



# Niveles de cortocircuito de la Red Nacional de Transmisión 2021

Dirección de Operación y Planeación  
del Sistema  
Subdirección de Planeación

Diciembre de 2018

*Capacidad de cortocircuito en las subestaciones eléctricas del Sistema Eléctrico Nacional  
calculados con base en el Estándar IEC 60909.*

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## **1. Objetivo**

Determinar los niveles de cortocircuito máximos y mínimos en las subestaciones eléctricas de la Red Nacional de Transmisión.

## **2. Fundamento legal**

De conformidad con los Criterios INTG 11, así como CONE 5, de las Disposiciones Administrativas de carácter general que contienen los criterios de eficiencia, calidad, confiabilidad, continuidad, seguridad y sustentabilidad del Sistema Eléctrico Nacional: Código de Red, publicadas en el Diario Oficial de la federación el 8 de abril de 2016, corresponde al Centro Nacional de Control de Energía (CENACE) calcular y publicar anualmente los niveles de cortocircuito máximos y mínimos en los puntos de interconexión de Centrales Eléctricas y conexión de Centros de Carga.

## **3. Consideraciones de cálculo**

Los niveles de cortocircuito se calcularon con base en lo siguiente:

- a) A fin de calcular los valores máximos y mínimos en los puntos de interconexión de Centrales Eléctricas y conexión de Centros de Carga, se analizaron los escenarios esperados para 2021.
- b) Para el escenario de mínima capacidad, se considera red completa (sin contingencia) y las condiciones esperadas para invierno de 2021.
- c) Para el escenario de máxima capacidad, se consideran cerrados todos los interruptores y elementos de transmisión que pueden estar en servicio en la Red Nacional de Transmisión, para dos condiciones: con los retiros solicitados al CENACE para 2021, así como con el Programa Indicativo Para el Retiro de Centrales Eléctricas 2018-2032.
- d) Los modelos eléctricos del Sistema Eléctrico Nacional (SEN) contemplan las obras indicadas en el Programa de Ampliación y Modernización de la Red Nacional de Transmisión y Redes Generales de Distribución del Mercado Eléctrico Mayorista (PRODESEN) 2018-2032.
- e) Los modelos eléctricos del SEN se desarrollaron con base en la información proporcionada por los Transportistas y Distribuidores.

- f) Los modelos de las Centrales Eléctricas y de los Centros de Cargas programados en los escenarios de estudio son con base en la información proporcionada en las solicitudes de interconexión y de conexión respectivamente que fueron consideradas para el PRODESEN 2018-2032.
- g) El método de cálculo es el establecido en el Estándar IEC 60909.
- h) Para efectos de cálculo se utiliza la herramienta de software PSS®E V34.5, con los siguientes parámetros:
  - Taps de los transformadores unitarios.
  - Reactores de Líneas de Transmisión (LT) y barra en servicio y sin cambio.
  - Susceptancia de las LT sin cambio.
  - Reactancia subtransitoria de las unidades de Centrales Eléctricas.
  - Cargas del sistema eléctrico sin cambio.
  - Para el escenario de máxima capacidad se considera el factor  $C = 1.1$ .
  - Para el escenario de mínima capacidad se considera el factor  $C=1.0$ .
- i) Se reporta la magnitud de la corriente simétrica inicial  $I_k''$  (r.m.s.)

Los niveles de cortocircuito calculados pueden variar dependiendo de las impedancias de las unidades de las Centrales Eléctricas, transformadores, autotransformadores, transformadores defasadores, reactores, etc., que tienen fecha de entrada en operación entre 2018 y 2021.

#### 4. Niveles de cortocircuito reportados por nivel de tensión y por Gerencia de Control Regional

En la figura 1 se muestran los niveles de cortocircuito reportados por nivel de tensión. Se observa que el nivel de tensión con el mayor número de subestaciones eléctricas es 115 kV, con aproximadamente el 68% de los valores reportados.

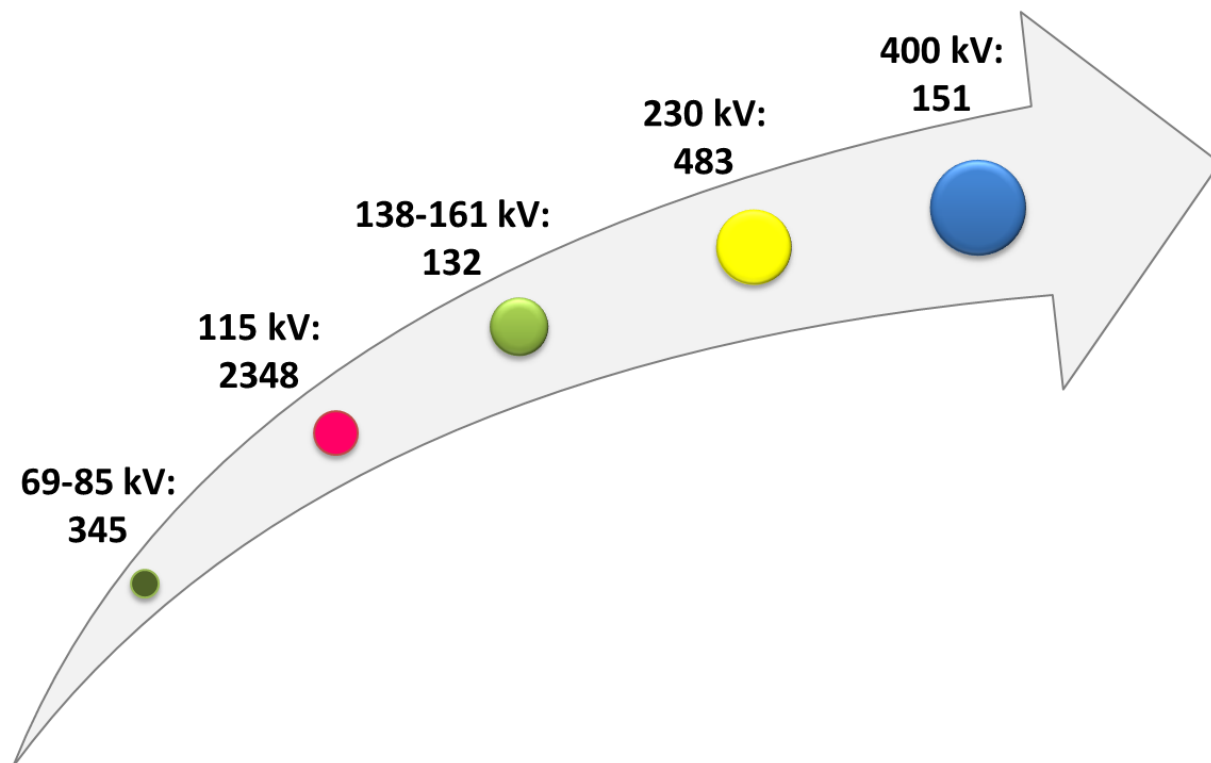
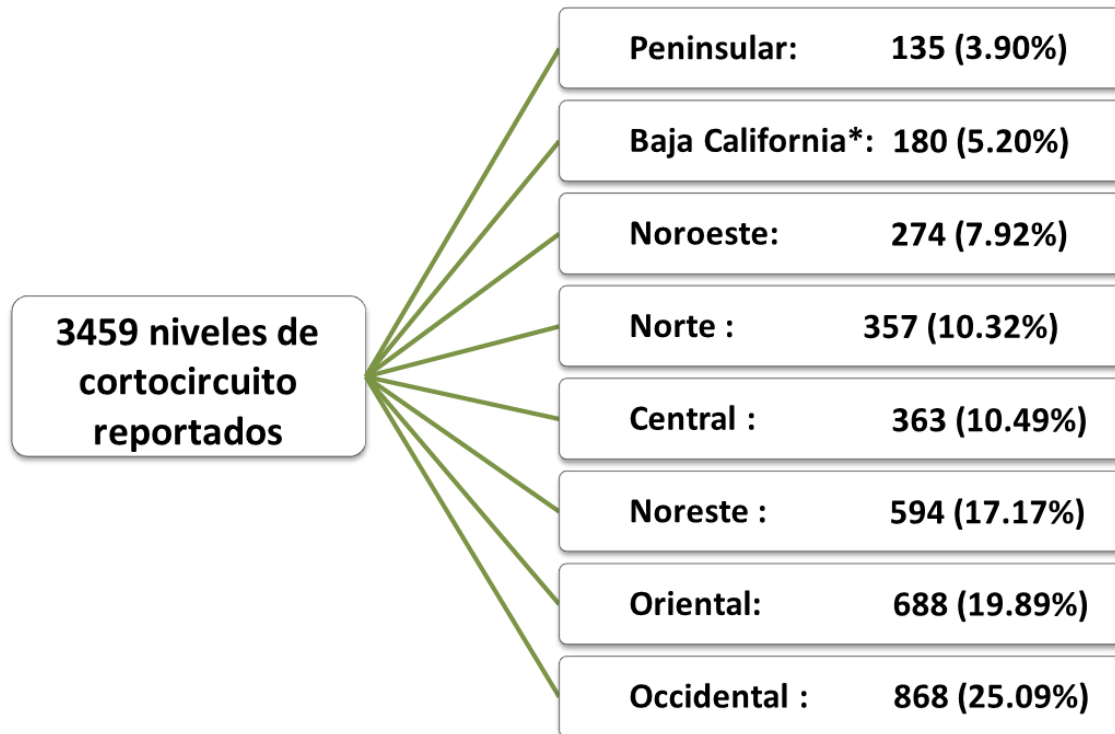


Figura 1: Niveles de cortocircuito por nivel de tensión

Considerando las diferentes Gerencias de Control Regional, en la figura 2 se indica el número de subestaciones eléctricas reportadas por Gerencia de Control, por ejemplo, el 25% de los niveles de cortocircuito reportados corresponde a la Gerencia de Control Regional Occidental.



\* Incluye los sistemas Baja California, Baja California Sur y Mulegé

Figura 2: Niveles de cortocircuito por Gerencia de Control Regional

## 5. Referencias

- [1] Ley de la Industria Eléctrica. DOF: 11/08/2014.
- [2] Reglamento de la Ley de la Industria eléctrica. DOF: 31/10/14.
- [3] Disposiciones Administrativas de carácter general que contienen los criterios de eficiencia, calidad, confiabilidad, continuidad, seguridad y sustentabilidad del Sistema Eléctrico Nacional: Código de Red. DOF: 08/04/2016.
- [4] Programa de Ampliación y Modernización de la Red Nacional de Transmisión y Redes Generales de Distribución del Mercado Eléctrico Mayorista 2018-2032.
- [5] Estándar IEC 60909 Short-circuit currents in three-phase a.c. systems.
- [6] IEEE Standard 551-2006. Recommended Practice for Calculating Short-Circuit Currents in Industrial and Commercial Power Systems.

# Niveles de cortocircuito de la Red Nacional de Transmisión por Gerencia de Control Regional





# Gerencia de Control Regional Central



*[Regresar a mapa del SEN](#)*

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Central

Subestación eléctrica	Acronímico	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
ACEROS CAMESA	ACM-85	85	17.96	6.05	0.506+j2.685	2.003+j18.820	21.04	8.28	0.408+j2.533	2.587+j14.224	20.89	8.08	0.413+j2.551	2.525+j14.698
ACEROS CORSA	ACC-85	85	13.91	5.51	0.669+j3.465	2.630+j19.533	15.92	8.14	0.592+j3.339	2.924+j12.835	15.83	8.06	0.598+j3.358	2.893+j12.999
ACEROS CORSA	ACS-230	230	18.34	14.63	1.146+j7.150	1.848+j12.680	21.16	16.27	0.924+j6.841	1.913+j13.003	21.01	16.20	0.944+j6.889	1.912+j13.006
ACEROS NACIONALES	ACN-85	85	18.04	6.36	0.574+j2.659	2.178+j17.639	21.08	9.26	0.494+j2.512	2.647+j12.102	20.94	9.07	0.500+j2.529	2.594+j12.459
ACOLMAN	ACO-230	230	24.67	19.17	0.972+j5.293	2.069+j9.862	29.16	21.65	0.711+j4.959	2.103+j10.029	28.77	21.50	0.739+j5.023	2.103+j10.034
ACTOPAN	AAN-85	85	5.73	2.92	2.421+j8.218	7.000+j32.690	6.28	3.19	2.402+j8.257	7.061+j32.903	6.27	3.19	2.405+j8.261	7.061+j32.903
ACULCO	AUO-115	115	2.44	1.42	5.489+j26.639	16.863+j83.745	2.71	1.57	5.293+j26.440	16.933+j84.042	2.71	1.57	5.295+j26.443	16.933+j84.042
AEROPUERTO	ATO-85	85	7.40	4.49	1.448+j6.474	2.559+j19.469	8.10	4.88	1.429+j6.513	2.650+j19.764	8.09	4.88	1.432+j6.517	2.650+j19.764
AGUAVIVA	AGV-85	85	5.76	1.41	1.851+j8.319	8.545+j87.134	6.26	1.52	1.840+j8.419	8.653+j89.158	6.26	1.52	1.846+j8.425	8.653+j89.158
ÁGUILAS	AGU-230	230	26.98	28.72	1.350+j4.732	0.673+j4.113	32.71	33.21	0.975+j4.357	0.694+j4.272	32.44	33.03	0.999+j4.391	0.694+j4.272
AGUSTÍN MILLÁN	ANM-115	115	18.28	13.29	0.562+j3.588	1.234+j7.621	21.41	15.09	0.487+j3.376	1.266+j7.576	21.39	15.09	0.489+j3.379	1.266+j7.576
ALMOLOYA	AML-400	400	12.57	10.87	2.987+j18.133	1.995+j27.027	15.56	12.64	2.009+j16.204	2.154+j27.520	15.49	12.61	2.048+j16.272	2.154+j27.520
ALPURA	ALR-85	85	18.69	5.97	0.495+j2.578	2.128+j19.365	22.56	8.20	0.369+j2.364	2.711+j14.757	22.39	8.00	0.375+j2.381	2.649+j15.232
ALTAMIRANO (115 KV)	ATM-115	115	2.77	1.62	6.652+j23.022	20.140+j71.940	3.37	2.14	5.635+j20.954	15.049+j56.861	3.37	2.14	5.637+j20.956	15.049+j56.861
AMOMOLULCO	AMO-85	85	9.30	4.64	1.154+j5.147	2.590+j21.181	10.18	5.12	1.112+j5.187	2.660+j20.977	10.17	5.12	1.115+j5.189	2.660+j20.977
APAPLASTIC	AAP-85	85	9.67	4.73	1.081+j4.959	2.806+j20.881	10.57	5.22	1.039+j4.998	2.876+j20.676	10.57	5.22	1.042+j5.001	2.876+j20.676
APASCO	APA-85	85	19.99	5.57	0.362+j2.428	2.209+j21.414	21.47	6.07	0.340+j2.491	2.221+j21.537	21.44	6.07	0.342+j2.495	2.221+j21.537
APASCO	APA-230	230	20.47	18.59	1.050+j6.401	0.949+j8.439	24.63	21.22	0.749+j5.883	1.025+j8.719	24.49	21.15	0.765+j5.915	1.025+j8.719
APM TERMINALS	ATS-115	115	11.53	10.57	0.914+j5.684	1.391+j7.080	13.37	14.24	0.853+j5.396	0.606+j4.392	13.37	14.24	0.853+j5.396	0.606+j4.392
ARAGÓN	ARA-85	85	10.32	2.87	0.649+j4.709	0.311+j41.847	11.82	3.18	0.598+j4.526	0.311+j41.847	11.80	3.18	0.603+j4.533	0.311+j41.847
ARAGÓN	ARA-230	230	18.55	18.42	1.260+j7.048	1.200+j7.286	21.85	20.82	0.933+j6.619	1.263+j7.606	21.61	20.68	0.967+j6.689	1.263+j7.607
ARCELIA NUEVA	ANU-69	69	2.32	2.87	3.915+j16.721	0.530+j7.072	2.51	3.07	3.758+j17.040	0.594+j7.750	2.51	3.07	3.758+j17.040	0.594+j7.750
ARCELIA NUEVA	ANU-115	115	2.39	1.44	9.247+j26.150	26.869+j77.470	2.76	1.71	8.651+j24.996	24.458+j70.418	2.76	1.71	8.652+j24.998	24.458+j70.418
ARMEX	ARX-230	230	24.28	19.47	0.952+j5.385	1.895+j9.361	30.06	22.94	0.640+j4.817	1.908+j9.184	29.88	22.87	0.654+j4.845	1.908+j9.184
ARTEAGA	ATG-69	69	2.21	2.35	3.565+j17.640	1.825+j14.816	2.35	2.47	3.739+j18.250	1.985+j15.816	2.35	2.47	3.739+j18.250	1.985+j15.816
ARTEAGA	ATG-115	115	2.68	2.14	5.352+j24.237	6.351+j42.850	2.97	2.33	5.254+j24.000	6.769+j44.516	2.97	2.33	5.254+j24.000	6.769+j44.516
ATENCO	ATE-85	85	16.07	7.28	0.605+j2.993	1.105+j14.164	17.51	8.05	0.561+j3.031	1.175+j13.961	17.49	8.05	0.564+j3.034	1.175+j13.961
ATENCO	ATE-230	230	17.02	18.43	1.904+j7.567	0.626+j6.200	20.45	21.18	1.411+j7.003	0.665+j6.481	20.36	21.12	1.432+j7.029	0.665+j6.481
ATIZAPÁN	ATI-230	230	21.13	18.17	1.307+j6.148	1.639+j9.315	25.33	20.72	0.941+j5.690	1.686+j9.510	25.15	20.64	0.963+j5.728	1.686+j9.510
ATLACOMULCO	ATU-115	115	8.20	5.82	1.667+j7.921	3.236+j17.609	9.04	6.36	1.608+j7.921	3.271+j17.855	9.03	6.36	1.611+j7.926	3.271+j17.855

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Central**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
ATLACOMULCO INDUSTRIAL	AIN-115	115	6.38	4.32	2.381+j10.133	5.282+j24.606	7.02	4.73	2.321+j10.135	5.319+j24.855	7.02	4.72	2.325+j10.139	5.319+j24.855
ATLACOMULCO POTENCIA	AMP-115	115	16.14	15.41	0.602+j4.069	0.314+j4.655	17.71	16.54	0.546+j4.088	0.346+j4.946	17.69	16.52	0.549+j4.092	0.346+j4.946
ATLACOMULCO POTENCIA	AMP-400	400	10.04	8.98	3.518+j22.736	2.369+j31.153	12.12	10.27	2.520+j20.815	2.577+j32.094	12.08	10.25	2.560+j20.881	2.577+j32.094
ATOTONILCO	ANL-85	85	2.93	1.60	4.099+j16.248	12.014+j57.474	3.21	1.75	4.083+j16.288	12.105+j57.738	3.21	1.75	4.086+j16.292	12.105+j57.738
AURORA	AUR-85	85	22.19	2.71	0.346+j2.184	0.118+j50.081	23.94	2.88	0.312+j2.233	0.162+j51.867	23.86	2.87	0.317+j2.240	0.162+j51.867
AURORA	AUR-230	230	32.50	33.71	0.937+j3.976	0.585+j3.706	40.27	39.49	0.614+j3.575	0.609+j3.840	39.54	39.03	0.645+j3.637	0.609+j3.841
AUTOMETALES	AUM-85	85	13.75	5.48	0.691+j3.502	2.722+j19.613	15.86	8.33	0.606+j3.350	2.893+j12.357	15.77	8.26	0.612+j3.367	2.863+j12.502
AVANDARO	AVA-115	115	7.22	4.78	2.568+j8.824	6.714+j22.247	8.20	5.36	2.465+j8.557	6.700+j22.015	8.20	5.36	2.466+j8.559	6.700+j22.015
AVANTE TEXTIL	AVT-85	85	13.81	6.71	0.722+j3.480	1.294+j14.865	15.13	7.44	0.675+j3.502	1.364+j14.639	15.12	7.44	0.678+j3.505	1.364+j14.639
AYOTLA	AYO-85	85	18.44	2.20	0.414+j2.629	3.198+j61.593	19.75	2.35	0.388+j2.706	3.273+j63.484	19.69	2.35	0.393+j2.713	3.273+j63.484
AYOTLA	AYO-230	230	21.22	21.14	1.215+j6.138	0.756+j6.415	24.86	23.71	0.898+j5.807	0.804+j6.744	24.57	23.54	0.930+j5.871	0.804+j6.745
AZCAPOTZALCO	AZC-230	230	32.32	31.87	1.046+j3.974	2.298+j3.851	40.73	37.79	0.670+j3.523	2.348+j3.983	40.29	37.53	0.691+j3.559	2.348+j3.983
AZTECA	ATK-230	230	27.01	26.47	0.949+j4.823	0.728+j5.242	32.54	30.47	0.646+j4.442	0.742+j5.379	32.01	30.15	0.679+j4.513	0.742+j5.380
BANCOMER	BBV-230	230	21.85	11.91	1.296+j5.937	2.056+j21.360	26.28	13.40	0.926+j5.481	2.099+j21.542	26.09	13.37	0.948+j5.518	2.099+j21.542
BÁRBARA (SANTA)	BBR-115	115	7.91	5.09	1.709+j8.219	4.540+j21.818	9.75	7.99	1.382+j7.359	1.613+j12.268	9.75	7.99	1.383+j7.362	1.613+j12.268
BARRIENTOS	BAR-85	85	20.97	7.00	0.500+j2.286	1.760+j16.316	24.76	10.55	0.420+j2.139	2.230+j10.778	24.56	10.30	0.426+j2.157	2.177+j11.136
BECTON DICKINSON	BDK-85	85	18.33	5.91	0.505+j2.629	2.160+j19.522	22.16	8.10	0.376+j2.407	2.743+j14.912	22.00	7.90	0.382+j2.424	2.682+j15.388
BOSQUES	BOS-230	230	23.86	21.66	1.448+j5.375	1.594+j7.200	28.74	24.82	1.076+j4.968	1.629+j7.359	28.52	24.72	1.099+j5.002	1.629+j7.359
CAMPO MORADO	CMO-115	115	1.81	1.08	11.115+j35.025	32.345+j105.060	2.06	1.26	10.513+j33.876	29.908+j97.962	2.06	1.26	10.514+j33.878	29.908+j97.962
CAMPOS HERMANOS	CHE-85	85	19.30	6.64	0.540+j2.485	1.983+j17.022	22.65	9.82	0.460+j2.338	2.453+j11.485	22.48	9.60	0.466+j2.356	2.399+j11.842
CANCHESDA NUEVA	CSN-115	115	3.08	1.92	5.757+j20.785	15.372+j58.537	3.39	2.11	5.697+j20.787	15.413+j58.794	3.39	2.10	5.701+j20.791	15.413+j58.794
CARACOL	CRO-230	230	23.08	19.20	1.088+j5.650	1.848+j9.118	27.33	21.76	0.803+j5.285	1.888+j9.280	26.97	21.61	0.834+j5.352	1.888+j9.281
CARBONER	CSR-115	115	7.78	6.33	1.651+j8.377	3.186+j13.924	8.86	7.16	1.590+j8.089	3.213+j13.727	8.86	7.16	1.590+j8.089	3.213+j13.727
CAREAGA	CAR-85	85	20.18	6.36	0.484+j2.383	2.169+j18.226	24.65	10.03	0.399+j2.153	2.278+j11.590	24.55	9.95	0.403+j2.162	2.235+j11.715
CARTAGENA	CTG-230	230	29.49	26.72	0.949+j4.402	0.666+j5.938	36.29	30.98	0.625+j3.976	0.685+j6.073	35.87	30.77	0.647+j4.020	0.685+j6.073
CARTÓN Y PAPEL DE MÉXICO	CPM-230	230	27.68	25.16	0.959+j4.700	1.138+j6.202	33.52	28.95	0.652+j4.308	1.160+j6.344	32.96	28.66	0.686+j4.379	1.160+j6.345
CAYACAL	CAY-115	115	8.77	8.93	1.484+j7.422	1.045+j6.986	10.03	10.16	1.416+j7.143	1.104+j6.894	10.03	10.16	1.417+j7.143	1.104+j6.894
CEILÁN	CEI-230	230	24.72	23.17	1.069+j5.264	1.080+j6.443	30.40	26.72	0.694+j4.755	1.117+j6.727	30.10	26.56	0.717+j4.800	1.117+j6.727
CEMENTOS ANÁHUAC	CAH-85	85	17.99	6.44	0.577+j2.666	1.940+j17.374	21.01	9.34	0.494+j2.521	2.460+j11.979	20.85	9.11	0.500+j2.541	2.408+j12.392
CEMENTOS APASCO	CEA-85	85	10.64	3.47	0.858+j4.530	5.740+j32.683	11.59	3.80	0.833+j4.581	5.753+j32.806	11.58	3.80	0.836+j4.584	5.753+j32.806

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Central**

Subestación eléctrica	Acronímico	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
CEMENTOS FORTALEZA	CFZ-85	85	2.52	1.27	4.785+j18.906	15.394+j75.538	2.76	1.39	4.766+j18.943	15.455+j75.752	2.76	1.39	4.769+j18.947	15.455+j75.752
CEMENTOS TOLTECA	TLT-85	85	9.98	3.07	0.907+j4.834	7.194+j37.487	10.86	3.36	0.883+j4.894	7.207+j37.611	10.85	3.36	0.885+j4.898	7.207+j37.611
CERRO DEL CAMPO	CCM-115	115	3.44	2.33	5.841+j18.372	14.756+j44.361	3.92	2.66	5.567+j17.786	14.274+j42.562	3.92	2.66	5.569+j17.788	14.274+j42.562
CERRO GORDO	CRG-85	85	25.42	8.36	0.344+j1.899	0.979+j13.764	32.13	17.69	0.248+j1.661	0.968+j5.749	29.88	14.90	0.276+j1.786	1.027+j7.205
CERRO GORDO	CRG-230	230	35.62	38.41	0.833+j3.634	0.413+j2.958	44.41	45.38	0.531+j3.246	0.429+j3.073	43.41	44.67	0.564+j3.317	0.428+j3.074
CERVECERÍA MODELO	CVM-85	85	14.06	4.64	0.677+j3.423	7.267+j23.758	20.16	6.77	0.489+j2.632	7.418+j17.175	20.10	6.73	0.493+j2.640	7.376+j17.304
CHALCO	CHA-85	85	13.19	1.90	0.690+j3.655	4.924+j69.759	14.14	2.04	0.675+j3.757	5.014+j71.710	14.11	2.04	0.680+j3.764	5.014+j71.710
CHALCO	CHA-85B	85	13.19	1.90	0.690+j3.655	4.924+j69.759	14.14	2.04	0.675+j3.757	5.014+j71.710	14.11	2.04	0.680+j3.764	5.014+j71.710
CHALCO	CHA-230	230	16.79	17.09	2.350+j7.551	2.071+j7.305	19.46	19.14	2.034+j7.223	2.135+j7.641	19.28	19.03	2.067+j7.287	2.135+j7.642
CHAPINGO	CPG-230	230	38.98	36.28	0.726+j3.328	0.791+j4.140	48.41	42.39	0.458+j2.982	0.809+j4.238	47.34	41.83	0.487+j3.047	0.809+j4.241
CHICOLOAPAN	CHC-230	230	35.47	30.64	0.748+j3.668	1.070+j5.459	43.56	35.43	0.480+j3.319	1.092+j5.569	42.68	35.03	0.509+j3.385	1.092+j5.572
CHIMALPA	MLP-230	230	30.19	32.16	1.191+j4.234	0.841+j3.595	37.52	37.83	0.818+j3.806	0.863+j3.740	37.14	37.58	0.840+j3.842	0.863+j3.740
CHIMALPA DOS	MLD-230	230	31.63	33.95	1.118+j4.047	0.547+j3.408	39.46	39.99	0.749+j3.625	0.574+j3.556	39.05	39.71	0.771+j3.660	0.574+j3.556
CHIMALPA DOS	MLD-400	400	23.78	23.19	2.314+j9.432	1.710+j10.556	31.05	27.90	1.313+j8.076	1.782+j10.882	30.62	27.67	1.369+j8.182	1.782+j10.882
CHRYSLER DE MÉXICO	KDM-85	85	13.08	6.96	0.760+j3.676	1.073+j13.711	14.46	7.76	0.705+j3.666	1.146+j13.430	14.45	7.76	0.708+j3.668	1.146+j13.430
CIUDAD BICENTENARIO	CDB-115	115	6.90	5.98	1.142+j9.554	1.451+j14.029	7.28	6.27	1.145+j9.970	1.511+j14.812	7.27	6.27	1.148+j9.975	1.511+j14.812
COAPA	COA-230	230	18.29	16.50	1.457+j7.112	1.665+j9.650	21.92	18.81	1.052+j6.581	1.717+j9.907	21.75	18.73	1.079+j6.629	1.717+j9.907
COFRADÍA UNO	CFI-230	230	28.55	26.21	1.012+j4.540	0.746+j5.940	35.34	30.51	0.660+j4.080	0.768+j6.076	34.97	30.32	0.682+j4.121	0.768+j6.076
COMALCO	COM-115	115	3.74	2.43	4.330+j17.238	10.665+j45.182	4.11	2.66	4.273+j17.254	10.698+j45.464	4.11	2.66	4.277+j17.258	10.698+j45.464
CONDESA	CDS-85	85	8.76	3.44	1.292+j5.454	10.496+j29.966	10.06	4.49	1.199+j5.232	10.572+j23.256	10.04	4.48	1.204+j5.240	10.530+j23.382
CONDESA	CDS-230	230	18.88	5.25	1.679+j6.831	1.894+j62.228	22.15	5.52	1.299+j6.466	2.046+j66.361	22.03	5.52	1.323+j6.498	2.046+j66.361
CONTADERO	CTD-230	230	23.08	21.39	1.489+j5.557	1.387+j7.107	27.66	24.41	1.115+j5.163	1.432+j7.304	27.46	24.31	1.138+j5.196	1.432+j7.304
CONTRERAS	CRS-230	230	15.89	13.94	1.649+j8.190	1.175+j11.978	18.41	15.55	1.287+j7.828	1.225+j12.345	18.32	15.51	1.312+j7.866	1.225+j12.345
COVADONGA	CVD-85	85	12.47	1.92	0.724+j3.869	4.733+j68.891	13.42	2.05	0.705+j3.960	4.820+j70.828	13.39	2.05	0.710+j3.968	4.820+j70.828
COYOACÁN	COY-230	230	22.64	23.62	1.555+j5.656	1.608+j5.011	26.94	26.90	1.175+j5.293	1.683+j5.260	26.76	26.78	1.199+j5.326	1.683+j5.260
COYOTEPEC	CYO-85	85	7.81	3.37	2.045+j5.944	6.562+j30.648	10.72	4.38	1.249+j4.880	7.135+j25.994	10.69	4.32	1.253+j4.892	7.074+j26.474
CRUZ AZUL	CCZ-230	230	25.12	21.58	0.815+j5.222	1.487+j7.757	31.29	25.70	0.517+j4.639	1.492+j7.559	31.11	25.62	0.530+j4.666	1.492+j7.559
CUAJIMALPA	CJM-230	230	23.33	22.65	1.365+j5.525	0.799+j6.299	27.77	25.77	0.997+j5.164	0.828+j6.494	27.58	25.67	1.020+j5.198	0.828+j6.494
CUAUHTÉMOC	CMC-230	230	21.61	21.91	1.206+j6.024	0.916+j5.938	25.82	24.90	0.858+j5.591	0.977+j6.277	25.48	24.68	0.893+j5.663	0.977+j6.277
CUAUTITLÁN	CTT-85	85	18.00	5.83	0.547+j2.671	2.357+j19.778	22.74	8.04	0.373+j2.345	2.937+j15.152	22.58	7.85	0.379+j2.361	2.876+j15.629

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Central**

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
CULHUACÁN	LUN-230	230	19.18	9.09	1.428+j6.776	1.542+j30.229	23.01	9.99	1.034+j6.262	1.635+j31.269	22.81	9.97	1.063+j6.314	1.635+j31.270
DEACERO	DCO-85	85	21.01	7.02	0.486+j2.284	1.769+j16.286	24.93	10.47	0.394+j2.129	2.305+j10.927	24.57	10.06	0.403+j2.160	2.251+j11.523
DEPORTIVA	DVA-230	230	17.26	19.00	1.454+j7.557	0.379+j5.764	20.00	21.26	1.079+j7.222	0.412+j6.109	19.92	21.20	1.098+j7.249	0.412+j6.109
DEPORTIVA	DVA-400	400	15.37	13.93	2.667+j14.782	1.206+j19.948	19.15	16.20	1.648+j13.162	1.312+j20.542	19.03	16.15	1.694+j13.242	1.312+j20.542
DIANA	DAA-230	230	19.10	20.07	2.041+j6.647	2.327+j5.615	22.46	22.76	1.661+j6.286	2.418+j5.871	22.34	22.67	1.685+j6.319	2.418+j5.871
DONATO GUERRA	DOG-115	115	29.07	25.97	0.255+j2.270	0.219+j3.094	35.06	29.99	0.186+j2.075	0.257+j3.120	35.02	29.97	0.188+j2.077	0.257+j3.120
DONATO GUERRA	DOG-115B	115	30.14	26.91	0.262+j2.187	0.229+j2.989	36.60	31.28	0.191+j1.986	0.265+j2.990	36.55	31.26	0.193+j1.989	0.265+j2.990
DONATO GUERRA	DOG-400	400	16.94	15.91	2.244+j13.447	1.253+j16.274	23.50	20.30	1.315+j10.728	1.630+j15.723	23.39	20.25	1.343+j10.775	1.630+j15.723
DOS CARLOS	DCA-85	85	5.79	3.22	1.824+j8.273	4.403+j28.533	6.35	3.52	1.808+j8.313	4.494+j28.796	6.34	3.51	1.811+j8.318	4.494+j28.796
ECATEPEC	ECA-230	230	22.17	19.61	1.120+j5.884	1.519+j8.285	26.59	22.45	0.801+j5.435	1.548+j8.434	26.24	22.28	0.833+j5.504	1.548+j8.435
EL CARMEN	CRM-85	85	5.51	1.76	2.485+j8.553	15.649+j63.994	6.67	3.90	2.284+j7.762	6.826+j24.297	6.67	3.89	2.286+j7.767	6.826+j24.297
EL CERRILLO	ECR-230	230	12.79	11.96	2.298+j10.123	1.642+j12.659	14.95	13.47	1.820+j9.598	1.691+j12.982	14.91	13.45	1.841+j9.625	1.691+j12.982
EL GALLO	ELG-115	115	2.14	1.30	6.918+j30.245	19.867+j88.517	3.47	3.66	3.290+j20.776	1.490+j17.741	3.47	3.66	3.291+j20.777	1.490+j17.741
EL ROSAL	RSL-230	230	15.78	13.66	1.618+j8.260	1.239+j12.460	18.26	15.22	1.261+j7.900	1.289+j12.819	18.16	15.18	1.286+j7.940	1.289+j12.819
EL SALTO	SAO-85	85	9.07	1.67	0.867+j5.338	19.762+j74.867	13.85	14.65	0.448+j3.873	0.235+j2.970	13.83	14.64	0.449+j3.877	0.235+j2.970
EL SALTO	SAO-230	230	5.89	6.42	3.706+j22.230	1.549+j16.993	7.49	7.60	2.518+j19.336	1.713+j18.153	7.47	7.59	2.534+j19.377	1.713+j18.153
EL VIDRIO	EVD-230	230	14.24	11.15	1.748+j9.162	2.741+j16.930	16.61	12.51	1.403+j8.682	2.839+j17.236	16.54	12.49	1.421+j8.714	2.839+j17.236
ENERGÍA DEL VALLE DE MÉXICO DOS MANIOBRAS	MAN-230	230	19.41	15.73	1.079+j6.757	1.626+j11.603	22.41	17.47	0.862+j6.461	1.693+j11.931	22.24	17.40	0.882+j6.509	1.693+j11.934
ENERGÍA DEL VALLE DE MÉXICO DOS MANIOBRAS	MAN-400	400	23.09	19.66	1.476+j9.894	1.953+j15.196	28.56	22.83	0.862+j8.854	2.034+j15.462	27.74	22.45	0.934+j9.109	2.030+j15.500
ESMERALDA	ESR-85	85	10.77	2.95	0.597+j4.518	0.000+j40.867	12.25	3.27	0.553+j4.374	0.000+j40.867	12.22	3.27	0.558+j4.381	0.000+j40.867
ESMERALDA	ESR-230	230	18.28	18.82	1.272+j7.150	1.059+j6.643	21.54	21.27	0.943+j6.714	1.127+j6.982	21.31	21.12	0.978+j6.785	1.127+j6.983
ESMERALDA	ESR-230B	230	18.28	18.82	1.272+j7.150	1.059+j6.643	21.54	21.27	0.943+j6.714	1.127+j6.982	21.31	21.12	0.978+j6.785	1.127+j6.983
ESTADIO	EST-230	230	15.96	16.44	1.542+j8.174	0.649+j7.776	18.45	18.36	1.167+j7.831	0.686+j8.124	18.38	18.32	1.186+j7.859	0.686+j8.124
ESTRELLA	ETR-230	230	22.93	21.28	1.799+j5.504	2.647+j6.755	28.16	24.80	1.422+j4.988	2.660+j6.867	27.83	24.62	1.452+j5.045	2.660+j6.868
ESTRELLA	ETR-230B	230	17.14	14.45	2.043+j7.472	3.157+j11.782	20.64	16.57	1.631+j6.887	3.176+j11.930	20.47	16.50	1.659+j6.940	3.176+j11.931
FERROCARRILES NACIONALES	FNL-230	230	33.79	34.27	0.888+j3.828	0.557+j3.802	42.81	40.66	0.541+j3.369	0.574+j3.934	42.25	40.32	0.563+j3.411	0.574+j3.934
FERTIMÉX	FTM-230	230	6.62	4.64	3.277+j19.781	11.366+j43.938	8.17	6.05	2.644+j17.688	9.088+j35.847	8.17	6.05	2.645+j17.689	9.088+j35.847
FISISA	FIS-230	230	15.88	13.29	1.578+j8.214	2.430+j13.167	18.61	14.95	1.200+j7.755	2.495+j13.465	18.49	14.89	1.227+j7.803	2.495+j13.465
FORD MOTOR COMPANY	FMC-85	85	24.06	7.15	0.387+j2.003	1.531+j16.519	29.01	10.25	0.284+j1.839	2.114+j11.920	28.73	9.94	0.289+j1.857	2.053+j12.394
FRANCISCO DE LOS REYES	FRR-115	115	1.88	1.15	9.759+j33.880	27.410+j99.441	2.07	1.26	9.699+j33.882	27.453+j99.702	2.07	1.26	9.702+j33.886	27.453+j99.702

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Central

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
FUNDIDORA MÉXICO	FUM-85	85	22.20	7.00	0.430+j2.168	1.439+j16.618	26.41	9.97	0.332+j2.017	2.023+j12.022	26.17	9.67	0.337+j2.035	1.961+j12.496
GENERAL MOTORS	GMC-85	85	13.44	7.09	0.745+j3.575	1.328+j13.520	14.89	7.90	0.690+j3.560	1.403+j13.230	14.87	7.90	0.693+j3.562	1.403+j13.230
GUACAMAYAS	GMV-115	115	11.17	10.65	0.942+j5.871	1.176+j6.594	12.84	12.32	0.871+j5.621	1.111+j6.298	12.84	12.32	0.871+j5.621	1.111+j6.298
GUADALUPE	GUA-85	85	15.14	5.84	0.661+j3.174	2.525+j18.656	18.06	10.32	0.551+j2.937	2.241+j9.518	17.96	10.24	0.557+j2.954	2.214+j9.614
HÉROES DE CARRANZA	HRC-230	230	10.71	8.02	2.125+j12.214	5.979+j24.167	12.90	9.31	1.672+j11.201	5.958+j23.669	12.88	9.30	1.680+j11.217	5.958+j23.669
HIPÓDROMO	HIP-85	85	16.23	5.21	0.558+j2.972	3.228+j22.050	24.42	8.01	0.373+j2.179	3.397+j15.475	24.32	7.95	0.377+j2.187	3.355+j15.605
HUASTECA	HTC-85	85	15.17	4.83	0.643+j3.171	7.169+j22.999	22.28	7.14	0.456+j2.380	7.320+j16.416	22.20	7.10	0.460+j2.388	7.278+j16.546
HUETAMO	HTM-69	69	2.67	3.42	2.746+j14.644	0.261+j5.217	3.25	4.02	1.961+j13.339	0.287+j5.739	3.25	4.02	1.961+j13.340	0.287+j5.739
HUETAMO	HTM-115	115	2.45	1.47	6.712+j26.282	19.241+j78.898	3.37	2.57	4.465+j21.198	7.735+j41.068	3.37	2.57	4.466+j21.200	7.735+j41.068
INDIANILLA	INN-85	85	9.98	0.17	0.729+j4.861	0.458-j876.784	21.22	5.90	0.434+j2.506	4.662+j21.911	21.16	5.87	0.438+j2.514	4.619+j22.042
INDUSTRIA DE LA DEFENSA NAL.	IDN-85	85	16.59	5.16	0.599+j2.897	5.340+j22.035	25.18	7.85	0.414+j2.104	5.500+j15.456	25.08	7.80	0.418+j2.112	5.457+j15.585
INDUSTRIA MILITAR	INM-85	85	10.02	3.93	1.051+j4.786	4.815+j27.395	11.58	5.31	0.959+j4.563	4.907+j20.699	11.55	5.28	0.963+j4.572	4.864+j20.825
INDUSTRIAL SAN CRISTÓBAL	ISC-85	85	15.05	5.44	0.560+j3.212	2.730+j20.398	20.11	13.32	0.388+j2.656	1.099+j6.775	17.62	9.67	0.473+j3.027	1.564+j10.528
INDUSTRIAS UNIDAS S. A.	INU-115	115	9.71	7.47	1.335+j6.704	2.367+j12.714	10.67	8.12	1.278+j6.723	2.400+j13.005	10.66	8.12	1.281+j6.727	2.400+j13.005
INFIERNILLO	IFR-69	69	0.91	1.06	20.625+j38.772	3.201+j25.836	1.00	1.15	20.444+j38.579	3.590+j27.730	1.00	1.15	20.444+j38.579	3.590+j27.730
INSURGENTES	INS-85	85	18.35	6.72	0.547+j2.618	1.689+j16.559	23.11	14.80	0.412+j2.299	0.988+j6.230	22.78	14.47	0.421+j2.332	0.943+j6.427
IROLO	IRO-230	230	10.53	8.53	1.997+j12.448	3.428+j21.327	12.00	9.41	1.740+j12.044	3.570+j21.947	11.96	9.39	1.759+j12.089	3.570+j21.949
IUSASOL I	IUN-115	115	15.46	14.53	0.637+j4.248	0.392+j5.075	16.97	15.61	0.580+j4.265	0.425+j5.370	16.95	15.60	0.583+j4.269	0.425+j5.370
IXTAPALUCA	IXL-230	230	21.65	21.48	1.163+j6.021	0.669+j6.368	25.40	24.20	0.849+j5.687	0.698+j6.629	25.10	24.02	0.881+j5.752	0.698+j6.630
IXTAPAN DE LA SAL	IXS-115	115	2.41	1.37	6.153+j26.851	18.996+j88.226	2.68	1.52	6.001+j26.548	19.045+j88.144	2.68	1.52	6.003+j26.550	19.045+j88.144
IXTAPANONGO	IXT-115	115	11.23	7.59	1.071+j5.813	2.658+j14.148	13.99	11.18	0.834+j5.154	1.289+j9.002	13.98	11.18	0.835+j5.157	1.289+j9.002
IXTLAHUACA DOS	ITD-115	115	10.39	8.04	1.161+j6.285	1.709+j11.791	11.42	8.74	1.104+j6.301	1.742+j12.073	11.41	8.74	1.108+j6.305	1.742+j12.073
IZTAPALAPA	IZT-230	230	21.06	19.55	1.302+j6.170	0.951+j7.862	25.83	22.69	0.890+j5.584	0.970+j8.010	25.57	22.56	0.918+j5.637	0.970+j8.011
JABÓN LA CORONA	JLC-230	230	23.03	20.80	1.082+j5.664	1.312+j7.578	27.45	23.67	0.769+j5.265	1.355+j7.788	27.07	23.47	0.803+j5.335	1.355+j7.789
JAMAICA	JAM-85	85	10.91	0.17	0.580+j4.462	0.041-j877.953	24.61	6.24	0.320+j2.170	4.391+j21.136	24.52	6.21	0.324+j2.177	4.348+j21.268
JAMAICA	JAM-230	230	20.05	20.88	1.396+j6.475	0.815+j5.940	25.45	25.37	0.939+j5.663	0.766+j5.829	25.18	25.20	0.970+j5.719	0.766+j5.829
JASSO	JAS-85	85	16.18	3.30	0.347+j3.013	7.143+j37.870	17.22	3.61	0.328+j3.117	7.156+j37.994	17.20	3.61	0.330+j3.121	7.156+j37.994
JASSO	JAS-230	230	25.82	22.42	0.797+j5.080	1.102+j7.407	32.46	26.81	0.494+j4.472	1.150+j7.236	32.27	26.72	0.507+j4.498	1.150+j7.236
JILOTEPEC	JIL-115	115	8.06	6.37	1.559+j8.084	2.692+j14.534	9.10	7.04	1.382+j7.909	2.755+j14.799	9.09	7.03	1.384+j7.912	2.755+j14.799
JILOTEPEC INDUSTRIAL	JID-115	115	7.36	5.65	1.708+j8.856	3.174+j16.915	8.31	6.24	1.517+j8.652	3.244+j17.210	8.31	6.24	1.519+j8.654	3.244+j17.210

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Central**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
JILOTEPEC POTENCIA	JIP-115	115	8.52	7.07	1.443+j7.660	2.250+j12.393	9.66	7.81	1.253+j7.455	2.320+j12.688	9.66	7.81	1.255+j7.457	2.320+j12.688
JILOTEPEC POTENCIA	JIP-230	230	5.06	4.15	5.017+j25.768	8.501+j42.646	5.99	4.71	4.123+j24.054	8.747+j43.186	5.98	4.71	4.129+j24.064	8.747+j43.186
JOROBAS	JRB-230	230	25.27	20.54	0.920+j5.174	1.736+j8.742	31.44	24.30	0.608+j4.606	1.749+j8.566	31.24	24.22	0.622+j4.634	1.749+j8.566
JUANDO	JUA-85	85	6.66	3.03	2.067+j7.068	6.656+j33.365	7.29	3.31	2.046+j7.115	6.686+j33.524	7.29	3.31	2.049+j7.119	6.686+j33.524
JUCHITEPEC	JCP-85	85	6.69	1.51	1.530+j7.179	7.561+j82.543	7.26	1.62	1.518+j7.280	7.664+j84.545	7.25	1.62	1.524+j7.287	7.664+j84.545
JUGOS DEL VALLE	JDV-85	85	7.23	3.12	2.098+j6.457	7.002+j33.018	9.47	3.98	1.384+j5.533	7.575+j28.367	9.44	3.93	1.388+j5.546	7.514+j28.847
JUGOSMEX	JMX-85	85	15.83	6.15	0.551+j3.051	1.673+j17.717	19.38	11.12	0.437+j2.751	1.549+j8.899	18.34	9.72	0.471+j2.905	1.619+j10.667
KILOMETRO 110	KMC-85	85	10.10	3.36	0.818+j4.792	5.632+j33.633	11.66	5.82	0.781+j4.563	3.938+j18.107	11.65	5.81	0.784+j4.568	3.938+j18.107
KILOMETRO 110	KMC-230	230	10.18	10.40	2.048+j12.880	1.583+j12.177	12.39	11.97	1.523+j11.687	1.668+j12.765	12.34	11.94	1.542+j11.733	1.668+j12.766
KILOMETRO 42	KCD-85	85	2.15	0.95	9.162+j20.901	49.476+j97.225	2.39	1.21	9.124+j20.671	43.452+j76.768	2.39	1.21	9.127+j20.676	43.452+j76.768
KILOMETRO 48	KCO-85	85	4.40	2.70	2.121+j10.950	5.124+j31.949	6.24	3.81	1.711+j8.484	4.139+j24.767	6.23	3.81	1.714+j8.487	4.139+j24.767
KILOMETRO CERO	KCR-230	230	22.43	22.75	1.142+j5.808	0.670+j5.761	26.89	25.87	0.794+j5.374	0.724+j6.095	26.52	25.64	0.829+j5.446	0.724+j6.095
LA CEIBA	LAC-115	115	2.59	1.59	5.923+j24.897	16.810+j72.304	3.92	3.53	3.278+j18.318	3.616+j24.503	3.92	3.53	3.279+j18.319	3.616+j24.503
LA COSTEÑA	LCT-85	85	18.10	6.40	0.476+j2.669	1.953+j17.503	23.35	14.09	0.345+j2.286	1.287+j6.796	21.14	11.13	0.399+j2.522	1.492+j9.348
LA ESTANCIA	LES-115	115	6.19	4.20	2.837+j10.341	6.884+j24.928	7.03	4.73	2.712+j10.032	6.832+j24.546	7.03	4.73	2.714+j10.034	6.832+j24.546
LA LOMA	LOM-85	85	14.90	5.49	0.718+j3.215	2.920+j20.065	17.38	7.85	0.635+j3.041	3.250+j14.090	17.30	7.75	0.640+j3.054	3.200+j14.328
LA MIRA	MIR-115	115	6.89	6.76	1.937+j9.445	1.565+j9.963	7.77	7.51	1.861+j9.212	1.626+j10.235	7.77	7.51	1.861+j9.212	1.626+j10.235
LA PAZ	LAP-230	230	28.10	31.35	0.979+j4.623	0.310+j3.361	33.68	35.89	0.667+j4.286	0.335+j3.574	33.15	35.49	0.699+j4.351	0.335+j3.576
LA PAZ	LAP-400	400	26.53	26.99	2.034+j8.463	0.880+j8.493	34.99	32.75	1.118+j7.175	0.924+j8.788	33.80	32.03	1.210+j7.418	0.923+j8.816
LA QUEBRADA	LAQ-85	85	17.86	6.45	0.579+j2.686	2.033+j17.297	21.00	9.45	0.485+j2.525	2.553+j11.765	20.69	9.07	0.495+j2.561	2.499+j12.414
LAFARGE	LFG-230	230	20.82	15.70	0.941+j6.307	1.890+j12.494	25.33	18.25	0.642+j5.730	1.887+j12.316	25.20	18.21	0.656+j5.759	1.887+j12.316
LAGO	LGO-230	230	22.56	23.87	0.953+j5.808	0.783+j4.920	26.34	26.90	0.664+j5.505	0.822+j5.162	25.98	26.64	0.698+j5.579	0.822+j5.163
LAGO	LGO-400	400	22.77	15.14	1.819+j9.976	3.652+j25.378	28.81	17.18	1.035+j8.758	3.865+j26.475	27.94	16.97	1.122+j9.023	3.862+j26.489
LAGO DE GUADALUPE	LGD-230	230	25.90	22.76	1.088+j5.011	0.986+j7.271	31.69	26.28	0.734+j4.550	1.011+j7.414	31.40	26.15	0.755+j4.591	1.011+j7.414
LAS AMÉRICAS	LAR-230	230	24.55	18.40	0.914+j5.330	2.176+j10.646	30.14	21.31	0.598+j4.809	2.207+j10.657	29.94	21.24	0.614+j4.840	2.207+j10.657
LAS CAÑAS	CAN-69	69	1.56	1.37	11.114+j22.911	12.176+j34.124	1.74	1.52	10.934+j22.715	12.073+j34.272	1.74	1.52	10.934+j22.715	12.073+j34.272
LÁZARO CÁRDENAS DISTRIBUCIÓN	LCD-115	115	10.83	10.90	1.044+j6.039	0.947+j5.823	12.50	12.94	0.977+j5.762	0.847+j5.153	12.50	12.94	0.977+j5.762	0.847+j5.153
LÁZARO CÁRDENAS POTENCIA	LCP-115	115	17.07	18.28	0.370+j3.872	0.194+j3.004	20.36	21.89	0.320+j3.572	0.226+j2.805	20.36	21.88	0.320+j3.573	0.226+j2.805
LÁZARO CÁRDENAS POTENCIA	LCP-230	230	23.29	27.13	0.718+j5.656	0.116+j2.819	32.28	36.98	0.428+j4.504	0.149+j2.624	32.27	36.97	0.429+j4.506	0.149+j2.624
LÁZARO CÁRDENAS POTENCIA	LCP-400	400	17.46	19.42	1.393+j13.153	0.367+j8.057	29.12	31.81	0.635+j8.702	0.333+j5.797	29.09	31.78	0.638+j8.710	0.333+j5.797

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Central

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
LECHERÍA	LEC-85	85	26.22	7.99	0.389+j1.830	1.240+j14.710	31.63	12.35	0.298+j1.680	1.812+j9.566	31.14	11.83	0.306+j1.706	1.752+j10.096
LERMA	LER-85	85	0.87	0.46	14.703+j54.605	50.664+j199.402	2.82	3.09	1.972+j19.027	0.272+j8.744	2.82	3.09	1.973+j19.028	0.272+j8.744
LIQUIMEX	LQX-85	85	9.09	3.76	1.542+j5.176	5.480+j28.004	11.51	4.84	1.132+j4.552	6.054+j23.356	11.47	4.77	1.136+j4.566	5.993+j23.835
LOMAS VERDES	LVE-230	230	22.19	19.26	1.276+j5.847	1.499+j8.688	26.72	22.03	0.906+j5.391	1.541+j8.869	26.52	21.94	0.928+j5.428	1.541+j8.870
LOS REYES	RES-85	85	18.82	2.41	0.426+j2.573	2.024+j55.964	20.33	2.57	0.393+j2.626	2.088+j57.805	20.27	2.57	0.398+j2.633	2.088+j57.805
LOS REYES	RES-230	230	25.16	27.20	1.059+j5.170	0.436+j4.187	29.98	31.07	0.744+j4.815	0.462+j4.390	29.56	30.77	0.775+j4.879	0.462+j4.392
MADERO	MAD-230	230	23.22	23.84	1.019+j5.628	1.012+j5.241	27.49	27.11	0.718+j5.265	1.040+j5.464	27.10	26.86	0.752+j5.337	1.040+j5.465
MAGDALENA	MAG-85	85	21.43	1.99	0.387+j2.257	6.277+j69.291	23.98	2.09	0.321+j2.228	6.916+j72.582	23.91	2.09	0.325+j2.234	6.916+j72.582
MAGDALENA	MAG-230	230	26.43	27.25	1.106+j4.900	0.720+j4.661	32.87	32.04	0.724+j4.385	0.743+j4.802	32.43	31.76	0.754+j4.441	0.743+j4.802
MERCED (A)	MER-230	230	18.11	17.99	1.566+j7.163	1.140+j7.556	22.65	21.50	1.108+j6.352	1.109+j7.492	22.44	21.38	1.139+j6.409	1.109+j7.493
MERCED (B)	MER-230	230	18.11	17.99	1.566+j7.163	1.140+j7.556	22.65	21.50	1.108+j6.352	1.109+j7.492	22.44	21.38	1.139+j6.409	1.109+j7.493
MILAGROS	MGR-85	85	12.84	2.23	0.741+j3.749	2.781+j58.498	14.08	2.37	0.699+j3.771	2.931+j60.583	14.05	2.37	0.704+j3.777	2.931+j60.583
MILLÁN DOS	MDO-400	400	16.01	14.49	2.326+j14.235	1.354+j18.993	21.66	18.08	1.383+j11.644	1.680+j18.538	21.57	18.03	1.413+j11.694	1.680+j18.538
MINERA TIZAPA	MTI-115	115	7.50	5.53	1.688+j8.692	3.289+j17.980	8.90	6.97	1.449+j8.076	2.455+j14.751	8.90	6.96	1.450+j8.078	2.455+j14.751
MOCTEZUMA	MZA-85	85	8.80	2.63	0.916+j5.503	1.266+j44.922	10.01	2.91	0.861+j5.322	1.266+j44.922	10.00	2.91	0.866+j5.330	1.266+j44.922
MORALES	MOS-85	85	18.15	5.53	0.492+j2.659	3.033+j21.107	28.56	8.70	0.308+j1.865	3.202+j14.532	28.43	8.64	0.312+j1.873	3.159+j14.661
MORALES	MOS-230	230	18.31	19.00	1.488+j7.099	1.304+j6.443	21.60	21.50	1.139+j6.667	1.370+j6.785	21.36	21.34	1.174+j6.738	1.370+j6.785
MORELOS	MOR-230	230	11.28	9.29	1.964+j11.605	3.435+j19.247	12.84	10.25	1.616+j11.263	3.568+j19.827	12.78	10.22	1.642+j11.307	3.568+j19.827
NACEL Y NACOBRE	NYN-85	85	12.83	5.25	0.853+j3.727	2.776+j20.280	14.44	7.08	0.787+j3.654	3.332+j15.071	14.33	6.95	0.796+j3.683	3.310+j15.455
NARVARTE	NAR-85	85	11.46	1.61	0.873+j4.191	17.755+j81.104	13.76	1.75	0.697+j3.862	14.632+j83.569	13.73	1.75	0.702+j3.867	14.632+j83.569
NARVARTE	NAR-230	230	21.07	22.14	1.749+j6.056	1.817+j5.208	24.94	25.16	1.369+j5.694	1.903+j5.462	24.78	25.05	1.393+j5.727	1.903+j5.462
NAUCALPAN	NAU-85	85	18.13	6.39	0.566+j2.648	1.679+j17.621	21.96	11.32	0.470+j2.412	1.444+j9.310	21.87	11.24	0.474+j2.423	1.410+j9.404
NECAXA	NEC-85A	85	8.28	1.61	1.072+j5.827	20.311+j76.770	12.37	12.31	0.629+j4.319	0.500+j4.106	12.36	12.31	0.630+j4.323	0.500+j4.106
NECAXA	NEC-85B	85	8.28	1.61	1.072+j5.827	20.311+j76.770	12.34	12.30	0.633+j4.327	0.500+j4.106	12.33	12.29	0.635+j4.331	0.500+j4.106
NECAXA	NEC-85C	85	8.28	1.61	1.072+j5.827	20.311+j76.770	12.33	12.29	0.635+j4.331	0.500+j4.106	12.32	12.28	0.637+j4.334	0.500+j4.106
NECAXA	NEC-85D	85	8.28	1.61	1.072+j5.827	20.311+j76.770	12.42	12.35	0.619+j4.302	0.500+j4.106	12.41	12.34	0.621+j4.305	0.500+j4.106
NESTLÉ	NLE-85	85	12.53	6.44	0.806+j3.832	1.596+j15.056	13.82	7.16	0.753+j3.832	1.669+j14.796	13.81	7.15	0.756+j3.834	1.669+j14.796
NETZAHUALCÓYOTL	NET-85	85	15.22	2.36	0.613+j3.166	2.015+j56.077	16.66	2.51	0.572+j3.190	2.154+j58.133	16.62	2.51	0.577+j3.196	2.154+j58.133
NISSAN	NIS-85	85	10.62	5.08	0.975+j4.518	2.676+j19.640	11.61	5.61	0.933+j4.557	2.746+j19.435	11.60	5.61	0.936+j4.560	2.746+j19.435
NOCHISTONGO	NOC-115	115	7.69	7.20	0.944+j8.582	0.711+j10.402	8.07	7.48	0.946+j8.998	0.771+j11.185	8.07	7.48	0.950+j9.003	0.771+j11.185



## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Central

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
NOCHISTONGO	NOC-230	230	30.98	27.35	0.792+j4.212	1.099+j5.917	39.50	32.83	0.482+j3.667	1.112+j5.839	39.17	32.68	0.497+j3.696	1.112+j5.839
NONOALCO	NON-85	85	26.63	8.00	0.352+j1.809	1.198+j14.725	36.86	28.71	0.212+j1.449	0.148+j2.753	36.46	28.32	0.217+j1.465	0.128+j2.800
NOPALA	NOP-230A	230	28.12	28.20	1.056+j4.603	0.646+j4.745	34.47	32.62	0.693+j4.181	0.688+j4.951	34.16	32.44	0.714+j4.216	0.688+j4.951
NOPALA	NOP-230B	230	28.12	28.20	1.056+j4.603	0.646+j4.745	34.47	32.62	0.693+j4.181	0.688+j4.951	34.16	32.44	0.714+j4.216	0.688+j4.951
NOPALA	NOP-230C	230	28.21	28.52	1.052+j4.588	0.615+j4.623	34.59	33.00	0.690+j4.166	0.656+j4.829	34.28	32.82	0.711+j4.202	0.656+j4.829
NOPALA	NOP-400	400	26.22	28.18	2.209+j8.528	0.719+j7.199	35.07	34.78	1.213+j7.140	0.774+j7.464	34.54	34.43	1.268+j7.245	0.774+j7.464
NUEVO AEROPERTO INTERNACIONAL MANIOBRAS	NAI-MAN	230	21.81	23.13	1.013+j6.005	0.881+j5.031	25.56	26.16	0.718+j5.670	0.917+j5.267	25.22	25.92	0.751+j5.743	0.916+j5.268
NUEVO FANAL	NFA-85	85	20.41	6.92	0.502+j2.351	1.812+j16.455	24.17	10.28	0.409+j2.196	2.346+j11.070	23.82	9.88	0.418+j2.228	2.291+j11.674
NUTRIGO	NTG-115	115	8.34	6.11	1.596+j7.799	2.938+j16.364	9.17	6.66	1.539+j7.814	2.971+j16.646	9.16	6.65	1.543+j7.819	2.971+j16.646
OCEANÍA	OCE-230	230	17.02	16.04	1.716+j7.612	3.195+j8.853	21.12	19.03	1.258+j6.801	3.164+j8.789	20.93	18.93	1.289+j6.857	3.164+j8.790
OCEANÍA	OCE-230B	230	15.12	12.74	1.691+j8.615	8.658+j11.699	17.62	14.30	1.361+j8.180	8.775+j12.056	17.46	14.23	1.396+j8.250	8.775+j12.057
ODÓN DE BUEN	ODB-230	230	15.08	13.32	1.847+j8.612	2.085+j12.239	17.41	14.84	1.467+j8.258	2.173+j12.628	17.34	14.80	1.492+j8.293	2.173+j12.628
OLIVAR	OLI-230	230	23.16	23.98	1.474+j5.540	0.903+j5.207	27.60	27.36	1.096+j5.178	0.931+j5.415	27.40	27.24	1.120+j5.211	0.931+j5.415
OTUMBA	OTM-230	230	13.10	10.33	1.558+j10.013	2.869+j18.185	14.92	11.41	1.337+j9.700	2.955+j18.620	14.85	11.38	1.356+j9.745	2.955+j18.622
PACHUCA	PAC-85	85	9.21	5.43	1.218+j5.189	2.004+j16.449	10.06	5.90	1.201+j5.230	2.095+j16.713	10.05	5.89	1.204+j5.234	2.095+j16.713
PACHUCA POTENCIA	PHP-230	230	9.76	9.76	1.595+j13.516	1.449+j13.557	11.05	10.72	1.291+j13.159	1.527+j14.276	11.00	10.69	1.312+j13.214	1.527+j14.281
PACHUCA POTENCIA	PHP-400	400	11.14	8.35	2.364+j20.591	6.625+j41.062	13.25	9.53	1.594+j19.106	6.805+j41.063	13.09	9.47	1.657+j19.340	6.803+j41.117
PALIZADA	PLZ-115	115	8.12	5.32	2.142+j7.893	5.532+j20.329	9.09	5.89	2.076+j7.765	5.556+j20.380	9.08	5.89	2.078+j7.768	5.556+j20.380
PANTITLAN	PNT-85	85	11.10	2.02	0.961+j4.317	4.557+j64.080	12.23	2.15	0.912+j4.319	4.820+j66.466	12.21	2.15	0.916+j4.325	4.820+j66.466
PAPELERA EL NEVADO	PDO-115	115	4.13	2.45	3.373+j15.720	9.742+j48.246	4.60	2.71	3.291+j15.519	9.777+j48.223	4.60	2.71	3.293+j15.522	9.777+j48.223
PAPELERA SAN RAFAEL	PSR-85	85	4.03	1.20	3.162+j11.754	12.608+j97.770	4.40	1.30	3.151+j11.854	12.719+j99.802	4.40	1.30	3.157+j11.861	12.719+j99.802
PAPELES HIGIÉNICOS DEL CENTRO	PHC-230	230	9.55	7.49	2.173+j13.731	4.375+j25.095	10.91	8.29	1.891+j13.258	4.497+j25.660	10.87	8.28	1.911+j13.303	4.496+j25.662
PARQUE INDUSTRIAL	PQI-115	115	6.57	5.30	1.614+j9.980	2.924+j17.162	7.02	5.65	1.591+j10.277	2.971+j17.782	7.02	5.65	1.594+j10.281	2.971+j17.782
PARQUE INDUSTRIAL REFORMA	PIR-85	85	10.94	8.38	0.723+j4.427	0.445+j8.612	11.78	8.91	0.726+j4.524	0.635+j9.000	11.77	8.90	0.729+j4.530	0.635+j9.000
PASO DE CORTES	PDC-115	115	2.64	1.60	7.927+j23.863	22.525+j70.570	2.92	1.77	7.848+j23.761	22.520+j70.550	2.92	1.77	7.853+j23.769	22.520+j70.550
PATERA	PAT-85	85	14.03	5.57	0.680+j3.431	2.266+j19.374	15.82	7.63	0.614+j3.357	2.822+j14.165	15.68	7.47	0.623+j3.386	2.801+j14.548
PATLA	PTL-85	85	5.86	1.42	1.990+j8.128	23.561+j83.993	8.50	8.21	1.299+j6.214	1.076+j6.543	8.50	8.21	1.300+j6.217	1.076+j6.543
PEMEX	PEX-85	85	15.05	4.75	0.650+j3.195	8.532+j23.070	22.05	6.94	0.462+j2.404	8.681+j16.486	21.98	6.91	0.466+j2.412	8.639+j16.616
PEMEX	PEX-85B	85	7.88	0.17	0.858+j6.168	0.187-j877.409	18.28	5.67	0.525+j2.906	4.691+j22.188	18.23	5.64	0.529+j2.913	4.648+j22.320
PEMEX	PMX-230	230	28.06	26.04	0.758+j4.672	0.625+j5.796	36.32	33.61	0.456+j3.995	0.498+j4.935	36.10	33.48	0.468+j4.020	0.498+j4.935

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Central**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
PEMEX AZCAPOTZALCO	PXA-85	85	16.35	6.07	0.615+j2.938	1.818+j18.245	19.73	11.00	0.511+j2.688	1.420+j9.174	19.64	10.93	0.516+j2.700	1.389+j9.256
PEMEX -ZLCP	PMX-115	115	7.91	6.28	1.587+j8.245	3.354+j14.437	9.02	7.10	1.528+j7.953	3.377+j14.226	9.02	7.10	1.529+j7.953	3.377+j14.226
PEMEX -ZOTP	PMX-115	115	6.84	7.86	0.338+j9.700	0.256+j5.913	9.32	11.58	0.192+j7.837	0.148+j3.232	9.31	11.58	0.194+j7.840	0.148+j3.232
PENSADOR	PEN-230	230	20.89	19.80	1.248+j6.232	2.641+j7.099	24.89	22.46	0.900+j5.799	2.718+j7.440	24.57	22.28	0.935+j5.871	2.718+j7.441
PENWALT	PEW-85	85	19.82	7.13	0.452+j2.435	1.579+j15.667	24.25	13.24	0.356+j2.197	1.568+j7.652	22.95	11.62	0.384+j2.321	1.627+j9.108
PERALVILLO	PEV-230	230	17.29	16.39	1.337+j7.564	3.498+j8.450	20.29	18.48	1.008+j7.128	3.614+j8.807	20.08	18.36	1.042+j7.198	3.613+j8.808
PITIRERA	PIT-230A	230	13.26	13.98	1.043+j9.959	0.672+j8.094	17.12	17.85	0.696+j8.503	0.467+j7.345	17.12	17.85	0.697+j8.506	0.467+j7.345
PITIRERA	PIT-230B	230	13.26	13.98	1.043+j9.959	0.672+j8.094	17.12	17.85	0.696+j8.503	0.467+j7.345	17.12	17.85	0.697+j8.506	0.467+j7.345
PITIRERA	PIT-230C	230	13.26	13.98	1.043+j9.959	0.672+j8.094	17.12	17.85	0.696+j8.503	0.467+j7.345	17.12	17.85	0.697+j8.506	0.467+j7.345
PITIRERA	PIT-230D	230	13.26	13.98	1.043+j9.959	0.672+j8.094	17.12	17.85	0.696+j8.503	0.467+j7.345	17.12	17.85	0.697+j8.506	0.467+j7.345
PITIRERA	PIT-400	400	14.17	12.90	1.819+j16.195	2.927+j20.032	25.34	26.55	0.773+j9.994	0.641+j8.011	25.31	26.53	0.778+j10.006	0.641+j8.011
PLACERES DEL ORO	PLO-115	115	1.64	0.96	11.326+j38.746	34.887+j121.300	1.92	1.18	10.299+j36.686	29.589+j105.925	1.92	1.18	10.301+j36.688	29.589+j105.925
POLANCO	POO-230	230	30.19	29.87	1.090+j4.261	2.539+j4.050	37.68	35.24	0.714+j3.810	2.592+j4.181	37.30	35.02	0.736+j3.846	2.592+j4.181
PROCTER & GAMBLE	PYG-230	230	24.93	20.14	0.941+j5.242	1.943+j8.949	30.97	23.79	0.629+j4.674	1.955+j8.772	30.78	23.72	0.644+j4.702	1.955+j8.772
PRODUCTORA MEXICANA DE TUB.	PMT-115	115	8.01	7.52	1.679+j8.113	1.806+j9.645	9.13	8.51	1.612+j7.834	1.860+j9.538	9.13	8.51	1.612+j7.834	1.860+j9.538
PROGRESO	PGS-85	85	3.45	1.73	4.764+j13.396	14.518+j54.735	3.79	1.90	4.743+j13.443	14.549+j54.894	3.79	1.90	4.746+j13.447	14.549+j54.894
PROPIMEX	PRO-85	85	12.89	6.42	0.780+j3.727	1.549+j15.350	14.16	7.12	0.731+j3.741	1.622+j15.114	14.15	7.12	0.734+j3.743	1.622+j15.114
PUERTA DE HIERRO	PTH-85	85	7.07	4.88	1.409+j6.797	1.456+j16.330	8.60	5.83	1.234+j6.151	1.505+j15.186	8.60	5.83	1.237+j6.154	1.505+j15.186
PUESTO CENTRAL DE CONTROL	PCC-85	85	9.77	0.17	0.781+j4.962	0.566+j876.484	19.82	5.66	0.512+j2.676	4.941+j22.672	19.76	5.63	0.516+j2.683	4.898+j22.804
PUESTO CENTRAL DE CONTROL	PCC-85B	85	21.01	6.47	0.527+j2.275	6.103+j17.103	27.62	15.21	0.386+j1.916	5.028+j5.122	27.39	15.13	0.391+j1.932	5.007+j5.169
REFORMA	REF-85	85	12.12	4.53	0.893+j3.948	4.066+j24.173	14.17	6.35	0.801+j3.725	4.159+j17.487	14.13	6.31	0.805+j3.733	4.117+j17.613
REMEDIOS	REM-85	85	33.81	8.34	0.276+j1.425	1.082+j14.778	44.66	15.25	0.193+j1.193	1.191+j8.142	44.33	15.06	0.197+j1.202	1.148+j8.267
REMEDIOS	REM-230	230	35.80	41.32	0.982+j3.577	0.265+j2.329	45.88	49.85	0.606+j3.125	0.281+j2.455	45.32	49.42	0.628+j3.161	0.281+j2.455
ROBERT BOSCH	RBS-85	85	12.65	6.58	0.797+j3.797	1.498+j14.642	13.97	7.32	0.743+j3.791	1.571+j14.371	13.96	7.32	0.746+j3.794	1.571+j14.371
SAFIMEX	SAF-85	85	13.71	6.69	0.728+j3.504	1.297+j14.884	15.03	7.42	0.680+j3.526	1.367+j14.657	15.02	7.42	0.683+j3.529	1.367+j14.657
SAN ANDRÉS	ANS-85	85	14.55	1.84	0.642+j3.312	7.497+j73.156	16.19	1.94	0.575+j3.284	8.135+j76.448	16.16	1.94	0.580+j3.290	8.135+j76.448
SAN ÁNGEL	SNG-230	230	24.10	26.06	1.460+j5.312	0.741+j4.345	28.84	29.83	1.081+j4.948	0.768+j4.565	28.63	29.69	1.105+j4.981	0.768+j4.565
SAN BERNABÉ	BRN-230	230	28.87	31.54	1.177+j4.447	0.370+j3.558	34.99	36.38	0.814+j4.095	0.395+j3.743	34.68	36.17	0.836+j4.128	0.395+j3.743
SAN BERNABÉ	BRN-400	400	25.81	26.34	2.263+j8.656	1.061+j8.638	34.05	32.00	1.273+j7.352	1.111+j8.921	33.51	31.69	1.332+j7.463	1.110+j8.922
SAN DIEGO	SDI-85	85	7.15	4.93	1.394+j6.721	1.426+j16.166	8.68	5.88	1.222+j6.098	1.481+j15.072	8.68	5.87	1.225+j6.101	1.481+j15.072

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Central

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
SAN FELIPE DEL PROGRESO	FPG-115	115	4.36	2.82	3.727+j14.764	9.593+j38.978	4.79	3.09	3.670+j14.784	9.626+j39.269	4.79	3.09	3.674+j14.788	9.626+j39.269
SAN FRANCISCO	SSO-85	85	12.81	7.40	0.802+j3.746	0.930+j12.338	14.23	8.18	0.743+j3.719	1.021+j12.254	14.22	8.18	0.746+j3.722	1.021+j12.254
SAN FRANCISCO SOYANIQUILPAN	SFS-230	230	6.27	6.07	4.114+j20.765	3.093+j23.119	7.70	7.06	3.152+j18.702	3.397+j23.697	7.70	7.06	3.157+j18.711	3.397+j23.697
SAN ISIDRO	ISO-115	115	6.79	6.87	1.948+j9.578	1.287+j9.266	7.66	7.62	1.872+j9.344	1.365+j9.596	7.66	7.62	1.872+j9.345	1.365+j9.596
SAN MATEO	SMT-115	115	5.06	3.00	2.577+j12.869	7.478+j39.535	5.66	3.32	2.495+j12.668	7.513+j39.513	5.66	3.32	2.497+j12.670	7.513+j39.513
SAN SEBASTIÁN	SSE-115	115	4.27	2.91	3.751+j15.102	10.691+j35.701	4.72	3.20	3.665+j15.043	10.719+j35.868	4.72	3.20	3.668+j15.047	10.719+j35.868
SANTA CRUZ	CRU-230	230	31.60	37.04	0.990+j4.084	0.235+j2.486	40.35	44.81	0.614+j3.568	0.248+j2.598	39.68	44.27	0.643+j3.625	0.248+j2.599
SANTA CRUZ	CRU-400	400	25.85	26.39	2.125+j8.677	1.025+j8.621	33.90	31.88	1.182+j7.400	1.077+j8.956	32.93	31.30	1.267+j7.609	1.076+j8.969
SANTA FÉ	SFE-230	230	23.42	22.38	1.469+j5.476	1.202+j6.476	28.06	25.57	1.094+j5.089	1.243+j6.667	27.86	25.47	1.117+j5.123	1.243+j6.667
SANTIAGO TLAUTLA	STU-115	115	4.91	3.51	3.329+j13.106	7.480+j28.848	5.34	3.81	3.277+j13.276	7.517+j29.315	5.34	3.81	3.279+j13.280	7.517+j29.315
SECRETARÍA DE SEGURIDAD PÚBLICA	SSP-85	85	10.49	4.06	1.008+j4.570	4.588+j26.587	12.15	5.54	0.916+j4.348	4.681+j19.894	12.13	5.51	0.921+j4.356	4.638+j20.020
SMURFIT KAPPA	SKP-85	85	10.71	4.41	0.821+j4.508	3.590+j23.994	11.87	5.64	0.771+j4.482	4.239+j19.175	11.82	5.59	0.777+j4.501	4.204+j19.419
SUBESTACIÓN CINCO BOMBEO	ENB-115	115	12.49	7.97	0.770+j5.262	2.374+j14.163	14.70	9.01	0.666+j4.923	2.408+j14.160	14.69	9.01	0.668+j4.925	2.408+j14.160
SUBESTACIÓN CUATRO BOMBEO	ECB-115	115	26.16	21.15	0.310+j2.519	0.492+j4.312	31.50	24.39	0.238+j2.306	0.525+j4.306	31.47	24.37	0.239+j2.309	0.525+j4.306
SUBESTACIÓN DOS BOMBEO	EDB-115	115	13.95	9.48	0.746+j4.699	1.899+j11.329	16.66	11.43	0.631+j4.339	1.714+j10.236	16.65	11.43	0.632+j4.341	1.714+j10.236
SUBESTACIÓN SEIS BOMBEO	ESB-115	115	14.07	9.52	0.697+j4.668	1.815+j11.336	16.40	10.74	0.614+j4.412	1.849+j11.329	16.39	10.74	0.616+j4.414	1.849+j11.329
SUBESTACIÓN TRES BOMBEO	ETB-115	115	22.16	16.66	0.384+j2.972	0.788+j5.908	26.44	19.06	0.310+j2.745	0.821+j5.902	26.41	19.06	0.311+j2.748	0.821+j5.902
SUBESTACIÓN UNO BOMBEO	EUB-115	115	10.69	6.69	0.989+j6.133	3.097+j17.072	12.40	8.01	0.893+j5.821	2.742+j15.322	12.40	8.00	0.894+j5.823	2.742+j15.322
TACUBA	TAC-85	85	17.46	6.36	0.596+j2.747	1.710+j17.538	21.54	13.26	0.475+j2.461	1.027+j7.176	21.42	13.16	0.480+j2.474	1.001+j7.241
TACUBAYA	TYA-85	85	9.69	3.84	1.093+j4.946	5.139+j27.871	11.18	5.16	1.001+j4.724	5.228+j21.166	11.16	5.14	1.005+j4.732	5.185+j21.293
TACUBAYA	TYA-230	230	21.38	21.13	1.555+j6.014	0.990+j6.502	25.32	23.99	1.176+j5.648	1.024+j6.726	25.16	23.89	1.200+j5.681	1.024+j6.726
TAXQUEÑA	TAX-85	85	13.92	1.73	0.613+j3.471	9.034+j77.750	15.21	1.81	0.567+j3.502	10.028+j81.831	15.19	1.81	0.572+j3.508	10.028+j81.831
TAXQUEÑA	TAX-230	230	13.61	11.45	1.901+j9.568	2.458+j15.237	15.62	12.69	1.525+j9.229	2.565+j15.695	15.55	12.66	1.550+j9.265	2.565+j15.695
TAXQUEÑA	TAX-230B	230	13.61	11.45	1.901+j9.568	2.458+j15.237	15.62	12.69	1.525+j9.229	2.565+j15.695	15.55	12.66	1.550+j9.265	2.565+j15.695
TECÁMAC	TCM-230	230	16.64	12.76	1.106+j7.905	1.989+j15.197	19.30	14.17	0.834+j7.523	2.084+j15.677	19.17	14.12	0.857+j7.573	2.084+j15.679
TECAMACHALCO	TEH-230	230	23.37	21.05	1.483+j5.485	1.715+j7.480	28.10	24.09	1.111+j5.078	1.752+j7.643	27.89	23.99	1.134+j5.112	1.752+j7.643
TEJUPILCO	TJP-115	115	8.06	6.62	1.734+j8.051	2.654+j13.225	9.32	7.64	1.582+j7.672	2.562+j12.605	9.32	7.64	1.584+j7.675	2.562+j12.605
TEOLOAPAN	TLP-69	69	0.88	1.16	18.207+j41.536	1.213+j12.271	0.96	1.26	18.071+j41.848	1.374+j13.391	0.96	1.26	18.072+j41.849	1.374+j13.391
TENANGO DEL VALLE	TDV-85	85	5.41	2.68	2.219+j8.792	6.794+j36.351	5.99	2.95	2.148+j8.748	6.882+j36.288	5.99	2.95	2.151+j8.750	6.882+j36.288
TEOTIHUACÁN	TTH-230	230	35.68	34.18	0.697+j3.656	0.515+j4.239	43.37	39.22	0.446+j3.338	0.547+j4.416	42.53	38.74	0.473+j3.402	0.547+j4.423

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Central

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
TEOTIHUACÁN	TTH-400	400	31.16	31.36	1.563+j7.246	0.770+j7.388	41.93	38.74	0.797+j6.006	0.814+j7.538	40.07	37.59	0.883+j6.278	0.811+j7.582
TEPEXIC	TEP-85	85	7.44	1.55	1.395+j6.445	21.089+j79.257	11.02	10.82	0.871+j4.819	0.604+j4.823	11.02	10.81	0.872+j4.822	0.604+j4.823
TEPOTZOTLÁN	TPZ-85	85	11.05	4.35	1.208+j4.273	4.322+j24.719	13.51	5.66	0.975+j3.874	4.900+j20.084	13.46	5.57	0.980+j3.890	4.839+j20.562
TEXCALTITLAN	TTT-115	115	5.87	4.82	2.390+j11.058	3.698+j18.251	6.66	5.40	2.259+j10.739	3.747+j18.170	6.65	5.40	2.261+j10.742	3.747+j18.170
TEXCOCO	TEX-230	230	43.14	45.70	0.655+j3.008	0.308+j2.599	54.56	54.18	0.386+j2.649	0.330+j2.724	53.07	53.15	0.416+j2.721	0.330+j2.731
TEXCOCO	TEX-400	400	31.81	33.93	1.665+j7.066	0.608+j6.065	44.07	43.06	0.829+j5.704	0.649+j6.180	41.46	41.14	0.935+j6.056	0.641+j6.287
TIANGUISTENCO	TIA-230	230	10.20	8.85	2.747+j12.730	2.716+j18.926	11.80	9.86	2.249+j12.177	2.838+j19.488	11.77	9.85	2.268+j12.203	2.838+j19.488
TINGAMBATO	TIN-115	115	5.75	4.57	2.162+j11.343	3.854+j20.050	7.59	7.04	1.505+j9.510	1.526+j11.615	7.58	7.04	1.507+j9.512	1.526+j11.615
TIQUICHEO	TQC-115	115	1.91	1.16	7.933+j33.907	22.904+j100.025	2.62	2.02	5.273+j27.339	9.544+j51.907	2.62	2.02	5.274+j27.340	9.544+j51.907
TIZAPA MANIOBRAS	TMA-115	115	8.28	6.25	1.528+j7.869	2.829+j15.495	9.92	8.04	1.290+j7.252	1.994+j12.266	9.91	8.04	1.291+j7.255	1.994+j12.266
TIZAYUCA	TIZ-230	230	15.24	12.05	1.215+j8.627	1.941+j15.582	17.76	13.42	0.925+j8.175	2.040+j16.082	17.66	13.39	0.945+j8.215	2.040+j16.083
TLAPEHUALA	TPA-115	115	2.49	1.47	8.137+j25.447	24.419+j78.246	2.95	1.84	7.266+j23.709	20.212+j65.983	2.95	1.84	7.267+j23.711	20.212+j65.983
TLATELULCO MÓVIL	TTO-85	85	10.48	6.74	1.014+j4.572	0.914+j12.598	11.63	7.33	0.953+j4.541	1.041+j12.871	11.63	7.33	0.956+j4.544	1.041+j12.871
TOLUCA	TOL-85	85	15.75	8.58	0.606+j3.057	0.578+j11.034	17.52	9.63	0.549+j3.031	0.652+j10.716	17.51	9.62	0.552+j3.034	0.652+j10.716
TOLUCA	TOL-230	230	15.14	15.98	1.930+j8.556	0.559+j7.621	17.80	18.04	1.475+j8.073	0.598+j7.986	17.74	18.00	1.495+j8.099	0.598+j7.986
TOLUCA 2000	TDK-230	230	11.70	10.23	2.412+j11.088	1.978+j16.313	13.56	11.44	1.955+j10.592	2.048+j16.725	13.52	11.42	1.977+j10.620	2.048+j16.725
TOPILEJO	TOP-230	230	24.10	24.59	1.123+j5.395	0.519+j5.310	28.58	27.76	0.778+j5.051	0.559+j5.617	28.32	27.60	0.803+j5.095	0.559+j5.617
TOPILEJO	TOP-400	400	26.79	27.64	2.115+j8.356	1.148+j8.043	34.97	33.40	1.185+j7.167	1.194+j8.318	34.29	32.99	1.249+j7.302	1.193+j8.319
TOTOLTEPEC	TTC-230	230	14.31	13.89	2.120+j9.035	1.393+j10.235	16.89	15.75	1.635+j8.493	1.440+j10.550	16.83	15.71	1.655+j8.520	1.440+j10.550
TRATAMIENTO AGUAS RESIDUALES	RAT-230	230	25.30	22.77	0.824+j5.184	1.179+j6.914	31.43	26.88	0.525+j4.618	1.219+j6.890	31.24	26.78	0.539+j4.645	1.219+j6.890
TREN INTERURBANO MÉXICO-TOLUCA DOS	TTD-230	230	21.13	19.68	1.460+j6.113	1.475+j7.652	24.94	22.34	1.088+j5.754	1.494+j7.819	24.79	22.26	1.111+j5.788	1.494+j7.819
TREN INTERURBANO MÉXICO-TOLUCA UNO	TTU-230	230	15.08	12.08	1.718+j8.634	3.094+j15.202	17.45	13.55	1.345+j8.262	3.110+j15.356	17.38	13.53	1.366+j8.293	3.110+j15.356
TREN SUBURBANO	TSU-230	230	23.43	21.56	1.120+j5.556	1.645+j7.036	28.69	24.76	0.739+j5.037	1.743+j7.358	28.42	24.62	0.762+j5.082	1.743+j7.358
TRIMEX	TRX-85	85	19.37	6.10	0.491+j2.486	2.248+j19.005	23.96	8.47	0.346+j2.226	2.828+j14.387	23.78	8.25	0.352+j2.243	2.767+j14.864
TULA	TUL-230	230	35.24	37.28	0.620+j3.717	0.257+j3.137	47.39	51.43	0.323+j3.065	0.137+j2.319	47.00	51.12	0.335+j3.090	0.137+j2.319
TULA	TUL-400	400	27.70	24.50	1.607+j8.180	1.648+j11.607	39.10	36.85	0.745+j6.454	0.745+j7.666	38.34	36.39	0.791+j6.579	0.745+j7.668
TULANCINGO	TLG-85	85	6.59	3.04	1.936+j7.187	7.516+j32.685	7.42	4.23	1.881+j7.025	6.467+j22.824	7.42	4.23	1.884+j7.030	6.467+j22.824
UNIVERSIDADES	UNI-85	85	9.00	5.53	1.185+j5.322	1.932+j15.714	9.83	5.99	1.171+j5.368	2.037+j15.992	9.82	5.99	1.174+j5.373	2.037+j15.992
VALLE DE MÉXICO (230 KV)	VAE-230	230	44.54	47.44	0.592+j2.922	0.299+j2.405	54.66	55.12	0.373+j2.646	0.322+j2.550	53.42	54.25	0.399+j2.705	0.322+j2.551
VALLE DE MÉXICO (85 KV)	VDM-85	85	11.87	4.13	0.561+j4.096	3.733+j27.213	20.38	23.33	0.232+j2.639	0.102+j1.821	14.42	9.08	0.437+j3.717	0.860+j10.353

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Central**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
VALLE SAN PEDRO	VAP-230	230	16.53	11.82	1.363+j7.917	2.353+j17.523	19.20	13.23	1.068+j7.532	2.399+j17.760	19.07	13.19	1.092+j7.580	2.398+j17.760
VALLE TULANCINGO	VTU-85	85	5.02	2.54	2.653+j9.408	8.677+j37.528	5.63	3.59	2.600+j9.229	7.279+j24.902	5.63	3.59	2.603+j9.233	7.279+j24.902
VALLEJO	VAJ-85	85	18.17	6.44	0.436+j2.665	1.557+j17.422	20.24	8.95	0.386+j2.639	2.206+j12.604	20.09	8.81	0.392+j2.658	2.171+j12.847
VALLEJO	VAJ-230	230	23.43	21.56	1.120+j5.556	1.645+j7.036	28.69	24.76	0.739+j5.037	1.743+j7.358	28.42	24.62	0.762+j5.082	1.743+j7.358
VERÓNICA	VRN-85	85	14.54	4.91	0.670+j3.308	3.554+j23.066	25.65	7.65	0.352+j2.075	3.763+j16.567	25.55	7.60	0.357+j2.082	3.720+j16.698
VERÓNICA	VRN-85B	85	8.11	0.17	0.811+j5.999	0.053-j877.911	19.43	5.85	0.479+j2.736	4.554+j21.679	19.38	5.82	0.483+j2.743	4.511+j21.811
VERÓNICA	VRN-230	230	20.40	20.79	1.375+j6.361	1.189+j6.143	24.28	23.59	1.026+j5.929	1.253+j6.483	23.97	23.40	1.061+j6.000	1.253+j6.483
VERTIZ	VER-230	230	19.40	19.37	1.430+j6.694	1.977+j6.756	24.50	23.36	0.973+j5.882	1.968+j6.662	24.25	23.22	1.003+j5.938	1.968+j6.663
VICTORIA	VIC-85	85	26.86	7.71	0.349+j1.793	1.217+j15.475	32.51	11.31	0.251+j1.641	1.801+j10.880	32.15	10.93	0.257+j1.659	1.740+j11.354
VICTORIA	VIC-230	230	37.65	41.37	0.841+j3.426	0.271+j2.649	48.57	49.88	0.494+j2.967	0.288+j2.780	47.85	49.38	0.515+j3.009	0.288+j2.781
VICTORIA	VIC-400	400	24.80	23.66	2.081+j9.077	1.467+j10.762	32.72	28.92	1.123+j7.682	1.518+j10.772	32.23	28.66	1.178+j7.793	1.518+j10.773
VIDRIERA LOS REYES	VLR-85	85	11.24	4.57	0.778+j4.297	3.400+j23.268	12.46	5.89	0.728+j4.271	4.049+j18.449	12.40	5.83	0.734+j4.291	4.014+j18.693
VIDRIERA TOLUCA	VDT-85	85	14.80	6.95	0.668+j3.248	1.250+j14.610	16.17	7.69	0.623+j3.279	1.319+j14.395	16.16	7.69	0.626+j3.282	1.319+j14.395
VIDRIO PLANO	VPM-85	85	11.96	5.14	0.811+j4.023	2.501+j20.308	13.60	7.19	0.736+j3.900	2.855+j14.332	13.43	6.95	0.749+j3.950	2.871+j14.999
VIGA TRIFILADOS	VIG-115	115	8.24	8.38	1.618+j7.893	1.079+j7.480	9.40	9.47	1.551+j7.614	1.163+j7.485	9.40	9.47	1.551+j7.614	1.163+j7.485
VILLA DE LAS FLORES	VDF-85	85	6.94	3.09	1.314+j6.953	5.215+j33.128	9.42	5.87	0.898+j5.657	3.909+j15.797	8.61	4.78	0.994+j6.188	4.084+j20.985
VILLA GUERRERO	VGU-115	115	1.98	1.13	8.197+j32.508	24.231+j107.156	2.20	1.24	8.041+j32.206	24.281+j107.074	2.20	1.24	8.043+j32.209	24.281+j107.074
VILLITA	VIL-115	115	12.80	12.81	0.706+j5.139	0.731+j5.013	14.77	14.99	0.634+j4.903	0.590+j4.684	14.77	14.99	0.634+j4.903	0.590+j4.684
VILLITA	VIL-230	230	14.10	12.10	1.591+j9.282	2.759+j13.373	20.17	22.37	0.975+j7.177	0.487+j5.291	20.16	22.36	0.976+j7.179	0.487+j5.291
VITO	VIT-85	85	10.25	3.20	0.845+j4.711	6.729+j35.861	11.16	3.50	0.819+j4.766	6.742+j35.985	11.15	3.50	0.822+j4.770	6.742+j35.985
VITRO FIBRAS	VFI-85	85	12.04	5.15	0.807+j3.996	2.524+j20.338	13.67	7.16	0.733+j3.879	2.895+j14.458	13.51	6.94	0.745+j3.926	2.910+j15.090
VOLCÁN GORDO	VOG-115	115	8.96	9.14	1.296+j7.295	0.453+j6.905	10.33	10.41	1.166+j6.975	0.502+j6.825	10.32	10.40	1.167+j6.978	0.502+j6.825
VOLCÁN GORDO	VOG-400	400	7.69	5.91	3.769+j29.798	4.002+j56.981	9.32	6.83	2.742+j27.113	4.303+j56.726	9.30	6.83	2.771+j27.162	4.302+j56.726
XALOSTOC	XAL-230	230	21.62	19.99	1.133+j6.037	1.250+j7.615	25.66	22.67	0.817+j5.634	1.299+j7.865	25.33	22.50	0.851+j5.704	1.299+j7.865
XICOTEPEC	XIP-85	85	7.16	1.53	1.426+j6.701	21.578+j79.609	10.33	9.26	0.947+j5.140	1.529+j6.539	10.32	9.26	0.949+j5.144	1.529+j6.539
XOCHIMILCO	XOC-230	230	20.15	18.92	1.377+j6.446	1.360+j7.927	24.29	21.68	0.983+j5.932	1.409+j8.151	24.07	21.57	1.012+j5.984	1.409+j8.152
XOCHITLA	XCH-230	230	22.45	16.02	0.999+j5.830	2.639+j12.827	27.15	18.31	0.673+j5.339	2.680+j12.916	26.96	18.26	0.691+j5.374	2.680+j12.916
YEBUCIBI	YBC-115	115	7.76	5.23	2.163+j8.274	5.318+j20.248	8.62	5.76	2.097+j8.205	5.343+j20.392	8.62	5.76	2.100+j8.208	5.343+j20.392
ZAPATA ENVASES	ZAE-85	85	18.95	6.00	0.505+j2.540	2.294+j19.311	23.55	8.30	0.354+j2.265	2.874+j14.690	23.37	8.09	0.360+j2.282	2.813+j15.167
ZARAGOZA	ZAR-230	230	25.21	19.62	1.106+j5.151	1.911+j9.694	30.79	22.50	0.751+j4.684	1.950+j9.857	30.39	22.36	0.781+j4.742	1.949+j9.858

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Central**

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero ( $\Omega$ )											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	$Z_{m(0)}$	$Z_{m(0)}$	3F	1F	$Z_{m(0)}$	$Z_{m(0)}$	3F	1F	$Z_{m(0)}$	$Z_{m(0)}$
ZICTEPEC	ZIC-85	85	5.36	2.61	2.229+j8.888	6.637+j37.638	5.98	2.88	2.132+j8.775	6.737+j37.679	5.98	2.88	2.135+j8.777	6.737+j37.679
ZIRANDARO	ZIR-69	69	1.48	1.11	12.438+j23.877	34.898+j41.649	1.72	1.25	11.652+j22.597	34.925+j42.172	1.72	1.25	11.652+j22.598	34.925+j42.172
ZUMPANGO	ZUM-85	85	8.26	3.17	1.220+j5.815	6.166+j33.953	9.00	3.47	1.200+j5.876	6.179+j34.076	8.99	3.47	1.203+j5.880	6.179+j34.076

# Gerencia de Control Regional Oriental



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## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Oriental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
AB CALSA	ABL-115	115	1.42	0.77	11.210+j45.316	42.968+j159.433	2.20	1.21	7.467+j32.278	31.410+j110.260	2.20	1.21	7.468+j32.280	31.410+j110.260
ABENT 3T	ABT-230	230	8.40	9.68	2.056+j15.676	0.912+j10.879	9.70	10.77	1.698+j14.964	1.016+j11.608	9.70	10.77	1.698+j14.964	1.016+j11.608
ACACOYAUA	AYA-115	115	2.93	2.61	6.347+j21.785	8.508+j29.773	3.51	2.99	5.319+j20.122	8.688+j30.265	3.51	2.99	5.319+j20.122	8.688+j30.265
ACAHUIZOTLA	AHZ-115	115	1.93	1.34	9.322+j33.055	17.103+j78.424	2.32	1.53	7.535+j30.585	17.129+j78.320	2.32	1.53	7.536+j30.586	17.129+j78.320
ACAJETE	ACJ-115	115	5.21	3.37	2.518+j12.497	6.926+j32.976	6.15	3.80	2.122+j11.690	6.936+j33.131	6.13	3.80	2.131+j11.718	6.936+j33.133
ACALA	AAA-115	115	4.27	3.09	3.724+j15.091	11.085+j31.598	4.95	3.53	3.365+j14.363	10.894+j30.700	4.95	3.53	3.365+j14.363	10.894+j30.700
ACAPULCO	APC-115	115	5.14	6.66	4.294+j12.176	1.266+j3.841	7.10	8.78	2.640+j9.936	1.320+j3.933	7.10	8.78	2.641+j9.937	1.320+j3.933
ACATLÁN	ACA-115	115	2.83	2.09	7.247+j22.343	10.224+j47.248	3.12	2.28	7.143+j22.264	10.503+j48.364	3.12	2.28	7.148+j22.269	10.503+j48.364
ACATZINGO	ACZ-115	115	4.37	2.76	5.574+j14.132	10.665+j40.636	4.85	3.04	5.489+j14.039	10.687+j40.783	4.84	3.03	5.493+j14.045	10.687+j40.783
ACAYUCAN	ACY-115	115	10.80	7.41	1.360+j5.997	3.176+j14.391	12.88	8.75	1.188+j5.544	2.987+j13.469	12.88	8.75	1.189+j5.544	2.987+j13.469
ACEROS TLAXCALA	ATX-230	230	6.62	4.96	3.744+j19.693	9.153+j39.446	7.68	5.57	3.227+j18.756	9.206+j39.636	7.65	5.57	3.250+j18.807	9.206+j39.636
ACTOPAN	AOC-115	115	2.98	1.93	6.100+j21.432	12.359+j57.606	3.32	2.13	5.919+j21.158	12.382+j57.875	3.32	2.13	5.923+j21.166	12.382+j57.875
ACUITLAPILCO	ACU-115	115	11.59	7.17	1.165+j5.610	4.016+j15.883	13.00	7.94	1.089+j5.512	4.015+j15.885	12.98	7.94	1.094+j5.521	4.015+j15.886
ADOLFO RUIZ CORTINEZ	ARC-115	115	5.09	6.32	4.390+j12.296	1.347+j5.173	7.00	8.24	2.722+j10.076	1.401+j5.264	7.00	8.24	2.723+j10.077	1.401+j5.264
AEROPUERTO	ARP-69	69	5.08	3.49	2.058+j7.566	4.554+j18.060	6.44	4.24	1.932+j6.522	4.529+j16.702	6.44	4.24	1.933+j6.526	4.529+j16.702
AEROPUERTO	ARU-115	115	13.88	14.80	1.005+j4.678	0.984+j3.842	20.03	20.02	0.599+j3.598	0.952+j3.688	20.01	20.01	0.601+j3.601	0.952+j3.688
AGRONITROGENADOS	ARG-115	115	6.70	4.39	1.668+j9.767	4.965+j25.228	7.95	5.09	1.504+j9.059	4.767+j24.345	7.95	5.09	1.505+j9.059	4.767+j24.345
AGUA DULCE DOS	ADD-115	115	5.39	4.07	2.661+j12.028	5.618+j23.810	6.07	4.53	2.621+j11.744	5.625+j23.757	6.07	4.53	2.621+j11.745	5.625+j23.757
AGUA FRÍA	AGF-69	69	2.87	2.58	4.581+j13.120	5.007+j18.082	3.40	3.04	4.436+j12.093	4.981+j16.724	3.40	3.04	4.437+j12.097	4.981+j16.724
AGUA SANTA	AGA-115	115	9.55	5.83	1.393+j6.811	5.275+j19.609	10.67	6.45	1.315+j6.718	5.278+j19.626	10.66	6.45	1.319+j6.726	5.278+j19.626
AGUA ZARCA	AZA-115	115	1.30	0.76	20.022+j47.015	47.516+j156.872	1.47	0.84	18.652+j46.018	47.567+j156.975	1.47	0.84	18.653+j46.019	47.567+j156.975
ALMECATLA	LML-115	115	35.71	30.08	0.336+j1.829	0.495+j2.895	42.02	34.66	0.263+j1.718	0.485+j2.832	41.82	34.57	0.267+j1.726	0.485+j2.832
ALTOTONGA DOS	TTG-115	115	9.50	10.66	1.172+j6.892	0.478+j4.762	11.62	12.71	0.881+j6.225	0.461+j4.561	11.49	12.59	0.892+j6.296	0.456+j4.576
ALTZAYANCA	AZY-115	115	5.58	3.57	3.179+j11.471	7.434+j31.262	6.24	3.94	3.073+j11.293	7.450+j31.308	6.19	3.93	3.110+j11.377	7.447+j31.333
ALTZAYANCA MANIOBRAS	AZM-230	230	6.96	5.28	3.300+j18.781	9.536+j36.247	8.40	6.23	2.615+j17.181	8.979+j34.341	8.38	6.22	2.637+j17.234	8.979+j34.341
ALUMINIO	AMN-115	115	14.00	16.35	0.986+j4.640	0.524+j2.712	19.47	21.58	0.625+j3.699	0.537+j2.730	19.45	21.57	0.627+j3.703	0.537+j2.730
ALVARADO DOS	AVD-115	115	1.96	1.12	10.969+j32.068	30.428+j105.189	2.29	1.46	9.767+j30.380	22.815+j82.936	2.29	1.46	9.768+j30.381	22.815+j82.936
AMATLAN DOS	ATD-115	115	16.18	18.50	0.775+j4.029	0.204+j2.615	19.57	21.45	0.599+j3.683	0.232+j2.767	19.55	21.43	0.602+j3.688	0.232+j2.767
AMATLAN DOS	ATD-230	230	7.91	8.16	2.973+j16.515	1.295+j15.400	9.51	9.33	2.272+j15.198	1.459+j16.300	9.49	9.32	2.281+j15.216	1.459+j16.300
AMOZOC	AMZ-115	115	7.29	4.73	3.214+j8.519	6.288+j23.165	8.12	5.21	3.137+j8.435	6.299+j23.250	8.11	5.21	3.141+j8.443	6.299+j23.250



**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Oriental**

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
ANA CHIAUTEMPAN SANTA	ANC-115	115	14.45	9.44	1.033+j4.479	2.969+j11.582	16.27	10.47	0.958+j4.385	2.971+j11.602	16.24	10.46	0.962+j4.394	2.970+j11.602
ANDRÉS DOS SAN	ADS-115	115	2.09	1.17	11.622+j29.595	27.056+j103.193	2.63	2.42	9.008+j26.280	7.560+j33.276	2.63	2.42	9.008+j26.281	7.560+j33.276
ANGOSTURA	ANG-115	115	10.33	10.15	0.950+j6.356	0.558+j6.719	13.07	13.20	0.584+j5.556	0.175+j5.378	13.07	13.20	0.584+j5.556	0.175+j5.378
ANGOSTURA	ANG-400	400	7.28	6.69	5.329+j31.288	6.554+j39.233	15.15	18.16	1.410+j16.713	0.386+j7.670	15.15	18.16	1.410+j16.714	0.386+j7.670
ANTUÑANO	AUN-115	115	19.04	12.75	0.895+j3.371	1.650+j8.517	21.64	14.22	0.817+j3.274	1.649+j8.521	21.59	14.20	0.821+j3.282	1.649+j8.521
APAXTLA SWITCHEO	AXS-115	115	2.27	1.62	9.094+j27.794	20.275+j61.421	2.77	1.90	7.300+j25.304	19.620+j59.046	2.77	1.90	7.302+j25.305	19.620+j59.046
APIZACO DOS	API-115	115	11.29	7.93	1.376+j5.717	3.528+j12.944	12.69	8.78	1.284+j5.611	3.536+j13.025	12.66	8.77	1.290+j5.622	3.536+j13.025
AQUASISTEMAS	ASI-115	115	3.13	2.45	4.545+j20.718	10.820+j37.541	3.53	2.72	4.324+j20.207	10.847+j37.771	3.53	2.72	4.324+j20.207	10.847+j37.771
ARRIAGA	ARR-115	115	2.46	2.68	7.048+j25.998	2.853+j20.465	2.87	3.02	6.365+j24.677	2.931+j21.547	2.87	3.02	6.365+j24.677	2.931+j21.547
ATENCINGO	AEN-115	115	1.80	1.14	11.481+j35.159	23.743+j98.472	1.98	1.25	11.383+j35.078	23.943+j99.171	1.98	1.25	11.388+j35.083	23.943+j99.171
ATEXCACO	AXO-115	115	3.50	2.82	4.546+j18.437	11.013+j30.839	4.42	4.63	3.488+j16.169	1.944+j13.609	4.38	4.60	3.512+j16.317	1.930+j13.633
ATLIHUETZIA	ATZ-115	115	17.22	12.68	0.925+j3.744	2.030+j7.828	19.48	14.07	0.847+j3.651	2.037+j7.880	19.43	14.05	0.852+j3.662	2.037+j7.880
ATLIXCO	ATC-115	115	7.97	4.88	1.859+j8.121	5.971+j23.454	8.89	5.39	1.777+j8.024	5.978+j23.485	8.88	5.39	1.781+j8.031	5.978+j23.486
ATLIXCOYOTL	AXT-115	115	21.05	13.46	0.779+j3.056	1.928+j8.294	24.04	15.05	0.700+j2.956	1.925+j8.284	23.97	15.03	0.705+j2.964	1.925+j8.285
AUTO MANUFACTURAS	AMF-115	115	17.46	12.91	0.603+j3.754	1.892+j7.637	19.28	14.09	0.560+j3.747	1.902+j7.784	19.23	14.07	0.565+j3.756	1.902+j7.785
AYUTLA	AYT-115	115	0.74	0.42	29.342+j85.030	76.348+j287.540	0.82	0.46	27.938+j84.049	76.401+j287.645	0.82	0.46	27.939+j84.050	76.401+j287.645
BALSAS	BAA-115	115	3.18	2.52	6.316+j19.872	12.972+j35.205	4.08	3.08	4.566+j17.305	12.328+j32.848	4.08	3.08	4.567+j17.307	12.328+j32.848
BARRA NORTE	BRN-115	115	3.04	3.47	4.871+j21.327	2.872+j13.832	3.38	3.82	4.786+j21.090	2.981+j14.266	3.37	3.82	4.793+j21.112	2.981+j14.267
BELISARIO DOMÍNGUEZ	BDZ-115	115	5.04	4.79	3.563+j12.681	3.307+j14.736	6.30	5.73	2.680+j11.274	3.221+j14.423	6.30	5.73	2.680+j11.274	3.221+j14.423
BELISARIO DOMÍNGUEZ II	BDD-115	115	2.11	1.61	9.429+j30.003	18.963+j58.003	2.47	1.82	8.326+j28.380	19.090+j58.309	2.47	1.82	8.327+j28.380	19.090+j58.309
BENITO JUÁREZ	BJU-115	115	9.31	6.63	1.996+j6.848	2.238+j15.929	11.22	7.45	1.876+j6.232	2.398+j16.426	11.22	7.45	1.877+j6.234	2.398+j16.426
BENTELER	BEN-115	115	15.73	9.60	1.058+j4.085	2.199+j12.147	17.74	10.63	0.983+j3.998	2.204+j12.190	17.70	10.62	0.988+j4.006	2.204+j12.190
BERRIOZÁBAL	BRZ-115	115	5.70	3.88	2.626+j11.338	5.718+j27.549	6.58	4.35	2.397+j10.835	5.720+j27.560	6.58	4.35	2.397+j10.835	5.720+j27.560
BII HIOXO	BII-115	115	4.55	5.33	1.486+j14.531	0.279+j8.163	5.79	6.43	1.177+j12.566	0.324+j8.816	5.79	6.43	1.177+j12.567	0.324+j8.816
BII HIOXO	BII-115B	115	3.55	4.34	2.080+j18.592	0.246+j8.462	5.00	5.71	1.371+j14.544	0.287+j9.164	5.00	5.71	1.371+j14.545	0.287+j9.164
BII NEE STIPA	BNS-115	115	6.87	8.83	1.619+j9.523	0.211+j3.353	8.80	10.89	1.173+j8.217	0.235+j3.584	8.80	10.89	1.174+j8.218	0.235+j3.584
BII STINÚ I	BSU-115	115	7.73	10.03	1.527+j8.457	0.214+j2.771	10.06	12.59	1.085+j7.181	0.232+j2.947	10.06	12.59	1.085+j7.181	0.232+j2.947
BII STINÚ II	BSD-230	230	5.37	5.82	2.347+j24.622	1.822+j18.792	7.28	7.29	1.699+j19.984	2.010+j19.829	7.28	7.29	1.700+j19.985	2.010+j19.829
BIO PAPEL PRINTING	BPP-115	115	7.36	6.61	1.792+j8.842	1.347+j12.150	9.89	8.29	1.352+j7.257	1.574+j11.730	9.89	8.29	1.353+j7.258	1.574+j11.730
BOCA DEL MONTE	BDM-115	115	2.30	1.40	6.274+j28.221	26.766+j80.473	2.56	1.55	6.095+j27.891	26.780+j80.528	2.56	1.55	6.098+j27.896	26.780+j80.528

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Oriental

Subestación eléctrica	Acronímico	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
BOCA DEL RIO	BDR-115	115	10.94	8.86	1.426+j5.899	1.996+j10.262	16.79	12.68	0.804+j4.274	1.637+j8.644	16.78	12.68	0.805+j4.277	1.637+j8.644
BOCHIL	BCH-115	115	3.61	2.31	4.327+j17.853	10.795+j48.427	4.11	2.57	4.077+j17.312	10.799+j48.392	4.11	2.57	4.077+j17.312	10.799+j48.392
BONFIL	BNL-115	115	4.75	5.10	4.751+j13.143	2.296+j10.997	6.37	6.36	3.083+j11.049	2.340+j11.151	6.37	6.36	3.084+j11.050	2.340+j11.151
BOSQUES	BOE-115	115	19.16	13.54	0.692+j3.395	1.666+j7.621	21.67	14.99	0.620+j3.313	1.676+j7.704	21.61	14.98	0.624+j3.321	1.676+j7.704
BRIDGESTONE	BDG-115	115	8.44	7.26	1.302+j7.758	1.989+j11.573	9.30	7.90	1.174+j7.764	2.031+j11.857	9.29	7.90	1.178+j7.769	2.031+j11.857
BUENA VISTA	BVI-115	115	6.60	4.38	2.030+j9.848	6.507+j24.651	8.06	5.06	1.832+j8.877	6.419+j24.218	8.04	5.06	1.836+j8.897	6.419+j24.220
BUGAMBILIAS	BGB-115	115	17.50	10.71	0.936+j3.676	2.774+j10.680	19.83	11.91	0.857+j3.582	2.776+j10.700	19.79	11.90	0.861+j3.589	2.776+j10.701
BUGAMBILIAS SF6	BGS-115	115	17.33	10.57	0.949+j3.712	2.819+j10.845	19.63	11.75	0.870+j3.617	2.820+j10.866	19.59	11.74	0.875+j3.624	2.820+j10.866
CACTUS PEMEX	CAX-115	115	8.07	7.91	1.497+j8.088	1.556+j8.978	9.19	8.69	1.389+j7.827	1.688+j9.483	9.19	8.69	1.389+j7.827	1.688+j9.483
CACTUS SWITCHEO	CSX-115	115	17.76	20.41	0.537+j3.701	0.170+j2.728	20.05	22.28	0.485+j3.610	0.191+j2.930	20.05	22.28	0.485+j3.611	0.191+j2.930
CALPULALPAN	CPL-115	115	4.49	3.92	4.807+j13.993	4.096+j21.707	4.82	4.18	4.911+j14.329	4.277+j22.661	4.82	4.18	4.914+j14.334	4.277+j22.661
CANTICAS	CIC-115	115	14.27	11.18	0.828+j4.580	1.660+j8.665	17.16	12.86	0.726+j4.194	1.682+j8.588	17.16	12.86	0.726+j4.194	1.682+j8.588
CARACOL	CRL-115	115	1.75	1.19	11.490+j36.215	27.488+j87.514	2.08	1.37	9.688+j33.729	26.829+j85.132	2.08	1.37	9.689+j33.730	26.829+j85.132
CARACOL	CRL-230	230	3.24	2.70	10.291+j39.623	14.294+j64.167	8.72	9.74	1.633+j16.665	0.306+j9.667	8.72	9.74	1.635+j16.668	0.306+j9.667
CARDEL	CAE-115	115	4.08	3.57	3.235+j15.929	3.693+j24.284	4.51	3.86	3.184+j15.884	3.835+j25.232	4.51	3.86	3.186+j15.889	3.835+j25.232
CÁRDENAS	CDN-115	115	11.26	10.27	1.245+j5.765	1.578+j7.635	12.91	11.44	1.120+j5.546	1.609+j7.810	12.91	11.44	1.120+j5.546	1.609+j7.810
CÁRDENAS DOS	CDD-115	115	13.73	14.07	0.801+j4.771	0.508+j4.666	15.87	15.78	0.670+j4.552	0.516+j4.795	15.87	15.78	0.670+j4.552	0.516+j4.795
CÁRDENAS DOS	CDD-230	230	9.01	8.98	2.495+j14.532	2.207+j15.436	11.14	10.65	1.865+j12.983	2.201+j15.213	11.14	10.65	1.866+j12.983	2.201+j15.213
CÁRDENAS SUR	CSU-115	115	8.46	7.84	1.838+j7.630	2.116+j9.724	9.58	8.64	1.721+j7.424	2.229+j10.050	9.58	8.64	1.721+j7.424	2.229+j10.050
CARLOS A. CARRILLO	CAC-115	115	3.79	2.39	5.515+j16.625	13.934+j46.565	4.56	2.89	4.916+j15.247	12.568+j42.098	4.56	2.89	4.917+j15.248	12.568+j42.098
CATEMACO	CTO-115	115	2.27	1.28	10.707+j27.204	24.560+j94.581	2.89	2.81	8.194+j23.934	5.818+j25.723	2.89	2.81	8.194+j23.935	5.818+j25.723
CAVERNAS TUZANDEPETL	CVN-115	115	13.65	10.19	0.988+j4.764	1.960+j9.754	16.59	11.71	0.867+j4.317	1.974+j9.774	16.58	11.71	0.868+j4.318	1.974+j9.774
CAYACO	CAY-115	115	5.84	6.89	3.958+j10.662	0.949+j6.176	8.30	9.06	2.303+j8.493	0.991+j6.306	8.30	9.06	2.304+j8.493	0.991+j6.306
CAZONES	CZN-115	115	8.52	6.19	1.085+j7.720	3.286+j16.323	11.00	7.49	0.863+j6.580	3.215+j15.490	10.97	7.48	0.868+j6.602	3.215+j15.494
CD. HIDALGO. CHIAPAS.	CGO-115	115	1.90	1.40	10.489+j33.307	25.847+j67.357	2.17	1.56	9.741+j32.257	25.961+j67.526	2.17	1.56	9.741+j32.257	25.961+j67.526
CD. INDUSTRIAL VILLAHERMOSA	CIH-115	115	13.42	11.52	0.992+j4.847	1.309+j7.486	15.64	12.94	0.823+j4.597	1.325+j7.611	15.64	12.94	0.823+j4.597	1.325+j7.611
CEBADAS Y MALTA	CBM-115	115	4.26	3.64	5.075+j14.751	4.860+j24.028	4.58	3.88	5.179+j15.086	5.042+j24.983	4.58	3.88	5.182+j15.092	5.042+j24.983
CECILIO DEL VALLE	CCL-69	69	1.97	2.40	2.031+j20.088	0.408+j9.279	2.66	3.39	1.102+j16.457	0.092+j4.629	2.66	3.39	1.102+j16.457	0.092+j4.629
CEFERESO	CFS-85	85	3.12	2.09	2.765+j15.508	6.586+j38.526	3.35	2.26	2.762+j15.857	6.595+j39.034	3.35	2.26	2.764+j15.860	6.595+j39.034
CEFERESO VILLACOMALTITLAN	CFV-115	115	2.80	2.79	6.599+j22.802	4.399+j23.475	3.40	3.22	5.382+j20.828	4.737+j24.388	3.40	3.22	5.382+j20.828	4.737+j24.388

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Oriental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
CELANESE	CLS-115	115	12.12	8.73	1.183+j5.348	2.422+j11.728	14.56	9.98	1.060+j4.904	2.436+j11.748	14.55	9.98	1.061+j4.905	2.436+j11.748
CALES	CLS-115	115	1.70	1.06	9.304+j37.898	24.826+j107.777	1.93	1.18	8.648+j36.769	24.700+j107.349	1.93	1.18	8.648+j36.769	24.700+j107.349
CELCSA MANIOBRAS	CCB-115	115	13.70	12.61	0.735+j4.789	0.822+j6.508	16.06	14.12	0.664+j4.500	0.871+j6.716	16.05	14.12	0.664+j4.500	0.871+j6.716
CEMENTOS APASCO (TABASCO)	CEM-115	115	5.53	4.59	2.624+j11.718	5.231+j18.776	6.45	5.25	2.236+j11.097	5.358+j18.435	6.45	5.25	2.236+j11.097	5.358+j18.435
CEMENTOS APASCO S.A. DE C.V.	CSS-115	115	5.71	7.28	4.088+j10.893	0.444+j4.161	8.10	9.72	2.425+j8.686	0.490+j4.287	8.10	9.72	2.426+j8.687	0.490+j4.287
CEMENTOS CRUZ AZUL (OAXACA)	CCA-115	115	4.58	3.26	4.393+j13.811	7.702+j31.061	5.37	3.68	4.068+j12.974	7.726+j31.266	5.37	3.68	4.068+j12.974	7.726+j31.266
CEMENTOS MOCTEZUMA (MORELOS)	CUM-230	230	12.46	12.09	2.008+j10.467	2.110+j11.535	14.70	13.72	1.458+j9.829	2.190+j11.863	14.66	13.70	1.474+j9.854	2.190+j11.863
CEMENTOS MOCTEZUMA(APAZAPAN)	CMT-115	115	4.23	2.80	3.180+j15.376	5.737+j39.716	4.75	3.09	2.983+j15.088	5.758+j39.941	4.75	3.09	2.988+j15.098	5.758+j39.941
CEMENTOS TOLTECA	TOC-230	230	8.43	6.87	2.359+j15.569	5.485+j25.961	9.40	7.55	2.085+j15.399	5.524+j26.389	9.38	7.54	2.099+j15.427	5.524+j26.389
CEMENTOS VERACRUZ	CVE-115	115	10.65	8.50	1.196+j6.120	2.663+j10.701	12.43	9.61	1.034+j5.782	2.683+j10.762	12.42	9.60	1.036+j5.787	2.683+j10.762
CENTENARIO	CIO-85	85	3.99	2.72	2.100+j12.116	4.662+j29.080	4.27	2.93	2.089+j12.468	4.670+j29.587	4.27	2.93	2.092+j12.471	4.670+j29.587
CENTRAL EÓLICA MÉXICO SAPI DE CV (CERRO IGUANA)	CEI-230	230	6.91	8.25	1.918+j19.115	1.365+j9.671	10.20	11.25	1.234+j14.269	1.471+j10.179	10.20	11.25	1.235+j14.271	1.471+j10.179
CENTRAL EÓLICA MÉXICO SAPI DE CV (LA PALMITA)	PLM-230	230	8.68	10.82	1.303+j15.246	1.038+j6.054	13.48	15.60	0.700+j10.813	1.068+j6.311	13.48	15.60	0.701+j10.815	1.068+j6.311
CENTRAL EÓLICA SURESTE UNO FASE DOS	SUD-230	230	9.46	12.45	1.286+j13.971	0.693+j3.790	14.59	18.16	0.740+j9.983	0.708+j4.016	14.59	18.16	0.741+j9.985	0.708+j4.016
CENTRO DE EXPOSICIONES Y CONVENCIONES FUERTES	CEF-115	115	15.43	9.05	1.077+j4.166	2.565+j13.187	17.39	10.02	1.002+j4.079	2.569+j13.230	17.35	10.01	1.006+j4.087	2.569+j13.231
CERRO AZUL DOS	CDO-115	115	4.09	2.41	3.662+j15.834	19.519+j46.592	4.56	2.67	3.591+j15.621	19.526+j46.667	4.55	2.66	3.597+j15.643	19.528+j46.674
CERRO DE ORO	EDO-115	115	18.50	18.55	0.389+j3.568	0.175+j3.614	25.50	23.26	0.226+j2.855	0.212+j3.633	25.48	23.25	0.227+j2.857	0.212+j3.633
CERRO DE ORO	EDO-400	400	15.71	16.96	2.507+j14.484	1.285+j11.495	24.84	23.70	1.208+j10.155	1.342+j11.573	24.75	23.65	1.224+j10.190	1.342+j11.573
CERVECERÍA DEL TRÓPICO	CVT-115	115	10.49	5.36	2.913+j5.621	4.438+j24.601	12.86	6.05	2.786+j4.947	4.557+j24.933	12.86	6.05	2.787+j4.949	4.557+j24.933
CERVECERÍA MOCTEZUMA (ORIZABA)	CMA-115	115	11.91	10.99	1.220+j5.439	1.497+j6.882	14.63	13.15	0.961+j4.898	1.470+j6.526	14.62	13.14	0.963+j4.902	1.470+j6.526
CHAPULCO	CPO-115	115	8.66	5.07	1.444+j7.532	5.415+j23.330	9.65	5.60	1.368+j7.447	5.418+j23.380	9.64	5.60	1.373+j7.454	5.418+j23.380
CHICOASÉN II	MMD-400	400	12.40	12.04	2.605+j18.437	3.818+j19.690	22.83	19.44	0.790+j11.098	3.581+j16.246	22.83	19.44	0.791+j11.100	3.581+j16.246
CHICONTEPEC	CHI-115	115	2.60	3.24	6.467+j24.720	1.611+j10.436	2.88	3.57	6.403+j24.560	1.647+j10.726	2.88	3.56	6.410+j24.580	1.647+j10.727
CHIGNAHUAPAN	CHH-115	115	2.79	1.72	6.350+j22.963	19.188+j65.920	3.08	1.89	6.238+j22.857	19.205+j66.088	3.08	1.89	6.244+j22.870	19.205+j66.088
CHILAPA	CIP-115	115	3.49	3.24	4.888+j18.410	5.442+j22.832	4.51	3.91	3.098+j15.895	5.481+j22.756	4.51	3.91	3.099+j15.896	5.481+j22.756
CHILAPAN	CHP-115	115	2.20	1.24	11.115+j28.085	25.510+j97.715	2.83	2.97	8.301+j24.445	4.418+j20.722	2.83	2.97	8.302+j24.445	4.418+j20.722
CHILPANCINGO	CHG-69	69	1.96	2.15	1.604+j20.273	0.000+j15.080	2.27	2.58	0.957+j19.310	3.338+j11.585	2.27	2.58	0.958+j19.310	3.338+j11.585
CHILPANCINGO	CHG-115	115	4.42	4.30	4.436+j14.344	2.821+j16.119	6.06	5.40	2.641+j11.764	2.846+j15.973	6.06	5.40	2.642+j11.765	2.846+j15.973
CHILPANCINGO DOS	CCS-115	115	5.08	5.60	3.749+j12.514	1.168+j9.458	7.19	7.33	2.003+j9.958	1.189+j9.274	7.19	7.33	2.004+j9.959	1.189+j9.274
CHILPANCINGO POTENCIA	CGP-115	115	5.22	6.18	3.594+j12.214	0.570+j6.849	7.41	8.20	1.860+j9.681	0.608+j6.774	7.41	8.20	1.862+j9.683	0.608+j6.774

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Oriental

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
CHILPANCINGO POTENCIA	CGP-230	230	3.30	3.52	11.879+j38.400	4.514+j32.834	5.23	5.01	5.276+j27.433	4.806+j30.367	5.23	5.01	5.281+j27.438	4.806+j30.367
CHINAMECA DOS	CHD-115	115	19.79	16.42	0.563+j3.307	0.855+j5.538	25.16	19.64	0.428+j2.871	0.843+j5.404	25.15	19.63	0.429+j2.872	0.843+j5.404
CHINAMECA POTENCIA	CHM-115	115	22.30	21.14	0.448+j2.944	0.403+j3.629	28.71	25.53	0.322+j2.523	0.414+j3.590	28.71	25.53	0.322+j2.524	0.414+j3.590
CHINAMECA POTENCIA	CHM-400	400	9.05	8.60	3.413+j25.279	4.281+j30.265	13.68	11.28	2.114+j18.445	4.410+j30.514	13.67	11.27	2.120+j18.459	4.410+j30.514
CHONTALPA	CHT-115	115	4.03	2.98	3.980+j15.983	12.249+j31.874	4.50	3.29	3.851+j15.768	12.279+j32.050	4.50	3.29	3.851+j15.768	12.279+j32.050
CIA. GRESS	GRE-115	115	12.95	8.22	1.094+j5.009	3.395+j13.605	14.55	9.11	1.020+j4.916	3.396+j13.620	14.52	9.11	1.025+j4.925	3.396+j13.621
CICLO COMBINADO CENTRO (HUEXCA)	CBE-400	400	17.44	18.42	1.965+j13.092	0.974+j11.620	20.41	20.60	1.303+j12.376	1.087+j12.390	20.27	20.51	1.345+j12.462	1.087+j12.390
CINCO DE MAYO	CIY-115	115	14.34	9.00	1.197+j4.472	3.358+j12.452	16.15	9.97	1.119+j4.382	3.361+j12.497	16.12	9.97	1.124+j4.389	3.361+j12.497
CINTALAPA DOS	CIT-115	115	4.82	3.33	2.994+j13.438	6.530+j31.641	5.55	3.74	2.721+j12.867	6.537+j31.698	5.55	3.74	2.721+j12.867	6.537+j31.698
CIUDAD PEMEX	CPX-115	115	7.99	5.46	1.332+j8.201	3.716+j19.580	9.62	6.30	0.967+j7.531	3.639+j19.300	9.62	6.30	0.967+j7.531	3.639+j19.300
CIUDAD TEXTIL	CDX-115	115	11.77	7.51	0.998+j5.552	3.697+j14.815	13.07	8.25	0.945+j5.505	3.777+j14.960	13.05	8.24	0.950+j5.514	3.777+j14.961
CIVAC	CIV-115	115	10.60	10.42	1.021+j6.178	0.782+j6.570	11.69	11.30	0.893+j6.184	0.824+j6.854	11.68	11.29	0.897+j6.190	0.824+j6.854
CLORO DE TEHUANTEPEC	CLO-115	115	13.22	9.67	0.764+j4.964	1.843+j10.530	16.00	11.09	0.641+j4.519	1.857+j10.550	16.00	11.09	0.642+j4.519	1.857+j10.550
COAPAN	CPA-115	115	4.53	2.76	4.085+j14.079	10.010+j41.526	5.04	3.04	3.950+j13.931	10.031+j41.674	5.04	3.04	3.954+j13.935	10.031+j41.674
COATEPEC	COP-115	115	4.63	3.69	2.809+j14.049	5.299+j24.891	5.28	4.11	2.517+j13.592	5.341+j25.169	5.28	4.11	2.526+j13.613	5.341+j25.170
COATZACOALCOS DOS	CTS-115	115	26.85	27.44	0.327+j2.451	0.253+j2.488	36.50	34.60	0.216+j1.989	0.261+j2.435	36.50	34.60	0.216+j1.990	0.261+j2.435
COATZACOALCOS DOS	CTS-400	400	11.34	11.94	2.876+j20.168	2.089+j18.178	17.30	16.09	1.544+j14.601	2.198+j18.241	17.29	16.09	1.547+j14.609	2.198+j18.241
COATZINTLA	CZT-115	115	11.66	10.82	0.871+j5.629	1.983+j6.817	16.64	14.45	0.635+j4.343	1.901+j5.924	16.56	14.41	0.639+j4.363	1.902+j5.928
COGENERACIÓN DE ENERGÍA LIMPIA DE COSOLEACAQUE	CGC-115	115	12.24	12.08	0.795+j5.365	0.528+j6.180	14.11	13.32	0.740+j5.121	0.591+j6.528	14.11	13.32	0.741+j5.122	0.591+j6.528
COGENERACIÓN NUEVO PEMEX	CNX-115	115	17.76	20.41	0.537+j3.701	0.170+j2.728	20.05	22.28	0.485+j3.610	0.191+j2.930	20.05	22.28	0.485+j3.611	0.191+j2.930
COLOTLIPA	CLT-69	69	0.94	1.06	11.484+j40.935	22.957+j21.391	1.21	1.54	8.036+j35.436	3.842+j10.162	1.21	1.54	8.037+j35.437	3.842+j10.162
COMALCALCO	COM-115	115	8.67	7.63	1.646+j7.483	2.936+j10.582	9.85	8.47	1.511+j7.262	2.979+j10.770	9.85	8.47	1.511+j7.262	2.979+j10.770
COMALCALCO ORIENTE	CAO-115	115	9.03	8.50	1.388+j7.220	1.642+j8.783	10.25	9.41	1.250+j7.012	1.699+j9.020	10.25	9.41	1.250+j7.012	1.699+j9.020
COMALCALCO POTENCIA	CMP-115	115	9.35	9.36	1.262+j6.991	1.037+j7.200	10.61	10.35	1.124+j6.788	1.098+j7.469	10.61	10.35	1.124+j6.788	1.098+j7.469
COMALCALCO POTENCIA	CMP-230	230	5.80	5.39	3.976+j22.539	4.736+j28.459	6.83	6.11	3.332+j21.130	4.988+j29.051	6.83	6.11	3.332+j21.131	4.988+j29.051
COMALCALCO SUR	CMU-115	115	7.16	6.09	2.302+j8.989	4.572+j13.582	8.07	6.74	2.184+j8.780	4.653+j13.811	8.07	6.74	2.184+j8.780	4.653+j13.811
COMITÁN	CJT-115	115	1.43	0.98	13.929+j44.345	42.708+j101.524	1.61	1.10	13.268+j43.361	42.303+j100.157	1.61	1.10	13.268+j43.361	42.303+j100.157
COMPLEJO PETROQUÍMICO CANGREJERA	CGJ-115	115	8.12	4.94	1.743+j7.989	5.601+j23.555	9.60	5.71	1.632+j7.429	5.403+j22.672	9.60	5.71	1.632+j7.429	5.403+j22.672
COMPLEJO PETROQUÍMICO COSOLEACAQUE	CPQ-115	115	6.99	4.41	1.911+j9.309	5.696+j25.682	9.34	7.07	1.327+j7.702	2.054+j15.441	9.34	7.07	1.327+j7.703	2.054+j15.441
COMPLEJO PETROQUÍMICO INDEPENDENCIA	PEI-115	115	12.41	10.36	0.925+j5.271	1.070+j8.486	13.55	11.10	0.908+j5.313	1.165+j8.906	13.53	11.09	0.912+j5.321	1.165+j8.906

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
COMPLEJO PETROQUÍMICO MORELOS	PMO-115	115	6.04	6.60	1.951+j10.819	1.847+j8.329	10.06	9.50	1.120+j7.170	1.973+j8.889	10.06	9.50	1.120+j7.170	1.973+j8.889
CONALEP	CNL-115	115	8.29	6.68	1.555+j7.855	3.775+j13.376	9.83	7.74	1.227+j7.330	3.706+j13.032	9.83	7.74	1.227+j7.330	3.706+j13.032
CONEJOS	CNJ-115	115	1.42	0.80	13.589+j44.605	35.371+j151.275	1.58	0.88	13.187+j44.157	35.392+j151.414	1.58	0.88	13.187+j44.158	35.392+j151.414
CONTLA	CNU-115	115	21.13	14.26	0.630+j3.078	1.725+j7.528	24.15	15.97	0.554+j2.973	1.720+j7.503	24.08	15.95	0.559+j2.982	1.720+j7.503
CÓRDOBA	COR-115	115	11.89	8.89	1.037+j5.487	2.644+j10.974	13.99	10.07	0.867+j5.147	2.657+j11.046	13.98	10.06	0.869+j5.151	2.657+j11.046
CÓRDOBA DOS	CBS-115	115	13.88	12.24	0.909+j4.696	1.371+j6.618	16.55	13.97	0.734+j4.352	1.393+j6.738	16.53	13.96	0.736+j4.357	1.393+j6.738
COSCOMATEPEC	CSE-115	115	4.77	2.87	2.473+j13.686	11.808+j40.032	5.39	3.19	2.299+j13.352	11.821+j40.086	5.39	3.19	2.302+j13.357	11.821+j40.086
COSOLAPA	CSL-115	115	4.29	3.00	2.344+j15.299	4.586+j35.283	5.43	3.70	1.807+j13.321	4.581+j32.021	5.43	3.70	1.808+j13.322	4.581+j32.021
COSOLEACAQUE	CSQ-115	115	11.10	7.67	1.492+j5.794	3.105+j13.817	13.20	8.79	1.353+j5.364	3.083+j13.622	13.20	8.79	1.353+j5.364	3.083+j13.622
COSTA AZUL	CAZ-115	115	5.37	6.26	4.171+j11.639	1.100+j7.082	7.43	8.06	2.514+j9.497	1.143+j7.246	7.43	8.06	2.515+j9.498	1.143+j7.246
COYOACO MANIOBRAS	CYM-230	230	5.32	5.59	4.300+j24.578	2.566+j21.401	6.83	6.67	3.066+j21.162	2.844+j22.532	6.81	6.66	3.088+j21.227	2.844+j22.533
COYUCA	CYC-115	115	4.53	4.50	4.518+j13.955	2.793+j14.725	6.36	5.84	2.781+j11.151	2.806+j14.044	6.35	5.84	2.782+j11.152	2.806+j14.044
CRISOL TEXTIL	CTX-115	115	10.85	7.04	1.041+j6.033	3.844+j15.627	12.00	7.71	0.993+j6.003	3.925+j15.803	11.98	7.70	0.998+j6.012	3.925+j15.803
CRISTÓBAL SAN	CRI-115	115	3.72	2.49	4.907+j17.159	13.621+j42.228	4.26	2.80	4.564+j16.512	13.559+j41.662	4.26	2.80	4.564+j16.512	13.559+j41.662
CRUCES	CRC-69	69	6.62	7.18	1.780+j5.751	1.892+j4.205	8.67	8.87	1.160+j4.919	1.969+j4.227	8.67	8.87	1.161+j4.919	1.969+j4.227
CRUCES GENERACIÓN	CUG-115	115	5.82	6.85	3.944+j10.704	1.009+j6.244	8.29	9.04	2.285+j8.506	1.057+j6.343	8.29	9.03	2.286+j8.507	1.057+j6.343
CRUZ AZUL MANIOBRAS	CZM-400	400	10.92	8.39	2.908+j20.954	7.504+j39.707	13.28	9.64	1.966+j19.023	7.674+j40.180	13.22	9.62	2.003+j19.107	7.674+j40.180
CRUZ GRANDE	CGN-115	115	1.90	1.20	12.170+j32.836	31.457+j92.449	2.21	1.34	10.629+j31.342	31.510+j92.552	2.21	1.34	10.630+j31.343	31.510+j92.552
CRYO INFRA DOS	CRX-115	115	7.24	5.06	2.191+j8.903	4.536+j20.704	8.39	5.68	2.067+j8.460	4.550+j20.724	8.39	5.68	2.067+j8.461	4.550+j20.724
CRYO_INFRA	CRY-115	115	15.49	13.59	0.732+j4.222	0.905+j6.388	19.30	16.43	0.616+j3.734	0.915+j5.948	19.30	16.43	0.617+j3.734	0.915+j5.948
CRYOINFRA - PRAXAIR	CYX-115	115	6.64	6.55	1.781+j9.845	2.287+j10.485	10.56	8.94	1.094+j6.832	2.377+j10.877	10.55	8.94	1.094+j6.833	2.377+j10.877
CRYOINFRA CÁRDENAS	ICD-115	115	10.87	9.78	1.302+j5.971	1.802+j8.145	12.44	10.89	1.177+j5.752	1.833+j8.320	12.44	10.89	1.177+j5.752	1.833+j8.320
CUAUHTÉMOC	CTM-115	115	8.61	5.95	1.800+j7.497	4.078+j17.718	9.67	6.58	1.697+j7.363	4.089+j17.802	9.63	6.57	1.708+j7.389	4.088+j17.805
CUAUTLA	CUA-115	115	9.41	7.93	1.414+j6.915	1.540+j10.939	10.27	8.54	1.349+j6.979	1.615+j11.346	10.26	8.54	1.354+j6.986	1.615+j11.346
CUAUTLA DOS	CUS-115	115	7.18	4.92	1.935+j9.038	4.646+j21.503	7.86	5.37	1.872+j9.102	4.661+j21.750	7.85	5.37	1.877+j9.109	4.661+j21.750
CUAUTLA INDUSTRIAL	CIL-115	115	6.43	4.63	2.448+j10.035	5.464+j21.693	7.04	5.04	2.386+j10.099	5.506+j22.018	7.03	5.04	2.390+j10.106	5.506+j22.018
CUCHAPA PEMEX	CUH-115	115	9.00	6.12	1.617+j7.197	3.659+j17.625	10.58	6.93	1.501+j6.737	3.667+j17.572	10.58	6.93	1.501+j6.738	3.667+j17.572
CUERNAVACA	CUE-85	85	6.31	5.24	1.243+j7.682	1.535+j12.444	6.64	5.53	1.232+j8.033	1.543+j12.949	6.64	5.53	1.234+j8.036	1.543+j12.949
CUICATLAN	CUX-115	115	1.44	1.05	13.233+j44.093	37.451+j90.720	1.59	1.16	13.050+j43.915	37.488+j91.089	1.59	1.16	13.052+j43.918	37.488+j91.089
CUICHAPA DOS	CCP-115	115	9.25	6.26	1.564+j7.004	3.584+j17.305	10.90	7.09	1.448+j6.544	3.591+j17.252	10.90	7.09	1.448+j6.545	3.591+j17.252

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
CUITLÁHUAC	CTH-115	115	4.59	2.87	2.688+j14.200	8.998+j39.493	5.19	3.19	2.507+j13.857	9.026+j39.645	5.18	3.19	2.509+j13.862	9.026+j39.645
CUNDUACÁN	DUA-115	115	5.96	4.02	1.986+j10.968	5.669+j26.863	6.71	4.46	1.847+j10.727	5.678+j26.956	6.71	4.46	1.847+j10.727	5.678+j26.956
CYNA DE ORIENTE	CYR-400	400	8.38	6.18	3.428+j27.339	10.407+j56.116	9.95	7.00	2.483+j25.409	10.706+j56.919	9.92	6.99	2.520+j25.493	10.706+j56.919
DISTRITO INDUSTRIAL	DIN-69	69	9.44	9.30	0.428+j4.198	0.413+j4.437	13.66	12.49	0.312+j3.193	0.516+j3.924	13.64	12.48	0.312+j3.197	0.516+j3.924
DONAJI	DOJ-115	115	4.05	2.54	4.108+j15.882	10.166+j44.644	4.62	2.83	3.890+j15.310	10.158+j44.654	4.62	2.83	3.891+j15.311	10.158+j44.654
DOS BOCAS CICLO COMBINADO	DBC-115	115	12.84	13.27	1.165+j5.037	0.820+j4.696	22.72	24.64	0.497+j3.176	0.308+j2.708	22.70	24.63	0.498+j3.179	0.308+j2.708
DOS BOCAS CICLO COMBINADO	DBC-230	230	9.20	8.39	2.764+j14.166	4.043+j18.377	12.23	10.30	1.733+j11.817	4.113+j18.478	12.21	10.29	1.741+j11.834	4.113+j18.478
DOS BOCAS PEMEX	DBX-115	115	4.65	3.61	3.228+j13.902	8.391+j25.491	5.20	3.98	3.087+j13.702	8.452+j25.741	5.20	3.98	3.087+j13.702	8.452+j25.741
DPA DRAEXLMAIER, PARTES AUTOMOTORAS DE MÉXICO	DXM-115	115	11.34	7.17	1.034+j5.762	3.829+j15.657	12.61	7.88	0.980+j5.710	3.900+j15.785	12.59	7.87	0.984+j5.718	3.900+j15.785
EASTMAN (CHEMICAL)	EAS-115	115	6.75	4.34	2.930+j9.394	6.305+j25.690	7.78	4.88	2.792+j8.962	6.293+j25.557	7.78	4.88	2.792+j8.962	6.293+j25.557
ECOWIND, S.A. DE C.V.	ECW-230	230	6.95	7.83	1.907+j19.009	2.260+j12.425	10.07	10.40	1.280+j14.453	2.373+j12.888	10.07	10.40	1.280+j14.455	2.373+j12.888
EDF ENERGIES NOUVELLES MÉXICO, S. DE R.L. DE C.V. (EÓLICA GUNAA SICAR)	EGS-230	230	9.05	11.76	1.164+j14.621	0.618+j4.414	14.38	17.50	0.557+j10.140	0.641+j4.657	14.38	17.50	0.557+j10.142	0.641+j4.657
EJUTLA	EJT-115	115	2.85	2.73	6.042+j22.522	5.334+j25.622	3.17	3.01	5.821+j22.320	5.405+j26.116	3.17	3.01	5.823+j22.322	5.405+j26.116
EL CARMEN	CNM-115	115	12.49	14.20	0.702+j5.270	0.275+j3.625	14.09	15.55	0.595+j5.150	0.298+j3.881	14.09	15.55	0.595+j5.150	0.298+j3.881
EL CARMEN	CNM-230	230	9.51	10.72	2.112+j13.805	1.167+j10.201	11.34	12.26	1.633+j12.775	1.238+j10.661	11.34	12.26	1.634+j12.775	1.238+j10.661
EL CASTILLO	ELC-115	115	7.70	8.97	1.682+j8.462	0.365+j5.097	9.03	10.16	1.387+j7.967	0.412+j5.398	9.01	10.13	1.395+j7.989	0.412+j5.398
EL CASTILLO	ELC-230	230	4.91	4.93	5.091+j26.557	3.196+j26.834	6.03	5.72	3.897+j23.889	3.628+j27.704	6.01	5.70	3.928+j23.984	3.626+j27.710
EL CERRO	CEO-115	115	6.73	4.36	2.001+j9.662	5.557+j25.500	7.89	4.89	1.680+j9.101	5.580+j25.695	7.87	4.88	1.689+j9.125	5.580+j25.696
EL CONDE	ECN-115	115	20.31	14.91	0.744+j3.183	1.267+j6.728	23.18	16.69	0.668+j3.079	1.265+j6.726	23.12	16.67	0.672+j3.087	1.265+j6.727
EL GIRASOL	GIS-115	115	1.28	0.90	14.329+j49.844	41.231+j109.944	1.41	0.99	14.145+j49.666	41.269+j110.314	1.41	0.99	14.148+j49.669	41.269+j110.314
EL GUAYABO	GYB-115	115	2.65	1.48	5.116+j24.574	18.810+j82.183	12.46	8.28	1.031+j5.769	3.087+j14.591	12.46	8.28	1.032+j5.772	3.087+j14.591
EL JÍCARO	JIC-115	115	4.02	2.35	3.122+j16.218	11.218+j50.627	6.58	3.90	1.847+j10.948	7.069+j33.301	6.58	3.90	1.848+j10.950	7.069+j33.301
EL MORAL (OAXACA)	MOR-115	115	2.44	1.90	7.936+j26.014	18.179+j47.506	2.71	2.09	7.754+j25.836	18.214+j47.872	2.71	2.09	7.756+j25.839	18.214+j47.872
EL MORAL (PUEBLA)	MOA-115	115	10.26	6.66	1.103+j6.377	3.852+j16.554	11.34	7.30	1.056+j6.356	3.884+j16.695	11.32	7.30	1.061+j6.365	3.884+j16.695
EL SABINO	SAB-115	115	16.85	16.56	0.571+j3.900	0.372+j4.132	21.63	20.23	0.344+j3.360	0.375+j4.041	21.63	20.23	0.344+j3.360	0.375+j4.041
EL SABINO	SAB-400	400	9.12	9.03	3.858+j25.028	3.475+j25.590	15.86	13.89	1.365+j15.956	3.543+j22.110	15.86	13.89	1.366+j15.957	3.543+j22.110
EL TEJAR	TJR-115	115	12.76	12.88	1.174+j5.071	0.917+j5.070	22.29	22.96	0.515+j3.235	0.442+j3.213	22.27	22.95	0.517+j3.238	0.442+j3.213
EL TREINTA	ETT-115	115	4.94	5.03	4.500+j12.657	2.456+j12.567	6.78	6.32	2.825+j10.398	2.509+j12.640	6.78	6.32	2.826+j10.399	2.509+j12.640
EL TULE	TLE-115	115	3.54	2.90	5.119+j18.045	6.862+j30.627	3.95	3.19	4.918+j17.816	6.895+j30.997	3.95	3.19	4.920+j17.818	6.895+j30.997
EL ZOPO	ZOP-115	115	6.11	5.04	2.361+j10.598	4.882+j17.181	7.18	5.82	1.969+j9.973	4.926+j16.701	7.18	5.82	1.969+j9.973	4.926+j16.701

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Oriental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
EMILIANO ZAPATA	EMZ-115	115	2.46	1.54	7.216+j25.983	21.732+j72.486	2.76	1.71	7.039+j25.528	21.644+j72.070	2.76	1.71	7.039+j25.528	21.644+j72.070
ENCANTO	ECT-115	115	4.46	4.85	3.453+j14.478	2.090+j11.229	5.25	5.88	3.033+j13.582	1.398+j9.244	5.23	5.86	3.043+j13.635	1.394+j9.254
ENERGÍA EÓLICA DEL SUR, S.A.P.I DE C.V	EOS-230	230	4.62	5.83	3.247+j28.537	0.749+j10.740	6.56	7.80	2.205+j22.167	0.846+j11.599	6.56	7.79	2.206+j22.168	0.846+j11.599
ENERGÍA ESCALONA S. DE R.L. DE C.V.	ESC-69	69	1.39	0.99	6.316+j27.964	17.599+j61.564	2.20	2.67	2.942+j19.675	0.983+j7.359	2.20	2.66	2.944+j19.704	0.983+j7.360
ENERGÍA RENOVABLE DEL ISTMO SAPI DE CV (EL SAUZAL)	SAU-230	230	7.50	9.06	1.682+j17.628	1.253+j8.373	11.25	12.57	1.030+j12.940	1.336+j8.787	11.25	12.56	1.031+j12.942	1.336+j8.787
ENTABLADERO	ETD-115	115	6.29	4.01	1.916+j10.378	9.826+j27.061	7.04	4.43	1.867+j10.199	9.868+j27.092	7.02	4.42	1.875+j10.239	9.872+j27.122
ESCÁMELA	ECM-115	115	10.89	8.67	1.144+j5.989	2.392+j10.563	12.82	9.88	0.967+j5.616	2.394+j10.545	12.80	9.87	0.970+j5.621	2.394+j10.545
ESFUERZO	ESF-115	115	3.32	2.99	4.556+j19.473	7.862+j26.093	3.70	3.30	4.469+j19.233	7.903+j26.365	3.69	3.29	4.476+j19.255	7.903+j26.366
ESPERANZA	ERZ-115	115	6.94	6.11	2.500+j9.231	2.171+j13.341	7.76	6.67	2.392+j9.098	2.283+j13.886	7.76	6.67	2.395+j9.103	2.283+j13.886
ETLA	ETX-115	115	3.66	3.37	5.204+j17.394	7.448+j21.770	4.08	3.71	5.015+j17.198	7.482+j22.169	4.08	3.71	5.017+j17.200	7.482+j22.169
EXCELOPOLIS	EXE-115	115	18.60	11.40	0.863+j3.463	2.410+j10.082	21.13	12.70	0.784+j3.366	2.407+j10.087	21.08	12.68	0.789+j3.373	2.407+j10.087
FENO QUIMIA	FNQ-115	115	7.06	4.38	1.924+j9.211	5.805+j26.231	8.52	5.35	1.678+j8.410	4.901+j23.418	8.52	5.35	1.678+j8.410	4.901+j23.418
FERMEX	FEM-115	115	10.85	8.72	1.652+j5.890	2.970+j10.227	13.12	10.30	1.413+j5.384	2.856+j9.728	13.11	10.29	1.416+j5.388	2.856+j9.728
FLORES MAGÓN	FLM-115	115	3.53	2.65	4.440+j18.264	13.240+j35.367	4.10	3.05	3.961+j17.360	12.847+j34.014	4.10	3.05	3.962+j17.360	12.847+j34.014
FORJAMEX	FJM-115	115	13.00	10.06	1.145+j4.976	2.274+j9.398	14.68	11.14	1.048+j4.863	2.284+j9.503	14.64	11.12	1.054+j4.876	2.284+j9.503
FORTÍN	FOR-115	115	13.91	10.77	0.858+j4.697	2.162+j8.733	16.55	12.28	0.691+j4.358	2.176+j8.787	16.53	12.27	0.694+j4.363	2.176+j8.787
FRAMBOYANES	FRY-115	115	16.08	22.66	0.864+j4.039	0.223+j0.562	22.91	32.23	0.520+j3.146	0.228+j0.515	22.88	32.20	0.522+j3.149	0.228+j0.515
FRONTERA	FRT-115	115	1.47	1.01	12.270+j43.575	42.845+j98.952	1.62	1.11	12.093+j43.355	42.867+j99.113	1.62	1.11	12.093+j43.355	42.867+j99.113
FRONTERA COMALAPA	FCM-115	115	0.98	0.65	17.389+j65.182	46.974+j165.990	1.11	0.72	16.229+j63.604	47.104+j166.300	1.11	0.72	16.229+j63.604	47.104+j166.300
FUERTES	FUE-115	115	16.58	10.79	1.004+j3.876	1.987+j10.291	18.72	11.96	0.929+j3.789	1.991+j10.334	18.68	11.95	0.933+j3.797	1.991+j10.334
GABINO BARREDA	GBA-115	115	9.38	7.08	1.376+j6.941	3.079+j13.763	12.15	8.56	1.114+j5.907	3.131+j13.280	12.15	8.56	1.114+j5.908	3.131+j13.280
GARITA	GAR-115	115	5.51	6.25	3.984+j11.365	1.259+j7.717	7.76	8.13	2.334+j9.115	1.309+j7.803	7.76	8.13	2.335+j9.116	1.309+j7.803
GAVIOTAS	GAV-115	115	12.87	10.14	1.048+j5.050	1.780+j9.351	15.09	11.45	0.862+j4.763	1.790+j9.422	15.09	11.45	0.862+j4.763	1.790+j9.422
GIRANDAS PEMEX	GIR-115	115	5.46	3.73	2.584+j11.873	7.192+j28.467	6.11	4.12	2.491+j11.695	7.208+j28.588	6.11	4.12	2.491+j11.696	7.208+j28.588
GRAN PRIDECO	GRA-115	115	12.91	12.81	1.141+j5.013	1.619+j5.093	17.41	16.18	0.797+j4.119	1.625+j5.046	17.39	16.17	0.799+j4.122	1.625+j5.046
GRIJALVA	GIA-115	115	6.36	4.19	2.511+j10.134	5.441+j26.161	7.49	4.78	2.212+j9.501	5.374+j25.774	7.49	4.78	2.212+j9.501	5.374+j25.774
GUADALUPE ANALCO	GAN-115	115	17.53	11.93	0.898+j3.679	2.057+j8.909	19.81	13.23	0.822+j3.594	2.063+j8.970	19.76	13.21	0.827+j3.602	2.063+j8.970
GUTIÉRREZ ZAMORA DOS	GZD-115	115	5.84	4.12	1.746+j11.233	5.418+j25.069	6.58	4.59	1.656+j10.976	5.423+j24.984	6.56	4.58	1.664+j11.014	5.425+j25.006
HELIPUERTO	HEL-115	115	2.46	2.47	6.647+j26.175	3.688+j26.410	3.02	2.89	4.802+j23.669	3.754+j26.962	3.02	2.89	4.803+j23.670	3.754+j26.962
HUAJUAPAN	HJP-115	115	1.80	1.17	11.028+j35.285	22.754+j93.926	1.98	1.28	10.896+j35.183	22.936+j94.622	1.98	1.28	10.900+j35.187	22.936+j94.622

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Oriental

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
HUAMANTLA DOS	HUA-115	115	9.15	6.41	1.641+j7.067	3.742+j16.244	10.29	7.09	1.541+j6.931	3.752+j16.322	10.24	7.08	1.552+j6.961	3.751+j16.326
HUAMUXTITLAN	HUU-115	115	1.02	0.65	19.065+j62.505	40.565+j172.846	1.17	0.72	17.092+j60.128	40.606+j172.765	1.17	0.72	17.093+j60.129	40.606+j172.765
HUATULCO	HCO-115	115	1.42	0.80	14.119+j44.601	35.484+j149.988	1.58	0.88	13.719+j44.187	35.507+j150.135	1.58	0.88	13.720+j44.187	35.507+j150.135
HUATUSCO	HTU-115	115	3.50	2.04	3.381+j18.682	16.617+j57.459	3.92	2.26	3.204+j18.350	16.631+j57.514	3.92	2.26	3.207+j18.354	16.631+j57.514
HUAUTLA DE JIMENEZ	HUJ-69	69	0.53	0.44	44.026+j60.975	50.810+j109.157	0.58	0.48	44.104+j61.969	50.814+j110.309	0.58	0.48	44.105+j61.971	50.814+j110.309
HUEJOTZINGO	HJO-115	115	12.68	8.36	0.908+j5.156	3.536+j12.923	14.06	9.14	0.860+j5.124	3.644+j13.122	14.03	9.14	0.864+j5.132	3.644+j13.122
HUEYAPAN	HYN-115	115	2.78	2.16	5.940+j23.146	15.466+j41.860	3.41	3.18	4.877+j20.884	6.394+j24.627	3.38	3.17	4.901+j21.031	6.380+j24.651
HUEYAPAN DE OCAMPO	HOC-115	115	3.19	1.77	7.130+j19.527	18.022+j68.750	3.82	2.72	6.143+j18.089	9.884+j40.880	3.82	2.72	6.143+j18.090	9.884+j40.880
HUIMANGUILLO	HMG-115	115	6.01	4.97	2.738+j10.699	5.596+j17.388	6.74	5.47	2.635+j10.515	5.716+j17.717	6.74	5.47	2.635+j10.516	5.716+j17.717
HUIXTLA	HUX-115	115	3.17	2.88	6.080+j20.023	7.791+j25.956	3.84	3.34	5.010+j18.374	7.916+j26.259	3.83	3.34	5.010+j18.374	7.916+j26.259
HUIXTLA DOS	HUD-115	115	3.15	2.85	6.139+j20.187	7.977+j26.490	3.80	3.29	5.068+j18.539	8.101+j26.793	3.80	3.29	5.068+j18.539	8.101+j26.793
HUMEROS DOS	HMD-115	115	6.82	7.79	1.836+j9.558	0.810+j6.148	7.97	9.04	1.682+j9.012	0.863+j5.818	7.49	8.52	1.867+j9.565	0.847+j6.155
HUMEROS LOS	HMS-115	115	4.54	4.84	2.742+j14.370	2.163+j11.737	5.36	5.89	2.417+j13.414	1.501+j9.818	4.78	4.89	3.032+j14.963	3.098+j13.928
HUMEROS TRES	HMT-115	115	6.67	7.25	1.814+j9.794	0.870+j7.586	7.68	8.21	1.694+j9.363	0.965+j7.607	7.29	7.85	1.855+j9.845	0.940+j7.801
IDESA	IDE-115	115	7.23	6.81	1.623+j9.039	2.401+j10.924	11.25	9.11	1.019+j6.413	2.467+j11.199	11.25	9.11	1.019+j6.414	2.467+j11.199
IGUALA	IGU-115	115	2.42	2.81	7.008+j26.581	0.784+j16.092	2.96	3.30	5.142+j24.103	0.917+j17.108	2.96	3.30	5.143+j24.104	0.917+j17.108
INDEPENDENCIA	IPD-115	115	3.38	2.25	4.589+j19.129	10.316+j48.101	3.92	2.56	4.106+j18.194	10.062+j47.187	3.92	2.56	4.106+j18.194	10.062+j47.187
INDUSTRIAL	INT-115	115	18.40	12.30	0.872+j3.501	1.716+j8.838	20.81	13.63	0.799+j3.418	1.723+j8.898	20.76	13.62	0.803+j3.426	1.723+j8.898
INDUSTRIAL CUAUTLA DOS	ICS-115	115	6.54	4.83	2.397+j9.861	5.206+j20.310	7.16	5.26	2.335+j9.926	5.251+j20.650	7.16	5.25	2.339+j9.932	5.251+j20.650
INDUSTRIAL PATRONA	IPA-115	115	13.81	11.62	0.915+j4.721	1.606+j7.405	16.45	13.24	0.740+j4.377	1.628+j7.525	16.43	13.23	0.743+j4.382	1.628+j7.525
INFONAVIT	IFN-115	115	13.85	13.34	1.116+j4.663	1.017+j5.337	20.42	17.92	0.673+j3.513	0.979+j5.146	20.40	17.91	0.675+j3.516	0.979+j5.146
INFRA VILLA HERMOSA	IVH-115	115	12.41	10.29	1.160+j5.222	1.764+j8.670	14.41	11.55	0.991+j4.972	1.780+j8.794	14.41	11.55	0.991+j4.972	1.780+j8.794
INGENIO LA GLORIA	GLR-115	115	3.63	3.64	3.451+j17.958	1.567+j19.994	3.97	3.87	3.479+j18.083	1.771+j21.423	3.97	3.87	3.481+j18.087	1.771+j21.423
INGENIO SAN NICOLÁS	ISN-115	115	3.38	1.87	3.159+j19.359	15.940+j65.550	4.80	4.57	1.924+j15.107	1.564+j17.416	4.80	4.57	1.924+j15.108	1.564+j17.416
IQUIZA	IQU-115	115	16.19	15.15	0.672+j4.045	0.570+j5.304	20.31	18.50	0.558+j3.553	0.590+j4.883	20.31	18.49	0.558+j3.553	0.590+j4.883
ISLA	ISL-115	115	2.67	1.59	6.918+j23.910	21.419+j72.664	3.01	1.77	6.705+j23.328	21.361+j72.133	3.01	1.77	6.705+j23.329	21.361+j72.133
ITUNDUIJA	ITU-115	115	0.76	0.46	23.272+j84.434	60.253+j249.467	0.84	0.51	23.106+j84.299	60.351+j249.884	0.84	0.51	23.109+j84.302	60.351+j249.884
IXHUATLAN DE MADERO	IXH-115	115	1.48	1.31	8.489+j44.179	24.445+j58.918	1.63	1.44	8.392+j43.921	24.458+j59.032	1.63	1.44	8.399+j43.943	24.458+j59.034
IXTAPA POTENCIA	ITP-115	115	6.05	5.12	1.136+j10.913	2.731+j16.637	8.86	7.06	1.137+j8.167	2.634+j14.283	8.86	7.06	1.137+j8.168	2.634+j14.283
IXTAPA POTENCIA	ITP-230	230	6.68	4.78	3.025+j19.637	10.883+j41.998	8.55	6.00	2.275+j16.932	9.864+j37.596	8.55	6.00	2.276+j16.934	9.864+j37.596



## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Oriental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
IXTEPEC	IXP-115	115	4.05	3.08	3.848+j15.938	7.041+j31.238	4.82	3.51	3.421+j14.777	7.057+j31.387	4.81	3.51	3.421+j14.778	7.057+j31.387
IXTEPEC POTENCIA	IPO-115	115	17.91	21.93	0.224+j3.701	0.095+j1.641	26.37	29.95	0.090+j2.768	0.101+j1.762	26.37	29.95	0.091+j2.769	0.101+j1.762
IXTEPEC POTENCIA	IPO-230	230	10.81	14.44	0.885+j12.257	0.178+j2.911	17.54	22.08	0.349+j8.322	0.189+j3.134	17.53	22.08	0.349+j8.324	0.189+j3.134
IXTEPEC POTENCIA	IPO-400	400	8.08	10.36	2.806+j28.445	0.791+j9.372	13.94	16.33	1.148+j18.191	0.846+j10.001	13.93	16.33	1.151+j18.199	0.846+j10.001
IXTLAN DE JUÁREZ	IXJ-115	115	2.92	2.01	5.706+j21.993	11.677+j52.735	3.26	2.21	5.523+j21.689	11.712+j52.994	3.26	2.21	5.525+j21.691	11.712+j52.994
IZUCAR DE MATAMOROS	IZM-115	115	2.82	1.88	7.849+j22.218	14.323+j57.195	3.11	2.06	7.753+j22.135	14.523+j57.893	3.11	2.05	7.758+j22.141	14.523+j57.893
IZUCAR DE MATAMOROS DOS	IZD-115	115	2.93	1.93	7.578+j21.333	14.482+j56.186	3.24	2.11	7.484+j21.249	14.657+j56.761	3.24	2.11	7.489+j21.255	14.657+j56.761
J. B. LOBOS	JBL-115	115	12.20	11.61	1.181+j5.313	1.312+j6.211	17.09	15.01	0.750+j4.208	1.291+j6.075	17.07	15.00	0.751+j4.211	1.291+j6.075
JALACINGO	JAL-115	115	9.71	11.12	1.137+j6.745	0.376+j4.292	11.90	13.31	0.846+j6.079	0.359+j4.092	11.76	13.18	0.857+j6.150	0.354+j4.106
JALACINGO	JAL-230	230	7.55	7.45	3.184+j17.295	2.728+j18.311	10.00	9.33	2.109+j14.461	2.639+j17.089	9.93	9.28	2.138+j14.559	2.638+j17.105
JALAPA DOS	JLD-115	115	4.78	3.89	2.793+j13.615	4.834+j23.132	5.46	4.33	2.495+j13.149	4.878+j23.418	5.45	4.32	2.503+j13.170	4.878+j23.418
JALPA	JAA-115	115	7.75	6.06	1.719+j8.388	4.380+j15.345	8.78	6.73	1.585+j8.163	4.398+j15.474	8.78	6.73	1.585+j8.163	4.398+j15.474
JARDÍN	JDN-115	115	16.41	20.27	0.866+j3.953	0.230+j1.798	24.22	28.31	0.492+j2.976	0.246+j1.833	24.19	28.28	0.494+j2.979	0.246+j1.833
JARDÍN	JDN-230	230	11.21	12.24	2.459+j11.587	1.504+j8.919	15.66	15.83	1.414+j9.219	1.606+j9.152	15.63	15.81	1.421+j9.236	1.606+j9.152
JIUTEPEC	JIU-115	115	9.91	8.96	1.030+j6.617	1.038+j8.803	10.95	9.73	0.923+j6.605	1.097+j9.118	10.94	9.73	0.927+j6.611	1.097+j9.118
JOJUTLA	JJT-115	115	6.60	4.71	2.048+j9.848	4.358+j21.736	7.35	5.19	1.911+j9.747	4.378+j21.910	7.35	5.19	1.916+j9.753	4.378+j21.910
JUCHITÁN DOS	JUD-115	115	8.94	12.14	1.220+j7.324	0.106+j1.666	11.94	15.71	0.785+j6.067	0.112+j1.782	11.94	15.71	0.785+j6.067	0.112+j1.782
JUCHITÁN DOS	JUD-230	230	5.37	6.93	3.788+j24.418	0.815+j8.221	8.13	9.84	2.052+j17.844	0.873+j8.622	8.13	9.84	2.052+j17.845	0.873+j8.622
JUCHITÁN UNO	JUC-115	115	7.07	7.29	1.842+j9.206	1.657+j8.494	8.95	8.75	1.424+j8.037	1.672+j8.643	8.95	8.75	1.424+j8.037	1.672+j8.643
JUILE	JUI-115	115	4.33	2.69	3.931+j14.829	9.848+j42.442	4.91	3.02	3.759+j14.378	9.734+j41.888	4.91	3.02	3.759+j14.378	9.734+j41.888
JUILE	JUI-230	230	10.74	12.62	1.090+j12.318	0.500+j6.765	13.87	15.45	0.562+j10.520	0.531+j7.218	13.86	15.44	0.563+j10.523	0.531+j7.218
JUILE	JUI-400	400	12.94	12.94	2.482+j17.675	2.907+j17.268	21.88	18.43	1.057+j11.563	3.032+j17.602	21.85	18.41	1.063+j11.576	3.032+j17.602
JUY JUY	JUY-115	115	12.40	12.97	0.851+j5.288	0.592+j4.608	15.07	15.15	0.648+j4.802	0.601+j4.715	15.07	15.15	0.648+j4.802	0.601+j4.715
KILOMETRO VEINTE	KLV-115	115	20.91	22.03	0.577+j3.122	0.291+j2.828	25.87	25.91	0.382+j2.797	0.301+j2.891	25.87	25.91	0.382+j2.797	0.301+j2.891
KILOMETRO VEINTE	KLV-230	230	12.83	13.17	1.997+j10.153	1.308+j9.911	17.23	16.45	1.158+j8.401	1.346+j9.833	17.22	16.44	1.158+j8.401	1.346+j9.833
KIMBERLEY CLARK	KIA-115	115	12.64	10.38	1.104+j5.137	1.606+j8.590	14.25	11.46	0.999+j5.027	1.624+j8.758	14.21	11.44	1.005+j5.040	1.624+j8.758
KIMBERLEY CLARK, PUÉ.	KIC-115	115	11.72	9.36	1.203+j5.537	1.888+j9.832	13.19	10.32	1.098+j5.428	1.906+j9.999	13.16	10.31	1.104+j5.441	1.905+j10.000
KIMBERLEY CLARK, VER.	KIM-115	115	12.89	11.63	0.897+j5.073	1.001+j6.802	15.48	13.23	0.707+j4.666	1.073+j7.053	15.46	13.22	0.710+j4.671	1.073+j7.053
KRUPP METALÚRGICA	KRU-115	115	14.22	9.03	0.799+j4.601	2.971+j12.416	15.98	10.02	0.733+j4.512	2.968+j12.402	15.95	10.02	0.737+j4.520	2.968+j12.402
LA BARRA	LBR-115	115	3.44	4.17	4.170+j18.853	1.378+j9.604	3.83	4.59	4.085+j18.616	1.426+j9.939	3.83	4.59	4.092+j18.638	1.425+j9.940

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Oriental

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
LA CHOCA	LCH-115	115	15.69	14.02	0.866+j4.143	1.178+j5.835	18.34	15.81	0.718+j3.916	1.190+j5.932	18.34	15.81	0.718+j3.916	1.190+j5.932
LA CIÉNEGA	CIG-115	115	5.31	5.91	3.321+j12.045	0.955+j8.807	5.97	6.49	3.121+j11.832	1.028+j9.332	5.97	6.49	3.123+j11.834	1.028+j9.332
LA CIÉNEGA	CIG-230	230	2.91	3.12	11.664+j44.163	4.429+j36.491	3.30	3.45	10.748+j42.922	4.757+j38.521	3.30	3.45	10.755+j42.930	4.757+j38.521
LA CURVA	LVA-115	115	8.53	6.13	1.253+j7.687	3.145+j16.723	10.18	7.06	0.920+j7.118	3.068+j16.443	10.18	7.06	0.920+j7.118	3.068+j16.443
LA GARZA	LGZ-115	115	1.89	1.13	9.876+j33.708	28.520+j102.242	2.11	1.25	9.598+j33.212	28.522+j102.211	2.11	1.25	9.598+j33.212	28.522+j102.211
LA GLORIA MANIOBRAS	GLM-115	115	3.71	3.59	3.460+j17.542	2.110+j21.266	4.07	3.84	3.473+j17.626	2.300+j22.581	4.06	3.84	3.475+j17.630	2.300+j22.581
LA GRANJA TRES	GRT-115	115	8.73	5.69	1.453+j7.467	4.372+j19.379	13.81	9.73	0.841+j5.221	2.405+j11.675	13.81	9.73	0.842+j5.222	2.405+j11.675
LA GUADALUPE	LGP-115	115	1.65	1.11	10.388+j38.812	30.755+j94.968	1.85	1.24	10.064+j38.135	30.354+j93.547	1.85	1.24	10.075+j38.180	30.351+j93.556
LA MALINCHE	MLC-115	115	19.59	23.62	0.665+j3.324	0.134+j1.736	22.27	26.15	0.575+j3.228	0.148+j1.870	22.18	26.07	0.581+j3.241	0.148+j1.870
LA MALINCHE	MLC-230	230	12.06	13.39	2.229+j10.782	0.926+j7.894	14.20	15.14	1.814+j10.127	1.018+j8.380	14.13	15.09	1.837+j10.174	1.018+j8.380
LA MIRA	MRA-115	115	4.53	4.79	4.575+j13.915	2.757+j11.884	6.06	5.97	2.925+j11.687	2.804+j11.971	6.06	5.97	2.926+j11.688	2.804+j11.971
LA REFORMA	RFA-115	115	10.54	7.78	1.090+j6.206	2.646+j13.059	11.90	8.61	1.010+j6.053	2.658+j13.176	11.90	8.61	1.010+j6.053	2.658+j13.176
LA REINA	RNA-115	115	6.54	6.18	2.014+j9.946	2.075+j11.892	7.58	6.93	1.729+j9.484	2.117+j12.169	7.56	6.92	1.737+j9.505	2.117+j12.170
LA TINAJA	TNJ-115	115	1.63	0.88	10.006+j39.584	37.516+j139.639	2.68	1.48	6.331+j26.484	25.972+j90.492	2.68	1.48	6.332+j26.486	25.972+j90.492
LA TRINITARIA	TNI-115	115	1.26	0.86	15.036+j50.475	46.831+j118.305	1.42	0.96	14.374+j49.490	46.426+j116.938	1.42	0.96	14.374+j49.490	46.426+j116.938
LA UNIÓN	UNN-115	115	5.76	2.37	2.436+j11.277	16.524+j58.466	8.41	4.20	1.801+j8.495	9.241+j33.501	8.41	4.20	1.802+j8.495	9.241+j33.501
LA VENTA DOS	VED-115	115	4.98	3.87	2.781+j13.047	5.665+j24.284	5.55	4.29	2.792+j12.868	5.672+j24.230	5.55	4.29	2.792+j12.868	5.672+j24.230
LA VENTA DOS	LVD-230	230	4.58	5.77	4.275+j28.684	1.426+j11.103	6.84	8.05	2.389+j21.223	1.504+j11.703	6.84	8.05	2.389+j21.224	1.504+j11.703
LA VENTA MANIOBRAS	VMN-230	230	4.05	4.99	4.647+j32.468	1.108+j14.315	6.08	7.09	2.511+j23.881	1.122+j13.809	6.08	7.09	2.512+j23.882	1.122+j13.809
LA VENTA PEMEX	VEP-115	115	4.91	3.79	2.811+j13.214	5.864+j25.008	5.47	4.20	2.826+j13.043	5.871+j24.955	5.47	4.20	2.826+j13.043	5.871+j24.955
LACANJÁ	LCJ-115	115	0.73	0.48	27.156+j87.151	90.610+j209.969	0.81	0.54	26.030+j86.004	87.704+j203.245	0.81	0.54	26.030+j86.004	87.704+j203.245
LAGUNA DE COYUCA	LGN-115	115	5.79	7.17	3.682+j10.867	0.586+j4.838	8.26	9.57	2.100+j8.589	0.630+j4.983	8.26	9.57	2.101+j8.590	0.630+j4.983
LAGUNA DE TRES PALOS	LTP-115	115	4.68	5.04	4.753+j13.383	2.313+j11.023	6.25	6.27	3.083+j11.279	2.358+j11.177	6.25	6.27	3.084+j11.280	2.358+j11.177
LAGUNA VERDE	LAV-230	230	10.47	11.16	1.408+j12.599	0.632+j10.420	12.74	13.19	0.893+j11.430	0.584+j10.354	12.71	13.17	0.901+j11.454	0.584+j10.354
LAGUNA VERDE	LAV-400	400	12.77	14.47	2.333+j17.930	0.757+j11.826	18.76	21.75	1.028+j13.502	0.340+j7.997	18.64	21.64	1.050+j13.589	0.339+j7.999
LAMOSA	LOA-115	115	22.58	19.09	0.473+j2.902	0.775+j4.516	24.95	20.75	0.429+j2.896	0.794+j4.663	24.86	20.71	0.433+j2.905	0.794+j4.664
LAPSOLITE	LSL-115	115	16.32	11.83	0.665+j4.013	2.198+j8.473	18.02	12.92	0.623+j4.006	2.206+j8.621	17.97	12.90	0.628+j4.015	2.206+j8.622
LAS BRISAS	BRS-115	115	14.21	13.73	1.091+j4.544	0.816+j5.193	20.55	17.96	0.672+j3.489	0.818+j5.182	20.53	17.95	0.674+j3.493	0.818+j5.182
LAS CHOAPAS DOS	LHD-115	115	3.36	2.08	5.674+j18.957	12.403+j55.009	3.78	2.31	5.549+j18.504	12.410+j54.956	3.78	2.31	5.549+j18.504	12.410+j54.956
LAS JUNTAS	LJU-115	115	1.72	1.11	11.348+j36.932	24.655+j99.234	1.90	1.22	11.211+j36.823	24.815+j99.856	1.90	1.22	11.215+j36.827	24.815+j99.856

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Oriental**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
LAS MARGARITAS	MGS-115	115	4.50	2.88	2.684+j14.500	8.160+j38.817	5.15	3.23	2.474+j13.951	8.185+j38.630	5.12	3.21	2.492+j14.046	8.178+j38.688
LAS MATAS	MAS-115	115	11.85	8.05	0.957+j5.519	2.773+j13.420	15.31	10.86	0.711+j4.718	1.870+j10.608	15.31	10.86	0.711+j4.718	1.870+j10.608
LAS TRANCAS	TRN-115	115	6.21	5.53	2.144+j10.474	2.719+j14.573	7.16	6.18	1.864+j10.030	2.757+j14.839	7.14	6.17	1.872+j10.050	2.757+j14.839
LAS VIGAS DOS	VGS-115	115	4.64	3.13	2.778+j14.046	7.189+j34.483	5.61	3.57	2.254+j12.823	7.180+j34.629	5.59	3.56	2.263+j12.857	7.180+j34.631
LERDO	LRD-115	115	1.87	1.05	12.175+j33.425	31.165+j114.585	2.22	1.54	10.408+j31.175	18.453+j73.176	2.22	1.54	10.409+j31.176	18.453+j73.176
LIBERACIÓN MEXICANA	LMX-115	115	2.66	2.17	6.269+j24.119	8.303+j41.238	3.06	2.42	5.796+j23.192	8.345+j41.813	3.06	2.42	5.796+j23.192	8.345+j41.813
LIBRES	LIB-115	115	4.78	3.16	3.592+j13.407	8.110+j34.487	5.37	3.50	3.468+j13.162	8.146+j34.511	5.29	3.47	3.560+j13.346	8.137+j34.581
LOMA BONITA DOS	LBD-115	115	3.43	2.05	5.268+j18.626	17.255+j56.071	3.94	2.30	5.024+j17.860	17.257+j55.597	3.94	2.30	5.024+j17.861	17.257+j55.597
LOMAS COCOYOC	LOC-115	115	9.28	6.51	1.503+j6.996	3.233+j15.968	10.14	7.09	1.438+j7.060	3.245+j16.195	10.13	7.08	1.442+j7.067	3.245+j16.195
LOMAS DEL MAR	LMM-115	115	5.35	6.23	4.201+j11.683	1.146+j7.144	7.40	8.01	2.544+j9.541	1.189+j7.308	7.40	8.01	2.545+j9.542	1.189+j7.308
LÓPEZ MATEOS	LME-115	115	12.90	9.88	0.970+j5.056	1.922+j10.031	15.61	11.53	0.859+j4.600	1.935+j9.687	15.61	11.53	0.859+j4.600	1.935+j9.687
LOS AMATES	LAT-115	115	5.95	7.84	3.929+j10.438	0.220+j3.174	8.50	10.58	2.278+j8.286	0.263+j3.338	8.50	10.58	2.279+j8.287	0.263+j3.338
LOS AMATES	LAT-230	230	3.25	4.02	13.927+j38.459	1.608+j17.539	4.79	5.49	7.554+j29.517	1.873+j18.188	4.79	5.49	7.559+j29.520	1.873+j18.188
LOS ARCOS	AOS-115	115	14.21	15.48	0.613+j4.631	0.287+j3.548	15.54	16.65	0.536+j4.670	0.298+j3.762	15.51	16.63	0.541+j4.677	0.298+j3.762
LOS RÍOS	LRS-115	115	5.57	4.38	2.374+j11.671	4.671+j21.173	6.99	6.12	1.423+j10.344	2.139+j14.803	6.99	6.12	1.423+j10.344	2.139+j14.803
LOS RÍOS	LRS-230	230	4.10	2.95	7.454+j31.551	17.116+j68.480	6.17	5.10	3.399+j23.424	7.038+j38.347	6.17	5.10	3.400+j23.424	7.038+j38.347
MACTUMATZA	MAA-115	115	9.74	6.14	1.505+j6.650	2.974+j18.570	11.71	7.03	1.255+j6.107	2.969+j18.453	11.71	7.03	1.255+j6.107	2.969+j18.453
MACULTEPEC	MCL-115	115	6.86	5.47	2.239+j9.414	6.129+j16.235	7.76	6.07	2.076+j9.182	6.149+j16.394	7.76	6.07	2.076+j9.182	6.149+j16.394
MACUSPANA	MCP-115	115	6.32	4.94	2.253+j10.263	5.933+j18.450	7.39	5.67	1.901+j9.705	5.888+j18.041	7.39	5.67	1.901+j9.705	5.888+j18.041
MACUSPANA DOS	MCD-115	115	12.86	11.34	0.813+j5.100	1.035+j7.242	15.77	13.49	0.503+j4.603	0.958+j6.963	15.77	13.49	0.503+j4.603	0.958+j6.963
MACUSPANA DOS	MCD-230	230	9.71	8.27	2.740+j13.402	3.974+j20.779	13.17	10.64	1.506+j10.992	3.568+j18.869	13.17	10.64	1.506+j10.992	3.568+j18.869
MAGDALENA MANIOBRAS	MMA-400	400	9.46	9.81	2.990+j24.240	2.213+j21.818	12.19	11.81	1.834+j20.755	2.471+j22.733	11.56	11.33	2.053+j21.887	2.439+j23.203
MAGDALENA MANIOBRAS DOS	MDM-230	230	8.22	8.79	2.475+j15.966	1.585+j13.045	9.94	10.12	1.903+j14.574	1.739+j13.791	9.90	10.10	1.925+j14.627	1.739+j13.791
MALINALTEPEC	MLN-115	115	0.76	0.43	28.005+j83.169	73.612+j276.430	0.85	0.48	26.603+j82.187	73.665+j276.535	0.85	0.48	26.604+j82.187	73.665+j276.535
MALPASO	MPS-115	115	6.23	7.40	1.595+j10.540	0.300+j5.674	6.86	8.01	1.553+j10.532	0.345+j6.126	6.86	8.01	1.553+j10.532	0.345+j6.126
MALPASO	MPS-400	400	15.11	16.61	2.259+j15.120	1.098+j11.116	28.96	31.48	0.639+j8.750	0.441+j6.275	28.95	31.48	0.640+j8.753	0.441+j6.275
MALPASO DOS	MPD-230	230	12.80	14.54	1.006+j10.329	0.286+j6.769	17.85	19.58	0.395+j8.175	0.209+j5.952	17.85	19.58	0.395+j8.175	0.209+j5.952
MALPASO TRES	MPE-115	115	6.12	7.15	1.640+j10.718	0.426+j6.258	6.74	7.73	1.597+j10.710	0.472+j6.711	6.74	7.73	1.598+j10.710	0.472+j6.711
MANDINGA	MDG-115	115	8.00	3.65	1.708+j8.124	14.273+j35.455	11.79	4.57	1.016+j6.108	13.730+j33.291	11.79	4.57	1.017+j6.111	13.730+j33.291
MANIOBRAS GENERADORES EÓLICOS DE MÉXICO	GEM-115	115	2.34	2.54	7.415+j27.383	3.436+j21.573	2.71	2.85	6.738+j26.076	3.515+j22.700	2.71	2.85	6.738+j26.077	3.515+j22.700

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Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
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			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
MANIOBRAS PRO MDF	MPR-115	115	6.87	6.21	2.357+j9.378	3.011+j12.669	7.71	6.81	2.255+j9.197	3.189+j13.102	7.71	6.81	2.255+j9.197	3.189+j13.102
MANIOBRAS SOLAR XOXCOTLA	SMX-115	115	9.37	9.21	1.161+j6.988	0.934+j7.433	10.63	10.17	1.009+j6.793	0.965+j7.755	10.62	10.17	1.013+j6.800	0.965+j7.755
MANLIO FABIO ALTAMIRANO	MFA-230	230	14.35	16.64	1.826+j9.071	0.680+j5.534	19.85	21.61	1.041+j7.286	0.736+j5.672	19.79	21.57	1.049+j7.305	0.736+j5.672
MANLIO FABIO ALTAMIRANO	MFA-400	400	8.70	8.92	4.001+j26.254	3.091+j24.593	11.64	11.15	2.181+j21.707	3.407+j24.736	11.60	11.12	2.204+j21.779	3.407+j24.736
MANUEL MORENO TORRES	MMT-115	115	13.97	16.89	0.684+j4.703	0.070+j2.296	17.16	20.02	0.486+j4.228	0.079+j2.417	17.16	20.02	0.486+j4.228	0.079+j2.417
MANUEL MORENO TORRES	MMT-400	400	14.35	16.82	2.421+j15.911	0.603+j8.700	31.29	36.02	0.529+j8.101	0.257+j4.483	31.28	36.01	0.530+j8.103	0.257+j4.483
MAPASTEPEC	MAP-115	115	3.72	2.92	4.811+j17.213	9.107+j31.200	4.44	3.35	4.055+j15.934	9.056+j31.077	4.44	3.35	4.055+j15.934	9.056+j31.077
MARTÍNEZ DE LA TORRE DOS	MDD-115	115	3.78	3.09	4.232+j17.033	8.791+j28.237	4.34	3.55	3.917+j16.349	8.395+j26.824	4.33	3.54	3.927+j16.395	8.392+j26.833
MARTÍNEZ DE LA TORRE TRES	MTT-115	115	3.70	2.85	4.106+j17.477	9.362+j32.729	4.23	3.25	3.820+j16.852	9.027+j31.521	4.22	3.25	3.830+j16.896	9.025+j31.530
MATAPIONCHE	MPH-115	115	1.71	0.95	9.586+j37.660	34.761+j127.827	2.90	1.65	5.980+j24.508	23.240+j78.726	2.89	1.65	5.981+j24.510	23.240+j78.726
MATÍAS ROMERO	MRO-115	115	6.79	5.49	2.141+j9.547	3.345+j16.384	8.22	6.31	1.827+j8.690	3.369+j16.590	8.22	6.31	1.827+j8.690	3.369+j16.590
MATÍAS ROMERO POTENCIA	MSP-115	115	9.44	9.90	1.097+j6.944	0.832+j6.014	11.71	11.63	0.827+j6.181	0.865+j6.298	11.71	11.63	0.827+j6.182	0.865+j6.298
MATÍAS ROMERO POTENCIA	MSP-230	230	6.02	6.17	3.348+j21.807	4.088+j20.123	8.07	7.66	2.228+j17.964	4.238+j20.635	8.07	7.66	2.229+j17.966	4.238+j20.635
MAZATAN	MAZ-115	115	4.14	3.64	3.842+j15.573	6.550+j21.484	4.94	4.18	3.152+j14.458	6.662+j21.653	4.94	4.18	3.152+j14.458	6.662+j21.653
MAZATEPEC	MZT-230	230	6.74	5.17	2.949+j19.484	8.779+j36.842	10.99	10.58	1.295+j13.223	1.226+j13.088	10.94	10.54	1.309+j13.283	1.225+j13.091
MEDIA LUNA	MLU-115	115	3.07	2.41	6.548+j20.635	13.783+j37.049	3.91	2.94	4.797+j18.071	13.139+j34.691	3.91	2.94	4.798+j18.072	13.139+j34.691
METALOIDES	MET-115	115	19.86	14.38	0.773+j3.253	1.356+j7.069	22.65	16.09	0.697+j3.148	1.353+j7.063	22.59	16.07	0.702+j3.156	1.353+j7.063
METEPEC	MEC-115	115	6.98	4.25	2.323+j9.228	7.173+j26.980	7.77	4.69	2.240+j9.132	7.178+j27.001	7.76	4.69	2.245+j9.139	7.178+j27.001
METLATONOC	MTL-115	115	0.94	0.59	19.742+j68.089	44.468+j192.268	1.07	0.66	17.777+j65.685	44.509+j192.187	1.07	0.66	17.778+j65.686	44.509+j192.187
MEZCALA	MZL-115	115	6.64	6.77	2.721+j9.623	1.519+j9.374	10.44	10.28	1.047+j6.916	0.892+j7.038	10.44	10.28	1.048+j6.918	0.892+j7.038
MEZCALA	MZL-230	230	4.42	4.41	9.252+j28.612	6.119+j29.821	8.78	8.31	2.907+j16.379	3.490+j18.149	8.78	8.30	2.911+j16.385	3.490+j18.149
MEZCALAPA	MEZ-115	115	6.27	4.97	2.353+j10.318	6.156+j18.092	7.02	5.49	2.258+j10.152	6.181+j18.289	7.02	5.49	2.258+j10.152	6.181+j18.289
MEZCALAPA SWITCHEO	MZW-230	230	8.05	6.44	2.498+j16.302	5.432+j28.795	10.53	8.27	1.652+j13.776	4.582+j24.990	10.53	8.27	1.653+j13.776	4.582+j24.990
MIAHUATLAN	MHT-115	115	1.91	1.34	10.337+j33.242	19.270+j76.247	2.11	1.48	10.084+j33.036	19.324+j76.622	2.11	1.48	10.085+j33.038	19.324+j76.622
MIAHUATLÁN DOS	MUD-115	115	2.02	1.47	9.578+j31.473	16.784+j67.434	2.24	1.62	9.333+j31.270	16.841+j67.832	2.24	1.62	9.335+j31.271	16.841+j67.832
MINAS	MIS-69	69	1.54	1.06	5.555+j25.311	14.946+j59.066	2.43	2.94	2.556+j17.856	0.494+j6.715	2.43	2.94	2.557+j17.887	0.494+j6.715
MINATITLÁN DOS	MID-115	115	27.36	30.64	0.325+j2.405	0.095+j1.780	37.10	38.70	0.204+j1.958	0.109+j1.800	37.09	38.69	0.205+j1.959	0.109+j1.800
MINATITLÁN DOS	MID-400	400	12.13	13.37	2.786+j18.833	1.418+j14.725	19.13	18.55	1.465+j13.195	1.540+j14.822	19.12	18.55	1.469+j13.204	1.540+j14.822
MINATITLÁN UNO	MIU-115	115	9.52	5.88	1.195+j6.874	4.323+j19.634	11.13	6.64	1.071+j6.473	4.318+j19.529	11.13	6.64	1.071+j6.473	4.318+j19.529
MINERA AUTLÁN, PUÉ.	MAU-115	115	7.69	8.58	1.746+j8.460	0.898+j5.972	9.50	10.38	1.386+j7.558	0.939+j5.516	9.30	10.16	1.417+j7.725	0.922+j5.647

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			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
MINERA CAPELA	MCA-115	115	1.52	1.00	13.993+j41.230	31.137+j107.466	1.79	1.15	12.146+j38.874	30.479+j105.085	1.79	1.15	12.148+j38.875	30.479+j105.085
MINERA CUZCATLAN	MCN-115	115	2.72	2.11	6.583+j23.532	9.467+j44.320	3.02	2.32	6.373+j23.328	9.540+j44.835	3.02	2.32	6.374+j23.330	9.540+j44.835
MINERA FILOS-BERMEJAL	MFB-115	115	4.71	3.91	3.786+j13.575	4.445+j22.408	6.58	5.11	2.100+j10.895	3.817+j20.072	6.58	5.11	2.101+j10.897	3.817+j20.072
MISANTLA DOS	MSD-115	115	2.08	1.62	8.556+j30.708	20.878+j55.534	2.35	1.83	8.229+j30.032	20.477+j54.116	2.34	1.82	8.240+j30.078	20.475+j54.125
MITLA	MTX-115	115	1.82	1.25	9.750+j35.140	19.620+j84.526	2.02	1.38	9.546+j34.915	19.654+j84.898	2.02	1.38	9.548+j34.917	19.654+j84.898
MOCAMBO	MCB-115	115	11.09	8.15	1.442+j5.811	1.993+j12.417	16.72	11.07	0.845+j4.285	1.709+j11.143	16.71	11.07	0.846+j4.288	1.709+j11.143
MOCAMBO	MCB-115B	115	11.09	8.15	1.442+j5.811	1.993+j12.417	16.72	11.07	0.845+j4.285	1.709+j11.143	16.71	11.07	0.846+j4.288	1.709+j11.143
MOTOZINTLA	MTO-115	115	1.58	1.11	12.821+j40.003	30.253+j90.263	1.82	1.25	11.694+j38.399	30.382+j90.571	1.82	1.25	11.694+j38.400	30.382+j90.571
MOZIMBA	MOZ-115	115	4.95	5.38	4.191+j12.729	1.754+j10.150	6.78	6.82	2.552+j10.472	1.802+j10.236	6.78	6.82	2.553+j10.473	1.802+j10.236
MUNDO IMPERIAL	MIP-115	115	4.54	4.53	4.891+j13.774	3.083+j14.533	6.03	5.57	3.221+j11.671	3.128+j14.687	6.03	5.57	3.222+j11.672	3.128+j14.687
NANCHITAL DOS	NND-115	115	9.91	6.79	1.535+j6.520	3.354+j15.708	11.71	7.69	1.411+j6.077	3.368+j15.728	11.71	7.69	1.411+j6.077	3.368+j15.728
NAONILCO	NAO-115	115	4.19	3.38	3.610+j15.411	5.467+j26.860	4.78	3.76	3.312+j14.921	5.515+j27.162	4.77	3.76	3.321+j14.943	5.514+j27.162
NISSAN	NSN-115	115	10.28	10.01	1.118+j6.359	0.897+j6.955	11.34	10.87	0.990+j6.364	0.935+j7.227	11.33	10.86	0.994+j6.370	0.935+j7.227
NOCHIXTLAN	NCH-115	115	1.85	1.27	10.432+j34.335	25.522+j80.869	2.05	1.40	10.262+j34.181	25.585+j81.230	2.05	1.40	10.265+j34.184	25.585+j81.230
NOGALES	NGL-115	115	9.34	6.76	1.906+j6.849	3.540+j14.910	11.03	7.75	1.705+j6.400	3.490+j14.634	11.02	7.75	1.707+j6.405	3.490+j14.634
NORTE	NOR-115	115	33.44	27.39	0.424+j1.940	0.565+j3.281	39.18	31.30	0.349+j1.831	0.559+j3.246	39.01	31.22	0.353+j1.839	0.559+j3.246
NUEVA XCALA MANIOBRAS	NXM-230	230	9.85	10.05	2.010+j13.337	2.163+j12.565	11.78	11.50	1.561+j12.303	2.280+j13.127	11.72	11.46	1.586+j12.360	2.280+j13.128
NUEVO MORELOS	NMO-115	115	3.75	2.28	4.689+j17.098	11.677+j50.520	4.25	2.55	4.495+j16.607	11.629+j50.314	4.24	2.55	4.496+j16.608	11.629+j50.314
OAXACA	OAX-115	115	3.95	3.75	4.679+j16.128	4.366+j19.145	4.42	4.14	4.473+j15.901	4.403+j19.542	4.42	4.14	4.475+j15.903	4.403+j19.542
OAXACA DOS	OXD-115	115	4.89	4.72	3.769+j13.046	3.123+j14.832	5.49	5.21	3.571+j12.815	3.157+j15.202	5.49	5.21	3.573+j12.817	3.157+j15.202
OAXACA PONIENTE	OAP-115	115	4.21	4.48	4.433+j15.135	2.513+j12.789	4.71	4.94	4.230+j14.913	2.550+j13.197	4.71	4.94	4.232+j14.914	2.550+j13.197
OAXACA POTENCIA	OXP-115	115	5.47	6.73	3.303+j11.684	0.291+j5.495	6.14	7.42	3.112+j11.476	0.330+j5.921	6.14	7.41	3.114+j11.478	0.330+j5.921
OAXACA POTENCIA	OXP-230	230	2.97	3.30	11.360+j43.171	2.491+j31.991	3.38	3.64	10.449+j41.941	2.811+j34.163	3.38	3.64	10.456+j41.950	2.811+j34.163
OAXACA UNO	OAU-230	230	3.64	4.36	5.723+j36.039	2.113+j18.351	5.15	5.76	3.693+j28.121	2.265+j19.244	5.15	5.76	3.694+j28.123	2.265+j19.244
OCOTLÁN	OCL-115	115	3.13	3.16	5.140+j20.570	3.725+j20.336	3.49	3.47	4.927+j20.367	3.797+j20.842	3.49	3.47	4.928+j20.369	3.797+j20.842
OCOZINGO	OCO-115	115	1.11	0.73	18.052+j56.917	57.740+j141.040	1.24	0.81	17.649+j56.320	57.672+j140.464	1.24	0.81	17.649+j56.320	57.672+j140.464
OCOZOUAUTLA	OCZ-115	115	6.51	4.46	2.369+j9.915	4.898+j23.840	7.58	5.03	2.123+j9.394	4.900+j23.809	7.58	5.03	2.123+j9.395	4.900+j23.809
OJO DE AGUA POTENCIA	OJP-115	115	20.83	22.01	0.513+j3.146	0.248+j2.711	25.83	25.98	0.351+j2.806	0.268+j2.773	25.78	25.95	0.354+j2.811	0.268+j2.773
OJO DE AGUA POTENCIA	OJP-400	400	12.11	12.87	3.314+j18.772	1.552+j15.871	18.42	17.25	2.008+j13.643	1.673+j16.563	18.32	17.19	2.043+j13.719	1.673+j16.563
OLINALA	OLN-115	115	1.28	0.88	14.715+j49.913	34.701+j117.056	1.49	0.99	12.805+j47.473	34.741+j116.977	1.49	0.99	12.806+j47.474	34.741+j116.977

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Oriental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
OMEALCA	OME-115	115	3.68	1.86	2.836+j17.795	15.978+j69.221	4.85	3.40	2.028+j14.932	6.368+j33.813	4.85	3.40	2.029+j14.934	6.368+j33.813
OMETEPEC	OMT-115	115	1.21	0.70	22.136+j50.417	51.351+j171.010	1.36	0.77	20.848+j49.562	51.400+j171.112	1.36	0.77	20.849+j49.563	51.400+j171.112
ORIENTE	ORT-115	115	18.12	12.86	0.822+j3.572	1.597+j8.020	20.47	14.25	0.748+j3.489	1.605+j8.095	20.42	14.23	0.753+j3.497	1.605+j8.095
ORIZABA	ORI-115	115	15.14	14.36	0.881+j4.297	0.886+j5.075	19.00	17.77	0.642+j3.790	0.771+j4.575	18.98	17.76	0.645+j3.794	0.771+j4.575
OXCHUC	OXC-115	115	1.56	1.03	12.755+j40.686	39.898+j100.888	1.74	1.14	12.367+j40.076	39.832+j100.313	1.74	1.14	12.367+j40.076	39.832+j100.313
PAGÉS	PAG-115	115	13.29	11.23	1.206+j4.849	1.208+j7.755	19.74	14.93	0.722+j3.630	1.125+j7.364	19.72	14.93	0.724+j3.633	1.125+j7.364
PAGÉS	PAG-115B	115	13.29	11.23	1.206+j4.849	1.208+j7.755	19.74	14.93	0.722+j3.630	1.125+j7.364	19.72	14.93	0.724+j3.633	1.125+j7.364
PAJARITOS DOS	PJD-115	115	16.69	15.70	0.642+j3.925	0.543+j5.084	21.06	19.34	0.525+j3.428	0.553+j4.617	21.06	19.34	0.526+j3.428	0.553+j4.617
PAKAL	PKN-115	115	2.66	1.91	6.035+j24.223	18.135+j51.675	3.11	2.32	5.061+j22.936	15.584+j45.286	3.11	2.32	5.061+j22.936	15.584+j45.286
PALENQUE	PLQ-115	115	2.14	1.51	7.724+j30.071	24.360+j65.805	2.47	1.80	6.744+j28.794	21.807+j59.415	2.47	1.80	6.744+j28.794	21.807+j59.415
PALMAR DE BRAVO	PLB-115	115	4.56	3.23	4.864+j13.721	7.935+j31.709	5.07	3.54	4.763+j13.603	8.009+j32.087	5.07	3.54	4.767+j13.609	8.009+j32.087
PALMAS	PMM-115	115	10.09	8.02	0.861+j6.526	2.174+j11.534	13.74	10.12	0.618+j5.279	2.094+j10.658	13.69	10.09	0.622+j5.299	2.094+j10.662
PANOTLA	PNA-115	115	12.14	8.04	1.543+j5.248	3.895+j13.318	13.56	8.88	1.477+j5.179	3.902+j13.375	13.54	8.88	1.482+j5.189	3.902+j13.375
PANTEPEC	PPC-115	115	8.53	10.08	1.262+j7.679	0.281+j4.373	9.68	11.14	1.184+j7.451	0.317+j4.674	9.65	11.11	1.190+j7.473	0.317+j4.675
PANTEPEC	PPC-230	230	5.37	5.35	3.973+j24.402	2.247+j25.322	6.25	5.97	3.572+j23.082	2.521+j26.685	6.23	5.95	3.595+j23.177	2.519+j26.694
PAPAGAYO	PPG-115	115	3.95	2.86	5.603+j15.857	14.423+j33.062	5.07	3.37	3.945+j13.847	14.478+j33.172	5.07	3.37	3.946+j13.848	14.478+j33.172
PAPALOTLA	PPL-115	115	19.63	13.12	0.635+j3.323	1.898+j8.238	22.38	14.70	0.560+j3.215	1.890+j8.193	22.32	14.68	0.564+j3.223	1.890+j8.193
PAPANOA	PPN-115	115	1.27	1.18	12.256+j50.700	39.315+j55.378	2.39	1.98	7.711+j29.626	25.513+j43.231	2.39	1.98	7.712+j29.626	25.513+j43.231
PAPANTLA DISTRIBUCIÓN	PAP-115	115	8.84	6.45	1.070+j7.433	3.330+j15.571	10.82	7.59	0.918+j6.687	3.294+j14.905	10.78	7.58	0.924+j6.714	3.295+j14.912
PAPANTLA POTENCIA	PPT-115	115	19.46	18.52	0.273+j3.401	0.511+j3.913	22.61	20.92	0.225+j3.223	0.553+j3.944	22.33	20.70	0.233+j3.262	0.557+j3.975
PAPANTLA POTENCIA	PPT-400	400	14.95	12.92	1.636+j15.358	4.182+j22.325	19.28	15.67	1.011+j13.137	4.332+j21.742	18.41	15.13	1.102+j13.757	4.349+j22.218
PAPELERA TUXTEPEC	PTU-230	230	5.06	3.64	3.644+j25.996	12.550+j55.599	5.94	4.16	3.085+j24.395	12.542+j54.841	5.94	4.16	3.090+j24.406	12.542+j54.841
PARAÍSO	PSO-115	115	6.98	5.92	1.925+j9.311	3.513+j14.406	7.87	6.54	1.785+j9.109	3.573+j14.655	7.87	6.54	1.785+j9.109	3.573+j14.655
PAREDÓN PEMEX	PPX-115	115	2.60	1.85	6.261+j24.786	21.464+j52.804	2.88	2.03	6.164+j24.622	21.489+j53.002	2.88	2.03	6.164+j24.622	21.489+j53.002
PARQUE INDUSTRIAL	PRQ-115	115	5.60	3.77	2.167+j11.662	6.538+j28.526	6.30	4.18	2.028+j11.420	6.550+j28.622	6.30	4.18	2.028+j11.420	6.550+j28.622
PARQUE INDUSTRIAL DE ENERGÍA RENOVABLE, S.A. DE C.V.	PIE-230	230	4.08	4.49	3.205+j32.374	1.729+j23.730	4.46	4.81	3.071+j32.602	1.917+j25.534	4.46	4.81	3.081+j32.623	1.917+j25.534
PARQUE INDUSTRIAL DE ENERGÍA RENOVABLE, S.A. DE C.V.	PIE-230B	230	3.49	3.69	4.021+j37.817	3.149+j31.628	3.82	3.97	3.898+j38.082	3.382+j33.649	3.81	3.97	3.907+j38.103	3.382+j33.649
PARRILLA	PLL-115	115	16.54	14.52	0.729+j3.949	0.949+j5.763	19.92	16.68	0.535+j3.628	0.959+j5.822	19.92	16.68	0.535+j3.628	0.959+j5.822
PASEO TABASCO	PTB-115	115	11.72	8.90	1.147+j5.550	2.146+j11.037	13.65	10.01	0.961+j5.263	2.156+j11.108	13.65	10.01	0.961+j5.263	2.156+j11.108
PASO DEL TORO	PDT-115	115	10.09	8.41	1.452+j6.420	2.203+j10.374	16.97	13.32	0.738+j4.240	1.615+j7.900	16.96	13.32	0.739+j4.242	1.615+j7.900

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Oriental**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
PE INGENIO	EIN-230	230	3.70	4.36	5.132+j35.566	2.395+j19.565	5.42	6.10	2.947+j26.785	2.109+j17.898	5.42	6.10	2.948+j26.787	2.109+j17.898
PEÑITAS	PEA-115	115	4.21	3.40	3.354+j15.397	9.645+j25.542	4.67	3.74	3.277+j15.282	9.667+j25.810	4.67	3.74	3.277+j15.282	9.667+j25.810
PEÑITAS	PEA-230	230	10.31	8.91	1.785+j12.761	3.323+j18.931	16.33	17.19	0.738+j8.913	0.518+j7.572	16.33	17.19	0.739+j8.913	0.518+j7.572
PEÑITAS DOS	PED-115	115	4.21	3.41	3.351+j15.419	9.616+j25.480	4.67	3.74	3.275+j15.305	9.638+j25.750	4.67	3.74	3.275+j15.305	9.638+j25.750
PEROTE DOS	PEE-115	115	4.90	4.96	2.586+j13.305	2.416+j12.970	6.18	5.91	1.937+j11.652	2.374+j13.221	6.16	5.90	1.946+j11.692	2.373+j13.225
PETATLÁN	PTT-115	115	1.98	1.78	7.298+j32.760	23.464+j39.728	3.05	2.60	5.650+j23.265	18.014+j32.542	3.05	2.60	5.650+j23.266	18.014+j32.542
PETROQUÍMICA ESCOLIN	PQS-115	115	11.78	11.05	0.863+j5.572	1.939+j6.565	16.87	14.82	0.627+j4.283	1.858+j5.670	16.79	14.78	0.631+j4.303	1.858+j5.674
PICHUCALCO	PCO-115	115	2.25	1.54	8.157+j28.391	27.703+j64.688	2.50	1.71	7.937+j28.094	27.714+j64.751	2.50	1.71	7.937+j28.094	27.714+j64.751
PIE DE LA CUESTA	PIC-115	115	6.01	7.87	3.586+j10.452	0.225+j3.245	8.68	10.73	2.008+j8.172	0.269+j3.397	8.68	10.73	2.009+j8.173	0.269+j3.397
PIE DE LA CUESTA	PIC-230	230	3.49	4.32	12.724+j35.866	1.646+j16.239	5.18	5.92	6.802+j27.373	1.894+j16.824	5.18	5.92	6.805+j27.377	1.894+j16.824
PIEDRAS NEGRAS	PNS-115	115	2.72	1.52	5.228+j23.801	18.705+j80.566	6.94	4.09	2.010+j10.335	7.399+j31.813	6.93	4.09	2.012+j10.338	7.399+j31.813
PIER II QUECHOLAC FELIPE ÁNGELES S.A. DE C.V.	PDQ-115	115	5.95	5.76	2.804+j10.800	1.370+j12.289	6.63	6.24	2.703+j10.676	1.519+j13.066	6.63	6.24	2.706+j10.681	1.519+j13.066
PINOTEPA NACIONAL	PIN-115	115	1.04	0.58	26.880+j57.946	58.594+j208.079	1.16	0.64	25.917+j57.453	58.637+j208.190	1.16	0.64	25.918+j57.453	58.637+j208.190
PLAYA DIAMANTE	PDI-115	115	4.80	5.14	4.621+j13.043	2.286+j10.993	6.45	6.41	2.953+j10.937	2.331+j11.147	6.45	6.41	2.954+j10.938	2.331+j11.147
PLAYA NORTE	PYN-115	115	13.98	12.55	1.119+j4.615	0.981+j6.393	20.73	16.72	0.669+j3.459	0.935+j6.162	20.71	16.71	0.670+j3.462	0.935+j6.162
PLAYA VICENTE	PVC-115	115	1.84	1.06	9.563+j34.701	35.913+j111.361	2.08	1.17	9.309+j33.940	35.914+j110.885	2.08	1.17	9.310+j33.941	35.914+j110.885
PLAYAS	PYS-115	115	4.57	4.89	4.587+j13.775	2.587+j11.340	6.13	6.11	2.931+j11.551	2.634+j11.426	6.13	6.11	2.932+j11.552	2.634+j11.426
POCHUTLA	POC-115	115	1.59	0.95	14.332+j39.269	30.900+j122.342	1.76	1.04	13.970+j39.004	30.936+j122.549	1.76	1.04	13.971+j39.005	30.936+j122.549
POLIDESA	PLS-115	115	11.82	8.72	1.278+j5.470	2.802+j11.347	13.31	9.65	1.181+j5.357	2.812+j11.451	13.28	9.63	1.186+j5.370	2.812+j11.451
POLIFIL	POF-115	115	18.95	15.04	0.653+j3.443	1.196+j6.149	20.93	16.39	0.609+j3.437	1.215+j6.297	20.87	16.36	0.613+j3.446	1.215+j6.297
POMOCA	PMC-115	115	16.02	16.66	0.795+j4.067	0.483+j3.842	18.80	18.80	0.636+j3.833	0.502+j3.994	18.80	18.80	0.636+j3.833	0.502+j3.994
PONIENTE	PON-115	115	23.58	16.56	0.678+j2.733	1.296+j6.291	27.06	18.60	0.600+j2.631	1.291+j6.271	26.98	18.57	0.604+j2.639	1.291+j6.271
PORCEL	POR-115	115	19.80	13.14	0.665+j3.287	1.873+j8.285	22.57	14.69	0.589+j3.182	1.868+j8.260	22.51	14.68	0.594+j3.190	1.868+j8.260
POTRERO DOS	PTD-115	115	6.41	4.68	3.116+j9.878	6.327+j20.999	7.32	5.22	2.938+j9.535	6.355+j21.151	7.32	5.21	2.940+j9.539	6.355+j21.151
POZA RICA	PRI-69	69	14.33	16.15	0.180+j2.775	0.052+j1.880	25.31	31.72	0.056+j1.730	0.027+j0.523	25.25	31.65	0.057+j1.734	0.027+j0.523
POZA RICA	PRI-115	115	16.48	19.39	0.417+j4.007	0.141+j2.268	27.47	31.79	0.167+j2.654	0.053+j1.356	27.27	31.58	0.171+j2.673	0.053+j1.359
POZA RICA	PRI-230	230	13.87	14.86	0.981+j9.526	0.842+j7.698	18.64	19.09	0.512+j7.820	0.664+j6.982	18.33	18.81	0.537+j7.949	0.670+j7.051
POZA RICA DOS	PRD-230	230	15.25	16.92	0.804+j8.671	0.432+j6.180	20.26	21.37	0.409+j7.197	0.397+j5.825	19.88	20.98	0.436+j7.334	0.413+j5.915
POZA RICA DOS	PRD-400	400	22.12	19.47	1.103+j10.382	2.321+j14.412	30.71	25.42	0.548+j8.254	2.200+j13.057	28.05	23.39	0.654+j9.034	2.332+j14.059
POZA RICA TRES	PRT-69	69	9.25	7.64	0.475+j4.279	1.126+j6.998	13.45	10.60	0.342+j3.241	1.101+j5.641	13.43	10.60	0.343+j3.245	1.101+j5.641

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
POZO RANEY	PZR-115	115	4.04	2.81	5.334+j15.543	27.250+j28.777	5.26	3.33	3.670+j13.383	27.305+j28.874	5.26	3.33	3.671+j13.383	27.305+j28.874
POZOS HUAZUNTLAN	POZ-115	115	5.40	3.49	4.268+j11.527	8.611+j31.575	6.17	3.91	4.131+j11.092	8.599+j31.441	6.17	3.91	4.131+j11.093	8.599+j31.441
PROCTER & GAMBLE MANUFACTURAS S DE R.L. DE C.V.	PGC-115	115	9.18	8.04	1.300+j7.115	1.324+j10.709	10.14	8.67	1.252+j7.091	1.440+j11.208	10.13	8.66	1.257+j7.102	1.440+j11.208
PROENERMEX SANTA GERTRUDIS	PSG-115	115	12.81	10.47	0.964+j5.092	1.821+j8.514	15.63	13.07	0.747+j4.614	1.362+j7.288	15.61	13.06	0.749+j4.619	1.362+j7.288
PUEBLA DOS	PBD-115	115	40.44	39.81	0.312+j1.612	0.134+j1.741	47.14	44.56	0.241+j1.530	0.144+j1.827	46.87	44.40	0.245+j1.539	0.144+j1.827
PUEBLA DOS	PBD-115B	115	40.44	39.81	0.312+j1.612	0.134+j1.741	47.14	44.56	0.241+j1.530	0.144+j1.827	46.87	44.40	0.245+j1.539	0.144+j1.827
PUEBLA DOS	PBD-230	230	18.33	19.52	1.038+j7.171	0.417+j5.939	20.99	21.60	0.748+j6.920	0.453+j6.337	20.87	21.52	0.766+j6.957	0.452+j6.338
PUEBLA DOS	PBD-400	400	21.24	22.56	2.280+j10.630	1.088+j9.113	28.12	27.79	1.356+j8.931	1.133+j9.361	27.74	27.54	1.408+j9.048	1.132+j9.362
PUEBLA DOS MIL	PDM-115	115	25.82	20.26	0.549+j2.513	0.810+j4.641	29.49	22.51	0.476+j2.431	0.820+j4.722	29.38	22.47	0.481+j2.439	0.819+j4.722
PUEBLA UNO SF6	PSF-115	115	19.16	12.69	0.871+j3.355	1.568+j8.642	21.74	14.12	0.794+j3.264	1.570+j8.672	21.69	14.10	0.799+j3.272	1.570+j8.672
PUENTE DE IXTLA	PTI-85	85	3.33	2.26	2.560+j14.523	5.853+j35.151	3.58	2.44	2.556+j14.872	5.862+j35.659	3.58	2.44	2.558+j14.875	5.862+j35.659
PUERTO CHIAPAS	PUC-115	115	2.88	2.26	6.867+j21.980	13.544+j39.484	3.35	2.55	6.146+j20.906	13.657+j39.653	3.35	2.55	6.147+j20.906	13.657+j39.653
PUERTO ESCONDIDO	PUE-115	115	1.15	0.66	22.362+j53.166	47.493+j181.383	1.28	0.73	21.865+j52.919	47.529+j181.548	1.28	0.73	21.866+j52.920	47.529+j181.548
PUERTO FRANCO	PFR-115	115	10.96	9.34	1.373+j5.899	1.734+j9.405	13.05	10.87	1.259+j5.455	1.747+j9.036	13.04	10.87	1.259+j5.455	1.747+j9.036
PUERTO MADERO	PTM-115	115	3.07	2.44	6.498+j20.598	12.092+j36.181	3.59	2.76	5.779+j19.523	12.205+j36.350	3.59	2.76	5.779+j19.523	12.205+j36.350
PUERTO MARQUEZ	PUM-115	115	5.46	6.46	4.105+j11.457	0.947+j6.484	7.59	8.37	2.452+j9.309	0.989+j6.648	7.59	8.37	2.453+j9.310	0.989+j6.648
PUNTA IXTAPA, GRO.	PUI-115	115	4.40	3.29	2.208+j14.941	6.240+j29.576	6.00	4.26	2.127+j11.984	6.071+j26.437	6.00	4.26	2.128+j11.985	6.071+j26.437
PUNTA LIMÓN	PLI-115	115	1.98	1.43	8.154+j32.587	14.316+j72.923	2.17	1.55	8.167+j32.671	14.508+j74.242	2.17	1.55	8.169+j32.675	14.508+j74.242
QUEMADO	QMD-69	69	7.99	10.75	1.354+j4.801	0.017+j1.166	10.86	14.03	0.734+j3.969	0.094+j1.187	10.86	14.03	0.735+j3.969	0.094+j1.187
QUEMADO	QMD-115	115	6.31	8.58	3.757+j9.831	0.105+j2.226	9.28	11.99	2.098+j7.586	0.163+j2.320	9.28	11.99	2.099+j7.587	0.163+j2.320
QUEMADO	QMD-230	230	3.33	4.27	13.760+j37.427	0.894+j14.013	4.97	5.91	7.388+j28.456	1.167+j14.601	4.97	5.91	7.392+j28.460	1.167+j14.601
REAL DEL BOSQUE	RDB-115	115	9.52	6.98	1.421+j6.827	2.687+j14.348	11.45	8.05	1.174+j6.271	2.678+j14.207	11.45	8.05	1.174+j6.271	2.678+j14.207
REFINERÍA LÁZARO CÁRDENAS RECONFIGURACIÓN	RLC-115	115	10.69	6.96	1.111+j6.112	3.503+j15.916	14.08	11.88	0.788+j5.128	0.898+j8.205	14.08	11.87	0.788+j5.128	0.898+j8.205
REFINERÍA MINATITLÁN	RMN-115	115	9.91	5.98	1.036+j6.620	4.360+j19.582	11.52	6.72	0.939+j6.269	4.363+j19.525	11.52	6.72	0.939+j6.269	4.363+j19.525
REFINERÍA PEMEX	RFP-115	115	10.90	7.11	1.073+j5.995	3.404+j15.554	14.34	12.00	0.762+j5.035	0.935+j8.188	14.34	12.00	0.762+j5.036	0.935+j8.188
REFINERÍA SALINA CRUZ	RSC-115	115	4.43	2.85	3.018+j14.681	10.725+j38.517	5.01	3.17	2.847+j14.294	10.752+j38.746	5.01	3.17	2.847+j14.294	10.752+j38.746
RENACIMIENTO	REN-115	115	5.81	7.47	4.038+j10.695	0.374+j3.853	8.29	10.04	2.376+j8.487	0.420+j3.979	8.29	10.04	2.377+j8.488	0.420+j3.979
RESURRECCIÓN	RSN-115	115	14.80	9.84	0.973+j4.378	2.356+j11.046	16.70	10.93	0.897+j4.282	2.358+j11.072	16.66	10.92	0.902+j4.290	2.358+j11.072
REYES MANTECÓN	RMC-115	115	4.45	4.20	3.894+j14.421	3.462+j17.241	4.98	4.63	3.692+j14.196	3.521+j17.704	4.98	4.63	3.694+j14.198	3.521+j17.704
RIO BLANCO	RBO-115	115	9.07	6.50	1.598+j7.147	3.535+j15.645	10.61	7.39	1.408+j6.737	3.513+j15.500	10.60	7.39	1.410+j6.741	3.513+j15.500



## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Oriental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>
RÍO COATAN	RCT-69	69	1.98	2.41	2.009+j20.039	0.395+j9.223	2.66	3.39	1.091+j16.429	0.113+j4.684	2.66	3.39	1.091+j16.429	0.113+j4.684
RÍO COATAN	RCT-115	115	3.57	3.20	5.135+j17.878	4.202+j24.609	4.45	3.93	3.919+j15.926	3.426+j22.289	4.45	3.93	3.919+j15.926	3.426+j22.289
RÍO MEDIO	RME-115	115	12.72	10.60	1.404+j5.027	1.097+j8.414	17.78	13.25	0.982+j3.989	1.105+j8.422	17.76	13.25	0.983+j3.992	1.105+j8.422
RODRÍGUEZ CLARA	RDC-115	115	2.66	1.63	6.810+j23.972	19.056+j69.891	3.00	1.82	6.611+j23.467	18.956+j69.288	3.00	1.82	6.612+j23.468	18.956+j69.288
SACRIFICIOS	SCF-115	115	11.48	8.39	1.393+j5.612	1.851+j12.157	17.21	11.21	0.825+j4.162	1.625+j11.143	17.20	11.21	0.827+j4.165	1.625+j11.143
SALINA CRUZ	SAC-115	115	4.68	3.23	2.847+j13.900	9.208+j32.111	5.35	3.60	2.626+j13.388	9.236+j32.341	5.35	3.60	2.626+j13.388	9.236+j32.341
SALOYA	SYA-115	115	15.06	13.04	0.944+j4.308	1.265+j6.552	17.57	14.66	0.794+j4.080	1.278+j6.660	17.57	14.66	0.794+j4.080	1.278+j6.660
SAMARIA	SMI-115	115	6.37	4.06	2.056+j10.218	6.351+j27.759	7.18	4.50	1.908+j9.991	6.358+j27.842	7.18	4.50	1.908+j9.991	6.358+j27.842
SAMARIA	SMI-115B	115	5.56	3.50	2.032+j11.769	6.969+j32.555	6.20	3.87	1.942+j11.614	6.982+j32.673	6.20	3.87	1.942+j11.614	6.982+j32.673
SAN CRISTÓBAL ORIENTE	SCO-115	115	2.69	1.79	7.058+j23.670	20.848+j58.398	3.04	2.00	6.698+j23.037	20.785+j57.828	3.04	2.00	6.698+j23.037	20.785+j57.828
SAN FELIPE OAXACA	SFO-115	115	3.92	3.65	4.633+j16.273	4.754+j20.240	4.39	4.03	4.429+j16.040	4.792+j20.636	4.39	4.03	4.431+j16.042	4.792+j20.636
SAN JACINTO TLACOTEPEC	JTL-115	115	1.11	0.74	11.973+j58.729	30.049+j144.932	1.22	0.82	11.749+j58.526	30.122+j145.435	1.22	0.82	11.751+j58.528	30.122+j145.435
SAN JERÓNIMO	JRN-115	115	1.72	1.37	11.197+j36.842	21.349+j65.436	2.77	2.12	6.888+j25.424	16.302+j47.715	2.77	2.12	6.888+j25.425	16.302+j47.715
SAN JOSÉ CHIAPA	JOC-230	230	4.99	3.59	4.477+j26.247	14.966+j55.977	5.86	4.14	3.773+j24.657	14.406+j54.066	5.84	4.13	3.795+j24.710	14.406+j54.066
SAN LORENZO	LRZ-115	115	39.36	35.44	0.302+j1.660	0.273+j2.268	46.65	41.18	0.229+j1.549	0.262+j2.204	46.41	41.06	0.233+j1.557	0.262+j2.204
SAN LUIS	SNL-115	115	1.80	1.00	9.075+j35.676	32.749+j121.872	3.15	1.79	5.480+j22.516	21.241+j72.792	3.15	1.79	5.481+j22.518	21.241+j72.792
SAN LUIS ACATLÁN	SLU-115	115	1.02	0.59	24.061+j60.192	58.845+j202.339	1.15	0.66	22.669+j59.204	58.898+j202.443	1.15	0.66	22.670+j59.205	58.898+j202.443
SAN LUIS MORELIA	SSM-115	115	1.13	0.71	17.950+j56.069	36.467+j159.167	1.24	0.78	17.842+j55.991	36.765+j160.321	1.24	0.78	17.847+j55.996	36.765+j160.321
SAN LUIS SAN PEDRO	SLS-115	115	1.01	0.83	16.063+j63.950	49.048+j96.474	2.27	1.72	8.362+j31.030	23.834+j58.267	2.27	1.72	8.363+j31.030	23.834+j58.267
SAN MARTIN	MAR-115	115	25.82	22.06	0.400+j2.541	0.611+j3.870	28.65	24.00	0.354+j2.524	0.628+j4.008	28.54	23.95	0.358+j2.534	0.628+j4.008
SAN MARTIN POTENCIA	MPT-115	115	28.79	26.33	0.348+j2.280	0.365+j2.962	31.85	28.46	0.303+j2.273	0.385+j3.112	31.71	28.39	0.308+j2.283	0.385+j3.113
SAN MARTIN POTENCIA	MPT-400	400	16.64	14.47	2.339+j13.679	3.119+j20.078	20.39	16.69	1.509+j12.368	3.236+j20.574	20.07	16.54	1.579+j12.557	3.233+j20.587
SAN MIGUEL	SMG-115	115	12.95	8.88	0.831+j5.059	4.129+j11.575	14.28	9.61	0.792+j5.052	4.357+j11.919	14.26	9.61	0.797+j5.061	4.357+j11.919
SAN MIGUEL SANTA FLOR	SMF-115	115	1.13	0.78	15.571+j56.418	45.407+j131.389	1.25	0.86	15.387+j56.241	45.445+j131.759	1.25	0.86	15.390+j56.243	45.445+j131.759
SAN PABLO HUIXTEPEC	HTP-115	115	3.84	3.89	4.365+j16.709	2.342+j16.574	4.29	4.28	4.160+j16.501	2.416+j17.093	4.29	4.28	4.162+j16.502	2.416+j17.093
SAN RAFAEL DOS	RFD-115	115	2.26	1.61	7.727+j28.379	23.384+j61.206	2.55	1.81	7.404+j27.701	22.984+j59.787	2.54	1.81	7.415+j27.746	22.981+j59.796
SÁNCHEZ TABOADA	SNT-115	115	1.61	0.94	11.255+j39.704	30.300+j125.781	1.79	1.04	11.055+j39.216	30.251+j125.572	1.79	1.04	11.056+j39.217	30.251+j125.572
SANTA ANITA	STN-115	115	16.12	14.64	0.917+j4.016	1.506+j5.314	18.16	16.16	0.842+j3.933	1.525+j5.431	18.11	16.13	0.847+j3.944	1.525+j5.431
SANTA FE	SNF-115	115	9.04	7.25	1.373+j7.215	3.061+j12.559	11.07	8.45	1.083+j6.507	3.069+j12.557	11.06	8.44	1.085+j6.511	3.069+j12.557
SANTA ROSA	RSO-115	115	1.02	0.57	26.632+j59.745	57.480+j211.640	1.13	0.63	25.914+j59.413	57.520+j211.771	1.13	0.63	25.915+j59.413	57.520+j211.771

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Oriental**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
SANTA SOFÍA	SNS-115	115	4.04	2.75	2.956+j16.173	9.090+j38.604	4.55	3.07	2.799+j15.789	8.987+j38.171	4.54	3.07	2.808+j15.828	8.988+j38.185
SANTO DOMINGO	STD-115	115	3.56	2.52	4.601+j18.086	9.445+j40.701	4.17	2.85	4.196+j17.014	9.452+j40.832	4.17	2.85	4.196+j17.014	9.452+j40.832
SARABIA	SRB-115	115	5.30	4.75	2.858+j12.197	3.355+j16.546	6.17	5.37	2.613+j11.537	3.384+j16.787	6.17	5.37	2.614+j11.537	3.384+j16.787
SCHPOINA	SCH-115	115	2.57	1.85	6.695+j24.944	20.609+j51.900	2.96	2.11	6.099+j23.904	20.211+j50.542	2.96	2.11	6.099+j23.904	20.211+j50.542
SIMOJOVEL	SMJ-115	115	1.22	0.77	14.580+j52.575	45.968+j141.429	1.35	0.85	14.356+j52.278	45.979+j141.494	1.35	0.85	14.356+j52.278	45.979+j141.494
SÍNTESIS ORGÁNICAS, TLAXCALA	SIA-115	115	10.81	7.97	1.395+j5.979	3.033+j12.435	12.16	8.81	1.298+j5.866	3.043+j12.540	12.13	8.80	1.304+j5.879	3.043+j12.540
SIVESA	SIV-115	115	12.03	11.20	1.204+j5.384	1.381+j6.665	14.81	13.42	0.943+j4.840	1.361+j6.322	14.80	13.41	0.946+j4.844	1.361+j6.322
SN. LORENZO POTENCIA	LRP-115	115	47.11	48.28	0.259+j1.385	0.094+j1.344	56.77	57.35	0.186+j1.273	0.083+j1.277	56.41	57.11	0.190+j1.281	0.083+j1.277
SN. LORENZO POTENCIA	LRP-115B	115	47.11	48.28	0.259+j1.385	0.094+j1.344	56.77	57.35	0.186+j1.273	0.083+j1.277	56.41	57.11	0.190+j1.281	0.083+j1.277
SN. LORENZO POTENCIA	LRP-400	400	21.09	22.01	2.235+j10.721	1.083+j9.748	27.49	26.88	1.334+j9.144	1.086+j9.894	27.08	26.62	1.390+j9.277	1.085+j9.897
SOLEDAD DE DOBLADO	SOD-115	115	3.88	2.32	4.162+j16.603	12.070+j50.048	4.51	2.62	3.802+j15.725	12.075+j50.001	4.51	2.62	3.804+j15.728	12.075+j50.001
SOYALÓ	SOY-115	115	5.25	3.58	2.930+j12.301	6.825+j29.581	6.06	4.02	2.676+j11.750	6.827+j29.523	6.06	4.02	2.676+j11.750	6.827+j29.523
SWITCHEO VILLACOMALTITLAN	SWV-115	115	2.88	2.95	6.489+j22.120	3.886+j21.111	3.51	3.41	5.272+j20.146	4.224+j22.025	3.51	3.41	5.272+j20.146	4.224+j22.025
TABACHINES	TBH-85	85	6.20	5.13	1.246+j7.811	1.559+j12.802	6.54	5.42	1.234+j8.163	1.567+j13.307	6.54	5.41	1.237+j8.165	1.567+j13.307
TABASCO POTENCIA	TSP-230	230	13.90	15.66	1.726+j9.395	0.581+j6.648	18.98	19.84	0.875+j7.646	0.644+j6.812	18.98	19.84	0.875+j7.646	0.644+j6.812
TABASCO POTENCIA	TSP-400	400	8.90	8.99	4.558+j25.556	2.538+j25.592	12.58	11.44	2.106+j20.076	2.804+j26.193	12.58	11.44	2.107+j20.077	2.804+j26.193
TABASQUILLO	TBQ-115	115	1.96	1.37	9.059+j32.586	31.106+j72.398	2.18	1.51	8.885+j32.363	31.127+j72.560	2.18	1.51	8.886+j32.363	31.127+j72.560
TACOTALPA	TCT-115	115	2.53	1.76	7.158+j25.292	24.115+j56.406	2.82	1.94	6.939+j24.993	24.126+j56.470	2.82	1.94	6.939+j24.993	24.126+j56.470
TAJÍN	TAJ-115	115	13.72	13.69	0.649+j4.796	1.247+j4.760	16.85	16.73	0.540+j4.301	1.235+j4.212	16.72	16.63	0.546+j4.333	1.236+j4.221
TALLERES Y ACEROS S.A. (TYASA)	TYS-400	400	11.68	12.37	3.388+j19.483	1.514+j16.624	17.51	16.41	2.077+j14.357	1.648+j17.394	17.42	16.36	2.112+j14.433	1.648+j17.394
TAMARINDO DOS	TDD-115	115	5.48	4.17	2.269+j11.907	4.571+j23.569	6.18	4.61	2.105+j11.627	4.608+j23.959	6.18	4.61	2.107+j11.632	4.608+j23.959
TAMAZULAPAN DOS	TAD-115	115	1.65	1.07	11.656+j38.419	27.045+j103.164	1.83	1.17	11.506+j38.295	27.165+j103.642	1.83	1.17	11.509+j38.298	27.165+j103.642
TAMSA DOS	TSD-230	230	10.79	9.85	2.409+j12.067	3.188+j15.644	14.00	11.91	1.603+j10.307	3.245+j15.782	13.98	11.90	1.611+j10.326	3.245+j15.782
TAMSA DOS	TSD-230B	230	10.79	9.85	2.409+j12.067	3.188+j15.644	14.00	11.91	1.603+j10.307	3.245+j15.782	13.98	11.90	1.611+j10.326	3.245+j15.782
TAMULTE	TAT-115	115	14.89	12.42	0.859+j4.376	1.670+j7.217	17.16	13.89	0.751+j4.188	1.679+j7.309	17.16	13.89	0.751+j4.188	1.679+j7.309
TAMULTE MANIOBRAS	TMM-115	115	13.42	10.91	0.863+j4.872	1.746+j8.519	15.28	12.10	0.774+j4.717	1.758+j8.638	15.28	12.10	0.774+j4.717	1.758+j8.638
TAPACHULA	TCH-115	115	4.15	3.53	4.029+j15.500	4.479+j23.797	5.10	4.19	3.100+j13.971	4.286+j22.905	5.10	4.19	3.100+j13.971	4.286+j22.905
TAPACHULA AEROPUERTO	TAE-115	115	5.81	5.70	2.822+j11.070	1.772+j11.820	7.28	6.81	2.057+j9.822	1.814+j11.718	7.28	6.81	2.057+j9.822	1.814+j11.718
TAPACHULA NORTE	TNE-115	115	4.26	3.83	3.924+j15.076	3.516+j20.332	5.32	4.65	2.930+j13.418	3.188+j19.081	5.32	4.65	2.930+j13.418	3.188+j19.081
TAPACHULA ORIENTE	TOE-115	115	4.36	3.69	3.718+j14.757	4.236+j22.964	5.35	4.34	2.855+j13.355	4.152+j22.442	5.35	4.34	2.855+j13.355	4.152+j22.442

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Oriental**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
TAPACHULA POTENCIA	THP-115	115	6.59	7.07	2.341+j9.806	0.578+j7.911	8.26	8.44	1.656+j8.684	0.689+j8.079	8.26	8.44	1.656+j8.684	0.689+j8.079
TAPACHULA POTENCIA	THP-400	400	2.44	2.72	22.631+j91.807	5.440+j64.869	3.22	3.39	15.167+j77.361	6.640+j65.264	3.22	3.39	15.167+j77.362	6.640+j65.264
TAPANATEPEC	TNP-115	115	2.24	1.77	7.948+j28.539	11.294+j52.476	2.57	1.97	7.412+j27.440	11.342+j53.132	2.57	1.97	7.412+j27.441	11.342+j53.132
TAPIJULAPA	TPJ-115	115	2.06	1.42	8.715+j30.966	30.124+j69.819	2.30	1.57	8.495+j30.668	30.135+j69.882	2.30	1.57	8.495+j30.668	30.135+j69.882
TAXCO	TXO-115	115	2.29	2.01	7.270+j28.099	7.300+j40.546	2.79	2.33	5.412+j25.607	7.326+j40.856	2.79	2.33	5.414+j25.608	7.326+j40.856
TEAPA, TABASCO.	TTB-115	115	3.42	2.41	5.325+j18.698	17.133+j40.725	3.83	2.67	5.109+j18.396	17.144+j40.789	3.83	2.67	5.109+j18.396	17.144+j40.789
TEAPA, VERACRUZ	TEA-115	115	17.78	14.62	0.553+j3.692	1.071+j6.263	24.26	19.33	0.390+j2.985	0.874+j5.381	24.26	19.33	0.390+j2.985	0.874+j5.381
TECALI	TCL-115	115	26.09	26.35	0.421+j2.510	0.129+j2.491	29.24	28.59	0.356+j2.472	0.147+j2.679	29.15	28.53	0.360+j2.479	0.147+j2.680
TECALI	TCL-230	230	16.01	17.84	1.033+j8.230	0.389+j5.776	18.05	19.56	0.760+j8.055	0.428+j6.203	17.99	19.51	0.774+j8.083	0.428+j6.203
TECALI	TCL-400	400	19.36	19.82	2.272+j11.713	1.450+j11.183	25.50	24.05	1.340+j9.873	1.576+j11.687	25.27	23.92	1.380+j9.957	1.575+j11.687
TECAMACHALCO	TML-115	115	7.46	4.85	2.187+j8.630	4.862+j22.799	8.27	5.33	2.109+j8.572	4.876+j22.945	8.27	5.33	2.113+j8.579	4.876+j22.945
TECAMACHALCO II	TLD-115	115	7.14	4.65	2.170+j9.040	5.005+j23.765	7.91	5.11	2.096+j8.989	5.020+j23.921	7.91	5.11	2.100+j8.995	5.020+j23.921
TECNOLÓGICO	TNL-115	115	4.44	3.12	2.788+j14.695	8.416+j33.089	5.13	3.49	2.508+j14.021	8.435+j33.275	5.13	3.49	2.508+j14.021	8.435+j33.275
TECOMAXTLAHUACA	TCX-115	115	0.80	0.48	22.376+j80.282	54.246+j238.606	0.88	0.53	22.266+j80.204	54.548+j239.769	0.88	0.53	22.271+j80.209	54.548+j239.769
TECPAN	TCA-115	115	1.25	0.90	15.054+j50.766	31.677+j111.158	2.37	1.75	8.095+j29.710	21.300+j59.884	2.37	1.75	8.096+j29.711	21.300+j59.884
TEHUACÁN	THN-115	115	5.16	3.24	3.673+j12.328	8.147+j34.651	5.75	3.57	3.548+j12.195	8.174+j34.827	5.75	3.57	3.552+j12.200	8.174+j34.827
TEHUANTEPEC	THT-115	115	4.12	3.12	3.696+j15.667	7.937+j30.717	4.79	3.51	3.387+j14.873	8.003+j31.029	4.79	3.51	3.387+j14.873	8.003+j31.029
TEJALPA	TJA-115	115	10.58	10.27	1.026+j6.192	0.852+j6.818	11.66	11.14	0.897+j6.198	0.890+j7.090	11.65	11.13	0.902+j6.204	0.890+j7.090
TELMAC	TLM-115	115	15.75	14.08	0.882+j4.124	1.120+j5.672	17.89	15.58	0.777+j4.007	1.134+j5.821	17.83	15.55	0.783+j4.020	1.134+j5.822
TEMASCAL DOS	TMD-230	230	14.65	16.86	1.159+j8.988	0.293+j5.569	19.70	22.23	0.603+j7.390	0.285+j4.814	19.67	22.21	0.609+j7.401	0.285+j4.814
TEMASCAL DOS	TMD-400	400	16.22	17.64	2.493+j14.022	1.207+j10.870	25.75	24.97	1.196+j9.793	1.188+j10.698	25.65	24.91	1.213+j9.828	1.188+j10.698
TEMASCAL UNO	TMU-115	115	13.20	6.95	0.724+j4.979	3.760+j18.309	20.41	18.12	0.367+j3.559	0.333+j4.751	20.40	18.11	0.367+j3.561	0.333+j4.751
TEMASCAL UNO	TMU-230	230	11.89	11.71	1.545+j11.059	1.840+j11.604	16.16	17.28	0.863+j8.997	0.711+j7.146	16.14	17.26	0.868+j9.007	0.711+j7.146
TEMAXCALAC	TXB-115	115	20.17	15.83	0.506+j3.252	1.231+j5.904	22.27	17.24	0.463+j3.247	1.247+j6.050	22.20	17.21	0.468+j3.256	1.247+j6.051
TEMIXCO	TMX-85	85	6.43	5.07	1.243+j7.525	1.676+j13.676	6.77	5.36	1.228+j7.879	1.684+j14.182	6.77	5.36	1.231+j7.882	1.684+j14.182
TENOSIQUE	TNQ-115	115	1.51	1.03	12.957+j41.951	39.471+j97.824	1.72	1.19	11.882+j40.757	36.700+j91.226	1.72	1.19	11.882+j40.757	36.700+j91.226
TEPALCINGO	TPL-115	115	4.43	2.79	3.124+j14.665	8.268+j40.564	4.85	3.06	3.060+j14.729	8.281+j40.793	4.85	3.06	3.064+j14.736	8.281+j40.793
TEPEACA	TPE-115	115	7.47	5.06	1.431+j8.768	4.816+j21.088	8.27	5.55	1.366+j8.730	4.834+j21.277	8.26	5.55	1.370+j8.737	4.834+j21.277
TEPEJI	TPI-115	115	3.76	2.45	4.684+j17.034	9.568+j44.901	4.15	2.69	4.600+j16.974	9.640+j45.257	4.15	2.69	4.604+j16.980	9.640+j45.257
TEPEYAC, VERACRUZ	TPY-115	115	9.26	6.85	1.034+j7.093	3.012+j14.493	11.94	8.31	0.834+j6.058	2.951+j13.703	11.90	8.29	0.839+j6.080	2.952+j13.708

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Oriental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
TEREFTALATOS	TRT-115	115	6.73	4.26	2.942+j9.424	6.524+j26.496	7.75	4.78	2.804+j8.992	6.512+j26.362	7.75	4.78	2.804+j8.993	6.512+j26.362
TERNIUM MÉXICO - LARGOS PUEBLA	TRP-230	230	7.03	5.16	3.316+j18.583	8.349+j38.380	7.85	5.68	3.021+j18.354	8.386+j38.779	7.84	5.68	3.040+j18.389	8.385+j38.779
TEZIUTLAN	TZT-69	69	3.61	3.89	0.589+j11.030	0.109+j8.679	4.40	4.62	0.460+j9.956	0.369+j8.109	4.38	4.60	0.470+j10.003	0.367+j8.130
TEZIUTLAN	TZT-115	115	8.03	9.23	1.632+j8.106	0.519+j5.113	9.98	11.26	1.273+j7.203	0.561+j4.657	9.76	11.00	1.304+j7.370	0.544+j4.787
TEZIUTLAN DOS	TZD-115	115	6.51	4.76	1.971+j10.002	4.131+j21.131	7.83	5.48	1.646+j9.184	4.164+j20.777	7.70	5.43	1.674+j9.333	4.151+j20.878
TEZOYUCA	TEZ-115	115	10.52	9.36	1.170+j6.205	1.385+j8.573	11.64	10.21	1.041+j6.188	1.423+j8.801	11.63	10.20	1.045+j6.194	1.423+j8.801
TIERRA BLANCA	TBL-115	115	3.93	2.29	4.213+j16.374	12.222+j51.780	5.00	2.94	3.563+j14.164	10.251+j44.066	5.00	2.94	3.564+j14.166	10.251+j44.066
TIERRA COLORADA	TIE-115	115	2.95	2.21	6.713+j21.493	9.533+j44.121	3.70	2.58	4.964+j19.114	9.566+j44.075	3.70	2.58	4.965+j19.115	9.566+j44.075
TIHUATLAN DOS	THD-115	115	8.04	5.69	1.417+j8.137	6.059+j17.740	9.14	6.33	1.336+j7.879	6.070+j17.853	9.11	6.32	1.342+j7.901	6.070+j17.855
TILAPA	TIL-69	69	0.97	0.80	19.157+j36.189	24.571+j61.735	1.05	0.87	19.201+j37.230	24.574+j62.886	1.05	0.87	19.203+j37.232	24.574+j62.886
TIXTLA	TIT-115	115	4.23	4.34	4.208+j15.124	2.829+j14.276	5.69	5.42	2.444+j12.599	2.868+j14.201	5.69	5.42	2.446+j12.600	2.868+j14.201
TLACOACHISTLAHUACA	THU-115	115	0.98	0.57	25.564+j62.741	60.627+j211.811	1.10	0.63	24.271+j61.895	60.677+j211.914	1.10	0.63	24.272+j61.895	60.677+j211.914
TLACOLULA	TLL-115	115	2.22	1.58	8.056+j28.832	14.934+j64.698	2.46	1.74	7.853+j28.606	14.967+j65.070	2.46	1.74	7.855+j28.608	14.967+j65.070
TLACOTALPAN	TTA-115	115	2.38	1.40	8.662+j26.485	25.412+j82.844	2.78	1.72	7.843+j25.075	21.474+j71.806	2.78	1.72	7.844+j25.076	21.474+j71.806
TLACOTEPEC	TTP-115	115	2.08	1.40	18.033+j26.266	29.550+j73.389	2.30	1.54	17.953+j26.211	29.565+j73.536	2.30	1.54	17.957+j26.217	29.565+j73.536
TLACOTEPEC	TCE-115	115	1.32	0.85	14.638+j48.312	36.401+j126.948	1.53	0.97	12.827+j45.834	35.739+j124.561	1.53	0.97	12.829+j45.835	35.739+j124.561
TLALTIZAPAN	TLZ-85	85	3.94	2.81	1.997+j12.301	4.278+j27.104	4.21	3.02	1.989+j12.653	4.286+j27.611	4.21	3.02	1.991+j12.656	4.286+j27.611
TLAPA NUEVA	TAN-115	115	1.41	0.93	13.820+j44.967	27.350+j117.036	1.65	1.05	11.868+j42.563	27.390+j116.956	1.65	1.05	11.870+j42.564	27.390+j116.956
TLAPACOYAN	TLY-115	115	4.79	6.18	3.256+j13.469	0.520+j4.612	5.63	7.21	2.867+j12.641	0.480+j4.367	5.61	7.18	2.877+j12.697	0.475+j4.382
TLATLAUQUITEPEC	TUQ-115	115	1.81	1.27	10.439+j35.165	19.150+j81.875	2.16	1.44	8.535+j32.722	19.190+j81.796	2.16	1.44	8.536+j32.723	19.190+j81.796
TLAXIACO	TXI-115	115	1.01	0.63	19.012+j63.147	46.100+j178.029	1.11	0.69	18.847+j63.012	46.197+j178.444	1.11	0.69	18.851+j63.015	46.197+j178.444
TONALÁ	TNA-115	115	1.61	1.45	11.218+j39.746	16.717+j51.719	1.83	1.62	10.516+j38.459	16.797+j52.847	1.83	1.62	10.516+j38.459	16.797+j52.847
TONANTZINTLA	TNZ-115	115	15.22	9.78	0.872+j4.275	2.688+j11.353	17.19	10.88	0.793+j4.175	2.686+j11.346	17.15	10.88	0.798+j4.182	2.686+j11.346
TRANSISTMICA (MANIOBRAS SEDENA)	TST-115	115	4.96	4.67	2.926+j13.076	3.044+j15.710	5.87	5.32	2.589+j12.163	3.131+j16.065	5.87	5.32	2.589+j12.163	3.131+j16.065
TRES ESTRELLAS	TTE-400	400	23.44	24.26	0.670+j9.831	0.402+j8.285	30.61	31.50	0.365+j8.292	0.346+j7.086	29.47	30.60	0.404+j8.611	0.336+j7.133
TRES VALLES	TVS-115	115	7.84	7.06	1.665+j8.305	1.313+j11.307	10.78	9.08	1.200+j6.669	1.505+j10.651	10.78	9.08	1.201+j6.670	1.505+j10.651
TROY	TOY-115	115	7.20	4.53	1.655+j9.072	4.965+j25.228	9.25	8.52	1.274+j7.793	0.756+j10.018	9.25	8.52	1.274+j7.794	0.756+j10.018
TULIPÁN	TLN-115	115	7.17	6.30	2.299+j8.964	3.685+j12.729	8.07	6.93	2.203+j8.781	3.847+j13.056	8.07	6.93	2.203+j8.781	3.847+j13.056
TUXPAN DOS	TUD-115	115	3.48	2.86	4.528+j18.540	10.354+j30.323	3.88	3.15	4.442+j18.295	10.389+j30.564	3.87	3.15	4.449+j18.317	10.389+j30.565
TUXPAN VAPOR	TUV-400	400	11.39	7.70	2.151+j20.155	11.144+j48.348	23.32	26.08	0.518+j10.879	0.239+j7.252	13.32	8.70	1.591+j19.005	11.156+j48.342

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Oriental

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>
TUXPANGO	TPG-115	115	9.98	8.43	1.304+j6.521	1.752+j10.227	12.27	10.50	1.011+j5.864	1.352+j8.828	12.26	10.49	1.013+j5.869	1.352+j8.828
TUXTEPEC DOS	TXD-115	115	10.74	5.46	2.877+j5.471	4.318+j24.244	13.21	6.16	2.750+j4.797	4.436+j24.576	13.20	6.16	2.750+j4.799	4.436+j24.576
TUXTEPEC TRES	TPS-115	115	8.77	6.22	1.530+j7.414	3.507+j16.650	10.84	7.21	1.335+j6.604	3.604+j16.584	10.84	7.21	1.336+j6.605	3.604+j16.584
TUXTLA GUTIÉRREZ	TGU-115	115	10.76	8.17	1.308+j6.033	2.216+j11.835	13.06	9.48	1.058+j5.490	2.211+j11.717	13.06	9.48	1.058+j5.490	2.211+j11.717
TUXTLA GUTIÉRREZ DOS	TGD-115	115	9.42	6.74	1.606+j6.865	3.050+j15.165	11.36	7.79	1.336+j6.289	3.025+j14.952	11.36	7.79	1.336+j6.289	3.025+j14.952
TUXTLA NORTE	TXN-115	115	10.83	8.18	1.271+j5.997	2.191+j11.895	13.18	9.51	1.016+j5.445	2.183+j11.753	13.18	9.51	1.016+j5.445	2.183+j11.753
TUXTLA SUR	TXS-115	115	12.71	10.44	0.887+j5.149	1.343+j8.539	15.71	12.27	0.652+j4.604	1.342+j8.434	15.71	12.27	0.652+j4.604	1.342+j8.434
UNILIVER	UNL-115	115	3.96	4.84	3.578+j16.399	1.024+j7.598	4.36	5.29	3.450+j16.404	1.062+j7.870	4.36	5.28	3.455+j16.410	1.062+j7.870
UNIÓN CARBIDE TEAPA	UCT-115	115	12.92	9.24	0.944+j5.053	2.197+j11.262	16.54	11.37	0.779+j4.346	1.999+j10.380	16.54	11.37	0.779+j4.347	1.999+j10.380
UNIÓN HIDALGO	UHI-230	230	9.65	13.08	1.056+j13.714	0.228+j2.845	15.62	20.08	0.463+j9.342	0.239+j3.063	15.61	20.08	0.464+j9.344	0.239+j3.063
UNIÓN HIDALGO	UHI-400	400	7.10	8.90	3.068+j32.369	1.293+j12.496	11.88	13.54	1.351+j21.333	1.375+j13.289	11.88	13.54	1.354+j21.340	1.375+j13.289
UXPANAPA DOS	UXD-115	115	6.01	3.88	2.584+j10.740	6.278+j28.815	6.91	4.34	2.467+j10.281	6.286+j28.762	6.91	4.34	2.467+j10.281	6.286+j28.762
UXPANAPA UNO	UXU-115	115	3.14	1.85	5.351+j20.432	14.507+j63.981	3.54	2.05	5.232+j19.973	14.515+j63.928	3.54	2.05	5.232+j19.973	14.515+j63.928
VALLE NACIONAL	VAN-115	115	3.28	2.07	4.965+j19.607	11.649+j54.853	3.70	2.29	4.817+j19.128	11.740+j55.165	3.70	2.29	4.818+j19.130	11.740+j55.165
VALSEQUILLO	VSE-115	115	7.93	4.85	1.506+j8.240	5.256+j23.763	8.81	5.35	1.432+j8.164	5.268+j23.847	8.80	5.35	1.437+j8.172	5.268+j23.847
VEGA DE ALATORRE	VDA-115	115	1.37	0.98	15.966+j45.599	31.190+j102.679	1.54	1.09	15.635+j44.927	30.787+j101.256	1.53	1.09	15.647+j44.972	30.784+j101.266
VENTA	VEN-69	69	2.42	2.87	6.060+j15.284	10.102+j4.699	3.59	4.43	3.322+j11.732	1.561+j4.111	3.59	4.43	3.322+j11.732	1.561+j4.111
VERACRUZ DOS	VRD-115	115	17.98	26.95	0.775+j3.610	0.098+j0.052	26.57	40.62	0.433+j2.715	0.104+j0.005	26.53	40.56	0.435+j2.719	0.104+j0.005
VERACRUZ DOS	VRD-230	230	12.08	13.07	2.299+j10.749	1.283+j8.576	17.13	17.20	1.285+j8.427	1.342+j8.579	17.10	17.17	1.293+j8.445	1.342+j8.579
VERACRUZ UNO	VRU-115	115	13.03	11.77	1.214+j4.947	1.244+j6.708	19.78	16.34	0.696+j3.626	1.110+j6.104	19.76	16.34	0.697+j3.629	1.110+j6.104
VETROTEX	VET-115	115	14.64	12.84	0.931+j4.438	1.112+j6.416	16.58	14.17	0.825+j4.328	1.129+j6.583	16.52	14.15	0.832+j4.341	1.129+j6.583
VIDRIERA DE TIERRA BLANCA	VTB-115	115	4.17	2.41	3.084+j15.636	12.449+j49.327	6.61	3.87	1.858+j10.899	8.232+j33.584	6.60	3.87	1.859+j10.900	8.232+j33.584
VILLA FLORES DOS	VFD-115	115	1.53	0.91	12.368+j41.644	36.354+j128.405	1.70	1.00	12.083+j41.153	36.355+j128.374	1.70	1.00	12.084+j41.153	36.355+j128.374
VILLAHERMOSA CENTRO	VHC-115	115	13.41	9.50	1.121+j4.824	2.424+j11.076	15.44	10.60	0.999+j4.623	2.431+j11.151	15.44	10.60	0.999+j4.623	2.431+j11.151
VILLAHERMOSA DOS	VID-115	115	13.55	10.85	0.998+j4.799	1.616+j8.592	15.95	12.28	0.811+j4.508	1.626+j8.659	15.95	12.28	0.811+j4.508	1.626+j8.659
VILLAHERMOSA NORTE	VHN-115	115	16.86	18.78	0.755+j3.866	0.261+j2.922	19.85	21.25	0.595+j3.631	0.281+j3.081	19.85	21.25	0.595+j3.631	0.281+j3.081
VILLAHERMOSA NORTE	VHN-230	230	10.59	10.47	2.245+j12.337	1.770+j13.467	13.19	12.25	1.549+j10.969	1.884+j13.874	13.19	12.25	1.550+j10.969	1.884+j13.874
VILLAHERMOSA PONIENTE	VIP-115	115	13.11	10.55	1.075+j4.949	2.208+j8.691	15.18	11.84	0.928+j4.720	2.216+j8.774	15.18	11.84	0.928+j4.720	2.216+j8.774
VILLAHERMOSA UNO	VIU-115	115	9.95	7.40	1.327+j6.539	2.646+j13.545	11.43	8.26	1.152+j6.283	2.660+j13.656	11.43	8.26	1.152+j6.283	2.660+j13.656
VISTAMAR	VIS-115	115	10.67	8.17	1.333+j6.078	2.484+j12.034	12.62	9.38	1.221+j5.658	2.501+j11.777	12.62	9.38	1.222+j5.658	2.501+j11.777

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Oriental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>
VOLKSWAGEN	VWG-115	115	41.59	38.70	0.292+j1.570	0.244+j1.976	49.57	45.27	0.218+j1.457	0.233+j1.909	49.29	45.12	0.222+j1.465	0.233+j1.909
XALAPA DE DÍAZ	JDD-230	230	4.87	3.67	3.390+j27.064	14.979+j52.295	5.70	4.19	2.830+j25.463	14.971+j51.537	5.70	4.19	2.836+j25.474	14.971+j51.537
XALOZTOC	XAL-115	115	10.15	7.41	1.481+j6.369	2.814+j13.585	11.42	8.19	1.375+j6.246	2.828+j13.707	11.39	8.18	1.382+j6.263	2.827+j13.708
XICOTENCATL	XIT-115	115	17.61	16.99	0.727+j3.699	0.607+j4.203	20.06	18.78	0.622+j3.588	0.624+j4.366	19.98	18.74	0.628+j3.601	0.624+j4.366
XOCHICALCO	XCH-85	85	3.31	2.24	2.581+j14.613	5.950+j35.598	3.56	2.42	2.577+j14.963	5.958+j36.106	3.55	2.42	2.579+j14.966	5.958+j36.106
XOXTLA	XOX-115	115	16.78	10.98	0.720+j3.892	2.332+j9.991	19.03	12.27	0.644+j3.783	2.324+j9.944	18.99	12.26	0.648+j3.791	2.324+j9.944
YAUTEPEC POTENCIA	YTP-115	115	20.00	20.96	0.362+j3.300	0.150+j2.892	21.63	22.23	0.294+j3.364	0.161+j3.112	21.58	22.20	0.299+j3.371	0.161+j3.112
YAUTEPEC POTENCIA	YTP-230	230	18.94	21.98	1.155+j6.914	0.331+j4.208	22.01	24.66	0.774+j6.593	0.356+j4.510	21.91	24.58	0.790+j6.621	0.356+j4.510
YAUTEPEC POTENCIA	YTP-400	400	22.34	23.19	2.082+j10.126	1.278+j9.458	27.72	27.08	1.238+j9.080	1.343+j9.899	27.40	26.88	1.289+j9.182	1.343+j9.899
YECAPIXTLA	YCP-230	230	10.57	9.58	1.851+j12.428	2.341+j16.378	11.98	10.55	1.487+j12.099	2.481+j16.989	11.95	10.54	1.503+j12.127	2.481+j16.989
YOLOMECATL	YOL-115	115	1.38	0.89	13.949+j46.034	33.778+j124.287	1.52	0.98	13.788+j45.898	33.873+j124.696	1.52	0.98	13.791+j45.901	33.873+j124.696
YUCUDAA	YUC-115	115	1.69	1.11	11.566+j37.664	27.605+j97.465	1.86	1.22	11.407+j37.527	27.698+j97.871	1.86	1.22	11.410+j37.530	27.698+j97.871
ZACAPOAXTLA	ZXP-115	115	2.69	2.12	5.770+j24.036	16.138+j42.127	3.02	2.36	5.605+j23.497	16.190+j41.797	2.95	2.32	5.800+j24.042	16.174+j42.135
ZACATEPEC	ZTP-115	115	2.01	1.25	7.548+j32.108	21.784+j91.162	2.23	1.38	7.418+j31.865	21.820+j91.186	2.22	1.37	7.514+j32.046	21.811+j91.256
ZANATEPEC	ZNT-115	115	2.46	1.70	7.149+j26.065	14.179+j61.680	2.81	1.90	6.719+j25.065	14.200+j61.981	2.81	1.90	6.719+j25.065	14.200+j61.981
ZAPATA	ZAP-85	85	8.39	8.38	0.739+j5.805	0.174+j5.902	8.70	8.62	0.720+j6.159	0.182+j6.407	8.70	8.61	0.723+j6.162	0.182+j6.407
ZAPATA	ZAP-115	115	15.73	18.35	0.607+j4.176	0.150+j2.445	17.36	19.87	0.478+j4.179	0.158+j2.615	17.34	19.85	0.482+j4.185	0.158+j2.615
ZAPATA	ZAP-230	230	14.47	14.76	1.913+j8.972	1.272+j8.662	17.62	17.12	1.285+j8.191	1.330+j8.899	17.56	17.09	1.300+j8.215	1.330+j8.899
ZAPATA DOS	ZPD-115	115	5.54	4.34	2.397+j11.748	4.761+j21.376	6.94	6.06	1.446+j10.421	2.229+j15.006	6.94	6.06	1.446+j10.421	2.229+j15.006
ZAPATA PONIENTE	EZA-115	115	2.33	1.64	7.622+j27.450	22.438+j60.669	2.70	1.96	6.601+j26.201	19.771+j54.170	2.70	1.96	6.601+j26.201	19.771+j54.170
ZAPOTECA DE ENERGÍA S.A. DE C.V.	ZPE-230	230	6.38	6.92	2.179+j20.693	3.028+j15.644	9.03	8.97	1.543+j16.108	3.176+j16.177	9.03	8.97	1.544+j16.110	3.176+j16.177
ZIHUATANEJO	ZIH-115	115	3.97	2.88	2.746+j16.482	7.570+j34.802	5.37	3.71	2.604+j13.347	7.325+j30.962	5.37	3.71	2.605+j13.347	7.325+j30.962
ZIHUATANEJO DOS	ZHD-115	115	4.02	2.91	2.674+j16.313	7.153+j34.481	5.67	3.97	2.451+j12.656	6.719+j28.615	5.67	3.97	2.452+j12.656	6.719+j28.615
ZINACATEPEC	ZIP-69	69	2.01	2.34	2.832+j19.622	0.000+j11.419	2.10	2.42	2.834+j20.705	0.000+j12.563	2.10	2.42	2.836+j20.706	0.000+j12.563
ZINACATEPEC	ZIP-115	115	2.77	1.63	6.815+j23.004	18.206+j71.342	3.07	1.80	6.676+j22.860	18.228+j71.490	3.07	1.80	6.680+j22.865	18.228+j71.490
ZOCAC	ZOC-115	115	18.35	18.41	0.697+j3.550	0.477+j3.620	20.93	20.35	0.592+j3.439	0.494+j3.787	20.85	20.29	0.598+j3.452	0.494+j3.788
ZOCAC	ZOC-230	230	12.99	12.90	2.106+j10.003	2.072+j10.404	15.89	15.02	1.600+j9.051	2.125+j10.594	15.80	14.96	1.623+j9.103	2.125+j10.594
ZONGOLICA	ZGL-115	115	4.27	2.46	2.614+j15.337	12.385+j48.533	5.64	5.08	1.808+j12.819	2.455+j17.026	5.64	5.08	1.810+j12.822	2.455+j17.026

# Gerencia de Control Regional Occidental



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## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Occidental

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
3M	P3M-115	115	14.58	13.79	0.950+j4.454	1.053+j5.254	17.18	15.81	0.765+j4.182	1.059+j5.285	17.17	15.80	0.765+j4.183	1.059+j5.285
ABASOLO	ABS-115	115	10.38	9.98	1.475+j6.223	1.581+j7.003	11.58	10.91	1.381+j6.155	1.634+j7.289	11.57	10.91	1.382+j6.157	1.634+j7.289
ABASOLO DOS	ABA-115	115	11.72	12.37	1.227+j5.530	0.563+j4.776	13.09	13.48	1.133+j5.465	0.620+j5.074	13.08	13.48	1.134+j5.467	0.620+j5.074
ABASOLO DOS	ABA-230	230	6.66	6.00	3.811+j19.580	3.553+j26.327	7.56	6.58	3.355+j19.036	3.892+j27.671	7.55	6.58	3.359+j19.044	3.892+j27.671
ABASTOS	ABT-115	115	8.69	7.54	1.951+j7.388	2.371+j11.021	9.54	8.20	1.906+j7.411	2.423+j11.277	9.54	8.20	1.907+j7.412	2.423+j11.277
ACÁMBARO	AQM-110	115	5.79	3.46	2.950+j11.086	9.911+j33.506	6.32	3.78	2.962+j11.178	9.929+j33.579	6.32	3.78	2.962+j11.179	9.929+j33.579
ACAPONETA	ACP-115	115	1.22	0.83	20.856+j50.030	52.838+j121.944	1.37	0.92	20.273+j49.201	52.820+j121.714	1.37	0.92	20.282+j49.215	52.820+j121.714
ACATLÁN	ATN-69	69	24.93	28.36	0.243+j1.579	0.053+j1.023	28.14	31.06	0.178+j1.547	0.058+j1.112	28.05	30.99	0.180+j1.552	0.058+j1.112
ACATLÁN	ATN-115	115	13.57	16.40	0.650+j4.848	0.103+j2.375	15.34	18.04	0.447+j4.741	0.114+j2.589	15.29	18.00	0.452+j4.755	0.114+j2.589
ACATLÁN	ATN-230	230	18.22	21.69	1.694+j7.089	0.376+j3.817	24.87	27.61	0.894+j5.804	0.411+j4.033	24.63	27.40	0.915+j5.860	0.410+j4.033
ACATLÁN	ATN-400	400	14.57	15.91	3.751+j15.395	1.562+j11.843	22.47	21.71	1.569+j11.198	1.685+j12.150	22.09	21.47	1.622+j11.384	1.684+j12.156
ACERLAN SA	ACR-69	69	12.99	11.05	0.715+j2.983	1.041+j4.565	14.93	12.39	0.649+j2.863	1.045+j4.620	14.91	12.38	0.651+j2.866	1.045+j4.620
ACERLAN SA	ACR-115	115	13.59	14.69	1.021+j4.779	0.608+j3.704	15.33	16.28	0.946+j4.670	0.629+j3.834	15.32	16.28	0.946+j4.671	0.629+j3.834
ACERO SAN LUIS	ACE-115	115	14.20	13.50	1.073+j4.550	1.165+j5.301	16.69	15.42	0.888+j4.286	1.173+j5.354	16.68	15.42	0.889+j4.288	1.173+j5.354
ACEROS JALISCO	ACJ-69	69	8.32	7.04	0.940+j4.693	1.271+j7.301	9.15	7.67	0.890+j4.704	1.281+j7.438	9.15	7.67	0.892+j4.707	1.281+j7.438
ACUEDUCTO	ACU-69	69	13.62	9.91	0.733+j2.832	1.299+j6.079	15.45	10.92	0.658+j2.760	1.323+j6.220	15.43	10.91	0.659+j2.763	1.323+j6.220
ACUEDUCTO II	AUD-115	115	5.20	4.04	2.842+j12.458	4.439+j23.326	6.51	4.87	2.096+j11.013	4.121+j22.014	6.51	4.87	2.097+j11.014	4.121+j22.014
AEROESPACIAL	ARL-115	115	8.83	5.51	2.198+j7.191	4.655+j20.511	9.89	6.11	2.114+j7.073	4.650+j20.513	9.89	6.11	2.114+j7.074	4.650+j20.513
AEROPUERTO	AER-115	115	5.59	4.20	3.062+j11.487	7.411+j22.741	6.11	4.58	3.054+j11.563	7.446+j22.951	6.11	4.58	3.054+j11.564	7.446+j22.951
AEROPUERTO ZACATECAS	AEZ-115	115	6.55	5.85	2.296+j9.876	2.855+j13.469	7.41	6.51	2.099+j9.637	2.868+j13.615	7.40	6.51	2.101+j9.638	2.868+j13.615
AEROTECH	AET-115	115	8.86	5.62	2.162+j7.172	4.455+j19.893	9.93	6.23	2.078+j7.054	4.450+j19.895	9.93	6.23	2.079+j7.055	4.450+j19.895
AGAVE	AVE-115	115	3.79	3.48	5.388+j16.671	5.573+j21.551	4.23	3.84	5.210+j16.455	5.614+j21.784	4.23	3.84	5.214+j16.461	5.614+j21.784
AGOSTADERITO	AGO-115	115	13.82	10.83	0.923+j4.716	0.772+j8.791	15.77	12.06	0.802+j4.562	0.780+j8.884	15.76	12.06	0.803+j4.563	0.780+j8.884
AGROGEN, S.A. DE C.V.	AGR-115	115	10.94	8.57	1.597+j5.857	1.940+j10.980	12.12	9.37	1.553+j5.822	1.991+j11.183	12.12	9.37	1.553+j5.823	1.991+j11.183
AGROINDUSTRIAL	AIL-115	115	6.50	4.04	2.766+j9.826	9.224+j27.404	7.23	4.45	2.671+j9.741	9.244+j27.560	7.23	4.45	2.672+j9.743	9.244+j27.560
AGUA AZUL	AGZ-230	230	10.06	8.86	2.886+j12.875	4.288+j18.099	12.18	10.17	2.103+j11.807	4.402+j18.532	12.14	10.15	2.120+j11.845	4.402+j18.532
AGUAMILPA	AGM-115	115	2.33	1.71	7.245+j27.534	23.197+j55.055	2.88	2.83	5.782+j24.684	7.248+j25.202	2.88	2.83	5.787+j24.699	7.248+j25.202
AGUAMILPA	AGM-400	400	5.98	5.42	7.219+j37.910	8.661+j49.784	14.49	16.21	1.243+j17.486	0.682+j11.135	14.34	16.06	1.291+j17.669	0.682+j11.137
AGUAPRIETA	APR-230	230	10.05	9.02	2.862+j12.897	3.285+j17.480	14.13	13.23	1.547+j10.220	1.744+j12.129	14.09	13.21	1.559+j10.252	1.744+j12.129
AGUAPRIETA	APR-230B	230	10.05	9.02	2.862+j12.897	3.285+j17.480	14.13	13.24	1.546+j10.219	1.738+j12.112	14.09	13.21	1.559+j10.251	1.738+j12.112



**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Occidental**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
AGUASCALIENTES NORTE	AGN-115	115	18.25	13.22	0.802+j3.549	0.642+j7.815	21.00	14.74	0.685+j3.410	0.650+j7.907	20.99	14.74	0.686+j3.412	0.650+j7.907
AGUASCALIENTES ORIENTE	AGS-115	115	23.55	25.91	0.555+j2.764	0.191+j2.057	27.38	29.17	0.441+j2.631	0.201+j2.173	27.36	29.16	0.442+j2.633	0.201+j2.173
AGUASCALIENTES ORIENTE	AGS-230	230	17.61	18.63	1.569+j7.376	1.122+j6.241	21.95	22.09	1.072+j6.567	1.159+j6.443	21.93	22.07	1.076+j6.573	1.159+j6.443
AGUASCALIENTES PONIENTE	AGP-115	115	13.49	10.61	0.945+j4.830	0.596+j8.961	15.33	11.78	0.827+j4.693	0.607+j9.078	15.32	11.78	0.828+j4.695	0.607+j9.078
AGUASCALIENTES POTENCIA	APT-115	115	22.47	24.46	0.507+j2.911	0.201+j2.240	26.36	27.73	0.388+j2.743	0.210+j2.356	26.35	27.72	0.389+j2.745	0.210+j2.356
AGUASCALIENTES POTENCIA	APT-230	230	19.93	22.61	1.372+j6.522	0.536+j4.304	24.70	26.74	0.921+j5.843	0.574+j4.541	24.67	26.72	0.924+j5.849	0.574+j4.541
AGUASCALIENTES POTENCIA	APT-400	400	16.38	18.00	3.027+j13.770	1.397+j10.336	21.73	22.27	1.707+j11.564	1.468+j10.776	21.68	22.23	1.719+j11.590	1.468+j10.776
AGUASCALIENTES SUR	ASS-115	115	13.64	10.08	0.951+j4.773	1.612+j9.918	15.62	12.15	0.845+j4.597	1.251+j8.600	15.62	12.15	0.846+j4.599	1.251+j8.600
AGUASCALIENTES UNO	AGT-115	115	17.07	16.48	0.695+j3.827	0.472+j4.297	19.36	18.15	0.585+j3.728	0.486+j4.505	19.35	18.15	0.586+j3.729	0.486+j4.505
AGUASCALIENTES UNO	AGT-230	230	13.09	11.88	1.988+j9.950	2.550+j13.039	15.68	13.61	1.499+j9.195	2.623+j13.339	15.67	13.60	1.503+j9.201	2.623+j13.339
AGYDSA	AGY-69	69	21.17	19.23	0.470+j1.822	0.393+j2.430	24.34	21.33	0.397+j1.756	0.409+j2.525	24.29	21.31	0.399+j1.760	0.409+j2.525
AHRETTY	ART-115	115	7.42	6.72	2.415+j8.621	3.050+j11.357	8.35	7.44	2.248+j8.452	3.075+j11.547	8.35	7.44	2.249+j8.454	3.075+j11.547
AHUACATLÁN	AHN-110	115	2.18	1.76	7.512+j29.524	16.304+j49.801	2.41	1.94	7.347+j29.379	16.258+j50.038	2.41	1.94	7.349+j29.384	16.258+j50.038
ALAMEDA	ALA-69	69	9.39	7.55	1.096+j4.097	1.960+j7.093	10.68	8.45	0.994+j3.980	1.949+j7.070	10.68	8.45	0.995+j3.983	1.949+j7.070
ALAMOS	ALS-69	69	11.62	13.28	0.643+j3.366	0.133+j2.157	12.78	14.34	0.593+j3.378	0.145+j2.304	12.77	14.33	0.595+j3.381	0.145+j2.304
ALAMOS	ALS-230	230	10.21	9.02	2.861+j12.693	3.578+j17.826	12.38	10.36	2.073+j11.618	3.715+j18.267	12.34	10.34	2.091+j11.655	3.715+j18.267
ALFA NISSAN	ALF-115	115	13.76	12.32	0.908+j4.738	0.962+j6.459	15.74	13.77	0.787+j4.573	0.970+j6.567	15.74	13.77	0.788+j4.574	0.970+j6.567
ALFA NISSAN MANIOBRAS	AIS-115	115	15.77	15.49	0.793+j4.136	0.520+j4.424	18.14	17.38	0.672+j3.970	0.528+j4.532	18.13	17.37	0.673+j3.972	0.528+j4.532
ALKANOVA	ALK-69	69	6.47	4.83	1.251+j6.025	2.499+j12.161	7.12	5.29	1.201+j6.036	2.509+j12.298	7.12	5.28	1.203+j6.039	2.509+j12.298
ALMERIA	ALM-69	69	3.32	2.71	4.961+j10.934	5.782+j19.304	3.70	2.96	4.815+j10.836	5.964+j19.870	3.69	2.96	4.817+j10.841	5.964+j19.870
ALUPRINT	ALU-115	115	13.98	13.81	1.048+j4.631	0.543+j4.939	16.11	15.42	0.896+j4.445	0.575+j5.147	16.10	15.42	0.897+j4.447	0.575+j5.147
ALZA	ALZ-115	115	6.68	6.01	3.264+j9.387	3.784+j12.731	7.52	6.66	3.084+j9.210	3.807+j12.920	7.52	6.66	3.085+j9.212	3.807+j12.920
ALZADA	AZA-115	115	3.36	2.37	5.865+j18.899	12.206+j42.806	3.86	2.88	5.421+j18.132	10.168+j36.664	3.84	2.87	5.453+j18.224	10.167+j36.665
AMATITÁN	AMT-69	69	4.20	3.25	2.711+j9.091	4.782+j17.163	6.36	5.54	1.492+j6.728	2.628+j9.335	6.36	5.54	1.492+j6.729	2.628+j9.335
AMECA	AMK-115	115	3.26	2.12	4.874+j19.745	13.800+j51.278	3.76	2.43	4.243+j18.929	12.909+j49.551	3.76	2.43	4.247+j18.938	12.909+j49.551
AMERI AXLE& MANUF DE MEX S.A. DE C.V.	AXL-115	115	9.46	6.80	1.871+j6.765	4.610+j14.550	10.61	7.53	1.770+j6.650	4.621+j14.653	10.61	7.53	1.770+j6.651	4.621+j14.653
AMISTAD BAJÍO	AMB-115	115	19.11	9.99	0.602+j3.422	3.075+j12.651	21.22	11.00	0.556+j3.397	3.080+j12.698	21.21	10.99	0.557+j3.398	3.080+j12.698
ANDARES	ADS-69	69	14.10	13.63	0.692+j2.740	0.367+j3.112	16.00	14.95	0.618+j2.669	0.399+j3.297	15.98	14.94	0.620+j2.672	0.399+j3.297
ANGAMACUTIRO DOS	ARD-115	115	3.28	2.26	6.899+j19.019	14.708+j45.259	3.73	2.85	6.511+j18.486	10.761+j36.024	3.73	2.85	6.513+j18.489	10.761+j36.024
ANTEA	NTA-115	115	14.62	13.08	1.343+j4.337	0.242+j6.294	16.50	14.56	1.275+j4.238	0.248+j6.333	16.50	14.56	1.275+j4.239	0.248+j6.333

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Occidental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
ANTÚNEZ	ANN-69	69	3.71	4.95	2.745+j10.379	0.166+j2.741	4.52	5.89	2.189+j9.452	0.167+j2.693	4.52	5.89	2.189+j9.452	0.167+j2.693
ANTÚNEZ	ANN-115	115	3.08	3.37	6.114+j20.697	1.730+j15.971	3.88	4.01	4.545+j18.244	1.889+j16.457	3.88	4.01	4.546+j18.246	1.889+j16.457
APA	APA-115	115	15.89	16.38	0.751+j4.111	0.532+j3.785	18.17	18.24	0.624+j3.971	0.552+j3.954	18.16	18.24	0.625+j3.974	0.552+j3.954
APASCO	APP-115	115	5.58	4.11	3.399+j11.408	8.830+j23.096	6.51	4.64	3.108+j10.781	8.837+j23.114	6.44	4.62	3.142+j10.891	8.838+j23.126
APASEO	APS-110	115	18.38	14.32	0.684+j3.547	1.367+j6.556	20.39	16.50	0.649+j3.523	1.147+j6.020	20.38	16.49	0.650+j3.525	1.147+j6.020
APASEO ORIENTE	APO-115	115	9.30	6.57	2.377+j6.735	4.674+j15.374	10.24	7.20	2.342+j6.738	4.682+j15.481	10.24	7.20	2.343+j6.739	4.682+j15.481
APATZINGÁN	APZ-115	115	3.99	4.48	4.649+j15.999	1.423+j11.125	5.22	5.55	3.154+j13.629	1.489+j10.872	5.22	5.55	3.155+j13.631	1.489+j10.872
APATZINGÁN	APZ-161	161	2.74	2.82	8.715+j32.742	3.851+j30.994	3.58	3.43	5.910+j27.927	4.047+j30.992	3.58	3.43	5.912+j27.930	4.047+j30.992
ARANCIA	ARA-115	115	15.03	17.22	0.764+j4.352	0.259+j2.686	16.98	19.08	0.689+j4.245	0.283+j2.839	16.98	19.07	0.689+j4.245	0.283+j2.839
ARANDAS	ARS-115	115	3.30	2.77	6.297+j19.115	8.996+j30.474	3.68	3.05	6.120+j18.905	9.036+j30.693	3.67	3.05	6.123+j18.910	9.036+j30.693
ARBOLEDAS	ABL-115	115	8.83	7.75	1.811+j7.297	2.425+j10.390	9.87	8.51	1.698+j7.203	2.469+j10.631	9.86	8.51	1.701+j7.208	2.469+j10.631
ARELLANO	ARE-115	115	12.67	9.58	1.006+j5.144	1.656+j10.182	14.44	10.69	0.885+j4.979	1.660+j10.255	14.44	10.69	0.886+j4.981	1.660+j10.255
ARIO DE ROSALES	ADR-69	69	1.88	1.21	7.504+j19.806	15.456+j54.377	2.23	1.39	6.644+j18.465	15.297+j53.077	2.23	1.39	6.644+j18.465	15.297+j53.077
ARMERÍA	AIA-115	115	5.17	3.58	3.029+j12.472	9.687+j28.351	6.02	4.04	2.745+j11.823	9.691+j28.361	5.96	4.02	2.779+j11.937	9.692+j28.376
ARRAYANAL	AYL-115	115	6.09	4.42	2.815+j10.533	7.279+j22.103	7.15	5.00	2.529+j9.894	7.284+j22.145	7.07	4.98	2.563+j10.006	7.284+j22.155
ARTEVA SPECIAL TES S.R.L. C.V.	ATV-115	115	21.19	21.32	0.713+j3.051	0.519+j3.057	24.01	23.74	0.653+j2.970	0.526+j3.122	24.01	23.73	0.653+j2.971	0.526+j3.122
ASMOLES	ASM-115	115	5.72	4.50	3.332+j11.126	7.920+j19.498	6.66	5.09	3.044+j10.528	7.932+j19.564	6.60	5.06	3.077+j10.633	7.932+j19.570
ASUNCIÓN	ASU-115	115	18.01	15.50	0.732+j3.614	0.776+j5.434	20.66	17.27	0.618+j3.480	0.794+j5.569	20.66	17.26	0.619+j3.481	0.794+j5.569
ATEQUIZA	ATQ-69	69	19.81	25.85	0.402+j1.970	0.030+j0.610	23.30	29.70	0.337+j1.850	0.034+j0.665	23.26	29.65	0.338+j1.853	0.034+j0.665
ATEQUIZA	ATQ-230	230	17.86	20.85	1.700+j7.237	0.437+j4.263	22.97	25.29	1.030+j6.274	0.473+j4.530	22.82	25.17	1.047+j6.316	0.473+j4.530
ATEQUIZA	ATQ-400	400	15.66	16.91	3.235+j14.389	1.596+j11.445	22.41	21.86	1.486+j11.237	1.690+j11.910	22.11	21.67	1.530+j11.388	1.689+j11.913
ATOTONILCO	ATO-115	115	5.12	6.53	3.777+j12.404	0.523+j4.596	5.75	7.25	3.602+j12.180	0.566+j4.842	5.75	7.25	3.605+j12.185	0.566+j4.842
ATOTONILQUILLO	ATT-115	115	3.52	2.33	5.163+j18.165	12.168+j46.119	4.86	2.81	3.668+j14.559	12.256+j46.464	4.86	2.81	3.673+j14.565	12.256+j46.464
AUTLÁN	AUT-115	115	1.22	0.83	17.405+j51.345	34.347+j127.872	1.36	0.91	17.049+j50.771	34.369+j127.980	1.36	0.91	17.096+j50.878	34.369+j127.989
ALUMINICASTE	AUT-115	115	7.82	5.64	1.861+j8.287	3.785+j17.990	9.14	7.03	1.643+j7.820	3.029+j14.933	9.14	7.03	1.644+j7.821	3.029+j14.933
AVENTEC	AVN-115	115	14.49	13.69	0.958+j4.480	1.050+j5.306	17.07	15.68	0.773+j4.208	1.056+j5.339	17.06	15.68	0.774+j4.210	1.056+j5.339
AYALA	AYA-115	115	12.33	8.77	1.170+j5.255	2.706+j11.657	13.75	9.66	1.078+j5.200	2.719+j11.755	13.75	9.66	1.079+j5.202	2.719+j11.755
AYOTLAN	AYN-115	115	3.80	3.26	5.133+j16.700	7.788+j24.906	4.24	3.61	4.962+j16.492	7.823+j25.100	4.24	3.61	4.965+j16.497	7.823+j25.100
AYUNTAMIENTO	AYU-115	115	12.89	9.28	0.999+j5.052	1.802+j11.037	14.73	11.00	0.891+j4.877	1.491+j9.900	14.73	11.00	0.892+j4.879	1.491+j9.900
AZUFRES SWITCHEO	AZS-115	115	12.62	14.85	0.799+j5.200	0.411+j3.309	13.33	15.56	0.849+j5.412	0.431+j3.536	13.33	15.56	0.849+j5.412	0.431+j3.536

**Niveles de cortocircuito de la Red Nacional de Transmisión  
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			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
BANDERAS	BAN-115	115	4.28	4.13	4.795+j14.771	5.251+j16.333	5.03	4.72	4.163+j13.904	5.271+j16.532	5.03	4.71	4.172+j13.919	5.271+j16.532
BAÑÓN	BON-110	115	2.65	2.53	9.671+j23.141	5.175+j28.620	3.03	2.79	8.978+j22.412	5.633+j30.011	3.02	2.79	8.979+j22.413	5.633+j30.011
BARRACUDA	BCD-115	115	11.87	9.19	1.211+j5.462	1.890+j10.341	13.77	10.35	1.037+j5.202	1.906+j10.409	13.76	10.35	1.038+j5.204	1.906+j10.409
BELTICOS S.A. DE C.V.	BEL-69	69	9.02	5.87	1.199+j4.249	3.208+j11.083	10.11	6.48	1.129+j4.186	3.213+j11.142	10.10	6.48	1.131+j4.190	3.213+j11.142
BICENTENARIO	BCT-115	115	7.98	7.93	1.907+j8.096	1.656+j8.314	9.41	9.04	1.636+j7.583	1.688+j8.480	9.29	8.97	1.667+j7.680	1.687+j8.482
BMW	BMW-230	230	9.39	7.84	2.986+j13.816	5.272+j22.040	12.11	9.89	2.111+j11.880	4.776+j19.786	12.10	9.89	2.113+j11.886	4.776+j19.786
BOCAS	BOC-115	115	4.43	3.52	3.281+j14.620	8.606+j25.338	4.91	3.87	3.190+j14.538	8.625+j25.495	4.91	3.87	3.192+j14.541	8.625+j25.495
BOLAÑOS	BLA-110	115	0.92	0.62	34.430+j63.190	56.857+j168.434	1.02	0.68	34.304+j63.116	57.055+j169.792	1.02	0.68	34.305+j63.117	57.055+j169.792
BONLAN	BNL-115	115	14.33	12.92	0.976+j4.530	1.201+j6.056	16.86	14.76	0.791+j4.260	1.208+j6.094	16.85	14.75	0.792+j4.262	1.208+j6.094
BOQUILLA	BOQ-115	115	5.88	4.19	2.738+j10.947	6.428+j24.058	7.36	5.00	2.080+j9.700	6.177+j22.990	7.36	5.00	2.081+j9.701	6.177+j22.990
BOTELLO	BOT-115	115	4.27	3.04	4.445+j14.913	9.148+j33.193	4.96	4.65	3.941+j14.178	2.515+j17.326	4.96	4.65	3.943+j14.181	2.515+j17.326
BUENA VISTA NORTE	BVN-115	115	10.72	8.24	1.618+j5.976	2.325+j11.633	12.18	9.35	1.519+j5.799	2.315+j11.256	12.18	9.35	1.519+j5.799	2.315+j11.256
BUENAVISTA	BNA-115	115	11.18	8.60	1.608+j5.715	1.820+j11.220	12.68	9.69	1.513+j5.555	1.835+j11.006	12.68	9.69	1.513+j5.556	1.835+j11.006
BUGAMBILIAS	BUG-69	69	10.91	7.03	0.907+j3.537	2.093+j9.483	12.24	7.77	0.839+j3.481	2.096+j9.527	12.22	7.77	0.841+j3.485	2.096+j9.527
BURNER S	BRN-115	115	7.22	5.89	3.241+j8.613	4.851+j14.649	7.98	6.47	3.188+j8.577	4.873+j14.791	7.98	6.47	3.188+j8.578	4.873+j14.791
C. H. SANTA ROSA	SRO-69	69	5.18	4.07	2.134+j7.390	3.918+j13.416	8.79	10.82	0.884+j4.909	0.112+j1.899	8.78	10.82	0.885+j4.910	0.112+j1.899
C.H. LA YESCA	LYE-400	400	5.15	3.51	5.964+j44.423	23.996+j105.106	10.37	11.15	1.464+j24.446	1.013+j18.400	10.35	11.14	1.477+j24.489	1.013+j18.400
CABLESA	CAB-115	115	14.27	14.10	1.131+j4.512	0.769+j4.790	16.07	15.92	1.060+j4.419	0.720+j4.647	16.07	15.91	1.061+j4.420	0.720+j4.647
CALERA	CAL-115	115	10.44	13.38	1.564+j6.167	0.185+j2.191	12.00	15.09	1.372+j5.931	0.201+j2.355	11.99	15.09	1.374+j5.933	0.201+j2.355
CALERA	CAL-230	230	6.46	7.45	5.061+j19.909	1.412+j12.458	7.52	8.41	4.337+j18.938	1.531+j13.242	7.52	8.41	4.343+j18.946	1.531+j13.242
CALERA INDUSTRIAL	CAI-115	115	7.10	7.85	2.187+j9.099	1.041+j6.591	8.27	8.89	1.893+j8.627	1.103+j6.897	8.27	8.89	1.894+j8.629	1.103+j6.897
CALVILLO	CVO-115	115	4.17	3.04	3.469+j15.544	5.234+j33.217	4.62	3.32	3.355+j15.454	5.333+j33.987	4.62	3.32	3.356+j15.455	5.333+j33.987
CAMPESTRE	CPE-115	115	8.75	7.84	1.939+j7.340	2.154+j10.105	9.63	8.54	1.879+j7.348	2.188+j10.336	9.63	8.54	1.880+j7.350	2.188+j10.336
CAMPOS	CMP-115	115	12.02	9.75	0.920+j5.447	1.745+j9.201	15.17	11.48	0.671+j4.769	1.748+j9.219	14.78	11.32	0.700+j4.893	1.748+j9.236
CAÑADA	KDA-115	115	20.09	20.36	0.572+j3.255	0.260+j3.179	22.78	22.31	0.469+j3.172	0.284+j3.403	22.76	22.30	0.470+j3.174	0.284+j3.403
CAÑADA	KDA-230	230	18.68	22.49	1.323+j6.985	0.368+j3.519	23.11	26.73	0.869+j6.262	0.396+j3.746	23.08	26.70	0.873+j6.268	0.396+j3.746
CAÑADA	KDA-400	400	14.92	16.25	3.149+j15.153	1.547+j11.704	19.42	19.79	1.860+j12.946	1.647+j12.271	19.39	19.77	1.871+j12.970	1.647+j12.271
CAPILLA DE GUADALUPE	CIA-115	115	2.18	1.35	9.722+j28.799	23.630+j83.432	2.42	1.49	9.506+j28.638	23.657+j83.712	2.42	1.49	9.510+j28.643	23.657+j83.712
CARAPAN POTENCIA	CRP-115	115	16.04	19.11	0.805+j4.061	0.166+j2.154	18.44	21.40	0.667+j3.904	0.191+j2.276	18.42	21.38	0.669+j3.908	0.191+j2.276
CARAPAN POTENCIA	CRP-230	230	14.30	17.12	1.763+j9.117	0.415+j4.725	17.25	19.86	1.224+j8.380	0.455+j5.026	17.21	19.83	1.232+j8.397	0.455+j5.026

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Occidental**

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
CARAPAN POTENCIA	CRP-400	400	10.76	10.60	3.719+j21.140	2.457+j22.338	13.23	12.25	2.412+j19.042	2.696+j23.526	13.19	12.23	2.434+j19.101	2.695+j23.527
CARTONES PODEROSA S.A. DE	PON-115	115	14.90	16.09	0.862+j4.371	0.513+j3.392	16.85	17.86	0.787+j4.262	0.534+j3.522	16.85	17.86	0.787+j4.263	0.534+j3.522
CASTILLO	CST-69	69	17.69	16.64	0.573+j2.178	0.716+j2.584	20.43	18.74	0.511+j2.083	0.718+j2.624	20.40	18.72	0.512+j2.086	0.718+j2.624
CASTRO DEL RIO	CDR-115	115	11.08	7.29	1.302+j5.848	3.194+j15.035	12.47	8.08	1.199+j5.733	3.201+j15.099	12.47	8.08	1.200+j5.734	3.201+j15.099
CATARINA	CTA-69	69	4.46	4.18	3.596+j8.187	2.033+j10.719	4.98	4.54	3.450+j8.090	2.216+j11.286	4.98	4.54	3.452+j8.094	2.216+j11.286
CD. HIDALGO	CDH-115	115	5.81	5.12	2.933+j11.041	4.057+j15.720	6.36	5.54	2.939+j11.101	4.289+j16.254	6.36	5.54	2.940+j11.102	4.289+j16.254
CELANESE (CARAPAN)	CME-115	115	5.45	4.44	3.734+j11.585	5.115+j19.877	6.18	5.33	3.496+j11.286	4.302+j16.848	6.18	5.33	3.498+j11.289	4.302+j16.848
CELAYA AEROPUERTO	CAE-110	115	15.38	12.66	1.025+j4.194	1.684+j6.915	17.19	13.95	0.965+j4.138	1.705+j7.028	17.18	13.94	0.966+j4.139	1.705+j7.028
CELAYA DOS	CYA-115	115	23.44	24.73	0.537+j2.782	0.264+j2.401	26.20	27.00	0.484+j2.745	0.286+j2.543	26.19	26.99	0.485+j2.747	0.286+j2.543
CELAYA DOS	CYA-230	230	17.11	15.35	1.498+j7.616	1.698+j10.375	20.11	17.31	1.225+j7.161	1.809+j10.699	20.09	17.30	1.228+j7.166	1.809+j10.699
CELAYA III	CEY-115	115	20.41	21.09	0.676+j3.182	0.350+j2.947	22.91	23.13	0.616+j3.128	0.379+j3.101	22.90	23.12	0.617+j3.129	0.379+j3.101
CELAYA III	CEY-230	230	16.84	14.94	1.606+j7.723	1.912+j10.821	20.23	17.16	1.273+j7.108	2.015+j10.986	20.21	17.16	1.275+j7.112	2.015+j10.986
CELAYA INDUSTRIAL	CYI-110	115	16.81	10.42	0.945+j3.834	2.566+j10.948	18.73	11.48	0.892+j3.796	2.570+j10.997	18.72	11.48	0.893+j3.798	2.570+j10.997
CELAYA PONIENTE	CLP-115	115	12.85	9.68	1.271+j5.009	2.806+j9.871	14.35	10.68	1.206+j4.943	2.822+j9.958	14.35	10.68	1.207+j4.944	2.822+j9.958
CELAYA SUR	CYS-115	115	12.49	8.66	1.315+j5.151	3.466+j11.905	13.90	9.58	1.262+j5.102	3.459+j11.892	13.89	9.58	1.263+j5.104	3.459+j11.892
CELAYA UNO	CLY-110	115	17.81	14.30	0.885+j3.622	1.626+j6.281	19.95	15.90	0.828+j3.567	1.620+j6.271	19.94	15.89	0.829+j3.568	1.620+j6.271
CEMENTOS MOCTEZUMA (MATEHUALA)	CMZ-115	115	1.24	0.74	22.498+j48.579	51.712+j155.678	1.37	0.81	22.408+j48.528	51.728+j155.817	1.37	0.81	22.410+j48.530	51.728+j155.817
CEMEX MÉXICO S.A. DE C.V. (C.D GUZMÁN)	CMX-115	115	3.90	3.14	4.333+j16.473	6.669+j28.553	4.33	3.45	4.128+j16.369	6.719+j28.958	4.32	3.44	4.147+j16.410	6.719+j28.958
CEMEX MÉXICO S.A. DE C.V. (GUADALAJARA)	CMX-69	69	6.16	4.36	1.635+j6.260	3.267+j14.096	6.77	4.77	1.587+j6.273	3.279+j14.243	6.77	4.77	1.589+j6.276	3.279+j14.243
CEMEX MÉXICO S.A. DE C.V. (HUICHAPAN)	CMX-230	230	5.54	4.39	4.726+j23.492	9.084+j41.839	6.82	5.15	3.690+j21.083	9.170+j41.085	6.82	5.15	3.695+j21.092	9.170+j41.085
CENTRAL FOTOVOLTAICA SANTIAGO MANIOBRAS	CFM-230	230	5.97	6.44	4.193+j21.832	2.892+j17.257	7.37	7.59	3.209+j19.563	2.991+j17.929	7.37	7.59	3.212+j19.568	2.991+j17.929
CENTRO	CTR-115	115	4.30	4.14	4.550+j14.746	4.072+j16.729	5.06	4.73	3.886+j13.890	4.091+j16.933	5.06	4.73	3.896+j13.905	4.091+j16.933
CENTRO LOGÍSTICO JALISCO	CLJ-115	115	6.28	5.29	2.389+j10.302	5.848+j15.506	7.03	5.84	2.180+j10.160	5.873+j15.724	7.02	5.84	2.187+j10.176	5.873+j15.724
CEPAMISA	CMS-115	115	7.91	7.24	2.096+j8.129	2.188+j10.591	8.72	7.89	2.021+j8.127	2.223+j10.853	8.72	7.89	2.022+j8.129	2.223+j10.853
CERRO BLANCO	CBL-400	400	8.14	7.57	5.773+j27.783	7.057+j34.095	17.86	17.05	1.216+j14.175	2.770+j15.513	17.67	16.92	1.257+j14.319	2.770+j15.515
CERRO GORDO	CRG-115	115	16.07	15.05	0.938+j4.023	1.402+j4.792	17.98	16.58	0.847+j3.973	1.419+j4.914	17.97	16.57	0.848+j3.974	1.419+j4.914
CERRO HUECO	CHC-69	69	1.08	0.68	16.468+j32.819	34.241+j97.333	1.24	0.77	15.596+j31.640	33.825+j95.377	1.24	0.77	15.596+j31.641	33.825+j95.377
CERVECERÍA MODELO DE GUADALAJARA	MOD-69	69	11.67	7.88	0.922+j3.286	2.074+j8.072	13.15	8.73	0.850+j3.221	2.081+j8.134	13.14	8.72	0.852+j3.224	2.081+j8.134
CH ZIMAPAN	ZMN-115	115	6.20	6.96	2.127+j10.490	0.634+j7.208	8.21	9.26	1.309+j8.795	0.259+j5.673	8.21	9.26	1.310+j8.796	0.259+j5.673
CH ZIMAPAN	ZMN-230	230	4.25	3.92	6.493+j30.598	5.406+j38.787	6.99	7.39	2.895+j20.685	1.130+j16.358	6.99	7.39	2.897+j20.690	1.130+j16.358

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Occidental

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
CHAMELA	CML-115	115	1.45	1.14	12.266+j44.265	32.034+j77.154	1.61	1.26	11.962+j43.635	32.055+j77.262	1.61	1.26	12.001+j43.753	32.054+j77.270
CHAPALA	CHA-69	69	5.11	2.95	2.062+j7.511	6.260+j24.179	5.66	3.24	2.032+j7.467	6.270+j24.253	5.66	3.24	2.033+j7.470	6.270+j24.253
CHAPALILLA	CPI-115	115	2.62	2.45	5.375+j24.788	6.352+j29.927	2.86	2.64	5.396+j24.975	6.618+j31.190	2.86	2.64	5.397+j24.980	6.618+j31.190
CHARAPAN	CHN-115	115	4.27	2.84	5.286+j14.629	13.158+j36.739	4.83	3.16	5.027+j14.272	13.159+j36.780	4.83	3.16	5.030+j14.276	13.159+j36.780
CHARAPAN	CHN-230	230	6.30	6.41	3.260+j20.814	2.562+j19.859	7.36	7.21	2.751+j19.650	2.779+j20.945	7.36	7.21	2.753+j19.654	2.779+j20.945
CHARCAS	CAK-110	115	6.14	6.72	2.227+j10.573	1.554+j7.883	6.74	7.30	2.185+j10.620	1.585+j8.195	6.73	7.30	2.185+j10.622	1.585+j8.195
CHARCAS POTENCIA	CHK-115	115	6.98	8.61	1.740+j9.351	0.276+j4.135	7.65	9.32	1.698+j9.398	0.307+j4.448	7.65	9.31	1.699+j9.400	0.307+j4.448
CHARCAS POTENCIA	CHK-230	230	3.76	4.12	6.334+j34.762	2.105+j26.059	4.17	4.47	6.047+j34.493	2.358+j27.946	4.17	4.47	6.051+j34.502	2.358+j27.946
CHILATÁN	CHL-115	115	1.72	1.40	11.651+j36.739	17.807+j62.359	2.25	2.30	8.233+j31.422	4.308+j28.688	2.25	2.30	8.234+j31.424	4.308+j28.688
CHIPILO	CHI-115	115	7.66	6.29	1.398+j8.555	2.698+j14.158	8.99	7.43	1.193+j8.036	2.583+j13.053	8.99	7.43	1.194+j8.036	2.583+j13.053
CICLO COMBINADO TIERRA MOJADA S. DE R.L. DE C.V.	CTM-400	400	15.84	17.89	2.999+j14.267	0.943+j9.625	22.15	22.86	1.393+j11.386	1.050+j10.191	21.90	22.69	1.429+j11.510	1.049+j10.192
CIENEGUILLAS	CGS-115	115	5.66	5.25	3.010+j11.333	4.047+j13.938	6.38	5.83	2.807+j11.106	4.059+j14.086	6.37	5.83	2.808+j11.107	4.059+j14.086
CIFUNSA DEL BAJÍO S.A. DE C.V.	CIF-115	115	23.45	22.13	0.616+j2.763	0.511+j3.331	27.20	24.82	0.516+j2.635	0.527+j3.446	27.19	24.81	0.517+j2.636	0.527+j3.446
CIHUATLAN	CHT-115	115	3.24	2.81	5.239+j19.821	10.870+j27.942	3.69	3.15	4.952+j19.182	10.887+j28.041	3.66	3.13	4.988+j19.301	10.886+j28.050
CIMATARIO	CIM-115	115	12.01	10.29	1.365+j5.357	0.237+j8.439	13.47	11.40	1.296+j5.266	0.242+j8.488	13.47	11.40	1.296+j5.267	0.242+j8.488
CIUDAD GUZMÁN	CGM-115	115	6.80	7.96	2.104+j9.535	0.492+j5.510	7.60	8.70	1.898+j9.426	0.543+j5.915	7.56	8.67	1.917+j9.468	0.543+j5.915
CIUDAD GUZMÁN	CGM-230	230	4.90	4.83	6.087+j26.383	3.630+j28.192	5.79	5.44	5.092+j24.715	3.996+j29.761	5.74	5.41	5.159+j24.902	3.995+j29.762
CIUADDELA	CIU-69	69	16.47	12.00	0.654+j2.329	1.147+j4.994	18.75	13.32	0.581+j2.263	1.156+j5.063	18.72	13.31	0.583+j2.267	1.156+j5.063
CNH DE MÉXICO S.A. DE C.V.	HOL-115	115	20.99	21.16	0.711+j3.082	0.522+j3.067	23.78	23.56	0.651+j3.001	0.529+j3.131	23.77	23.56	0.651+j3.002	0.529+j3.131
COAHUAYANA	CHY-115	115	1.95	1.29	10.038+j32.497	30.005+j80.977	2.19	1.43	9.729+j31.895	30.012+j81.003	2.18	1.43	9.766+j32.000	30.013+j81.014
COALCOMÁN	CMN-115	115	1.27	0.83	19.896+j48.449	48.871+j127.028	1.46	1.13	18.426+j46.586	26.978+j88.550	1.46	1.13	18.455+j46.674	26.978+j88.550
COBANO	CBN-69	69	4.70	4.89	2.194+j8.193	0.800+j7.493	6.44	6.20	1.367+j6.670	0.877+j7.238	6.44	6.20	1.367+j6.671	0.877+j7.238
COBANO	CBN-161	161	3.55	3.94	6.161+j25.450	2.042+j18.402	5.10	5.23	3.374+j19.773	2.093+j17.083	5.10	5.23	3.376+j19.776	2.093+j17.083
COBRECEL	COB-115	115	13.72	10.30	1.149+j4.702	2.539+j9.352	15.48	11.45	1.078+j4.595	2.552+j9.387	15.47	11.45	1.079+j4.596	2.552+j9.387
COCULA	CLA-115	115	5.73	4.48	2.849+j11.224	7.498+j20.021	6.65	5.05	2.400+j10.719	7.390+j20.059	6.64	5.05	2.405+j10.730	7.390+j20.059
COLIMA DOS	CMD-115	115	9.81	11.66	1.425+j6.614	0.335+j3.542	11.77	13.52	1.157+j6.096	0.366+j3.708	11.58	13.36	1.187+j6.194	0.366+j3.709
COLIMA DOS	CMD-230	230	6.93	7.01	3.870+j18.767	2.647+j18.312	8.90	8.39	2.802+j16.169	2.857+j18.956	8.69	8.26	2.901+j16.560	2.853+j18.972
COLIMA NORTE	CNO-115	115	6.69	6.08	2.429+j9.624	3.039+j12.525	7.80	6.88	2.155+j9.115	3.071+j12.691	7.71	6.83	2.187+j9.211	3.070+j12.693
COLIMILLA	CLL-69	69	10.95	7.36	0.971+j3.506	2.264+j8.685	13.48	13.50	0.753+j3.163	0.379+j3.117	13.47	13.49	0.754+j3.165	0.379+j3.117
COLINAS	COI-115	115	10.42	7.93	1.324+j6.233	2.230+j12.198	12.05	8.94	1.137+j5.953	2.235+j12.212	12.05	8.94	1.138+j5.955	2.235+j12.212

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Occidental

Subestación eléctrica	Acronímico	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
COLINAS DE APASEO PARQUE INDUSTRIAL	CAP-115	115	5.96	4.04	3.456+j10.598	8.491+j25.632	6.56	4.44	3.422+j10.601	8.499+j25.739	6.56	4.44	3.422+j10.602	8.499+j25.739
COLINAS DE LEÓN DOS MANIOBRAS	CCL-115	115	15.61	13.73	0.882+j4.162	1.126+j5.908	17.37	15.05	0.793+j4.130	1.140+j6.051	17.36	15.05	0.794+j4.131	1.140+j6.051
COLINAS DEL RINCÓN PARQUE INDUSTRIAL	RPI-115	115	13.56	10.32	0.951+j4.804	1.887+j9.324	15.02	11.30	0.866+j4.784	1.909+j9.487	15.02	11.30	0.867+j4.786	1.909+j9.487
COLOMO	COL-115	115	16.30	19.52	0.647+j4.021	0.155+j2.050	21.64	24.43	0.398+j3.351	0.166+j2.136	20.86	23.75	0.427+j3.475	0.166+j2.146
COLOMO	COL-230	230	11.08	12.83	1.694+j11.863	0.972+j6.960	16.61	17.69	0.775+j8.761	0.995+j6.795	15.69	16.95	0.865+j9.270	0.995+j6.869
COLOMO DISTRIBUCIÓN	CDI-115	115	16.09	19.14	0.668+j4.072	0.184+j2.139	21.31	23.91	0.419+j3.402	0.195+j2.225	20.55	23.25	0.448+j3.525	0.195+j2.235
COLON	CLN-230	230	13.03	11.82	2.510+j9.877	2.756+j13.045	16.35	13.88	1.731+j8.763	2.810+j13.336	16.26	13.84	1.752+j8.811	2.810+j13.337
COMALA	COM-115	115	5.88	5.07	2.753+j10.945	4.477+j16.135	6.83	5.76	2.463+j10.404	4.404+j15.964	6.77	5.73	2.494+j10.500	4.404+j15.966
COMPOSTELA	CMP-110	115	3.35	2.39	7.399+j18.361	15.321+j41.044	3.89	2.69	6.850+j17.485	15.327+j40.999	3.89	2.69	6.858+j17.500	15.327+j41.000
CONTICÓN	CON-115	115	13.71	9.86	1.074+j4.723	2.629+j10.212	15.40	10.92	1.007+j4.633	2.645+j10.272	15.40	10.92	1.008+j4.634	2.645+j10.272
CONDEMBARO	CON-115	115	2.06	1.71	9.308+j30.904	16.071+j49.662	2.49	2.00	7.607+j28.332	15.689+j47.863	2.49	2.00	7.608+j28.334	15.689+j47.863
CONDUCTORES MONTERREY	CDM-115	115	15.08	14.48	0.928+j4.305	0.768+j4.910	17.77	16.57	0.745+j4.042	0.778+j4.972	17.76	16.57	0.746+j4.043	0.778+j4.972
CONIN	CNI-115	115	18.13	21.28	0.670+j3.600	0.114+j2.066	20.31	23.44	0.604+j3.544	0.120+j2.180	20.31	23.44	0.605+j3.545	0.120+j2.180
CONIN	CNI-230	230	16.20	16.00	1.553+j8.048	1.007+j8.548	20.21	19.23	1.181+j7.130	1.040+j8.343	20.20	19.22	1.183+j7.133	1.040+j8.343
CORONEO	COO-110	115	2.57	2.09	9.960+j23.802	12.848+j41.986	2.82	2.27	9.997+j23.843	13.042+j42.832	2.82	2.27	9.997+j23.844	13.042+j42.832
CORPORACIÓN DE OCCIDENTE	COC-69	69	14.01	12.58	0.663+j2.765	0.846+j3.719	16.16	14.14	0.597+j2.645	0.850+j3.774	16.14	14.13	0.599+j2.648	0.850+j3.774
CORTÁZAR	CZR-115	115	9.99	8.70	1.556+j6.463	2.451+j9.316	11.20	9.67	1.481+j6.352	2.452+j9.319	11.20	9.67	1.482+j6.353	2.452+j9.319
COTIJA	CTJ-115	115	5.17	3.35	3.434+j12.365	8.805+j32.645	5.78	3.70	3.293+j12.191	8.820+j32.744	5.78	3.70	3.296+j12.197	8.820+j32.744
CRUCERO	CCR-115	115	2.10	1.80	9.649+j30.074	10.773+j46.416	2.71	2.63	6.976+j26.015	5.381+j27.826	2.71	2.63	6.977+j26.016	5.381+j27.826
CRUZ AZUL	CZA-230	230	5.86	4.22	4.304+j22.254	12.768+j47.462	6.68	4.71	3.785+j21.542	12.809+j47.706	6.68	4.71	3.790+j21.548	12.809+j47.706
CRYOINFRA	CRI-115	115	14.72	9.86	1.181+j4.354	3.055+j10.782	17.25	11.25	1.053+j4.101	3.059+j10.640	17.24	11.25	1.054+j4.102	3.059+j10.640
CRYOINFRA	CRY-115	115	23.09	25.78	0.649+j2.802	0.332+j1.971	26.24	28.78	0.589+j2.721	0.339+j2.035	26.23	28.77	0.590+j2.722	0.339+j2.035
CUAUHTÉMOC	SCC-115	115	3.55	2.55	5.240+j17.956	11.037+j39.039	4.06	2.96	4.873+j17.315	10.166+j36.424	4.04	2.96	4.906+j17.408	10.166+j36.425
CUERÁMARO	CUE-110	115	7.66	5.25	1.926+j8.455	6.899+j19.496	8.53	5.79	1.831+j8.368	6.918+j19.620	8.52	5.79	1.832+j8.370	6.918+j19.620
CUITZEO MORELIA	CTZ-115	115	5.14	3.49	3.631+j12.390	10.560+j29.525	5.68	3.84	3.568+j12.353	10.579+j29.656	5.68	3.84	3.569+j12.354	10.579+j29.656
CUITZEO OCOTLAN	CZO-115	115	8.55	7.43	2.149+j7.459	2.497+j11.041	10.57	8.59	1.751+j6.683	2.584+j11.384	10.56	8.59	1.755+j6.689	2.584+j11.384
CUITZILLOS	CZS-115	115	6.49	5.14	2.642+j9.886	5.518+j17.629	7.10	5.60	2.621+j9.940	5.567+j17.870	7.10	5.60	2.622+j9.941	5.567+j17.870
CUMBRES	CUB-115	115	17.95	18.37	0.725+j3.627	0.432+j3.436	20.62	20.58	0.610+j3.488	0.442+j3.544	20.62	20.57	0.611+j3.490	0.442+j3.544
CUMMINS FILTRACIÓN	CSF-115	115	12.51	8.41	1.148+j5.182	2.385+j12.864	14.59	9.48	0.969+j4.911	2.400+j12.914	14.59	9.48	0.970+j4.912	2.400+j12.914
CUPATITZIO	CPT-161	161	3.98	4.35	4.809+j22.839	2.287+j17.276	5.85	6.34	2.345+j17.311	1.118+j12.062	5.85	6.34	2.347+j17.315	1.118+j12.062

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Occidental

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
CUPRO	CPO-115	115	16.07	17.07	0.930+j4.026	0.595+j3.375	19.03	19.67	0.746+j3.764	0.606+j3.441	19.03	19.67	0.747+j3.765	0.606+j3.441
CUQUIO	CQO-115	115	1.96	1.34	9.966+j32.378	29.318+j75.775	2.17	1.47	9.755+j32.202	29.345+j76.048	2.17	1.47	9.759+j32.207	29.345+j76.048
DAIDO METAL	DAI-69	69	6.19	3.81	1.517+j6.259	4.056+j18.003	6.88	4.21	1.446+j6.204	4.059+j18.047	6.87	4.21	1.449+j6.208	4.059+j18.048
DAL-TILE MÉXICO S. DE R.L. DE C.V	DLT-115	115	18.43	17.32	0.719+j3.529	0.826+j4.240	21.35	19.76	0.620+j3.365	0.838+j4.210	21.34	19.75	0.621+j3.366	0.838+j4.210
DANISCO MEXICANA	DAM-115	115	5.57	4.11	3.434+j11.425	8.942+j22.897	6.49	4.65	3.140+j10.805	8.949+j22.921	6.43	4.63	3.175+j10.912	8.949+j22.932
DANONE DE MÉXICO S.A. DE C.V.	DNN-115	115	10.37	7.92	1.491+j6.224	3.502+j11.871	11.66	8.73	1.394+j6.109	3.579+j12.085	11.65	8.73	1.395+j6.111	3.579+j12.085
DAÑU	DAN-230	230	8.88	8.67	3.022+j14.650	2.495+j15.853	11.79	10.87	2.004+j12.222	2.581+j15.100	11.79	10.87	2.008+j12.231	2.581+j15.100
DE ACERO MORELIA	DEO-115	115	8.97	7.97	1.868+j7.166	2.186+j10.097	9.83	8.64	1.833+j7.198	2.254+j10.381	9.83	8.64	1.834+j7.200	2.254+j10.381
DE ACERO CELAYA	DEA-230	230	13.72	11.08	1.871+j9.493	3.346+j16.355	16.21	12.59	1.535+j8.882	3.449+j16.520	16.20	12.58	1.538+j8.886	3.449+j16.520
DELCO REMY	DLC-115	115	14.51	13.37	0.956+j4.475	1.187+j5.650	17.11	15.33	0.771+j4.197	1.190+j5.664	17.11	15.33	0.772+j4.199	1.190+j5.664
DENSO	DEN-115	115	6.96	5.65	2.171+j9.294	3.690+j15.770	7.71	6.21	2.077+j9.243	3.706+j15.915	7.71	6.21	2.077+j9.244	3.706+j15.915
DESCANSADERO	DSC-69	69	1.58	1.32	11.094+j22.660	13.294+j37.839	1.76	1.47	10.867+j22.350	13.031+j37.554	1.76	1.47	10.867+j22.350	13.031+j37.554
DESTILADERAS	DST-115	115	3.86	3.44	4.918+j16.501	5.115+j22.945	4.50	3.90	4.276+j15.640	5.132+j23.132	4.50	3.90	4.285+j15.655	5.132+j23.132
DICUMSA	DIC-115	115	15.06	14.44	0.930+j4.311	0.773+j4.942	17.75	16.52	0.746+j4.047	0.783+j5.004	17.74	16.51	0.747+j4.049	0.783+j5.004
DISTEX	DTX-115	115	21.73	21.72	0.698+j2.974	0.516+j3.042	24.65	24.19	0.638+j2.893	0.522+j3.107	24.64	24.18	0.638+j2.894	0.522+j3.107
DOLORES HIDALGO	DHD-115	115	6.78	4.50	2.128+j9.561	4.557+j24.374	7.58	4.98	2.043+j9.413	4.560+j24.413	7.58	4.98	2.043+j9.413	4.560+j24.413
DOMINICA	DMN-115	115	4.08	5.33	1.617+j16.176	0.125+j4.874	4.40	5.69	1.638+j16.515	0.137+j5.314	4.40	5.69	1.639+j16.516	0.137+j5.314
DOMO SAN PEDRO	DSP-115	115	2.47	2.52	5.139+j26.392	3.008+j25.240	2.67	2.68	5.269+j26.835	3.401+j26.998	2.67	2.68	5.271+j26.840	3.401+j26.998
DON VASCO	VCO-115	115	2.74	1.87	7.868+j22.934	20.281+j54.204	3.06	2.08	7.590+j22.620	20.180+j54.019	3.06	2.08	7.591+j22.622	20.180+j54.019
EATON	EAT-115	115	14.56	13.40	0.957+j4.457	1.208+j5.636	17.19	15.38	0.771+j4.179	1.211+j5.648	17.18	15.38	0.772+j4.180	1.211+j5.648
EDOSA	EDO-69	69	7.38	4.88	1.463+j5.199	3.368+j13.262	10.01	5.84	1.036+j4.253	3.372+j13.317	10.00	5.84	1.038+j4.256	3.372+j13.317
EFFEM (LA CIÉNEGA)	EFF-115	115	3.90	2.62	4.116+j16.498	9.596+j41.047	5.17	3.10	3.061+j13.788	9.684+j41.391	5.17	3.10	3.065+j13.794	9.684+j41.391
EFFEM (SAN JUAN DEL RÍO)	EFF-115	115	9.01	5.90	2.127+j7.055	4.454+j18.445	10.10	6.54	2.044+j6.937	4.449+j18.447	10.10	6.54	2.044+j6.937	4.449+j18.447
EL ARBOLITO	ABO-115	115	4.02	2.82	6.030+j15.391	12.956+j35.268	4.51	3.13	5.836+j15.112	12.952+j35.223	4.51	3.13	5.836+j15.113	12.952+j35.223
EL CAJÓN	CJN-400	400	7.09	6.11	6.108+j32.006	10.533+j47.143	15.48	15.88	1.242+j16.362	1.396+j14.500	15.36	15.78	1.277+j16.489	1.396+j14.500
EL CAMPANARIO	CAM-115	115	7.71	5.74	2.795+j8.150	6.744+j16.139	8.60	6.35	2.724+j8.042	6.742+j16.169	8.60	6.35	2.724+j8.043	6.742+j16.169
EL CUARENTA	ELC-69	69	24.28	26.73	0.256+j1.620	0.097+j1.191	27.39	29.29	0.191+j1.588	0.102+j1.279	27.31	29.22	0.193+j1.593	0.102+j1.280
EL GRANJENO	EGJ-115	115	13.37	11.25	1.303+j4.794	2.027+j7.526	14.85	12.33	1.214+j4.764	2.042+j7.681	14.85	12.33	1.215+j4.766	2.042+j7.681
EL GRULLO	GRU-110	115	0.83	0.52	28.145+j74.987	60.000+j214.975	0.92	0.57	27.781+j74.427	60.022+j215.084	0.92	0.57	27.828+j74.532	60.021+j215.093
EL MARQUÉS	MRQ-115	115	13.55	12.10	1.106+j4.773	1.252+j6.562	15.12	13.33	1.040+j4.718	1.258+j6.675	15.11	13.33	1.040+j4.719	1.258+j6.675

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Occidental**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
EL MARQUÉS ORIENTE	MQO-115	115	12.76	10.78	1.033+j5.099	1.433+j7.966	14.22	11.87	0.967+j5.044	1.439+j8.079	14.22	11.87	0.967+j5.045	1.439+j8.079
EL MIRADOR	MRR-115	115	5.61	4.86	3.363+j11.353	3.559+j16.954	6.84	5.74	2.634+j10.340	3.342+j16.309	6.84	5.74	2.636+j10.342	3.342+j16.309
EL PALMAR	EPM-115	115	5.66	3.31	3.413+j11.219	10.061+j35.319	6.58	3.74	3.081+j10.656	9.949+j34.869	6.58	3.74	3.082+j10.657	9.949+j34.869
EL PARDILLO	PRL-110	115	3.56	2.56	4.945+j17.988	11.455+j38.933	3.97	2.83	4.752+j17.754	11.471+j39.097	3.97	2.83	4.753+j17.756	11.471+j39.097
EL POTOSÍ	EPS-115	115	19.66	20.62	0.546+j3.333	0.239+j2.921	22.18	22.59	0.454+j3.261	0.263+j3.121	22.16	22.58	0.455+j3.265	0.263+j3.121
EL POTOSÍ	EPS-230	230	15.19	17.86	1.619+j8.589	0.503+j4.883	18.73	21.18	1.140+j7.715	0.560+j5.140	18.70	21.16	1.145+j7.726	0.560+j5.140
EL POTOSÍ	EPS-400	400	11.30	11.65	3.536+j20.125	2.190+j18.720	13.85	13.53	2.402+j18.183	2.398+j19.645	13.81	13.51	2.419+j18.236	2.398+j19.644
EL REALITO	ELR-115	115	2.48	1.45	5.031+j26.243	16.049+j82.030	2.75	1.60	4.947+j26.090	16.056+j82.109	2.75	1.60	4.948+j26.091	16.056+j82.109
EL REFUJO	RFJ-115	115	3.15	2.02	6.731+j19.996	15.712+j53.979	3.50	2.23	6.519+j19.831	15.740+j54.259	3.50	2.23	6.523+j19.835	15.740+j54.259
EL SALTO	ESJ-69	69	16.33	17.19	0.618+j2.360	0.456+j2.028	18.64	19.23	0.561+j2.283	0.463+j2.080	18.61	19.21	0.563+j2.286	0.463+j2.080
EL SAUCITO	MSU-115	115	7.05	6.66	2.466+j9.091	1.620+j11.027	7.95	7.40	2.287+j8.892	1.638+j11.183	7.95	7.40	2.289+j8.894	1.638+j11.183
EL SAUZ	SAU-115	115	21.45	24.35	0.458+j3.061	0.111+j1.858	24.27	27.31	0.396+j2.983	0.101+j1.883	24.27	27.31	0.396+j2.983	0.101+j1.883
EL SAUZ	SAU-230	230	14.90	14.59	1.483+j8.791	0.977+j9.508	20.74	21.71	0.895+j6.985	0.446+j6.171	20.73	21.70	0.897+j6.988	0.446+j6.171
EL SOL	SOL-69	69	16.44	12.31	0.627+j2.341	1.195+j4.719	18.72	13.67	0.554+j2.275	1.203+j4.781	18.69	13.66	0.556+j2.278	1.203+j4.781
EL SOL	SOL-69B	69	18.36	13.96	0.535+j2.103	0.972+j4.112	20.97	15.52	0.463+j2.038	0.978+j4.171	20.93	15.51	0.465+j2.041	0.978+j4.171
EL SOL (CARAPAN)	ESO-115	115	5.54	4.55	3.490+j11.464	5.344+j19.087	6.19	4.99	3.354+j11.312	5.500+j19.508	6.19	4.99	3.356+j11.316	5.500+j19.508
EL TARAY	TAY-115	115	4.48	3.07	3.672+j14.359	1.303+j35.646	4.97	3.36	3.559+j14.266	1.350+j36.071	4.97	3.36	3.560+j14.267	1.350+j36.071
EL TORO	TOO-115	115	11.19	5.77	1.231+j5.803	5.846+j21.915	12.36	6.32	1.149+j5.794	5.874+j22.118	12.36	6.32	1.150+j5.795	5.874+j22.118
EL ZAPOTE	EZE-69	69	13.32	10.33	0.672+j2.914	1.029+j5.498	14.87	11.35	0.616+j2.883	1.035+j5.585	14.84	11.34	0.618+j2.887	1.035+j5.585
EL ZAPOTILLO	EZP-115	115	2.73	1.70	6.710+j23.421	18.340+j66.024	3.01	1.87	6.590+j23.370	18.361+j66.191	3.01	1.87	6.592+j23.372	18.361+j66.191
EMMAN TABLEROS S.A. DE C.V.	EMM-115	115	6.16	4.62	2.742+j10.417	4.713+j21.037	7.68	5.35	2.205+j9.249	4.800+j21.380	7.68	5.35	2.209+j9.255	4.800+j21.380
EMPAQUES MODERNOS	EMP-69	69	8.02	5.87	1.798+j4.631	3.712+j9.761	8.99	6.49	1.740+j4.554	3.718+j9.811	8.98	6.49	1.742+j4.557	3.718+j9.811
ENCARNACIÓN DE DÍAZ	ENC-110	115	3.94	2.69	3.907+j16.400	12.998+j38.172	4.36	2.97	3.797+j16.317	13.000+j38.315	4.36	2.97	3.798+j16.319	13.000+j38.315
ENVASES INNOVATIVOS	ENV-69	69	12.61	8.98	0.844+j3.045	1.710+j6.778	14.18	9.94	0.786+j2.989	1.716+j6.830	14.16	9.93	0.788+j2.992	1.716+j6.830
ENVASES UNIVERSALES	EVS-69	69	13.71	12.10	0.683+j2.825	0.911+j3.967	15.79	13.58	0.617+j2.706	0.915+j4.022	15.77	13.57	0.618+j2.709	0.915+j4.022
ENVASES Y TAPAS	EYT-115	115	6.87	7.39	2.271+j9.396	1.324+j7.512	7.99	8.36	1.977+j8.924	1.385+j7.818	7.99	8.36	1.978+j8.926	1.385+j7.818
EÓLICA CERRITOS (MESA MORENOS) MANIOBRAS	ECM-230	230	5.68	5.78	4.289+j22.980	3.626+j21.893	6.86	6.68	3.424+j21.008	3.834+j22.789	6.86	6.68	3.426+j21.013	3.834+j22.789
EÓLICA HUIMILPAN (SAN PEDRO) MANIOBRAS IXMIQUILPAN	HUM-115	115	1.87	1.19	13.458+j32.766	31.427+j92.055	2.16	1.34	12.627+j31.388	31.113+j90.787	2.16	1.34	12.627+j31.389	31.113+j90.787
EÓLICA HUIMILPAN (SAN PEDRO) MANIOBRAS HUIMILPAN	HUM-115	115	4.19	4.30	5.484+j14.878	2.321+j14.643	4.59	4.63	5.522+j14.920	2.514+j15.489	4.59	4.63	5.522+j14.920	2.514+j15.489
EÓLICA SANTIAGO MANIOBRAS	ESM-230	230	7.28	6.42	3.019+j17.991	4.902+j25.194	8.90	7.62	2.321+j16.252	4.821+j24.348	8.90	7.62	2.323+j16.256	4.821+j24.348



**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Occidental**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
ESTADIO CORREGIDORA	ECO-115	115	16.74	10.41	0.744+j3.895	1.047+j11.206	18.74	11.48	0.679+j3.837	1.052+j11.269	18.74	11.48	0.679+j3.838	1.052+j11.269
ESTANCIA DE ANIMAS	EDA-115	115	3.59	2.64	6.218+j17.417	13.984+j35.952	4.00	2.91	6.051+j17.229	13.997+j36.090	4.00	2.91	6.052+j17.230	13.997+j36.090
ESTANCITA	ETA-115	115	2.91	1.90	5.577+j22.103	15.487+j57.120	3.40	2.24	4.740+j20.926	13.663+j53.166	3.40	2.24	4.743+j20.933	13.663+j53.166
EXPERIENCIA	EXP-69	69	8.26	5.40	1.094+j4.696	3.197+j12.085	9.35	6.01	0.994+j4.581	3.189+j12.072	9.34	6.01	0.995+j4.583	3.189+j12.072
EZEQUIEL MONTES	EZM-110	115	7.42	4.48	2.520+j8.586	7.647+j25.358	8.49	5.02	2.334+j8.275	7.617+j25.249	8.49	5.02	2.334+j8.276	7.617+j25.249
FERTIMEX	FER-69	69	5.18	3.51	2.044+j7.409	4.452+j18.135	5.70	3.84	1.996+j7.422	4.463+j18.282	5.70	3.84	1.998+j7.425	4.463+j18.282
FIBERWEB DE MÉXICO S.A. DE C.V.	VTC-115	115	6.20	4.65	1.665+j10.574	4.826+j20.997	7.22	5.70	1.424+j10.019	4.209+j17.787	7.22	5.70	1.424+j10.019	4.209+j17.787
FLAMINGOS	FLA-115	115	5.28	6.00	3.502+j12.083	1.591+j7.914	6.30	6.95	2.874+j11.225	1.619+j8.150	6.29	6.94	2.884+j11.240	1.619+j8.150
FLEXTRONICS PLANTA SUR	SLT-69	69	9.90	6.23	1.021+j3.891	2.455+j10.860	11.09	6.89	0.953+j3.835	2.458+j10.903	11.08	6.89	0.955+j3.839	2.458+j10.903
FLUVIAL	FLU-115	115	4.80	5.01	3.944+j13.255	2.522+j11.838	5.69	5.76	3.292+j12.402	2.541+j12.042	5.68	5.76	3.302+j12.417	2.541+j12.042
FORJAS	FRJ-115	115	17.23	16.53	0.818+j3.766	0.819+j4.284	19.45	18.49	0.755+j3.679	0.814+j4.279	19.44	18.48	0.756+j3.680	0.814+j4.279
FRESNILLO INDUSTRIAL	FRI-110	115	7.01	6.88	2.648+j9.099	2.480+j9.704	7.90	7.64	2.473+j8.905	2.497+j9.872	7.90	7.64	2.475+j8.907	2.497+j9.872
FRESNILLO NORTE	FRN-115	115	8.00	9.69	2.039+j8.047	0.555+j3.942	9.02	10.76	1.873+j7.875	0.577+j4.153	9.02	10.76	1.874+j7.878	0.577+j4.153
FRESNILLO POTENCIA	FSO-115	115	8.28	10.65	1.941+j7.778	0.192+j2.714	9.35	11.82	1.776+j7.608	0.214+j2.931	9.35	11.82	1.777+j7.610	0.214+j2.931
FRESNILLO POTENCIA	FSO-230	230	4.58	5.43	6.958+j28.178	1.328+j15.480	5.23	6.05	6.241+j27.243	1.480+j16.617	5.22	6.05	6.248+j27.255	1.480+j16.617
FRESNILLO SUR	FNO-115	115	7.59	7.34	2.387+j8.410	1.970+j9.468	8.60	8.18	2.206+j8.201	1.984+j9.610	8.60	8.18	2.207+j8.204	1.984+j9.610
FRESNO	FRE-69	69	13.35	9.38	0.783+j2.879	1.678+j6.565	15.10	10.39	0.711+j2.814	1.685+j6.626	15.08	10.39	0.713+j2.817	1.685+j6.626
GENERADORA ELÉCTRICA SAN RAFAEL, S.A.P.I. DE C.V.	SRA-115	115	2.80	2.09	5.953+j22.968	18.427+j44.237	3.55	3.94	4.470+j20.081	2.101+j13.698	3.55	3.94	4.475+j20.095	2.101+j13.698
GENERAL MOTORS DE MÉXICO	GMC-115	115	7.63	5.57	2.158+j8.432	5.037+j17.645	8.46	6.13	2.065+j8.380	5.054+j17.795	8.46	6.13	2.066+j8.381	5.054+j17.795
GUARAPO	GRP-115	115	6.42	4.15	2.517+j10.025	7.946+j26.206	7.15	4.58	2.436+j9.927	7.974+j26.312	7.14	4.58	2.437+j9.928	7.974+j26.312
GKN	GKN-115	115	14.41	10.57	1.030+j4.491	2.448+j9.331	16.21	11.72	0.963+j4.401	2.464+j9.391	16.21	11.72	0.964+j4.402	2.464+j9.391
GÓMEZ PORTUGAL	GOP-115	115	9.33	6.31	1.447+j6.968	3.810+j16.916	10.48	6.98	1.331+j6.841	3.821+j17.018	10.48	6.98	1.332+j6.842	3.821+j17.018
GRAHAM PACKAGING PLASTIC	GRH-115	115	10.27	7.87	1.526+j6.284	3.514+j11.902	11.53	8.67	1.429+j6.169	3.591+j12.117	11.53	8.67	1.430+j6.170	3.591+j12.117
GRÁN JARDÍN	GJA-115	115	11.08	8.47	1.304+j5.847	2.278+j11.331	12.32	9.31	1.214+j5.802	2.298+j11.466	12.32	9.31	1.215+j5.803	2.298+j11.466
GUADALAJARA DOS	GUD-69	69	25.69	28.90	0.283+j1.525	0.093+j1.036	29.12	31.88	0.229+j1.487	0.101+j1.105	29.05	31.83	0.231+j1.491	0.101+j1.105
GUADALAJARA DOS	GUD-161	161	6.20	8.47	1.472+j14.917	0.110+j2.977	6.57	8.92	1.183+j15.512	0.120+j3.258	6.56	8.91	1.192+j15.533	0.120+j3.258
GUADALAJARA DOS	GUD-230	230	15.42	17.03	1.996+j8.377	0.865+j6.146	19.52	20.37	1.296+j7.369	0.915+j6.430	19.41	20.28	1.314+j7.411	0.915+j6.430
GUADALAJARA INDUSTRIAL	GUI-69	69	21.98	25.27	0.421+j1.763	0.077+j1.116	24.77	27.73	0.365+j1.731	0.084+j1.203	24.71	27.68	0.367+j1.735	0.084+j1.203
GUADALAJARA INDUSTRIAL	GUI-230	230	12.22	12.09	2.525+j10.569	1.724+j11.139	15.11	14.08	1.754+j9.508	1.819+j11.577	15.03	14.04	1.775+j9.555	1.819+j11.577
GUADALAJARA NORTE	GUN-69	69	20.91	24.09	0.371+j1.869	0.092+j1.156	24.85	28.15	0.268+j1.743	0.076+j1.127	24.81	28.11	0.269+j1.746	0.076+j1.127

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Occidental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
GUADALAJARA NORTE	GUN-230	230	11.29	10.79	2.645+j11.458	2.100+j13.268	16.09	15.75	1.387+j8.972	1.164+j9.427	16.03	15.71	1.400+j9.005	1.164+j9.427
GUADALAJARA ORIENTE	GDO-69	69	23.89	26.31	0.291+j1.642	0.088+j1.212	27.74	29.70	0.213+j1.565	0.095+j1.246	27.68	29.66	0.214+j1.568	0.095+j1.246
GUADALAJARA ORIENTE	GDO-230	230	14.44	15.21	2.085+j8.955	1.172+j7.755	19.08	18.80	1.227+j7.557	1.213+j7.802	18.98	18.74	1.242+j7.594	1.213+j7.803
GUADALAJARA UNO	GDU-69	69	29.03	31.53	0.312+j1.336	0.100+j1.051	33.68	35.22	0.246+j1.278	0.108+j1.123	33.58	35.14	0.248+j1.281	0.108+j1.123
GUADALAJARA UNO	GDU-230	230	14.05	14.65	2.302+j9.164	1.282+j8.237	17.85	17.44	1.514+j8.040	1.358+j8.585	17.74	17.37	1.535+j8.088	1.358+j8.586
GUADALCAZAR	GDL-115	115	1.41	0.85	19.779+j42.895	44.944+j132.329	1.55	0.94	19.688+j42.840	44.960+j132.468	1.55	0.94	19.690+j42.842	44.960+j132.468
GUADALUPE	GPE-110	115	7.31	6.86	3.064+j8.557	3.024+j10.443	8.23	7.61	2.889+j8.391	3.050+j10.643	8.23	7.60	2.891+j8.392	3.050+j10.643
GUANAJUATO	GTO-115	115	7.72	4.94	1.793+j8.417	5.298+j22.526	8.61	5.46	1.692+j8.315	5.305+j22.596	8.61	5.46	1.693+j8.316	5.305+j22.596
GUANAJUATO SUR	GSU-115	115	9.21	6.10	1.526+j7.044	4.128+j17.799	10.31	6.74	1.424+j6.940	4.135+j17.869	10.31	6.74	1.424+j6.942	4.135+j17.869
GUARDIÁN INDUSTRIE VP	GDI-115	115	6.92	4.82	2.902+j9.143	6.098+j21.273	7.73	5.33	2.823+j9.023	6.095+j21.279	7.72	5.33	2.823+j9.024	6.095+j21.279
GUASCARO	GSO-115	115	5.70	3.77	3.208+j11.199	7.928+j28.389	6.39	4.18	3.056+j11.013	7.942+j28.481	6.39	4.18	3.059+j11.019	7.942+j28.481
GUAYABITOS	GYS-115	115	2.76	2.13	9.046+j22.251	18.446+j41.611	3.18	2.39	8.437+j21.391	18.454+j41.712	3.17	2.39	8.446+j21.406	18.454+j41.712
GUEVARA	GVA-115	115	2.92	1.98	5.704+j22.046	15.320+j52.837	3.48	2.43	4.657+j20.484	12.518+j46.494	3.48	2.42	4.659+j20.490	12.518+j46.494
HACIENDA	HDA-115	115	13.26	9.96	1.290+j4.838	2.759+j9.627	14.82	10.99	1.225+j4.775	2.775+j9.715	14.81	10.98	1.226+j4.776	2.775+j9.715
HACIENDA NUEVA	HNV-115	115	5.52	5.11	3.474+j11.505	4.504+j14.263	6.23	5.68	3.262+j11.266	4.521+j14.436	6.23	5.68	3.263+j11.267	4.521+j14.436
HENKEL CAPITAL S.A. DE C.V.	RSS-115	115	19.74	11.30	0.746+j3.279	2.964+j10.526	23.87	13.01	0.609+j2.999	2.968+j10.381	23.86	13.01	0.610+j3.000	2.968+j10.381
HERDEZ	HER-115	115	14.64	12.71	0.961+j4.432	1.069+j6.545	17.22	14.47	0.777+j4.168	1.080+j6.607	17.22	14.46	0.778+j4.170	1.080+j6.607
HIGUERILLAS	HIG-69	69	15.75	9.94	0.901+j2.363	1.278+j6.901	17.74	10.85	0.841+j2.322	1.324+j7.085	17.71	10.85	0.843+j2.326	1.324+j7.085
HILASAL MEXICANA S.A.B. DE C.V.	HYL-69	69	14.47	13.24	0.729+j2.655	0.921+j3.398	16.48	14.79	0.671+j2.573	0.926+j3.442	16.46	14.78	0.673+j2.576	0.926+j3.442
HIROTEC MÉXICO S.A. DE C.V.	AVT-115	115	9.72	7.50	1.822+j6.586	3.844+j12.332	10.91	8.30	1.720+j6.471	3.856+j12.435	10.91	8.30	1.721+j6.472	3.856+j12.435
HITCHINER	HIT-115	115	13.90	12.35	1.057+j4.658	1.187+j6.487	16.35	14.13	0.869+j4.382	1.190+j6.498	16.34	14.12	0.870+j4.383	1.190+j6.498
HITACHI	HIT-115	115	9.31	6.82	1.794+j6.902	2.988+j14.690	10.53	7.70	1.694+j6.725	2.979+j14.313	10.53	7.70	1.694+j6.726	2.979+j14.313
HONDA DE MÉXICO S.A. DE C.V. EL SALTO	HON-69	69	15.06	14.55	0.686+j2.555	0.691+j2.842	17.15	16.25	0.628+j2.477	0.697+j2.892	17.12	16.23	0.630+j2.480	0.697+j2.892
HORUS	HRS-230	230	8.55	7.98	2.877+j15.260	4.079+j18.456	10.11	9.04	2.316+j14.257	4.334+j19.144	10.11	9.04	2.319+j14.263	4.334+j19.144
HUACANA	HUC-69	69	1.57	1.05	11.718+j22.452	21.725+j59.100	1.84	1.22	10.912+j21.212	20.735+j55.964	1.84	1.22	10.912+j21.212	20.735+j55.964
HUANACAXTLE	HUA-115	115	4.09	3.81	4.724+j15.517	4.378+j19.367	4.80	4.34	4.086+j14.656	4.399+j19.569	4.79	4.33	4.095+j14.671	4.399+j19.569
HUANIMARO	HNM-115	115	3.97	3.00	4.433+j16.111	12.040+j30.763	4.39	3.30	4.338+j16.044	12.093+j31.049	4.39	3.30	4.339+j16.046	12.093+j31.049
HUENTITÁN	HUN-69	69	10.54	7.11	1.046+j3.633	2.439+j8.933	12.56	10.48	0.889+j3.375	1.522+j5.276	12.55	10.48	0.891+j3.377	1.522+j5.276
HUICHAPAN	HCH-115	115	1.85	1.05	11.021+j34.152	34.452+j112.550	2.07	1.17	10.666+j33.619	34.338+j112.097	2.07	1.17	10.666+j33.620	34.338+j112.097
HUNTSMAN INTERNATIONAL DE MÉXICO	HMA-115	115	3.56	2.35	4.573+j18.088	11.070+j45.963	4.91	2.83	3.242+j14.528	11.158+j46.308	4.90	2.83	3.246+j14.535	11.158+j46.308

**Niveles de cortocircuito de la Red Nacional de Transmisión  
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			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
IBÍDEM	IBD-115	115	10.42	9.00	1.646+j6.154	2.341+j9.116	12.08	10.17	1.460+j5.869	2.403+j9.180	12.07	10.16	1.461+j5.870	2.403+j9.180
IBM DE MÉXICO S.A. DE C.V.	IBM-69	69	22.76	22.83	0.325+j1.720	0.280+j1.715	25.72	25.18	0.270+j1.682	0.289+j1.784	25.66	25.14	0.272+j1.686	0.289+j1.784
IBM-ALKA	IBA-69	69	24.03	25.27	0.305+j1.629	0.194+j1.404	27.19	27.88	0.251+j1.592	0.203+j1.473	27.13	27.84	0.253+j1.595	0.203+j1.473
IMMSA	IMM-115	115	4.80	4.44	3.345+j13.423	4.523+j16.586	5.27	4.84	3.303+j13.470	4.554+j16.898	5.27	4.84	3.304+j13.472	4.554+j16.898
IND MINERA MÉXICO	MNR-230	230	9.80	8.49	2.665+j13.291	4.648+j19.365	11.90	9.89	2.039+j12.101	4.690+j19.338	11.89	9.88	2.043+j12.110	4.690+j19.338
INDEPENDENCIA	INE-115	115	8.35	7.50	1.999+j7.700	2.232+j10.499	9.20	8.18	1.933+j7.704	2.265+j10.738	9.19	8.18	1.934+j7.706	2.265+j10.738
INDUSTRIAL SAN FRANCISCO	ISF-115	115	11.24	8.14	1.197+j5.787	2.168+j12.486	12.62	8.98	1.086+j5.683	2.187+j12.645	12.62	8.98	1.087+j5.685	2.187+j12.645
INGENIO TALA	ING-69	69	4.44	4.82	2.599+j8.592	0.625+j6.923	7.12	7.09	1.231+j6.028	0.918+j6.080	7.12	7.08	1.231+j6.029	0.918+j6.080
INGUARAN	ING-69	69	0.98	0.66	21.254+j34.714	38.266+j93.827	1.12	0.75	20.444+j33.498	37.273+j90.687	1.12	0.75	20.444+j33.499	37.273+j90.687
INNOPACK	INN-115	115	10.08	7.35	1.519+j6.409	3.572+j13.500	11.18	8.06	1.429+j6.374	3.601+j13.669	11.18	8.06	1.430+j6.376	3.601+j13.669
INVISTA	INV-115	115	22.33	23.71	0.682+j2.894	0.438+j2.438	25.35	26.44	0.622+j2.814	0.445+j2.503	25.34	26.43	0.622+j2.814	0.445+j2.503
IRAPUATO II	IRA-115	115	26.31	27.11	0.510+j2.471	0.244+j2.322	30.71	30.53	0.410+j2.342	0.259+j2.437	30.70	30.52	0.411+j2.343	0.259+j2.437
IRAPUATO II	IRA-230	230	19.63	19.29	1.431+j6.610	1.276+j7.132	25.03	23.42	0.986+j5.753	1.323+j7.023	25.00	23.41	0.988+j5.758	1.323+j7.023
IRAPUATO INDUSTRIAL	IRI-115	115	12.50	10.48	1.265+j5.159	2.106+j8.143	14.11	11.55	1.168+j5.043	2.184+j8.358	14.10	11.55	1.169+j5.045	2.184+j8.358
IRAPUATO PONIENTE	IPP-115	115	15.45	11.03	0.882+j4.206	1.841+j9.307	17.47	12.23	0.787+j4.105	1.852+j9.397	17.47	12.23	0.788+j4.106	1.852+j9.397
IRAPUATO UNO	IRP-110	115	21.77	17.57	0.669+j2.975	0.993+j5.168	25.07	19.66	0.569+j2.857	1.002+j5.241	25.06	19.66	0.570+j2.859	1.002+j5.241
IRAPUATO VILLAS	IRV-115	115	17.07	12.52	0.818+j3.802	1.586+j7.999	19.42	13.92	0.720+j3.692	1.595+j8.078	19.41	13.92	0.721+j3.693	1.595+j8.078
ITALAISE	ITA-115	115	8.73	5.91	1.853+j7.377	4.360+j18.024	10.08	7.31	1.677+j7.047	3.241+j15.177	10.08	7.31	1.677+j7.048	3.241+j15.177
IXTLAHUACAN	ITC-400	400	9.68	7.53	4.376+j23.459	8.635+j43.432	15.95	12.34	1.551+j15.856	5.896+j29.054	15.87	12.31	1.577+j15.934	5.896+j29.054
IXTLAN	ITL-115	115	6.52	4.86	2.804+j9.793	7.150+j19.411	7.31	5.37	2.668+j9.632	7.166+j19.535	7.30	5.37	2.671+j9.638	7.166+j19.535
JABIL CIRCUIT DE MÉXICO	JBL-69	69	11.87	8.00	0.791+j3.262	1.917+j7.994	13.43	8.85	0.714+j3.183	1.934+j8.098	13.42	8.85	0.716+j3.186	1.934+j8.098
JACONA	JCN-115	115	9.92	7.96	1.592+j6.499	2.724+j11.322	11.17	8.80	1.467+j6.370	2.749+j11.485	11.16	8.79	1.471+j6.377	2.749+j11.485
JAGUAR	CBO-69	69	15.43	11.57	0.602+j2.511	1.069+j5.059	17.62	12.84	0.527+j2.430	1.090+j5.148	17.60	12.83	0.529+j2.433	1.090+j5.148
JALOSTOTITLAN	JLT-115	115	6.29	5.45	2.074+j10.349	3.631+j15.045	6.89	5.93	2.006+j10.412	3.660+j15.341	6.89	5.93	2.007+j10.413	3.660+j15.341
JALPA	JAP-115	115	2.29	1.63	9.208+j27.519	5.362+j64.834	2.53	1.78	9.090+j27.435	5.545+j66.171	2.53	1.78	9.091+j27.437	5.545+j66.171
JARAL DEL PROGRESO	JDP-115	115	4.86	3.01	3.612+j13.168	11.376+j37.170	5.39	3.32	3.531+j13.071	11.403+j37.276	5.39	3.32	3.532+j13.072	11.403+j37.276
JARRETADERAS	JDA-115	115	5.02	5.34	3.714+j12.690	2.585+j10.566	5.98	6.16	3.078+j11.826	2.608+j10.769	5.97	6.15	3.088+j11.841	2.608+j10.769
JATCO	JAT-115	115	11.38	8.31	1.172+j5.716	2.030+j12.144	12.93	9.25	1.051+j5.552	2.035+j12.217	12.92	9.25	1.052+j5.553	2.035+j12.217
JATCO II	JTC-115	115	12.23	10.24	1.020+j5.333	1.403+j8.494	13.92	11.41	0.899+j5.168	1.412+j8.602	13.92	11.41	0.900+j5.169	1.412+j8.602
JEREZ	JRZ-115	115	2.16	1.57	10.577+j28.819	21.305+j61.811	2.40	1.73	10.368+j28.602	21.318+j61.961	2.40	1.73	10.370+j28.603	21.318+j61.961

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Occidental**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
JESÚS DEL MONTE	JEM-110	115	11.11	8.49	1.298+j5.832	2.738+j11.193	12.32	9.30	1.210+j5.802	2.777+j11.386	12.32	9.30	1.211+j5.803	2.777+j11.386
JESUS MARÍA	JSM-115	115	14.88	10.79	0.925+j4.366	1.394+j9.457	16.97	12.00	0.807+j4.226	1.399+j9.560	16.97	12.00	0.808+j4.228	1.399+j9.560
JESÚS MARÍA	JMA-115	115	3.25	2.71	6.239+j19.457	10.218+j30.864	3.62	3.00	6.064+j19.249	10.254+j31.069	3.62	3.00	6.068+j19.254	10.254+j31.069
JIQUILPAN	JIQ-115	115	7.89	5.46	1.987+j8.175	4.838+j19.078	8.87	6.04	1.862+j8.023	4.857+j19.211	8.86	6.03	1.866+j8.030	4.857+j19.211
JOCOTEPEC	JCT-69	69	3.83	2.24	3.086+j9.924	9.055+j31.188	4.24	2.47	3.020+j9.894	9.061+j31.277	4.23	2.47	3.022+j9.899	9.061+j31.277
JOYUELAS	JYU-110	115	5.50	3.74	3.357+j11.589	8.703+j27.813	6.10	4.12	3.282+j11.511	8.724+j27.897	6.10	4.12	3.283+j11.513	8.724+j27.897
JUAN JOSÉ ARREOLA	JUJ-115	115	5.80	5.60	2.732+j11.127	2.327+j12.429	6.47	6.15	2.523+j11.007	2.377+j12.804	6.44	6.13	2.542+j11.047	2.377+j12.804
JUAN RULFO	JRU-115	115	2.01	1.30	9.925+j31.429	23.951+j83.624	2.23	1.43	9.704+j31.276	24.042+j84.075	2.23	1.43	9.721+j31.309	24.042+j84.075
JULIÁN CARRILLO	JCR-115	115	4.89	3.27	4.098+j12.947	10.103+j32.304	5.42	3.59	4.006+j12.874	10.127+j32.492	5.42	3.59	4.008+j12.877	10.127+j32.492
JURICA	JUR-110	115	11.16	9.15	1.865+j5.647	0.497+j10.095	12.57	10.18	1.789+j5.529	0.504+j10.095	12.57	10.18	1.790+j5.529	0.504+j10.095
KELLOGG'S DE MÉXICO S.R.L. DE C.V.	KEL-115	115	13.27	12.23	1.274+j4.839	1.195+j6.194	14.94	13.89	1.198+j4.738	1.087+j5.917	14.94	13.89	1.199+j4.739	1.087+j5.917
KIMBERLY CLARK DE MÉXICO	KIM-115	115	16.13	14.31	0.739+j4.050	0.934+j5.549	18.11	15.75	0.681+j3.976	0.978+j5.707	18.10	15.75	0.681+j3.976	0.978+j5.707
KITAGAWA	KIT-115	115	7.78	5.17	1.673+j8.373	4.677+j20.951	8.74	5.73	1.553+j8.209	4.685+j21.046	8.74	5.73	1.554+j8.211	4.685+j21.046
KODAK DE MÉXICO S.A. DE C.V.	KDK-69	69	12.56	8.29	0.839+j3.060	1.950+j7.839	14.17	9.18	0.768+j2.995	1.956+j7.898	14.16	9.17	0.770+j2.998	1.956+j7.898
KRUPP	KRP-115	115	15.61	16.14	0.885+j4.159	0.593+j3.819	18.46	18.56	0.701+j3.893	0.603+j3.874	18.46	18.56	0.701+j3.895	0.603+j3.874
LA BARCA	BRC-115	115	8.06	6.69	2.443+j7.864	4.035+j12.668	9.27	7.47	2.248+j7.554	4.078+j12.916	9.26	7.47	2.251+j7.561	4.078+j12.916
LA BUFA MANIOBRAS	BFM-230	230	5.48	4.40	4.887+j23.741	10.218+j40.886	6.25	4.90	4.336+j22.981	10.296+j41.410	6.24	4.90	4.340+j22.988	10.296+j41.410
LA CALIFORNIA	CLF-115	115	11.37	8.48	1.275+j5.701	2.644+j11.599	12.87	9.43	1.193+j5.547	2.648+j11.660	12.87	9.43	1.193+j5.548	2.648+j11.660
LA CUEVA	CUV-115	115	5.11	3.92	3.159+j12.599	8.345+j23.505	5.64	4.30	3.066+j12.588	8.359+j23.711	5.64	4.30	3.067+j12.589	8.359+j23.711
LA ESPERANZA	LAE-115	115	6.22	5.49	3.197+j10.190	3.392+j14.540	7.71	6.80	2.457+j9.154	2.717+j12.837	7.70	6.80	2.459+j9.156	2.717+j12.837
LA ESTRELLA	ELA-115	115	3.56	2.54	5.223+j17.926	10.753+j39.773	4.12	3.23	4.717+j17.066	7.575+j31.345	4.10	3.22	4.748+j17.158	7.575+j31.346
LA FRAGUA	FRA-115	115	9.67	7.13	1.647+j6.666	3.467+j13.837	11.19	8.68	1.482+j6.357	2.719+j11.934	11.19	8.68	1.483+j6.358	2.719+j11.934
LA GRIEGA	GRI-115	115	6.57	4.63	3.224+j9.575	6.767+j21.719	7.33	5.13	3.147+j9.458	6.764+j21.729	7.33	5.13	3.147+j9.459	6.764+j21.729
LA HUERTA	LHT-115	115	2.12	1.70	8.907+j29.966	13.956+j52.682	2.39	1.89	8.587+j29.358	13.978+j52.789	2.38	1.89	8.629+j29.471	13.977+j52.798
LA JOYA	LJY-115	115	17.26	15.97	0.875+j3.746	0.966+j4.697	19.34	17.59	0.783+j3.694	0.982+j4.815	19.33	17.59	0.785+j3.695	0.982+j4.815
LA LOMA	LLM-115	115	11.80	9.55	1.280+j5.478	1.433+j9.530	13.17	10.58	1.223+j5.411	1.438+j9.539	13.16	10.58	1.224+j5.411	1.438+j9.539
LA MANGA	MAN-230	230	7.72	5.51	2.819+j16.974	8.472+j37.046	9.27	6.55	2.351+j15.582	8.171+j34.568	9.26	6.55	2.354+j15.589	8.171+j34.568
LA MANSIÓN	MNS-115	115	13.14	10.82	0.886+j4.974	1.485+j8.080	14.83	12.01	0.808+j4.858	1.512+j8.173	14.83	12.01	0.808+j4.859	1.512+j8.173
LA PIEDAD	LPI-115	115	6.22	4.86	3.101+j10.222	5.738+j18.775	6.96	5.36	2.963+j10.065	5.829+j19.020	6.96	5.36	2.965+j10.069	5.829+j19.020
LA PIEDAD PONIENTE	LPP-115	115	5.43	4.61	3.555+j11.692	4.783+j18.127	6.07	5.05	3.419+j11.541	4.974+j18.611	6.07	5.05	3.421+j11.545	4.974+j18.611

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Occidental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>
LA PILA	SPI-115	115	18.44	20.10	0.773+j3.517	0.342+j2.714	22.21	23.58	0.588+j3.235	0.347+j2.728	22.20	23.57	0.589+j3.236	0.347+j2.728
LA PILA	SPI-230	230	11.70	12.49	2.286+j11.118	1.433+j9.168	15.20	15.75	1.520+j9.490	1.416+j8.619	15.19	15.74	1.524+j9.497	1.416+j8.619
LA PRIMAVERA (BAJÍO)	PRI-230	230	9.85	8.49	2.875+j13.176	4.506+j19.438	12.42	10.03	1.895+j11.612	4.554+j19.552	12.37	10.01	1.911+j11.650	4.554+j19.552
LA RESOLANA	LRE-115	115	9.30	8.88	1.329+j7.011	2.499+j7.819	10.51	9.83	1.102+j6.861	2.505+j8.020	10.49	9.82	1.107+j6.874	2.505+j8.020
LA SOLEDAD	SDD-115	115	9.16	6.99	0.791+j7.205	3.317+j13.769	10.49	7.90	0.669+j6.930	3.301+j13.564	10.49	7.90	0.669+j6.930	3.301+j13.564
LA VEGA	LVG-69	69	2.18	1.48	5.504+j17.461	10.224+j42.856	2.80	1.77	4.184+j15.095	10.465+j41.564	2.80	1.77	4.184+j15.096	10.465+j41.564
LA VENTA	LVT-69	69	9.53	7.63	0.937+j4.076	2.497+j6.901	11.43	8.86	0.775+j3.756	2.390+j6.747	11.42	8.86	0.777+j3.759	2.390+j6.747
LA VENTILLA	VLT-115	115	5.13	4.22	3.300+j12.512	5.714+j20.623	5.71	4.68	3.152+j12.392	5.629+j20.576	5.71	4.68	3.152+j12.393	5.629+j20.576
LA VIRGEN	LVR-115	115	4.92	3.08	3.148+j13.123	8.021+j36.917	5.44	3.38	3.056+j13.085	8.041+j37.053	5.43	3.38	3.057+j13.086	8.041+j37.053
LABORATORIOS PISA	LBP-69	69	6.76	4.25	1.403+j5.722	3.615+j15.968	7.53	4.68	1.333+j5.667	3.617+j16.013	7.52	4.68	1.335+j5.671	3.617+j16.013
LAGOS DE MORENO	LGS-110	115	5.17	3.25	2.998+j12.482	7.464+j34.795	5.72	3.58	2.906+j12.443	7.485+j34.931	5.72	3.58	2.907+j12.444	7.485+j34.931
LAGOS GALERA	LGG-115	115	5.10	3.21	2.988+j12.659	7.572+j35.264	5.64	3.53	2.896+j12.620	7.592+j35.399	5.64	3.53	2.897+j12.621	7.592+j35.399
LAGOS TECNOLÓGICO	LGT-115	115	6.99	4.67	2.080+j9.263	4.876+j23.193	7.74	5.13	1.990+j9.221	4.897+j23.328	7.74	5.13	1.991+j9.222	4.897+j23.328
LAGUNA LARGA	LGL-115	115	3.74	2.48	5.493+j16.899	15.206+j42.309	4.15	2.73	5.371+j16.770	15.252+j42.483	4.15	2.73	5.372+j16.773	15.252+j42.483
LAGUNA SAN VICENTE	LSV-230	230	9.68	8.31	2.809+j13.430	4.546+j20.082	12.38	10.32	1.972+j11.630	4.262+j18.558	12.38	10.31	1.974+j11.636	4.262+j18.558
LAGUNA SECA	LAS-110	115	4.82	4.16	4.441+j13.049	5.652+j19.534	5.48	4.63	4.143+j12.678	5.736+j19.885	5.47	4.63	4.144+j12.680	5.736+j19.885
LAGUNILLAS	LAG-115	115	3.84	2.84	4.939+j16.550	13.082+j33.206	4.30	3.15	4.716+j16.315	13.020+j33.186	4.30	3.15	4.717+j16.317	13.020+j33.186
LALA DERIVADOS LÁCTEOS S.A. DE C.V.	LAL-115	115	10.54	8.18	1.453+j6.131	3.292+j11.310	11.84	9.01	1.356+j6.016	3.369+j11.524	11.84	9.01	1.357+j6.017	3.369+j11.524
LAMOSA	LAM-115	115	14.41	13.10	1.011+j4.496	1.033+j5.927	16.99	15.01	0.824+j4.219	1.035+j5.939	16.98	15.01	0.825+j4.221	1.035+j5.939
LAMPOTAL	LPL-115	115	5.36	4.28	3.235+j11.968	5.479+j21.036	6.04	4.75	3.027+j11.715	5.512+j21.265	6.04	4.75	3.028+j11.717	5.512+j21.265
LAPEM	LPM-115	115	10.31	8.36	1.714+j6.207	2.941+j10.563	11.59	9.22	1.617+j6.091	3.019+j10.777	11.59	9.21	1.618+j6.093	3.019+j10.777
LAS BRISAS	BRI-115	115	7.93	6.90	1.839+j8.172	2.552+j11.841	9.90	8.19	1.334+j7.256	2.545+j11.656	9.88	8.18	1.341+j7.272	2.545+j11.656
LAS COLINAS	LCN-115	115	10.62	8.75	1.507+j6.070	2.373+j9.997	11.82	9.63	1.413+j6.013	2.388+j10.137	11.82	9.63	1.414+j6.014	2.388+j10.137
LAS DELICIAS	LDE-230	230	18.73	22.12	0.949+j7.026	0.357+j4.296	23.35	26.96	0.687+j6.218	0.336+j4.134	23.34	26.96	0.687+j6.220	0.336+j4.134
LAS FAJAS	FAJ-110	115	0.65	0.46	37.509+j94.880	83.364+j214.325	0.72	0.51	37.304+j94.747	83.394+j214.552	0.72	0.51	37.306+j94.749	83.394+j214.552
LAS FRESAS	LFR-115	115	24.49	23.14	0.492+j2.666	0.369+j3.188	27.74	25.41	0.409+j2.601	0.391+j3.350	27.72	25.40	0.410+j2.603	0.391+j3.350
LAS FRESAS	LFR-400	400	15.35	14.80	3.038+j14.733	2.796+j16.678	19.23	17.52	1.938+j13.070	2.871+j16.943	19.19	17.50	1.950+j13.094	2.871+j16.943
LAS PALMAS	LAP-115	115	4.46	4.64	4.377+j14.244	4.228+j12.428	5.26	5.32	3.723+j13.389	4.247+j12.631	5.25	5.32	3.733+j13.404	4.247+j12.631
LAS PINTAS	LPS-69	69	15.78	10.82	0.702+j2.425	1.118+j5.907	17.68	11.89	0.646+j2.393	1.124+j5.995	17.65	11.88	0.648+j2.397	1.124+j5.995
LAS TORRES	LTL-115	115	13.53	11.24	1.097+j4.784	3.132+j7.348	15.09	12.34	1.006+j4.733	3.226+j7.518	15.09	12.33	1.007+j4.734	3.226+j7.518

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Occidental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
LAS VARAS	VRS-115	115	2.69	1.95	9.561+j22.744	19.998+j48.912	3.09	2.19	8.971+j21.875	20.004+j48.947	3.09	2.19	8.980+j21.889	20.004+j48.947
LEAR CORP (SELVA)	LCO-115	115	14.24	12.84	1.026+j4.549	1.084+j6.114	16.78	14.71	0.839+j4.272	1.087+j6.126	16.77	14.70	0.840+j4.274	1.087+j6.126
LECHERA GUADALAJARA S.A. DE C.V.	LEC-69	69	7.57	6.06	1.044+j5.156	1.655+j9.070	8.33	6.61	0.994+j5.166	1.665+j9.207	8.32	6.61	0.996+j5.169	1.665+j9.207
LECHERA MANIOBRAS	LEM-69	69	11.66	10.31	0.827+j3.315	0.949+j4.669	13.30	11.44	0.767+j3.205	0.979+j4.801	13.28	11.43	0.768+j3.208	0.979+j4.801
LEÓN ALFARO	LNA-115	115	13.46	12.10	1.103+j4.807	1.418+j6.468	15.01	13.31	1.012+j4.759	1.434+j6.595	15.01	13.30	1.013+j4.760	1.434+j6.595
LEÓN CUATRO	LNC-115	115	17.17	18.68	0.860+j3.770	0.403+j2.927	19.17	20.42	0.771+j3.730	0.434+j3.100	19.17	20.41	0.772+j3.731	0.434+j3.100
LEÓN CUATRO	LNC-230	230	10.90	10.53	2.655+j11.886	2.216+j13.391	12.55	11.72	2.236+j11.423	2.353+j13.971	12.54	11.72	2.240+j11.428	2.353+j13.971
LEÓN MALECÓN	LNM-115	115	12.41	11.84	1.197+j5.216	1.329+j5.992	13.83	13.05	1.105+j5.163	1.340+j6.102	13.83	13.04	1.106+j5.164	1.340+j6.102
LEÓN NORTE	LNN-115	115	14.18	12.19	1.066+j4.560	2.636+j6.524	15.84	13.44	0.974+j4.508	2.643+j6.645	15.83	13.43	0.975+j4.509	2.643+j6.645
LEÓN ORIENTE	LNO-110	115	12.68	11.08	1.259+j5.084	1.647+j7.333	14.15	12.19	1.167+j5.029	1.675+j7.484	14.14	12.18	1.168+j5.030	1.675+j7.484
LEÓN PONIENTE	LNP-110	115	14.14	10.63	1.048+j4.579	2.115+j9.116	15.79	11.71	0.957+j4.526	2.129+j9.221	15.78	11.71	0.958+j4.528	2.129+j9.221
LEÓN TRES	LNT-115	115	20.53	23.29	0.741+j3.149	0.266+j2.090	23.04	25.58	0.651+j3.102	0.286+j2.224	23.03	25.57	0.652+j3.104	0.286+j2.224
LEÓN TRES	LNT-230	230	12.60	12.35	2.273+j10.287	1.756+j11.121	14.54	13.76	1.868+j9.870	1.869+j11.645	14.53	13.76	1.872+j9.876	1.869+j11.645
LEÓN UNO	LNU-115	115	20.63	22.98	0.656+j3.151	0.205+j2.249	23.02	25.07	0.568+j3.121	0.221+j2.405	23.01	25.06	0.569+j3.123	0.221+j2.405
LEÓN UNO	LNU-230	230	15.01	15.56	1.986+j8.621	1.189+j7.906	17.62	17.62	1.580+j8.139	1.252+j8.251	17.61	17.61	1.584+j8.144	1.252+j8.251
LINDAVISTA	LVA-115	115	7.64	6.21	2.226+j8.403	4.371+j14.058	8.54	6.84	2.106+j8.289	4.405+j14.256	8.53	6.84	2.109+j8.295	4.405+j14.256
LOGISTIK	LOG-115	115	10.64	9.30	1.621+j6.025	2.246+j8.681	12.34	10.51	1.435+j5.740	2.308+j8.746	12.34	10.51	1.436+j5.742	2.308+j8.746
LOMAS	LMS-69	69	13.36	9.96	0.765+j2.882	1.812+j5.766	15.09	11.04	0.694+j2.819	1.818+j5.824	15.07	11.03	0.696+j2.822	1.818+j5.824
LOMBARDÍA	LMB-69	69	4.25	4.14	2.714+j8.983	1.728+j10.032	5.68	5.17	1.899+j7.484	1.718+j9.496	5.68	5.17	1.899+j7.484	1.718+j9.496
LORETO	LOR-115	115	4.49	3.00	4.608+j14.062	10.178+j35.499	4.98	3.30	4.485+j13.956	10.197+j35.664	4.98	3.30	4.486+j13.958	10.197+j35.664
LOS FRESNOS	FRS-115	115	12.14	10.60	1.333+j5.303	1.903+j7.643	13.55	11.67	1.238+j5.246	1.918+j7.783	13.55	11.67	1.239+j5.247	1.918+j7.783
LOS HERNÁNDEZ	HDZ-110	115	1.40	1.13	18.067+j43.742	29.050+j76.184	1.57	1.25	17.369+j43.026	29.512+j77.578	1.57	1.25	17.370+j43.027	29.512+j77.578
LOS OLIVOS	OLY-115	115	12.82	10.06	1.007+j5.082	2.036+j9.234	14.21	11.10	0.958+j5.048	2.036+j9.257	14.21	11.10	0.959+j5.049	2.036+j9.257
LOS OLIVOS (IRAPUATO)	OLV-115	115	12.09	8.76	1.152+j5.369	2.493+j11.507	13.59	9.67	1.059+j5.270	2.529+j11.646	13.58	9.67	1.060+j5.271	2.529+j11.646
LOS REYES	RYS-115	115	4.14	2.67	4.766+j15.316	12.546+j40.674	4.63	2.95	4.580+j15.079	12.555+j40.738	4.63	2.95	4.583+j15.084	12.555+j40.738
LOS SAUCES	LSA-115	115	9.41	6.39	2.134+j6.729	4.709+j16.426	10.50	7.05	2.034+j6.649	4.725+j16.523	10.50	7.05	2.035+j6.650	4.725+j16.523
LUIS MOYA	LMY-110	115	5.21	3.97	4.761+j11.814	5.393+j24.251	5.91	4.42	4.516+j11.505	5.405+j24.466	5.91	4.42	4.517+j11.507	5.405+j24.466
MABE LEISER (SLP)	MBL-115	115	14.86	14.38	0.930+j4.370	0.933+j4.851	17.53	16.50	0.745+j4.099	0.940+j4.888	17.52	16.49	0.746+j4.101	0.940+j4.888
MABE MÉXICO S. DE R.L. DE C.V. (MABE SANYO SLP)	MAB-115	115	13.78	12.06	1.030+j4.708	1.099+j6.810	16.14	13.71	0.846+j4.444	1.110+j6.872	16.14	13.71	0.847+j4.446	1.110+j6.872
MABE MÉXICO S. DE R.L. DE C.V. (CELAYA)	MAB-115	115	10.70	7.24	1.448+j6.035	4.334+j14.521	11.85	7.99	1.404+j6.003	4.327+j14.512	11.84	7.98	1.405+j6.005	4.327+j14.512

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Occidental**

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
MABE MÉXICO S. DE R.L. DE C.V. (QUERETARO)	MBE-115	115	14.84	14.07	1.085+j4.340	0.961+j5.149	16.71	15.82	1.019+j4.250	0.925+j5.046	16.71	15.82	1.020+j4.251	0.925+j5.046
MAHLE	MAH-115	115	11.47	9.52	1.368+j5.622	3.175+j8.842	12.97	10.57	1.254+j5.489	3.186+j8.958	12.97	10.57	1.255+j5.491	3.186+j8.958
MALPASO	MPO-115	115	3.31	2.55	7.298+j18.669	10.224+j36.818	3.70	2.82	7.092+j18.447	10.237+j36.967	3.70	2.82	7.093+j18.448	10.237+j36.967
MANIOBRAS GENERAL MOTORS	MGM-230	230	10.33	8.35	2.640+j12.581	4.823+j21.575	12.06	9.42	2.195+j11.910	4.913+j21.845	12.06	9.42	2.198+j11.915	4.913+j21.845
MANIOBRAS GETRAG	MGT-115	115	6.96	4.31	1.923+j9.341	5.693+j26.533	7.74	4.75	1.829+j9.252	5.707+j26.632	7.74	4.75	1.830+j9.253	5.707+j26.632
MANIOBRAS GKN	MGK-115	115	14.71	10.81	1.014+j4.398	2.391+j9.116	16.56	11.98	0.947+j4.308	2.407+j9.177	16.55	11.98	0.948+j4.309	2.407+j9.177
MANIOBRAS HONDA	MHN-115	115	14.69	10.63	0.855+j4.437	2.250+j9.459	16.33	11.76	0.806+j4.400	2.242+j9.445	16.32	11.76	0.806+j4.401	2.242+j9.445
MANIOBRAS IBERDROLA	MIB-115	115	15.89	14.09	0.755+j4.111	0.939+j5.639	17.81	15.48	0.700+j4.042	0.991+j5.812	17.80	15.48	0.700+j4.042	0.991+j5.812
MANIOBRAS KASAI	MKI-115	115	17.67	17.90	0.755+j3.682	0.661+j3.569	19.67	19.57	0.666+j3.652	0.676+j3.724	19.67	19.56	0.667+j3.653	0.676+j3.724
MANIOBRAS LA GRANJA SOLAR	LGM-400	400	8.41	6.48	3.953+j27.179	7.815+j51.538	10.06	7.40	2.738+j25.095	7.912+j52.039	10.05	7.39	2.752+j25.127	7.912+j52.039
MANIOBRAS SOLEM	MSL-230	230	8.34	9.55	3.028+j15.635	1.303+j9.822	10.54	11.49	2.159+j13.690	1.377+j10.367	10.54	11.48	2.162+j13.695	1.377+j10.367
MANIOBRAS WTC DOS	FWM-230	230	9.34	7.75	2.834+j13.926	5.285+j22.471	12.08	9.85	1.951+j11.930	4.713+j19.958	12.08	9.84	1.954+j11.936	4.713+j19.958
MANUFACTURAS KALTEX S.A. DE C.V.	KAL-115	115	12.01	7.50	1.262+j5.383	3.976+j14.897	13.43	8.29	1.200+j5.303	3.984+j14.946	13.43	8.29	1.200+j5.303	3.984+j14.946
MANUFACTURAS VITROMEX I	VTM-115	115	6.51	4.47	1.944+j10.011	5.168+j23.696	7.60	5.36	1.706+j9.459	4.705+j21.218	7.60	5.36	1.706+j9.460	4.705+j21.218
MANUFACTURAS VITROMEX II	VT2-115	115	6.65	4.97	1.810+j9.826	4.311+j19.677	7.76	6.02	1.572+j9.275	3.847+j17.199	7.76	6.02	1.572+j9.276	3.847+j17.199
MANZANILLO	MNZ-230	230	10.54	12.60	1.661+j12.487	0.480+j6.351	15.51	17.28	0.767+j9.387	0.481+j6.182	14.69	16.55	0.855+j9.904	0.486+j6.275
MANZANILLO	MNZ-400	400	10.65	12.87	3.112+j21.470	0.592+j10.239	24.63	28.92	0.635+j10.297	0.170+j4.657	21.14	24.92	0.846+j11.988	0.220+j5.551
MARAVATIO	MAV-115	115	2.28	1.45	8.101+j27.912	27.890+j74.232	2.51	1.60	8.114+j28.002	27.907+j74.305	2.51	1.60	8.114+j28.003	27.907+j74.305
MARGARITAS	MRS-115	115	15.03	11.37	0.878+j4.328	1.434+j8.581	17.13	12.64	0.763+j4.195	1.447+j8.697	17.12	12.63	0.764+j4.197	1.447+j8.697
MATEHUALA SUBESTACIÓN	MHS-110	115	2.48	2.15	8.250+j25.474	8.044+j38.519	2.70	2.31	8.353+j25.713	8.468+j40.038	2.70	2.31	8.354+j25.714	8.468+j40.038
MATEHUALA SUR	MHR-115	115	2.44	2.00	8.094+j26.004	10.359+j43.937	2.66	2.16	8.174+j26.210	10.694+j45.190	2.66	2.16	8.174+j26.212	10.694+j45.190
MATEHUALA SUR	MHR-230	230	8.65	8.11	2.840+j15.090	3.476+j18.099	10.23	9.19	2.282+j14.095	3.641+j18.778	10.23	9.19	2.286+j14.102	3.641+j18.778
MAZAMITLA	MTA-400	400	10.76	8.40	3.526+j21.174	8.401+j38.622	14.04	10.04	2.019+j17.981	8.533+j38.659	13.87	9.98	2.073+j18.204	8.532+j38.683
MAZDA MANIOBRAS	MMZ-115	115	14.06	9.87	0.935+j4.628	2.401+j10.495	16.16	11.09	0.830+j4.441	2.420+j10.489	16.16	11.09	0.831+j4.443	2.420+j10.489
MEADWEST VACO (SAINT GO BAIN)	MEA-115	115	13.27	11.48	1.119+j4.879	1.391+j7.227	15.55	13.09	0.932+j4.602	1.393+j7.238	15.55	13.09	0.933+j4.604	1.393+j7.238
MELAUQUE	MLQ-115	115	3.66	4.23	4.408+j17.584	2.536+j10.483	4.19	4.78	4.109+j16.953	2.557+j10.589	4.16	4.75	4.147+j17.071	2.556+j10.598
METAL FOARMING	SMF-115	115	8.89	7.09	1.855+j7.234	3.139+j12.789	10.22	7.97	1.668+j6.949	3.200+j12.853	10.22	7.96	1.669+j6.951	3.200+j12.853
METALSA	MTL-115	115	13.52	12.27	1.051+j4.797	1.251+j6.316	15.85	13.99	0.866+j4.527	1.257+j6.354	15.84	13.98	0.866+j4.529	1.257+j6.354
MINA LAS TORRES	MTL-115	115	6.05	3.93	3.328+j10.465	7.284+j27.830	6.73	4.34	3.227+j10.362	7.291+j27.900	6.73	4.34	3.228+j10.364	7.291+j27.900
MEXICHEM DERIVADOS	MCH-69	69	14.38	13.37	0.769+j2.662	1.077+j3.228	16.53	15.03	0.705+j2.555	1.079+j3.271	16.51	15.02	0.707+j2.558	1.079+j3.271

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			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
MEXICHEM DERIVADOS	MCH-115	115	8.92	6.72	2.041+j7.160	4.013+j14.239	10.16	7.80	1.914+j6.926	3.730+j13.225	10.16	7.80	1.914+j6.926	3.730+j13.225
MÉXICO	MXJ-69	69	13.06	8.83	0.856+j2.927	1.546+j7.278	14.76	9.76	0.783+j2.863	1.561+j7.373	14.74	9.75	0.784+j2.867	1.561+j7.373
MEXSOLAR MANIOBRAS	MSM-115	115	7.22	7.11	1.657+j9.045	0.995+j9.691	8.61	8.50	1.386+j8.370	0.997+j8.813	8.61	8.50	1.386+j8.371	0.997+j8.813
MEXTICACAN	MXT-115	115	2.64	1.64	7.194+j24.087	19.430+j68.313	2.92	1.81	7.064+j24.020	19.450+j68.478	2.92	1.81	7.067+j24.022	19.450+j68.478
MEZQUITÁN	MZI-110	115	1.18	0.80	16.867+j53.713	54.234+j124.903	1.41	0.91	13.928+j49.729	54.125+j124.942	1.41	0.91	13.932+j49.738	54.125+j124.942
MICHELIN	MIC-115	115	21.19	21.30	0.667+j3.062	0.521+j3.066	24.01	23.71	0.607+j2.981	0.528+j3.130	24.00	23.71	0.607+j2.982	0.528+j3.130
MICHELÍN MANIOBRAS	MMH-115	115	9.35	6.41	2.043+j6.798	4.389+j16.299	10.44	7.08	1.944+j6.718	4.407+j16.398	10.44	7.08	1.945+j6.719	4.407+j16.398
MICROPARQUE	MPQ-115	115	21.50	21.45	0.726+j3.001	0.664+j3.063	24.39	23.89	0.666+j2.920	0.671+j3.128	24.38	23.88	0.667+j2.921	0.671+j3.128
MIGUEL AUZA	MGU-115	115	0.59	0.41	42.927+j104.472	95.150+j245.733	0.65	0.45	42.719+j104.341	95.180+j245.960	0.65	0.45	42.721+j104.343	95.180+j245.960
MINA LA PAZ	MLP-115	115	2.25	2.01	9.246+j28.072	7.066+j39.481	2.44	2.16	9.395+j28.362	7.649+j41.427	2.44	2.16	9.396+j28.364	7.649+j41.427
MINA PEÑALES	PNO-115	115	2.17	2.66	4.254+j30.237	4.490+j13.166	2.41	2.94	4.035+j30.002	4.509+j13.354	2.41	2.94	4.036+j30.004	4.509+j13.354
MINA SAN JAVIER	MSJ-115	115	6.93	5.00	2.254+j9.317	5.505+j19.906	7.75	5.53	2.127+j9.178	5.525+j20.076	7.75	5.53	2.128+j9.181	5.525+j20.076
MINA SANTA FRANCISCA	SFC-115	115	3.23	2.73	7.182+j19.251	12.996+j29.131	3.74	3.08	6.564+j18.388	13.013+j29.292	3.74	3.08	6.573+j18.403	13.013+j29.292
MINA SAUCITO	MST-115	115	5.00	3.98	3.669+j12.762	5.264+j22.916	5.60	4.41	3.489+j12.567	5.282+j23.071	5.60	4.40	3.491+j12.569	5.282+j23.071
MINATITLÁN	MTC-115	115	6.62	4.70	2.582+j9.685	6.077+j21.513	7.82	5.33	2.289+j9.056	6.082+j21.542	7.72	5.30	2.324+j9.166	6.082+j21.552
MINERA PEÑASQUITO	PNQ-400	400	4.55	3.10	7.152+j50.306	28.693+j118.606	5.23	3.47	6.269+j48.203	28.695+j119.018	5.22	3.47	6.287+j48.236	28.695+j119.019
MINERA REAL DE ÁNGELES SA DE CV	MRA-115	115	2.89	2.02	7.518+j21.748	17.168+j49.969	3.20	2.22	7.359+j21.575	17.182+j50.102	3.20	2.22	7.360+j21.576	17.182+j50.102
LA MORA	MRA-115	115	10.12	7.30	1.410+j6.407	3.607+j13.728	11.22	8.02	1.321+j6.377	3.622+j13.856	11.21	8.02	1.323+j6.378	3.622+j13.856
MINERALES Y MINAS MEXICANAS BOLAÑOS	BOL-115	115	0.92	0.62	34.611+j63.264	57.047+j168.505	1.01	0.68	34.486+j63.190	57.245+j169.863	1.01	0.68	34.487+j63.191	57.245+j169.863
MINSA, S.A. DE C.V.	MIN-69	69	10.00	6.19	1.545+j3.672	3.054+j10.969	11.17	6.78	1.485+j3.632	3.101+j11.154	11.16	6.77	1.487+j3.636	3.101+j11.154
MIRAMAR	MRM-115	115	8.66	7.74	1.730+j7.465	3.350+j9.865	10.49	8.95	1.468+j6.807	3.362+j9.953	10.30	8.86	1.500+j6.929	3.362+j9.963
MIRAVALLE	MIL-69	69	16.47	9.00	0.851+j2.264	1.816+j8.275	18.57	9.94	0.788+j2.224	1.820+j8.329	18.53	9.93	0.790+j2.228	1.820+j8.329
MISIÓN HILLS	MHI-115	115	8.49	6.03	1.776+j7.616	4.315+j16.933	9.75	7.21	1.616+j7.316	3.567+j15.030	9.75	7.21	1.616+j7.317	3.567+j15.030
MOCTEZUMA	MZM-115	115	5.79	4.24	2.670+j11.160	6.060+j23.271	6.42	4.67	2.581+j11.087	6.075+j23.407	6.41	4.67	2.582+j11.089	6.075+j23.407
MOJONERA	MOJ-69	69	16.17	12.41	0.566+j2.397	0.951+j4.610	18.51	13.78	0.490+j2.316	0.972+j4.699	18.48	13.77	0.492+j2.319	0.972+j4.699
MONARCA	MNC-115	115	6.18	4.21	3.168+j10.265	7.351+j24.771	6.87	4.64	3.120+j10.168	7.394+j24.879	6.87	4.64	3.121+j10.171	7.394+j24.879
MONTENEGRO	MNG-115	115	10.14	7.76	2.003+j6.231	1.077+j12.727	11.44	8.67	1.918+j6.091	1.088+j12.637	11.44	8.67	1.918+j6.091	1.088+j12.637
MORALETE	MTE-115	115	6.72	6.17	2.486+j9.560	3.300+j12.101	7.84	6.97	2.211+j9.052	3.331+j12.267	7.75	6.93	2.243+j9.149	3.331+j12.268
MORELIA	MEL-115	115	10.00	10.33	1.694+j6.417	1.247+j5.962	11.03	11.23	1.625+j6.416	1.278+j6.204	11.03	11.23	1.627+j6.418	1.278+j6.204
MORELIA DOS	MRD-115	115	8.76	8.16	1.916+j7.329	1.855+j9.161	9.66	8.89	1.847+j7.331	1.887+j9.405	9.66	8.89	1.848+j7.332	1.887+j9.405



**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Occidental**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
MORELIA INDUSTRIAL	MOI-115	115	9.42	8.54	1.769+j6.824	1.764+j9.190	10.33	9.26	1.732+j6.854	1.834+j9.479	10.33	9.26	1.733+j6.856	1.834+j9.479
MORELIA NORTE	MOR-115	115	9.30	8.01	1.826+j6.898	2.274+j10.457	10.24	8.73	1.776+j6.911	2.308+j10.662	10.23	8.73	1.777+j6.912	2.308+j10.662
MORELIA POTENCIA	MRP-115	115	10.87	12.61	1.435+j5.937	0.333+j3.669	12.00	13.65	1.361+j5.934	0.368+j3.931	11.99	13.65	1.362+j5.936	0.368+j3.931
MORELIA POTENCIA	MRP-230	230	6.15	6.10	4.356+j21.140	2.502+j22.225	6.92	6.66	3.879+j20.736	2.761+j23.578	6.92	6.65	3.886+j20.747	2.761+j23.578
MORELOS	MRE-115	115	14.13	10.79	0.931+j4.606	1.446+j8.951	16.15	12.35	0.818+j4.449	1.341+j8.588	16.14	12.35	0.819+j4.450	1.341+j8.588
MOROLEÓN	MLO-110	115	5.10	3.13	3.703+j12.482	11.719+j35.773	5.65	3.45	3.631+j12.415	11.737+j35.864	5.65	3.45	3.632+j12.416	11.737+j35.864
MUELLE	MLE-115	115	4.24	4.25	4.656+j14.951	4.999+j14.686	4.98	4.86	3.996+j14.099	5.018+j14.890	4.98	4.86	4.006+j14.114	5.018+j14.890
NAL DE CONDUC ELEC S.A DE C.V	CDT-115	115	16.13	18.30	0.705+j4.056	0.316+j2.599	18.29	20.37	0.626+j3.944	0.332+j2.712	18.29	20.37	0.627+j3.944	0.332+j2.712
NESTLÉ (LA CIÉNEGA)	NES-115	115	3.57	2.56	5.379+j17.819	14.419+j37.991	4.02	2.84	5.114+j17.417	14.460+j38.238	4.02	2.84	5.118+j17.422	14.460+j38.238
NESTLÉ (LEÓN)	NES-115	115	4.98	3.12	3.130+j12.969	7.880+j36.361	5.50	3.43	3.039+j12.930	7.900+j36.496	5.50	3.43	3.040+j12.931	7.900+j36.496
NIÑOS HÉROES	NHE-230	230	9.41	8.04	3.059+j13.779	4.587+j20.857	11.74	9.41	2.075+j12.272	4.673+j21.079	11.70	9.39	2.092+j12.310	4.673+j21.079
NISSAN	NIS-115	115	11.71	8.67	1.157+j5.553	1.894+j11.477	13.30	9.66	1.036+j5.393	1.898+j11.544	13.30	9.66	1.037+j5.394	1.898+j11.544
NISSAN MANIOBRAS	NSS-115	115	11.78	8.74	1.106+j5.526	1.878+j11.389	13.39	9.73	0.985+j5.366	1.883+j11.455	13.38	9.73	0.986+j5.368	1.883+j11.455
NITROPISO	NTP-115	115	12.51	9.27	1.148+j5.182	1.977+j10.724	14.59	10.46	0.969+j4.911	1.992+j10.775	14.59	10.46	0.970+j4.912	1.992+j10.775
NOGALES	NGA-115	115	8.45	6.32	1.681+j7.671	3.234+j15.551	9.94	8.00	1.464+j7.204	2.478+j12.494	9.93	8.00	1.464+j7.204	2.478+j12.494
NOGALITO	NGT-115	115	4.01	3.73	4.942+j15.786	5.216+j19.703	4.71	4.24	4.266+j14.922	5.235+j19.907	4.70	4.24	4.275+j14.937	5.235+j19.907
NUEVA ITALIA	NVI-69	69	3.95	3.61	3.196+j9.574	3.192+j12.555	5.09	5.24	2.479+j8.246	1.234+j7.491	5.09	5.24	2.479+j8.246	1.234+j7.491
NUEVA JAUJA	JAU-115	115	6.90	5.88	2.313+j9.335	3.968+j14.106	8.44	6.87	1.816+j8.459	3.981+j14.008	8.43	6.86	1.823+j8.474	3.981+j14.008
NUEVA PEDREGAL	NPD-115	115	9.98	7.47	1.742+j6.418	1.772+j13.339	11.17	8.27	1.674+j6.319	1.779+j13.378	11.17	8.27	1.675+j6.319	1.779+j13.378
NUEVA PEDREGAL	PDL-115	115	9.16	6.83	1.751+j7.034	3.713+j14.186	10.34	7.58	1.617+j6.876	3.728+j14.323	10.34	7.58	1.618+j6.878	3.728+j14.323
NUEVO VALLARTA POTENCIA	NVT-115	115	5.91	7.64	3.082+j10.800	0.358+j3.641	7.13	8.98	2.458+j9.942	0.389+j3.889	7.12	8.96	2.467+j9.957	0.389+j3.889
NUEVO VALLARTA POTENCIA	NVT-230	230	3.32	4.03	10.654+j38.591	2.287+j18.796	4.10	4.80	8.110+j34.655	2.465+j19.884	4.10	4.79	8.145+j34.718	2.465+j19.884
NYPRO KANAAK SA CV	NKA-69	69	13.24	9.78	0.703+j2.926	1.608+j5.991	15.25	11.00	0.606+j2.809	1.602+j5.979	15.23	11.00	0.607+j2.812	1.602+j5.979
OBLATOS	OBL-69	69	11.76	7.91	0.821+j3.287	1.930+j8.105	14.20	12.48	0.659+j3.015	0.850+j4.193	14.19	12.47	0.661+j3.017	0.850+j4.193
OCOTLÁN	OCN-115	115	13.13	14.11	1.271+j4.895	0.486+j4.005	15.51	16.00	1.077+j4.583	0.529+j4.253	15.49	15.98	1.080+j4.590	0.529+j4.253
OCOTLÁN	OCN-230	230	7.48	6.78	3.695+j17.361	3.350+j23.061	8.66	7.52	3.014+j16.598	3.632+j24.228	8.64	7.51	3.028+j16.626	3.632+j24.228
OJO CALIENTE	OCL-110	115	6.97	5.64	3.176+j8.975	4.834+j15.545	7.89	6.27	2.993+j8.758	4.852+j15.704	7.89	6.27	2.994+j8.760	4.852+j15.704
OJO SECO	OJO-110	115	10.80	7.33	1.428+j5.977	4.266+j14.306	11.96	8.09	1.384+j5.946	4.260+j14.296	11.96	8.09	1.385+j5.947	4.260+j14.296
OJUELOS	OJU-115	115	2.30	2.95	8.298+j27.648	2.185+j9.473	2.70	3.41	7.296+j26.078	2.206+j9.905	2.70	3.41	7.296+j26.079	2.206+j9.905
OJUELOS DOS	OJD-115	115	5.57	4.10	3.440+j11.413	5.882+j24.018	6.31	4.57	3.249+j11.105	5.887+j24.094	6.31	4.57	3.250+j11.106	5.887+j24.094

**Niveles de cortocircuito de la Red Nacional de Transmisión  
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Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
OMEGA	OMG-115	115	7.84	5.20	1.641+j8.303	4.531+j20.896	8.82	5.76	1.521+j8.140	4.539+j20.991	8.82	5.76	1.522+j8.141	4.539+j20.991
OMYA MÉXICO S.A. DE C.V.	OMY-115	115	14.06	6.89	0.928+j4.629	8.522+j17.678	15.98	7.66	0.837+j4.493	8.516+j17.693	15.98	7.66	0.838+j4.493	8.516+j17.693
P. H. TROJES	TJS-115	115	1.83	1.22	12.911+j33.981	30.812+j85.584	2.14	1.88	11.447+j32.107	9.026+j47.186	2.14	1.88	11.476+j32.195	9.025+j47.186
PABELLÓN	PAB-115	115	7.52	6.27	2.076+j8.584	2.162+j13.998	8.53	6.91	1.912+j8.345	2.244+j14.421	8.53	6.91	1.913+j8.347	2.244+j14.421
PACHAMAMA MANIOBRAS	PHM-400	400	12.79	12.67	3.290+j17.757	2.850+j18.476	16.36	15.13	1.960+j15.403	2.979+j19.134	16.33	15.11	1.972+j15.429	2.979+j19.134
PALO ALTO	PAO-115	115	5.59	3.81	3.726+j11.282	6.407+j27.836	6.29	4.23	3.571+j11.051	6.412+j27.903	6.29	4.23	3.572+j11.053	6.412+j27.903
PÁNFILO NATERA	PFN-115	115	2.52	1.90	16.552+j20.450	24.529+j46.875	2.81	2.09	16.369+j20.241	24.548+j47.034	2.81	2.09	16.370+j20.242	24.548+j47.034
PAPEL POTOSÍ	PAP-115	115	15.98	16.44	0.866+j4.065	0.571+j3.786	18.91	18.91	0.683+j3.801	0.581+j3.848	18.90	18.91	0.683+j3.803	0.581+j3.848
PARQUE PIEL	PAP-115	115	11.38	8.79	1.288+j5.690	2.772+j10.662	12.63	9.66	1.198+j5.656	2.782+j10.790	12.63	9.66	1.199+j5.657	2.782+j10.790
PARACHO II	POD-115	115	6.64	5.10	3.096+j9.512	6.635+j17.897	7.69	5.74	2.772+j9.081	6.632+j17.936	7.69	5.74	2.774+j9.084	6.632+j17.936
PARQUE DE TECNOLOGÍA	PTE-69	69	11.09	8.10	0.886+j3.482	1.461+j7.432	12.51	8.89	0.816+j3.407	1.519+j7.620	12.50	8.89	0.817+j3.410	1.519+j7.620
PARQUE INDUSTRIAL	PQI-69	69	16.44	13.23	0.625+j2.340	0.999+j4.067	18.62	14.69	0.568+j2.284	1.004+j4.119	18.59	14.67	0.569+j2.287	1.004+j4.119
PARQUE INDUSTRIAL COLINAS DE LEÓN	ICL-115	115	14.82	11.21	0.994+j4.369	1.789+j8.635	16.59	12.37	0.901+j4.310	1.800+j8.729	16.58	12.37	0.902+j4.312	1.800+j8.729
PARQUE INDUSTRIAL GUANAJUATO CENTRAL	IGC-115	115	12.85	10.75	1.237+j5.015	2.162+j7.927	14.52	11.87	1.139+j4.898	2.227+j8.121	14.52	11.87	1.140+j4.899	2.227+j8.121
PARQUE INNOVACIÓN	PQN-115	115	12.32	10.34	1.110+j5.274	1.558+j8.363	13.72	11.38	1.044+j5.219	1.563+j8.477	13.72	11.38	1.044+j5.220	1.563+j8.477
PARQUE LOGÍSTICO WTC	WTC-115	115	12.97	11.02	1.075+j5.004	1.571+j7.707	15.19	12.55	0.889+j4.724	1.574+j7.717	15.19	12.55	0.890+j4.726	1.574+j7.717
PARQUE VIDANTA VALLARTA MANIOBRAS	MPV-115	115	5.14	5.79	3.668+j12.387	2.218+j8.268	6.13	6.71	3.030+j11.515	2.247+j8.493	6.13	6.70	3.039+j11.530	2.247+j8.493
PÁTZCUARO NORTE	PTN-115	115	3.38	2.39	5.796+j18.755	15.279+j41.258	3.83	2.69	5.409+j18.278	15.089+j40.691	3.83	2.69	5.410+j18.280	15.089+j40.691
PÁTZCUARO SUR	PCS-115	115	3.40	2.40	5.744+j18.659	15.082+j41.369	3.84	2.68	5.407+j18.257	14.934+j40.985	3.84	2.68	5.408+j18.259	14.934+j40.985
PEDREGAL	PDG-115	115	7.21	6.51	2.393+j8.895	3.916+j11.630	7.99	7.13	2.293+j8.850	3.942+j11.852	7.99	7.13	2.294+j8.852	3.942+j11.852
PELETIZADORA ALZADA	PAL-115	115	3.35	2.36	5.893+j18.953	12.269+j43.015	3.84	2.85	5.459+j18.208	10.427+j37.275	3.82	2.84	5.492+j18.299	10.427+j37.276
PEMSA	PEM-115	115	11.21	8.22	1.926+j5.600	3.728+j11.838	12.49	9.07	1.867+j5.542	3.743+j11.910	12.49	9.07	1.868+j5.543	3.743+j11.910
PENAL	PNL-69	69	9.50	6.26	0.966+j4.079	2.586+j10.400	10.67	6.93	0.886+j4.010	2.592+j10.430	10.66	6.93	0.888+j4.012	2.592+j10.430
PÉNJAMO	PNJ-115	115	5.63	3.98	3.412+j11.290	7.796+j25.340	6.26	4.38	3.303+j11.191	7.835+j25.526	6.26	4.38	3.305+j11.194	7.835+j25.526
PEÑA COLORADA	PEC-115	115	6.33	4.44	2.744+j10.126	6.464+j22.958	7.44	5.03	2.450+j9.500	6.469+j22.987	7.36	5.00	2.486+j9.610	6.469+j22.996
PEÑASCO	PNS-115	115	10.07	7.25	1.356+j6.450	2.786+j14.044	11.28	7.99	1.254+j6.353	2.804+j14.197	11.27	7.99	1.256+j6.357	2.804+j14.197
PEÑITAS	PEN-115	115	3.24	2.20	6.435+j19.461	14.808+j47.268	3.75	2.48	5.886+j18.574	14.792+j47.042	3.75	2.48	5.894+j18.590	14.792+j47.042
PEÑUELAS	PEN-115	115	6.44	4.14	2.024+j10.112	6.031+j26.842	7.21	4.58	1.904+j9.952	6.039+j26.932	7.21	4.58	1.905+j9.953	6.039+j26.932
PERFORMANCE FIBERS MÉXICO	PER-115	115	14.88	17.76	1.085+j4.329	0.416+j2.276	16.71	19.74	1.024+j4.248	0.422+j2.340	16.71	19.74	1.025+j4.249	0.422+j2.340
PERIBAN	PBN-115	115	3.89	2.53	5.232+j16.231	14.071+j42.404	4.36	2.80	5.026+j15.960	14.077+j42.457	4.36	2.80	5.029+j15.965	14.077+j42.457

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			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
PETROQUÍMICA	INP-69	69	13.33	11.66	0.869+j2.860	1.420+j4.034	15.24	13.06	0.807+j2.760	1.421+j4.074	15.22	13.05	0.809+j2.763	1.421+j4.074
PILONCILLO	PLN-115	115	17.41	13.00	0.759+j3.737	1.444+j7.581	19.73	14.41	0.667+j3.641	1.457+j7.680	19.72	14.41	0.667+j3.642	1.457+j7.680
PINAR	PNR-69	69	16.43	14.52	0.515+j2.370	0.563+j3.335	18.83	16.05	0.439+j2.285	0.599+j3.478	18.81	16.04	0.441+j2.288	0.599+j3.478
PINZÁNDARO	PIZ-115	115	2.12	2.05	9.571+j29.798	5.531+j34.408	2.65	2.56	7.435+j26.539	5.528+j29.266	2.65	2.56	7.436+j26.541	5.528+j29.266
PIRELLI NEUMÁTICOS S.A. DE C.V.	PIR-115	115	6.60	5.26	2.364+j9.777	4.310+j17.280	7.31	5.78	2.269+j9.726	4.326+j17.425	7.31	5.78	2.270+j9.727	4.326+j17.425
PITILLAL	PTL-115	115	5.08	5.57	3.603+j12.570	1.769+j9.499	6.05	6.43	2.958+j11.711	1.788+j9.703	6.04	6.42	2.967+j11.726	1.788+j9.703
PM CIGATAM PS S. DE R.L. DE C.V.	CIG-69	69	11.39	7.35	0.988+j3.355	2.202+j9.011	12.83	8.13	0.916+j3.290	2.211+j9.080	12.82	8.12	0.918+j3.293	2.211+j9.080
PONCITLAN	PNC-115	115	4.48	3.09	4.150+j14.214	8.816+j33.655	5.75	3.62	3.288+j12.271	8.903+j33.999	5.75	3.62	3.292+j12.278	8.903+j33.999
PORCELANITE SJI	POR-115	115	14.31	13.91	1.138+j4.498	0.902+j4.980	16.11	15.65	1.069+j4.406	0.866+j4.873	16.11	15.65	1.069+j4.407	0.866+j4.873
POTOSÍ SOLAR MANIOBRAS	PSM-400	400	6.39	6.46	4.235+j35.890	4.504+j34.742	8.00	7.61	2.875+j31.631	4.810+j36.386	7.99	7.60	2.884+j31.650	4.810+j36.386
POTRERILLOS	POS-115	115	21.60	21.16	0.547+j3.025	0.345+j3.268	23.95	22.88	0.465+j3.014	0.372+j3.469	23.94	22.87	0.466+j3.015	0.372+j3.469
POTRERILLOS	POS-230	230	15.36	17.03	1.767+j8.465	0.652+j6.154	17.86	19.15	1.384+j8.062	0.703+j6.538	17.84	19.14	1.388+j8.068	0.703+j6.538
POTRERILLOS	POS-400	400	13.86	13.78	3.402+j16.307	2.476+j16.951	17.14	16.08	2.228+j14.652	2.638+j17.640	17.11	16.07	2.240+j14.674	2.638+j17.640
PPG	PPG-115	115	14.96	14.22	0.824+j4.359	1.109+j4.976	16.95	15.84	0.744+j4.244	1.118+j5.053	16.95	15.84	0.744+j4.245	1.118+j5.053
PRADERA	PAD-115	115	3.11	2.94	6.213+j20.406	5.046+j24.632	3.97	3.61	4.519+j17.820	4.665+j22.835	3.97	3.61	4.521+j17.822	4.665+j22.835
PRAXAIR MÉXICO S.A. DE C.V. (GUADALAJARA)	PRA-69	69	10.87	7.49	1.137+j3.485	2.264+j8.339	12.23	8.29	1.065+j3.420	2.270+j8.399	12.22	8.28	1.067+j3.423	2.270+j8.399
PRIMERO DE MAYO	PMY-400	400	8.48	9.50	3.267+j27.031	1.944+j18.404	10.95	11.54	2.116+j23.102	2.057+j19.515	10.94	11.54	2.127+j23.124	2.057+j19.515
PROCTER & GAMBLE MANIOBRAS (IRAPUATO)	PGM-115	115	11.94	5.00	1.374+j5.389	7.653+j27.691	13.36	5.51	1.286+j5.315	7.667+j27.813	13.35	5.51	1.287+j5.317	7.667+j27.813
PROCTER & GAMBLE QUERETARO	P&G-115	115	5.48	3.66	3.642+j11.549	9.201+j28.830	6.03	4.02	3.608+j11.552	9.208+j28.937	6.03	4.02	3.609+j11.553	9.208+j28.937
PROD FARMACÉUTICOS COLLINS	CNS-69	69	16.25	11.85	0.637+j2.368	1.150+j5.054	18.42	13.12	0.570+j2.309	1.159+j5.126	18.39	13.11	0.572+j2.313	1.159+j5.126
PROD MET MEX DE POSTES SA CV	AMX-69	69	13.10	8.59	1.044+j2.857	1.349+j7.779	14.67	9.33	0.988+j2.820	1.420+j8.036	14.65	9.32	0.990+j2.823	1.420+j8.036
PRODUCTORA NACIONAL DE PAPEL	PRO-115	115	5.73	5.51	2.892+j11.215	2.359+j12.828	6.36	6.04	2.782+j11.135	2.462+j13.146	6.36	6.04	2.783+j11.136	2.462+j13.146
PROTEINOL	PRO-115	115	8.26	5.60	2.754+j7.556	6.282+j18.471	9.14	6.15	2.701+j7.520	6.304+j18.613	9.14	6.15	2.701+j7.521	6.304+j18.613
PRODUCTOS GATORADE	GAT-69	69	5.59	3.13	1.797+j6.891	5.939+j23.140	6.17	3.44	1.780+j6.873	5.952+j23.226	6.17	3.44	1.781+j6.876	5.952+j23.226
POLIVIN	PLV-115	115	7.48	4.99	3.099+j8.316	7.230+j21.005	8.28	5.48	3.046+j8.280	7.253+j21.147	8.28	5.48	3.047+j8.281	7.253+j21.147
PUEBLO NUEVO	PNV-115	115	6.43	4.37	2.790+j9.945	8.445+j23.450	7.15	4.81	2.694+j9.860	8.469+j23.637	7.14	4.81	2.695+j9.862	8.469+j23.637
PUENTE GRANDE	PGN-69	69	7.90	4.73	1.294+j4.875	3.967+j14.666	8.95	6.54	1.177+j4.753	1.977+j10.100	8.94	6.53	1.179+j4.755	1.977+j10.100
PUENTE GRANDE DOS	PTD-69	69	7.96	4.75	1.283+j4.837	3.952+j14.617	9.02	6.57	1.167+j4.717	1.976+j10.081	9.01	6.56	1.169+j4.719	1.976+j10.081
PUENTE GRANDE DOS	PTD-115	115	2.56	2.61	6.691+j25.045	1.782+j24.699	2.75	2.75	6.738+j25.670	2.035+j26.772	2.75	2.75	6.742+j25.676	2.035+j26.772
PUERTA GRANDE	PGE-115	115	7.97	6.15	2.170+j8.038	4.414+j15.136	8.94	6.79	2.044+j7.909	4.439+j15.299	8.93	6.78	2.047+j7.915	4.439+j15.299

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Occidental**

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
PUERTO INTERIOR	PTI-115	115	7.66	6.65	2.017+j8.428	2.936+j12.276	8.50	7.32	1.922+j8.375	2.951+j12.418	8.50	7.32	1.923+j8.376	2.951+j12.418
PUERTO INTERIOR (FONDEPORT)	FDP-115	115	8.82	7.76	1.684+j7.337	3.619+j10.023	10.70	8.97	1.426+j6.678	3.631+j10.111	10.50	8.88	1.456+j6.800	3.630+j10.120
PUNTA DE MITA	PMI-115	115	3.20	2.59	5.600+j19.953	7.666+j34.687	3.70	2.91	4.957+j19.095	7.684+j34.874	3.70	2.91	4.966+j19.110	7.684+j34.874
PURÉPECHA POTENCIA	PRH-115	115	17.60	17.49	0.587+j3.726	0.410+j3.825	19.89	19.16	0.479+j3.641	0.440+j4.053	19.84	19.13	0.483+j3.650	0.440+j4.053
PURÉPECHA POTENCIA	PRH-400	400	9.40	8.23	4.031+j24.223	5.414+j34.617	11.67	9.54	2.590+j21.610	5.752+j35.752	11.59	9.50	2.632+j21.754	5.751+j35.759
PURUANDIRO	PUR-115	115	3.07	2.07	6.883+j20.496	15.405+j50.696	3.50	2.69	6.423+j19.872	9.923+j38.405	3.50	2.68	6.425+j19.875	9.923+j38.405
PURUARÁN	PUU-69	69	1.58	1.02	10.704+j22.764	21.308+j63.834	1.85	1.17	9.848+j21.523	20.893+j61.881	1.85	1.17	9.848+j21.523	20.893+j61.881
QUERÉTARO I	QRO-115	115	27.52	34.04	0.482+j2.364	0.074+j1.054	31.46	38.16	0.422+j2.283	0.080+j1.119	31.45	38.14	0.422+j2.283	0.080+j1.119
QUERÉTARO I	QRO-230	230	19.79	21.09	1.319+j6.579	0.663+j5.541	23.99	24.52	1.040+j6.000	0.712+j5.729	23.97	24.51	1.042+j6.003	0.712+j5.729
QUERÉTARO INDUSTRIAL	QRI-110	115	13.07	13.25	1.299+j4.913	0.760+j4.842	14.66	14.91	1.233+j4.828	0.714+j4.704	14.66	14.91	1.234+j4.829	0.714+j4.704
QUERÉTARO MANIOBRAS	QMR-110	115	14.58	15.41	1.041+j4.435	0.499+j3.810	16.33	17.18	0.984+j4.364	0.484+j3.801	16.32	17.18	0.984+j4.365	0.484+j3.801
QUERÉTARO NORTE	QRN-115	115	14.66	14.12	1.288+j4.343	0.152+j5.176	16.53	15.71	1.220+j4.246	0.157+j5.226	16.53	15.71	1.220+j4.247	0.157+j5.226
QUERÉTARO ORIENTE	QRE-115	115	11.78	10.27	1.562+j5.415	0.232+j8.304	13.23	11.39	1.490+j5.317	0.236+j8.350	13.22	11.39	1.491+j5.318	0.236+j8.350
QUERÉTARO PONIENTE	QPE-115	115	11.51	9.66	1.493+j5.574	1.458+j8.999	12.76	10.60	1.448+j5.537	1.480+j9.133	12.76	10.60	1.448+j5.538	1.480+j9.133
QUERÉTARO POTENCIA	QRP-115	115	22.50	27.08	0.491+j2.910	0.085+j1.477	24.78	29.36	0.456+j2.912	0.092+j1.584	24.77	29.35	0.457+j2.913	0.092+j1.584
QUERÉTARO POTENCIA	QRP-230	230	24.50	27.21	0.915+j5.341	0.393+j3.861	28.88	30.96	0.707+j5.009	0.424+j4.069	28.84	30.93	0.710+j5.014	0.424+j4.069
QUERÉTARO POTENCIA	QRP-400	400	18.75	16.77	1.819+j12.181	2.112+j16.648	22.42	19.07	1.218+j11.263	2.253+j17.200	22.36	19.04	1.230+j11.292	2.253+j17.200
QUERÉTARO POTENCIA MANIOBRAS	QPM-400	400	19.98	16.08	1.609+j11.447	3.624+j19.689	23.84	18.41	1.068+j10.603	3.672+j19.788	23.76	18.38	1.081+j10.638	3.671+j19.789
QUERÉTARO SUR	QRS-115	115	15.70	13.93	1.001+j4.110	1.363+j5.700	17.36	15.26	0.962+j4.097	1.369+j5.793	17.35	15.26	0.962+j4.098	1.369+j5.793
QUINCEO	QNC-115	115	9.36	8.59	1.779+j6.870	1.875+j8.889	10.31	9.36	1.718+j6.874	1.904+j9.108	10.30	9.36	1.720+j6.876	1.904+j9.108
RANCHO GRANDE	RAG-115	115	2.60	1.81	7.938+j24.243	17.387+j56.550	2.89	1.99	7.763+j24.083	17.412+j56.767	2.89	1.99	7.765+j24.085	17.412+j56.767
REXAM BEVERAGE CAN AM S.A.	RXM-115	115	15.68	14.71	0.988+j4.117	0.961+j5.009	17.67	16.52	0.923+j4.028	0.933+j4.931	17.67	16.51	0.924+j4.029	0.933+j4.931
REXEL	RES-115	115	6.75	4.67	2.728+j9.452	6.373+j22.104	7.49	5.14	2.687+j9.368	6.427+j22.237	7.49	5.14	2.688+j9.370	6.427+j22.237
REYMA	RYM-115	115	14.48	11.79	1.005+j4.473	1.794+j7.533	16.11	12.93	0.916+j4.440	1.814+j7.686	16.11	12.92	0.917+j4.441	1.814+j7.686
RÍO GRANDE	RGR-110	115	1.06	0.80	19.077+j59.419	45.177+j116.696	1.17	0.88	18.884+j59.276	45.205+j116.919	1.17	0.88	18.886+j59.278	45.205+j116.919
RIO GRANDE II	RIG-115	115	1.50	0.96	15.675+j41.476	41.856+j110.191	1.65	1.06	15.489+j41.328	41.884+j110.414	1.65	1.06	15.491+j41.331	41.884+j110.414
ROMITA	RTA-115	115	8.98	7.48	1.778+j7.176	3.626+j11.329	9.98	8.22	1.686+j7.124	3.643+j11.479	9.97	8.22	1.687+j7.125	3.643+j11.479
S.I.A.P.A. (TOLUQUILLA)	SPB-69	69	16.93	11.77	0.639+j2.265	1.237+j5.307	19.24	13.06	0.572+j2.204	1.243+j5.365	19.21	13.05	0.574+j2.208	1.243+j5.365
S.I.A.P.A. PLANTA 2	STO-69	69	4.98	3.51	2.030+j7.733	4.726+j17.438	5.48	3.84	1.984+j7.747	4.738+j17.584	5.48	3.84	1.985+j7.749	4.738+j17.584
S.I.A.P.A. PTA BOMBEO STA CRUZ	SCH-69	69	3.64	1.67	2.416+j10.660	12.536+j48.247	3.94	1.82	2.496+j10.846	12.550+j48.332	3.94	1.82	2.497+j10.848	12.550+j48.332

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Occidental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
SAHUAYO	SHY-115	115	7.60	5.25	1.944+j8.511	4.524+j19.976	8.58	5.82	1.803+j8.321	4.542+j20.129	8.57	5.81	1.807+j8.329	4.542+j20.129
SALAHUA	SLH-115	115	8.84	7.98	1.701+j7.317	3.222+j9.401	10.72	9.25	1.441+j6.659	3.234+j9.488	10.53	9.15	1.472+j6.781	3.234+j9.498
SALAMANCA	SLM-115	115	25.57	28.78	0.480+j2.552	0.123+j1.760	31.95	36.00	0.339+j2.261	0.128+j1.586	31.93	35.99	0.340+j2.262	0.128+j1.586
SALAMANCA	SLM-230	230	25.42	29.44	0.977+j5.132	0.275+j3.227	35.66	41.76	0.523+j4.063	0.165+j2.431	35.62	41.73	0.525+j4.067	0.165+j2.431
SALAMANCA	SLM-400	400	18.20	18.36	2.423+j12.456	1.556+j12.473	23.35	22.59	1.413+j10.789	1.410+j12.031	23.29	22.56	1.424+j10.813	1.410+j12.031
SALAMANCA COGENERACIÓN	SCG-230	230	25.51	29.34	0.981+j5.113	0.308+j3.311	35.47	40.72	0.536+j4.083	0.236+j2.651	35.43	40.69	0.538+j4.087	0.236+j2.651
SALAMANCA DOS	SMD-115	115	21.41	21.17	0.516+j3.058	0.341+j3.215	24.46	23.59	0.436+j2.955	0.372+j3.332	24.44	23.58	0.436+j2.956	0.372+j3.332
SALAMANCA DOS	SMD-230	230	12.07	9.37	2.028+j10.816	4.946+j20.030	14.62	10.95	1.588+j9.866	4.916+j19.580	14.61	10.95	1.591+j9.871	4.916+j19.580
SALAMANCA DOS	SMD-400	400	18.05	18.12	2.529+j12.543	1.780+j12.705	23.16	22.09	1.487+j10.868	1.739+j12.561	23.10	22.06	1.498+j10.893	1.739+j12.561
SALAMANCA NORTE	SLN-115	115	16.26	10.73	0.967+j3.967	2.743+j10.056	19.17	12.24	0.845+j3.716	2.755+j9.966	19.16	12.24	0.845+j3.717	2.755+j9.966
SALAMANCA PONIENTE	SPO-115	115	17.71	14.97	0.653+j3.692	1.066+j5.734	20.22	16.72	0.567+j3.566	1.093+j5.820	20.22	16.72	0.568+j3.568	1.093+j5.820
SALAMANCA SUR	SSU-110	115	18.81	21.48	0.737+j3.451	0.169+j2.250	22.20	25.45	0.619+j3.231	0.170+j2.089	22.19	25.44	0.619+j3.232	0.170+j2.089
SALERO	SLR-400	400	6.70	4.79	4.545+j34.152	16.919+j73.854	7.89	5.43	3.720+j32.002	16.921+j74.265	7.88	5.42	3.737+j32.036	16.921+j74.266
SALINAS	SNA-115	115	1.49	0.92	22.003+j38.646	64.363+j110.170	1.65	1.01	21.818+j38.439	64.382+j110.331	1.65	1.01	21.819+j38.441	64.382+j110.331
SALITRE	STE-115	115	3.70	3.03	4.189+j17.446	2.880+j29.878	4.10	3.28	4.074+j17.358	3.061+j31.195	4.10	3.28	4.075+j17.360	3.061+j31.195
SALVATIERRA	SVT-110	115	5.68	3.68	3.107+j11.261	10.326+j29.143	6.25	4.04	3.083+j11.267	10.327+j29.160	6.25	4.04	3.083+j11.268	10.327+j29.160
SAMSUNG	SAM-115	115	7.91	6.97	2.301+j8.078	2.334+j11.596	8.89	7.82	2.206+j7.918	2.350+j11.382	8.88	7.82	2.207+j7.919	2.350+j11.382
SAN AGUSTÍN	SAG-69	69	11.96	7.75	0.890+j3.209	2.023+j8.536	13.45	8.57	0.820+j3.152	2.025+j8.577	13.44	8.57	0.823+j3.156	2.025+j8.577
SAN ANDRÉS	ADE-115	115	9.19	7.90	1.882+j6.978	2.182+j10.564	11.05	9.02	1.586+j6.418	2.240+j10.845	11.04	9.01	1.590+j6.424	2.240+j10.845
SAN ANTONIO	SAN-115	115	8.04	7.70	2.304+j7.929	1.798+j9.223	9.41	8.68	2.009+j7.494	1.845+j9.576	9.41	8.68	2.010+j7.495	1.845+j9.576
SAN CARLOS	SCA-115	115	10.33	7.71	1.633+j6.216	3.012+j12.645	11.53	8.50	1.538+j6.146	3.035+j12.767	11.53	8.50	1.539+j6.147	3.035+j12.767
SAN CLEMENTE	SCM-69	69	1.26	0.60	6.529+j30.926	40.018+j128.626	1.49	0.67	5.054+j29.053	40.081+j130.886	1.49	0.67	5.055+j29.055	40.081+j130.886
SAN CLEMENTE	SCM-115	115	1.66	1.14	12.258+j38.160	37.674+j87.588	2.06	1.31	9.334+j34.161	37.565+j87.627	2.06	1.31	9.338+j34.171	37.565+j87.627
SAN DIEGO PEÑUELAS	SDP-115	115	4.61	2.91	3.618+j13.949	10.096+j38.301	5.13	3.22	3.536+j13.796	10.103+j38.379	5.13	3.22	3.536+j13.797	10.103+j38.379
SAN FELIPE	SFL-115	115	1.77	1.08	4.146+j37.281	27.213+j106.522	1.96	1.19	4.052+j37.135	27.216+j106.562	1.96	1.19	4.053+j37.135	27.216+j106.562
SAN FRANCISCO	SFR-115	115	10.67	7.58	1.276+j6.091	2.446+j13.632	11.98	8.37	1.165+j5.984	2.463+j13.782	11.98	8.37	1.166+j5.985	2.463+j13.782
SAN FRANCISCO DEL RINCÓN	SFQ-110	115	10.00	6.97	1.388+j6.492	3.237+j14.956	11.04	7.63	1.306+j6.482	3.264+j15.158	11.04	7.63	1.307+j6.484	3.264+j15.158
SAN GASPAR	GPR-69	69	22.63	23.47	0.320+j1.731	0.181+j1.565	26.21	26.43	0.242+j1.655	0.187+j1.600	26.16	26.40	0.243+j1.658	0.187+j1.600
SAN ILDEFONSO	SFS-115	115	12.22	8.62	1.577+j5.202	2.547+j11.898	13.78	9.59	1.494+j5.084	2.541+j11.900	13.78	9.59	1.494+j5.085	2.541+j11.900
SAN JERÓNIMO	SJE-115	115	2.49	1.76	8.394+j25.267	18.144+j57.139	2.76	1.94	8.226+j25.101	18.167+j57.358	2.76	1.94	8.227+j25.104	18.167+j57.358

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Occidental

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
SAN JORGE	SAJ-69	69	7.92	5.33	1.387+j4.836	3.019+j11.997	10.94	6.43	0.960+j3.890	3.022+j12.053	10.93	6.43	0.962+j3.893	3.022+j12.053
SAN JORGE	SAJ-115	115	3.29	2.18	5.308+j19.493	12.753+j49.227	5.21	2.76	3.003+j13.705	12.841+j49.573	5.20	2.76	3.007+j13.712	12.841+j49.573
SAN JOSÉ DE GRACIA	JOG-115	115	3.11	1.99	7.655+j19.917	18.428+j54.349	3.45	2.19	7.528+j19.767	18.448+j54.482	3.45	2.19	7.532+j19.774	18.448+j54.482
SAN JOSÉ ITURBIDE	SJI-115	115	8.98	7.44	1.478+j7.241	2.170+j11.864	10.78	10.38	1.229+j6.662	1.208+j7.526	10.78	10.38	1.229+j6.663	1.208+j7.526
SAN JUAN ZITÁCUARO	SJZ-115	115	6.08	4.09	3.259+j10.423	7.611+j25.802	6.76	4.51	3.206+j10.318	7.648+j25.895	6.76	4.51	3.208+j10.321	7.648+j25.895
SAN JUAN DE LOS LAGOS	JDL-115	115	6.38	5.31	2.387+j10.136	5.211+j15.873	7.01	5.81	2.302+j10.154	5.231+j16.106	7.01	5.81	2.303+j10.155	5.231+j16.106
SAN JUAN DE LOS LAGOS II	SJD-115	115	10.48	11.78	1.001+j6.254	0.407+j4.230	11.47	12.69	0.915+j6.299	0.443+j4.515	11.47	12.69	0.916+j6.300	0.443+j4.515
SAN JUAN DE LOS LAGOS II	SJD-230	230	7.47	7.10	3.139+j17.502	2.640+j20.403	8.53	7.84	2.692+j16.908	2.868+j21.445	8.53	7.84	2.696+j16.914	2.868+j21.445
SAN JUAN DEL RÍO	SJR-110	115	16.48	14.95	0.712+j3.965	0.831+j5.145	18.54	16.52	0.650+j3.884	0.855+j5.261	18.54	16.52	0.650+j3.885	0.855+j5.261
SAN JUAN DEL RÍO MANIOBRAS	SJM-110	115	15.74	14.41	0.757+j4.151	1.106+j5.217	17.92	16.15	0.669+j4.019	1.115+j5.250	17.92	16.15	0.670+j4.020	1.115+j5.250
SAN JUAN DEL RIO ORIENTE	SJO-115	115	13.08	10.33	1.084+j4.960	2.354+j8.758	14.63	11.37	1.025+j4.884	2.393+j8.903	14.63	11.37	1.026+j4.885	2.393+j8.903
SAN JUAN POTENCIA	SJP-115	115	19.10	24.32	0.576+j3.428	0.102+j1.197	21.88	27.51	0.490+j3.301	0.110+j1.248	21.88	27.50	0.490+j3.302	0.110+j1.248
SAN JUAN POTENCIA	SJP-230	230	11.10	10.76	2.041+j11.786	1.505+j12.993	13.74	12.73	1.548+j10.522	1.652+j13.015	13.73	12.72	1.550+j10.525	1.652+j13.015
SAN LUIS DE LA PAZ	SAP-110	115	16.85	16.77	0.656+j3.886	0.646+j4.043	19.41	18.87	0.570+j3.719	0.655+j4.115	19.41	18.86	0.570+j3.719	0.655+j4.115
SAN LUIS DE LA PAZ II	SPA-115	115	21.35	24.41	0.404+j3.083	0.162+j2.039	24.80	27.62	0.324+j2.928	0.169+j2.117	24.79	27.62	0.324+j2.928	0.169+j2.117
SAN LUIS DE LA PAZ II	SPA-230	230	17.60	20.29	1.077+j7.467	0.553+j4.966	22.03	24.58	0.781+j6.584	0.559+j4.911	22.02	24.58	0.782+j6.586	0.559+j4.911
SAN LUIS DOS	SLD-115	115	17.16	18.90	0.694+j3.806	0.267+j2.817	19.69	21.08	0.567+j3.666	0.287+j2.986	19.67	21.07	0.568+j3.669	0.287+j2.986
SAN LUIS DOS	SLD-230	230	12.70	13.35	2.031+j10.258	1.484+j8.880	15.78	15.88	1.447+j9.143	1.569+j9.050	15.76	15.87	1.452+j9.152	1.569+j9.050
SAN LUIS I	SLP-115B	115	14.78	15.58	0.961+j4.389	0.295+j3.834	17.03	17.38	0.812+j4.211	0.328+j4.059	17.02	17.37	0.813+j4.213	0.328+j4.059
SAN LUIS I	SLP-115	115	17.57	20.36	0.776+j3.698	0.201+j2.251	20.95	23.63	0.593+j3.436	0.214+j2.323	20.93	23.62	0.594+j3.438	0.214+j2.323
SAN LUIS I	SLP-230	230	12.59	13.28	2.413+j10.270	1.247+j8.928	16.32	16.49	1.660+j8.796	1.302+j8.698	16.31	16.48	1.663+j8.803	1.302+j8.698
SAN LUIS INDUSTRIAL	SLI-110	115	14.73	13.73	0.993+j4.397	0.849+j5.453	17.38	15.74	0.806+j4.123	0.855+j5.484	17.38	15.74	0.807+j4.125	0.855+j5.484
SAN LUIS NORTE	SNE-115	115	8.09	5.59	1.690+j8.032	4.471+j18.733	9.03	6.16	1.584+j7.931	4.489+j18.882	9.03	6.16	1.585+j7.934	4.489+j18.882
SAN LUIS ORIENTE	SLO-110	115	12.38	10.40	1.171+j5.232	1.921+j8.221	14.16	11.62	1.025+j5.055	1.934+j8.342	14.15	11.62	1.026+j5.057	1.934+j8.342
SAN LUIS PONIENTE	SLW-110	115	9.28	6.68	1.652+j6.965	3.528+j15.104	10.43	7.40	1.530+j6.831	3.542+j15.227	10.43	7.40	1.532+j6.834	3.542+j15.227
SAN LUIS PROGRESO	SPR-110	115	10.45	8.36	1.472+j6.179	2.724+j10.795	11.87	9.31	1.327+j6.008	2.736+j10.913	11.87	9.31	1.328+j6.010	2.736+j10.913
SAN MARTIN	SMR-230	230	10.57	9.50	2.718+j12.271	3.266+j16.501	12.90	10.97	1.927+j11.157	3.387+j16.908	12.86	10.94	1.944+j11.195	3.387+j16.908
SAN MIGUEL	MIG-115	115	3.74	3.76	3.801+j17.329	2.855+j17.344	4.07	4.03	3.800+j17.526	2.962+j18.251	4.07	4.03	3.801+j17.527	2.962+j18.251
SAN MIGUEL DE ALLENDE	MAL-115	115	12.09	8.97	1.317+j5.330	2.609+j10.959	13.64	9.96	1.239+j5.209	2.618+j11.020	13.64	9.96	1.240+j5.210	2.618+j11.020
SAN NICOLÁS	SNS-69	69	5.15	3.07	2.019+j7.468	5.880+j22.776	5.72	3.38	1.978+j7.403	5.887+j22.842	5.72	3.38	1.980+j7.405	5.887+j22.842

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Occidental**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
SAN PEDRO	PDR-115	115	11.94	9.82	1.100+j5.449	2.051+j8.958	13.59	10.93	0.962+j5.288	2.064+j9.087	13.58	10.93	0.963+j5.290	2.064+j9.087
SAN RAFAEL MANIOBRAS	SRM-115	115	2.82	2.12	5.892+j22.753	18.203+j43.727	3.58	3.95	4.430+j19.904	2.268+j13.886	3.58	3.95	4.435+j19.919	2.268+j13.886
SAN ROQUE	SRQ-115	115	12.04	8.77	1.105+j5.405	2.261+j11.467	13.30	9.58	1.023+j5.395	2.289+j11.669	13.30	9.58	1.024+j5.396	2.289+j11.669
SAN VICENTE	SVI-115	115	5.57	6.70	3.301+j11.460	0.997+j5.841	6.68	7.80	2.674+j10.602	1.026+j6.083	6.67	7.79	2.684+j10.618	1.026+j6.083
SANMINA-SCI SYSTEMS DE MEXICO	SCI-69	69	10.53	6.96	0.967+j3.656	2.272+j9.338	11.74	7.67	0.913+j3.619	2.280+j9.407	11.73	7.66	0.915+j3.622	2.280+j9.407
SANMINA-SCISYSTEMS MÉXICO	SCR-69	69	14.23	10.63	0.738+j2.700	1.369+j5.478	16.06	11.78	0.680+j2.643	1.374+j5.530	16.03	11.77	0.682+j2.646	1.374+j5.530
SANMINA-SCISYSTEMS MÉXICO	SCR-115	115	10.78	8.66	1.380+j6.000	2.381+j10.436	11.97	9.46	1.290+j5.965	2.452+j10.688	11.96	9.46	1.291+j5.967	2.452+j10.688
SANTA CRUZ	SCU-69	69	14.71	10.82	0.686+j2.621	1.333+j5.473	16.61	12.00	0.616+j2.565	1.335+j5.517	16.59	11.99	0.618+j2.569	1.335+j5.517
SANTA CRUZ	SCZ-115	115	6.08	4.05	3.528+j10.329	8.419+j26.013	6.72	4.45	3.474+j10.293	8.442+j26.156	6.72	4.45	3.475+j10.294	8.442+j26.156
SANTA FE	STF-115	115	16.84	20.12	0.763+j3.869	0.165+j2.066	19.26	22.49	0.679+j3.732	0.182+j2.195	19.25	22.48	0.680+j3.732	0.182+j2.195
SANTA FE	STF-230	230	11.04	10.62	2.139+j11.837	1.764+j13.558	12.85	11.88	1.826+j11.221	1.925+j14.192	12.85	11.88	1.827+j11.224	1.925+j14.192
SANTA FE II	SFD-115	115	7.32	6.09	2.084+j8.830	3.350+j14.205	8.11	6.70	1.990+j8.779	3.366+j14.350	8.11	6.70	1.991+j8.780	3.366+j14.350
SANTA FE TRES	SFT-115	115	7.33	6.10	2.085+j8.818	3.335+j14.170	8.12	6.71	1.990+j8.767	3.351+j14.313	8.12	6.71	1.991+j8.768	3.351+j14.313
SANTA MARÍA	SRI-115	115	2.54	2.16	5.958+j25.485	10.776+j38.421	2.79	2.35	5.902+j25.497	10.964+j39.415	2.79	2.35	5.904+j25.503	10.964+j39.415
SANTA MARÍA	STM-115	115	25.95	23.81	0.409+j2.526	0.396+j3.243	28.72	26.24	0.369+j2.516	0.392+j3.255	28.70	26.23	0.370+j2.518	0.392+j3.255
SANTA MARÍA	SNM-115	115	8.37	7.39	2.029+j7.667	2.363+j10.921	9.22	8.06	1.966+j7.674	2.396+j11.155	9.22	8.06	1.967+j7.675	2.396+j11.155
SANTA MARÍA	STM-400	400	18.10	16.09	2.027+j12.600	2.912+j17.410	21.98	18.68	1.320+j11.480	2.930+j17.519	21.93	18.66	1.331+j11.506	2.930+j17.519
SANTIAGO	SNG-115	115	7.82	5.37	1.859+j8.289	4.626+j19.589	8.74	5.93	1.744+j8.168	4.643+j19.718	8.74	5.93	1.745+j8.170	4.643+j19.718
SANTIAGO IXCUINTLA	SNI-115	115	4.03	2.88	5.133+j15.648	11.294+j34.442	4.73	3.27	4.593+j14.750	11.279+j34.217	4.72	3.27	4.600+j14.765	11.279+j34.217
SANTIAGO UNDAMEO	SUN-115	115	5.57	4.56	3.234+j11.466	7.022+j18.663	6.19	5.02	3.106+j11.375	7.033+j18.835	6.19	5.02	3.107+j11.377	7.033+j18.835
SANTIAGUITO	STG-115	115	9.66	8.30	1.744+j6.650	2.202+j10.130	10.62	9.04	1.700+j6.667	2.240+j10.336	10.61	9.04	1.701+j6.668	2.240+j10.336
SAPAL PROC AGUAS RESID	SPL-115	115	10.02	7.46	1.494+j6.458	3.698+j12.935	11.11	8.21	1.404+j6.423	3.708+j13.058	11.11	8.20	1.405+j6.425	3.708+j13.058
SATÉLITE	SEI-115	115	10.45	7.95	1.318+j6.216	2.185+j12.189	12.09	8.96	1.131+j5.936	2.191+j12.203	12.08	8.96	1.132+j5.937	2.191+j12.203
SATÉLITE	SAT-115	115	13.90	10.95	1.015+j4.667	1.535+j8.527	15.60	12.34	0.953+j4.585	1.444+j8.279	15.59	12.34	0.954+j4.586	1.444+j8.279
SAYULA	SYL-115	115	3.89	3.03	4.826+j16.378	8.071+j30.587	4.33	3.33	4.609+j16.221	8.161+j31.037	4.32	3.32	4.625+j16.255	8.161+j31.037
SENDERO	MTS-115	115	11.06	9.71	1.277+j5.865	2.233+j8.237	12.54	10.80	1.142+j5.711	2.247+j8.378	12.53	10.80	1.143+j5.713	2.247+j8.378
SERVICIOS AGUAMILPA	SEA-110	115	2.18	1.60	7.801+j29.380	25.054+j58.764	2.68	2.57	6.337+j26.530	9.104+j28.911	2.68	2.56	6.343+j26.545	9.104+j28.911
SERVICIOS EL CAJÓN	SCJ-115	115	2.89	2.10	5.686+j22.283	14.135+j46.909	3.24	2.32	5.420+j21.848	14.167+j47.290	3.24	2.32	5.424+j21.858	14.167+j47.290
SERVICIOS LA YESCA	SLY-115	115	2.15	1.52	7.948+j29.879	22.878+j64.993	2.45	1.75	7.272+j28.891	21.408+j61.665	2.45	1.75	7.274+j28.897	21.408+j61.665
SHULMANN	SHU-115	115	14.43	13.36	0.958+j4.499	1.171+j5.609	17.01	15.31	0.773+j4.224	1.175+j5.629	17.00	15.31	0.774+j4.225	1.175+j5.629

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Occidental**

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
SIBASA	SIB-230	230	13.70	11.94	1.837+j9.519	2.801+j13.799	16.18	13.59	1.503+j8.905	2.904+j13.964	16.17	13.59	1.506+j8.909	2.904+j13.964
SIDERÚRGICA GUADALAJARA	SGG-161	161	3.23	2.63	6.531+j28.051	12.082+j47.001	3.49	2.85	6.263+j28.643	12.091+j47.283	3.48	2.85	6.273+j28.663	12.091+j47.283
SIEMENS	SIE-69	69	9.82	6.16	1.032+j3.924	2.493+j11.007	10.99	6.81	0.964+j3.868	2.497+j11.051	10.98	6.81	0.966+j3.872	2.497+j11.051
SILAO	SIL-115	115	14.48	14.10	1.141+j4.440	1.346+j4.791	16.21	15.54	1.047+j4.381	1.361+j4.930	16.21	15.53	1.048+j4.382	1.361+j4.930
SILAO INDUSTRIAL	SII-115	115	10.23	7.85	1.736+j6.253	3.678+j11.852	11.50	8.70	1.634+j6.138	3.690+j11.954	11.50	8.70	1.635+j6.139	3.690+j11.954
SILAO POTENCIA	SIP-115	115	17.95	21.01	0.804+j3.610	0.188+j2.113	20.13	23.07	0.711+j3.557	0.205+j2.263	20.13	23.06	0.712+j3.558	0.205+j2.263
SILAO POTENCIA	SIP-230	230	13.32	13.16	2.277+j9.704	1.557+j10.340	15.76	14.93	1.836+j9.086	1.679+j10.774	15.75	14.92	1.839+j9.091	1.679+j10.774
SIPOSA (GASA)	GAS-115	115	11.65	9.84	1.271+j5.555	1.296+j8.780	13.36	10.99	1.114+j5.350	1.323+j8.951	13.36	10.98	1.115+j5.352	1.323+j8.951
SISTEMAS JUÁREZ	SIS-69	69	20.19	15.74	0.516+j1.904	0.781+j3.566	23.09	17.49	0.450+j1.844	0.788+j3.631	23.04	17.47	0.452+j1.848	0.788+j3.631
SOLEDAD DE GRACIANO SÁNCHEZ	SGS-110	115	11.13	8.64	1.111+j5.860	1.754+j11.015	12.56	9.57	0.992+j5.730	1.768+j11.139	12.55	9.57	0.993+j5.733	1.768+j11.139
URUAPAN	STI-115	115	3.89	2.88	5.013+j16.314	12.004+j32.985	4.51	3.30	4.453+j15.568	11.597+j31.894	4.51	3.30	4.455+j15.570	11.597+j31.894
TABACALERA	TBK-110	115	7.28	6.25	2.161+j8.855	3.215+j13.271	8.98	7.33	1.660+j7.966	3.234+j13.176	8.96	7.32	1.667+j7.981	3.234+j13.176
TACUBAYA	TYA-115	115	4.98	3.52	3.826+j12.772	10.132+j28.138	5.54	3.89	3.704+j12.642	10.166+j28.276	5.54	3.89	3.705+j12.645	10.166+j28.276
TALA	TLA-69	69	4.66	4.86	2.522+j8.166	0.935+j7.501	7.43	7.21	1.221+j5.767	1.177+j6.211	7.43	7.21	1.221+j5.769	1.177+j6.211
TALPA	TPA-69	69	0.55	0.72	28.477+j66.532	0.561+j22.414	0.75	0.91	18.786+j55.462	0.618+j24.660	0.75	0.91	18.787+j55.464	0.618+j24.660
TAMARINDOS	TMI-115	115	5.99	7.99	3.092+j10.646	0.305+j2.787	7.25	9.44	2.457+j9.777	0.323+j2.989	7.23	9.43	2.466+j9.792	0.323+j2.989
TAMAZULA	TAZ-115	115	2.84	2.07	6.048+j22.595	11.929+j48.133	3.14	2.27	5.842+j22.490	11.980+j48.538	3.14	2.27	5.861+j22.532	11.980+j48.538
TANGAMANGA	TMG-115	115	9.03	6.54	1.743+j7.147	3.836+j15.298	10.16	7.24	1.617+j7.004	3.849+j15.423	10.16	7.24	1.618+j7.006	3.849+j15.423
TANGANCÍCUARO	TGR-115	115	8.76	8.10	2.089+j7.288	2.867+j9.000	9.84	8.93	1.964+j7.160	2.899+j9.206	9.83	8.93	1.966+j7.165	2.899+j9.206
TANQUE TENORIO (DEGREMONT)	TQT-115	115	14.34	13.00	0.983+j4.526	0.960+j6.005	16.84	14.82	0.800+j4.262	0.970+j6.067	16.84	14.81	0.801+j4.264	0.970+j6.067
TAPALPA	TLP-115	115	2.66	1.97	7.045+j23.951	16.048+j48.700	2.95	2.16	6.828+j23.795	16.138+j49.150	2.95	2.16	6.844+j23.828	16.138+j49.150
TAPEIXTLES	TAP-69	69	4.33	5.78	0.771+j9.158	0.082+j2.288	4.52	6.00	0.732+j9.663	0.088+j2.505	4.50	5.98	0.745+j9.705	0.088+j2.505
TAPEIXTLES	TAP-115	115	13.63	14.21	0.909+j4.785	0.713+j4.204	17.51	17.12	0.656+j4.118	0.734+j4.313	17.00	16.79	0.686+j4.241	0.734+j4.322
TAPEIXTLES POTENCIA	TPX-115	115	17.94	20.40	0.538+j3.662	0.183+j2.349	24.40	25.98	0.297+j2.979	0.189+j2.359	23.40	25.17	0.324+j3.104	0.190+j2.381
TAPEIXTLES POTENCIA	TPX-230	230	12.06	15.17	1.538+j10.898	0.280+j4.196	18.61	21.87	0.632+j7.823	0.290+j4.018	17.48	20.76	0.720+j8.324	0.291+j4.090
TAPEIXTLES POTENCIA	TPX-400	400	10.17	12.06	3.339+j22.456	0.961+j11.848	21.68	23.25	0.830+j11.687	0.945+j8.269	19.03	20.83	1.046+j13.308	0.944+j8.884
TARANDACUAO	TDC-115	115	2.93	1.84	6.248+j21.815	21.401+j59.509	3.21	2.02	6.260+j21.907	21.419+j59.582	3.21	2.02	6.261+j21.907	21.419+j59.582
TARETAN	TAR-69	69	2.43	1.97	5.306+j15.492	9.427+j26.365	2.77	2.20	4.980+j14.995	9.416+j26.461	2.77	2.20	4.981+j14.996	9.416+j26.461
TARIMBARO	TRB-115	115	7.03	5.43	2.547+j9.098	5.362+j17.058	7.74	5.95	2.497+j9.096	5.393+j17.239	7.74	5.95	2.498+j9.098	5.393+j17.239
TECHNICOLOR MEXICANA S. DE R.L. DE C.V.	TNI-69	69	11.66	7.56	0.964+j3.279	2.125+j8.721	13.14	8.36	0.891+j3.214	2.135+j8.790	13.13	8.36	0.893+j3.217	2.135+j8.790



## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Occidental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
TECNOLÓGICO	TAG-115	115	15.26	12.12	0.862+j4.263	1.210+j7.651	17.47	13.76	0.748+j4.113	1.153+j7.475	17.46	13.76	0.749+j4.114	1.153+j7.475
TECOLAPA	TOA-115	115	5.99	4.47	3.208+j10.619	8.080+j20.848	7.01	5.07	2.914+j9.999	8.087+j20.874	6.94	5.04	2.949+j10.107	8.087+j20.885
TECOLOTLAN	TCT-115	115	2.64	1.87	7.191+j24.053	21.705+j51.889	3.15	2.13	5.926+j22.392	21.596+j51.927	3.15	2.13	5.930+j22.402	21.596+j51.927
TECOMÁN	TEC-115	115	5.13	3.67	3.648+j12.431	10.210+j26.543	5.95	4.13	3.355+j11.800	10.215+j26.560	5.90	4.11	3.390+j11.911	10.216+j26.572
TECOMATES	TCS-115	115	1.71	1.26	11.649+j36.988	20.649+j77.307	1.92	1.40	11.316+j36.392	20.671+j77.415	1.91	1.40	11.360+j36.504	20.670+j77.424
TECOZAUTLA	TCZ-115	115	2.63	1.63	7.704+j24.042	24.189+j67.201	2.97	1.82	7.356+j23.500	24.075+j66.748	2.97	1.82	7.357+j23.501	24.075+j66.748
TECUALA	TEL-115	115	1.08	0.72	24.284+j56.524	61.309+j141.422	1.21	0.80	23.698+j55.701	61.291+j141.192	1.21	0.80	23.706+j55.716	61.291+j141.192
TECUAN	TCN-115	115	6.87	4.71	2.540+j9.320	4.949+j22.483	7.75	5.23	2.401+j9.111	4.955+j22.556	7.75	5.23	2.402+j9.113	4.955+j22.556
TEJEDA	TJD-115	115	13.70	16.89	1.053+j4.730	0.366+j2.087	15.30	18.66	1.000+j4.669	0.365+j2.178	15.29	18.66	1.001+j4.670	0.365+j2.178
TEOCALTICHE	TEO-115	115	4.48	3.08	3.658+j14.376	9.238+j33.820	4.92	3.37	3.572+j14.420	9.275+j34.106	4.92	3.37	3.573+j14.422	9.275+j34.106
TEOCUITATLAN	TTL-115	115	3.21	2.95	5.676+j19.917	5.965+j25.536	3.57	3.21	5.456+j19.722	6.396+j26.586	3.56	3.21	5.468+j19.747	6.396+j26.586
TEPALCATEPEC DOS	TPD-115	115	1.53	1.21	13.084+j41.492	22.808+j73.714	1.95	1.87	9.655+j36.194	9.302+j40.037	1.95	1.87	9.656+j36.195	9.302+j40.037
TEPATITLÁN	TPT-115	115	4.76	3.27	4.436+j13.232	9.657+j31.497	5.32	3.61	4.227+j13.056	9.684+j31.769	5.32	3.61	4.230+j13.061	9.684+j31.769
TEPETONGO	TGO-115	115	1.34	0.98	15.152+j47.175	37.232+j97.822	1.48	1.08	14.941+j46.960	37.245+j97.972	1.48	1.08	14.942+j46.962	37.245+j97.972
TEPEYAC	TPY-115	115	9.32	6.14	2.059+j6.818	4.275+j17.608	10.46	6.81	1.976+j6.699	4.270+j17.610	10.46	6.81	1.976+j6.700	4.270+j17.610
TEPIC DOS	TED-115	115	11.79	14.08	1.011+j5.538	0.179+j2.904	15.83	18.29	0.507+j4.587	0.165+j2.683	15.77	18.23	0.514+j4.603	0.165+j2.683
TEPIC DOS	TED-230	230	8.42	10.35	3.120+j15.458	0.641+j6.955	13.26	15.83	1.155+j10.956	0.432+j5.413	13.17	15.73	1.182+j11.029	0.432+j5.414
TEPIC DOS	TED-400	400	7.21	7.50	6.697+j31.318	3.652+j28.157	16.42	16.70	1.393+j15.411	2.057+j13.947	16.16	16.50	1.461+j15.649	2.057+j13.955
TEPIC INDUSTRIAL	TID-110	115	8.08	7.13	1.929+j7.991	2.594+j11.199	10.06	8.43	1.434+j7.119	2.605+j11.100	10.04	8.42	1.441+j7.134	2.605+j11.100
TECOMÁN SUR	TES-115	115	4.17	2.95	4.479+j15.268	13.196+j33.329	4.80	3.30	4.186+j14.639	13.201+j33.346	4.76	3.29	4.221+j14.749	13.202+j33.359
TEPIC UNO	TES-115	115	9.14	8.90	1.591+j7.086	1.456+j7.736	11.63	10.73	1.094+j6.184	1.478+j7.644	11.60	10.71	1.101+j6.200	1.478+j7.644
TEQUILA	TQA-69	69	4.34	3.02	2.404+j8.857	5.637+j20.489	5.73	4.12	1.725+j7.451	4.062+j15.924	5.73	4.12	1.726+j7.453	4.062+j15.924
TEQUILA	TQA-115	115	2.73	1.86	6.166+j23.559	15.776+j56.211	3.31	2.36	4.816+j21.540	11.818+j46.793	3.31	2.36	4.819+j21.546	11.818+j46.793
TEQUISQUIAPAN	TEQ-115	115	7.87	4.52	2.065+j8.181	10.340+j25.244	8.89	5.02	1.936+j7.980	10.322+j25.218	8.89	5.02	1.936+j7.981	10.322+j25.218
TERMINAL DE GAS MANZANILLO	TGM-115	115	12.02	9.75	0.920+j5.447	1.745+j9.201	15.17	11.48	0.671+j4.769	1.748+j9.219	14.78	11.32	0.700+j4.893	1.748+j9.236
TERMOENVASES EXPANDIBLES	TER-115	115	16.03	14.59	0.923+j4.037	1.167+j5.258	17.85	15.99	0.833+j4.005	1.182+j5.407	17.85	15.98	0.834+j4.007	1.182+j5.407
TESISTAN	TSN-69B	69	21.84	24.47	0.226+j1.810	0.056+j1.240	26.09	27.96	0.134+j1.674	0.065+j1.326	26.04	27.92	0.136+j1.677	0.065+j1.326
TESISTAN	TSN-69	69	31.86	32.92	0.216+j1.231	0.098+j1.131	38.14	37.70	0.138+j1.141	0.103+j1.178	38.03	37.63	0.140+j1.144	0.103+j1.178
TESISTAN	TSN-230	230	16.59	19.74	1.891+j7.776	0.400+j4.216	23.57	26.14	0.932+j6.127	0.424+j4.251	23.41	26.01	0.947+j6.166	0.424+j4.251
TESISTAN	TSN-400	400	13.70	14.69	4.104+j16.350	1.885+j13.413	23.53	22.36	1.432+j10.703	1.898+j12.096	23.26	22.20	1.470+j10.821	1.897+j12.097

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Occidental**

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
TETRAPAK	TTK-115	115	13.09	9.76	1.232+j4.919	6.720+j8.410	14.47	10.72	1.192+j4.905	6.726+j8.503	14.46	10.72	1.193+j4.906	6.726+j8.503
TISAMATIC	TIS-115	115	13.60	12.96	1.084+j4.761	0.682+j5.602	15.66	14.48	0.930+j4.569	0.711+j5.797	15.66	14.48	0.931+j4.571	0.711+j5.797
TLAJOMULCO POTENCIA	TLJ-230	230	15.78	17.83	1.885+j8.199	0.606+j5.532	20.05	21.36	1.177+j7.189	0.649+j5.850	19.92	21.26	1.197+j7.236	0.649+j5.851
TLAJOMULCO POTENCIA	TLJ-400	400	14.10	14.48	3.636+j15.966	2.259+j14.997	20.34	18.68	1.669+j12.378	2.369+j15.446	20.07	18.53	1.718+j12.542	2.369+j15.450
TLALTENANGO	TLO-110	115	1.89	1.30	9.771+j33.737	15.174+j82.006	2.09	1.42	9.650+j33.655	15.365+j83.355	2.09	1.42	9.651+j33.657	15.365+j83.355
TOTOTLAN	TTO-115	115	4.84	3.57	4.016+j13.126	9.489+j26.791	5.51	3.97	3.752+j12.723	9.530+j27.037	5.50	3.97	3.756+j12.728	9.530+j27.037
TREJO	TRJ-115	115	11.45	6.94	1.581+j5.579	5.213+j16.340	12.91	7.69	1.479+j5.460	5.220+j16.405	12.91	7.69	1.479+j5.461	5.220+j16.405
TREMEC	TRE-115	115	20.49	20.60	0.706+j3.162	0.556+j3.165	23.20	22.93	0.645+j3.081	0.562+j3.229	23.19	22.92	0.646+j3.082	0.562+j3.229
TRES MARÍAS	TSM-115	115	7.74	5.90	1.985+j8.344	3.529+j16.392	8.49	6.44	1.950+j8.375	3.562+j16.578	8.49	6.44	1.951+j8.376	3.562+j16.578
TRES NACIONES	TEN-115	115	14.99	13.62	0.969+j4.322	0.934+j5.719	17.72	15.63	0.782+j4.046	0.937+j5.731	17.72	15.63	0.782+j4.048	0.937+j5.731
TRIARA	TTR-115	115	12.65	11.40	1.515+j5.026	0.201+j7.138	14.23	12.67	1.444+j4.926	0.206+j7.183	14.22	12.67	1.445+j4.927	0.206+j7.183
TRIGUILLOS	TGS-115	115	2.85	1.94	8.234+j21.764	19.109+j52.897	3.13	2.13	8.213+j21.818	19.159+j53.139	3.13	2.13	8.214+j21.819	19.159+j53.139
TURBORREACTORES S.A. DE C.V.	REA-115	115	22.66	24.36	0.663+j2.854	0.380+j2.311	25.73	27.17	0.603+j2.774	0.386+j2.376	25.72	27.16	0.603+j2.774	0.386+j2.376
TUXPAN	TUX-115	115	3.36	2.67	6.601+j18.652	11.113+j33.106	3.72	2.94	6.395+j18.547	11.164+j33.511	3.71	2.93	6.414+j18.588	11.164+j33.511
TUXPAN	TXP-115	115	5.82	4.27	3.096+j10.989	7.054+j22.807	6.42	4.68	3.071+j10.955	7.152+j23.088	6.42	4.68	3.072+j10.956	7.152+j23.088
TUZANIA	TUZ-230	230	14.03	14.40	2.178+j9.210	1.462+j8.645	19.47	18.62	1.160+j7.414	1.418+j8.290	19.36	18.56	1.175+j7.451	1.418+j8.290
UNIÓN DE SAN ANTONIO	USA-115	115	4.54	2.77	2.934+j14.331	9.025+j41.584	5.00	3.05	2.852+j14.323	9.053+j41.786	5.00	3.05	2.853+j14.324	9.053+j41.786
UNIVERSIDAD AUTÓNOMA DE GUADALAJARA	UAG-69	69	17.18	14.96	0.569+j2.247	0.546+j3.318	19.61	16.55	0.496+j2.179	0.563+j3.426	19.58	16.54	0.498+j2.182	0.563+j3.426
UNIVERSIDAD DEL VALLE DE MÉXICO	UVM-69	69	20.20	15.74	0.517+j1.904	0.781+j3.566	23.09	17.49	0.450+j1.844	0.788+j3.631	23.04	17.47	0.452+j1.847	0.788+j3.631
UNIVEX	UVX-115	115	14.49	9.77	1.216+j4.416	3.069+j10.819	16.95	11.14	1.089+j4.169	3.072+j10.677	16.95	11.14	1.090+j4.170	3.072+j10.677
URIANGATO	URG-115	115	5.14	3.41	3.675+j12.371	10.174+j31.034	5.70	3.76	3.603+j12.302	10.192+j31.116	5.70	3.76	3.604+j12.303	10.192+j31.116
URUAPAN POTENCIA	UPP-115	115	7.65	9.13	2.408+j8.341	0.413+j4.496	9.73	11.09	1.690+j7.316	0.421+j4.563	9.72	11.08	1.692+j7.319	0.421+j4.563
URUAPAN POTENCIA	UPP-161	161	4.23	4.81	4.175+j21.587	1.209+j14.031	6.01	6.52	2.165+j16.865	1.039+j11.803	6.01	6.52	2.167+j16.869	1.039+j11.803
URUAPAN POTENCIA	UPP-230	230	4.37	4.66	6.670+j29.678	2.516+j24.771	5.77	5.83	3.992+j24.981	2.334+j23.535	5.77	5.83	3.998+j24.992	2.334+j23.535
URUAPAN TRES	UPT-69	69	5.22	6.94	1.381+j7.499	0.103+j1.979	6.15	7.95	1.094+j7.044	0.107+j2.115	6.15	7.95	1.094+j7.045	0.107+j2.115
URUAPAN TRES	UPT-115	115	7.77	8.37	2.522+j8.169	1.165+j6.651	9.81	10.08	1.844+j7.212	1.149+j6.589	9.81	10.08	1.845+j7.215	1.149+j6.589
USI	USI-69	69	7.71	4.84	1.452+j4.959	3.741+j13.892	8.99	6.43	1.295+j4.701	2.824+j10.235	8.98	6.43	1.296+j4.703	2.824+j10.235
USM	USM-115	115	9.31	7.04	1.897+j6.871	4.214+j13.403	10.45	7.80	1.795+j6.756	4.225+j13.505	10.45	7.80	1.796+j6.757	4.225+j13.505
VALLARTA POTENCIA	VTP-115	115	6.05	8.17	3.054+j10.534	0.165+j2.486	7.33	9.68	2.419+j9.664	0.184+j2.690	7.32	9.66	2.428+j9.679	0.184+j2.690
VALLARTA POTENCIA	VTP-230	230	3.33	4.23	10.782+j38.351	1.166+j14.728	4.13	5.05	8.216+j34.417	1.302+j15.824	4.12	5.04	8.251+j34.480	1.302+j15.824

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Occidental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>
VALLARTA UNO	VRT-115	115	4.85	5.10	3.989+j13.103	2.498+j11.393	5.75	5.87	3.335+j12.251	2.517+j11.597	5.74	5.87	3.344+j12.266	2.517+j11.597
VALLE DE AGUASCALIENTES	VAG-115	115	15.02	11.67	0.836+j4.340	1.426+j8.116	17.02	12.91	0.726+j4.228	1.440+j8.267	17.02	12.91	0.727+j4.230	1.440+j8.267
VALLE DE GUADALUPE	VGP-115	115	2.88	1.80	6.940+j21.953	17.738+j62.235	3.20	1.98	6.772+j21.831	17.760+j62.426	3.19	1.98	6.775+j21.835	17.760+j62.426
VALLE DE LAS DELICIAS	VDL-115	115	4.66	3.74	4.135+j13.623	8.882+j23.250	5.28	4.15	3.887+j13.286	8.914+j23.483	5.28	4.15	3.888+j13.287	8.914+j23.483
VALLE DE SANTIAGO	VAS-115	115	12.22	9.11	1.265+j5.283	3.071+j10.594	13.73	10.08	1.185+j5.184	3.098+j10.699	13.73	10.08	1.186+j5.185	3.098+j10.699
VALEO TÉRMICO	VAT-115	115	14.85	14.30	0.931+j4.374	0.966+j4.914	17.51	16.41	0.746+j4.103	0.972+j4.948	17.50	16.40	0.746+j4.105	0.972+j4.948
VALLE DE TECOMAN	VAT-115	115	2.81	1.86	6.889+j22.636	19.306+j56.780	3.18	2.07	6.586+j22.027	19.313+j56.806	3.16	2.06	6.622+j22.133	19.313+j56.817
VALLE DEL MEZQUITAL	VDM-115	115	6.51	4.60	2.181+j9.971	6.417+j21.994	8.52	5.63	1.426+j8.455	6.109+j20.734	8.52	5.63	1.427+j8.456	6.109+j20.734
VALLE DEL MEZQUITAL	VDM-230	230	4.34	3.65	6.408+j29.936	8.913+j47.149	6.54	5.72	3.390+j22.059	5.869+j30.509	6.54	5.72	3.392+j22.064	5.869+j30.509
VALLE VERDE	VAV-115	115	3.43	3.47	5.554+j18.528	3.354+j18.449	4.41	4.23	3.990+j16.090	3.403+j17.840	4.41	4.23	3.991+j16.091	3.403+j17.840
VALPARAISO	VPS-110	115	1.26	0.82	18.264+j49.377	43.941+j132.004	1.39	0.90	18.092+j49.214	43.965+j132.226	1.39	0.90	18.094+j49.217	43.965+j132.226
VAQUERÍAS MANIOBRAS	VQM-230	230	7.01	7.35	2.933+j18.703	1.925+j16.267	8.27	8.33	2.406+j17.492	2.109+j17.217	8.27	8.33	2.408+j17.496	2.109+j17.217
VELCON	VEL-115	115	13.60	10.66	1.180+j4.738	2.230+j8.664	15.17	11.74	1.120+j4.681	2.252+j8.778	15.17	11.74	1.120+j4.682	2.252+j8.778
VENUSTIANO CARRANZA	VNC-115	115	5.50	3.65	2.986+j11.695	7.240+j29.566	6.18	4.04	2.835+j11.481	7.260+j29.725	6.17	4.04	2.838+j11.489	7.260+j29.725
VERGELES	VGL-115	115	4.15	2.63	3.340+j15.650	11.108+j42.472	4.61	2.90	3.224+j15.517	11.113+j42.567	4.61	2.90	3.225+j15.519	11.113+j42.567
VIDRIERA	VRA-115	115	14.57	13.49	1.006+j4.445	0.880+j5.616	17.18	15.45	0.819+j4.171	0.887+j5.648	17.18	15.44	0.820+j4.172	0.887+j5.648
VIDRIERA GUADALAJARA	VID-69	69	20.37	18.03	0.485+j1.894	0.464+j2.685	23.38	20.00	0.413+j1.829	0.480+j2.780	23.33	19.98	0.414+j1.832	0.480+j2.780
VIDRIERA QUERÉTARO	VRR-115	115	15.11	14.40	1.056+j4.265	0.913+j4.993	17.02	16.19	0.990+j4.175	0.878+j4.890	17.02	16.19	0.991+j4.176	0.878+j4.890
VILLA DE ÁLVAREZ	VDA-115	115	7.82	7.66	1.969+j8.255	1.811+j8.842	9.21	8.72	1.697+j7.743	1.842+j9.008	9.10	8.65	1.728+j7.839	1.842+j9.010
VILLA DE ARISTA	VAR-115	115	2.71	1.75	9.305+j22.653	20.413+j61.449	2.99	1.93	9.215+j22.587	20.428+j61.586	2.99	1.93	9.217+j22.589	20.428+j61.586
VILLA DE REYES	VDR-115	115	9.14	10.12	1.174+j7.168	0.546+j5.168	10.29	11.45	1.010+j7.025	0.389+j4.980	10.29	11.45	1.011+j7.026	0.389+j4.980
VILLA DE REYES	VDR-230	230	13.21	12.58	2.075+j9.838	2.360+j11.438	20.19	22.97	1.038+j7.160	0.449+j4.797	20.18	22.96	1.040+j7.164	0.449+j4.797
VILLA HIDALGO	VHO-115	115	3.07	2.16	6.831+j20.547	15.190+j46.306	3.40	2.39	6.685+j20.411	15.205+j46.439	3.40	2.39	6.686+j20.412	15.205+j46.439
VILLA JIMÉNEZ	VJI-115	115	5.58	4.28	3.361+j11.412	6.018+j21.968	6.43	5.72	3.030+j10.950	3.155+j15.142	6.43	5.72	3.032+j10.954	3.155+j15.142
VILLA JUÁREZ	VJU-115	115	8.83	6.33	1.510+j7.368	2.797+j16.208	9.86	6.96	1.402+j7.277	2.822+j16.410	9.85	6.96	1.403+j7.279	2.822+j16.410
VILLAGRÁN	VIG-110	115	13.40	10.42	1.265+j4.789	2.427+j8.902	15.17	11.63	1.188+j4.667	2.435+j8.916	15.16	11.62	1.188+j4.668	2.435+j8.916
VINITECK S.A. DE C.V.	VIN-69	69	6.47	4.83	1.251+j6.026	2.499+j12.161	7.12	5.29	1.200+j6.037	2.509+j12.298	7.12	5.28	1.202+j6.039	2.509+j12.298
VISTA HERMOSA	VIH-115	115	8.59	6.45	2.213+j7.404	4.867+j14.639	9.74	7.17	2.069+j7.211	4.882+j14.755	9.73	7.17	2.072+j7.217	4.882+j14.755
VIZARRÓN	VIZ-110	115	3.45	1.86	5.808+j18.374	18.281+j65.797	3.95	2.09	5.406+j17.700	18.142+j65.231	3.95	2.09	5.407+j17.701	18.142+j65.231
VOLCANES	VCS-69	69	0.76	0.70	18.418+j48.774	19.638+j62.496	0.97	0.82	13.626+j43.103	19.699+j64.750	0.97	0.82	13.628+j43.106	19.699+j64.750

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Occidental

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
VOLKSWAGEN	VVS-115	115	7.09	5.81	2.165+j9.117	3.638+j15.128	7.85	6.39	2.071+j9.066	3.654+j15.272	7.85	6.39	2.072+j9.067	3.654+j15.272
XALISCO	XLS-115	115	7.25	6.00	2.005+j8.936	3.132+j14.552	8.93	7.03	1.503+j8.041	3.132+j14.402	8.91	7.02	1.510+j8.057	3.132+j14.402
YERBABUENA	YEA-115	115	4.59	3.00	3.552+j14.038	8.470+j36.384	5.15	3.32	3.347+j13.788	8.500+j36.607	5.15	3.32	3.351+j13.794	8.500+j36.607
YURÉCUARO	YUR-115	115	6.43	5.01	2.989+j9.882	5.339+j18.356	7.23	5.55	2.835+j9.692	5.366+j18.484	7.23	5.55	2.838+j9.697	5.366+j18.484
ZACAPU	ZCP-110	115	5.52	4.38	3.861+j11.388	5.977+j20.590	6.24	5.15	3.638+j11.117	5.282+j18.316	6.24	5.15	3.640+j11.121	5.282+j18.316
ZACATECAS	ZCT-115	115	6.77	6.02	2.688+j9.426	3.799+j12.947	7.65	6.69	2.498+j9.219	3.812+j13.092	7.64	6.69	2.499+j9.221	3.812+j13.092
ZACATECAS II	ZCD-115	115	10.22	11.98	1.608+j6.295	0.427+j3.639	11.55	13.26	1.455+j6.152	0.461+j3.876	11.55	13.26	1.456+j6.154	0.461+j3.876
ZACATECAS II	ZCD-230	230	6.90	7.22	4.558+j18.700	2.560+j16.591	8.01	8.11	3.882+j17.820	2.720+j17.369	8.01	8.11	3.886+j17.827	2.720+j17.369
ZACATECAS SUR	ZCS-115	115	6.88	6.07	2.687+j9.274	3.807+j12.953	7.76	6.75	2.502+j9.077	3.824+j13.107	7.76	6.74	2.503+j9.079	3.824+j13.107
ZALATITAN	ZLT-69	69	12.93	9.29	0.694+j3.001	1.399+j6.562	14.62	10.31	0.617+j2.934	1.404+j6.595	14.60	10.30	0.619+j2.937	1.404+j6.595
ZAMORA	ZMA-110	115	8.13	6.39	2.161+j7.878	4.412+j14.173	9.12	7.06	2.034+j7.747	4.438+j14.336	9.11	7.06	2.038+j7.753	4.438+j14.336
ZAMORA POTENCIA	ZRP-115	115	11.20	12.16	1.298+j5.784	0.570+j4.511	12.53	13.28	1.191+j5.704	0.618+j4.794	12.52	13.27	1.194+j5.709	0.618+j4.794
ZAMORA POTENCIA	ZRP-230	230	8.09	7.18	3.087+j16.125	4.069+j22.342	9.34	7.99	2.522+j15.429	4.292+j23.142	9.33	7.98	2.532+j15.449	4.292+j23.142
ZAPOPAN	ZPA-69	69	22.04	20.59	0.455+j1.750	0.323+j2.175	25.38	22.86	0.382+j1.684	0.339+j2.270	25.32	22.83	0.384+j1.687	0.339+j2.270
ZAPOPAN	ZPA-230	230	9.67	8.45	2.995+j13.409	4.047+j19.273	12.08	9.90	2.014+j11.920	4.152+j19.554	12.04	9.88	2.031+j11.958	4.152+j19.554
ZAPOTILTIC	ZTI-115	115	4.91	4.55	3.544+j13.042	4.796+j16.016	5.47	4.99	3.338+j12.935	4.846+j16.421	5.45	4.98	3.357+j12.976	4.846+j16.421
ZAPOTLANEJO	ZPO-230	230	15.74	17.64	1.878+j8.224	0.661+j5.728	20.62	21.64	1.093+j6.998	0.714+j5.960	20.51	21.55	1.109+j7.036	0.713+j5.961
ZAPOTLANEJO	ZPO-400	400	13.31	13.43	3.594+j16.972	2.735+j16.742	18.73	17.05	1.669+j13.462	2.869+j17.152	18.56	16.96	1.707+j13.582	2.869+j17.153
ZAPOTLANEJO DISTRIBUCIÓN	ZAD-115	115	2.69	2.09	8.338+j23.243	12.439+j44.412	2.94	2.26	8.241+j23.461	12.551+j45.436	2.94	2.26	8.245+j23.467	12.551+j45.436
ZARAGOZA	ZAG-115	115	5.20	3.44	2.481+j12.534	8.187+j31.382	5.86	3.82	2.295+j12.253	8.193+j31.396	5.86	3.82	2.296+j12.254	8.193+j31.396
ZIMAPAN	ZIM-115	115	3.94	2.70	4.430+j16.270	13.435+j37.867	4.79	3.15	3.640+j14.808	13.125+j36.604	4.79	3.15	3.641+j14.809	13.125+j36.604
ZINÁPARO	ZID-115	115	8.64	7.02	2.068+j7.405	4.491+j12.251	9.73	7.78	1.933+j7.249	4.521+j12.375	9.73	7.77	1.936+j7.253	4.521+j12.375
ZINAPÉCUARO	ZIN-115	115	9.10	7.38	1.334+j7.176	2.488+j12.443	9.82	7.99	1.355+j7.314	2.506+j12.610	9.82	7.99	1.356+j7.315	2.506+j12.610
ZITÁCUARO	ZIT-115	115	6.84	4.72	2.688+j9.333	6.321+j21.939	7.59	5.19	2.647+j9.249	6.376+j22.073	7.59	5.19	2.648+j9.251	6.376+j22.073
ZITÁCUARO DOS	ZTD-115	115	6.53	4.36	2.716+j9.803	6.765+j24.471	7.26	4.81	2.669+j9.701	6.811+j24.569	7.26	4.81	2.670+j9.703	6.811+j24.569
ZOLTECH	CYD-69	69	16.81	17.74	0.516+j2.313	0.385+j1.963	19.57	20.11	0.450+j2.193	0.389+j2.019	19.54	20.09	0.452+j2.196	0.389+j2.019
ZOQUIPAN	ZQP-69	69	14.37	10.77	0.645+j2.696	1.338+j5.391	16.63	12.15	0.547+j2.578	1.330+j5.378	16.61	12.14	0.548+j2.581	1.330+j5.378
ZUMPIMITO	ZMP-69-HI	69	4.92	5.69	1.684+j7.923	0.912+j4.712	5.86	6.59	1.335+j7.361	0.862+j4.708	5.86	6.59	1.335+j7.362	0.862+j4.708

# Gerencia de Control Regional Noroeste



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## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Noroeste

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
ACUÍCOLA	ACU-115	115	2.07	1.41	8.696+j30.948	26.178+j72.147	2.35	1.58	8.204+j29.943	26.203+j72.114	2.35	1.58	8.206+j29.948	26.203+j72.114
AGRÍCOLA SONOYTA	AGS-115	115	0.57	0.40	37.398+j111.087	70.500+j258.850	0.73	0.47	28.403+j96.296	69.240+j254.565	0.72	0.47	28.637+j96.755	69.236+j254.609
AGUA PRIETA	AGI-115	115	4.78	3.20	2.693+j13.639	5.963+j34.161	5.55	3.54	2.334+j12.939	6.031+j34.966	5.55	3.54	2.337+j12.946	6.031+j34.966
AGUA PRIETA DOS	AGD-230	230	8.36	8.80	2.168+j15.742	2.302+j13.909	15.62	16.96	0.687+j9.325	0.524+j6.401	15.60	16.94	0.692+j9.338	0.524+j6.401
AHOME	AHO-115	115	4.88	3.50	2.995+j13.271	8.501+j28.208	5.52	3.90	2.885+j12.905	8.506+j28.317	5.37	3.84	2.968+j13.268	8.524+j28.490
ALAMOS	AAM-115	115	1.62	1.18	22.900+j33.849	27.866+j83.659	1.88	1.47	21.481+j32.453	20.132+j69.538	1.87	1.47	21.489+j32.490	20.132+j69.539
ALEPH MANIOBRAS	ALE-MAN	230	3.10	4.08	11.302+j41.378	0.938+j12.312	12.31	13.87	0.925+j11.832	0.724+j7.518	12.03	13.63	0.984+j12.104	0.724+j7.519
ALTAR	ALT-115	115	2.51	1.83	7.519+j25.311	14.414+j54.313	3.48	2.32	5.187+j20.363	14.289+j50.237	3.32	2.15	5.512+j21.285	15.598+j55.819
ANGOSTURA	ANG-115	115	4.75	3.39	4.071+j13.386	8.074+j29.512	5.72	3.91	3.630+j12.240	8.186+j28.925	5.65	3.89	3.677+j12.390	8.184+j28.941
ANTIMONIO	ANT-115	115	2.44	2.12	7.379+j26.211	9.988+j38.077	3.85	2.83	4.131+j18.500	10.032+j38.065	3.75	2.79	4.282+j18.998	10.027+j38.204
ARROYO SECO	ASE-115	115	1.73	1.25	10.497+j36.982	25.196+j78.236	2.43	1.65	7.308+j29.141	24.756+j68.207	2.28	1.46	7.959+j31.074	28.119+j81.754
BACHIGUALATO	BCH-115	115	4.51	2.39	2.990+j14.415	15.847+j51.544	5.22	2.67	2.674+j13.724	15.886+j51.548	5.15	2.65	2.742+j13.925	15.921+j51.769
BACUM	BAC-115	115	18.04	18.29	0.488+j3.648	0.771+j3.487	21.75	21.15	0.396+j3.334	0.800+j3.548	21.61	21.04	0.400+j3.356	0.800+j3.548
BACUM	BAC-230	230	12.52	13.86	1.387+j10.515	0.861+j7.638	15.40	16.14	1.031+j9.426	0.911+j8.113	15.26	16.02	1.047+j9.512	0.911+j8.113
BACUM	BAC-400	400	9.15	9.27	2.859+j25.072	3.106+j24.539	11.04	10.59	2.007+j22.920	3.334+j25.921	10.92	10.50	2.052+j23.177	3.334+j25.922
BACURATO	BRT-115	115	3.44	1.78	3.516+j19.002	17.951+j71.054	6.13	6.51	1.330+j11.838	0.309+j7.316	6.09	6.46	1.347+j11.919	0.309+j7.316
BAGOTES	BGT-115	115	11.76	10.91	1.797+j5.350	2.885+j6.469	16.49	14.49	1.343+j4.222	2.884+j5.655	16.47	14.48	1.344+j4.227	2.884+j5.655
BAMOA	BMO-115	115	2.73	1.77	8.717+j22.724	19.908+j60.389	3.13	1.99	8.331+j21.785	19.993+j59.985	3.11	1.98	8.393+j21.958	19.996+j60.024
BANDERAS	BND-115	115	13.16	11.83	0.897+j4.963	1.855+j6.545	16.11	14.74	0.745+j4.470	1.495+j5.577	16.03	14.68	0.751+j4.493	1.495+j5.577
BIZANI	BZI-115	115	2.62	2.44	6.458+j24.501	9.531+j29.636	6.18	5.01	2.246+j11.596	5.470+j19.389	5.68	4.48	2.534+j12.611	6.292+j22.337
BLUMEX MANIOBRAS	BLM-MAN	115	7.84	7.51	1.960+j8.236	1.571+j9.627	8.86	8.26	1.874+j8.030	1.618+j10.017	8.85	8.26	1.875+j8.035	1.618+j10.017
BUENA VISTA	BNV-230	230	7.48	6.85	4.797+j17.101	4.121+j22.705	10.54	8.61	2.868+j13.557	4.327+j22.623	10.48	8.58	2.904+j13.628	4.327+j22.627
CABORCA	CBA-115	115	3.56	2.99	4.679+j18.040	3.635+j29.398	7.14	5.45	1.610+j10.104	3.217+j19.414	5.96	3.77	2.231+j12.058	6.537+j32.905
CAJEME	CAJ-115	115	13.55	12.01	0.809+j4.834	1.929+j6.571	16.22	14.82	0.678+j4.451	1.713+j5.519	16.14	14.77	0.684+j4.473	1.713+j5.519
CARDONAL	CRD-115	115	2.07	1.46	8.660+j30.813	26.179+j67.676	2.36	1.63	8.169+j29.808	26.204+j67.643	2.36	1.63	8.170+j29.813	26.204+j67.643
CARRIZO	CRZ-115	115	2.65	1.42	7.975+j23.762	27.228+j85.344	3.28	1.90	6.711+j21.196	21.131+j67.352	3.27	1.90	6.725+j21.275	21.131+j67.357
CENTENARIO	CNT-115	115	13.52	11.18	1.041+j4.799	1.694+j7.581	16.27	12.91	0.920+j4.394	1.692+j7.646	15.01	12.19	1.005+j4.760	1.716+j7.830
CENTINELA	CLA-115	115	7.43	6.20	1.962+j8.715	4.228+j13.825	8.39	6.84	1.864+j8.499	4.268+j14.156	8.39	6.84	1.865+j8.503	4.268+j14.156
CENTRAL FOTOVOLTAICA HERMOSILLO MANIOBRAS	CFH-MAN	115	11.74	11.62	1.311+j5.501	1.177+j5.805	17.68	17.09	0.743+j4.064	1.060+j4.497	17.66	17.07	0.744+j4.068	1.060+j4.497
CERRO CAÑEDO	CCA-115	115	3.21	2.61	5.371+j19.998	6.006+j34.649	5.72	4.22	2.379+j12.541	5.645+j25.750	4.99	3.22	2.963+j14.328	8.588+j37.782

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Noroeste

Subestación eléctrica	Acronímico	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
CHINITOS	CHI-115	115	2.21	1.48	9.048+j28.582	25.018+j69.915	2.51	1.65	8.699+j27.804	25.062+j69.754	2.49	1.65	8.758+j27.964	25.072+j69.834
CHOACAHUI	CHO-230	230	22.17	23.10	0.435+j5.974	0.206+j4.246	26.92	27.12	0.297+j5.417	0.249+j4.501	24.28	24.84	0.368+j6.004	0.225+j4.612
CHOACAHUI	CHO-400	400	14.60	16.13	1.189+j15.774	0.479+j8.809	17.13	18.46	0.775+j14.811	0.528+j9.577	16.29	17.65	0.900+j15.572	0.527+j9.586
CIUDAD OBREGÓN CUATRO	COC-115	115	14.80	13.76	0.745+j4.425	1.267+j5.393	19.19	18.27	0.580+j3.761	1.112+j4.213	19.07	18.19	0.585+j3.784	1.112+j4.213
CIUDAD OBREGÓN CUATRO	COC-230	230	10.12	10.70	2.013+j12.964	2.098+j10.909	13.06	12.97	1.445+j11.093	2.058+j11.086	12.94	12.88	1.465+j11.193	2.058+j11.086
CIUDAD OBREGÓN DOS	COD-115	115	16.03	16.69	0.638+j4.093	1.495+j3.457	20.08	20.42	0.514+j3.600	1.352+j3.227	19.96	20.32	0.519+j3.623	1.352+j3.227
CIUDAD OBREGÓN TRES	COT-115	115	16.08	17.36	0.648+j4.077	1.369+j3.040	19.78	20.79	0.506+j3.657	1.283+j2.918	19.66	20.69	0.511+j3.679	1.283+j2.918
CIUDAD OBREGÓN TRES	COT-230	230	8.86	9.24	2.291+j14.808	2.359+j13.074	11.18	10.97	1.714+j12.953	2.351+j13.479	11.10	10.91	1.733+j13.046	2.351+j13.480
CIUDAD OBREGÓN UNO	OBU-115	115	14.24	13.01	0.862+j4.582	1.662+j5.802	17.88	17.40	0.707+j4.024	1.127+j4.241	17.77	17.32	0.712+j4.047	1.127+j4.241
COCORIT	CCI-115	115	11.59	8.72	0.941+j5.653	3.431+j10.931	13.79	10.01	0.808+j5.233	3.324+j10.814	13.74	9.99	0.813+j5.255	3.324+j10.814
COMEDERO	CMR-115	115	3.55	1.64	3.838+j18.331	20.728+j80.996	5.97	6.68	1.635+j12.127	0.289+j7.254	5.91	6.62	1.660+j12.236	0.289+j7.254
COMPUERTAS	CTS-115	115	13.71	11.29	1.009+j4.735	1.674+j7.556	16.54	13.05	0.883+j4.326	1.671+j7.620	15.24	12.32	0.968+j4.692	1.695+j7.805
CORONA	COR-115	115	12.90	9.76	1.123+j5.023	2.920+j9.715	16.05	14.77	0.955+j4.448	1.047+j5.595	15.97	14.71	0.960+j4.472	1.047+j5.595
COSTA RICA	CSA-115	115	6.34	4.83	2.450+j10.187	4.676+j19.604	7.63	5.55	2.050+j9.354	4.702+j19.667	7.46	5.47	2.128+j9.560	4.695+j19.692
CRUZ DE PIEDRA	CDP-115	115	6.96	6.38	2.386+j9.243	2.754+j11.990	7.83	7.01	2.299+j9.038	2.801+j12.380	7.83	7.01	2.300+j9.043	2.801+j12.380
CULIACÁN CENTRO	CCC-115	115	11.36	10.29	1.286+j5.700	1.674+j7.373	15.54	13.14	0.831+j4.625	1.660+j6.902	14.81	12.56	0.906+j4.848	1.689+j7.141
CULIACÁN CINCO	CUI-115	115	12.18	11.00	1.169+j5.325	1.645+j6.910	16.58	13.67	0.745+j4.341	1.688+j6.864	15.82	13.24	0.814+j4.544	1.675+j6.908
CULIACÁN CUATRO	CUC-115	115	12.82	12.35	1.122+j5.054	1.227+j5.529	17.34	15.32	0.719+j4.151	1.257+j5.595	16.49	14.81	0.791+j4.357	1.248+j5.599
CULIACÁN DOS	CUD-115	115	12.34	12.17	1.187+j5.247	1.160+j5.378	17.14	15.75	0.740+j4.197	1.168+j5.073	16.28	15.04	0.813+j4.412	1.180+j5.234
CULIACÁN LIBRAMIENTO	CLI-115	115	10.73	9.93	1.357+j6.034	1.915+j7.342	14.33	12.32	0.918+j5.014	1.944+j7.175	13.74	11.92	0.989+j5.223	1.940+j7.272
CULIACÁN MILENIUM	CMI-115	115	10.63	10.95	1.356+j6.096	1.800+j5.314	14.10	14.62	0.920+j5.097	1.539+j4.254	13.27	13.12	1.030+j5.407	1.829+j5.207
CULIACÁN NORTE	CUN-115	115	11.51	10.92	1.269+j5.626	1.452+j6.432	15.78	14.43	0.814+j4.558	1.299+j5.602	14.84	13.37	0.911+j4.838	1.452+j6.143
CULIACÁN ORIENTE	CUO-115	115	11.77	11.96	1.274+j5.494	1.205+j5.129	16.25	15.69	0.820+j4.418	1.200+j4.639	15.45	14.87	0.895+j4.641	1.225+j4.888
CULIACÁN PONIENTE	CPO-115	115	14.47	12.96	0.822+j4.515	0.875+j6.016	18.96	15.74	0.515+j3.817	0.914+j6.020	17.98	14.99	0.579+j4.020	0.948+j6.240
CULIACÁN PONIENTE	CPO-400	400	5.97	6.00	6.782+j38.102	4.706+j36.353	8.18	7.50	3.636+j30.843	4.957+j37.951	7.71	7.18	4.195+j32.661	5.001+j38.146
CULIACÁN SUR	CUS-115	115	11.06	9.96	1.267+j5.870	1.729+j7.699	14.56	12.10	0.858+j4.943	1.762+j7.726	13.96	11.78	0.928+j5.147	1.752+j7.741
CULIACÁN TRES	CUT-115	115	13.62	14.12	1.033+j4.765	0.605+j4.212	19.67	19.64	0.575+j3.667	0.531+j3.498	18.48	18.17	0.652+j3.898	0.601+j3.854
CULIACÁN TRES	CUT-230	230	8.37	9.91	3.312+j15.519	0.932+j8.028	12.03	13.22	1.786+j12.008	0.973+j8.242	11.29	12.50	2.035+j12.778	0.985+j8.344
CULIACÁN UNO	CUU-115	115	12.87	13.06	1.124+j5.037	0.973+j4.728	18.06	18.43	0.673+j3.987	0.611+j3.600	16.59	15.97	0.793+j4.329	0.987+j4.602
DEL MAR	DMA-115	115	11.65	10.76	1.221+j5.565	1.359+j6.960	17.34	14.35	0.660+j4.159	1.331+j6.696	15.63	13.29	0.777+j4.609	1.341+j6.902

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Noroeste**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
DERIVACIÓN	DER-115	115	8.71	6.82	1.864+j7.390	3.842+j13.509	11.30	8.19	1.394+j6.312	3.842+j13.332	11.28	8.19	1.396+j6.320	3.842+j13.332
DESEO	DSE-115	115	1.87	1.57	9.783+j34.174	20.742+j52.001	3.32	2.47	5.528+j21.303	16.672+j41.745	3.17	2.33	5.820+j22.316	17.496+j44.696
DYNATECH	DYN-115	115	12.42	12.72	1.673+j5.079	1.994+j4.663	18.14	18.06	1.138+j3.863	1.839+j3.736	18.11	18.05	1.140+j3.868	1.839+j3.736
EL FUERTE PENAL	FPE-115	115	2.84	1.64	7.636+j22.137	21.311+j71.272	4.28	3.31	4.368+j16.515	8.013+j30.622	4.25	3.30	4.383+j16.623	8.013+j30.630
EL DORADO	EDR-115	115	1.78	1.16	11.168+j35.667	18.537+j95.631	2.00	1.29	10.726+j34.884	18.563+j95.696	1.99	1.28	10.813+j35.079	18.555+j95.721
EL FRESNAL	EFR-115	115	7.68	6.10	0.934+j8.590	0.740+j15.527	9.19	6.71	0.623+j7.924	0.826+j16.636	9.18	6.71	0.626+j7.929	0.826+j16.636
EL FRESNAL	EFR-230	230	9.35	11.16	2.085+j14.050	0.492+j7.936	15.60	17.30	0.834+j9.324	0.533+j6.200	15.57	17.28	0.840+j9.341	0.533+j6.200
EL FUERTE	EFU-115	115	1.78	1.02	13.184+j34.787	35.803+j114.650	3.34	3.87	4.672+j21.351	0.808+j12.357	3.33	3.86	4.674+j21.421	0.808+j12.358
EL HABAL	HBL-115	115	11.59	10.84	1.094+j5.621	0.945+j6.837	17.39	14.53	0.533+j4.167	0.955+j6.590	15.54	13.37	0.656+j4.655	0.967+j6.800
EL HABAL	HBL-230	230	7.30	7.57	3.400+j17.882	1.725+j16.044	13.10	12.82	1.211+j11.080	1.694+j11.676	10.87	10.76	1.659+j13.330	1.702+j13.243
EL LLANO	LNO-115	115	3.71	2.69	6.032+j16.828	11.044+j36.896	4.71	3.14	4.822+j14.740	11.074+j37.063	4.67	3.13	4.865+j14.849	11.070+j37.106
EL MAYO	EMY-115	115	9.44	10.57	1.216+j6.930	0.525+j4.708	12.30	12.88	0.857+j5.874	0.556+j4.996	12.19	12.79	0.868+j5.926	0.556+j4.997
EL MAYO	EMY-230	230	6.12	6.52	3.855+j21.337	2.403+j17.434	8.32	8.13	2.594+j17.362	2.580+j18.163	8.21	8.05	2.640+j17.591	2.579+j18.169
EMPALME	EPM-115	115	9.82	8.80	1.384+j6.621	1.626+j9.135	11.19	9.73	1.287+j6.399	1.652+j9.442	11.18	9.72	1.287+j6.404	1.652+j9.442
EMPALME CICLO COMBINADO	ECC-230	230	12.96	15.67	1.061+j10.191	0.279+j5.931	14.86	17.34	0.893+j9.788	0.316+j6.422	14.84	17.32	0.896+j9.804	0.316+j6.422
EMPALME CICLO COMBINADO	ECC-400	400	9.38	10.92	2.406+j24.504	1.068+j15.930	11.12	12.38	1.563+j22.783	1.184+j17.173	11.06	12.33	1.582+j22.906	1.184+j17.173
ESCUINAPA	EPA-115	115	1.75	1.00	9.205+j36.898	27.876+j120.005	1.99	1.12	8.549+j35.630	27.836+j119.728	1.97	1.11	8.695+j36.039	27.857+j119.944
ESPERANZA	ESP-115	115	9.70	9.23	1.577+j6.663	0.955+j7.963	12.70	11.27	1.102+j5.645	0.980+j7.930	12.69	11.26	1.103+j5.650	0.980+j7.930
ESPERANZA	ESP-230	230	5.65	5.58	4.915+j22.974	3.264+j24.570	7.82	7.13	2.958+j18.454	3.326+j24.035	7.81	7.12	2.964+j18.476	3.326+j24.035
ESTACIÓN TORRES	ETO-115	115	3.66	2.34	5.873+j17.181	14.745+j46.487	4.29	2.69	5.459+j16.145	14.485+j45.162	4.28	2.69	5.461+j16.149	14.485+j45.162
ÉVORA	EVO-115	115	8.72	7.45	1.441+j7.472	1.426+j11.302	11.44	9.14	1.004+j6.302	1.545+j10.686	11.17	9.00	1.050+j6.453	1.544+j10.701
FÁTIMA	FMA-115	115	9.96	9.30	1.302+j6.539	1.263+j8.171	11.41	10.29	1.199+j6.289	1.315+j8.512	11.40	10.28	1.200+j6.294	1.315+j8.512
FISTERRA SAN FERNANDO MANIOBRAS	FIS-MAN	230	3.90	3.24	8.244+j33.031	13.290+j53.391	6.03	7.60	3.837+j23.936	0.521+j9.140	5.95	7.53	3.944+j24.213	0.520+j9.142
FUNDICIÓN	FUC-115	115	5.69	4.65	4.077+j10.933	4.312+j19.164	6.76	5.31	3.722+j10.135	4.470+j19.167	6.74	5.30	3.730+j10.166	4.470+j19.167
GRUPO MÉXICO ( SE MINA)	SMI-230	230	5.33	4.01	6.421+j24.064	11.429+j48.436	9.56	7.54	3.234+j14.938	5.329+j26.855	9.51	7.52	3.272+j15.012	5.329+j26.860
GUAMÚCHIL	GML-115	115	7.86	6.32	1.651+j8.288	2.232+j14.330	10.09	7.60	1.212+j7.138	2.343+j13.744	9.87	7.50	1.259+j7.288	2.342+j13.759
GUAMÚCHIL DOS	GMD-115	115	9.28	8.28	1.317+j7.030	0.942+j9.594	12.37	10.31	0.880+j5.840	1.068+j8.956	12.05	10.13	0.925+j5.990	1.066+j8.970
GUAMÚCHIL DOS	GMD-230	230	6.60	6.25	3.919+j19.739	3.517+j22.699	8.72	7.61	2.606+j16.545	3.684+j22.935	8.38	7.40	2.786+j17.199	3.678+j22.999
GUASAVE	GSV-115	115	5.55	3.94	2.850+j11.613	7.706+j25.320	6.57	4.50	2.540+j10.827	7.774+j25.086	6.44	4.44	2.615+j11.034	7.787+j25.158
GUAYMAS CERESO	GYC-115	115	14.95	14.22	0.643+j4.394	0.489+j5.290	17.27	15.65	0.553+j4.192	0.532+j5.647	17.25	15.64	0.554+j4.197	0.532+j5.647



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			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
GUAYMAS CERESO	GYC-230	230	10.04	10.42	1.901+j13.092	1.506+j12.442	12.02	11.88	1.514+j13.057	1.623+j13.035	12.00	11.87	1.517+j12.074	1.623+j13.035
HERMOSILLO AEROPUERTO	HAE-230	230	9.43	9.88	3.066+j13.749	2.538+j12.257	16.32	17.41	1.162+j8.874	0.963+j7.333	16.28	17.38	1.168+j8.897	0.963+j7.333
HERMOSILLO CERESO	HCE-115	115	12.63	12.30	1.527+j5.031	1.706+j5.511	18.53	17.29	1.001+j3.813	1.575+j4.585	18.50	17.27	1.003+j3.818	1.575+j4.585
HERMOSILLO CINCO	HLI-115	115	16.19	16.72	0.919+j3.997	0.545+j3.767	27.60	31.41	0.377+j2.620	0.146+j1.735	27.55	31.37	0.378+j2.624	0.146+j1.735
HERMOSILLO CINCO	HLI-230	230	11.52	12.51	2.362+j11.287	1.408+j9.052	18.09	17.73	1.005+j8.012	1.370+j8.615	18.04	17.70	1.010+j8.034	1.370+j8.615
HERMOSILLO CUATRO	HLC-115	115	17.13	17.95	0.898+j3.769	0.422+j3.426	27.31	27.55	0.447+j2.637	0.422+j2.613	27.25	27.51	0.448+j2.642	0.422+j2.613
HERMOSILLO CUATRO	HLC-230	230	10.22	11.38	2.780+j12.691	1.289+j9.327	16.52	16.85	1.190+j8.762	1.237+j8.399	16.48	16.82	1.196+j8.784	1.237+j8.399
HERMOSILLO DOS	HLD-115	115	11.93	9.69	1.224+j5.428	1.830+j9.346	18.48	14.41	0.697+j3.890	1.351+j7.210	18.45	14.40	0.699+j3.896	1.351+j7.210
HERMOSILLO LA MANGA	HMA-115	115	8.61	7.12	2.279+j7.368	4.514+j11.843	11.26	9.08	1.806+j6.230	4.013+j10.482	11.25	9.07	1.808+j6.235	4.013+j10.482
HERMOSILLO LOMAS	HLM-115	115	12.53	11.90	0.967+j5.210	0.558+j6.214	20.36	19.10	0.548+j3.546	0.653+j4.286	20.32	19.08	0.550+j3.551	0.653+j4.286
HERMOSILLO LOMAS	HLM-230	230	9.48	10.22	3.042+j13.676	1.817+j11.164	15.60	15.43	1.279+j9.275	1.690+j9.677	15.56	15.40	1.286+j9.300	1.690+j9.677
HERMOSILLO MISIÓN	HMI-115	115	8.54	8.05	1.854+j7.553	2.585+j8.904	15.82	14.44	0.918+j4.523	1.557+j5.782	15.80	14.43	0.920+j4.529	1.557+j5.782
HERMOSILLO NUEVE	HLN-115	115	15.84	16.62	1.153+j4.031	0.757+j3.618	24.85	25.27	0.660+j2.864	0.690+j2.752	24.81	25.24	0.661+j2.868	0.690+j2.752
HERMOSILLO OCHO	HLO-115	115	13.63	12.50	1.128+j4.738	1.304+j6.147	20.84	18.16	0.599+j3.453	1.145+j4.978	20.81	18.15	0.600+j3.458	1.145+j4.978
HERMOSILLO SEIS	HLS-115	115	11.09	9.62	1.377+j5.828	2.110+j8.574	17.91	15.73	0.764+j4.005	1.399+j5.651	17.89	15.72	0.765+j4.010	1.399+j5.651
HERMOSILLO SIETE	HLE-115	115	12.00	9.20	1.167+j5.409	2.058+j10.480	16.77	11.54	0.704+j4.297	2.062+j10.118	16.75	11.53	0.706+j4.303	2.062+j10.118
HERMOSILLO TRES	HLT-115	115	14.58	12.55	0.933+j4.458	0.839+j6.807	21.35	16.15	0.480+j3.387	0.904+j6.709	21.31	16.13	0.482+j3.393	0.904+j6.709
HERMOSILLO TRES	HLT-230	230	10.24	11.08	2.835+j12.649	1.637+j10.259	16.54	16.16	1.205+j8.747	1.636+j9.457	16.49	16.13	1.212+j8.772	1.636+j9.457
HERMOSILLO UNO	HLU-115	115	16.02	16.81	1.113+j3.991	0.717+j3.594	25.31	25.72	0.615+j2.819	0.641+j2.722	25.27	25.68	0.616+j2.824	0.641+j2.722
HERNANDO DE VILLAFANE	HVF-115	115	5.07	3.47	2.960+j12.754	8.502+j29.859	5.98	3.95	2.631+j11.927	8.578+j29.581	5.88	3.91	2.702+j12.125	8.588+j29.642
HIERRO DE SONORA	HDS-115	115	9.23	5.50	2.156+j6.861	6.375+j20.892	11.14	6.68	1.967+j6.252	5.445+j18.893	11.10	6.66	1.973+j6.276	5.445+j18.893
HIGUERA DE ZARAGOZA	HGZ-115	115	2.96	2.06	5.502+j21.785	17.477+j48.588	3.31	2.28	5.390+j21.421	17.482+j48.697	3.25	2.26	5.474+j21.782	17.500+j48.870
HORNILLOS	HRS-115	115	1.62	0.93	14.748+j38.139	39.586+j125.823	2.94	3.06	5.747+j24.146	3.850+j20.957	2.93	3.05	5.748+j24.213	3.850+j20.957
HUATABAMPO	HPO-115	115	6.20	4.56	2.212+j10.485	6.427+j21.305	7.58	5.25	1.845+j9.456	6.447+j21.451	7.54	5.24	1.857+j9.504	6.447+j21.451
HUITES	HTS-230	230	3.09	1.71	6.376+j42.517	36.044+j142.133	7.67	8.21	1.303+j19.001	0.481+j12.332	7.65	8.19	1.308+j19.056	0.481+j12.332
HUMAYA	HYA-115	115	5.58	2.91	2.251+j11.679	10.710+j43.239	8.58	8.85	1.127+j8.442	0.380+j6.912	8.41	8.71	1.172+j8.608	0.378+j6.922
IMURIS	IMR-115	115	3.40	2.85	5.784+j18.636	10.205+j29.326	4.35	3.37	4.260+j16.249	10.243+j29.646	4.31	3.36	4.317+j16.372	10.241+j29.661
INDUSTRIAL CABORCA	ICA-115	115	3.77	3.43	4.339+j17.078	1.484+j23.135	8.12	7.23	1.277+j8.902	1.071+j12.248	6.58	4.42	1.903+j10.939	4.635+j26.973
INDUSTRIAL CABORCA	ICA-230	230	2.51	2.70	14.918+j50.758	6.332+j42.033	5.16	4.43	4.231+j27.986	6.251+j41.743	4.63	4.06	5.426+j31.047	7.327+j44.189
INDUSTRIAL SAN CARLOS	ISC-115	115	3.92	3.64	5.124+j16.155	4.158+j20.485	5.09	4.36	3.497+j13.918	4.246+j21.140	5.05	4.34	3.558+j14.028	4.245+j21.143

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Noroeste

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
ISLA MUSALA	ISM-115	115	13.26	14.21	1.121+j4.882	0.555+j3.866	19.00	19.68	0.664+j3.787	0.505+j3.209	17.88	18.25	0.740+j4.017	0.560+j3.538
JAIME SEVILLA POYASTRO	JSP-115	115	11.20	11.54	1.292+j5.788	1.511+j5.084	15.07	15.65	0.850+j4.771	1.211+j3.998	14.09	13.90	0.964+j5.093	1.534+j4.970
JOSÉ ÁNGEL ESPINOZA	JAE-115	115	1.21	0.69	19.423+j51.310	54.369+j171.397	2.08	1.88	8.335+j34.146	11.640+j44.051	2.07	1.88	8.335+j34.206	11.640+j44.052
JUAN JOSÉ RÍOS	JJR-115	115	7.56	5.59	1.534+j8.642	4.484+j17.321	8.83	6.32	1.368+j8.160	4.507+j17.397	8.46	6.15	1.461+j8.509	4.550+j17.600
LA CARIDAD	LCD-230	230	7.62	5.91	2.899+j17.182	8.406+j31.737	9.21	6.78	2.271+j15.697	8.445+j31.814	9.20	6.78	2.275+j15.709	8.445+j31.814
LA CARIDAD FUNDICIÓN	LCF-230	230	10.14	9.96	1.520+j13.009	2.126+j13.751	12.03	11.28	1.122+j12.089	2.208+j14.322	12.02	11.27	1.125+j12.098	2.208+j14.322
LA CARIDAD GENERACIÓN	LCG-230	230	12.01	13.40	1.269+j10.982	0.494+j7.719	14.46	15.32	0.873+j10.061	0.576+j8.291	14.45	15.31	0.876+j10.070	0.576+j8.291
LA CHOYA	LCH-115	115	1.48	1.62	13.967+j42.654	5.156+j33.028	2.61	2.51	6.160+j27.273	6.110+j30.618	2.57	2.48	6.358+j27.747	6.098+j30.647
LA CRUZ	LCZ-115	115	1.08	0.67	19.881+j58.035	54.832+j165.096	1.22	0.75	19.154+j56.744	54.839+j164.838	1.21	0.74	19.331+j57.184	54.854+j165.057
LA HIGUERA	HGA-115	115	15.38	19.35	0.866+j4.230	0.089+j1.566	21.25	25.37	0.501+j3.401	0.107+j1.625	19.95	23.86	0.572+j3.616	0.106+j1.674
LA HIGUERA	HGA-230	230	9.28	11.27	2.845+j14.024	0.479+j6.334	13.29	15.04	1.492+j10.888	0.538+j6.644	12.42	14.15	1.729+j11.635	0.540+j6.740
LA HIGUERA	HGA-400	400	6.47	7.00	6.660+j35.063	2.420+j26.283	9.24	9.05	3.297+j27.306	2.669+j27.883	8.63	8.59	3.871+j29.182	2.686+j28.023
LA MISA	LMA-115	115	3.83	3.05	5.384+j16.492	11.144+j28.746	4.26	3.35	5.294+j16.289	11.192+j29.137	4.26	3.35	5.295+j16.294	11.192+j29.137
LA PINTA	LPN-115	115	1.57	1.47	13.600+j40.070	13.202+j48.977	2.56	2.08	7.002+j27.679	12.357+j46.564	2.51	2.06	7.197+j28.151	12.351+j46.623
LADRILLERAS	LAD-115	115	11.94	10.37	1.140+j5.443	1.407+j8.049	17.15	13.73	0.702+j4.202	1.554+j7.313	17.12	13.72	0.703+j4.207	1.554+j7.313
LEYVA SOLANO	LVS-115	115	4.61	3.37	2.983+j14.097	9.109+j28.767	5.32	3.80	2.735+j13.463	9.151+j28.692	5.21	3.75	2.819+j13.720	9.175+j28.813
LLANO BLANCO	LLB-115	115	2.57	1.79	7.233+j24.841	15.066+j57.986	3.71	2.33	4.667+j19.103	14.867+j52.605	3.49	2.11	5.078+j20.292	16.627+j59.920
LOS MOCHIS COLINAS	LMC-115	115	14.68	11.11	0.767+j4.458	1.597+j8.528	17.96	12.89	0.627+j4.017	1.595+j8.568	16.46	12.17	0.716+j4.379	1.626+j8.763
LOS MOCHIS DOS	LMD-115	115	10.49	7.45	0.977+j6.253	1.440+j13.824	12.54	8.58	0.821+j5.767	1.588+j13.643	12.01	8.38	0.874+j6.018	1.593+j13.709
LOS MOCHIS DOS	LMD-230	230	10.41	9.02	2.000+j12.595	3.306+j17.667	13.66	11.00	1.382+j10.606	3.371+j17.596	12.60	10.38	1.567+j11.490	3.400+j17.970
LOS MOCHIS INDUSTRIAL	LMI-115	115	16.09	13.10	0.600+j4.081	0.846+j6.694	19.95	15.28	0.458+j3.633	0.864+j6.812	18.01	14.19	0.552+j4.018	0.911+j7.052
LOS MOCHIS INDUSTRIAL	LMI-230	230	10.69	9.73	1.707+j12.303	2.352+j15.041	14.63	12.95	1.102+j9.923	2.105+j13.115	12.25	10.81	1.486+j11.831	2.483+j15.638
LOS MOCHIS TRES	LMT-115	115	14.12	11.49	0.855+j4.624	1.594+j7.540	17.10	13.31	0.724+j4.210	1.590+j7.603	15.71	12.54	0.810+j4.576	1.616+j7.788
LOS MOCHIS UNO	LMU-115	115	15.07	11.92	0.743+j4.344	1.414+j7.548	18.44	13.88	0.607+j3.914	1.412+j7.584	16.87	13.06	0.695+j4.274	1.440+j7.771
LOUISIANA	LOU-115	115	19.20	18.23	0.412+j3.434	0.265+j3.778	23.72	21.42	0.306+j3.064	0.274+j3.904	21.16	19.55	0.385+j3.430	0.290+j4.073
LOUISIANA	LOU-230	230	13.97	14.02	1.139+j9.436	1.019+j8.409	18.79	18.33	0.734+j7.739	0.981+j7.645	15.77	15.44	1.001+j9.205	1.083+j8.866
LUIS DONALDO COLOSIO	LDO-115	115	4.14	3.25	4.811+j15.297	8.210+j28.111	5.48	3.90	3.345+j12.909	8.241+j28.315	5.42	3.88	3.401+j13.040	8.239+j28.348
MANIOBRA FRESNILLO	MFN-115	115	1.57	1.27	14.535+j39.656	22.411+j69.536	2.21	1.58	9.708+j31.572	22.301+j68.974	2.18	1.57	9.906+j32.026	22.299+j69.064
MANIOBRA MINA COBRE DEL MAYO	MCM-115	115	2.54	1.91	13.763+j22.192	17.164+j49.652	3.02	2.59	12.344+j20.779	9.441+j35.542	3.02	2.59	12.352+j20.816	9.441+j35.542
MANIOBRAS APASCO	MAP-115	115	6.68	4.50	2.022+j9.733	5.806+j23.804	9.03	6.00	1.354+j7.971	4.879+j19.790	9.03	6.00	1.355+j7.975	4.879+j19.790

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Noroeste**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
MANIOBRAS ENH	ENH-MAN	115	6.43	4.54	3.229+j9.804	6.166+j22.481	8.10	6.44	2.690+j8.603	3.151+j15.770	8.10	6.44	2.691+j8.608	3.151+j15.770
MANIOBRAS MUNISOL	MUN-MAN	115	5.88	4.35	3.490+j10.745	7.013+j22.231	7.32	6.07	2.937+j9.543	3.584+j15.769	7.31	6.07	2.938+j9.548	3.584+j15.769
MARINA	MRN-115	115	10.42	8.50	1.309+j6.239	1.591+j10.530	14.99	10.86	0.742+j4.815	1.580+j10.283	13.65	10.23	0.864+j5.279	1.590+j10.492
MAZATLÁN AEROPUERTO	MAE-115	115	11.43	11.22	1.780+j5.530	1.781+j5.828	16.69	14.98	1.260+j4.191	1.752+j5.579	15.17	13.89	1.364+j4.617	1.766+j5.773
MAZATLÁN CENTRO	MAC-115	115	11.55	10.54	1.203+j5.622	1.633+j7.182	17.09	13.99	0.648+j4.225	1.600+j6.914	15.45	13.00	0.760+j4.667	1.610+j7.120
MAZATLÁN DOS	MZD-115	115	14.98	14.48	0.808+j4.358	0.340+j4.872	24.14	20.47	0.295+j3.011	0.311+j4.624	21.10	18.48	0.396+j3.439	0.324+j4.817
MAZATLÁN DOS	MZD-230	230	8.04	8.68	2.981+j16.249	0.850+j12.745	16.32	18.82	0.748+j8.920	0.206+j5.311	12.74	14.03	1.213+j11.400	0.370+j7.775
MAZATLÁN DOS	MZD-400	400	6.39	6.59	7.081+j35.436	3.596+j32.374	10.96	9.79	2.247+j23.075	3.427+j30.924	9.75	8.97	2.979+j25.881	3.600+j31.720
MAZATLÁN NORTE	MZN-115	115	12.15	11.16	1.163+j5.340	1.123+j6.801	18.39	15.01	0.601+j3.927	1.100+j6.540	16.44	13.84	0.720+j4.383	1.110+j6.746
MAZATLÁN ORIENTE	MZO-115	115	10.63	8.64	1.410+j6.082	2.218+j10.297	15.32	11.06	0.859+j4.688	2.187+j10.018	13.97	10.42	0.973+j5.135	2.198+j10.222
MAZATLÁN TECNOLÓGICO	MTE-115	115	10.35	8.71	1.554+j6.227	2.065+j9.796	14.78	11.16	1.009+j4.839	2.033+j9.514	13.52	10.51	1.121+j5.283	2.044+j9.718
MAZATLÁN UNO	MZU-115	115	13.07	11.41	0.962+j4.990	1.143+j7.175	19.99	15.31	0.433+j3.627	1.110+j6.898	17.83	14.15	0.539+j4.059	1.122+j7.095
MOCHIS CENTRO	MCE-115	115	14.12	11.36	0.957+j4.605	1.691+j7.726	17.15	13.18	0.825+j4.179	1.689+j7.764	15.78	12.44	0.913+j4.538	1.717+j7.950
MOCHIS LAS VILLAS	MLV-115	115	13.18	10.14	0.772+j4.977	1.568+j9.220	15.81	11.66	0.649+j4.573	1.565+j9.262	14.64	11.08	0.733+j4.935	1.593+j9.448
MOCUZARI	MRI-115	115	2.06	1.41	17.444+j27.033	27.134+j73.128	2.46	2.16	15.411+j25.371	8.641+j42.348	2.46	2.16	15.418+j25.407	8.641+j42.348
MORELOS-LA ATRAVESADA	MLA-115	115	4.57	3.76	4.313+j13.874	8.125+j22.716	5.10	4.13	4.224+j13.671	8.172+j23.106	5.10	4.13	4.225+j13.676	8.172+j23.106
NACUZARI	NRI-230	230	12.68	12.02	1.547+j10.355	2.447+j12.146	16.43	14.45	0.947+j8.839	2.485+j12.222	16.41	14.44	0.951+j8.851	2.485+j12.222
NAINARI	NNR-115	115	14.15	17.19	0.742+j4.632	2.866+j1.505	17.16	20.34	0.609+j4.213	2.785+j1.525	17.06	20.24	0.614+j4.236	2.785+j1.525
NAVOJOA	NVJ-115	115	9.72	7.67	1.343+j6.700	2.378+j12.032	12.52	9.17	1.000+j5.747	2.400+j11.880	12.43	9.13	1.010+j5.789	2.400+j11.880
NAVOJOA INDUSTRIAL	NVI-115	115	4.41	3.38	3.232+j14.695	7.462+j27.846	5.33	3.92	2.776+j13.422	7.355+j27.429	5.31	3.91	2.788+j13.481	7.355+j27.430
NAVOJOA NORTE	NVN-115	115	7.98	6.37	2.189+j8.025	3.080+j14.277	9.96	7.50	1.836+j7.101	3.107+j14.112	9.90	7.47	1.845+j7.140	3.107+j14.112
NAVOJOA ORIENTE	NVO-115	115	9.17	6.55	1.348+j7.116	2.578+j15.705	11.64	7.74	1.014+j6.190	2.608+j15.419	11.57	7.72	1.023+j6.230	2.608+j15.420
NAVOLATO	NTO-115	115	4.37	3.02	3.575+j14.769	9.574+j34.157	5.09	3.41	3.207+j13.992	9.587+j34.156	5.01	3.38	3.281+j14.197	9.594+j34.254
NOGALES	NGS-115	115	3.92	3.64	5.136+j16.153	4.159+j20.487	5.09	4.36	3.509+j13.919	4.248+j21.143	5.05	4.34	3.570+j14.028	4.247+j21.146
NOGALES AEROPUERTO	NGA-115	115	5.13	5.77	3.789+j12.378	0.702+j8.860	7.10	7.29	2.235+j10.041	0.791+j9.485	7.02	7.23	2.292+j10.155	0.789+j9.488
NOGALES AEROPUERTO	NGA-230	230	2.82	3.31	13.622+j45.059	2.541+j26.713	4.08	4.39	7.517+j35.031	2.934+j28.096	4.02	4.34	7.732+j35.488	2.932+j28.111
NOGALES NORTE	NGN-115	115	3.98	3.99	5.024+j15.918	2.728+j16.557	5.18	4.80	3.398+j13.679	2.829+j17.261	5.14	4.77	3.459+j13.789	2.828+j17.264
NOVILLO	NVL-115	115	2.00	0.85	6.590+j32.479	46.332+j160.470	4.42	5.37	1.661+j16.436	0.387+j6.538	4.42	5.37	1.661+j16.438	0.387+j6.538
NUEVO NOGALES	NNG-115	115	3.88	3.90	5.268+j16.292	2.427+j16.923	5.03	4.67	3.643+j14.045	2.581+j17.800	4.99	4.64	3.703+j14.154	2.580+j17.802
NUEVO PROGRESO	NPO-115	115	4.55	3.10	3.326+j14.208	6.691+j34.595	5.28	3.44	2.968+j13.509	6.759+j35.399	5.28	3.43	2.971+j13.515	6.759+j35.399

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Noroeste

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
OASIS	OAS-115	115	2.56	1.55	9.437+j24.203	23.748+j72.482	2.99	1.75	8.710+j22.862	23.747+j72.425	2.98	1.75	8.725+j22.901	23.745+j72.438
OBSERVATORIO	OBS-230	230	5.88	5.04	5.689+j21.864	6.827+j33.564	8.15	6.24	3.479+j17.589	7.054+j33.489	8.10	6.22	3.529+j17.692	7.055+j33.497
OCUCA	OCU-115	115	3.23	2.38	5.804+j19.711	10.667+j41.221	4.32	2.90	4.055+j16.396	10.728+j40.424	4.22	2.82	4.197+j16.788	10.935+j41.742
OREJANA MANIOBRAS	ORE-MAN	230	3.72	4.26	6.613+j35.084	2.186+j22.356	5.85	5.97	2.872+j24.820	2.415+j23.312	5.83	5.96	2.885+j24.884	2.415+j23.312
ORIENTE	ORI-115	115	1.50	1.43	14.197+j41.998	12.176+j49.409	2.67	2.16	6.315+j26.623	10.974+j45.217	2.62	2.14	6.515+j27.097	10.970+j45.259
OVIACHIC	OVI-115	115	2.26	1.60	13.939+j25.844	25.435+j61.058	2.94	2.86	10.163+j22.679	4.092+j25.132	2.94	2.86	10.165+j22.697	4.092+j25.132
PARQUE INDUSTRIAL HERMOSILLO NORTE	PIH-115	115	11.37	10.34	1.101+j5.735	1.099+j7.599	17.14	14.96	0.679+j4.207	1.229+j6.045	17.12	14.94	0.681+j4.212	1.229+j6.045
PARTICULAR MINA ALAMO DORADO	PAD-115	115	1.15	0.67	22.105+j53.303	57.430+j171.811	1.74	1.39	13.560+j39.847	22.071+j69.077	1.73	1.39	13.561+j39.917	22.071+j69.077
PARTICULAR MINA PIEDRAS VERDES	PVD-115	115	1.97	1.30	17.330+j28.906	29.071+j81.620	2.30	1.69	15.910+j27.521	19.300+j63.613	2.29	1.69	15.918+j27.557	19.300+j63.613
PARTICULAR SAUZAL	PSZ-115	115	0.72	0.41	31.004+j86.238	91.768+j289.203	1.33	1.79	11.231+j53.895	0.449+j12.224	1.33	1.79	11.228+j53.936	0.449+j12.224
PIAXTLA	PXT-115	115	1.65	1.00	12.527+j38.268	32.183+j114.187	1.88	1.12	11.840+j36.931	32.190+j113.929	1.86	1.11	12.005+j37.385	32.205+j114.148
PLANTA GUAYMAS DOS	PGD-115	115	12.90	11.40	0.799+j5.086	0.987+j7.278	14.81	12.55	0.710+j4.880	1.046+j7.647	14.80	12.54	0.711+j4.885	1.046+j7.647
PLANTA GUAYMAS DOS	PGD-230	230	10.53	10.64	1.790+j12.482	1.839+j12.860	12.64	12.16	1.410+j11.468	1.930+j13.349	12.62	12.15	1.413+j11.485	1.930+j13.349
PLAYA ENCANTO	PYE-115	115	1.55	1.51	13.674+j40.505	11.913+j45.217	2.64	2.21	6.586+j26.848	10.954+j42.260	2.59	2.19	6.782+j27.322	10.949+j42.313
PORTALES	PRT-115	115	13.45	11.67	1.107+j4.812	1.288+j7.168	19.68	15.92	0.640+j3.656	1.188+j6.266	19.65	15.91	0.642+j3.661	1.188+j6.266
PROGRESO	PRG-115	115	5.46	3.86	2.802+j11.825	8.201+j26.056	6.18	4.29	2.708+j11.512	8.229+j26.117	6.16	4.29	2.713+j11.533	8.229+j26.117
PROVIDENCIA	PRO-115	115	15.67	15.25	0.606+j4.193	1.337+j4.460	18.90	17.75	0.505+j3.830	1.332+j4.431	18.80	17.68	0.510+j3.852	1.332+j4.431
PUEBLITOS	PUE-115	115	11.58	10.23	1.087+j5.628	1.221+j8.004	17.46	14.60	0.665+j4.131	1.359+j6.541	17.43	14.59	0.667+j4.136	1.359+j6.541
PUEBLO NUEVO	PNO-115	115	10.89	8.17	1.036+j6.009	1.656+j12.060	14.24	9.86	0.708+j5.081	1.692+j11.719	14.12	9.82	0.717+j5.121	1.692+j11.719
PUEBLO NUEVO	PNO-230	230	7.95	10.03	2.904+j16.452	0.840+j6.173	11.93	14.03	1.658+j12.128	0.843+j6.192	11.78	13.86	1.689+j12.289	0.843+j6.193
PUERTO LIBERTAD	PLD-230	230	3.11	4.05	11.280+j41.199	1.302+j13.323	13.41	16.01	0.728+j10.866	0.258+j5.276	13.08	15.68	0.785+j11.136	0.258+j5.277
PUERTO PEÑASCO	PPA-115	115	1.56	1.65	13.590+j40.388	8.758+j34.261	2.85	2.66	5.777+j24.971	7.564+j30.084	2.79	2.63	5.975+j25.446	7.560+j30.127
QUILA	QLA-115	115	2.61	1.69	7.411+j24.307	6.159+j67.542	2.98	1.88	6.981+j23.510	6.185+j67.607	2.95	1.87	7.065+j23.709	6.178+j67.632
QUIROGA	QRG-115	115	7.96	6.07	2.308+j8.011	4.843+j15.484	10.24	7.39	1.851+j6.886	4.842+j14.670	10.24	7.39	1.852+j6.891	4.842+j14.670
RIO SONORA	RIS-115	115	15.91	16.72	1.136+j4.016	0.713+j3.597	24.79	25.20	0.668+j2.869	0.687+j2.761	24.75	25.17	0.669+j2.874	0.687+j2.761
ROCA FUERTE	RCF-115	115	11.21	8.90	1.011+j5.838	1.959+j10.536	12.81	9.81	0.916+j5.626	1.996+j10.869	12.80	9.81	0.917+j5.630	1.996+j10.869
ROLANDO GARCIA URREA	RGU-115	115	13.64	14.24	1.516+j4.627	1.377+j4.122	20.42	20.75	1.000+j3.434	1.266+j3.222	20.39	20.73	1.001+j3.439	1.266+j3.222
ROSARIO	ROS-115	115	2.43	1.44	6.689+j26.449	18.764+j81.629	2.82	1.62	6.058+j25.174	18.728+j81.360	2.77	1.61	6.197+j25.584	18.747+j81.570
RUIZ CORTINEZ	RCO-115	115	3.47	2.15	3.651+j18.807	11.757+j52.642	3.94	2.40	3.434+j18.232	11.789+j52.616	3.87	2.38	3.521+j18.519	11.817+j52.760
SAHUARO	SHO-115	115	2.08	1.78	10.340+j30.157	11.835+j46.629	3.19	2.34	5.988+j22.123	11.799+j46.285	3.12	2.31	6.171+j22.596	11.797+j46.381

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Noroeste**

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
SALVADOR ALVARADO	SAA-115	115	7.19	5.76	2.032+j9.007	3.257+j15.607	9.08	6.87	1.603+j7.879	3.370+j15.028	8.90	6.79	1.652+j8.034	3.369+j15.046
SAN CARLOS	SCR-115	115	5.34	3.52	2.862+j12.093	7.983+j30.834	5.99	3.88	2.764+j11.877	8.022+j31.165	5.99	3.88	2.765+j11.881	8.022+j31.165
SAN NICOLÁS	SNC-115	115	1.80	1.39	14.246+j33.918	25.411+j64.540	2.05	1.56	13.757+j32.916	25.390+j64.356	2.05	1.56	13.758+j32.921	25.390+j64.356
SAN RAFAEL	SRF-115	115	6.32	4.66	2.443+j10.219	5.670+j20.830	7.69	5.41	2.066+j9.264	5.755+j20.426	7.55	5.35	2.126+j9.440	5.759+j20.465
SAN RAFAEL AMPLIACIÓN	SRA-115	115	6.32	4.66	2.443+j10.219	5.670+j20.830	7.69	5.41	2.066+j9.264	5.755+j20.426	7.55	5.35	2.126+j9.440	5.759+j20.465
SANALONA	SLA-115	115	2.56	1.86	11.904+j22.998	17.930+j52.396	3.12	3.20	10.257+j21.052	3.148+j21.782	3.09	3.18	10.317+j21.266	3.136+j21.844
SANTA ANA	STA-115	115	7.29	7.43	2.456+j8.774	0.784+j8.740	11.34	10.00	1.074+j6.348	0.829+j8.996	11.09	9.84	1.127+j6.488	0.825+j9.050
SANTA ANA	STA-230	230	4.75	5.45	8.527+j26.603	2.514+j17.558	8.92	9.09	3.145+j16.077	2.439+j15.159	8.66	8.90	3.328+j16.531	2.450+j15.223
SANTA MARÍA	STM-115	115	5.28	3.67	2.920+j12.235	8.097+j27.827	6.23	4.18	2.602+j11.432	8.169+j27.574	6.12	4.13	2.675+j11.635	8.181+j27.641
SEIS DE ABRIL	SSA-115	115	4.13	5.36	4.307+j15.488	0.521+j5.143	9.34	10.51	1.099+j7.741	0.565+j5.131	8.76	9.95	1.247+j8.241	0.559+j5.270
SEIS DE ABRIL	SSA-230	230	2.52	3.12	15.222+j50.401	2.133+j22.815	6.22	6.17	3.457+j23.242	2.370+j23.755	5.80	5.85	3.998+j24.851	2.433+j24.215
SELECTA	SEL-115	115	1.84	1.22	11.304+j34.220	28.711+j86.905	2.09	1.36	10.794+j33.229	28.841+j87.152	2.09	1.36	10.796+j33.234	28.841+j87.152
SERI	SER-230	230	11.68	12.85	2.102+j11.176	1.106+j8.592	17.49	17.46	0.961+j8.296	1.195+j8.495	17.44	17.43	0.967+j8.319	1.195+j8.495
SERI	SER-400	400	6.88	7.21	4.787+j33.234	3.149+j30.091	9.04	8.73	2.419+j28.002	3.370+j31.669	9.01	8.71	2.435+j28.085	3.370+j31.669
SIEMPRE VIVA	SVV-115	115	2.80	2.77	6.298+j22.871	7.996+j23.313	5.54	4.67	2.681+j12.919	6.663+j19.496	5.22	4.40	2.900+j13.676	6.944+j20.722
SONOYTA	SNY-115	115	0.72	0.53	29.964+j86.948	50.502+j186.435	0.97	0.65	21.080+j72.116	49.247+j182.158	0.97	0.64	21.311+j72.575	49.243+j182.202
SUBESTACIÓN BAHÍA DE KINO	SBK-115	115	1.79	1.39	16.430+j33.177	25.411+j64.540	2.03	1.56	15.940+j32.178	25.390+j64.356	2.03	1.56	15.941+j32.183	25.390+j64.356
SUBESTACIÓN CANANEA	SCN-115	115	7.25	6.28	1.492+j9.042	0.835+j13.520	8.50	6.89	1.049+j8.527	0.920+j14.576	8.48	6.88	1.058+j8.544	0.920+j14.577
SUBESTACIÓN CANANEA	SCN-230	230	7.38	6.95	4.806+j17.351	3.610+j21.411	10.58	8.83	2.872+j13.504	3.883+j21.507	10.52	8.80	2.911+j13.581	3.883+j21.512
SUBESTACIÓN CANANEA SUR	CNS-230	230	6.59	5.34	5.632+j19.337	7.629+j33.807	9.47	7.23	3.359+j15.059	6.153+j28.946	9.42	7.21	3.396+j15.128	6.153+j28.950
SUBESTACIÓN CENTRO	SCE-230	230	5.88	4.57	6.099+j21.737	9.570+j41.270	9.23	7.09	3.407+j15.447	6.090+j29.360	9.19	7.07	3.445+j15.518	6.090+j29.364
SUBESTACIÓN CINCO	SBI-115	115	3.33	2.54	4.794+j19.371	14.999+j35.949	3.87	2.87	4.306+j18.364	15.025+j35.916	3.87	2.87	4.307+j18.368	15.025+j35.916
SUBESTACIÓN COLINAS	SCL-115	115	10.74	8.27	1.339+j6.038	2.385+j11.550	15.59	11.31	0.826+j4.612	2.023+j9.843	15.57	11.30	0.828+j4.617	2.023+j9.843
SUBESTACIÓN CONCENTRADORA	SCO-230	230	5.84	4.59	6.261+j21.873	9.540+j40.591	8.00	5.98	3.991+j17.823	8.064+j35.730	7.97	5.97	4.029+j17.890	8.064+j35.734
SUBESTACIÓN CUATRO	SBC-115	115	3.11	2.17	7.267+j20.094	13.110+j47.272	3.60	2.44	6.759+j19.103	13.239+j47.519	3.60	2.44	6.761+j19.107	13.239+j47.519
SUBESTACIÓN CULIACÁN POTENCIA	SCP-115	115	13.92	14.83	0.962+j4.672	0.374+j3.791	19.75	19.25	0.540+j3.659	0.427+j3.795	18.71	18.45	0.605+j3.856	0.422+j3.824
SUBESTACIÓN CULIACÁN POTENCIA	SCP-230	230	8.46	10.05	3.301+j15.353	0.920+j7.790	12.27	13.52	1.757+j11.771	0.974+j8.004	11.49	12.76	2.007+j12.555	0.974+j8.089
SUBESTACIÓN DIEZ	SBZ-115	115	3.02	1.96	6.717+j20.922	14.605+j55.822	3.50	2.21	6.228+j19.927	14.582+j55.717	3.50	2.21	6.230+j19.932	14.582+j55.717
SUBESTACIÓN DOS	SBD-115	115	6.16	5.28	3.106+j10.313	3.105+j16.047	7.56	6.11	2.615+j9.300	3.233+j16.293	7.56	6.11	2.617+j9.305	3.233+j16.293
SUBESTACIÓN ESDE	SES-230	230	6.22	4.92	5.824+j20.546	8.614+j37.595	8.77	6.54	3.544+j16.276	7.137+j32.734	8.73	6.53	3.582+j16.345	7.137+j32.738

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Noroeste**

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
SUBESTACIÓN GUAYMAS UNO	SGU-115	115	10.04	7.60	1.241+j6.494	2.675+j12.902	11.45	8.38	1.144+j6.277	2.714+j13.233	11.44	8.38	1.145+j6.281	2.714+j13.233
SUBESTACIÓN NUEVE	SBN-115	115	1.81	1.17	13.239+j34.278	28.077+j92.658	2.05	1.30	12.719+j33.305	28.207+j92.905	2.05	1.30	12.721+j33.310	28.207+j92.905
SUBESTACIÓN OCHO	SBO-115	115	1.77	1.19	13.164+j35.167	26.761+j88.434	2.00	1.33	12.668+j34.176	26.741+j88.250	2.00	1.33	12.670+j34.181	26.741+j88.250
SUBESTACIÓN PERICOS	SPE-115	115	4.34	2.88	4.305+j14.679	10.825+j36.798	5.04	3.25	3.978+j13.934	10.863+j36.699	4.98	3.22	4.039+j14.104	10.878+j36.805
SUBESTACIÓN PONIENTE	SPO-230	230	5.83	4.58	6.267+j21.894	9.561+j40.665	7.99	5.97	3.997+j17.844	8.085+j35.804	7.96	5.96	4.034+j17.910	8.085+j35.808
SUBESTACIÓN PUNTO P	SPP-115	115	9.51	8.74	1.675+j6.779	1.319+j8.842	12.41	10.70	1.200+j5.762	1.299+j8.659	12.40	10.69	1.202+j5.767	1.299+j8.659
SUBESTACIÓN SANTA INÉS	STI-115	115	3.80	2.81	5.665+j16.540	9.581+j34.695	4.46	3.20	5.178+j15.539	9.561+j34.512	4.46	3.20	5.180+j15.544	9.561+j34.512
SUBESTACIÓN SEIS	SBS-115	115	2.58	1.85	6.937+j24.742	20.033+j52.600	2.97	2.08	6.446+j23.737	20.058+j52.567	2.97	2.08	6.448+j23.742	20.058+j52.567
SUBESTACIÓN SIETE	SBE-115	115	4.53	3.15	4.591+j13.911	8.139+j33.114	5.39	3.59	4.107+j12.909	8.117+j33.009	5.39	3.59	4.108+j12.914	8.117+j33.009
SUBESTACIÓN TRES	SBT-115	115	4.65	3.34	4.409+j13.591	8.134+j30.139	5.54	3.82	3.927+j12.582	8.113+j29.955	5.54	3.82	3.928+j12.586	8.113+j29.955
SUBESTACIÓN UNO	SBU-115	115	2.41	1.71	9.429+j25.853	17.449+j59.287	2.76	1.92	8.936+j24.858	17.429+j59.103	2.76	1.92	8.938+j24.863	17.429+j59.103
SUBESTACIÓN VILLA UNIÓN	SVU-115	115	9.51	7.99	1.710+j6.769	2.549+j10.630	13.13	10.04	1.178+j5.435	2.519+j10.379	12.17	9.53	1.286+j5.860	2.533+j10.575
TAMAZULA	TAM-115	115	3.52	2.48	4.823+j18.240	14.142+j40.071	4.09	2.81	4.441+j17.293	14.227+j39.667	4.05	2.79	4.502+j17.468	14.230+j39.706
TASTIOTA	TST-115	115	2.14	1.47	9.907+j29.337	22.298+j70.340	2.45	1.64	9.398+j28.345	22.427+j70.587	2.45	1.64	9.399+j28.350	22.427+j70.587
TECAPAN	TPN-115	115	1.46	0.85	10.734+j44.058	32.279+j139.449	1.66	0.95	10.071+j42.791	32.239+j139.169	1.65	0.94	10.220+j43.200	32.260+j139.387
TECNOLÓGICO HERMOSILLO	TCG-115	115	10.35	8.06	1.324+j6.276	2.360+j11.742	14.16	10.10	0.877+j5.082	2.467+j11.163	14.15	10.09	0.879+j5.087	2.467+j11.163
TETABIATE	TTB-115	115	12.46	11.42	0.946+j5.246	2.091+j6.512	15.16	14.30	0.793+j4.752	1.709+j5.406	15.09	14.25	0.799+j4.775	1.709+j5.406
TOBARITO	TBR-115	115	6.42	4.51	2.440+j10.049	6.701+j22.557	7.56	5.25	2.268+j9.390	6.535+j21.393	7.54	5.25	2.273+j9.413	6.535+j21.393
TOPOLOBAMPO	TPO-115	115	6.95	3.58	2.258+j9.285	9.028+j35.172	8.02	4.00	2.116+j8.862	9.025+j35.209	7.71	3.93	2.209+j9.216	9.053+j35.396
TOPOLOBAMPO	TPO-230	230	7.99	6.71	2.167+j16.470	4.390+j24.829	12.99	13.03	0.987+j11.203	0.884+j10.552	8.99	7.42	1.990+j16.117	4.461+j25.288
TOPOLOBAMPO DOS	TPD-400	400	14.58	16.20	1.178+j15.794	0.402+j8.582	17.08	18.52	0.772+j14.856	0.452+j9.357	16.25	17.71	0.895+j15.609	0.451+j9.365
TOPOLOBAMPO TRES	TPT-230	230	22.12	23.08	0.427+j5.988	0.188+j4.213	26.72	27.00	0.294+j5.458	0.232+j4.481	24.18	24.79	0.363+j6.031	0.208+j4.583
TRES RÍOS	TSR-115	115	12.28	12.20	1.144+j5.285	1.135+j5.291	16.84	16.65	0.711+j4.279	0.864+j4.238	15.79	14.85	0.807+j4.553	1.147+j5.164
UNIÓN ENERGÉTICA DEL NOROESTE	UEN-230	230	7.89	8.35	2.295+j16.680	2.428+j14.444	14.13	15.42	0.829+j10.307	0.675+j6.992	14.11	15.41	0.834+j10.320	0.675+j6.992
URES	URE-115	115	1.96	1.18	9.518+j32.576	27.584+j97.221	2.23	1.32	9.035+j31.530	27.650+j97.122	2.23	1.32	9.037+j31.536	27.650+j97.122
VALLE DEL MAYO	VMY-115	115	4.57	3.11	3.274+j14.158	10.157+j33.431	5.42	3.53	2.910+j13.160	10.176+j33.455	5.40	3.53	2.921+j13.205	10.176+j33.455
VALLE DEL YAQUI	VDY-115	115	5.30	3.75	3.997+j11.878	8.205+j26.858	5.98	4.17	3.902+j11.571	8.233+j26.922	5.97	4.16	3.907+j11.592	8.233+j26.923
VALLE DEL YAQUI DOS	VYD-115	115	3.82	2.37	4.443+j16.793	14.765+j46.945	4.38	2.69	4.267+j16.138	14.599+j45.781	4.37	2.69	4.273+j16.161	14.599+j45.781
VENADILLO	VND-115	115	9.99	8.12	1.327+j6.510	1.619+j11.091	14.23	10.31	0.761+j5.074	1.615+j10.845	13.00	9.73	0.883+j5.547	1.626+j11.054
VICAM	VCM-115	115	4.09	2.81	5.216+j15.361	9.968+j37.340	4.58	3.10	5.130+j15.098	9.992+j37.432	4.58	3.10	5.133+j15.112	9.992+j37.432

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Noroeste**

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero ( $\Omega$ )											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	$Z_{m(0)}$	$Z_{m0}$	3F	1F	$Z_{m(0)}$	$Z_{m0}$	3F	1F	$Z_{m(0)}$	$Z_{m0}$
VILLA JUÁREZ	VJI-115	115	2.75	1.77	6.854+j23.134	18.084+j61.771	3.15	1.98	6.493+j22.261	18.133+j61.661	3.14	1.98	6.502+j22.297	18.133+j61.661
VILLAS DEL CEDRO	VCD-115	115	10.42	9.53	1.450+j6.202	2.255+j7.741	13.86	12.49	1.005+j5.173	1.893+j6.599	13.03	11.31	1.119+j5.494	2.270+j7.631
VILLAS DEL PITIC	VPI-115	115	14.31	15.00	1.386+j4.428	1.139+j3.935	21.75	22.17	0.876+j3.242	1.038+j3.046	21.72	22.14	0.877+j3.246	1.038+j3.046
VIÑEDOS	VNO-115	115	4.86	3.10	4.474+j12.905	10.738+j35.534	5.87	3.54	3.959+j11.802	10.734+j35.379	5.86	3.54	3.963+j11.814	10.734+j35.381

# Gerencia de Control Regional Norte



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## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Norte

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
ABASTOS	ABA-115	115	18.90	18.32	0.878+j3.401	0.905+j3.751	27.12	24.25	0.547+j2.637	0.898+j3.564	27.11	24.24	0.547+j2.638	0.898+j3.564
ABRAHAM GONZÁLEZ	ABG-115	115	4.39	3.69	3.335+j14.758	5.705+j23.155	6.84	5.73	2.130+j10.464	4.545+j16.282	6.84	5.73	2.130+j10.464	4.545+j16.282
ACEBUHES	ACB-115	115	1.78	1.21	6.115+j36.712	31.815+j85.451	2.00	1.34	5.833+j36.055	31.768+j85.196	2.00	1.34	5.833+j36.055	31.768+j85.196
AEROPUERTO	AEP-115	115	9.72	7.64	1.385+j6.690	4.185+j11.812	11.79	8.85	1.177+j6.084	4.193+j11.738	11.79	8.85	1.177+j6.084	4.193+j11.738
AGNICO EAGLE	AGE-115	115	2.03	2.28	8.508+j31.548	5.857+j21.174	2.55	2.75	7.052+j27.703	5.942+j21.852	2.55	2.75	7.052+j27.703	5.942+j21.852
ALAMOS	AMS-115	115	11.62	8.40	1.219+j5.584	2.890+j11.949	15.08	10.11	0.864+j4.765	2.867+j11.673	15.08	10.11	0.864+j4.766	2.867+j11.673
ALCALDES	ADS-115	115	2.49	1.90	7.107+j25.649	20.336+j47.564	2.99	2.27	6.243+j23.592	18.948+j44.286	2.99	2.27	6.243+j23.592	18.948+j44.286
ALDAMA	AMA-115	115	4.03	3.03	4.367+j15.894	12.434+j30.479	4.80	3.50	3.779+j14.749	12.339+j29.935	4.80	3.50	3.779+j14.749	12.339+j29.935
ALLENDE	ALL-115	115	15.22	11.90	1.098+j4.222	2.391+j7.659	20.61	14.71	0.752+j3.463	2.388+j7.477	20.60	14.70	0.752+j3.465	2.388+j7.477
ALTARES	ATR-115	115	0.69	0.48	37.070+j88.067	101.849+j198.111	0.77	0.53	36.643+j87.573	101.977+j198.646	0.77	0.53	36.659+j87.600	101.977+j198.646
ALTAVISTA	ALV-115	115	2.19	2.06	10.851+j28.318	9.168+j34.995	2.54	2.32	9.666+j27.085	9.286+j35.890	2.54	2.32	9.666+j27.085	9.286+j35.890
ÁLVARO OBREGÓN	AVO-115	115	4.23	3.74	4.527+j15.029	7.613+j20.570	5.00	4.28	3.901+j14.074	7.629+j20.703	5.00	4.28	3.901+j14.074	7.629+j20.703
AMADO NERVO	AMN-115	115	1.71	1.26	14.473+j36.113	27.625+j75.342	2.88	2.10	9.164+j23.686	19.429+j50.050	2.87	2.10	9.175+j23.710	19.429+j50.050
AMÉRICAS	AMR-115	115	10.01	8.74	1.668+j6.422	2.460+j9.304	13.33	10.70	1.089+j5.370	2.485+j9.220	13.33	10.70	1.089+j5.370	2.485+j9.220
ANAPRA	APR-115	115	7.38	5.98	1.532+j8.864	5.497+j14.562	8.82	6.94	1.311+j8.173	5.447+j14.200	8.82	6.94	1.311+j8.173	5.447+j14.200
ANDALUCÍA	AND-115	115	13.78	15.09	1.033+j4.707	0.420+j3.558	17.92	18.85	0.696+j4.017	0.410+j3.482	17.91	18.84	0.697+j4.018	0.410+j3.482
ANDALUCÍA	AND-230	230	10.32	10.93	2.652+j12.586	1.704+j10.653	15.54	15.97	1.309+j9.311	1.507+j8.669	15.52	15.96	1.312+j9.319	1.507+j8.669
ARCADIO	ADI-115	115	6.38	5.23	3.087+j9.941	6.726+j15.969	7.53	5.99	2.773+j9.297	6.718+j15.922	7.53	5.99	2.773+j9.299	6.718+j15.922
ARENALES	ARE-115	115	7.88	10.08	2.093+j8.161	0.428+j3.000	9.94	12.28	1.518+j7.192	0.450+j3.143	9.94	12.28	1.518+j7.192	0.450+j3.143
ARMENDÁRIZ	ARM-115	115	2.84	2.02	6.117+j22.524	17.146+j48.944	3.44	2.37	5.215+j20.567	16.806+j47.335	3.44	2.37	5.215+j20.567	16.806+j47.335
ASCENSIÓN	AON-115	115	4.79	4.87	2.440+j13.642	2.407+j13.024	5.40	5.40	2.260+j13.335	2.440+j13.334	5.40	5.40	2.260+j13.335	2.440+j13.334
ASCENSIÓN DOS	AOD-115	115	5.11	6.48	2.083+j12.819	0.263+j4.798	5.76	7.17	1.909+j12.539	0.298+j5.188	5.76	7.17	1.909+j12.539	0.298+j5.188
ASCENSIÓN DOS	AOD-230	230	2.94	3.31	7.008+j44.619	2.185+j30.248	3.37	3.68	6.203+j42.856	2.479+j32.445	3.37	3.68	6.204+j42.859	2.479+j32.445
AUMA	AUM-115	115	10.48	9.36	1.390+j6.178	1.998+j8.469	14.33	12.00	0.805+j5.031	1.878+j7.881	14.33	12.00	0.805+j5.031	1.878+j7.881
AUTOMOTIVE LIGHTING	ALI-115	115	14.31	13.30	0.980+j4.534	1.491+j5.588	20.73	19.68	0.668+j3.459	1.064+j3.992	20.73	19.68	0.668+j3.459	1.064+j3.992
AVALOS	AVL-115	115	14.94	17.13	1.039+j4.323	0.330+j2.829	22.85	25.05	0.467+j3.162	0.284+j2.358	22.85	25.05	0.467+j3.162	0.284+j2.358
AVALOS	AVL-230	230	9.40	10.63	3.507+j13.688	1.408+j9.550	16.87	18.35	1.277+j8.561	1.155+j6.542	16.87	18.35	1.277+j8.562	1.155+j6.542
AZTECAS	AZT-115	115	12.76	11.06	1.170+j5.071	2.669+j7.243	16.05	13.17	0.959+j4.447	2.668+j7.127	16.05	13.17	0.959+j4.447	2.668+j7.127
BABISAS	BBS-115	115	2.86	2.22	6.469+j22.277	15.077+j40.868	5.52	5.43	3.508+j12.748	2.719+j13.611	5.52	5.43	3.508+j12.748	2.719+j13.611
BACIS	BAC-115	115	0.52	0.34	52.721+j116.732	139.632+j291.700	0.57	0.38	52.284+j116.249	139.764+j292.241	0.57	0.38	52.300+j116.275	139.764+j292.241

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Norte

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>
BASASEACHIC	BAS-115	115	2.30	2.80	7.491+j27.924	2.521+j13.100	2.95	3.46	6.050+j23.964	2.604+j13.729	2.95	3.46	6.050+j23.964	2.604+j13.729
BATOPILAS	BAT-115	115	4.25	3.00	3.613+j15.207	8.005+j34.261	5.10	4.11	2.959+j14.005	5.118+j24.171	5.10	4.11	2.959+j14.006	5.118+j24.171
BENITO JUÁREZ	BJZ-115	115	5.64	4.53	2.555+j11.498	7.803+j19.043	6.56	5.15	2.299+j10.899	7.806+j18.945	6.56	5.15	2.299+j10.899	7.806+j18.945
BERMEJILLO	BER-115	115	3.96	2.34	3.605+j16.384	12.758+j49.931	5.12	3.01	3.114+j13.910	11.485+j42.906	5.12	3.01	3.114+j13.911	11.485+j42.906
BIOPAPEL	BIO-115	115	4.40	4.29	3.336+j14.730	3.766+j16.142	6.27	5.89	2.699+j11.330	3.694+j13.625	6.26	5.88	2.709+j11.355	3.694+j13.625
BISMARCK	BSM-115	115	1.66	1.22	12.950+j37.760	30.322+j77.382	1.84	1.35	12.766+j37.500	30.361+j77.778	1.84	1.35	12.766+j37.500	30.361+j77.778
BOLÍVAR	BLV-115	115	1.65	1.46	12.562+j38.179	18.996+j52.800	1.89	1.63	11.354+j36.939	19.125+j53.709	1.89	1.63	11.354+j36.939	19.125+j53.709
BOQUILLA	BOQ-115	115	2.77	2.13	6.768+j22.972	15.973+j42.649	5.61	5.69	3.503+j12.544	1.811+j12.339	5.61	5.69	3.503+j12.544	1.811+j12.339
BUENA VISTA	BUV-115	115	2.53	2.07	5.869+j25.537	14.873+j41.328	2.82	2.29	5.687+j25.230	14.907+j41.639	2.82	2.29	5.688+j25.231	14.907+j41.639
BUENOS AIRES	BUA-115	115	2.43	1.84	6.407+j26.604	18.769+j50.586	2.71	2.03	6.217+j26.252	18.789+j50.796	2.71	2.03	6.217+j26.252	18.789+j50.796
BÚFALO	BUF-115	115	2.45	1.81	8.385+j25.788	19.805+j52.144	3.87	2.94	5.978+j17.925	11.843+j34.648	3.87	2.94	5.978+j17.926	11.843+j34.648
CAHUISORI POTENCIA	CPO-115	115	2.42	3.13	7.102+j26.527	0.517+j9.037	3.13	3.89	5.663+j22.660	0.602+j9.715	3.13	3.89	5.663+j22.660	0.602+j9.715
CAHUISORI POTENCIA	CPO-230	230	1.31	1.57	24.756+j98.260	2.360+j52.047	1.71	1.94	19.073+j83.377	2.742+j55.553	1.71	1.94	19.073+j83.377	2.742+j55.553
CALIFORNIA	CFN-115	115	18.16	15.99	0.927+j3.536	1.377+j4.964	25.68	20.68	0.595+j2.781	1.375+j4.741	25.67	20.67	0.596+j2.782	1.375+j4.741
CAMARGO DOS	CGD-115	115	7.45	9.17	1.817+j8.731	0.230+j3.982	11.96	14.19	0.902+j6.041	0.280+j3.225	11.96	14.19	0.902+j6.041	0.280+j3.225
CAMARGO DOS	CGD-230	230	5.42	5.89	6.292+j23.695	2.085+j18.883	9.09	9.07	2.703+j15.837	2.099+j16.088	9.09	9.07	2.703+j15.838	2.099+j16.088
CAMARGO UNO	CGU-115	115	4.89	4.22	2.777+j13.286	3.931+j19.772	7.56	6.35	1.716+j9.513	3.535+j14.792	7.56	6.35	1.716+j9.513	3.535+j14.792
CANATLAN DOS	CND-115	115	4.67	5.38	2.708+j13.942	2.272+j8.355	5.37	6.04	2.384+j13.378	2.342+j8.816	5.36	6.03	2.395+j13.407	2.342+j8.816
CANATLAN DOS POTENCIA	CAP-115	115	4.92	5.91	2.420+j13.266	0.728+j6.719	5.66	6.63	2.098+j12.727	0.812+j7.214	5.65	6.62	2.108+j12.757	0.812+j7.214
CANATLAN DOS POTENCIA	CAP-230	230	3.30	3.48	7.602+j39.480	5.319+j33.720	4.00	4.02	6.117+j35.962	5.854+j35.609	3.99	4.01	6.159+j36.084	5.854+j35.610
CARICHIC	CRC-115	115	1.67	1.22	10.298+j38.432	33.460+j77.274	1.94	1.41	9.428+j36.380	32.067+j73.991	1.94	1.41	9.428+j36.380	32.067+j73.991
CAROLINAS	CAS-115	115	10.27	9.64	1.669+j6.248	2.223+j7.492	13.63	11.85	1.098+j5.245	2.252+j7.474	13.63	11.85	1.098+j5.245	2.252+j7.474
CARTAGENA	CAR-115	115	12.07	10.51	1.237+j5.361	2.486+j7.653	16.03	13.37	0.943+j4.457	2.308+j6.966	16.03	13.37	0.943+j4.457	2.308+j6.966
CASAS GRANDES	CGR-115	115	7.47	6.87	1.453+j8.763	2.378+j11.036	8.59	7.70	1.270+j8.404	2.405+j11.209	8.59	7.70	1.270+j8.405	2.405+j11.209
CATEDRAL	CAT-115	115	0.81	0.59	29.301+j77.034	68.177+j159.599	0.90	0.65	28.011+j75.994	68.335+j160.555	0.90	0.65	28.011+j75.994	68.335+j160.555
CATERPILLAR	CTP-115	115	11.16	10.27	1.427+j5.778	1.966+j7.230	14.04	12.47	1.115+j5.080	2.038+j6.908	14.03	12.47	1.117+j5.083	2.038+j6.908
CEBALLOS	CEB-115	115	1.04	0.62	25.772+j58.122	58.667+j184.424	2.14	1.33	13.329+j31.380	31.344+j92.022	2.14	1.33	13.329+j31.381	31.344+j92.022
CEMENTOS	CEM-115	115	9.18	7.47	1.870+j6.985	3.918+j11.597	11.36	8.85	1.521+j6.248	3.900+j11.282	11.35	8.85	1.522+j6.250	3.900+j11.282
CEMENTOS SAMALAYUCA	CMS-115	115	4.99	3.91	3.063+j12.938	9.360+j22.715	5.79	4.44	2.848+j12.288	9.284+j22.442	5.79	4.44	2.848+j12.288	9.284+j22.442
CERESO	CER-115	115	7.91	6.93	1.821+j8.193	4.342+j11.320	9.47	8.07	1.607+j7.542	4.266+j11.047	9.47	8.07	1.607+j7.542	4.266+j11.047

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Norte**

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
CERESO JUÁREZ	CEJ-115	115	7.24	6.17	2.019+j8.946	5.138+j13.129	8.60	7.15	1.805+j8.295	5.062+j12.856	8.60	7.15	1.805+j8.295	5.062+j12.856
CERROS BLANCOS	CRB-115	115	1.48	1.03	11.922+j43.274	41.659+j96.147	1.65	1.14	11.683+j42.769	41.670+j96.153	1.65	1.14	11.683+j42.769	41.670+j96.153
CHALCHIHUITES	CHL-115	115	1.00	0.66	22.969+j62.361	70.998+j153.365	1.69	1.18	14.133+j40.713	38.907+j91.734	1.69	1.18	14.144+j40.736	38.907+j91.734
CHAMIZAL	CZL-115	115	14.76	13.80	0.947+j4.398	1.373+j5.346	20.45	19.06	0.669+j3.509	1.057+j4.261	20.45	19.06	0.669+j3.509	1.057+j4.261
CHARCOS	CHA-115	115	0.70	0.47	30.190+j90.543	99.584+j215.575	1.02	0.71	21.596+j68.246	66.775+j153.374	1.02	0.71	21.608+j68.269	66.775+j153.374
CHAVEÑA	CVA-115	115	13.09	11.74	1.080+j4.955	1.995+j6.614	17.24	14.85	0.825+j4.155	1.879+j6.057	17.24	14.85	0.825+j4.155	1.879+j6.057
CHÁVEZ UNO	CZU-115	115	9.69	8.96	1.661+j6.651	1.632+j8.374	12.66	11.09	1.138+j5.656	1.613+j8.092	12.66	11.09	1.138+j5.657	1.613+j8.092
CHIHUAHUA NORTE	CUN-115	115	12.31	13.81	1.349+j5.221	0.551+j3.708	16.98	17.76	0.788+j4.228	0.587+j3.711	16.98	17.76	0.788+j4.228	0.587+j3.711
CHIHUAHUA NORTE	CUN-230	230	8.41	8.38	3.888+j15.310	3.137+j16.012	13.29	11.68	1.801+j10.842	3.291+j15.284	13.29	11.68	1.801+j10.842	3.291+j15.284
CHIHUAHUA NORTE	CUN-230B	230	8.25	8.15	3.934+j15.604	3.318+j16.753	12.94	11.27	1.846+j11.136	3.477+j16.041	12.94	11.27	1.846+j11.137	3.477+j16.041
CHIHUAHUA PLANTA	CUP-115	115	11.82	11.27	1.468+j5.422	1.779+j6.281	16.38	14.33	0.879+j4.372	1.780+j6.153	16.38	14.33	0.879+j4.372	1.780+j6.153
CHIHUAHUA PONIENTE	CPN-115	115	8.95	7.51	1.888+j7.171	3.732+j11.202	12.85	10.52	1.230+j5.550	3.045+j9.008	12.85	10.52	1.230+j5.550	3.045+j9.008
CHUVISCAR	CHU-115	115	13.92	16.04	1.137+j4.633	0.346+j2.972	20.69	23.32	0.556+j3.486	0.203+j2.351	20.69	23.32	0.556+j3.486	0.203+j2.351
CHUVISCAR	CHU-230	230	8.58	9.28	3.656+j15.030	1.860+j12.308	14.88	18.32	1.380+j9.718	0.374+j4.349	14.88	18.32	1.380+j9.718	0.374+j4.349
CIENÉGA	CIE-115	115	0.53	0.35	52.406+j114.040	137.638+j287.015	0.58	0.39	51.969+j113.564	137.769+j287.555	0.58	0.39	51.985+j113.590	137.769+j287.556
CIÉNEGA DOS	CID-115	115	0.54	0.36	51.576+j112.586	135.755+j282.136	0.59	0.39	51.139+j112.109	135.887+j282.676	0.59	0.39	51.155+j112.135	135.887+j282.676
CLID	CLI-115	115	6.64	5.53	2.300+j9.725	7.217+j14.612	8.45	8.90	1.717+j8.475	1.665+j7.174	8.42	8.87	1.726+j8.503	1.665+j7.174
COLEGIO	CLG-115	115	11.93	10.19	1.300+j5.412	2.782+j8.053	18.11	14.55	0.851+j3.941	2.298+j6.674	18.11	14.55	0.851+j3.941	2.298+j6.674
COLINA	CLN-115	115	2.67	1.98	7.597+j23.698	18.323+j47.387	4.91	4.48	4.602+j14.160	4.696+j18.491	4.91	4.48	4.602+j14.160	4.696+j18.491
COLONIA JUÁREZ	COJ-115	115	2.73	2.10	5.780+j23.581	17.706+j43.148	3.05	2.32	5.604+j23.262	17.730+j43.378	3.05	2.32	5.604+j23.263	17.730+j43.378
COMPLEJO DE SEGURIDAD	CSG-115	115	9.07	7.88	1.802+j7.095	3.288+j10.241	12.03	9.84	1.216+j5.948	3.181+j9.679	12.03	9.84	1.216+j5.948	3.181+j9.679
COMPLEJO INDUSTRIAL	CIN-115	115	10.21	9.72	1.753+j6.264	2.230+j7.253	13.56	11.99	1.169+j5.257	2.249+j7.191	13.56	11.99	1.169+j5.257	2.249+j7.191
COMPLEJO LALA	CLA-115	115	12.88	9.78	1.304+j4.987	3.222+j9.548	16.84	11.83	0.958+j4.229	3.219+j9.366	16.84	11.82	0.959+j4.231	3.219+j9.366
COMPONENTES	COM-115	115	10.92	11.02	1.616+j5.861	1.499+j5.811	14.67	13.76	1.045+j4.868	1.529+j5.792	14.67	13.76	1.045+j4.868	1.529+j5.792
CONCHEÑO	CON-115	115	1.91	2.05	9.846+j33.253	8.241+j26.510	2.38	2.44	8.298+j29.501	8.330+j27.193	2.38	2.44	8.299+j29.501	8.330+j27.193
CONCORDIA	CCD-115	115	12.66	12.98	1.231+j5.098	0.982+j4.856	18.25	17.76	0.647+j3.950	0.860+j4.267	18.25	17.76	0.647+j3.950	0.860+j4.267
CONEJOS MÉDANOS	CJM-115	115	2.85	3.03	5.257+j22.722	3.780+j18.731	3.33	3.75	4.720+j21.397	2.215+j14.466	3.33	3.75	4.720+j21.397	2.215+j14.466
CORONEL	CRN-115	115	8.44	5.87	1.624+j7.693	4.463+j17.666	10.43	6.84	1.239+j6.892	4.458+j17.501	10.43	6.84	1.240+j6.893	4.458+j17.501
CREEL	CRL-115	115	1.10	0.89	17.242+j57.947	40.642+j94.023	1.34	1.04	15.498+j52.401	40.845+j94.027	1.34	1.04	15.498+j52.401	40.845+j94.027
CUADRO DE MANIOBRAS BISMARCK	CMB-115	115	2.44	2.05	6.611+j26.395	15.889+j40.008	2.71	2.26	6.429+j26.126	15.928+j40.403	2.71	2.26	6.430+j26.126	15.928+j40.403

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Norte**

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>
CUADRO DE MANIOBRAS CEMENTOS	CMC-115	115	5.29	4.19	2.874+j12.214	8.594+j20.974	6.16	4.77	2.659+j1.563	8.518+j20.701	6.16	4.77	2.659+j1.563	8.518+j20.701
CERRO DEL MERCADO	CME-115	115	8.38	8.20	1.711+j7.738	2.772+j8.036	10.07	9.60	1.411+j7.114	2.810+j7.922	10.03	9.57	1.422+j7.142	2.810+j7.922
CUADRO DE MANIOBRAS ELECTROLUX	CME-115	115	15.98	17.27	0.812+j4.075	0.593+j3.247	20.80	21.18	0.596+j3.460	0.614+j3.301	20.80	21.18	0.596+j3.460	0.614+j3.301
CUADRO DE MANIOBRAS FOX	CMF-115	115	10.01	7.98	1.358+j6.494	4.063+j11.126	12.18	9.27	1.148+j5.883	4.069+j11.042	12.18	9.27	1.148+j5.883	4.069+j11.042
CUADRO DE MANIOBRAS SAN FRANCISCO	CMF-115	115	2.69	3.05	7.773+j23.432	2.538+j15.949	3.16	3.47	6.601+j22.136	2.655+j16.840	3.16	3.47	6.601+j22.136	2.655+j16.840
CUADRO DE MANIOBRAS INTERNACIONAL WIRE	CMI-115	115	7.84	7.55	1.866+j8.261	3.409+j8.901	10.12	10.27	1.345+j7.090	1.936+j6.679	10.08	10.24	1.355+j7.118	1.936+j6.679
CUADRO DE MANIOBRAS LA PARRILLA	CMP-115	115	1.45	1.05	17.601+j42.213	34.475+j92.782	2.75	1.99	9.543+j24.804	20.959+j52.892	2.75	1.99	9.554+j24.828	20.959+j52.892
CUADRO DE MANIOBRAS NAICA	NAC-115	115	1.54	1.01	18.991+j38.663	37.321+j105.961	3.49	2.51	9.551+j18.642	16.711+j42.376	3.49	2.51	9.551+j18.642	16.711+j42.376
CUADRO DE MANIOBRAS NAICA	CMN-115B	115	1.54	1.01	18.991+j38.663	37.321+j105.961	3.49	2.51	9.551+j18.642	16.711+j42.376	3.49	2.51	9.551+j18.642	16.711+j42.376
CUADRO DE MANIOBRAS VITROMEX	VIM-115	115	12.40	12.59	1.294+j5.194	1.245+j5.065	17.80	17.06	0.712+j4.041	1.150+j4.521	17.80	17.06	0.712+j4.041	1.150+j4.521
CUATRO SIGLOS	CSS-115	115	10.55	8.65	1.604+j6.087	3.622+j9.886	13.63	10.61	1.290+j5.202	3.446+j9.382	13.63	10.61	1.290+j5.202	3.446+j9.382
CUAUHTÉMOC	CHC-115	115	6.78	7.02	2.670+j9.422	2.994+j8.360	8.68	8.76	2.039+j8.158	2.762+j7.755	8.68	8.76	2.039+j8.158	2.762+j7.755
CUAUHTÉMOC DOS	CHD-115	115	8.21	10.99	2.003+j7.837	0.108+j2.081	10.41	13.52	1.430+j6.867	0.129+j2.224	10.41	13.52	1.430+j6.867	0.129+j2.224
CUAUHTÉMOC DOS	CHD-230	230	4.94	6.27	7.031+j25.943	0.839+j10.266	6.66	8.02	4.539+j21.446	0.949+j10.909	6.66	8.02	4.539+j21.446	0.949+j10.909
CUESTA	CUE-115	115	13.86	12.37	1.130+j4.655	2.148+j6.252	18.19	15.50	0.867+j3.920	1.984+j5.833	18.19	15.50	0.867+j3.920	1.984+j5.833
DELICIAS	DEL-115	115	6.93	6.48	2.363+j9.284	3.159+j11.210	10.05	9.17	1.295+j7.147	2.505+j9.062	10.05	9.17	1.295+j7.147	2.505+j9.062
DELICIAS DOS	DLD-115	115	2.42	1.54	7.483+j26.451	20.334+j71.935	10.20	8.77	1.073+j7.079	4.414+j9.974	10.20	8.77	1.073+j7.079	4.414+j9.974
DELPHI	DPH-115	115	12.66	10.65	1.331+j5.072	2.756+j7.760	16.36	13.11	1.010+j4.350	2.723+j7.352	16.35	13.10	1.011+j4.352	2.723+j7.352
DELPHI	DLP-115	115	14.24	13.10	0.979+j4.558	1.510+j5.766	20.86	19.94	0.664+j3.437	1.046+j3.890	20.86	19.94	0.664+j3.437	1.046+j3.890
DIAGONAL	DGN-115	115	10.70	8.66	1.405+j6.046	3.186+j10.129	13.49	10.37	1.066+j5.307	3.207+j9.852	13.49	10.37	1.066+j5.309	3.207+j9.852
DINAMITA	DIN-115	115	4.51	2.90	3.558+j14.289	11.316+j37.625	5.40	3.39	3.146+j13.143	11.121+j35.897	5.40	3.39	3.147+j13.144	11.121+j35.897
DIVISADERO	DIV-115	115	0.83	0.64	24.412+j76.188	62.597+j139.689	0.98	0.73	22.496+j70.675	62.807+j139.690	0.98	0.73	22.496+j70.675	62.807+j139.690
DIVISIÓN DEL NORTE	DDN-115	115	13.00	14.59	1.265+j4.947	0.548+j3.505	18.57	19.35	0.700+j3.871	0.576+j3.430	18.57	19.35	0.700+j3.871	0.576+j3.430
DIVISIÓN DEL NORTE	DDN-230	230	8.40	8.38	3.770+j15.357	3.195+j15.997	13.58	11.92	1.645+j10.626	3.280+j14.994	13.58	11.92	1.645+j10.626	3.280+j14.994
DUNAS	DUN-115	115	3.99	2.93	4.092+j16.150	13.573+j32.286	4.57	3.30	3.877+j15.500	13.497+j32.013	4.57	3.30	3.877+j15.500	13.497+j32.013
DURANGO DOS	DGD-115	115	11.08	13.63	1.097+j5.894	0.260+j2.651	13.91	16.88	0.783+j5.192	0.307+j2.490	13.83	16.80	0.793+j5.221	0.307+j2.491
DURANGO DOS	DGD-230	230	7.64	8.57	3.034+j17.110	1.686+j11.710	10.10	10.83	1.992+j14.330	1.777+j11.449	10.00	10.75	2.030+j14.462	1.777+j11.454
DURANGO UNO	DGU-115	115	9.57	9.90	1.384+j6.796	2.006+j5.986	11.57	11.63	1.117+j6.211	2.031+j5.959	11.52	11.59	1.127+j6.239	2.031+j5.960
DURAPLAY	DUR-115	115	2.17	2.04	10.923+j28.549	9.416+j35.560	2.52	2.29	9.738+j27.316	9.535+j36.455	2.52	2.29	9.738+j27.316	9.535+j36.455
EJERCITO	EJE-115	115	11.46	9.75	1.333+j5.637	2.857+j8.484	15.90	12.86	0.970+j4.489	2.546+j7.493	15.90	12.86	0.970+j4.489	2.546+j7.493

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Norte

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>
EL CAPULIN	ECU-115	115	3.82	3.02	3.929+j16.937	10.977+j29.462	4.30	3.35	3.740+j16.565	10.997+j29.620	4.30	3.35	3.740+j16.566	10.997+j29.620
EL PERÚ	PER-115	115	10.89	8.14	1.487+j5.913	3.900+j11.678	13.82	9.67	1.136+j5.159	3.897+j11.507	13.82	9.67	1.137+j5.161	3.897+j11.507
EL PILAR	ELP-115	115	2.84	1.94	6.017+j22.591	16.552+j53.647	3.39	3.02	5.070+j20.911	5.617+j29.010	3.39	3.02	5.071+j20.912	5.617+j29.010
EL SALTO	ESL-115	115	1.27	0.80	19.219+j48.817	65.504+j130.319	1.39	0.87	19.202+j48.928	65.529+j130.297	1.39	0.87	19.211+j48.947	65.529+j130.297
EL SAUCITO	SAU-115	115	9.33	7.36	1.866+j6.870	3.289+j12.485	12.23	8.85	1.285+j5.831	3.313+j12.398	12.23	8.85	1.285+j5.831	3.313+j12.398
EL SAUZ	ESZ-115	115	3.14	2.45	8.273+j19.472	14.809+j36.080	3.65	2.77	7.707+j18.489	14.845+j36.083	3.65	2.77	7.707+j18.489	14.845+j36.083
EL TRÉBOL	ETB-115	115	2.29	2.44	6.305+j28.312	3.938+j23.470	3.45	3.67	4.267+j20.721	2.596+j17.163	3.45	3.67	4.267+j20.721	2.596+j17.163
EL VERGEL	ELV-115	115	8.12	5.22	1.708+j7.998	4.835+j21.286	10.12	6.14	1.335+j7.090	4.778+j20.721	10.12	6.14	1.336+j7.092	4.778+j20.721
EMILIANO ZAPATA	EZT-115	115	3.86	3.00	5.442+j16.334	13.251+j29.295	4.39	3.35	5.195+j15.800	13.255+j29.347	4.39	3.35	5.196+j15.802	13.255+j29.347
ENCINO	ENO-230	230	11.61	14.83	2.735+j11.102	0.349+j4.442	24.22	29.97	0.718+j5.988	0.193+j2.654	24.22	29.97	0.718+j5.988	0.193+j2.654
ENCINO	ENO-400	400	5.88	6.70	7.606+j38.545	1.558+j25.966	9.65	10.31	2.331+j26.221	0.990+j21.522	9.65	10.31	2.331+j26.222	0.990+j21.522
ENCINO DOS	END-230	230	11.67	14.91	2.717+j11.050	0.341+j4.424	23.98	29.06	0.727+j6.048	0.292+j2.989	23.98	29.06	0.727+j6.048	0.292+j2.989
ESCALÓN	ESC-115	115	1.08	0.71	22.723+j57.139	58.258+j148.416	2.19	1.38	12.815+j30.851	30.981+j86.646	2.19	1.38	12.815+j30.852	30.981+j86.646
ESCUADRÓN 201	EDU-115	115	6.49	4.54	2.649+j9.877	8.154+j22.061	7.76	5.21	2.297+j9.127	8.152+j21.879	7.76	5.21	2.298+j9.128	8.152+j21.879
FELIPE ANGELES	FAS-115	115	14.52	12.75	0.951+j4.472	1.424+j6.397	19.19	16.10	0.720+j3.738	1.316+j5.891	19.19	16.10	0.720+j3.738	1.316+j5.891
FELIPE PESCADOR	FPR-115	115	7.86	7.52	1.698+j8.273	3.331+j9.101	9.26	8.63	1.466+j7.748	3.355+j9.149	9.23	8.60	1.476+j7.776	3.355+j9.149
FLEXTRONICS	FLE-115	115	13.87	13.15	0.898+j4.703	1.741+j5.402	17.61	15.69	0.686+j4.091	1.761+j5.461	17.61	15.69	0.686+j4.091	1.761+j5.461
FORD	FRD-115	115	10.86	11.03	1.604+j5.900	1.494+j5.732	14.57	13.77	1.033+j4.907	1.524+j5.713	14.57	13.77	1.033+j4.907	1.524+j5.713
FORD MANIOBRAS	FOM-115	115	11.21	11.59	1.550+j5.716	1.295+j5.280	15.14	14.56	0.979+j4.723	1.325+j5.261	15.14	14.56	0.979+j4.723	1.325+j5.261
FOXCONN DOS	FXD-115	115	4.70	2.23	2.414+j13.911	24.117+j56.755	5.45	2.50	2.191+j13.222	24.066+j56.391	5.45	2.50	2.191+j13.222	24.066+j56.391
FRANCISCO VILLA	FVL-115	115	9.32	10.28	1.493+j6.966	0.517+j5.209	14.54	16.07	0.611+j4.985	0.180+j3.605	14.54	16.07	0.611+j4.985	0.180+j3.605
FRANCISCO VILLA	FVL-230	230	6.83	7.23	5.082+j18.755	2.682+j16.444	13.93	15.09	1.491+j10.377	0.809+j8.091	13.93	15.09	1.491+j10.377	0.809+j8.091
FRANCISCO ZARCO	FZA-115	115	7.52	4.75	1.924+j8.623	5.188+j23.703	9.59	5.81	1.526+j7.461	4.993+j21.976	9.59	5.81	1.526+j7.462	4.993+j21.976
FRANCKE	FRC-115	115	23.68	27.63	0.621+j2.734	0.197+j1.607	37.08	41.00	0.291+j1.948	0.184+j1.420	37.06	40.98	0.291+j1.949	0.184+j1.420
FUENTES	FTS-115	115	10.69	8.80	1.560+j6.012	3.539+j9.685	14.38	11.23	1.198+j4.934	3.258+j8.849	14.38	11.23	1.198+j4.934	3.258+j8.849
FUENTES MARES	FMR-115	115	13.06	12.84	1.184+j4.946	0.981+j5.355	19.08	17.44	0.610+j3.778	0.938+j4.840	19.08	17.44	0.610+j3.778	0.938+j4.840
FUNDILAG	FDL-115	115	10.14	8.96	1.596+j6.353	2.686+j8.746	12.60	10.75	1.283+j5.655	2.745+j8.401	12.59	10.74	1.284+j5.657	2.745+j8.401
GALEANA	GNA-115	115	3.17	2.34	4.948+j20.322	16.389+j40.286	3.58	2.60	4.735+j19.863	16.406+j40.354	3.58	2.60	4.735+j19.864	16.406+j40.354
GAMMON LAKE	GML-115	115	1.83	1.93	9.453+j34.984	9.381+j29.177	2.27	2.29	7.987+j31.148	9.466+j29.856	2.27	2.29	7.987+j31.148	9.466+j29.856
GASASEACHIC	GAS-115	115	1.94	2.09	9.715+j32.903	7.834+j25.584	2.41	2.49	8.171+j29.146	7.922+j26.267	2.41	2.49	8.171+j29.146	7.922+j26.267

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Norte**

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
GAVILÁN	GAV-115	115	1.44	1.01	12.501+j44.431	42.301+j97.039	1.61	1.12	12.210+j43.791	42.299+j96.861	1.61	1.12	12.211+j43.791	42.299+j96.861
GÉMINIS	GEM-115	115	13.07	11.48	1.203+j4.934	2.550+j6.834	16.45	13.66	1.000+j4.325	2.557+j6.770	16.45	13.66	1.000+j4.325	2.557+j6.770
GENERAL TRÍAS	GTR-115	115	4.54	3.55	3.433+j14.210	10.455+j25.103	5.45	4.08	2.842+j13.107	10.449+j24.986	5.45	4.08	2.842+j13.107	10.449+j24.986
GÓMEZ PALACIO	GPL-115	115	24.22	30.16	0.600+j2.674	0.078+j1.144	38.29	46.19	0.271+j1.888	0.065+j0.957	38.27	46.16	0.271+j1.889	0.065+j0.957
GÓMEZ PALACIO	GPL-230	230	11.12	12.41	2.496+j11.680	0.739+j8.291	18.80	20.62	0.960+j7.708	0.517+j5.870	18.79	20.61	0.962+j7.714	0.517+j5.870
GRANJERO	GJO-115	115	12.87	11.79	1.168+j5.025	2.831+j6.108	16.32	14.12	0.935+j4.377	2.812+j6.079	16.32	14.12	0.935+j4.377	2.812+j6.079
GRUPO ESSEX MÉXICO	GEX-115	115	9.40	8.16	1.851+j6.815	3.229+j9.787	11.62	9.83	1.513+j6.101	3.161+j9.239	11.61	9.83	1.514+j6.103	3.161+j9.239
GUACHOCHI	GCH-115	115	0.66	0.49	28.809+j96.594	82.068+j190.674	0.74	0.54	27.547+j95.372	82.225+j191.628	0.74	0.54	27.547+j95.372	82.225+j191.628
GUADALUPE VICTORIA	GVR-115	115	1.89	1.42	12.199+j32.981	8.407+j70.269	2.16	1.70	11.578+j31.790	2.821+j62.787	2.16	1.70	11.588+j31.816	2.821+j62.787
GUADIANA	GDN-115	115	7.09	6.06	2.239+j9.099	5.225+j13.246	8.30	6.91	1.974+j8.572	5.250+j13.225	8.28	6.90	1.984+j8.599	5.250+j13.226
GUANACEVI	GVI-115	115	0.59	0.41	42.428+j103.324	105.557+j239.197	0.66	0.45	41.062+j102.412	105.728+j240.172	0.66	0.45	41.062+j102.412	105.728+j240.172
HACIENDAS	HDS-115	115	8.41	6.80	2.015+j7.630	3.904+j13.019	11.54	8.94	1.382+j6.178	3.371+j11.386	11.54	8.94	1.382+j6.178	3.371+j11.386
HÉRCULES	HCL-230	230	1.02	0.89	28.385+j127.526	41.853+j181.711	1.42	1.41	19.150+j101.344	14.922+j103.882	1.42	1.41	19.150+j101.344	14.922+j103.882
HÉRCULES POTENCIA	HCP-400	400	3.08	2.02	8.542+j74.393	49.913+j187.438	3.86	2.39	5.347+j65.551	49.095+j181.910	3.86	2.39	5.349+j65.559	49.095+j181.910
IBERDROLA	IEL-115	115	24.14	29.69	0.590+j2.686	0.088+j1.228	37.93	45.08	0.267+j1.907	0.075+j1.036	37.91	45.06	0.267+j1.908	0.075+j1.036
INDUSTRIAL JUÁREZ	INJ-115	115	15.12	14.29	1.001+j4.275	1.692+j4.967	19.75	18.25	0.771+j3.618	1.349+j4.456	19.75	18.25	0.771+j3.618	1.349+j4.456
INDUSTRIAS SUPERIOR	ISP-115	115	10.84	10.99	1.606+j5.911	1.509+j5.766	14.53	13.71	1.034+j4.919	1.539+j5.747	14.53	13.71	1.034+j4.919	1.539+j5.747
INSURGENTES	IGS-115	115	16.08	17.05	0.807+j4.050	0.604+j3.454	21.43	22.09	0.588+j3.358	0.554+j3.092	21.43	22.09	0.588+j3.358	0.554+j3.092
INTERCERAMIC	ITC-115	115	10.06	9.51	1.780+j6.356	2.335+j7.490	13.33	11.71	1.196+j5.349	2.353+j7.428	13.33	11.71	1.196+j5.349	2.353+j7.428
INTERMEX ORIENTE	INO-115	115	12.53	12.99	1.123+j5.178	3.626+j3.883	15.79	15.61	0.895+j4.538	3.608+j3.913	15.79	15.61	0.895+j4.538	3.608+j3.913
INTERMEX SUR	INS-115	115	13.12	12.73	1.041+j4.951	1.538+j5.396	16.55	15.17	0.826+j4.336	1.559+j5.449	16.55	15.17	0.826+j4.336	1.559+j5.449
INTERNATIONAL WIRE	INW-115	115	7.71	7.46	1.906+j8.393	3.433+j8.957	9.93	10.11	1.385+j7.221	1.961+j6.735	9.89	10.08	1.395+j7.249	1.961+j6.735
JABIL	JAB-115	115	9.98	9.40	1.793+j6.409	2.385+j7.603	13.19	11.56	1.209+j5.402	2.403+j7.541	13.19	11.56	1.209+j5.402	2.403+j7.541
JANOS	JOS-115	115	4.64	4.00	2.725+j14.046	5.540+j20.570	5.25	4.44	2.537+j13.692	5.560+j20.779	5.24	4.44	2.537+j13.692	5.560+j20.779
JARDÍN	JAR-115	115	14.32	12.45	1.133+j4.497	1.829+j6.478	19.41	15.90	0.771+j3.682	1.730+j6.050	19.41	15.90	0.771+j3.684	1.730+j6.050
JARUDO	JRD-115	115	12.64	10.61	1.269+j5.097	2.651+j7.933	16.14	12.92	1.019+j4.408	2.468+j7.564	16.14	12.92	1.019+j4.408	2.468+j7.564
JERÓNIMO ORTIZ MARTÍNEZ	JOM-115	115	11.59	14.45	0.881+j5.662	0.165+j2.379	14.02	17.01	0.686+j5.163	0.197+j2.495	13.95	16.93	0.696+j5.191	0.197+j2.495
JERÓNIMO ORTIZ MARTÍNEZ	JOM-230	230	8.98	10.58	2.284+j14.603	0.846+j8.158	11.80	13.35	1.448+j12.296	0.958+j8.081	11.69	13.24	1.482+j12.409	0.958+j8.084
JERÓNIMO ORTIZ MARTÍNEZ	JOM-400	400	5.27	4.95	5.748+j43.422	5.435+j52.214	6.69	5.86	3.233+j37.814	5.938+j53.972	6.58	5.79	3.406+j38.454	5.936+j54.013
JIMÉNEZ	JEZ-115	115	3.08	2.45	6.213+j20.632	14.042+j35.541	4.84	3.92	4.341+j14.458	8.577+j24.197	4.84	3.92	4.341+j14.458	8.577+j24.197

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Norte

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>
JOHN DEREÉ	JND-115	115	9.85	8.77	1.760+j6.510	2.850+j8.801	12.24	10.64	1.422+j5.795	2.781+j8.252	12.23	10.63	1.424+j5.797	2.781+j8.252
JUÁREZ	JRZ-115	115	10.67	8.63	1.207+j6.105	3.151+j10.262	13.06	10.04	1.007+j5.502	3.163+j10.227	13.06	10.04	1.007+j5.502	3.163+j10.227
KILOMETRO OCHENTA Y OCHO	KOO-115	115	4.66	3.54	3.771+j13.755	7.370+j26.751	6.02	4.35	2.876+j11.789	7.031+j25.144	6.02	4.35	2.876+j11.789	7.031+j25.144
LA FLOR	LAF-115	115	1.60	1.16	9.519+j40.402	35.695+j82.554	1.78	1.28	9.320+j39.901	35.729+j82.672	1.78	1.28	9.330+j39.929	35.729+j82.672
LA LAGUNA	LGA-115	115	21.48	21.18	0.720+j3.006	0.678+j3.163	32.97	31.58	0.366+j2.184	0.461+j2.493	32.96	31.57	0.367+j2.185	0.461+j2.493
LA PARILLA	LPA-115	115	1.39	0.99	18.206+j44.324	37.159+j99.753	2.54	1.80	10.127+j26.948	23.641+j59.860	2.53	1.80	10.138+j26.972	23.641+j59.860
LA PERLA	LPL-115	115	1.04	0.76	20.807+j60.390	59.892+j120.993	3.67	3.79	4.816+j19.298	6.377+j16.994	3.67	3.79	4.816+j19.298	6.377+j16.994
LA ROSITA	LRT-115	115	7.77	6.18	3.254+j7.900	5.571+j14.106	9.43	7.19	2.913+j7.174	5.588+j13.922	9.43	7.19	2.913+j7.176	5.588+j13.922
LA SALADA	LSA-115	115	1.81	1.42	9.039+j35.615	25.679+j62.209	2.00	1.56	8.857+j35.346	25.717+j62.605	2.00	1.56	8.857+j35.347	25.717+j62.605
LA TRINIDAD	LTR-230	230	9.19	10.89	1.951+j14.316	0.652+j7.763	12.68	15.22	1.120+j11.469	0.395+j5.806	12.59	15.13	1.140+j11.546	0.395+j5.806
LA UNIÓN	LAU-115	115	16.89	13.04	0.934+j3.818	1.831+j7.192	23.52	16.31	0.593+j3.048	1.825+j7.017	23.51	16.31	0.593+j3.049	1.825+j7.017
LAGOS	LAG-115	115	13.52	12.15	1.208+j4.758	2.311+j6.264	17.46	14.80	0.959+j4.071	2.277+j6.091	17.46	14.80	0.959+j4.071	2.277+j6.091
LAGUNA DEL REY	LRE-115	115	1.02	1.19	16.042+j63.212	2.748+j37.861	1.11	1.28	16.419+j63.860	3.312+j40.435	1.11	1.28	16.420+j63.860	3.312+j40.435
LAGUNA DOS	LGD-115	115	21.33	20.89	0.730+j3.026	0.698+j3.246	32.66	30.95	0.376+j2.204	0.486+j2.588	32.64	30.94	0.377+j2.205	0.486+j2.588
LAGUNA ENCINILLAS	LEN-230	230	3.66	2.55	5.953+j35.831	21.799+j81.036	4.46	2.94	4.473+j32.475	21.850+j80.787	4.46	2.94	4.474+j32.475	21.850+j80.787
LAGUNA SECA	LSC-115	115	9.42	8.38	2.062+j6.740	2.962+j9.215	11.72	10.04	1.715+j5.990	3.020+j8.902	11.72	10.03	1.716+j5.992	3.020+j8.902
LAJAT	LJT-115	115	13.36	11.44	1.256+j4.810	2.458+j7.081	17.42	14.19	0.935+j4.088	2.425+j6.674	17.41	14.19	0.935+j4.090	2.425+j6.674
LALA	LAL-115	115	17.96	16.33	0.881+j3.590	1.310+j4.637	25.91	22.51	0.527+j2.769	1.098+j3.979	25.90	22.51	0.527+j2.771	1.098+j3.979
LAS CUATAS	CUA-115	115	2.20	1.57	4.764+j29.773	26.687+j61.932	2.48	1.75	4.483+j29.115	26.641+j61.677	2.48	1.75	4.483+j29.115	26.641+j61.677
LÁZARO CÁRDENAS	LCS-115	115	3.62	2.53	5.335+j17.556	11.516+j40.548	6.75	4.95	2.103+j10.619	6.198+j21.795	6.75	4.95	2.103+j10.619	6.198+j21.795
LEBARON	LEB-115	115	1.77	1.25	9.532+j36.307	33.193+j78.300	1.97	1.38	9.317+j35.849	33.210+j78.368	1.97	1.38	9.317+j35.850	33.210+j78.368
LEÓN GUZMÁN	LGM-115	115	5.53	3.51	2.439+j11.752	10.102+j31.253	6.54	3.99	2.033+j10.983	10.092+j31.073	6.54	3.99	2.034+j10.984	10.092+j31.073
LEONI CABLE	LEO-115	115	7.74	9.12	2.135+j8.312	1.145+j4.629	9.73	11.01	1.560+j7.343	1.166+j4.771	9.73	11.01	1.560+j7.343	1.166+j4.771
LERDO	LED-230	230	10.51	10.66	2.737+j12.339	2.162+j11.965	17.72	18.89	1.104+j8.169	0.939+j6.950	17.70	18.88	1.107+j8.176	0.939+j6.950
LEXMARK	LEX-115	115	10.42	8.55	1.423+j6.211	3.916+j9.948	12.74	9.93	1.209+j5.602	3.931+j9.971	12.74	9.93	1.209+j5.602	3.931+j9.971
LEXMARK DOS	LXD-115	115	10.43	9.05	1.090+j6.275	3.264+j8.863	12.74	10.52	0.877+j5.665	3.284+j8.921	12.74	10.52	0.877+j5.665	3.284+j8.921
LIBERTAD	LTD-115	115	12.78	10.70	1.270+j5.040	2.586+j7.903	16.30	13.04	1.023+j4.361	2.381+j7.527	16.30	13.04	1.023+j4.361	2.381+j7.527
LÓPEZ MATEOS	LZM-115	115	2.10	2.11	7.424+j30.724	10.415+j29.812	4.06	3.79	4.332+j17.463	7.580+j20.531	4.06	3.79	4.332+j17.463	7.580+j20.531
LUCERO	LCR-115	115	3.40	2.42	6.358+j18.436	14.855+j40.626	3.97	2.75	5.821+j17.473	14.836+j40.344	3.97	2.75	5.821+j17.474	14.836+j40.344
MANIOBRA BORDER SOLAR	MBS-230	230	9.64	9.15	2.115+j13.618	3.009+j16.024	13.20	14.88	1.379+j10.981	0.906+j7.428	13.20	14.88	1.379+j10.981	0.906+j7.428

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Norte**

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
MANIOBRA MEZQUITE	MMZ-230	230	5.63	4.03	3.309+j23.370	12.839+j50.308	6.99	4.72	2.539+j20.747	12.750+j49.690	6.99	4.72	2.539+j20.747	12.750+j49.690
MANIOBRAS BAHUICHIVO	MBH-115	115	0.71	0.53	29.471+j89.434	78.882+j174.149	0.83	0.60	27.475+j83.947	79.094+j174.148	0.83	0.60	27.475+j83.947	79.094+j174.148
MANIOBRAS CENTAURO	MAC-115	115	4.46	4.35	3.246+j14.523	3.854+j15.966	6.40	6.01	2.601+j11.110	3.710+j13.305	6.39	6.01	2.610+j11.135	3.710+j13.305
MANIOBRAS CERRO DEL MERCADO	MCM-115	115	7.92	7.10	1.858+j8.179	3.992+j10.642	9.44	8.22	1.564+j7.575	4.024+j10.558	9.41	8.20	1.574+j7.602	4.024+j10.558
MANIOBRAS CIENTO OCHO	MCO-115	115	4.67	4.15	4.128+j13.594	5.579+j18.905	5.57	4.76	3.501+j12.638	5.596+j19.044	5.57	4.76	3.501+j12.638	5.596+j19.044
MANIOBRAS FISTERRA	FIS-CM	230	4.97	3.84	4.283+j26.356	12.115+j49.166	6.38	6.09	3.022+j22.679	3.580+j25.982	6.38	6.09	3.022+j22.680	3.580+j25.982
MANIOBRAS HUERTRO SOLAR DURANGO	MHS-230	230	4.24	4.62	5.554+j30.802	3.574+j23.409	5.32	5.50	4.144+j27.134	3.916+j24.547	5.30	5.48	4.183+j27.258	3.916+j24.549
MANIOBRAS MIELERAS	MMI-115	115	12.79	12.00	1.220+j5.047	1.617+j6.009	16.46	14.93	0.905+j4.343	1.641+j5.599	16.45	14.93	0.907+j4.345	1.641+j5.599
MANIOBRAS PARQUE EÓLICO	MPE-115	115	1.41	1.71	12.497+j45.391	1.519+j23.055	1.52	1.82	13.042+j46.203	1.751+j25.018	1.52	1.82	13.042+j46.204	1.751+j25.018
MANIOBRAS SABINAS	MAS-115	115	0.98	0.63	26.525+j62.082	73.180+j165.014	1.65	1.10	17.801+j40.581	41.133+j103.385	1.65	1.10	17.813+j40.604	41.133+j103.385
MANIOBRAS SANTA ROSA	MSR-115	115	3.85	2.99	4.261+j16.704	12.736+j29.897	4.57	3.43	3.651+j15.552	12.666+j29.655	4.57	3.43	3.651+j15.552	12.666+j29.655
MANIOBRAS TREINTA Y CUATRO	MTC-115	115	4.88	4.31	3.693+j13.082	7.162+j17.804	6.43	5.73	2.862+j10.992	5.788+j14.539	6.43	5.73	2.862+j10.992	5.788+j14.539
MANIOBRAS VILLANUEVA	MVI-400	400	6.27	7.23	5.729+j36.401	2.565+j22.109	9.03	10.02	2.696+j28.001	2.114+j19.882	9.01	10.00	2.714+j28.053	2.114+j19.882
MANITOBA	MBA-115	115	5.15	4.59	3.553+j12.403	4.050+j17.195	6.19	5.30	2.951+j11.430	4.066+j17.320	6.19	5.30	2.951+j11.430	4.066+j17.320
MAPIMI	MPI-115	115	2.38	1.37	5.657+j27.358	20.830+j86.962	2.87	1.65	5.162+j24.884	19.552+j79.926	2.87	1.65	5.162+j24.885	19.552+j79.926
MASISA	MSS-115	115	6.48	5.76	2.288+j9.994	5.061+j13.238	7.62	6.62	1.987+j9.371	5.098+j13.123	7.60	6.61	1.997+j9.399	5.098+j13.124
MATAMOROS	MAT-115	115	10.69	9.91	1.474+j6.036	2.214+j7.358	13.39	11.87	1.131+j5.337	2.205+j7.269	13.38	11.87	1.132+j5.339	2.205+j7.269
MAYRAN	MAY-115	115	4.00	2.82	4.317+j16.007	12.373+j35.312	4.67	3.20	3.844+j15.169	12.356+j35.155	4.67	3.20	3.845+j15.170	12.356+j35.155
MÉDANOS	MED-115	115	11.06	8.88	1.233+j5.875	3.381+j9.992	13.71	10.40	0.998+j5.233	3.382+j9.941	13.71	10.40	0.998+j5.233	3.382+j9.941
MENONITAS	MEN-115	115	2.80	2.37	6.823+j22.743	13.846+j34.016	3.22	2.67	6.170+j21.832	13.871+j34.253	3.22	2.67	6.170+j21.832	13.871+j34.253
MEOQUI	MOQ-115	115	2.89	1.91	6.506+j22.016	15.012+j56.562	7.40	5.51	1.748+j9.719	6.386+j19.111	7.40	5.51	1.748+j9.719	6.386+j19.111
MESTEÑAS	MES-115	115	2.75	3.66	5.280+j23.565	0.184+j6.259	4.39	5.64	3.441+j16.280	0.315+j5.612	4.39	5.64	3.441+j16.280	0.315+j5.612
MESTEÑAS	MES-115B	115	2.74	3.64	5.297+j23.636	0.274+j6.438	4.38	5.61	3.456+j16.318	0.403+j5.775	4.38	5.61	3.456+j16.318	0.403+j5.775
MESTEÑAS	MES-230	230	1.64	2.00	18.923+j78.744	1.829+j38.100	2.55	2.96	11.605+j56.006	2.382+j33.974	2.55	2.96	11.605+j56.007	2.382+j33.974
MILENIO	MLN-115	115	9.11	9.20	1.382+j7.159	2.307+j6.773	10.85	10.64	1.151+j6.633	2.330+j6.821	10.80	10.61	1.161+j6.661	2.330+j6.821
MINA CERRO DEL MERCADO	CDM-115	115	7.79	6.44	1.911+j8.310	5.171+j12.999	9.28	7.42	1.617+j7.707	5.203+j12.914	9.24	7.40	1.628+j7.734	5.203+j12.915
MINERA AUTLÁN	MAU-115	115	13.44	9.80	1.106+j4.815	2.111+j10.243	17.78	11.86	0.757+j4.037	2.104+j10.077	17.78	11.85	0.757+j4.038	2.104+j10.077
MINERA AUTLÁN TAP	MAX-115	115	13.88	10.22	1.050+j4.666	2.002+j9.742	18.49	12.41	0.701+j3.887	1.995+j9.576	18.48	12.41	0.702+j3.888	1.995+j9.576
MINERA DEL TORO	MDT-115	115	0.99	0.65	23.223+j63.250	71.945+j155.514	1.66	1.15	14.379+j41.613	39.854+j93.882	1.66	1.15	14.391+j41.636	39.854+j93.882
MINERA DOLORES	MDO-115	115	0.81	0.64	24.520+j78.638	58.028+j137.576	0.93	0.72	22.786+j75.060	58.126+j138.274	0.93	0.72	22.786+j75.060	58.126+j138.274



**Niveles de cortocircuito de la Red Nacional de Transmisión**  
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			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>
MINERA ROBLE	MRO-115	115	1.55	0.90	19.164+j38.393	49.246+j127.558	1.73	0.99	18.692+j37.775	49.231+j127.369	1.73	0.99	18.693+j37.776	49.231+j127.369
MINERA SAN JUAN	SAJ-115	115	0.68	0.48	35.892+j90.878	86.059+j199.616	0.76	0.53	34.593+j89.907	86.220+j200.575	0.76	0.53	34.593+j89.907	86.220+j200.575
MIRAVALLE	MIR-115	115	15.33	12.70	0.901+j4.236	1.475+j6.881	20.94	15.90	0.560+j3.442	1.461+j6.676	20.93	15.90	0.561+j3.443	1.461+j6.676
MITLA	MLA-115	115	11.24	8.53	1.178+j5.788	2.743+j11.280	13.91	9.92	0.955+j5.163	2.750+j11.302	13.91	9.92	0.955+j5.163	2.750+j11.302
MOCTEZUMA	MCZ-115	115	13.21	16.98	0.637+j4.984	0.047+j1.739	16.81	21.40	0.366+j4.329	0.046+j1.563	16.81	21.40	0.366+j4.329	0.046+j1.563
MOCTEZUMA	MCZ-230	230	11.00	14.18	2.074+j11.888	0.294+j4.190	15.98	19.59	1.056+j9.080	0.306+j4.128	15.98	19.59	1.056+j9.081	0.306+j4.128
MOCTEZUMA	MCZ-400	400	5.20	6.00	6.601+j43.917	1.605+j27.491	7.05	7.58	3.308+j35.892	1.723+j28.544	7.05	7.58	3.308+j35.893	1.723+j28.544
MONTE VERDE	MTV-115	115	2.01	1.53	7.890+j32.031	5.751+j64.600	2.24	1.69	7.700+j31.679	5.771+j64.810	2.24	1.69	7.700+j31.680	5.771+j64.810
NAICA	NAI-115	115	1.56	1.02	18.306+j38.301	36.686+j104.669	3.48	2.50	9.545+j18.674	16.781+j42.617	3.48	2.50	9.545+j18.674	16.781+j42.617
NAMIQUIPA	NAM-115	115	1.93	1.50	10.245+j32.911	22.963+j59.740	2.18	1.67	9.571+j32.084	23.003+j60.120	2.18	1.67	9.571+j32.084	23.003+j60.120
NAZAS	NAZ-115	115	18.86	21.58	0.781+j3.432	0.243+j2.201	27.51	29.97	0.414+j2.622	0.235+j2.027	27.50	29.95	0.415+j2.623	0.235+j2.027
NAZAS	NAZ-230	230	10.34	10.86	2.735+j12.542	1.492+j10.983	16.75	16.77	1.179+j8.641	1.359+j8.817	16.74	16.76	1.181+j8.647	1.359+j8.817
NICOLÁS BRAVO	NCB-115	115	1.26	0.92	15.855+j50.417	41.903+j102.490	1.41	1.02	15.172+j49.607	41.944+j102.870	1.41	1.02	15.172+j49.607	41.944+j102.870
NOMBRE DE DIOS	NDD-115	115	10.41	9.82	1.714+j6.146	2.249+j7.274	13.91	12.17	1.131+j5.126	2.264+j7.199	13.91	12.17	1.131+j5.126	2.264+j7.199
NORTE III	CER-230	230	16.85	21.23	1.061+j7.810	0.235+j3.339	26.25	31.15	0.533+j5.540	0.308+j3.099	26.25	31.15	0.533+j5.540	0.308+j3.099
NUEVA HOLANDA	NHO-115	115	1.56	1.27	8.876+j41.531	14.404+j70.812	2.11	1.63	6.727+j33.890	12.852+j63.891	2.11	1.63	6.727+j33.890	12.852+j63.891
NUEVO CASAS GRANDES	NCG-115	115	9.45	11.36	0.948+j6.962	0.240+j3.514	10.92	12.80	0.773+j6.641	0.263+j3.744	10.92	12.80	0.773+j6.641	0.263+j3.744
NUEVO CASAS GRANDES	NCG-230	230	6.25	6.50	3.113+j21.004	2.231+j18.807	7.58	7.54	2.366+j19.129	2.419+j19.444	7.58	7.54	2.367+j19.131	2.419+j19.444
NUEVO IDEAL	NID-115	115	1.47	1.13	16.315+j41.977	38.672+j77.014	1.64	1.25	15.943+j41.449	38.768+j77.508	1.64	1.25	15.957+j41.477	38.768+j77.509
OASIS	OAS-115	115	1.60	1.31	8.777+j40.580	13.747+j67.576	2.19	1.77	6.550+j32.777	10.881+j56.257	2.19	1.77	6.550+j32.777	10.881+j56.257
OCAMPO	OCP-115	115	9.18	7.81	1.846+j6.996	3.540+j10.547	12.60	10.20	1.242+j5.663	3.277+j9.393	12.60	10.20	1.242+j5.663	3.277+j9.393
OJINAGA	OJI-115	115	0.85	0.64	21.090+j75.045	53.638+j146.268	1.05	0.77	18.794+j67.222	50.667+j134.829	1.05	0.77	18.794+j67.222	50.667+j134.829
ORIENTE VEINTIUNO	OTV-115	115	12.18	10.33	1.105+j5.339	2.782+j8.023	15.25	12.18	0.877+j4.709	2.789+j8.021	15.25	12.18	0.877+j4.709	2.789+j8.021
PAILA	PLA-115	115	0.99	0.92	19.486+j64.305	27.263+j77.097	1.07	0.99	20.163+j65.348	27.503+j79.070	1.07	0.99	20.163+j65.349	27.503+j79.070
PALMAREJO	PAL-115	115	0.59	0.43	35.639+j105.919	98.196+j217.214	0.69	0.49	33.579+j100.499	98.408+j217.212	0.69	0.49	33.579+j100.499	98.408+j217.212
PALOMAR	PMR-115	115	8.19	6.59	2.022+j7.850	3.726+j13.596	10.61	8.01	1.442+j6.731	3.548+j13.130	10.61	8.01	1.442+j6.732	3.548+j13.130
PALOMAS	PMS-115	115	1.54	1.18	11.112+j41.609	32.133+j76.767	1.71	1.30	10.929+j41.341	32.172+j77.164	1.71	1.30	10.929+j41.341	32.172+j77.164
PAPELERA CHIHUAHUA	PCH-115	115	10.07	9.08	1.583+j6.401	2.512+j8.477	13.65	11.58	0.996+j5.256	2.405+j7.915	13.65	11.58	0.996+j5.256	2.405+j7.915
PARQUE	PQE-115	115	16.76	18.05	0.854+j3.870	0.754+j3.097	23.18	24.63	0.582+j3.097	0.546+j2.574	23.18	24.63	0.582+j3.097	0.546+j2.574
PARRAL	PAR-115	115	2.06	1.86	11.586+j30.147	11.151+j41.392	2.38	2.08	10.397+j28.922	11.270+j42.289	2.38	2.08	10.397+j28.922	11.270+j42.289

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			3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>
PARRAS	PRA-115	115	1.26	1.30	14.018+j50.932	11.802+j46.292	1.35	1.39	14.692+j51.981	12.039+j48.262	1.35	1.39	14.692+j51.982	12.039+j48.262
PASO DEL AGULIA	PSA-115	115	9.90	7.19	1.713+j6.481	4.684+j13.521	12.40	8.47	1.363+j5.728	4.681+j13.339	12.40	8.47	1.364+j5.729	4.681+j13.339
PASO DEL NORTE	PNR-115	115	17.07	19.32	0.766+j3.813	0.349+j2.595	23.07	25.68	0.546+j3.118	0.297+j2.223	23.07	25.68	0.546+j3.118	0.297+j2.223
PASO DEL NORTE	PNR-230	230	9.75	9.89	2.192+j13.439	1.933+j13.251	13.35	14.07	1.432+j10.849	1.396+j9.309	13.35	14.07	1.432+j10.849	1.396+j9.309
PATRIA	PAT-115	115	11.38	9.21	1.276+j5.693	3.673+j9.405	14.15	10.80	1.043+j5.053	3.664+j9.388	14.15	10.80	1.043+j5.053	3.664+j9.388
PEDRICEÑA	PDA-115	115	1.66	0.96	18.168+j35.539	45.997+j120.186	1.87	1.06	17.698+j34.915	45.982+j119.997	1.87	1.06	17.699+j34.916	45.982+j119.997
PEÑOLES	PEL-230	230	9.30	8.81	3.146+j13.928	3.374+j16.341	14.32	13.05	1.549+j10.084	2.766+j13.173	14.31	13.04	1.552+j10.092	2.766+j13.173
PHILIPS	PHS-115	115	20.70	18.45	0.732+j3.122	0.784+j4.327	30.74	24.49	0.396+j2.342	0.775+j4.151	30.73	24.48	0.397+j2.344	0.775+j4.151
PONDERCEL	POE-115	115	5.48	6.01	3.054+j11.735	2.182+j8.730	6.58	6.95	2.522+j10.812	2.313+j9.081	6.58	6.95	2.522+j10.812	2.313+j9.081
POPULAR	PPR-115	115	5.07	3.73	4.548+j12.280	8.391+j25.922	6.09	4.30	4.016+j11.308	8.372+j25.639	6.09	4.30	4.016+j11.309	8.372+j25.639
PORVENIR	PRR-115	115	1.72	1.21	10.125+j37.359	34.091+j81.418	1.92	1.33	9.897+j36.752	34.275+j81.734	1.92	1.33	9.897+j36.752	34.275+j81.734
PUENTE DE NEGROS	PDN-115	115	2.39	1.71	8.139+j26.596	25.028+j55.843	5.66	4.95	3.431+j12.428	6.116+j17.604	5.65	4.95	3.440+j12.453	6.116+j17.604
PUERTO JUSTO	PTJ-115	115	1.80	1.64	11.912+j34.898	15.749+j45.117	2.07	1.84	10.694+j33.657	15.884+j46.037	2.07	1.84	10.694+j33.657	15.884+j46.037
QUEVEDO	QVD-115	115	5.24	6.67	3.051+j12.305	0.289+j4.678	6.26	7.74	2.418+j11.404	0.326+j5.052	6.26	7.74	2.418+j11.404	0.326+j5.052
QUEVEDO	QVD-230	230	2.98	3.58	10.758+j43.217	1.828+j22.663	3.67	4.23	8.137+j38.941	2.054+j24.268	3.67	4.23	8.137+j38.941	2.054+j24.268
QUINCE DE OCTUBRE	QDO-115	115	7.56	6.87	1.887+j8.578	4.078+j10.796	8.85	7.83	1.657+j8.080	4.102+j10.847	8.82	7.81	1.667+j8.107	4.102+j10.847
RANCHO LUCERO	RLO-115	115	11.45	8.12	1.273+j5.659	2.917+j12.625	14.71	9.65	0.920+j4.879	2.911+j12.461	14.71	9.65	0.921+j4.880	2.911+j12.461
RAYÓN	RYN-115	115	11.51	9.94	1.080+j5.667	2.046+j8.345	14.23	11.61	0.863+j5.061	2.067+j8.403	14.23	11.61	0.863+j5.061	2.067+j8.403
REFORMA	REA-115	115	19.73	24.47	0.594+j3.313	0.139+j1.486	26.62	31.57	0.405+j2.714	0.155+j1.485	26.62	31.57	0.405+j2.714	0.155+j1.485
REFORMA	REA-230	230	13.34	15.38	1.596+j9.824	0.841+j6.277	19.56	20.97	0.947+j7.409	0.927+j6.059	19.56	20.96	0.947+j7.409	0.927+j6.059
REGIO MÁRMOL	REM-115	115	4.20	2.70	3.844+j15.341	12.441+j40.181	5.00	3.15	3.431+j14.195	12.245+j38.452	5.00	3.15	3.432+j14.196	12.245+j38.452
REVOLUCIÓN	REV-115	115	7.64	5.90	2.250+j8.399	5.854+j15.352	9.25	6.84	1.897+j7.669	5.849+j15.220	9.24	6.84	1.897+j7.670	5.849+j15.220
RIO FLORIDO	RIF-115	115	3.01	2.43	5.809+j21.301	14.058+j35.391	4.31	4.13	4.160+j16.432	4.266+j18.651	4.31	4.13	4.160+j16.432	4.266+j18.651
RIVEREÑA	RVA-115	115	14.70	14.29	0.973+j4.409	1.391+j4.794	21.34	20.76	0.654+j3.360	1.003+j3.613	21.34	20.76	0.654+j3.360	1.003+j3.613
ROBERT BOSH	ROB-115	115	12.35	11.01	1.297+j5.217	2.564+j6.982	15.78	13.37	1.043+j4.509	2.511+j6.743	15.78	13.37	1.043+j4.509	2.511+j6.743
ROBINSON	RNN-115	115	11.23	10.60	1.391+j5.747	1.791+j6.837	15.64	13.87	0.806+j4.600	1.684+j6.275	15.64	13.87	0.806+j4.600	1.684+j6.275
RODEO II	RDO-115	115	0.77	0.46	35.666+j78.725	99.507+j236.899	0.85	0.51	35.126+j78.160	99.490+j236.706	0.85	0.51	35.127+j78.161	99.490+j236.706
RUIZ CORTINES	RCS-115	115	4.02	3.96	4.136+j15.992	3.943+j16.885	4.71	4.50	3.493+j15.107	3.980+j17.260	4.71	4.50	3.493+j15.107	3.980+j17.260
SABINAS	SAB-115	115	0.97	0.62	27.005+j63.081	74.349+j168.051	1.61	1.07	18.279+j41.582	42.302+j106.421	1.61	1.07	18.291+j41.605	42.301+j106.421
SACRAMENTO	SCT-115	115	18.22	17.73	0.831+j3.548	1.076+j3.811	26.19	23.92	0.486+j2.746	0.985+j3.483	26.18	23.91	0.486+j2.747	0.985+j3.483

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Norte**

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m0</sub>
SALAIRES	SLC-115	115	1.74	1.27	11.059+j36.597	31.085+j74.113	2.30	1.67	9.130+j30.477	25.591+j62.744	2.30	1.67	9.130+j30.478	25.591+j62.744
SALVARCAR	SVC-115	115	12.72	11.11	1.083+j5.108	2.673+j7.121	15.94	13.12	0.870+j4.498	2.687+j7.144	15.94	13.12	0.870+j4.498	2.687+j7.144
SAMALAYACA SUR	SYS-230	230	15.24	17.02	1.194+j8.633	0.928+j6.158	26.18	28.82	0.492+j5.558	0.580+j4.129	26.18	28.82	0.492+j5.558	0.580+j4.129
SAMALAYUCA	SYC-230	230	15.78	18.26	1.125+j8.342	0.630+j5.197	28.04	33.07	0.421+j5.192	0.228+j2.948	28.04	33.07	0.421+j5.192	0.228+j2.948
SAN ANTONIO DE BELÉN	ABE-115	115	1.04	0.67	24.806+j58.633	69.051+j154.350	1.81	1.21	16.096+j37.108	37.022+j92.736	1.80	1.21	16.108+j37.131	37.022+j92.736
SAN BUENAVENTURA	SBV-115	115	3.13	2.28	5.098+j20.606	17.445+j41.554	3.53	2.54	4.864+j20.096	17.455+j41.560	3.53	2.54	4.864+j20.096	17.455+j41.560
SAN FERNANDO	SFD-115	115	10.93	8.09	1.319+j5.928	3.384+j12.023	14.03	9.68	0.956+j5.117	3.372+j11.814	14.03	9.68	0.957+j5.118	3.372+j11.814
SAN FRANCISCO DE BORJA	SFB-115	115	1.50	0.98	10.679+j43.081	35.497+j109.419	1.69	1.09	10.061+j41.931	35.425+j109.176	1.69	1.09	10.061+j41.931	35.425+j109.176
SAN FRANCISCO DEL ORO	SFO-115	115	2.44	2.57	8.761+j25.712	5.172+j22.793	2.86	2.91	7.589+j24.419	5.288+j23.684	2.86	2.91	7.589+j24.419	5.288+j23.684
SAN IGNACIO	SIG-115	115	2.33	1.67	7.332+j27.477	23.733+j57.951	2.63	1.85	7.104+j26.869	23.916+j58.268	2.63	1.85	7.104+j26.869	23.916+j58.268
SAN ISIDRO	SID-115	115	7.21	6.08	1.972+j8.992	4.205+j13.850	8.53	6.87	1.752+j8.381	4.386+j14.165	8.53	6.87	1.752+j8.381	4.386+j14.165
SAN JERÓNIMO	SJE-115	115	5.10	2.35	2.227+j12.833	23.171+j54.607	5.93	2.64	2.004+j12.144	23.120+j54.243	5.93	2.64	2.004+j12.144	23.120+j54.243
SAN MARTIN	MRT-115	115	0.98	0.63	26.768+j62.577	73.764+j166.532	1.63	1.08	18.043+j41.079	41.717+j104.903	1.63	1.08	18.054+j41.102	41.717+j104.903
SAN PEDRO	SPD-115	115	6.19	4.55	2.576+j10.418	6.247+j21.395	7.45	5.26	2.110+j9.571	6.230+j21.239	7.45	5.26	2.110+j9.573	6.230+j21.239
SAN PEDRO POTENCIA	SPP-115	115	3.05	3.94	4.834+j21.244	0.414+j7.091	4.55	5.60	3.536+j15.656	0.601+j7.101	4.55	5.60	3.536+j15.656	0.601+j7.101
SAN PEDRO POTENCIA	SPP-230	230	1.97	2.30	16.411+j65.457	3.166+j38.928	2.71	2.97	11.671+j52.546	3.769+j39.837	2.71	2.97	11.671+j52.546	3.769+j39.837
SANTA BÁRBARA	BBA-115	115	2.55	2.75	8.644+j24.562	3.963+j20.147	2.99	3.12	7.479+j23.265	4.077+j21.034	2.99	3.12	7.479+j23.265	4.077+j21.034
SANTA MARÍA DEL ORO	SMO-115	115	0.81	0.59	29.127+j76.102	68.594+j158.576	0.91	0.66	27.810+j75.062	68.757+j159.539	0.91	0.66	27.810+j75.062	68.757+j159.539
SANTIAGO DOS	SGD-115	115	2.90	3.50	7.170+j21.709	0.625+j11.625	3.43	4.00	6.006+j20.403	0.739+j12.511	3.43	4.00	6.006+j20.403	0.739+j12.511
SANTIAGO DOS	SGD-230	230	1.65	1.86	25.098+j76.630	3.675+j53.723	2.00	2.16	20.321+j70.100	4.341+j57.416	2.00	2.16	20.321+j70.100	4.341+j57.416
SANTIAGO PAPANQUIARO	SGP-115	115	1.05	0.77	24.711+j58.162	61.630+j118.231	1.17	0.85	24.317+j57.650	61.739+j118.741	1.17	0.85	24.331+j57.678	61.739+j118.741
SANTIAGO UNO	SGU-115	115	2.84	3.36	7.422+j22.186	1.102+j12.711	3.35	3.84	6.258+j20.882	1.216+j13.597	3.35	3.84	6.258+j20.882	1.216+j13.597
SANTOS SOLAR MANIOBRAS	SSM-115	115	11.87	14.11	0.726+j5.544	0.575+j2.938	14.89	17.50	0.454+j4.883	0.530+j2.685	14.89	17.50	0.454+j4.884	0.530+j2.685
SAUZAL	SAZ-115	115	10.89	8.79	1.334+j5.951	3.587+j9.962	13.53	10.35	1.088+j5.285	3.570+j9.839	13.53	10.35	1.088+j5.285	3.570+j9.839
SETENTA Y TRES	SAT-115	115	1.77	1.36	10.875+j35.808	27.855+j65.755	2.01	1.52	10.215+j34.910	27.881+j65.992	2.01	1.52	10.215+j34.910	27.881+j65.992
SOMBRETE	SOM-115	115	0.95	0.60	28.341+j64.216	76.661+j174.005	1.55	1.02	19.469+j42.997	44.599+j112.362	1.55	1.02	19.481+j43.020	44.599+j112.362
TABALAOA	TBL-115	115	11.40	11.28	1.516+j5.623	1.774+j5.845	15.99	14.95	0.935+j4.471	1.681+j5.292	15.99	14.95	0.935+j4.471	1.681+j5.292
TACUBAYA	TBA-115	115	1.05	0.77	20.627+j59.900	59.370+j119.806	3.77	3.95	4.643+j18.796	5.856+j15.808	3.77	3.95	4.643+j18.796	5.856+j15.808
TAKATA	TAK-115	115	13.82	12.49	1.158+j4.664	1.941+j6.055	18.07	15.83	0.845+j3.952	1.873+j5.492	18.06	15.82	0.846+j3.954	1.873+j5.492
TECNOLÓGICO	TEC-115	115	11.83	10.43	1.391+j5.440	2.696+j7.484	14.97	12.55	1.136+j4.744	2.658+j7.300	14.97	12.55	1.136+j4.744	2.658+j7.300

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Norte**

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
TERRANOVA	TER-115	115	17.66	21.05	0.716+j3.691	0.249+j2.010	23.41	26.43	0.504+j3.079	0.269+j2.068	23.41	26.43	0.504+j3.079	0.269+j2.068
TERRANOVA	TER-230	230	12.97	14.27	1.639+j10.106	1.166+j7.663	19.36	19.51	0.932+j7.488	1.244+j7.412	19.36	19.51	0.932+j7.488	1.244+j7.412
TINAJAS	TIN-115	115	2.89	2.13	3.702+j22.699	18.684+j44.352	3.27	2.38	3.421+j22.052	18.683+j44.176	3.27	2.38	3.421+j22.052	18.683+j44.176
TORREÓN	TRR-115	115	11.74	9.34	1.190+j5.528	2.653+j9.677	15.11	11.27	0.835+j4.760	2.665+j9.467	15.11	11.27	0.836+j4.762	2.665+j9.467
TORREÓN ORIENTE	TOT-115	115	15.17	13.50	1.093+j4.239	1.861+j5.724	20.29	17.14	0.772+j3.516	1.828+j5.317	20.27	17.14	0.773+j3.518	1.828+j5.317
TORREÓN SUR	TRS-115	115	17.98	19.60	0.795+j3.607	0.330+j2.778	24.80	27.77	0.489+j2.904	0.213+j2.016	24.78	27.75	0.490+j2.906	0.213+j2.016
TORREÓN SUR	TRS-230	230	10.87	12.76	2.456+j11.965	0.541+j6.848	16.63	18.58	1.138+j8.708	0.613+j6.165	16.61	18.57	1.142+j8.717	0.613+j6.165
TORREÓN SUR	TRS-400	400	6.77	7.73	5.948+j33.586	2.232+j21.377	9.83	10.73	2.747+j25.700	1.910+j19.462	9.80	10.71	2.768+j25.763	1.910+j19.462
TORREONCITOS SOLAR	TOS-115	115	2.96	2.39	6.272+j21.532	14.307+j35.957	4.23	4.08	4.587+j16.656	4.188+j18.744	4.23	4.08	4.587+j16.656	4.188+j18.744
TORRES	TOR-115	115	14.89	14.39	0.915+j4.363	1.683+j4.740	19.13	17.38	0.705+j3.751	1.695+j4.749	19.13	17.38	0.705+j3.751	1.695+j4.749
TRECE SOLAR MANIOBRAS	TSM-115	115	2.00	1.90	7.074+j32.440	7.155+j38.118	2.93	3.14	4.854+j24.430	2.215+j19.825	2.93	3.14	4.854+j24.430	2.215+j19.825
TRES HERMANOS	THS-115	115	1.68	1.63	11.827+j37.692	16.980+j39.685	2.27	2.05	9.758+j30.633	17.108+j39.018	2.27	2.05	9.758+j30.633	17.108+j39.018
TRES MANANTIALES	TMA-115	115	1.60	1.33	10.607+j40.071	21.190+j63.054	1.79	1.52	10.273+j39.455	20.376+j59.410	1.79	1.52	10.273+j39.456	20.376+j59.410
VADO SANTA MARÍA	VSM-115	115	2.02	1.55	8.279+j31.798	3.869+j62.989	2.25	1.71	8.100+j31.481	3.892+j63.221	2.25	1.71	8.101+j31.481	3.892+j63.221
VALLE DE JUÁREZ	VJZ-115	115	17.95	21.16	0.743+j3.623	0.245+j2.089	24.96	28.47	0.497+j2.884	0.236+j1.866	24.96	28.47	0.497+j2.884	0.236+j1.866
VALLE DE JUÁREZ	VJZ-230	230	11.26	12.06	1.961+j11.627	1.425+j9.664	16.14	16.03	1.189+j8.973	1.429+j9.269	16.14	16.03	1.189+j8.973	1.429+j9.269
VALLE ESPERANZA	VEZ-115	115	2.24	1.55	4.812+j29.257	27.489+j64.728	2.52	1.72	4.529+j28.611	27.488+j64.551	2.52	1.72	4.529+j28.611	27.488+j64.551
VALLE VERDE	VAE-115	115	15.81	13.77	1.060+j4.064	1.862+j5.788	21.43	17.44	0.734+j3.328	1.850+j5.485	21.42	17.43	0.735+j3.329	1.850+j5.485
VERDE INDEPENDENCIA UNO	VIU-115	115	8.97	7.27	1.233+j7.295	4.627+j11.961	10.80	8.36	1.019+j6.685	4.647+j12.020	10.80	8.36	1.019+j6.685	4.647+j12.020
VICENTE GUERRERO	VGR-115	115	1.33	0.89	17.298+j46.782	52.506+j112.609	2.79	2.04	9.031+j24.557	20.866+j51.340	2.79	2.04	9.043+j24.581	20.866+j51.340
VIDRIERA CHIHUAHUA MANIOBRAS	VCM-115	115	3.22	2.18	5.955+j19.749	13.265+j48.560	6.90	5.06	1.982+j10.393	6.377+j21.299	6.90	5.06	1.982+j10.393	6.377+j21.299
VILLA AHUMADA	VAH-115	115	2.30	1.66	7.584+j27.851	24.688+j57.275	2.59	1.85	7.296+j27.208	24.686+j57.097	2.59	1.85	7.297+j27.208	24.686+j57.097
VIÑEDOS	VDS-115	115	12.32	9.33	1.329+j5.221	3.284+j10.071	15.98	11.23	0.980+j4.465	3.281+j9.895	15.97	11.22	0.980+j4.467	3.281+j9.895
WERNER	WER-115	115	12.53	10.84	1.267+j5.147	2.789+j7.377	15.67	12.83	1.064+j4.537	2.795+j7.313	15.67	12.83	1.064+j4.537	2.795+j7.313
WRANGLER	WRA-115	115	7.22	6.27	1.907+j8.996	7.647+j11.704	10.53	9.01	1.039+j6.858	5.250+j9.469	10.53	9.01	1.039+j6.858	5.250+j9.469
YERMO	YMO-115	115	1.34	0.79	19.336+j45.804	49.827+j144.224	2.31	1.41	12.126+j29.247	29.968+j87.549	2.31	1.41	12.126+j29.248	29.968+j87.549
ZARAGOZA	ZZA-115	115	15.20	14.89	1.002+j4.253	1.469+j4.494	20.16	18.76	0.748+j3.545	1.416+j4.255	20.16	18.76	0.748+j3.545	1.416+j4.255

# Gerencia de Control Regional Noreste



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**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Noreste**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
ACERO	AEO-115	115	9.67	8.94	1.083+j6.782	1.556+j8.623	11.45	10.18	0.906+j6.313	1.563+j8.759	10.95	9.92	0.963+j6.599	1.563+j8.759
ACEROS PLANOS	APM-115	115	11.72	6.75	1.125+j5.552	3.907+j17.732	13.19	7.52	1.074+j5.434	3.880+j17.626	13.12	7.48	1.085+j5.461	3.911+j17.730
ACUÑA	AUA-138	138	5.58	6.11	2.518+j14.043	1.432+j10.520	7.06	7.59	2.032+j12.253	1.393+j9.594	7.05	7.58	2.033+j12.256	1.393+j9.594
ACUÑA DOS	ACD-138	138	5.75	6.26	2.163+j13.687	1.358+j10.400	7.58	8.22	1.532+j11.455	1.182+j8.632	7.58	8.22	1.533+j11.457	1.182+j8.632
AEROPUERTO	AER-138	138	21.02	24.75	0.515+j3.755	0.172+j2.123	25.61	29.24	0.420+j3.396	0.189+j2.198	23.21	26.85	0.498+j3.743	0.189+j2.266
AEROPUERTO	AER-230	230	19.88	24.20	0.819+j6.630	0.277+j3.233	25.49	30.05	0.561+j5.703	0.293+j3.209	22.48	26.80	0.732+j6.456	0.299+j3.434
AEROPUERTO	AER-400	400	15.12	17.07	1.752+j15.175	1.277+j10.415	19.45	20.91	1.170+j13.011	1.341+j10.519	18.17	19.80	1.410+j13.907	1.370+j10.716
AEROPUERTO NORTE	ANE-115	115	12.90	6.92	1.015+j5.045	4.096+j18.038	18.00	9.74	0.723+j3.993	3.193+j14.011	17.95	9.74	0.728+j4.003	3.193+j14.011
AEROPUERTO OMA MONTERREY	OMA-115	115	19.51	13.76	0.528+j3.361	1.636+j7.495	24.06	16.13	0.460+j3.001	1.627+j7.348	23.98	16.10	0.464+j3.010	1.627+j7.349
AFI STEEL FOUNDRY	ASF-115	115	17.72	13.43	0.644+j3.692	1.548+j7.180	20.76	15.53	0.558+j3.474	1.507+j6.917	20.74	15.52	0.560+j3.477	1.507+j6.917
AGUA NUEVA	AGN-115	115	7.85	8.19	1.070+j8.395	0.705+j7.368	9.12	9.21	0.931+j7.955	0.757+j7.745	9.11	9.20	0.933+j7.958	0.757+j7.745
AGUAS TRATADAS	ATM-115	115	12.89	9.30	0.829+j5.083	2.390+j10.982	15.87	11.56	0.670+j4.552	1.972+j9.682	15.80	11.54	0.673+j4.572	1.973+j9.687
ALAMO	ALM-115	115	11.93	9.22	1.295+j5.414	2.423+j10.200	13.47	10.27	1.227+j5.283	2.419+j10.208	13.46	10.27	1.229+j5.286	2.419+j10.208
ÁLCALI MANIOBRAS	ACM-115	115	23.85	24.47	0.320+j2.765	0.222+j2.541	25.88	26.14	0.314+j2.804	0.243+j2.707	25.67	26.00	0.321+j2.827	0.243+j2.707
ALCOA PRIVADA	APV-115	115	13.30	7.14	0.982+j4.893	3.970+j17.484	18.71	10.14	0.692+j3.841	3.067+j13.457	18.67	10.13	0.696+j3.850	3.067+j13.457
ALEN DEL NORTE	ADN-115	115	11.23	7.49	1.010+j5.825	2.920+j14.481	12.57	8.26	0.956+j5.729	2.930+j14.597	12.51	8.24	0.967+j5.759	2.930+j14.597
ALIANZA	ALZ-115	115	21.47	15.45	0.498+j3.052	1.314+j6.577	24.14	17.11	0.461+j2.991	1.321+j6.625	24.05	17.08	0.465+j3.001	1.321+j6.626
ALLENDE	ALN-115	115	2.99	1.66	4.471+j21.765	16.182+j73.537	5.60	3.44	2.967+j12.688	8.984+j36.618	5.59	3.43	2.979+j12.716	9.000+j36.690
ALLENDE DOS	AED-138	138	5.49	4.35	2.481+j14.300	4.727+j25.554	6.93	5.16	1.938+j12.493	4.720+j25.119	6.93	5.16	1.940+j12.498	4.720+j25.119
ALMACENTRO DEFINITIVO	ALE-115	115	23.32	16.92	0.436+j2.814	1.202+j5.957	26.97	19.07	0.387+j2.681	1.204+j5.956	26.84	19.03	0.392+j2.692	1.204+j5.959
ALPES	ALP-115	115	16.63	12.16	0.670+j3.935	1.466+j8.279	19.34	13.93	0.584+j3.731	1.423+j8.059	19.32	13.92	0.586+j3.734	1.423+j8.059
ALTAMIRA	ALT-115	115	28.71	31.51	0.296+j2.293	0.172+j1.812	32.91	35.07	0.278+j2.202	0.175+j1.886	32.52	34.75	0.283+j2.228	0.179+j1.898
ALTAMIRA	ALT-230	230	21.64	26.02	0.516+j6.116	0.367+j3.398	26.70	31.77	0.386+j5.457	0.257+j3.040	25.93	30.81	0.409+j5.618	0.302+j3.186
ALTAMIRA	ALT-400	400	22.70	22.38	0.871+j10.137	1.914+j11.168	32.66	33.34	0.495+j7.763	0.941+j7.491	29.22	28.30	0.611+j8.672	1.588+j9.885
ALTAMIRA DE AGUA Y DRENAJE DE MONTERREY	AAD-115	115	20.02	10.14	0.603+j3.261	2.773+j12.700	22.82	11.32	0.557+j3.151	2.768+j12.660	22.56	11.24	0.570+j3.187	2.779+j12.729
ALTAMIRA III Y IV	ATC-400	400	24.77	29.03	0.654+j9.302	0.592+j6.268	35.87	42.11	0.365+j7.073	0.394+j4.640	34.48	40.84	0.393+j7.356	0.388+j4.732
ALTAMIRA V	ATV-400	400	24.73	29.01	0.658+j9.316	0.591+j6.267	35.79	42.06	0.368+j7.088	0.394+j4.640	34.41	40.79	0.396+j7.372	0.388+j4.732
ALTAMIRANO	ATR-115	115	7.53	5.85	1.459+j8.691	3.347+j16.332	8.93	6.66	1.249+j8.082	3.336+j16.375	8.51	6.50	1.333+j8.480	3.336+j16.375
ALTOS HORNOS DE MÉXICO	AHM-400	400	8.98	8.33	3.926+j25.418	4.283+j32.835	11.88	10.06	2.501+j21.231	4.683+j33.529	11.74	10.00	2.587+j21.481	4.683+j33.530
AMERICAN INDUSTRIES	AIN-138	138	16.44	16.68	0.835+j4.775	0.861+j4.605	19.75	19.44	0.726+j4.377	0.872+j4.636	18.15	18.20	0.817+j4.758	0.877+j4.740

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Noreste

Subestación eléctrica	Acronímico	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
AMERICAN INDUSTRIES DULCES NOMBRES	AID-115	115	19.73	15.79	0.452+j3.336	1.106+j5.781	28.04	20.49	0.351+j2.581	1.091+j5.396	27.96	20.45	0.353+j2.588	1.091+j5.396
AMÉRICAS	AME-115	115	19.17	12.57	0.479+j3.429	2.645+j8.571	23.07	14.78	0.428+j3.137	2.471+j8.166	23.00	14.76	0.431+j3.146	2.471+j8.167
AMISTAD	AMI-138	138	3.22	2.82	5.169+j24.160	7.878+j34.601	4.63	5.22	3.089+j18.658	1.062+j12.057	4.63	5.22	3.089+j18.660	1.062+j12.057
AMPAD	AMP-138	138	9.04	9.62	1.451+j8.698	1.099+j7.324	10.17	10.61	1.387+j8.508	1.144+j7.615	9.88	10.40	1.446+j8.750	1.142+j7.625
ANÁHUAC	ANH-138	138	2.19	1.39	7.348+j35.573	20.044+j97.730	2.53	1.55	6.735+j34.010	20.116+j98.130	2.53	1.55	6.737+j34.018	20.116+j98.130
ANÁHUAC POTENCIA	ANP-115	115	19.85	26.37	0.425+j3.318	0.270+j0.898	21.34	28.07	0.434+j3.395	0.313+j0.962	21.18	27.91	0.439+j3.419	0.311+j0.964
ANÁHUAC POTENCIA	ANP-400	400	16.85	27.03	1.226+j13.653	1.930-j1.275	20.22	32.41	0.965+j12.525	2.159-j1.410	19.73	31.69	1.006+j12.835	2.157-j1.411
ANÁHUAC TAM.POTENCIA	ATP-230	230	15.28	20.29	0.845+j8.647	0.133+j2.925	18.00	23.36	0.693+j8.086	0.136+j3.061	16.96	22.20	0.789+j8.575	0.133+j3.083
ANÁHUAC TAM.POTENCIA	ATP-400	400	11.75	13.94	1.688+j19.588	0.770+j11.734	16.17	19.52	0.980+j15.682	0.448+j8.456	15.42	18.80	1.155+j16.432	0.444+j8.478
ANGOSTURA	ANG-115	115	6.96	5.32	1.233+j9.460	3.607+j18.009	7.76	5.88	1.167+j9.336	3.628+j18.113	7.76	5.88	1.169+j9.340	3.628+j18.113
ANILLO PERIFÉRICO	APF-115	115	13.86	10.35	0.760+j4.730	1.784+j9.485	15.47	11.33	0.727+j4.664	1.865+j9.729	15.44	11.31	0.731+j4.673	1.865+j9.729
ANZALDUAS	ANZ-138	138	15.27	13.29	0.860+j5.147	1.461+j7.457	18.00	15.23	0.760+j4.810	1.453+j7.423	17.06	14.75	0.824+j5.071	1.451+j7.440
ANZALDUAS RODÉ	ANR-138	138	12.43	9.66	1.211+j6.295	2.576+j11.679	14.59	11.15	1.094+j5.908	2.483+j11.338	14.00	10.90	1.154+j6.152	2.481+j11.352
APASCO	APC-230	230	10.28	8.49	2.085+j12.753	4.613+j20.582	11.62	9.44	1.879+j12.427	4.657+j20.814	11.60	9.43	1.889+j12.447	4.657+j20.815
APODACA	APO-115	115	11.74	7.31	1.043+j5.558	3.291+j15.574	19.49	12.73	0.660+j3.689	1.944+j9.522	19.43	12.71	0.664+j3.700	1.944+j9.523
ARCO VIAL	ARV-115	115	23.65	21.39	0.385+j2.781	0.623+j3.627	25.91	23.22	0.371+j2.794	0.630+j3.734	25.65	23.07	0.380+j2.822	0.630+j3.734
ARROYO DEL COYOTE	ADC-138	138	8.62	11.36	1.820+j9.067	0.140+j2.616	11.22	14.29	1.270+j7.706	0.163+j2.771	11.21	14.28	1.272+j7.715	0.163+j2.771
ARROYO DEL COYOTE	ADC-230	230	4.51	5.12	5.293+j28.983	1.377+j19.018	5.78	6.18	3.796+j24.998	1.561+j20.231	5.77	6.18	3.801+j25.018	1.561+j20.231
ARROYO DEL COYOTE	ADC-400	400	3.31	3.51	10.742+j69.043	4.277+j57.994	4.51	4.41	6.376+j55.920	5.084+j60.245	4.51	4.41	6.389+j55.970	5.084+j60.245
ARTES GRAFICAS	AGR-115	115	10.83	8.12	0.965+j6.055	2.114+j12.083	20.71	14.52	0.591+j3.477	1.500+j7.899	20.65	14.50	0.595+j3.486	1.500+j7.899
ARVIN MERITOR	AVM-115	115	12.14	6.51	1.077+j5.360	4.354+j19.178	16.67	9.02	0.785+j4.310	3.452+j15.150	16.64	9.01	0.790+j4.319	3.452+j15.151
ATLAPEXCO	APX-115	115	2.12	2.02	8.569+j30.066	11.945+j34.197	2.35	2.22	8.518+j29.940	11.968+j34.435	2.34	2.22	8.525+j29.959	11.968+j34.437
AXTLA	AXA-115	115	1.11	0.61	21.606+j55.730	51.258+j199.581	1.22	0.67	21.607+j55.783	51.307+j199.629	1.22	0.67	21.615+j55.803	51.306+j199.631
AZTECAS	AZT-115	115	2.96	1.81	6.328+j21.503	20.565+j62.114	3.29	2.02	6.231+j21.327	19.917+j60.895	3.28	2.02	6.236+j21.349	19.917+j60.895
AZTLÁN	AZN-138	138	16.36	14.30	0.825+j4.799	1.474+j6.868	19.69	16.73	0.716+j4.393	1.433+j6.707	18.51	16.11	0.780+j4.670	1.431+j6.730
BAJÍO	BAO-115	115	2.21	1.62	6.746+j29.314	14.840+j61.292	2.59	1.83	6.241+j27.494	14.853+j61.657	2.59	1.83	6.246+j27.509	14.853+j61.657
BALL METAL BEVERAGE	BMB-115	115	16.83	11.38	0.686+j3.885	1.887+j9.424	23.56	15.03	0.529+j3.054	1.777+j8.198	23.48	15.00	0.533+j3.065	1.777+j8.203
BARRETAL	BET-115	115	3.43	2.29	7.179+j17.981	16.591+j45.363	4.67	3.08	5.360+j14.692	13.644+j37.453	4.67	3.08	5.363+j14.703	13.644+j37.454
BARRY CALLEBAUT	BAC-115	115	16.40	8.48	0.698+j3.988	3.259+j15.041	18.37	9.35	0.660+j3.920	3.279+j15.127	18.31	9.34	0.665+j3.932	3.279+j15.128
BASF	BSF-115	115	15.68	11.29	0.782+j4.161	1.931+j9.088	19.50	14.22	0.660+j3.687	1.660+j7.823	19.40	14.19	0.662+j3.706	1.660+j7.826

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Noreste

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
BASF	BSF-115B	115	15.47	10.88	0.803+j4.216	2.201+j9.597	19.86	15.50	0.632+j3.623	1.276+j6.742	19.76	15.47	0.635+j3.642	1.276+j6.744
BERLÍN	BRN-115	115	27.57	19.56	0.451+j2.365	1.574+j5.139	31.78	21.96	0.407+j2.261	1.578+j5.161	31.55	21.88	0.414+j2.278	1.578+j5.164
BICENTENARIO	BIC-115	115	9.21	8.35	1.211+j7.105	2.204+j9.202	10.06	9.05	1.231+j7.154	2.253+j9.456	10.04	9.04	1.234+j7.166	2.253+j9.456
BIOFILM	BFL-115	115	17.47	12.84	0.674+j3.740	1.725+j7.838	20.69	15.40	0.613+j3.476	1.532+j7.082	20.58	15.36	0.615+j3.495	1.532+j7.085
BLACK & DECKER	BAD-138	138	16.49	14.13	0.702+j4.779	1.254+j7.188	20.42	16.98	0.578+j4.254	1.181+j6.835	19.19	16.37	0.639+j4.521	1.178+j6.851
BOMBEO LOMA LARGA	BLL-115	115	27.33	18.54	0.474+j2.382	1.119+j5.776	31.32	20.75	0.431+j2.292	1.122+j5.788	30.86	20.54	0.443+j2.324	1.127+j5.823
BOMBEO NUEVA CASTILLA III	BNC-115	115	11.31	6.11	1.010+j5.785	3.980+j20.491	12.62	6.68	0.969+j5.707	4.081+j20.846	12.58	6.67	0.976+j5.722	4.080+j20.846
BOMBEO PORVENIR	POR-115	115	3.17	2.27	6.307+j19.965	18.478+j42.214	3.49	2.49	6.300+j19.957	18.501+j42.264	3.49	2.49	6.306+j19.983	18.502+j42.264
BRAVO	BRA-115	115	2.03	1.28	9.338+j31.414	29.427+j85.722	2.23	1.40	9.344+j31.466	29.475+j85.764	2.22	1.40	9.352+j31.487	29.474+j85.766
CADEREYTA	CYN-115	115	15.13	11.64	0.614+j4.345	1.544+j8.200	17.96	13.19	0.545+j4.029	1.592+j8.338	17.92	13.17	0.548+j4.039	1.591+j8.342
CADEREYTA II	CDT-115B2	115	2.49	1.94	4.198+j26.308	16.281+j47.101	3.74	3.36	2.699+j19.362	6.486+j25.350	3.73	3.36	2.704+j19.379	6.486+j25.350
CADEREYTA II	CDT-115B1	115	2.55	2.31	3.937+j25.770	8.327+j33.022	3.74	3.37	2.692+j19.367	6.391+j25.132	3.73	3.37	2.697+j19.384	6.391+j25.132
CAMARGO	CAM-138	138	3.89	2.22	5.360+j19.789	17.228+j64.464	6.79	4.54	3.156+j12.515	7.163+j31.195	6.72	4.52	3.189+j12.652	7.162+j31.199
CAMPESTRE	CPR-138	138	7.04	7.22	2.213+j11.107	1.718+j10.345	8.89	8.66	1.649+j9.724	1.741+j10.497	8.88	8.65	1.651+j9.732	1.741+j10.497
CAMPO TAMAULIPAS	CTS-115	115	11.57	7.89	1.293+j5.590	3.336+j13.499	13.28	8.96	1.233+j5.361	3.228+j13.130	13.21	8.94	1.238+j5.387	3.230+j13.140
CAPELLANIA	CAP-115	115	12.87	9.02	0.968+j5.066	2.685+j11.477	14.69	10.12	0.892+j4.892	2.681+j11.409	14.68	10.11	0.894+j4.896	2.681+j11.409
CARBÓN DOS	CBD-400	400	8.53	8.45	4.172+j26.752	3.620+j28.084	23.11	27.20	0.627+j10.973	0.359+j6.456	23.04	27.14	0.636+j11.008	0.359+j6.456
CARPLASTIC	CIS-115	115	19.50	13.44	0.539+j3.363	1.716+j7.830	22.99	15.33	0.479+j3.141	1.714+j7.765	22.91	15.30	0.483+j3.151	1.714+j7.767
CASA BLANCA	CBL-138	138	9.57	7.78	1.434+j8.202	2.611+j14.009	11.06	8.94	1.327+j7.812	2.488+j13.492	10.67	8.75	1.396+j8.097	2.489+j13.548
CASTECH	CAS-115	115	17.57	13.35	0.653+j3.723	1.574+j7.204	20.53	15.37	0.568+j3.511	1.542+j6.986	20.51	15.36	0.570+j3.514	1.542+j6.986
CATERPILA JAGUAR	CJR-115	115	11.56	6.19	1.130+j5.633	4.577+j20.159	15.68	8.47	0.838+j4.582	3.674+j16.131	15.65	8.47	0.842+j4.591	3.674+j16.132
CEDROS	CED-115	115	26.79	29.49	0.443+j2.439	0.192+j1.795	31.71	33.94	0.370+j2.274	0.210+j1.842	31.65	33.90	0.372+j2.277	0.210+j1.842
CEDROS	CED-230	230	12.68	12.78	1.795+j10.316	1.291+j10.165	14.53	14.25	1.548+j9.932	1.380+j10.577	14.51	14.23	1.557+j9.948	1.380+j10.578
CEJA	CJA-115	115	2.51	2.30	4.042+j26.135	9.952+j32.575	3.70	3.72	2.651+j19.540	4.946+j18.928	3.70	3.72	2.655+j19.557	4.946+j18.928
CELULOSA	CEL-115	115	31.00	21.25	0.396+j2.105	0.996+j4.985	35.81	23.90	0.353+j2.009	0.996+j4.990	35.41	23.72	0.362+j2.030	1.001+j5.012
CEMENTOS ANÁHUAC	CAN-115	115	13.68	12.81	0.863+j4.778	1.323+j5.749	14.81	13.87	0.873+j4.854	1.366+j5.813	14.73	13.83	0.878+j4.879	1.365+j5.815
CEMENTOS HIDALGO	CEH-115	115	7.13	4.68	2.525+j8.958	8.752+j22.351	7.90	5.16	2.487+j8.900	8.760+j22.405	7.90	5.15	2.491+j8.909	8.760+j22.406
CEMENTOS MEXICANOS	CEM-115	115	32.71	22.27	0.389+j1.992	0.965+j4.786	38.34	25.50	0.340+j1.874	0.941+j4.688	37.76	25.03	0.351+j1.902	0.969+j4.788
CEMEX (VALLES)	CMX-115	115	7.18	5.33	2.353+j8.946	4.380+j18.454	7.84	5.82	2.362+j9.008	4.426+j18.500	7.82	5.82	2.367+j9.032	4.425+j18.502
CENTEC	CNE-115	115	10.38	7.13	1.460+j6.227	3.549+j14.719	17.58	13.24	0.878+j4.060	1.807+j8.041	17.56	13.23	0.880+j4.064	1.807+j8.041



## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Noreste

Subestación eléctrica	Acronímico	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
CENTRAL	CEN-138	138	11.81	11.00	1.173+j6.645	1.386+j8.309	13.49	12.29	1.096+j6.403	1.408+j8.450	12.94	11.96	1.164+j6.672	1.408+j8.486
CENTRAL ANÁHUAC	CAH-230	230	15.25	20.27	0.842+j8.666	0.126+j2.917	17.95	23.30	0.691+j8.110	0.132+j3.061	16.92	22.16	0.787+j8.597	0.129+j3.082
CENTRAL DULCES NOMBRES	CDU-115	115	17.27	19.24	0.208+j3.839	0.053+j2.660	17.64	19.55	0.211+j4.135	0.059+j2.926	17.62	19.54	0.212+j4.139	0.059+j2.926
CENTRAL DULCES NOMBRES	CDU-400	400	31.58	33.67	1.174+j7.217	0.539+j5.861	41.99	44.30	0.732+j6.006	0.418+j5.051	41.34	43.79	0.766+j6.097	0.418+j5.058
CENTRAL DULCES NOMBRES II	DNO-115	115	23.46	23.08	0.404+j2.802	0.207+j2.956	48.73	49.94	0.180+j1.488	0.170+j1.387	48.46	49.75	0.183+j1.496	0.169+j1.387
CENTRAL IBERDROLA COGENERACIÓN RAMOS	ICR-115	115	17.00	12.14	0.609+j3.859	1.601+j8.473	19.95	14.36	0.527+j3.623	1.483+j7.826	19.93	14.35	0.529+j3.626	1.483+j7.826
CERRALVO	CER-115	115	3.07	2.22	5.641+j20.866	16.197+j43.758	3.51	2.49	5.406+j20.086	15.818+j43.491	3.51	2.49	5.411+j20.102	15.818+j43.491
CERRO PRIETO	CEP-115	115	4.63	4.04	2.342+j14.135	5.720+j19.934	5.38	4.57	2.438+j13.343	5.733+j20.040	5.38	4.57	2.441+j13.352	5.733+j20.040
CHAIREL	CHR-115	115	18.25	15.22	0.631+j3.582	1.784+j5.678	20.69	16.91	0.606+j3.477	1.788+j5.731	20.52	16.82	0.612+j3.506	1.793+j5.749
CHAMPAYAN	CPY-400	400	27.79	31.22	0.655+j8.283	0.774+j6.300	39.23	43.70	0.383+j6.464	0.605+j4.900	36.95	41.64	0.427+j6.862	0.614+j5.073
CHAPACAO	CHW-115	115	4.34	3.07	3.969+j14.777	13.752+j31.686	4.79	3.38	3.956+j14.737	13.767+j31.737	4.78	3.37	3.962+j14.765	13.772+j31.741
CHRYSLER CAMIONES PLANTA MOTORES SUR	CPS-115	115	11.64	9.26	0.965+j5.621	2.347+j9.832	14.50	11.61	0.807+j4.972	1.858+j8.601	14.49	11.61	0.809+j4.976	1.858+j8.601
CHRYSLER DE MÉXICO	CYM-115	115	12.18	8.46	0.985+j5.361	2.557+j12.385	13.97	9.61	0.898+j5.149	2.508+j12.104	13.96	9.60	0.900+j5.152	2.508+j12.104
CHRYSLER PLANTA CAMIONES	CYC-115	115	11.88	9.59	0.925+j5.509	2.230+j9.348	14.61	11.80	0.789+j4.938	1.818+j8.371	14.59	11.80	0.791+j4.942	1.818+j8.371
CIBIOSA (FERSINSA)	CIB-115	115	11.26	7.52	1.114+j5.790	3.224+j14.334	12.78	8.41	1.040+j5.620	3.220+j14.268	12.77	8.41	1.042+j5.624	3.220+j14.268
CIÉNEGA DE FLORES DOS	CFD-115	115	13.60	8.88	0.653+j4.839	3.070+j12.330	15.69	10.08	0.609+j4.614	2.980+j12.098	15.66	10.07	0.613+j4.623	2.980+j12.098
CIFUNSA	CIF-115	115	18.11	14.81	0.712+j3.596	1.197+j6.005	22.10	18.22	0.614+j3.247	1.059+j5.315	22.07	18.21	0.616+j3.251	1.059+j5.315
CIMA	CIM-138	138	11.32	11.44	1.140+j6.945	0.975+j6.955	12.83	12.66	1.074+j6.744	1.013+j7.205	12.38	12.36	1.134+j6.990	1.011+j7.217
CITROFRUT	CIT-115	115	7.13	3.04	2.422+j8.992	11.951+j45.429	7.94	3.38	2.385+j8.880	11.702+j45.003	7.92	3.38	2.390+j8.904	11.704+j45.006
CIUDAD INDUSTRIAL	CID-138	138	6.92	7.85	2.336+j11.273	0.831+j7.468	8.89	9.52	1.747+j9.698	0.896+j7.849	8.89	9.52	1.749+j9.706	0.896+j7.849
CIUDAD INDUSTRIAL	CID-230	230	4.40	4.77	5.701+j29.619	2.738+j23.211	5.69	5.78	4.175+j25.327	2.935+j24.293	5.69	5.77	4.180+j25.346	2.935+j24.293
CLOSURES INTERIORES	CLI-138	138	10.08	8.42	1.632+j7.735	2.671+j12.474	11.61	9.51	1.526+j7.392	2.663+j12.414	11.08	9.21	1.619+j7.743	2.680+j12.586
CODEFRONT	CFT-138	138	2.79	2.05	4.499+j28.156	10.396+j58.647	3.26	2.31	3.904+j26.584	10.462+j59.029	3.26	2.31	3.906+j26.591	10.462+j59.029
COMPAÑÍA CERVECERA DE COAHUILA	CVC-138	138	5.67	5.02	2.948+j13.738	3.637+j19.258	8.58	7.79	1.886+j10.041	2.593+j13.007	8.57	7.79	1.887+j10.045	2.593+j13.007
CONCEPCIÓN DEL ORO	CDO-115	115	1.39	0.82	15.471+j45.371	36.832+j142.358	1.54	0.90	15.291+j44.983	36.889+j142.747	1.54	0.90	15.293+j44.986	36.889+j142.747
CONDUCTORES MONTERREY	CDY-115	115	24.87	17.67	0.480+j2.626	1.430+j5.760	29.02	20.00	0.428+j2.480	1.437+j5.750	28.86	19.94	0.433+j2.494	1.437+j5.752
CONEK	CNK-115	115	22.95	20.31	0.400+j2.865	0.695+j3.944	25.15	22.06	0.386+j2.878	0.702+j4.051	24.91	21.93	0.395+j2.906	0.702+j4.051
CONEK II	COK-115	115	22.93	20.30	0.401+j2.867	0.695+j3.944	25.13	22.05	0.387+j2.880	0.702+j4.051	24.89	21.92	0.396+j2.908	0.702+j4.051
CONTEC MEXICANA	CON-115	115	24.91	22.96	0.319+j2.646	0.542+j3.297	38.37	32.46	0.219+j1.891	0.528+j2.911	38.20	32.38	0.222+j1.899	0.528+j2.911
CONTROLADORA DE TERMINALES	COT-115	115	20.39	9.78	0.552+j3.209	2.801+j13.561	22.97	10.76	0.512+j3.138	2.839+j13.706	22.88	10.75	0.518+j3.150	2.839+j13.706

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Noreste

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
CONTRY	CNY-115	115	24.69	15.76	0.459+j2.650	1.400+j7.118	28.48	17.79	0.413+j2.531	1.390+j7.049	28.06	17.53	0.426+j2.568	1.410+j7.154
CORONA	CRO-138	138	6.79	5.59	2.391+j11.480	3.630+j19.041	11.28	9.20	1.278+j7.667	2.558+j12.701	11.27	9.20	1.279+j7.671	2.558+j12.701
CORPORATE PROPERTIES OF AMÉRICA	CPA-115	115	10.09	5.40	1.284+j6.454	5.245+j23.103	13.29	7.17	0.992+j5.403	4.342+j19.075	13.27	7.17	0.996+j5.412	4.342+j19.076
CRUZ DE ATAQUE	CRQ-115	115	0.86	0.67	17.997+j75.033	57.923+j133.824	0.95	0.73	17.890+j74.776	57.936+j133.940	0.95	0.73	17.898+j74.798	57.937+j133.942
CRYOINFRA	CRY-115	115	16.31	14.21	0.784+j3.994	1.040+j6.021	18.38	15.58	0.769+j3.898	1.091+j6.204	18.27	15.53	0.773+j3.923	1.091+j6.207
CRYOINFRA SCMS	COF-115	115	38.41	30.01	0.297+j1.703	0.520+j3.132	45.82	34.47	0.251+j1.574	0.527+j3.123	45.41	34.30	0.257+j1.588	0.527+j3.126
CUADRO DE MANIOBRAS EL MEZQUITE	CMM-230	230	7.11	6.60	2.711+j18.475	4.476+j22.725	7.98	7.27	2.561+j18.124	4.520+j23.310	7.95	7.26	2.579+j18.188	4.520+j23.311
CUADRO DE MANIOBRAS EÓLICA DE COAHUILA	MEH-230	230	5.50	6.93	3.448+j23.874	1.101+j9.188	6.16	7.66	3.226+j23.500	1.181+j9.679	6.16	7.66	3.230+j23.510	1.181+j9.679
CUADRO DE MANIOBRAS PROMAX	MPX-115	115	33.30	13.88	0.377+j1.958	2.094+j10.142	38.33	15.42	0.337+j1.876	2.100+j10.180	37.85	15.37	0.346+j1.898	2.100+j10.185
CUADRO MANIOBRAS DE ABSORMEX	MBX-115	115	19.68	15.28	0.611+j3.317	1.386+j6.274	28.01	24.92	0.397+j2.577	0.602+j3.621	27.82	24.83	0.399+j2.595	0.602+j3.623
CUADRO MANIOBRAS EÓLICO SANTA CATARINA	MEO-230	230	15.20	12.22	1.234+j8.647	3.602+j14.715	17.18	13.55	1.085+j8.433	3.642+j14.933	17.13	13.53	1.096+j8.459	3.642+j14.934
CUATRO CIÉNEGAS	CCE-115	115	1.65	1.08	16.160+j36.837	37.034+j97.539	1.83	1.19	15.996+j36.455	37.046+j97.722	1.83	1.19	16.039+j36.658	37.046+j97.722
CUMBRES FRONTERA	CUF-138	138	21.10	24.03	0.509+j3.741	0.242+j2.422	25.63	28.28	0.415+j3.395	0.256+j2.482	23.78	26.67	0.475+j3.655	0.254+j2.497
CUMBRES FRONTERA	CUF-230	230	15.37	15.93	0.937+j8.587	0.932+j7.741	18.52	18.43	0.719+j7.856	0.982+j7.993	17.11	17.42	0.862+j8.494	0.973+j8.057
CUMBRES ORIENTE	CBO-115	115	14.19	10.08	0.614+j4.640	2.250+j10.157	15.75	11.12	0.585+j4.601	2.254+j10.202	15.69	11.10	0.592+j4.618	2.254+j10.202
CUMBRES PONIENTE	CMN-115	115	16.30	12.28	0.533+j4.039	1.702+j7.901	18.13	13.55	0.503+j3.997	1.706+j7.942	18.06	13.52	0.509+j4.012	1.706+j7.943
DE ACERO	DEA-230	230	10.41	9.32	2.135+j12.574	3.005+j16.984	11.84	10.35	1.887+j12.192	3.095+j17.397	11.82	10.34	1.896+j12.209	3.095+j17.397
DE ACERO CLAVOS MONTERREY	DCM-115	115	33.62	22.86	0.370+j1.940	0.951+j4.663	40.21	26.36	0.321+j1.788	0.946+j4.584	39.80	26.16	0.328+j1.805	0.952+j4.608
DE ACERO POTENCIA	DEP-400	400	22.01	14.59	1.555+j10.377	2.895+j26.340	26.65	16.22	1.109+j9.467	3.173+j27.730	26.47	16.17	1.136+j9.529	3.173+j27.730
DECOFINMEX	DFX-138	138	10.86	9.10	1.316+j7.219	2.176+j11.565	12.92	10.80	1.189+j6.679	2.010+j10.747	12.34	10.48	1.266+j6.986	2.016+j10.848
DENSO	DSO-115	115	10.67	6.56	1.144+j6.115	3.744+j17.519	20.72	13.99	0.610+j3.471	1.681+j8.442	20.66	13.97	0.614+j3.482	1.681+j8.443
DENSO GUADALUPE	DGP-115	115	14.31	8.40	0.811+j4.570	3.153+j14.080	16.39	9.44	0.751+j4.392	3.149+j13.954	16.32	9.42	0.758+j4.410	3.153+j13.979
DERRAMADERO	DMD-115	115	20.97	21.03	0.424+j3.138	0.355+j3.120	23.56	23.06	0.376+j3.078	0.373+j3.278	23.53	23.04	0.378+j3.081	0.373+j3.278
DERRAMADERO	DMD-400	400	11.11	9.34	2.634+j20.613	5.069+j32.244	13.03	10.51	2.059+j19.380	5.272+j33.103	13.00	10.50	2.082+j19.430	5.272+j33.104
DÍAZ ORDAZ	DOR-138	138	4.79	2.91	4.150+j16.108	12.413+j47.387	7.34	4.76	2.843+j11.602	7.546+j30.381	7.22	4.73	2.887+j11.782	7.545+j30.390
DINASTÍA	DNA-115	115	27.78	17.70	0.434+j2.350	1.224+j6.355	32.04	19.75	0.383+j2.247	1.235+j6.418	31.27	19.53	0.405+j2.301	1.236+j6.427
DIRONA	DIR-115	115	19.43	9.59	0.567+j3.370	2.703+j13.679	21.90	10.52	0.526+j3.294	2.760+j13.886	21.80	10.50	0.532+j3.308	2.760+j13.887
DIRONA Y FORJA	DFO-115	115	19.42	9.56	0.567+j3.371	2.734+j13.736	21.89	10.49	0.527+j3.295	2.788+j13.934	21.79	10.48	0.533+j3.309	2.788+j13.935
DOFASCO DE MÉXICO	DAO-115	115	20.06	9.64	0.561+j3.262	2.799+j13.760	22.59	10.60	0.521+j3.190	2.844+j13.929	22.50	10.58	0.527+j3.203	2.844+j13.929
DULCES NOMBRES AYD	RDN-115	115	7.71	4.80	1.573+j8.468	5.755+j23.587	8.74	5.36	1.506+j8.218	5.752+j23.501	8.73	5.36	1.510+j8.228	5.752+j23.502

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Noreste

Subestación eléctrica	Acronímico	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
DYNASOL	DYN-115	115	17.19	13.15	0.768+j3.785	1.722+j7.349	20.24	15.39	0.703+j3.539	1.597+j6.919	20.09	15.33	0.708+j3.565	1.600+j6.929
EARTH TECH	ETH-115	115	7.98	3.30	1.390+j8.205	9.325+j42.635	10.01	3.76	1.124+j7.206	9.343+j42.631	10.00	3.76	1.127+j7.215	9.343+j42.633
ÉBANO	EBN-115	115	4.43	3.14	4.121+j14.403	13.355+j30.943	4.89	3.45	4.106+j14.350	13.368+j30.996	4.88	3.45	4.112+j14.379	13.374+j31.003
EL ABRA	ABR-115	115	2.44	1.67	8.478+j25.858	16.571+j62.705	2.78	1.98	7.972+j25.036	13.178+j56.162	2.78	1.98	7.976+j25.053	13.178+j56.162
EL CANADÁ	ECN-115	115	21.74	11.52	0.453+j3.020	1.913+j11.010	24.60	12.59	0.412+j2.940	1.992+j11.286	24.46	12.57	0.419+j2.956	1.991+j11.287
EL COCO	COC-115	115	19.49	25.44	0.445+j3.377	0.334+j1.043	20.97	27.11	0.454+j3.453	0.377+j1.107	20.82	26.96	0.459+j3.478	0.375+j1.109
EL CUCHILLO	CCL-115	115	6.04	7.11	1.070+j10.938	0.576+j6.014	6.52	7.62	1.003+j11.164	0.585+j6.320	6.51	7.61	1.008+j11.181	0.585+j6.320
EL CUCHILLO	CCL-230	230	5.94	5.52	3.420+j22.108	4.055+j27.146	7.00	6.24	3.026+j20.632	4.291+j28.116	6.98	6.23	3.045+j20.706	4.291+j28.117
EL FRAILE	FAI-400	400	28.87	29.29	0.869+j7.951	0.559+j7.340	33.63	32.77	0.643+j7.525	0.617+j7.868	33.38	32.60	0.664+j7.581	0.617+j7.868
EL GUERREÑO	GRR-138	138	19.86	23.98	0.529+j3.976	0.116+j2.004	23.99	28.09	0.429+j3.628	0.131+j2.108	22.12	26.24	0.499+j3.930	0.129+j2.133
EL GUERREÑO	GRR-400	400	12.63	13.03	1.943+j18.187	2.502+j17.039	16.15	15.79	1.311+j15.676	2.622+j17.020	15.21	15.12	1.562+j16.633	2.637+j17.177
EL HIGO DOS	HGD-115	115	2.46	1.58	6.139+j26.294	20.549+j70.309	2.69	1.73	6.195+j26.421	20.563+j70.397	2.69	1.73	6.200+j26.438	20.570+j70.418
EL PORVENIR	EPR-138	138	7.99	7.38	1.985+j9.776	1.725+j12.359	9.09	8.14	1.908+j9.455	1.873+j12.929	8.78	7.97	1.978+j9.785	1.868+j12.951
EL REGIONMONTANO	RGM-115	115	29.14	28.74	0.253+j2.265	0.268+j2.355	33.35	31.98	0.219+j2.179	0.284+j2.456	33.18	31.84	0.223+j2.190	0.284+j2.463
EL REGIONMONTANO	RGM-400	400	20.58	17.65	1.502+j11.120	3.087+j16.505	25.27	20.70	1.095+j9.994	3.151+j16.427	25.03	20.58	1.127+j10.085	3.154+j16.445
ELECTRICIDAD ÁGUILA ALTAMIRA	EAA-400	400	24.70	28.84	0.660+j9.326	0.639+j6.433	35.62	41.41	0.376+j7.122	0.465+j4.903	34.25	40.17	0.403+j7.407	0.460+j5.000
ELENA	ELN-115	115	15.74	16.42	0.702+j4.160	0.601+j3.766	18.59	19.36	0.623+j3.879	0.547+j3.518	18.48	19.29	0.627+j3.901	0.547+j3.521
EMERSON	EMR-138	138	10.94	8.26	1.433+j7.138	2.996+j14.120	13.68	10.19	1.164+j6.300	2.711+j12.842	12.33	9.29	1.379+j6.976	2.910+j13.813
EMERSON DOS	EMD-138	138	9.35	5.98	1.862+j8.320	5.684+j22.282	19.35	13.46	0.725+j4.471	2.345+j10.259	18.23	13.06	0.788+j4.743	2.343+j10.279
EMPALME	EML-138	138	7.13	4.94	2.624+j10.862	6.132+j25.481	8.31	5.66	2.435+j10.266	5.988+j24.763	7.86	5.42	2.603+j10.837	6.145+j25.595
ENERGÍA MK KF	KAF-115	115	20.01	16.26	0.580+j3.267	1.055+j5.645	27.00	23.27	0.424+j2.671	0.713+j4.037	26.82	23.19	0.426+j2.689	0.713+j4.039
ENERTEK	ETK-115	115	23.44	22.31	0.415+j2.803	0.502+j3.399	27.40	26.12	0.379+j2.639	0.452+j3.156	27.21	26.02	0.381+j2.657	0.452+j3.159
EÓLICA CIUDAD VICTORIA	ECV-115	115	4.11	5.39	3.542+j15.752	0.869+j4.590	4.51	5.88	3.564+j15.808	0.904+j4.785	4.50	5.88	3.567+j15.819	0.903+j4.786
EÓLICA GUADALUPE MANIOBRAS	EGM-400	400	9.25	9.57	2.362+j24.846	2.487+j22.455	10.53	10.60	2.120+j24.026	2.641+j23.613	10.48	10.57	2.146+j24.136	2.641+j23.615
EÓLICA LA MESA	ELM-115	115	3.59	4.23	4.504+j17.960	1.664+j9.963	3.93	4.59	4.531+j18.022	1.785+j10.438	3.93	4.59	4.534+j18.033	1.785+j10.439
EÓLICA TRES MESAS	EMS-115	115	4.26	3.00	0.319+j15.600	7.971+j34.687	4.33	3.10	0.315+j16.858	7.990+j36.395	4.33	3.10	0.318+j16.874	7.990+j36.395
EÓLICA TRES MESAS	EMS-115A	115	3.14	3.36	1.824+j21.086	0.170+j16.990	3.26	3.45	1.821+j22.332	0.188+j18.694	3.26	3.45	1.823+j22.347	0.188+j18.694
EÓLICA TRES MESAS FASE CUATRO	EMC-115	115	4.29	4.12	1.000+j15.440	0.987+j17.443	4.37	4.20	1.069+j16.679	1.000+j18.723	4.37	4.20	1.073+j16.694	1.000+j18.723
EÓLICA TRES MESAS FASE CUATRO	EMC-115A	115	3.44	3.88	2.124+j19.173	0.129+j12.791	3.56	3.98	2.197+j20.399	0.142+j14.071	3.56	3.98	2.201+j20.413	0.142+j14.071
ESCOBEDO	ESC-115	115	54.76	55.99	0.176+j1.200	0.108+j1.124	63.58	62.90	0.139+j1.140	0.116+j1.178	63.03	62.53	0.143+j1.150	0.116+j1.179

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Noreste**

Subestación eléctrica	Acronímico	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
ESCOBEDO	ESC-230	230	21.58	20.07	0.834+j6.095	1.063+j7.470	24.95	22.39	0.685+j5.814	1.138+j7.782	24.82	22.32	0.698+j5.845	1.138+j7.783
ESCOBEDO	ESC-400	400	28.86	28.84	1.382+j7.882	1.183+j7.839	37.10	34.98	0.937+j6.783	1.222+j7.934	36.57	34.65	0.976+j6.877	1.222+j7.942
ESPERANZAS	ESP-115	115	2.20	1.63	7.255+j29.271	14.319+j60.231	2.57	1.84	6.738+j27.560	14.332+j60.596	2.57	1.84	6.744+j27.574	14.332+j60.596
ESTANZUELA	ETZ-115	115	16.67	12.79	0.509+j3.950	1.405+j7.484	20.27	15.35	0.475+j3.572	1.334+j6.947	20.04	15.11	0.490+j3.612	1.363+j7.088
ESTANZUELA	ETZ-115B	115	17.65	11.59	0.737+j3.688	2.000+j9.456	20.93	13.67	0.665+j3.425	1.891+j8.847	20.68	13.48	0.679+j3.466	1.919+j8.988
ESTRELLA	ELL-115	115	7.18	5.08	1.544+j9.114	4.403+j20.287	7.86	5.55	1.564+j9.161	4.423+j20.464	7.85	5.54	1.567+j9.173	4.423+j20.465
FALCÓN MEXICANO	FAM-138	138	5.14	3.02	3.991+j14.984	12.506+j46.639	6.22	5.54	3.361+j13.692	2.188+j18.982	6.19	5.53	3.376+j13.755	2.188+j18.983
FARO	FAR-115	115	25.76	17.07	0.462+j2.535	1.209+j6.399	29.49	19.16	0.418+j2.441	1.205+j6.369	29.12	18.95	0.430+j2.471	1.215+j6.428
FÉLIX U. GÓMEZ	FUG-115	115	31.99	22.08	0.381+j2.041	0.918+j4.776	37.26	25.13	0.335+j1.931	0.906+j4.711	36.68	24.72	0.346+j1.961	0.923+j4.791
FINSA	FIT-115	115	12.07	8.65	0.872+j5.429	2.472+j11.788	15.98	10.75	0.757+j4.508	2.420+j10.979	15.95	10.74	0.761+j4.516	2.420+j10.980
FINSA	FIS-115	115	17.31	14.33	0.657+j3.778	1.330+j6.095	19.88	16.07	0.587+j3.627	1.344+j6.146	19.86	16.06	0.589+j3.630	1.344+j6.146
FINSA GUADALUPE	FIG-115	115	18.84	13.22	0.605+j3.473	1.526+j7.866	27.53	18.19	0.444+j2.616	1.412+j6.595	27.41	18.15	0.448+j2.626	1.412+j6.598
FINSA LAREDO	FIL-138	138	7.03	7.31	2.522+j11.054	2.024+j9.863	8.92	8.80	1.935+j9.633	2.050+j10.021	8.91	8.79	1.937+j9.641	2.050+j10.021
FIRESTONE	FRS-115	115	13.90	8.25	0.931+j4.686	3.206+j14.240	19.96	12.38	0.636+j3.603	2.287+j10.133	19.91	12.36	0.641+j3.612	2.287+j10.134
FLEX AMÉRICAS	FME-115	115	16.84	12.86	0.475+j3.914	1.613+j7.540	19.42	14.63	0.434+j3.735	1.567+j7.375	19.32	14.59	0.437+j3.755	1.567+j7.379
FOMERREY	FOM-115	115	11.20	7.46	1.014+j5.841	2.933+j14.539	12.52	8.23	0.963+j5.753	2.943+j14.656	12.45	8.21	0.974+j5.783	2.943+j14.656
FREIGHTLINER	FRI-115	115	10.42	7.84	1.118+j6.272	3.062+j12.294	12.13	9.07	0.982+j5.942	2.768+j11.804	12.12	9.07	0.984+j5.946	2.768+j11.804
FRISA	FSA-115	115	19.93	17.26	0.385+j3.309	0.804+j4.790	21.74	18.66	0.376+j3.339	0.821+j4.935	21.59	18.59	0.383+j3.361	0.821+j4.935
FRONTERA	FRO-115	115	12.12	15.37	0.709+j5.432	0.128+j2.217	14.42	17.67	0.556+j5.035	0.139+j2.398	13.84	17.11	0.593+j5.244	0.139+j2.398
FRONTERA	FRO-230	230	10.87	13.23	1.692+j12.095	0.485+j6.449	13.53	15.70	1.162+j10.730	0.533+j6.840	13.08	15.31	1.249+j11.099	0.533+j6.840
FRONTERA	FRO-400	400	9.93	9.70	3.562+j22.977	2.780+j26.049	13.56	12.01	2.111+j18.611	3.134+j26.550	13.37	11.92	2.198+j18.868	3.134+j26.550
FUENTES	FTE-138	138	8.12	8.08	1.681+j9.663	1.794+j9.847	11.49	10.66	1.110+j7.547	1.660+j9.183	11.48	10.66	1.111+j7.551	1.660+j9.183
FUNDICIÓN	FDC-115	115	19.69	15.39	0.563+j3.325	1.229+j6.080	23.39	18.23	0.473+j3.086	1.158+j5.667	23.36	18.22	0.475+j3.090	1.158+j5.667
FUNDIDORA	FUN-115	115	29.24	20.54	0.414+j2.233	0.972+j5.059	34.26	24.48	0.360+j2.101	0.817+j4.615	33.45	22.95	0.379+j2.150	0.981+j5.087
G. E. PLASTIC	GEP-115	115	9.27	5.87	1.314+j7.041	4.200+j19.306	11.06	6.98	1.172+j6.501	3.891+j17.855	11.03	6.97	1.175+j6.519	3.891+j17.857
GALVASID	GLS-115	115	20.82	14.42	0.521+j3.147	1.489+j7.279	28.76	19.97	0.397+j2.508	1.164+j5.781	28.62	19.92	0.402+j2.520	1.164+j5.783
GARCIA	GAC-115	115	9.88	8.02	0.713+j6.683	2.182+j11.193	10.83	8.76	0.703+j6.710	2.193+j11.319	10.78	8.74	0.711+j6.735	2.193+j11.319
GENERACIÓN ELÉCTRICA HUINALA	GEH-115	115	8.53	8.64	0.612+j7.757	0.606+j7.483	9.39	9.32	0.630+j7.756	0.693+j7.930	9.38	9.31	0.632+j7.761	0.693+j7.930
GENERAL MOTOR	GMO-115	115	13.30	9.80	1.109+j4.868	2.232+j10.097	18.63	14.34	0.814+j3.834	1.582+j7.274	18.61	14.33	0.816+j3.838	1.582+j7.274
GIRASOLES	GRS-115	115	26.24	18.64	0.421+j2.495	1.105+j5.511	29.88	20.79	0.380+j2.415	1.110+j5.539	29.67	20.72	0.386+j2.431	1.110+j5.541

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Noreste**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
GOLDEN DRAGÓN	GOD-115F	115	6.54	4.46	1.740+j9.996	5.181+j24.022	7.83	5.18	1.486+j9.210	4.983+j23.229	7.59	5.11	1.545+j9.498	4.983+j23.229
GOLLEK	GOK-115	115	4.56	3.45	2.042+j14.431	6.145+j28.030	5.79	4.75	2.010+j12.461	3.520+j20.544	5.78	4.75	2.012+j12.470	3.520+j20.544
GP BIENES INMUEBLES	GPI-115	115	9.36	6.65	1.154+j6.996	2.886+j15.485	18.49	12.30	0.682+j3.890	1.947+j9.722	18.44	12.28	0.686+j3.900	1.947+j9.723
GRANJAS	GRA-115	115	8.03	5.96	1.382+j8.150	3.515+j16.726	9.72	6.97	1.144+j7.430	3.381+j16.213	9.32	6.83	1.210+j7.746	3.381+j16.213
GUADALUPE	GDL-115	115	23.85	15.92	0.524+j2.735	1.380+j6.798	27.69	18.04	0.475+j2.595	1.376+j6.733	27.43	17.89	0.484+j2.618	1.384+j6.779
GÜEMEZ	GUE-115	115	17.02	18.49	0.356+j3.884	0.268+j2.982	18.50	19.84	0.375+j3.931	0.285+j3.148	18.44	19.79	0.378+j3.943	0.285+j3.149
GÜEMEZ	GUE-400	400	13.92	12.13	1.735+j16.500	3.962+j23.932	16.31	13.68	1.486+j15.500	4.138+j24.435	16.14	13.60	1.518+j15.670	4.136+j24.455
GUILLFORD MILLS	GUI-115	115	15.70	11.29	0.676+j4.175	1.819+j9.138	17.80	12.61	0.650+j4.052	1.800+j9.083	17.70	12.58	0.654+j4.075	1.803+j9.090
H.C. INDUSTRIAS	HCI-115	115	13.21	9.64	1.083+j4.908	2.399+j10.345	18.55	14.21	0.807+j3.854	1.638+j7.364	18.53	14.20	0.809+j3.858	1.638+j7.364
HERSHEY DE MÉXICO	HER-115	115	17.14	8.85	0.665+j3.816	3.119+j14.424	19.22	9.76	0.627+j3.748	3.139+j14.510	19.15	9.75	0.632+j3.760	3.139+j14.511
HIDALGO	HID-115	115	7.89	5.30	2.226+j8.117	8.072+j19.221	8.75	5.84	2.188+j8.059	8.080+j19.275	8.74	5.84	2.192+j8.068	8.080+j19.275
HUASTECA	HST-115	115	1.30	0.73	18.722+j47.336	43.051+j164.500	1.43	0.81	18.725+j47.390	43.100+j164.549	1.43	0.81	18.733+j47.411	43.098+j164.550
HUEJUTLA II	HJD-115	115	1.82	1.80	10.920+j34.803	12.670+j35.958	2.00	1.98	10.901+j34.758	12.692+j36.192	2.00	1.98	10.909+j34.774	12.693+j36.195
HUERTAS	HUS-115	115	7.00	6.23	1.108+j9.421	2.873+j12.750	8.38	7.17	1.206+j8.631	2.885+j12.857	8.37	7.16	1.209+j8.640	2.885+j12.857
HUICHIHUAYAN	HUH-115	115	1.79	1.05	13.514+j34.549	30.030+j111.670	1.97	1.16	13.521+j34.607	30.078+j111.718	1.96	1.15	13.529+j34.628	30.077+j111.720
HUINALA	HUI-115	115	33.95	39.25	0.228+j1.942	0.057+j1.161	61.21	69.61	0.128+j1.186	0.043+j0.775	60.79	69.24	0.131+j1.194	0.043+j0.775
HUINALA	HUI-115B	115	33.95	39.25	0.228+j1.942	0.057+j1.161	61.21	69.61	0.128+j1.186	0.043+j0.775	60.79	69.24	0.131+j1.194	0.043+j0.775
HUINALA	HUI-230	230	23.92	27.59	0.716+j5.505	0.263+j3.315	34.45	38.75	0.417+j4.220	0.225+j2.840	34.21	38.54	0.428+j4.249	0.225+j2.841
HUINALA	HUI-230B	230	24.12	27.57	0.699+j5.461	0.306+j3.409	34.63	38.70	0.411+j4.198	0.254+j2.901	34.39	38.49	0.421+j4.227	0.254+j2.902
HUINALA	HUI-400	400	32.17	34.38	1.186+j7.080	0.521+j5.704	43.02	45.47	0.739+j5.858	0.398+j4.900	42.34	44.93	0.773+j5.950	0.398+j4.908
HUINALA DOS	HUO-400	400	32.01	34.19	1.183+j7.116	0.525+j5.750	42.80	45.32	0.737+j5.890	0.386+j4.891	42.12	44.79	0.771+j5.982	0.386+j4.899
HYLSA MANIOBRAS	HYM-400	400	26.93	25.10	1.729+j8.398	1.333+j10.303	34.39	30.37	1.282+j7.274	1.314+j10.196	33.91	30.10	1.325+j7.375	1.315+j10.207
HYLSA NORTE	EHN-230	230	14.95	11.45	1.369+j8.773	4.023+j16.566	18.03	13.21	1.137+j8.019	4.037+j16.536	17.97	13.19	1.148+j8.048	4.037+j16.537
IBERDROLA COGENERACIÓN ALTAMIRA	IBC-115	115	21.70	20.78	0.422+j3.030	0.420+j3.607	24.59	22.91	0.408+j2.941	0.449+j3.722	24.41	22.81	0.411+j2.963	0.449+j3.726
IMIS	IMI-115	115	10.99	8.45	1.397+j5.877	2.774+j11.162	12.43	9.42	1.320+j5.725	2.776+j11.173	12.42	9.42	1.322+j5.728	2.776+j11.173
IMSA	INM-115	115	10.74	11.67	0.855+j6.122	0.664+j4.891	12.86	13.40	0.680+j5.637	0.681+j5.101	12.05	12.82	0.758+j6.012	0.681+j5.101
IMSA PARTICULARES	IMO-115	115	17.81	10.70	0.681+j3.666	2.346+j10.902	20.17	11.91	0.637+j3.564	2.349+j10.908	20.08	11.89	0.644+j3.580	2.349+j10.911
INDUSTRIA VIDRIERA DE COAHUILA	IVC-138	138	6.15	4.86	2.738+j12.672	4.660+j22.864	9.73	7.51	1.622+j8.863	3.588+j16.524	9.72	7.51	1.623+j8.867	3.588+j16.524
INFONAVIT	INF-115	115	16.41	14.02	0.678+j3.988	2.064+j5.933	18.57	15.56	0.653+j3.879	2.072+j5.993	18.43	15.50	0.658+j3.907	2.074+j6.005
INFONAVIT	INV-138	138	9.59	8.10	1.393+j8.192	2.327+j12.900	10.82	8.97	1.329+j7.989	2.349+j13.079	10.49	8.81	1.389+j8.239	2.347+j13.092

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Noreste**

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
INGENIO SAN MIGUEL EL NARANJO	MGN-115	115	2.80	3.06	6.481+j22.830	1.854+j17.697	3.22	3.62	5.897+j21.880	1.932+j14.768	3.22	3.62	5.899+j21.893	1.932+j14.768
INTERNACIONAL REGIOMONTANA DE ACERO	IRG-115	115	21.14	14.94	0.482+j3.103	1.456+j6.900	24.58	16.90	0.430+j2.941	1.457+j6.880	24.48	16.86	0.435+j2.952	1.457+j6.882
INTERPUERTO	IPR-115	115	17.44	8.12	0.504+j3.773	3.574+j16.532	19.62	9.05	0.466+j3.694	3.495+j16.408	19.57	9.04	0.470+j3.703	3.495+j16.408
IQUISA NORESTE	IQN-115	115	14.59	10.86	0.538+j4.518	1.920+j9.047	16.07	11.89	0.521+j4.516	1.930+j9.139	16.00	11.87	0.528+j4.535	1.930+j9.139
JABIL	JAB-138	138	11.08	8.44	1.416+j7.051	2.902+j13.687	13.88	10.44	1.149+j6.209	2.620+j12.423	12.54	9.55	1.352+j6.858	2.793+j13.292
JARACHINA	JRA-138	138	17.08	15.13	0.714+j4.611	1.181+j6.401	21.70	19.21	0.574+j3.997	1.001+j5.565	20.32	18.42	0.636+j4.267	0.999+j5.583
JARDÍN DOS	JAD-138	138	11.67	10.33	1.209+j6.721	1.701+j9.533	13.36	11.56	1.129+j6.464	1.716+j9.624	12.79	11.25	1.200+j6.744	1.718+j9.683
JERÓNIMO POTENCIA	JEP-115	115	43.59	38.18	0.265+j1.500	0.253+j2.154	50.90	42.73	0.222+j1.417	0.268+j2.243	49.54	41.97	0.237+j1.455	0.269+j2.254
JERÓNIMO POTENCIA	JEP-115B	115	43.70	38.83	0.262+j1.497	0.229+j2.076	51.02	43.43	0.220+j1.415	0.245+j2.168	49.63	42.65	0.235+j1.453	0.246+j2.179
JERÓNIMO POTENCIA	JEP-400	400	20.72	19.12	1.706+j11.014	2.074+j13.727	25.23	22.16	1.239+j9.991	2.153+j14.056	24.82	21.88	1.305+j10.150	2.183+j14.161
JIMÉNEZ	JIM-115	115	1.58	1.07	13.104+j40.005	41.631+j94.161	1.73	1.17	13.118+j40.047	41.653+j94.336	1.73	1.17	13.122+j40.058	41.653+j94.336
JOHNSON AND CONTROL	JCC-115	115	8.93	5.27	1.368+j7.309	5.029+j22.378	14.40	9.11	0.789+j5.009	3.066+j13.567	14.38	9.11	0.793+j5.018	3.066+j13.568
JOHNSON CONTROL	JHC-115	115	15.00	11.97	0.483+j4.401	1.410+j7.640	16.40	13.03	0.472+j4.428	1.421+j7.766	16.31	12.99	0.481+j4.453	1.421+j7.766
JOSEFA ZOZAYA	JZO-115	115	15.67	9.77	0.763+j4.169	2.397+j11.671	20.60	12.13	0.629+j3.488	2.321+j10.738	20.54	12.11	0.633+j3.500	2.322+j10.742
JUÁREZ	JUZ-138	138	19.07	18.36	0.641+j4.128	0.928+j4.619	23.59	22.13	0.517+j3.679	0.871+j4.417	21.84	20.99	0.584+j3.970	0.869+j4.445
JUÁREZ NORTE	JNO-115	115	16.37	11.53	0.630+j4.008	1.758+j8.988	23.14	15.15	0.505+j3.115	1.640+j8.003	23.08	15.13	0.508+j3.123	1.640+j8.003
KALOS GUADALUPE	KGP-115	115	17.91	12.78	0.473+j3.678	2.054+j7.934	22.94	15.31	0.393+j3.160	2.047+j7.716	22.87	15.29	0.396+j3.168	2.047+j7.718
KEMET	KMT-115	115	22.09	14.88	0.541+j2.957	1.756+j7.162	25.69	16.79	0.485+j2.802	1.763+j7.152	25.56	16.76	0.490+j2.815	1.763+j7.154
KEMET	KMM-138	138	8.15	6.33	1.668+j9.628	3.407+j18.106	9.17	7.00	1.604+j9.426	3.428+j18.282	8.93	6.90	1.664+j9.676	3.426+j18.295
KEMET VICTORIA	KWM-115	115	6.87	5.43	2.255+j9.401	5.206+j16.609	7.52	5.92	2.275+j9.448	5.233+j16.806	7.51	5.92	2.278+j9.460	5.233+j16.807
KIKAPU	KIK-115	115	2.03	1.45	7.449+j31.827	17.021+j69.580	2.37	1.64	6.944+j30.006	17.034+j69.945	2.37	1.64	6.950+j30.021	17.034+j69.945
KRAFT	KRA-115	115	34.13	23.34	0.364+j1.911	0.924+j4.545	40.91	26.95	0.315+j1.757	0.920+j4.465	40.50	26.76	0.322+j1.775	0.924+j4.488
KRAFT FOODS DE MÉXICO	KRF-115	115	16.60	10.29	0.680+j3.942	2.474+j11.094	20.42	12.54	0.565+j3.531	2.259+j10.073	20.37	12.53	0.569+j3.540	2.259+j10.074
LA FE	LAF-115	115	38.90	27.14	0.309+j1.679	0.723+j3.854	46.39	31.12	0.265+j1.552	0.725+j3.824	45.94	30.94	0.271+j1.567	0.726+j3.833
LA MODERNA	MDR-115	115	17.96	10.85	0.723+j3.626	2.316+j10.721	20.45	12.17	0.673+j3.507	2.289+j10.615	20.29	12.06	0.684+j3.534	2.320+j10.719
LA ROSITA	RSI-115	115	4.07	2.94	4.645+j15.620	14.155+j32.393	4.48	3.23	4.638+j15.612	14.177+j32.443	4.48	3.23	4.644+j15.638	14.179+j32.444
LA SILLA	SLL-115B	115	12.94	8.11	0.904+j5.051	3.161+j13.949	14.74	9.10	0.845+j4.881	3.157+j13.834	14.69	9.07	0.852+j4.899	3.161+j13.858
LA SILLA	SLL-115	115	6.34	4.13	1.347+j10.391	6.006+j26.651	7.03	4.55	1.313+j10.306	6.022+j26.751	7.02	4.55	1.316+j10.317	6.022+j26.759
LADRILLERA	LDA-115	115	1.64	1.15	12.007+j38.687	19.498+j90.907	4.32	2.81	4.418+j16.316	11.178+j42.711	4.31	2.81	4.427+j16.337	11.183+j42.754
LADRILLERA REVOLUCIÓN	LRR-115	115	24.06	17.51	0.509+j2.712	1.028+j5.761	27.81	19.90	0.459+j2.586	1.010+j5.666	27.33	19.38	0.474+j2.629	1.060+j5.863

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Noreste

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
LAGO	LAO-138	138	6.71	6.71	2.614+j11.580	2.422+j11.654	8.44	8.01	2.037+j10.184	2.445+j11.807	8.43	8.00	2.039+j10.192	2.445+j11.807
LAGUNA DEL CONEJO	LDC-115	115	25.47	23.59	0.383+j2.578	0.547+j3.342	30.09	28.43	0.343+j2.403	0.441+j2.933	29.86	28.31	0.345+j2.422	0.441+j2.935
LAGUNAS DE MIRALTA	LGM-115	115	17.53	13.77	0.620+j3.736	1.707+j6.807	19.87	15.28	0.595+j3.627	1.716+j6.871	19.72	15.22	0.600+j3.655	1.718+j6.881
LAJAS	LAJ-115	115	9.02	11.92	0.509+j7.339	0.087+j2.006	11.10	14.35	0.608+j6.550	0.100+j2.112	11.09	14.34	0.611+j6.559	0.100+j2.113
LAJAS	LAJ-400	400	11.94	10.51	2.116+j19.224	4.743+j26.946	14.01	11.86	1.795+j18.048	4.945+j27.646	13.93	11.82	1.824+j18.148	4.944+j27.652
LAMOSA	LMS-115	115	16.32	11.48	0.571+j4.027	2.411+j8.925	20.60	13.62	0.492+j3.511	2.404+j8.707	20.55	13.61	0.495+j3.519	2.404+j8.708
LAMOSA LAREDO	LAL-138	138	6.95	7.13	2.527+j11.181	2.041+j10.449	8.82	8.56	1.938+j9.747	2.070+j10.617	8.81	8.56	1.940+j9.756	2.070+j10.617
LAMPAZOS	LAM-400	400	8.98	6.35	3.172+j25.521	12.758+j56.508	12.65	8.26	1.714+j20.012	11.955+j51.033	12.61	8.25	1.735+j20.068	11.955+j51.035
LAREDO PONIENTE	LAP-138	138	5.97	5.58	2.812+j13.039	2.912+j15.918	7.46	6.58	2.220+j11.537	2.957+j16.174	7.45	6.58	2.222+j11.545	2.957+j16.174
LAS BRISAS	BRI-115	115	18.79	15.90	0.752+j3.452	0.936+j5.386	21.56	17.80	0.683+j3.319	0.950+j5.453	21.53	17.79	0.685+j3.322	0.950+j5.453
LAS CRUCES	CRU-115	115	1.57	1.26	12.494+j40.451	25.654+j69.082	1.81	1.58	11.284+j38.672	18.963+j54.689	1.81	1.58	11.286+j38.686	18.963+j54.689
LAS GLORIAS	GLO-115	115	35.33	32.64	0.239+j1.864	0.267+j2.325	42.67	37.94	0.207+j1.699	0.281+j2.334	42.44	37.81	0.211+j1.708	0.281+j2.334
LAS GLORIAS	GLO-400	400	22.45	18.21	1.365+j10.194	2.542+j17.210	27.44	21.31	0.985+j9.206	2.539+j17.008	27.14	21.18	1.021+j9.305	2.539+j17.015
LAS NORIAS	NOI-115	115	0.95	0.59	24.132+j65.466	67.721+j188.118	1.05	0.65	24.133+j65.502	67.745+j188.296	1.05	0.64	24.138+j65.513	67.745+j188.297
LAS PUENTES	PTS-115B2	115	32.88	23.11	0.354+j1.988	0.875+j4.490	38.54	26.15	0.306+j1.870	0.880+j4.503	38.19	26.03	0.313+j1.887	0.880+j4.505
LAS PUENTES	PTS-115B1	115	32.42	22.37	0.359+j2.016	0.914+j4.714	37.78	25.20	0.314+j1.908	0.919+j4.739	37.43	25.09	0.320+j1.925	0.919+j4.741
LAS TORRES	LTO-138	138	10.57	10.02	1.241+j7.432	1.420+j8.872	11.97	11.10	1.174+j7.227	1.453+j9.097	11.57	10.87	1.234+j7.472	1.451+j9.107
LAURO VILLAR	LVI-138	138	11.56	12.52	1.081+j6.808	0.605+j5.490	13.09	13.81	1.018+j6.618	0.650+j5.781	12.62	13.46	1.076+j6.860	0.648+j5.791
LAURO VILLAR	LVI-230	230	8.10	8.50	2.456+j16.203	1.972+j14.546	9.31	9.48	2.248+j15.529	2.106+j15.162	8.95	9.23	2.395+j16.141	2.102+j15.191
LECHUGAL	LEC-115	115	15.22	10.47	0.717+j4.303	2.043+j10.079	17.26	11.64	0.655+j4.180	2.049+j10.150	16.77	11.49	0.700+j4.298	2.049+j10.152
LEGO REAL ESTATE	LGR-115	115	12.21	6.55	1.071+j5.330	4.329+j19.067	16.79	9.08	0.779+j4.279	3.426+j15.039	16.76	9.08	0.783+j4.288	3.426+j15.040
LEONA	LEO-115	115	14.83	10.15	0.778+j4.410	2.127+j10.453	17.43	11.46	0.661+j4.139	2.135+j10.516	16.42	11.16	0.755+j4.384	2.136+j10.521
LG	LGE-115	115	11.06	6.83	1.103+j5.903	3.572+j16.759	20.80	13.97	0.609+j3.459	1.702+j8.495	20.73	13.95	0.614+j3.469	1.702+j8.496
LIBERTAD (MONTEMORELOS)	LBT-115	115	7.32	7.82	0.876+j9.033	2.310+j7.099	8.80	9.10	0.974+j8.243	2.322+j7.206	8.79	9.10	0.977+j8.252	2.322+j7.206
LIBERTAD (CIUDAD VICTORIA)	LBT-115	115	7.60	6.12	1.992+j8.506	4.266+j14.472	8.31	6.67	2.013+j8.553	4.293+j14.669	8.30	6.67	2.016+j8.565	4.293+j14.670
LIBRAMIENTO	LBR-115	115	2.71	1.74	7.636+j23.264	17.323+j62.987	3.06	2.02	7.296+j22.710	14.918+j58.675	3.06	2.02	7.301+j22.729	14.919+j58.675
LINARES	LSN-115	115	3.75	2.66	2.724+j17.493	8.657+j38.435	5.14	3.68	2.616+j13.977	7.023+j30.379	5.13	3.68	2.619+j13.986	7.023+j30.379
LINDA VISTA	LDV-115	115	5.04	3.08	2.354+j12.965	8.013+j37.582	5.57	3.39	2.341+j12.898	8.028+j37.681	5.56	3.38	2.348+j12.931	8.048+j37.728
LLANO GRANDE	LLG-138	138	12.35	13.85	1.016+j6.372	0.460+j4.543	14.04	15.34	0.952+j6.171	0.497+j4.799	13.49	14.89	1.012+j6.418	0.496+j4.810
LLANO GRANDE	LLG-230	230	8.84	9.43	2.214+j14.864	1.672+j12.702	10.19	10.55	2.010+j14.192	1.788+j13.253	9.77	10.24	2.152+j14.794	1.785+j13.282

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Noreste**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
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			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
LOMA LARGA	LOL-115	115	23.52	11.81	0.511+j2.776	2.378+j10.959	26.98	13.21	0.465+j2.666	2.373+j10.920	26.62	13.10	0.478+j2.702	2.384+j10.988
LOS NOVILLOS	LVN-138	138	6.74	7.51	1.628+j11.708	0.907+j8.183	8.80	9.62	1.148+j9.889	0.868+j7.228	8.80	9.62	1.148+j9.891	0.868+j7.228
LOS NOVILLOS	LVN-230	230	5.60	5.88	3.247+j23.497	3.263+j20.199	7.45	7.49	2.189+j19.485	3.089+j18.867	7.45	7.49	2.191+j19.492	3.089+j18.867
LUVATA	LUV-115	115	18.40	12.75	0.622+j3.555	1.617+j8.237	26.43	17.27	0.466+j2.723	1.508+j7.012	26.32	17.23	0.470+j2.734	1.508+j7.016
MABE	MAB-115	115	15.83	12.10	0.797+j4.118	1.819+j7.870	18.38	13.88	0.723+j3.908	1.777+j7.637	18.36	13.87	0.725+j3.912	1.777+j7.637
MAGNA FORMEX SALTILLO	MFS-115	115	27.73	26.17	0.368+j2.366	0.392+j2.802	34.44	33.96	0.273+j2.103	0.284+j2.197	34.38	33.92	0.275+j2.107	0.284+j2.198
MAGNA POWER TRAIN	MGP-115	115	24.80	24.06	0.424+j2.644	0.422+j2.900	30.28	30.68	0.330+j2.389	0.315+j2.302	30.24	30.65	0.331+j2.393	0.315+j2.302
MAGNÉTICOS DE MÉXICO	MME-138	138	6.94	7.19	2.526+j11.204	2.143+j10.113	8.78	8.63	1.942+j9.786	2.166+j10.265	8.78	8.63	1.944+j9.794	2.166+j10.265
MALE PISTONES	MPI-115	115	20.19	17.51	0.562+j3.239	0.899+j4.721	23.97	20.95	0.473+j3.010	0.826+j4.289	23.94	20.94	0.475+j3.014	0.826+j4.289
MANIOBRAS DE ALTAMIRA	MDA-230	230	16.39	19.93	0.773+j8.066	0.347+j4.411	18.92	22.28	0.705+j7.687	0.387+j4.682	18.63	22.04	0.720+j7.806	0.386+j4.695
MANIOBRAS DULCES NOMBRES II	MDU-115	115	24.49	22.91	0.406+j2.681	0.330+j3.247	55.64	59.84	0.163+j1.302	0.122+j1.038	55.27	59.54	0.166+j1.311	0.122+j1.039
MANIOBRAS LOS RAMONES	MLR-400	400	11.58	10.99	1.448+j19.888	1.531+j21.470	12.86	11.92	1.307+j19.709	1.741+j22.899	12.74	11.85	1.352+j19.887	1.740+j22.903
MANIOBRAS MAMULIQUE	MMQ	115	5.48	5.92	2.897+j11.756	1.528+j9.310	6.16	6.47	2.856+j11.501	1.740+j10.053	6.16	6.46	2.860+j11.509	1.740+j10.053
MANIOBRAS MESA LA PAZ	MPM-400	400	9.52	6.34	2.425+j24.147	14.875+j59.641	11.02	7.22	2.160+j22.941	14.358+j58.320	10.91	7.18	2.199+j23.186	14.358+j58.388
MANIOBRAS RANCHO NORTE	MRN-400	400	9.88	8.31	2.035+j23.288	6.007+j35.645	11.33	9.24	1.740+j22.344	6.264+j36.696	11.12	9.14	1.851+j22.771	6.264+j36.733
MANIOBRAS TRACTEBEL ENERGÍA DE PANUCO	ENP-115	115	17.50	15.78	0.716+j3.727	0.839+j5.188	19.76	17.32	0.700+j3.628	0.888+j5.365	19.63	17.26	0.704+j3.654	0.888+j5.368
MANNESMANN SACH	MSC-115	115	19.92	17.13	0.571+j3.283	0.935+j4.880	23.62	20.46	0.481+j3.054	0.862+j4.447	23.59	20.45	0.483+j3.058	0.862+j4.447
MANIOBRAS POLLUX	MAN-115	115	1.43	1.64	14.961+j44.056	3.078+j28.417	1.75	1.93	12.101+j39.975	3.419+j30.147	1.75	1.93	12.103+j39.978	3.419+j30.147
MANTE	MAN-115	115	3.07	1.89	6.739+j20.561	17.355+j59.723	3.45	2.16	6.504+j20.174	15.624+j56.863	3.44	2.16	6.509+j20.194	15.625+j56.863
MANUEL	MUL-115	115	7.05	3.02	2.455+j9.086	12.037+j45.736	7.86	3.35	2.417+j8.973	11.779+j45.291	7.84	3.35	2.422+j8.998	11.781+j45.294
MATAMOROS	MTM-69	69	4.99	5.36	0.423+j7.967	0.128+j6.377	5.13	5.47	0.414+j8.530	0.140+j7.014	5.08	5.43	0.434+j8.609	0.140+j7.014
MATAMOROS	MTM-138	138	12.31	10.94	1.183+j6.364	1.667+j8.942	14.22	12.37	1.094+j6.067	1.667+j8.938	13.51	11.93	1.173+j6.382	1.675+j9.059
MATAMOROS POTENCIA	MMP-138	138	12.90	14.82	0.869+j6.114	0.388+j3.962	14.61	16.39	0.816+j5.945	0.410+j4.189	13.99	15.86	0.875+j6.201	0.408+j4.204
MATAMOROS POTENCIA	MMP-230	230	11.24	11.99	1.503+j11.722	1.586+j10.110	13.08	13.55	1.320+j11.086	1.640+j10.396	12.46	13.09	1.441+j11.639	1.638+j10.429
MATRIMAR	MTR-115	115	3.19	2.24	5.438+j20.113	15.874+j44.536	3.59	2.51	5.289+j19.671	15.621+j43.959	3.58	2.51	5.294+j19.686	15.621+j43.959
MAXITILE	MAX-138	138	6.16	5.99	2.686+j12.648	2.373+j13.924	7.74	7.09	2.095+j11.121	2.425+j14.218	7.74	7.09	2.096+j11.128	2.425+j14.218
MAYTAG	MYG-138	138	10.98	8.31	1.430+j7.116	2.971+j13.998	13.73	10.25	1.162+j6.277	2.687+j12.726	12.38	9.37	1.373+j6.944	2.877+j13.663
MESAS	MES-400	400	21.17	22.11	0.500+j10.900	0.451+j8.724	22.94	23.55	0.447+j11.063	0.502+j9.421	22.82	23.47	0.453+j11.121	0.501+j9.422
METALDYNE SINTERED COMPONENTS MÉXICO S. DE R.L DE C.V.	MST-115	115	22.77	22.50	0.473+j2.878	0.451+j2.995	27.47	28.30	0.380+j2.631	0.346+j2.405	27.43	28.28	0.382+j2.635	0.346+j2.405
METALSA	MSA-115	115	24.89	18.17	0.420+j2.635	1.084+j5.517	32.92	23.78	0.331+j2.194	0.914+j4.688	32.73	23.71	0.336+j2.206	0.914+j4.690



**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Noreste**

Subestación eléctrica	Acronímico	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m00</sub>
METRO CUAUHTÉMOC	MCU-115	115	22.84	14.42	0.547+j2.855	1.638+j7.826	26.21	16.25	0.499+j2.742	1.620+j7.745	25.93	16.06	0.510+j2.770	1.643+j7.834
METRO LINCOLN	MLI-115	115	20.03	12.55	0.599+j3.261	1.901+j9.043	23.24	14.09	0.527+j3.098	1.907+j9.080	22.48	13.88	0.566+j3.199	1.907+j9.084
MEXICHEM FLUOR	MEF-138	138	9.41	7.43	1.723+j8.287	3.313+j15.058	10.75	8.33	1.634+j7.990	3.314+j15.053	10.34	8.13	1.713+j8.305	3.322+j15.175
MÉXICO	MEX-138	138	15.74	14.01	0.899+j4.980	1.480+j6.839	18.88	16.24	0.787+j4.574	1.482+j6.817	17.39	15.31	0.880+j4.962	1.495+j6.967
MEZQUITAL	MZQ-115	115	16.45	10.21	0.685+j3.978	2.491+j11.164	18.52	11.33	0.649+j3.889	2.496+j11.184	18.47	11.31	0.654+j3.900	2.496+j11.186
MEZQUITAL PROVISIONAL	MZP-115	115	16.24	9.86	0.693+j4.029	2.625+j11.726	18.28	10.94	0.657+j3.940	2.630+j11.746	18.23	10.93	0.662+j3.951	2.629+j11.748
MICARE	MCR-138	138	6.78	5.13	2.404+j11.503	4.973+j22.617	12.19	12.10	1.114+j7.105	1.299+j7.163	12.18	12.09	1.115+j7.109	1.299+j7.163
MICARE DOS	MDS-138	138	9.83	11.24	1.157+j8.026	0.602+j5.075	13.93	14.97	0.626+j6.260	0.559+j4.878	13.92	14.96	0.628+j6.264	0.559+j4.878
MIGUEL ALEMÁN	MIG-138	138	3.96	2.32	5.338+j19.410	16.313+j60.811	6.13	4.62	3.526+j13.856	5.414+j27.605	6.09	4.61	3.549+j13.950	5.413+j27.606
MINA TAYAHUA	MTU-115	115	1.24	0.74	17.647+j50.587	43.005+j156.350	1.37	0.82	17.464+j50.205	43.062+j156.738	1.37	0.82	17.466+j50.208	43.062+j156.738
MINERA	MIE-115	115	3.47	3.93	3.006+j18.905	1.746+j12.408	4.21	4.61	2.533+j17.151	1.759+j12.772	4.21	4.60	2.538+j17.166	1.759+j12.772
MINERA AUTLÁN	MIA-230	230	6.77	4.84	3.065+j19.359	10.611+j42.325	7.63	5.36	2.945+j18.908	10.654+j42.523	7.59	5.35	2.965+j19.016	10.655+j42.544
MIRADOR	MRD-115	115	30.28	21.37	0.392+j2.158	1.013+j4.825	35.24	24.30	0.346+j2.043	1.006+j4.767	34.59	23.84	0.360+j2.080	1.022+j4.863
MIRAVALLE	MAV-115	115	26.33	19.79	0.427+j2.485	1.409+j4.833	29.94	21.97	0.386+j2.408	1.419+j4.908	29.49	21.78	0.400+j2.444	1.420+j4.918
MISIONES	MSI-115	115	7.45	4.70	1.969+j8.687	5.746+j23.891	11.82	7.60	1.357+j6.029	4.066+j15.979	11.74	7.54	1.371+j6.067	4.093+j16.105
MITRAS	MIT-115B2	115	20.95	15.54	0.440+j3.139	1.322+j6.345	23.41	17.17	0.409+j3.093	1.326+j6.387	23.30	17.13	0.415+j3.107	1.326+j6.387
MITRAS	MIT-115B1	115	19.74	14.33	0.479+j3.330	1.469+j7.022	22.03	15.83	0.448+j3.285	1.473+j7.063	21.94	15.80	0.454+j3.298	1.473+j7.064
MOBIS	MOB-115	115	5.57	3.65	1.718+j11.786	6.798+j30.079	6.39	4.10	1.650+j11.305	6.802+j29.889	6.39	4.10	1.654+j11.312	6.802+j29.889
MODELO	MOD-115	115	16.88	8.54	0.757+j3.861	3.204+j15.107	19.00	9.45	0.715+j3.776	3.211+j15.155	18.85	9.42	0.726+j3.805	3.212+j15.162
MODINE	MNE-138	138	6.99	7.23	2.546+j11.117	2.069+j10.102	8.86	8.69	1.959+j9.696	2.096+j10.263	8.85	8.68	1.961+j9.704	2.096+j10.263
MOLANGO	MOL-115	115	1.07	0.87	20.010+j58.963	40.034+j97.645	1.17	0.95	19.980+j58.915	40.057+j97.881	1.17	0.95	19.988+j58.931	40.057+j97.883
MONCLOVA	MON-115	115	11.89	14.51	0.744+j5.537	0.188+j2.792	14.37	16.82	0.570+j5.052	0.205+j3.001	13.36	15.92	0.647+j5.427	0.205+j3.001
MONCLOVA	MON-115F	115	11.56	13.44	0.780+j5.693	0.373+j3.544	14.00	15.59	0.598+j5.184	0.389+j3.746	13.00	14.77	0.682+j5.578	0.389+j3.746
MONCLOVA	MON-230	230	9.92	11.21	2.011+j13.238	1.147+j9.713	12.31	13.16	1.458+j11.780	1.229+j10.199	11.85	12.83	1.577+j12.225	1.229+j10.199
MONTE KRISTAL	MKL-115	115	12.74	8.11	0.867+j5.141	3.299+j13.767	14.36	9.03	0.819+j5.021	3.297+j13.726	14.31	9.01	0.825+j5.036	3.299+j13.745
MONTEMORELOS	MTN-115	115	1.60	1.12	12.306+j39.566	20.369+j92.887	4.37	2.83	4.352+j16.141	11.202+j42.547	4.36	2.83	4.361+j16.162	11.208+j42.592
MONTERREY	MTY-115	115	49.01	45.23	0.229+j1.335	0.175+j1.684	59.99	53.21	0.183+j1.203	0.182+j1.673	59.31	52.82	0.189+j1.217	0.182+j1.676
MONTERREY POTENCIA SF6	MTP-115	115	53.36	50.00	0.208+j1.227	0.145+j1.486	63.98	57.54	0.168+j1.129	0.152+j1.518	63.18	57.06	0.173+j1.143	0.152+j1.521
MONTERREY POTENCIA SF6	MTP-115B	115	50.25	47.40	0.223+j1.302	0.142+j1.552	61.71	55.97	0.177+j1.170	0.149+j1.541	61.00	55.53	0.182+j1.183	0.149+j1.544
MONTERREY POTENCIA SF6	MTP-400	400	29.91	30.06	1.458+j7.581	0.818+j7.498	39.02	37.43	1.014+j6.432	0.781+j7.261	38.41	37.02	1.054+j6.530	0.782+j7.272

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Noreste

Subestación eléctrica	Acronímico	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
MONTOI	MTI-115	115	20.96	10.07	0.535+j3.122	2.751+j13.154	23.62	11.09	0.496+j3.052	2.783+j13.279	23.52	11.08	0.501+j3.064	2.783+j13.279
MORELOS	MRL-115	115	12.03	8.46	0.913+j5.443	2.505+j12.248	13.72	9.52	0.832+j5.257	2.478+j12.121	13.71	9.52	0.834+j5.261	2.478+j12.121
MÚNICH	MUN-115	115	18.27	12.08	0.552+j3.592	1.890+j9.032	20.91	13.49	0.490+j3.459	1.896+j9.070	20.48	13.36	0.518+j3.529	1.896+j9.074
MUSEO	MSO-115	115	9.87	7.78	1.303+j6.601	3.211+j11.803	10.76	8.49	1.311+j6.660	3.258+j11.844	10.72	8.47	1.316+j6.684	3.257+j11.846
NADADORES	NAD-115F	115	4.56	3.44	4.785+j13.758	9.827+j27.336	5.16	3.82	4.627+j13.367	9.838+j27.518	5.09	3.79	4.667+j13.574	9.838+j27.518
NARANJOS	NRJ-115	115	3.24	2.02	5.075+j19.834	22.907+j53.673	3.60	2.22	5.015+j19.656	22.914+j53.736	3.60	2.22	5.021+j19.678	22.917+j53.747
NARCISO MENDOZA	NMZ-138	138	6.06	5.60	2.824+j12.849	3.257+j16.086	7.53	6.59	2.242+j11.421	3.285+j16.259	7.52	6.59	2.244+j11.429	3.285+j16.259
NAVA	NAV-138	138	8.97	10.25	1.373+j8.780	0.594+j5.584	12.49	13.63	0.838+j6.966	0.588+j5.150	12.48	13.63	0.839+j6.971	0.588+j5.150
NAVA	NAV-230	230	8.86	9.60	2.415+j14.786	1.849+j11.573	15.84	15.44	0.934+j9.172	1.698+j9.624	15.81	15.42	0.938+j9.190	1.698+j9.624
NAVIDAD	NVD-115	115	1.77	1.87	9.550+j36.311	5.802+j31.021	2.13	2.16	8.004+j33.379	6.000+j32.421	2.13	2.16	8.006+j33.382	6.000+j32.421
NAVISTAR	NAS-115	115	15.86	9.70	0.736+j4.120	2.529+j11.894	17.74	10.72	0.698+j4.056	2.537+j11.946	17.70	10.71	0.702+j4.067	2.537+j11.947
NEMAK	NEK-115	115	15.65	12.43	0.505+j4.212	1.480+j7.386	17.19	13.57	0.492+j4.221	1.493+j7.502	17.10	13.53	0.499+j4.241	1.493+j7.502
NGM CERÁMICA	NGM-115	115	12.90	7.63	0.994+j5.050	3.488+j15.428	17.51	10.68	0.732+j4.106	2.694+j11.871	17.47	10.67	0.736+j4.116	2.694+j11.871
NOGALAR	NOG-115	115	38.52	27.54	0.331+j1.692	0.725+j3.709	45.75	31.92	0.282+j1.571	0.698+j3.603	44.94	31.16	0.293+j1.599	0.729+j3.708
NOKIA	NOK-138	138	14.63	8.91	0.931+j5.367	3.651+j15.575	19.20	13.03	0.732+j4.505	2.494+j10.818	18.10	12.66	0.794+j4.776	2.492+j10.839
NORTE	NRE-138	138	10.43	7.27	1.568+j7.475	4.082+j17.178	12.30	8.53	1.420+j6.982	3.795+j16.163	11.89	8.39	1.478+j7.220	3.793+j16.177
NUEVA CASTILLA	NUC-115	115	12.73	6.71	0.892+j5.140	3.697+j18.889	14.23	7.34	0.851+j5.063	3.784+j19.199	14.18	7.34	0.858+j5.078	3.784+j19.200
NUEVA ESCOBEDO	NUE-115	115	29.41	21.49	0.350+j2.230	0.885+j4.666	33.31	23.86	0.313+j2.170	0.892+j4.716	33.16	23.80	0.317+j2.180	0.892+j4.716
NUEVA ROSITA	NUR-115	115	5.10	6.21	1.748+j12.891	0.321+j6.126	6.52	7.58	1.287+j11.128	0.334+j6.489	6.51	7.57	1.292+j11.143	0.334+j6.489
NUEVA ROSITA	NUR-115F	115	5.01	5.97	1.817+j13.126	0.501+j6.918	6.42	7.29	1.334+j11.290	0.513+j7.281	6.42	7.29	1.339+j11.305	0.513+j7.281
NUEVA ROSITA	NUR-230	230	5.43	5.81	4.553+j24.019	2.172+j19.869	7.36	7.40	3.150+j19.589	2.192+j19.363	7.34	7.39	3.167+j19.652	2.192+j19.363
NUEVO LAREDO	NUL-138	138	7.16	7.55	2.470+j10.855	1.827+j9.280	9.12	9.11	1.881+j9.427	1.854+j9.444	9.11	9.10	1.883+j9.435	1.854+j9.444
NUEVO PROGRESO	NVP-138	138	9.49	7.06	1.856+j8.183	3.910+j16.706	11.67	8.67	1.582+j7.343	3.553+j15.051	10.48	7.73	1.837+j8.161	3.938+j16.883
NUEVO SANTANDER	NST-115	115	8.17	7.77	1.430+j8.000	1.646+j9.266	8.93	8.37	1.451+j8.051	1.729+j9.667	8.91	8.37	1.454+j8.063	1.729+j9.667
NUTEC FIBRATEC S.A. DE C.V.	NUF-115	115	15.85	12.23	0.804+j4.111	1.912+j7.679	18.20	13.78	0.733+j3.944	1.906+j7.648	18.19	13.78	0.735+j3.948	1.906+j7.648
OBISPADO	OBI-115	115	20.67	16.38	0.574+j3.160	0.972+j5.648	23.38	18.15	0.531+j3.078	0.987+j5.736	23.09	18.02	0.546+j3.116	0.989+j5.748
OBRA DE TOMA	ODT-115	115	1.85	1.38	12.213+j33.816	23.535+j68.405	2.03	1.50	12.260+j33.895	23.977+j69.577	2.03	1.50	12.263+j33.907	23.976+j69.577
OJO CALIENTE	OJC-138	138	6.34	6.04	2.639+j12.278	2.800+j14.258	7.92	7.14	2.063+j10.871	2.825+j14.419	7.91	7.13	2.065+j10.879	2.825+j14.419
OLIVO	OVO-115	115	9.87	9.03	1.107+j6.632	2.262+j8.360	10.78	9.78	1.127+j6.681	2.301+j8.575	10.76	9.77	1.130+j6.693	2.301+j8.576
ORIENTE	OTE-138	138	11.72	11.44	1.142+j6.699	1.151+j7.412	13.35	12.73	1.071+j6.477	1.179+j7.600	12.84	12.41	1.134+j6.732	1.178+j7.619

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Noreste**

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			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
ORIÓN	ORN-115	115	25.64	22.16	0.460+j2.549	0.555+j3.766	29.19	24.62	0.417+j2.467	0.570+j3.855	28.74	24.36	0.432+j2.505	0.571+j3.866
ORIZATLAN	ORZ-138	138	12.59	9.92	1.177+j6.220	2.322+j11.261	16.14	12.73	0.915+j5.354	1.932+j9.709	14.57	11.69	1.082+j5.918	2.039+j10.301
OXFORD	OXF-115	115	15.78	11.40	0.682+j4.153	1.784+j8.882	18.55	13.44	0.586+j3.892	1.675+j8.272	18.54	13.43	0.588+j3.896	1.675+j8.272
OZULUAMA	OZL-115	115	3.30	2.19	5.259+j19.420	20.099+j46.986	3.65	2.41	5.225+j19.308	20.108+j47.047	3.65	2.41	5.232+j19.334	20.118+j47.073
P. IND. COLONIAL	PIC-138	138	11.01	8.32	1.420+j7.094	2.966+j14.012	13.78	10.27	1.150+j6.255	2.681+j12.731	12.40	9.35	1.367+j6.935	2.883+j13.716
P. IND. PUENTE	PIP-138	138	10.26	7.59	1.699+j7.577	3.844+j15.558	12.36	8.92	1.501+j6.932	3.721+j14.936	11.34	8.33	1.677+j7.547	3.859+j15.678
P.I. DEL NORTE	INO1-138	138	12.01	7.24	1.261+j6.515	4.639+j19.244	18.38	12.71	0.792+j4.703	2.520+j10.910	17.36	12.35	0.855+j4.974	2.518+j10.931
P.I. SANTA MARÍA	PSM-115	115	23.17	20.08	0.428+j2.833	0.707+j4.134	28.16	25.03	0.332+j2.572	0.598+j3.525	28.12	25.01	0.334+j2.576	0.598+j3.525
PANUCO	PAN-115	115	4.86	2.57	2.373+j13.466	11.617+j50.024	5.25	2.80	2.459+j13.696	11.629+j50.103	5.24	2.80	2.463+j13.714	11.643+j50.134
PARQUE DE INVESTIGACIONES E INNOVACIÓN TECNOLÓGICA	IIT-115	115	10.84	7.81	0.775+j6.075	2.630+j13.011	13.62	9.29	0.673+j5.321	2.616+j12.625	13.60	9.28	0.676+j5.329	2.616+j12.625
PARQUE EÓLICO VICENTE GUERRERO	VIG-115	115	7.40	8.03	1.332+j8.873	0.719+j6.850	8.09	8.68	1.346+j8.923	0.768+j7.176	8.08	8.67	1.349+j8.935	0.768+j7.176
PARQUE IND. ACUÑA	PIU-138	138	5.82	6.04	2.030+j13.532	1.665+j12.134	7.59	7.73	1.456+j11.449	1.539+j10.656	7.59	7.73	1.457+j11.451	1.539+j10.656
PARQUE INDL. ESTRELLA	EST-115	115	14.13	8.37	0.922+j4.606	3.167+j14.054	20.24	12.52	0.633+j3.553	2.264+j10.028	20.18	12.51	0.637+j3.563	2.264+j10.028
PARQUE INDUSTRIAL	PAI-138	138	13.92	11.79	1.005+j5.633	1.647+j8.742	17.09	14.07	0.826+j5.060	1.585+j8.389	15.46	12.96	0.976+j5.585	1.656+j8.843
PARQUE INDUSTRIAL AMISTAD-AEROPUERTO	PIA-115	115	10.88	7.28	1.080+j6.009	3.234+j14.796	12.42	8.23	0.993+j5.798	3.190+j14.516	12.41	8.23	0.995+j5.801	3.190+j14.516
PARQUE INDUSTRIAL APODACA TECHNOLOGY PARK	PQT-115	115	12.29	8.15	0.811+j5.342	2.965+j13.304	13.80	9.03	0.778+j5.237	2.986+j13.371	13.77	9.02	0.781+j5.246	2.986+j13.371
PARQUE INDUSTRIAL DEL NORTE	INO2-138	138	8.88	5.65	1.985+j8.750	6.055+j23.658	18.38	12.72	0.792+j4.701	2.519+j10.905	17.37	12.36	0.855+j4.973	2.517+j10.926
PARQUE INDUSTRIAL ESCOBEDO	PIE-115	115	24.19	18.02	0.436+j2.710	1.085+j5.456	27.42	20.07	0.395+j2.634	1.089+j5.486	27.27	20.01	0.401+j2.648	1.089+j5.487
PARQUE INDUSTRIAL LA SILLA	SIA-115	115	14.24	9.45	0.717+j4.607	2.596+j11.464	16.58	10.71	0.651+j4.355	2.594+j11.378	16.54	10.70	0.655+j4.366	2.594+j11.379
PARQUE INDUSTRIAL LINARES	PIL-115	115	4.42	3.32	2.180+j14.872	6.516+j29.332	5.87	4.49	2.132+j12.251	5.052+j23.403	5.87	4.49	2.134+j12.260	5.052+j23.403
PARQUE INDUSTRIAL MONTERREY - APODACA	PMA-115	115	9.44	6.74	1.148+j6.940	2.864+j15.201	20.74	14.05	0.608+j3.469	1.666+j8.390	20.67	14.03	0.613+j3.479	1.666+j8.391
PARQUE INDUSTRIAL ORADEL	PIO-138	138	6.78	7.22	2.438+j11.503	1.403+j9.548	8.65	8.69	1.847+j9.963	1.457+j9.860	8.64	8.69	1.849+j9.970	1.457+j9.860
PARQUE INDUSTRIAL SALTILLO RAMOS ARIZPE	ISR1-115	115	21.22	19.37	0.523+j3.085	0.702+j3.969	25.36	23.64	0.432+j2.847	0.614+j3.460	25.33	23.62	0.434+j2.851	0.614+j3.460
PARQUE INDUSTRIAL SALTILLO RAMOS ARIZPE	ISR2-115	115	17.63	13.51	0.652+j3.709	1.560+j7.056	20.58	15.50	0.569+j3.503	1.536+j6.881	20.56	15.49	0.571+j3.507	1.536+j6.881
PEMEX	PEM-115	115	50.68	40.80	0.241+j1.288	0.392+j2.223	64.00	49.17	0.191+j1.125	0.389+j2.139	63.09	48.65	0.197+j1.141	0.392+j2.153
PEMEX CADEREYTA	PCD-230	230	8.92	7.17	2.281+j14.707	5.847+j25.188	11.42	8.52	1.750+j12.672	5.887+j25.175	11.38	8.50	1.762+j12.713	5.887+j25.176
PEMEX CRIOGÉNICA	PXC-138	138	5.59	3.43	2.553+j14.027	8.248+j40.428	6.94	5.32	2.070+j12.457	3.112+j24.023	6.81	5.26	2.121+j12.697	3.110+j24.031
PEMEX CRIOGÉNICA	PXC-138B	138	5.16	3.14	2.848+j15.166	9.067+j44.386	6.40	4.88	2.325+j13.504	3.401+j26.328	6.28	4.83	2.376+j13.743	3.399+j26.335
PEMEX NARANJOS	PMX-115	115	3.12	1.94	5.307+j20.641	23.752+j55.595	3.46	2.14	5.247+j20.463	23.759+j55.658	3.45	2.14	5.253+j20.485	23.763+j55.669
PEMEX-REFINERÍA	PRF-115	115	8.23	4.07	1.342+j7.954	8.729+j31.710	10.45	4.68	1.061+j6.908	8.747+j31.706	10.44	4.68	1.063+j6.916	8.747+j31.709

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Noreste**

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
PEÑOLES	PÑL-115	115	16.02	12.43	0.795+j4.067	1.876+j7.521	18.41	14.01	0.725+j3.900	1.870+j7.489	18.39	14.00	0.727+j3.904	1.870+j7.489
PERFILES	PFS-115	115	24.13	17.50	0.433+j2.717	1.143+j5.765	32.13	23.09	0.340+j2.248	0.953+j4.853	31.95	23.02	0.345+j2.260	0.953+j4.855
PESQUERÍA	PQA-115	115	15.82	12.50	0.610+j4.154	1.409+j7.410	19.70	14.83	0.551+j3.667	1.414+j7.220	19.65	14.82	0.555+j3.674	1.414+j7.221
PETROCEL	GPT-115	115	16.25	13.25	0.787+j4.009	2.039+j6.734	18.97	15.97	0.723+j3.782	1.628+j5.914	18.88	15.94	0.725+j3.800	1.628+j5.916
PETROLERA	PER-138	138	14.93	13.30	0.864+j5.266	1.401+j7.213	17.57	15.20	0.764+j4.930	1.401+j7.226	16.64	14.70	0.829+j5.200	1.399+j7.245
PHEPS DODGE	PHD-115	115	11.37	6.09	1.146+j5.727	4.652+j20.492	15.37	8.30	0.854+j4.676	3.750+j16.464	15.33	8.30	0.858+j4.685	3.750+j16.464
PIEDRAS NEGRAS	PNE-138	138	8.63	8.68	1.596+j9.093	1.423+j9.000	11.72	10.98	1.074+j7.398	1.441+j8.813	11.72	10.97	1.075+j7.401	1.441+j8.813
PIEDRAS NEGRAS POTENCIA	PNG-138	138	9.83	11.08	1.254+j8.009	0.623+j5.377	13.69	14.40	0.755+j6.358	0.641+j5.350	13.68	14.39	0.756+j6.362	0.641+j5.350
PIEDRAS NEGRAS POTENCIA	PNG-230	230	8.07	8.48	2.493+j16.271	2.162+j14.029	13.11	12.28	1.122+j11.081	2.193+j13.049	13.10	12.27	1.125+j11.092	2.193+j13.049
PLANTA	PTA-138	138	11.64	10.13	1.236+j6.731	1.832+j9.926	13.36	11.38	1.152+j6.457	1.841+j9.979	12.77	11.05	1.226+j6.751	1.845+j10.060
PLANTA BOMBEO DOS	PBD-115	115	4.89	4.95	1.569+j13.484	3.158+j12.752	5.86	6.37	1.254+j12.399	1.749+j9.309	5.85	6.37	1.259+j12.417	1.749+j9.309
PLANTA BOMBEO UNO	PBU-115	115	3.80	3.68	2.296+j17.336	5.148+j18.564	5.04	5.17	1.629+j14.404	3.206+j13.093	5.03	5.16	1.633+j14.421	3.206+j13.093
PLANTA DE AGUAS RESIDUALES NORTE	RNO-115	115	24.00	15.34	0.400+j2.737	1.462+j7.311	27.25	16.99	0.359+j2.656	1.480+j7.392	27.07	16.94	0.366+j2.673	1.480+j7.393
PLANTA DE BOMBEO 0	PB0-115	115	2.36	2.13	4.339+j27.789	10.009+j36.186	3.69	4.06	2.649+j19.606	3.432+j14.077	3.69	4.05	2.654+j19.623	3.432+j14.077
PLANTA DE BOMBEO LA SILLA	PBS-115	115	14.55	9.81	0.783+j4.497	2.219+j10.948	16.62	10.98	0.729+j4.333	2.241+j10.940	16.51	10.92	0.739+j4.360	2.251+j11.002
PLANTA DE BOMBEO SAN ROQUE DE AYD	PBR-115	115	14.02	9.40	0.816+j4.665	2.346+j11.471	16.08	10.55	0.757+j4.479	2.369+j11.436	15.99	10.51	0.766+j4.503	2.377+j11.481
PLANTA DE BOMBEO SANTA ROSA APODACA	PBA-115	115	13.01	8.73	0.751+j5.049	2.747+j12.303	14.62	9.67	0.717+j4.943	2.768+j12.370	14.59	9.66	0.721+j4.952	2.768+j12.370
PLANTA DUPONT	DUT-115	115	17.31	15.62	0.721+j3.767	0.835+j5.240	19.55	17.14	0.706+j3.669	0.885+j5.423	19.41	17.08	0.710+j3.694	0.885+j5.426
PLANTA EL SALTO	STO-115	115	2.51	2.30	7.898+j25.247	9.491+j32.460	2.99	3.24	6.699+j23.452	2.833+j18.097	2.99	3.24	6.701+j23.466	2.833+j18.097
PLANTA FALCÓN	PFA-115	115	4.21	5.12	3.021+j15.474	0.250+j7.478	4.75	5.61	2.663+j15.154	0.285+j8.187	4.74	5.60	2.673+j15.190	0.285+j8.187
PLAZA SF6	PZA-115	115	44.99	35.04	0.259+j1.453	0.368+j2.705	52.99	40.16	0.217+j1.361	0.364+j2.675	51.78	39.26	0.228+j1.392	0.373+j2.734
PLAZA SF6	PZA-400	400	20.22	19.03	1.774+j11.284	1.746+j13.395	24.62	22.07	1.300+j10.235	1.824+j13.739	24.21	21.76	1.369+j10.402	1.871+j13.883
POLARIS	POI-115	115	18.70	14.63	0.485+j3.517	1.246+j6.399	26.19	18.73	0.384+j2.762	1.231+j6.013	26.11	18.70	0.387+j2.770	1.231+j6.013
POLICYD	PLC-115	115	19.81	16.47	0.605+j3.296	1.139+j5.390	27.38	24.70	0.419+j2.634	0.644+j3.562	27.11	24.54	0.424+j2.660	0.648+j3.573
POLVORÍN	POL-115	115	18.52	16.22	0.606+j3.533	1.035+j5.124	22.46	19.53	0.513+j3.211	0.920+j4.730	22.30	19.45	0.517+j3.234	0.920+j4.736
POSCO DE MÉXICO	PCO-115	115	23.00	19.19	0.386+j2.861	0.878+j4.623	27.04	23.53	0.346+j2.679	0.644+j3.921	26.84	23.44	0.349+j2.699	0.644+j3.924
PRAX AIR	PAX-115	115	22.31	14.02	0.554+j2.923	1.708+j8.073	25.47	15.66	0.511+j2.822	1.711+j8.080	25.32	15.62	0.518+j2.837	1.711+j8.082
PRIMEX	PRX-115	115	18.14	13.65	0.654+j3.600	1.578+j7.247	27.09	23.94	0.407+j2.665	0.614+j3.810	26.91	23.85	0.409+j2.683	0.614+j3.812
PRIMEX	PRX-115B	115	18.19	13.70	0.651+j3.591	1.570+j7.215	27.09	23.95	0.407+j2.665	0.612+j3.806	26.91	23.86	0.409+j2.683	0.612+j3.808
PROEZA GREDE	PGR-115	115	22.82	17.61	0.492+j2.868	1.899+j5.195	25.67	19.51	0.455+j2.809	1.907+j5.249	25.58	19.48	0.459+j2.818	1.907+j5.249

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Noreste**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
PROLAMSA	POM-115	115	19.68	9.65	0.551+j3.329	2.681+j13.633	22.19	10.59	0.510+j3.252	2.739+j13.846	22.08	10.57	0.516+j3.267	2.739+j13.847
PROLEC	PLE-115	115	24.84	18.14	0.468+j2.632	1.084+j5.527	28.32	20.28	0.430+j2.543	1.087+j5.543	28.18	20.22	0.435+j2.555	1.087+j5.545
PROLEC PARTICULAR	PLP-115	115	21.41	14.97	0.502+j3.060	1.417+j6.962	29.36	20.51	0.385+j2.458	1.123+j5.598	29.21	20.45	0.390+j2.470	1.123+j5.600
PROLOGIS	POG-138	138	11.41	8.83	1.364+j6.849	2.714+j12.902	14.37	10.97	1.097+j6.000	2.430+j11.641	12.99	10.06	1.289+j6.623	2.579+j12.413
PROLOGIS-APODACA	PLG-115	115	14.34	11.19	0.672+j4.580	1.504+j8.406	22.04	15.96	0.515+j3.274	1.366+j6.971	21.97	15.93	0.519+j3.283	1.365+j6.972
PROPARK	PPK-115	115	6.45	3.94	1.892+j10.113	6.965+j29.159	7.28	4.39	1.825+j9.863	6.963+j29.073	7.27	4.39	1.829+j9.873	6.963+j29.075
PROPASA	PDP-115	115	21.96	14.77	0.545+j2.974	1.770+j7.226	25.57	16.68	0.487+j2.815	1.777+j7.215	25.44	16.64	0.492+j2.828	1.777+j7.218
PROVIDENCIA	PRO-115	115	10.27	7.55	1.215+j6.347	3.429+j13.036	11.62	8.46	1.126+j6.186	3.266+j12.930	11.61	8.46	1.128+j6.189	3.266+j12.930
PTA BOMBEO CUATRO	PBC-115	115	2.23	2.04	4.599+j29.403	8.617+j37.114	3.55	3.27	2.882+j20.378	6.197+j25.232	3.55	3.27	2.887+j20.395	6.197+j25.232
PTA DE TRATAMIENTO DE AGUAS RESIDUALES NORESTE	RNE-115	115	11.46	7.51	0.877+j5.727	3.243+j14.588	12.85	8.31	0.844+j5.621	3.264+j14.655	12.83	8.30	0.848+j5.630	3.264+j14.655
PTA. BOMBEO TRES	PBT-115	115	2.83	2.69	3.420+j23.190	7.241+j26.396	4.19	4.10	2.271+j17.291	4.952+j18.001	4.18	4.10	2.276+j17.308	4.952+j18.002
PUENTE INTERNACIONAL	PUI-138	138	7.56	6.76	1.798+j10.379	2.745+j14.081	10.23	8.41	1.255+j8.473	2.714+j13.821	10.23	8.40	1.256+j8.477	2.714+j13.821
PUERTO	PUO-115	115	27.55	26.30	0.276+j2.395	0.460+j2.813	32.25	30.44	0.246+j2.251	0.427+j2.697	31.95	30.28	0.249+j2.272	0.428+j2.701
PUERTO ALTAMIRA ELÉCTRICA	PAE-115	115	29.53	30.09	0.239+j2.236	0.318+j2.197	34.61	34.85	0.211+j2.100	0.291+j2.108	34.27	34.64	0.214+j2.120	0.291+j2.112
PUERTO ALTAMIRA ELÉCTRICA	PAE-400	400	25.32	30.18	0.624+j9.099	0.520+j5.789	36.80	43.97	0.339+j6.895	0.340+j4.246	35.32	42.54	0.367+j7.182	0.336+j4.350
QUÍMICA FLUOR	QFL-138	138	9.41	7.43	1.723+j8.286	3.313+j15.058	10.75	8.33	1.634+j7.990	3.314+j15.053	10.34	8.13	1.714+j8.305	3.322+j15.175
RAMOS ARIZPE	RRA-115	115	19.28	15.82	0.605+j3.391	1.124+j5.596	22.68	18.48	0.519+j3.178	1.074+j5.314	22.66	18.47	0.521+j3.181	1.074+j5.314
RAMOS ARIZPE POTENCIA	RAP-115	115	29.92	29.93	0.331+j2.194	0.241+j2.213	37.63	40.24	0.235+j1.927	0.123+j1.566	37.56	40.19	0.237+j1.930	0.123+j1.566
RAMOS ARIZPE POTENCIA	RAP-400	400	25.21	21.66	1.432+j9.050	2.576+j13.369	31.06	25.75	0.985+j8.120	2.326+j12.999	30.81	25.63	1.013+j8.183	2.325+j13.001
RASSINI	RNI-138	138	7.02	5.65	2.193+j11.144	4.009+j19.267	9.13	6.78	1.668+j9.452	4.027+j19.080	9.13	6.78	1.669+j9.456	4.027+j19.080
RAYÓN	RAY-115	115	2.41	1.59	7.712+j26.412	24.499+j65.601	2.65	1.75	7.721+j26.467	24.547+j65.643	2.65	1.75	7.728+j26.489	24.546+j65.645
REAL DE PALMAS	RDP-115	115	5.99	3.56	1.996+j10.900	7.454+j32.949	18.94	12.32	0.554+j3.816	2.313+j9.811	18.89	12.31	0.558+j3.825	2.313+j9.811
REBOMBEO I	RBU-115	115	3.06	2.57	7.289+j20.427	8.790+j33.182	3.35	2.77	7.336+j20.507	9.225+j34.347	3.35	2.77	7.339+j20.518	9.225+j34.347
REBOMBEO II	RBD-115	115	4.58	3.96	4.189+j13.866	5.302+j20.711	5.02	4.28	4.219+j13.927	5.520+j21.427	5.01	4.28	4.222+j13.939	5.520+j21.427
REFINERÍA MADERO	RMA-115	115	14.15	10.52	0.803+j4.623	2.008+j9.456	17.88	13.58	0.624+j4.036	1.520+j7.949	17.79	13.55	0.628+j4.057	1.520+j7.953
REGIDORES	RGS-115	115	9.16	6.74	1.126+j7.158	3.122+j14.979	11.70	8.40	0.834+j6.186	2.756+j13.475	11.27	8.25	0.879+j6.423	2.756+j13.475
REYNOSA	REY-138	138	16.39	14.56	0.761+j4.800	1.196+j6.627	19.44	16.82	0.660+j4.460	1.178+j6.545	18.38	16.25	0.721+j4.712	1.176+j6.560
REYNOSA CENTRO	RYC-138	138	12.04	9.66	1.196+j6.507	2.488+j11.294	14.00	10.92	1.099+j6.162	2.497+j11.335	13.34	10.62	1.167+j6.466	2.494+j11.373
RHEEM	RHM-138	138	6.99	7.23	2.546+j11.117	2.069+j10.102	8.86	8.69	1.959+j9.696	2.096+j10.263	8.85	8.68	1.961+j9.704	2.096+j10.263
RICSA	RIS-138	138	10.81	8.07	1.586+j7.195	3.577+j14.512	12.91	9.39	1.419+j6.637	3.496+j14.084	11.95	8.86	1.564+j7.166	3.590+j14.628

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Noreste

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
RIEL	RIE-115	115	29.21	18.76	0.422+j2.234	1.232+j5.942	34.20	21.37	0.373+j2.102	1.220+j5.860	33.83	21.15	0.382+j2.125	1.234+j5.913
RIO	RIO-115	115	30.80	21.42	0.399+j2.118	0.889+j4.901	35.47	24.04	0.356+j2.028	0.892+j4.913	34.89	23.77	0.368+j2.061	0.897+j4.948
RIO BRAVO	RIB-138	138	16.13	15.75	0.867+j4.863	0.753+j5.321	22.34	24.52	0.545+j3.886	0.243+j3.068	17.79	17.06	0.852+j4.853	0.793+j5.553
RIO BRAVO	RIB-230	230	13.92	12.86	1.353+j9.444	2.276+j11.904	19.08	19.87	0.832+j7.611	0.751+j6.834	15.63	14.18	1.263+j9.257	2.330+j12.158
RIO BRAVO III	RBT-400	400	11.56	13.71	1.688+j19.908	0.815+j11.918	15.96	19.28	0.973+j15.886	0.459+j8.519	15.24	18.58	1.147+j16.631	0.455+j8.541
RIO BRAVO IV	RBC-400	400	11.64	13.85	1.677+j19.764	0.762+j11.734	15.95	19.28	0.974+j15.897	0.459+j8.519	15.23	18.59	1.148+j16.642	0.455+j8.541
RIO BRAVO PONIENTE	RBP-138	138	11.99	9.28	1.213+j6.536	2.261+j12.322	15.28	11.89	0.927+j5.662	1.875+j10.646	13.30	10.23	1.184+j6.480	2.259+j12.373
RIO ESCONDIDO	REC-138	138	10.13	12.16	1.068+j7.794	0.251+j3.975	14.50	16.49	0.538+j6.019	0.209+j3.782	14.49	16.48	0.539+j6.024	0.209+j3.782
RIO ESCONDIDO	REC-230	230	10.54	12.92	1.937+j12.445	0.515+j5.790	22.31	27.15	0.446+j6.533	0.122+j2.827	22.26	27.11	0.449+j6.546	0.122+j2.827
RIO ESCONDIDO	REC-400	400	8.47	8.56	4.213+j26.931	3.098+j26.765	22.68	26.26	0.647+j11.181	0.454+j6.943	22.61	26.20	0.657+j11.217	0.454+j6.943
RIO SALADO	SDO-138	138	3.59	2.46	5.635+j21.456	13.651+j50.905	4.18	3.82	5.139+j20.316	4.553+j26.508	4.18	3.82	5.145+j20.346	4.553+j26.508
RÍO VERDE	RVE-115	115	2.18	1.37	8.589+j29.163	26.976+j80.155	2.40	1.51	8.595+j29.216	27.024+j80.197	2.40	1.51	8.603+j29.237	27.023+j80.199
ROCKWELL	ROW-115	115	17.94	12.39	0.638+j3.646	1.670+j8.498	25.78	16.78	0.478+j2.792	1.557+j7.232	25.68	16.75	0.482+j2.803	1.557+j7.236
SABINAS	SAB-115	115	3.73	3.23	3.233+j17.480	5.432+j25.668	4.63	3.77	2.653+j15.544	5.444+j26.032	4.63	3.77	2.658+j15.559	5.444+j26.032
SABINAS HIDALGO	SAH-115	115	1.99	2.31	9.534+j31.956	2.832+j19.513	2.22	2.52	9.392+j31.579	3.147+j20.935	2.22	2.52	9.396+j31.587	3.147+j20.935
SABINO	SSB-115	115	25.31	16.70	0.470+j2.581	1.245+j6.557	28.95	18.74	0.427+j2.487	1.241+j6.526	28.58	18.54	0.438+j2.517	1.251+j6.586
SALITRILLO	SLT-115	115	4.23	3.52	2.723+j15.466	8.287+j23.986	4.89	3.97	2.819+j14.674	8.300+j24.093	4.88	3.97	2.822+j14.683	8.300+j24.093
SALITRILLOS	SLT-138	138	4.90	5.78	1.761+j16.175	0.460+j8.824	5.49	6.36	1.684+j15.874	0.528+j9.469	5.39	6.26	1.750+j16.181	0.527+j9.474
SALTILLO	SAL-115	115	24.76	26.71	0.509+j2.632	0.211+j2.094	28.68	30.02	0.445+j2.508	0.232+j2.198	28.63	29.99	0.447+j2.511	0.232+j2.198
SALTILLO	SAL-230	230	12.68	13.42	1.756+j10.323	0.997+j8.696	14.48	14.91	1.522+j9.970	1.073+j9.167	14.46	14.89	1.531+j9.986	1.073+j9.167
SAN AGUSTÍN	AUS-115	115	29.49	19.17	0.392+j2.217	1.240+j5.755	34.02	21.60	0.349+j2.119	1.236+j5.721	33.49	21.32	0.361+j2.151	1.246+j5.783
SAN BERNABÉ	BER-115	115	15.65	10.33	0.697+j4.185	2.253+j10.550	17.44	11.41	0.664+j4.135	2.258+j10.591	17.39	11.39	0.669+j4.147	2.258+j10.591
SAN CARLOS POTENCIA	SCP-400	400	9.19	9.33	2.367+j25.009	2.956+j24.005	10.46	10.32	2.129+j24.204	3.111+j25.156	10.41	10.29	2.155+j24.317	3.111+j25.158
SAN CRISTOBAL	SCB-138	138	6.99	4.45	2.018+j11.225	6.155+j30.342	8.60	6.32	1.677+j10.049	3.277+j20.997	8.39	6.24	1.731+j10.298	3.275+j21.007
SAN FERNANDO	FDO-115	115	0.82	0.49	29.038+j75.588	78.917+j230.039	0.90	0.54	29.032+j75.620	78.941+j230.218	0.90	0.54	29.037+j75.631	78.941+j230.219
SAN JORGE	JOR-115	115	22.66	14.40	0.536+j2.881	1.573+j7.813	26.18	16.12	0.473+j2.749	1.581+j7.863	25.43	15.91	0.505+j2.827	1.582+j7.871
SAN JUAN	JAN-115	115	3.93	2.21	3.104+j16.623	11.883+j55.112	8.04	4.84	1.815+j8.896	6.842+j26.233	8.04	4.84	1.818+j8.904	6.842+j26.233
SAN MARCOS	MCO-115	115	6.59	3.97	1.755+j9.919	6.285+j29.336	10.10	6.06	1.324+j7.106	4.875+j21.186	10.09	6.05	1.327+j7.114	4.875+j21.187
SAN MARTIN	SMA-115	115	13.62	10.92	0.861+j4.799	1.597+j8.341	15.21	12.08	0.822+j4.730	1.603+j8.383	15.17	12.06	0.827+j4.742	1.603+j8.384
SAN NICOLÁS	NIC-115	115	59.46	56.82	0.195+j1.100	0.137+j1.262	71.07	64.89	0.155+j1.016	0.145+j1.313	69.65	64.02	0.162+j1.036	0.145+j1.316

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Noreste**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
SAN NICOLÁS	NIC-115B	115	59.71	57.20	0.194+j1.095	0.135+j1.248	71.44	65.38	0.154+j1.011	0.143+j1.298	69.99	64.50	0.162+j1.031	0.143+j1.301
SAN NICOLÁS	NIC-400	400	26.84	25.90	1.587+j8.457	1.359+j9.368	34.15	31.12	1.137+j7.351	1.399+j9.460	33.66	30.82	1.181+j7.454	1.399+j9.472
SAN RENO	SRN-138	138	15.52	13.91	0.771+j5.075	1.152+j6.869	18.39	15.92	0.676+j4.717	1.169+j6.944	17.12	15.18	0.754+j5.064	1.169+j7.012
SAN ROBERTO	RBO-115	115	0.90	0.98	31.403+j66.865	18.793+j53.257	1.06	1.12	28.505+j62.953	19.138+j54.992	1.06	1.12	28.506+j62.955	19.138+j54.992
SAN ROQUE	ROQ-115B	115	17.86	12.04	0.641+j3.661	1.916+j8.904	20.94	13.78	0.573+j3.441	1.913+j8.721	20.82	13.72	0.580+j3.460	1.917+j8.749
SAN ROQUE	ROQ-115	115	17.74	11.93	0.646+j3.686	1.939+j8.997	20.77	13.65	0.578+j3.468	1.935+j8.815	20.66	13.59	0.585+j3.487	1.940+j8.844
SAN DOVAL	SDV-138	138	8.06	6.84	2.215+j9.636	3.357+j14.970	9.29	7.75	2.080+j9.199	3.338+j14.858	8.88	7.50	2.198+j9.627	3.365+j15.079
SANTA AMALIA TAMAULIPAS	AAT-115	115	22.26	21.25	0.404+j2.955	0.419+j3.549	25.27	23.46	0.389+j2.864	0.442+j3.654	25.08	23.36	0.392+j2.886	0.442+j3.658
SANTA CATARINA	CAT-115	115	11.53	7.65	0.978+j5.676	2.865+j14.227	12.83	8.42	0.936+j5.613	2.875+j14.343	12.76	8.40	0.947+j5.643	2.875+j14.344
SANTA CRUZ	STZ-115	115	22.75	16.19	0.501+j2.876	1.237+j6.334	32.16	21.64	0.378+j2.239	1.164+j5.469	31.99	21.57	0.383+j2.251	1.164+j5.476
SANTANDER	SNT-138	138	9.36	6.38	1.463+j8.388	4.021+j20.076	11.51	8.44	1.230+j7.514	2.742+j15.745	11.13	8.29	1.288+j7.771	2.740+j15.759
SANTO DOMINGO	DON-115	115	38.46	27.79	0.309+j1.699	0.703+j3.642	45.13	31.51	0.266+j1.596	0.706+j3.649	44.68	31.35	0.273+j1.612	0.706+j3.652
SANTO DOMINGO VIEJO PROVISIONAL	DVP-115	115	24.81	17.19	0.481+j2.632	1.504+j6.055	28.98	19.45	0.428+j2.484	1.512+j6.044	28.82	19.40	0.433+j2.497	1.512+j6.047
SARAPE MANIOBRAS	ZIS-230	230	12.22	11.95	1.874+j10.704	1.932+j11.445	13.98	13.33	1.631+j10.322	1.995+j11.824	13.96	13.31	1.639+j10.338	1.995+j11.824
SELLO ROJO	SER-115	115	4.26	3.14	2.233+j15.431	6.960+j31.622	5.35	4.23	2.200+j13.462	4.344+j24.158	5.35	4.23	2.203+j13.471	4.344+j24.158
SENDERO NACIONAL	SEN-138	138	10.35	8.49	1.383+j7.573	2.410+j12.736	12.49	10.37	1.218+j6.911	2.098+j11.279	11.96	10.09	1.293+j7.211	2.103+j11.367
SIDERÚRGICA	SIG-138	138	11.32	9.73	1.258+j6.925	1.952+j10.488	13.64	11.79	1.120+j6.325	1.743+j9.459	13.01	11.41	1.197+j6.631	1.749+j9.559
SIDERÚRGICA DEL GOLFO S.A.	SGA-230	230	10.13	8.14	1.840+j12.978	4.731+j22.443	13.00	10.96	1.304+j11.158	3.206+j17.372	11.31	8.97	1.748+j12.793	4.785+j22.696
SIECOR	SIE-138	138	12.77	7.72	1.151+j6.132	4.310+j18.021	18.12	12.47	0.809+j4.768	2.590+j11.171	17.14	12.12	0.872+j5.040	2.588+j11.192
SOLIDARIDAD	SRD-115	115	15.31	10.02	0.714+j4.277	2.355+j10.948	17.07	11.07	0.679+j4.224	2.361+j10.990	17.02	11.05	0.684+j4.236	2.361+j10.990
SORIANA CEDIS	SOC-115	115	14.36	8.52	0.865+j4.541	3.111+j13.798	19.25	11.49	0.654+j3.737	2.539+j11.204	19.20	11.48	0.658+j3.746	2.539+j11.204
SOTO LA MARINA	SOT-115	115	1.08	0.76	19.898+j58.278	50.220+j128.051	1.18	0.84	19.945+j58.356	50.673+j129.234	1.18	0.84	19.948+j58.367	50.673+j129.234
SPARTECH	SEH-115	115	15.37	11.01	0.703+j4.263	1.874+j9.277	18.04	12.94	0.607+j4.002	1.765+j8.668	18.03	12.94	0.609+j4.006	1.765+j8.668
STIVA	STV-115	115	18.85	13.12	0.551+j3.478	1.801+j7.944	22.76	15.19	0.480+j3.173	1.798+j7.822	22.69	15.16	0.484+j3.183	1.797+j7.823
TAMALIN	TLN-115	115	3.71	2.50	4.659+j17.289	17.245+j40.774	4.10	2.75	4.631+j17.189	17.254+j40.840	4.10	2.75	4.637+j17.216	17.266+j40.870
TAMAULIPAS	TAM-115	115	15.08	11.62	0.807+j4.329	2.208+j8.148	17.42	13.25	0.758+j4.123	2.178+j7.955	17.31	13.20	0.763+j4.150	2.185+j7.970
TAMAZUNCHALE 115	TZE-115	115	0.97	0.54	24.651+j63.531	58.856+j228.233	1.07	0.59	24.650+j63.582	58.906+j228.281	1.07	0.59	24.658+j63.602	58.905+j228.283
TAMAZUNCHALE 400	TMH-400	400	21.06	22.22	0.502+j10.957	0.360+j8.428	22.79	23.63	0.453+j11.137	0.411+j9.142	22.68	23.55	0.459+j11.194	0.411+j9.143
TAMBACA	TBC-115	115	3.35	2.31	5.271+j19.088	16.646+j43.599	3.68	2.54	5.279+j19.145	16.694+j43.641	3.67	2.54	5.286+j19.168	16.692+j43.643
TAMOS	TMO-115	115	21.66	19.79	0.448+j3.033	0.707+j3.971	24.37	21.78	0.435+j2.965	0.722+j4.069	24.10	21.55	0.442+j2.999	0.742+j4.117

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Noreste

Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
TAMOS	TMO-400	400	18.40	15.63	1.104+j12.501	4.003+j19.497	24.30	19.98	0.750+j10.427	3.484+j17.166	22.62	18.51	0.850+j11.197	3.861+j18.779
TAMPICO	TPC-115	115	27.66	30.56	0.332+j2.377	0.234+j1.835	31.90	34.10	0.309+j2.269	0.249+j1.925	31.53	33.83	0.313+j2.295	0.249+j1.930
TAMPICO	TPC-230	230	16.29	17.10	0.875+j8.105	1.250+j7.422	18.94	19.23	0.783+j7.670	1.294+j7.627	18.65	19.03	0.801+j7.793	1.296+j7.654
TAMPIQUITO	TPQ-115	115	31.04	19.52	0.367+j2.107	1.082+j5.825	35.71	21.76	0.323+j2.020	1.090+j5.877	35.08	21.56	0.336+j2.055	1.093+j5.897
TANCOL	TCL-115	115	17.26	14.91	0.630+j3.794	1.903+j5.515	19.56	16.55	0.606+j3.684	1.911+j5.579	19.41	16.48	0.611+j3.712	1.913+j5.590
TECHNOCAST	THC-115	115	14.54	10.28	0.701+j4.511	2.070+j10.050	17.03	12.06	0.603+j4.246	1.952+j9.403	17.02	12.06	0.605+j4.249	1.952+j9.403
TECNOLÓGICO POTENCIA SF6	TEC-115	115	42.13	39.21	0.268+j1.553	0.216+j1.914	50.48	46.28	0.222+j1.430	0.204+j1.831	49.01	44.08	0.237+j1.471	0.233+j1.976
TECNOLÓGICO POTENCIA SF6	TEC-400	400	19.75	18.26	1.857+j11.543	1.888+j14.383	24.04	21.23	1.379+j10.476	1.941+j14.603	23.65	20.90	1.448+j10.643	2.008+j14.804
TEKSID	TKS-115	115	8.78	8.18	1.068+j7.490	1.773+j9.268	12.63	12.86	0.723+j5.737	0.888+j5.532	12.15	12.54	0.764+j5.962	0.888+j5.532
TELEFLEX	TLX-138	138	6.73	6.65	2.257+j11.613	2.077+j12.129	8.45	7.92	1.694+j10.234	2.100+j12.281	8.44	7.91	1.695+j10.243	2.100+j12.281
TEMPOAL II	TED-115	115	1.95	1.41	8.992+j32.883	19.740+j71.449	2.14	1.54	9.015+j32.928	19.757+j71.581	2.14	1.54	9.022+j32.944	19.761+j71.591
TERNIUM MANIOBRAS	TNM-400	400	14.06	10.44	1.802+j16.324	6.269+j32.574	16.33	11.86	1.456+j15.483	6.216+j32.342	16.22	11.81	1.493+j15.589	6.216+j32.347
TEXTILERAS	TXE-115	115	16.95	12.53	0.617+j3.869	1.592+j8.040	19.26	14.02	0.591+j3.746	1.574+j7.984	19.14	13.98	0.595+j3.769	1.576+j7.992
TIERRA NUEVA	TNA-115	115	6.26	4.53	3.337+j10.068	7.405+j21.514	7.56	5.43	2.933+j9.200	6.828+j19.882	7.55	5.43	2.936+j9.212	6.828+j19.883
TOPO CHICO	THO-115	115	28.93	21.53	0.437+j2.253	0.881+j4.571	33.24	24.13	0.395+j2.161	0.886+j4.602	32.91	23.98	0.403+j2.182	0.887+j4.611
TOSHIBA	TOS-115	115	11.37	6.09	1.145+j5.727	4.652+j20.492	15.36	8.30	0.854+j4.676	3.750+j16.464	15.33	8.30	0.858+j4.685	3.750+j16.464
TRANE	TNE-115	115	17.98	12.34	0.583+j3.646	1.937+j8.545	21.61	14.24	0.512+j3.341	1.934+j8.423	21.54	14.22	0.515+j3.351	1.934+j8.425
TRES MESAS MANIOBRAS	TMS-400	400	9.56	6.52	2.287+j24.053	12.652+j57.237	11.02	7.31	2.044+j22.959	12.711+j57.152	10.92	7.28	2.078+j23.178	12.710+j57.203
TRIARA II	TII-115	115	11.91	9.32	0.851+j5.511	1.659+j8.086	21.12	15.34	0.565+j3.412	1.312+j7.250	21.06	15.32	0.569+j3.421	1.312+j7.251
TRICO COMPTS.	TCO-138	138	10.67	8.91	1.329+j7.347	2.232+j11.883	12.68	10.55	1.203+j6.808	2.064+j11.059	12.13	10.25	1.278+j7.111	2.070+j11.154
TUBACERO MONTERREY	TBM-115	115	23.23	15.87	0.513+j2.811	1.637+j6.640	27.10	17.94	0.457+j2.656	1.644+j6.630	26.96	17.89	0.463+j2.669	1.644+j6.632
UCAR	UCA-230	230	15.28	12.53	1.326+j8.586	3.382+j14.027	18.76	14.75	1.074+j7.710	3.362+j13.774	18.69	14.72	1.085+j7.739	3.362+j13.775
UNIVERSIDAD	UNI-115	115	21.75	14.01	0.543+j3.003	1.643+j7.938	25.80	15.89	0.451+j2.794	1.649+j7.976	24.45	15.51	0.510+j2.943	1.650+j7.981
UNIVERSIDAD SACH	UNT-115	115	16.95	13.27	0.658+j3.861	1.463+j7.141	19.97	15.34	0.588+j3.610	1.399+j6.926	19.84	15.29	0.592+j3.633	1.400+j6.931
VALADECES	VDL-138	138	4.33	2.59	4.696+j17.806	14.173+j53.675	7.74	5.15	2.695+j11.002	6.695+j27.565	7.62	5.11	2.735+j11.167	6.694+j27.573
VALLE	VLL-115	115	33.57	22.78	0.358+j1.945	0.847+j4.708	38.81	25.54	0.314+j1.855	0.852+j4.739	38.09	25.24	0.327+j1.889	0.856+j4.766
VALLE ALTO	VAL-115	115	11.98	10.16	0.964+j5.458	2.021+j8.345	13.04	11.07	0.971+j5.515	2.069+j8.380	12.99	11.05	0.977+j5.539	2.068+j8.382
VALLE DEL ROBLE	VRO-115	115	9.43	6.36	1.113+j6.950	3.952+j16.793	10.88	7.11	1.044+j6.633	4.000+j16.931	10.86	7.11	1.047+j6.642	3.999+j16.935
VALLE HERMOSO	VHE-138	138	3.13	2.74	7.100+j24.475	8.889+j35.398	3.52	3.08	6.887+j23.899	8.744+j34.678	3.44	3.01	7.077+j24.451	8.902+j35.512
VALLE ORIENTE	VOT-115	115	42.31	32.52	0.275+j1.545	0.434+j2.952	49.67	37.18	0.233+j1.452	0.430+j2.920	48.60	36.40	0.244+j1.483	0.440+j2.980



## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Noreste

Subestación eléctrica	Acronímico	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
VALLE PONIENTE	VAP-115	115	16.21	12.16	0.707+j4.035	1.579+j8.032	18.81	13.67	0.618+j3.834	1.589+j8.102	17.99	13.37	0.682+j4.002	1.590+j8.110
VALLE SOLEADO DEFINITIVO	VSL-115	115	22.05	13.86	0.557+j2.960	1.677+j8.172	26.83	16.22	0.489+j2.678	1.659+j7.897	26.69	16.17	0.494+j2.692	1.661+j7.907
VALLE SUR	VSR-138	138	3.57	3.37	6.150+j21.433	6.419+j25.596	4.04	3.82	5.940+j20.854	6.273+j24.876	3.94	3.71	6.128+j21.409	6.432+j25.710
VALLES	VES-115	115	11.89	10.01	0.982+j5.497	2.032+j8.569	12.93	10.89	0.991+j5.560	2.078+j8.615	12.88	10.87	0.997+j5.583	2.076+j8.617
VENTIKA MANIOBRAS	VKM-230	230	6.42	6.72	2.747+j20.490	2.940+j17.760	7.21	7.40	2.631+j20.080	3.017+j18.494	7.08	7.31	2.705+j20.440	3.014+j18.506
VERDE CO.	VEC-138	138	10.25	7.53	1.701+j7.588	3.873+j15.768	12.38	8.94	1.495+j6.921	3.700+j14.926	11.32	8.27	1.679+j7.559	3.890+j15.897
VICTORIA	VRA-115	115	7.84	6.29	1.789+j8.277	3.736+j14.266	8.57	6.85	1.809+j8.325	3.769+j14.477	8.56	6.85	1.813+j8.337	3.768+j14.478
VIDRIERA MONTERREY	VMO-115	115	27.79	18.20	0.454+j2.346	1.241+j6.034	32.21	20.66	0.406+j2.231	1.220+j5.945	31.80	20.36	0.417+j2.259	1.245+j6.039
VILLA DE CASAS	VDC-115	115	2.43	1.89	9.799+j25.517	14.797+j48.579	2.66	2.05	9.846+j25.597	15.238+j49.751	2.66	2.05	9.849+j25.608	15.238+j49.751
VILLA DE GARCIA	VDG-115	115	28.07	31.93	0.311+j2.345	0.099+j1.494	30.94	34.54	0.290+j2.342	0.108+j1.610	30.52	34.19	0.301+j2.374	0.108+j1.611
VILLA DE GARCIA	VDG-230	230	25.61	29.44	0.646+j5.144	0.280+j3.146	29.27	32.83	0.509+j4.964	0.299+j3.353	29.11	32.68	0.521+j4.991	0.299+j3.354
VILLA DE GARCIA	VDG-400	400	30.92	30.23	1.200+j7.372	1.327+j7.803	39.21	36.15	0.781+j6.432	1.367+j7.957	38.65	35.81	0.818+j6.522	1.368+j7.966
VILLA DE JUÁREZ DOS	VJD-115	115	11.36	6.95	0.992+j5.759	3.504+j16.587	15.85	9.36	0.798+j4.538	3.057+j13.867	15.82	9.36	0.800+j4.546	3.057+j13.867
VILLA DE SANTIAGO	VDS-115	115	5.40	3.03	2.409+j12.053	8.920+j40.177	11.17	7.06	1.420+j6.382	4.619+j17.375	11.11	7.01	1.434+j6.418	4.642+j17.492
VILLA FLORIDA	VLF-138	138	16.57	14.73	0.689+j4.757	1.114+j6.560	20.32	17.66	0.571+j4.276	1.044+j6.213	19.11	17.00	0.633+j4.541	1.042+j6.230
VISTEON	VIS-115	115	12.79	9.33	0.809+j5.126	2.168+j10.758	17.14	11.72	0.696+j4.204	2.116+j9.949	17.10	11.71	0.700+j4.213	2.116+j9.950
VITRO CRISA	VSA-115	115	26.11	16.80	0.482+j2.496	1.393+j6.620	30.12	18.97	0.436+j2.386	1.378+j6.560	29.80	18.77	0.445+j2.410	1.397+j6.627
WHIRLPOOL	WHI-115	115	14.98	10.64	0.725+j4.373	1.964+j9.673	17.56	12.48	0.628+j4.112	1.854+j9.063	17.54	12.47	0.630+j4.116	1.854+j9.063
WHIRLPOOL APODACA	WHA-115	115	23.41	16.87	0.446+j2.800	1.202+j6.012	31.39	22.44	0.349+j2.300	0.992+j5.015	31.22	22.38	0.354+j2.312	0.992+j5.017
XICOTENCATL II	XID-115	115	1.74	1.11	11.563+j36.421	34.317+j98.087	1.93	1.24	11.323+j36.038	32.578+j95.221	1.93	1.24	11.328+j36.058	32.578+j95.221
XOCHIPILLI	XOC-115	115	9.21	7.95	1.142+j7.120	2.058+j10.650	11.10	9.17	0.934+j6.511	2.047+j10.694	10.46	8.88	1.018+j6.910	2.047+j10.694
YESOS INDUSTRIALES DEL NORTE	YIN-115	115	33.76	10.74	0.387+j1.928	5.583+j13.566	38.41	11.86	0.350+j1.869	5.591+j13.620	38.20	11.85	0.354+j1.879	5.591+j13.621
ZAPALINAME	ZPL-115	115	14.33	11.15	0.986+j4.528	1.580+j8.448	16.34	12.49	0.909+j4.377	1.582+j8.459	16.33	12.48	0.911+j4.380	1.582+j8.459
ZINC NACIONAL	ZNA-115	115	31.91	13.42	0.392+j2.043	2.166+j10.458	36.66	14.90	0.353+j1.961	2.172+j10.496	36.22	14.85	0.362+j1.983	2.172+j10.502

# Gerencia de Control Regional Baja California

## Sistema Baja California



*Regresar a mapa del SEN*

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
ACUEDUCTO	ACU-115	115	3.50	2.67	3.068+j18.723	10.426+j35.461	4.13	3.05	2.780+j17.476	10.433+j35.070	4.13	3.05	2.780+j17.476	10.433+j35.070
AEROPUERTO DOS	APD-230	230	10.03	7.93	1.837+j13.117	4.293+j23.407	11.83	9.08	1.666+j12.234	4.339+j23.196	11.79	9.06	1.678+j12.272	4.341+j23.211
BAJA RECYCLING	B.RECYCLING	69	14.23	13.20	0.410+j2.770	0.638+j3.418	16.11	14.66	0.387+j2.693	0.646+j3.486	16.11	14.66	0.387+j2.693	0.646+j3.486
BAJÍO	BAJ-69	69	4.76	0.95	2.130+j8.102	24.481+j105.964	5.28	1.05	2.106+j8.033	24.512+j106.119	5.28	1.05	2.106+j8.033	24.512+j106.119
CACHANILLA	KCH-161	161	16.17	13.72	0.690+j5.708	1.764+j8.667	19.50	15.88	0.630+j5.205	1.777+j8.664	19.38	15.82	0.636+j5.238	1.776+j8.671
CAÑÓN	KON-115	115	2.56	2.24	7.069+j24.902	8.221+j36.391	2.92	2.51	6.715+j24.075	8.227+j36.632	2.92	2.51	6.715+j24.075	8.227+j36.632
CÁRDENAS	CNA-69	69	14.43	10.11	0.528+j2.710	1.274+j6.204	16.59	11.31	0.490+j2.596	1.280+j6.239	16.59	11.31	0.490+j2.596	1.280+j6.239
CARRANZA	CNZ-161	161	14.79	13.02	0.807+j6.233	1.732+j8.697	18.79	15.85	0.739+j5.391	1.757+j8.303	18.57	15.71	0.755+j5.455	1.758+j8.343
CEMENTOS	CEC-115	115	7.69	7.29	1.579+j8.491	5.130+j9.201	9.54	8.65	1.279+j7.552	5.090+j9.140	9.54	8.65	1.279+j7.552	5.090+j9.140
CENTENARIO	CNT-230	230	13.49	10.08	1.282+j9.762	4.614+j19.354	15.87	11.57	1.163+j9.129	4.588+j18.992	15.83	11.55	1.170+j9.154	4.588+j19.000
CENTINELA	CTA-69	69	2.59	3.03	3.752+j14.918	11.341+j4.789	2.88	3.35	3.719+j14.763	11.345+j4.867	2.88	3.35	3.719+j14.764	11.345+j4.867
CENTRO	CRO-161	161	19.20	18.97	0.585+j4.806	0.670+j4.984	23.67	22.33	0.522+j4.288	0.702+j5.057	23.48	22.20	0.529+j4.323	0.701+j5.065
CENTRO	CRO-230	230	16.90	14.46	0.991+j7.794	1.727+j11.727	20.46	16.78	0.864+j7.086	1.791+j11.714	20.37	16.73	0.873+j7.119	1.792+j11.726
CERRO PRIETO CUATRO	CPC-161	161	12.66	13.31	0.893+j7.285	0.665+j6.250	15.00	15.34	0.876+j6.760	0.716+j6.334	14.53	14.75	0.930+j6.976	0.764+j6.688
CERRO PRIETO DOS	CPD-230	230	13.72	14.41	1.122+j9.613	0.805+j8.260	16.81	17.49	0.945+j8.635	0.758+j7.661	16.75	17.44	0.954+j8.669	0.758+j7.665
CERRO PRIETO TRES	CPT-230	230	13.72	14.02	1.151+j9.609	1.006+j9.026	17.04	17.64	0.944+j8.520	0.763+j7.673	16.98	17.59	0.953+j8.552	0.762+j7.677
CERRO PRIETO UNO	CPU-161	161	12.03	11.29	1.005+j7.659	1.332+j9.169	14.20	13.31	0.982+j7.132	1.192+j8.581	13.61	12.30	1.063+j7.436	1.513+j9.802
CERVECERA BAJA CALIFORNIA	CBC-230	230	11.93	9.60	1.597+j11.019	4.071+j18.836	14.08	10.97	1.451+j10.273	4.155+j18.793	14.03	10.94	1.461+j10.306	4.156+j18.806
CESPT	CPT-69	69	13.63	8.90	0.456+j2.887	1.597+j7.446	15.48	9.90	0.428+j2.799	1.601+j7.474	15.48	9.90	0.428+j2.799	1.601+j7.474
CETYS	CTY-161	161	17.03	16.30	0.709+j5.413	0.944+j6.128	22.21	20.41	0.637+j4.560	0.980+j5.745	21.94	20.23	0.650+j4.614	0.980+j5.769
CETYS	CTY-230	230	10.83	8.81	1.679+j12.148	3.479+j20.400	12.83	10.10	1.511+j11.282	3.559+j20.314	12.79	10.08	1.523+j11.320	3.561+j20.332
CHAPULTEPEC	CHQ-230	230	9.41	9.28	1.838+j13.989	1.962+j14.573	11.13	10.81	1.656+j13.017	1.925+j14.181	11.09	10.78	1.669+j13.063	1.924+j14.188
CICLO COMBINADO MEXICALI	CCM-230	230	28.41	28.91	0.503+j4.646	0.381+j4.440	35.43	36.18	0.408+j4.103	0.318+j3.871	35.30	36.09	0.412+j4.117	0.318+j3.872
CIPRÉS	CIP-115	115	8.93	10.85	1.306+j7.321	0.330+j3.611	11.40	13.53	0.997+j6.329	0.303+j3.463	11.40	13.53	0.997+j6.329	0.303+j3.463
CIPRÉS	CIP-230	230	5.96	6.23	3.743+j21.983	2.181+j19.818	7.34	7.37	2.979+j19.687	2.178+j20.013	7.34	7.37	2.979+j19.687	2.178+j20.013
COLONET	COE-115	115	1.89	1.61	10.625+j33.436	11.835+j52.223	2.14	1.79	10.249+j32.634	11.871+j52.739	2.14	1.79	10.249+j32.635	11.871+j52.739
COMISIÓN ESTATAL DE SERVICIOS PÚBLICOS DE TIJUANA	CES-69	69	18.32	14.65	0.330+j2.149	0.710+j3.777	21.35	16.53	0.293+j2.032	0.715+j3.812	21.35	16.53	0.293+j2.032	0.715+j3.812
DART CONTAINER	DAR-69	69	18.19	19.84	0.381+j2.157	0.250+j1.644	20.74	22.13	0.358+j2.082	0.258+j1.714	20.74	22.13	0.358+j2.082	0.258+j1.714
DINAMIS PLASTICS	PLA-69	69	16.32	14.50	0.425+j2.404	0.584+j3.330	18.60	16.13	0.396+j2.322	0.592+j3.411	18.60	16.13	0.396+j2.322	0.592+j3.411
DURAZNO	DRA-69	69	12.39	7.84	0.544+j3.170	1.881+j8.628	14.05	8.73	0.514+j3.076	1.884+j8.648	14.05	8.73	0.514+j3.076	1.884+j8.648

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
EL DORADO	EDR-115	115	0.85	1.03	24.667+j73.725	4.418+j38.848	0.95	1.12	24.432+j73.240	4.778+j41.413	0.95	1.12	24.432+j73.240	4.778+j41.413
ENCINAL	ENL-69	69	4.17	4.05	1.564+j9.430	1.529+j10.277	4.61	4.40	1.545+j9.371	1.648+j10.768	4.61	4.40	1.545+j9.371	1.648+j10.768
ENERGÍA BAJA CALIFORNIA	EBC-230	230	18.79	14.30	0.850+j7.017	2.976+j13.432	24.10	20.62	0.658+j6.024	1.341+j9.046	24.05	20.59	0.662+j6.038	1.341+j9.048
ENSENADA	EDA-115	115	7.91	8.35	1.524+j8.259	1.545+j7.034	9.79	9.92	1.238+j7.358	1.570+j7.097	9.79	9.92	1.238+j7.358	1.570+j7.097
FABRICAS MONTERREY	FAM-115	115	7.65	7.76	1.583+j8.535	1.934+j8.213	9.45	9.19	1.291+j7.620	1.959+j8.255	9.45	9.19	1.291+j7.620	1.959+j8.255
FEVISA	FEV-161	161	4.75	2.94	3.178+j19.296	12.345+j54.478	5.37	3.29	3.151+j18.771	12.204+j53.889	5.29	3.22	3.235+j19.073	12.527+j55.113
FLORIDO	FLO-69	69	13.13	8.82	0.522+j2.988	1.687+j7.310	14.84	9.80	0.498+j2.911	1.691+j7.347	14.84	9.80	0.498+j2.911	1.691+j7.347
FRANCISCO VILLA	FCO-69	69	13.45	10.19	0.505+j2.918	1.481+j5.651	15.21	11.31	0.478+j2.841	1.486+j5.705	15.21	11.31	0.478+j2.841	1.486+j5.705
FRONTERA	FTA-69	69	20.49	15.07	0.340+j1.914	0.821+j3.979	23.56	16.85	0.313+j1.833	0.826+j4.019	23.56	16.85	0.313+j1.833	0.826+j4.019
GALLO	GLL-115	115	7.98	8.39	1.522+j8.175	1.832+j7.022	9.94	10.03	1.225+j7.247	1.857+j7.022	9.94	10.03	1.225+j7.247	1.857+j7.022
GONZALES ORTEGA	GOR-161	161	15.81	14.46	0.772+j5.827	1.304+j7.421	20.25	17.80	0.712+j4.999	1.316+j7.022	19.91	17.55	0.733+j5.082	1.322+j7.094
GUERRERO	GER-69	69	18.66	13.11	0.395+j2.098	1.003+j4.772	21.65	14.75	0.359+j1.992	1.006+j4.789	21.65	14.75	0.359+j1.992	1.006+j4.789
HERRADURA	HRA-69	69	26.10	29.65	0.206+j1.513	0.079+j0.996	30.24	33.30	0.183+j1.438	0.087+j1.066	30.24	33.30	0.183+j1.438	0.087+j1.066
HERRADURA	HRA-230	230	20.56	18.83	0.862+j6.400	1.322+j8.338	25.76	22.28	0.672+j5.630	1.391+j8.409	25.76	22.28	0.672+j5.631	1.391+j8.409
HIDALGO	HGO-161	161	6.96	5.62	2.070+j13.191	4.430+j22.504	7.98	6.29	1.993+j12.657	4.459+j22.689	7.92	6.26	2.017+j12.745	4.496+j22.774
HIPÓDROMO	HMO-69	69	26.98	20.70	0.288+j1.448	0.630+j2.774	31.81	23.53	0.255+j1.354	0.631+j2.785	31.80	23.53	0.255+j1.354	0.631+j2.785
HUNTER	HTR-69	69	16.27	11.08	0.431+j2.410	1.234+j5.786	18.65	12.39	0.399+j2.315	1.237+j5.810	18.65	12.39	0.399+j2.315	1.237+j5.810
HYUNDAI. CARGA INDUSTRIAL	HIU-69	69	26.83	17.98	0.270+j1.460	0.617+j3.647	31.32	20.13	0.244+j1.377	0.624+j3.703	31.32	20.13	0.244+j1.377	0.624+j3.703
INDUSTRIAL	INA-69	69	23.00	17.17	0.303+j1.705	0.688+j3.452	26.61	19.25	0.275+j1.623	0.693+j3.488	26.61	19.25	0.275+j1.623	0.693+j3.488
IOJOS NEGROS	ONG-69	69	1.24	0.96	11.285+j30.144	16.283+j57.912	1.37	1.05	11.179+j29.936	16.343+j58.854	1.37	1.05	11.179+j29.936	16.343+j58.854
JATAY	JAT-115	115	3.72	2.81	2.898+j17.631	9.803+j33.994	4.37	3.20	2.621+j16.507	9.819+j33.774	4.37	3.20	2.621+j16.507	9.819+j33.774
JOVITA	JOV-230	230	7.79	8.86	1.894+j16.946	0.649+j11.827	9.01	9.91	1.703+j16.119	0.756+j12.680	9.01	9.91	1.703+j16.119	0.756+j12.680
JOYA	JOY-115	115	8.07	8.74	0.987+j8.173	1.346+j6.299	13.10	13.72	0.596+j5.544	1.287+j4.731	13.10	13.72	0.596+j5.544	1.287+j4.731
KENWORTH	KEN-230	230	5.89	6.67	2.822+j22.375	2.791+j14.371	6.69	7.55	2.679+j21.653	2.816+j14.173	6.68	7.54	2.689+j21.685	2.818+j14.186
LA ENCANTADA	ENA-69	69	17.03	18.51	0.409+j2.304	0.280+j1.777	19.42	20.71	0.383+j2.223	0.289+j1.834	19.42	20.71	0.383+j2.223	0.289+j1.834
LA MESA	LMS-69	69	21.98	16.78	0.347+j1.779	0.709+j3.447	25.46	18.87	0.316+j1.692	0.712+j3.476	25.46	18.87	0.316+j1.692	0.712+j3.476
LA ROSITA	ROA-230	230	32.11	30.80	0.480+j4.107	0.653+j4.633	40.61	39.09	0.385+j3.577	0.540+j3.990	40.42	38.97	0.389+j3.593	0.539+j3.993
LAGO	LGO-69	69	15.10	11.57	0.509+j2.589	0.998+j4.971	17.17	12.87	0.478+j2.507	1.004+j5.031	17.17	12.87	0.478+j2.507	1.004+j5.031
LOMAS	LOS-69	69	2.58	2.91	2.917+j15.148	0.455+j10.316	2.88	3.16	2.814+j14.939	0.514+j11.257	2.88	3.16	2.814+j14.939	0.514+j11.257
LOMAS	LOS-115	115	8.34	9.87	1.369+j7.838	0.404+j4.399	10.34	11.77	1.103+j6.976	0.438+j4.575	10.34	11.77	1.103+j6.976	0.438+j4.575

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Baja California**

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
LOMAS	LOS-230	230	6.06	5.96	3.584+j21.602	2.958+j23.363	7.45	6.98	2.865+j19.388	3.088+j23.832	7.45	6.98	2.865+j19.388	3.088+j23.832
MABAMEX	MAB-69	69	13.38	8.91	0.543+j2.927	1.870+j7.254	15.14	9.89	0.519+j2.847	1.875+j7.290	15.14	9.89	0.519+j2.847	1.875+j7.290
MANEADERO	MND-115	115	6.92	7.58	1.815+j9.421	1.037+j7.136	8.51	9.08	1.496+j8.446	1.011+j6.998	8.51	9.08	1.496+j8.446	1.011+j6.998
MATRIX	MATRIX-69	69	10.57	6.29	0.881+j3.663	2.459+j11.228	11.90	6.97	0.853+j3.581	2.464+j11.265	11.90	6.97	0.853+j3.581	2.464+j11.265
MESA INDUSTRIAL GROUP	MGI-69	69	14.60	9.59	0.594+j2.663	1.468+j6.873	16.58	10.66	0.566+j2.582	1.472+j6.910	16.58	10.66	0.566+j2.582	1.472+j6.910
METROPOLIS	MEP-69	69	31.07	32.79	0.174+j1.271	0.100+j1.099	36.60	37.21	0.148+j1.188	0.107+j1.155	36.60	37.21	0.148+j1.188	0.107+j1.155
METROPOLIS	MEP-230	230	22.30	22.21	0.818+j5.898	1.024+j6.182	29.24	27.65	0.595+j4.960	1.055+j5.997	29.24	27.65	0.595+j4.961	1.055+j5.997
MEXICALI II	MXI-161	161	21.88	22.71	0.503+j4.219	0.482+j3.756	28.23	27.89	0.427+j3.596	0.503+j3.726	27.88	27.61	0.436+j3.642	0.504+j3.746
MEXICALI II	MXI-230	230	19.86	18.39	0.901+j6.626	1.213+j8.218	24.67	21.96	0.759+j5.872	1.242+j8.031	24.52	21.86	0.769+j5.907	1.244+j8.046
MEXICALI ORIENTE	MOE-161	161	13.53	12.07	0.909+j6.811	1.629+j9.225	18.51	16.40	0.836+j5.461	1.492+j7.515	18.31	16.28	0.850+j5.518	1.492+j7.540
MÉXICO	MXC-69	69	17.47	11.34	0.459+j2.234	1.302+j5.860	20.16	12.72	0.423+j2.132	1.304+j5.872	20.16	12.72	0.423+j2.132	1.304+j5.872
MINERA	MIN-115	115	0.76	0.67	28.481+j82.246	34.914+j119.066	0.84	0.73	28.241+j81.770	35.011+j120.612	0.84	0.73	28.241+j81.770	35.011+j120.612
MISIÓN	MSN-115	115	3.43	2.69	3.083+j19.093	10.122+j34.101	4.08	3.10	2.783+j17.703	10.120+j33.512	4.08	3.10	2.783+j17.703	10.120+j33.512
MONTECITO	MUE-69	69	17.16	13.08	0.432+j2.280	0.904+j4.426	19.63	14.60	0.401+j2.195	0.909+j4.470	19.63	14.60	0.401+j2.195	0.909+j4.470
NACOZARI	NZI-161	161	14.06	11.52	0.893+j6.550	1.920+j10.836	17.39	13.60	0.827+j5.820	1.951+j10.638	17.25	13.53	0.838+j5.866	1.951+j10.655
OPTICA	OPT-69	69	21.13	15.62	0.303+j1.861	0.768+j3.828	24.32	17.47	0.277+j1.781	0.773+j3.867	24.32	17.47	0.277+j1.781	0.773+j3.867
ORIZABA	OZA-230	230	18.18	15.03	0.953+j7.242	2.004+j11.739	22.17	17.62	0.824+j6.536	2.024+j11.537	22.06	17.56	0.833+j6.569	2.024+j11.548
PACIFICO	PAF-69	69	22.36	18.47	0.279+j1.759	0.468+j2.895	26.20	20.79	0.246+j1.655	0.486+j2.964	26.20	20.79	0.246+j1.655	0.486+j2.964
PACKARD	PKD-161	161	17.83	16.65	0.673+j5.171	1.099+j6.232	22.65	20.15	0.599+j4.475	1.119+j6.098	22.40	19.99	0.610+j4.523	1.120+j6.120
PANAMERICANA	PNM-115	115	6.45	5.61	1.302+j10.209	3.424+j14.661	9.56	7.62	0.897+j7.589	3.375+j13.129	9.56	7.62	0.897+j7.589	3.375+j13.129
PANAMERICANA POTENCIA	PAP-69	69	32.71	35.65	0.173+j1.206	0.081+j0.941	39.45	41.32	0.140+j1.102	0.086+j0.983	39.45	41.32	0.140+j1.102	0.086+j0.983
PANAMERICANA POTENCIA	PAP-230	230	18.54	19.07	1.005+j7.093	0.968+j6.803	24.82	24.27	0.696+j5.843	0.993+j6.506	24.82	24.27	0.696+j5.843	0.993+j6.506
PARQUE INDUSTRIAL	PID-161	161	7.87	8.25	1.600+j11.695	1.258+j10.145	9.05	9.21	1.517+j11.195	1.360+j10.616	9.00	9.18	1.533+j11.256	1.364+j10.633
PARQUE INDUSTRIAL	PID-230	230	6.63	6.19	2.787+j19.823	4.026+j23.977	7.68	6.95	2.604+j18.843	4.359+j24.662	7.65	6.93	2.627+j18.918	4.367+j24.687
PARQUE INDUSTRIAL LOS OLIVOS	POL-69	69	17.21	19.26	0.403+j2.279	0.231+j1.582	19.64	21.57	0.378+j2.199	0.239+j1.638	19.64	21.57	0.378+j2.199	0.239+j1.638
PARQUE INDUSTRIAL PACÍFICO	PFCO	69	14.41	11.83	0.473+j2.723	0.895+j4.518	16.50	13.23	0.439+j2.620	0.901+j4.560	16.50	13.23	0.439+j2.620	0.901+j4.560
PLANTA DE BOMBEO UNO	PBI-69	69	13.32	7.01	0.633+j2.924	2.621+j10.788	15.21	7.80	0.597+j2.819	2.626+j10.812	15.21	7.80	0.597+j2.819	2.626+j10.812
POPOTLA	POP-115	115	4.89	4.32	1.876+j13.440	5.696+j18.299	6.46	5.43	1.504+j11.212	5.672+j17.049	6.46	5.43	1.504+j11.212	5.672+j17.049
PRESIDENTE JUÁREZ	PJZ-115	115	9.23	10.94	0.666+j7.165	0.167+j3.919	16.09	19.25	0.284+j4.530	0.106+j2.345	16.09	19.25	0.284+j4.530	0.106+j2.345
PRESIDENTE JUÁREZ	PJZ-230	230	21.74	26.46	0.833+j6.051	0.287+j3.205	32.44	40.26	0.460+j4.479	0.170+j2.232	32.44	40.26	0.461+j4.479	0.170+j2.232

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
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Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
PUERTO NUEVO	PNU-115	115	3.99	3.84	2.455+j16.445	5.614+j18.000	4.96	4.67	2.116+j14.561	5.593+j16.790	4.96	4.67	2.116+j14.561	5.593+j16.790
PUNTA CHICA	PCH-115	115	2.20	2.01	7.873+j29.166	9.337+j37.541	2.50	2.26	7.537+j28.227	9.315+j37.449	2.50	2.26	7.537+j28.227	9.315+j37.449
RIO	RII-69	69	22.32	15.80	0.353+j1.749	0.876+j3.923	26.06	17.84	0.318+j1.651	0.878+j3.933	26.06	17.84	0.318+j1.651	0.878+j3.933
RIO NUEVO	RIN-161	161	16.74	14.69	0.697+j5.508	1.446+j7.762	20.30	17.05	0.635+j4.997	1.468+j7.792	20.16	16.98	0.642+j5.031	1.467+j7.799
RSI HOME PRODUCTS	RSI-69	69	24.55	21.21	0.248+j1.604	0.463+j2.367	28.50	23.83	0.223+j1.521	0.469+j2.418	28.50	23.83	0.223+j1.521	0.469+j2.418
RUBÍ	RUB-69	69	28.99	30.27	0.179+j1.362	0.117+j1.225	35.05	35.11	0.143+j1.242	0.124+j1.267	35.05	35.11	0.143+j1.242	0.124+j1.267
RUBÍ	RUB-230	230	14.68	14.93	1.258+j8.958	1.364+j8.850	19.50	18.84	0.881+j7.439	1.420+j8.509	19.50	18.84	0.881+j7.440	1.420+j8.509
RUIZ CORTINEZ	RZC-161	161	8.01	6.59	1.803+j11.458	3.357+j18.810	9.25	7.42	1.728+j10.913	3.371+j18.926	9.17	7.37	1.754+j11.009	3.420+j19.037
RUMOROSA	RUM-69	69	9.89	13.32	0.375+j4.010	0.044+j0.917	11.33	15.06	0.345+j3.853	0.048+j0.995	11.32	15.06	0.345+j3.854	0.048+j0.995
RUMOROSA	RUM-230	230	10.12	8.77	1.616+j13.019	2.505+j19.045	11.61	9.75	1.495+j12.493	2.686+j19.641	11.60	9.74	1.498+j12.503	2.685+j19.641
SAMSUNG	SAM-230	230	19.66	18.21	0.926+j6.691	1.537+j8.478	25.20	22.14	0.702+j5.753	1.568+j8.293	25.20	22.14	0.702+j5.754	1.568+j8.293
SAN FELIPE	SAF-115	115	0.78	0.84	27.270+j81.202	11.386+j65.117	0.86	0.92	27.033+j80.719	11.747+j67.684	0.86	0.92	27.033+j80.719	11.747+j67.684
SAN LUIS REY	SRY-230	230	6.40	6.30	2.816+j20.566	2.716+j21.523	7.39	7.16	2.632+j19.591	2.748+j21.482	7.37	7.15	2.652+j19.655	2.749+j21.495
SAN MATÍAS	SMT-115	115	1.18	1.51	17.233+j53.817	1.013+j19.860	1.30	1.65	17.009+j53.324	1.141+j21.456	1.30	1.65	17.009+j53.324	1.141+j21.456
SAN QUINTÍN	SQN-115	115	1.19	1.18	19.521+j52.447	9.691+j57.286	1.33	1.29	19.104+j51.704	9.873+j59.063	1.33	1.29	19.104+j51.704	9.873+j59.063
SAN SIMÓN	SMN-115	115	0.96	1.15	22.954+j64.986	1.668+j37.175	1.07	1.25	22.526+j64.256	1.946+j40.176	1.07	1.25	22.526+j64.256	1.946+j40.176
SAN VICENTE	SVE-115	115	2.57	2.10	6.984+j24.834	10.134+j42.390	2.94	2.35	6.632+j23.976	10.131+j42.516	2.94	2.35	6.632+j23.976	10.131+j42.516
SÁNCHEZ TABOADA	STB-230	230	16.20	13.49	1.153+j8.115	2.471+j12.934	19.58	15.72	1.014+j7.391	2.496+j12.736	19.49	15.67	1.023+j7.423	2.497+j12.749
SANTA ISABEL	SIS-161	161	22.11	22.94	0.451+j4.181	0.479+j3.723	27.55	27.47	0.394+j3.691	0.487+j3.716	27.32	27.31	0.400+j3.722	0.486+j3.722
SANTA ISABEL	SIS-230	230	23.21	20.88	0.719+j5.676	1.268+j7.550	28.82	25.14	0.606+j5.032	1.256+j7.198	28.66	25.05	0.613+j5.059	1.256+j7.207
SAUZAL	SAZ-115	115	3.36	2.62	3.365+j19.445	9.948+j35.544	3.95	2.98	3.049+j18.237	9.937+j35.260	3.95	2.98	3.049+j18.237	9.937+j35.260
SEMINARIO	SIO-69	69	15.12	8.99	0.480+j2.591	1.725+j7.862	17.20	10.00	0.451+j2.507	1.727+j7.883	17.20	10.00	0.451+j2.507	1.727+j7.883
SHARP	SHA-115	115	8.41	9.12	0.791+j7.860	0.653+j6.104	13.93	14.50	0.404+j5.227	0.613+j4.628	13.93	14.50	0.404+j5.227	0.613+j4.628
SIDERÚRGICA	CSC-230	230	12.32	10.09	1.491+j10.677	3.321+j17.621	14.78	11.82	1.322+j9.797	3.252+j17.014	14.73	11.80	1.331+j9.830	3.253+j17.022
SKYWORKS	SKW-161	161	15.39	13.74	0.806+j5.986	1.307+j8.122	19.54	16.64	0.736+j5.181	1.351+j7.861	19.35	16.53	0.749+j5.232	1.350+j7.881
SONY	SON-69	69	11.01	6.19	0.695+j3.552	2.557+j11.815	12.41	6.85	0.664+j3.469	2.563+j11.874	12.41	6.85	0.664+j3.469	2.563+j11.874
TAICO	TYC-69	69	16.08	12.70	0.453+j2.435	0.872+j4.391	18.34	14.15	0.423+j2.352	0.878+j4.449	18.34	14.15	0.423+j2.352	0.878+j4.449
TECATE	TCT-69	69	6.25	3.92	1.230+j6.253	4.206+j17.280	6.96	4.30	1.206+j6.184	4.250+j17.476	6.96	4.30	1.206+j6.184	4.250+j17.476
TECATE DOS	TCD-69	69	7.01	5.63	0.998+j5.593	1.838+j9.718	7.81	6.13	0.975+j5.525	1.928+j10.043	7.81	6.13	0.975+j5.525	1.928+j10.043
TECNOLÓGICO	TEK-230	230	14.19	11.62	1.281+j9.272	2.985+j15.300	17.06	13.47	1.127+j8.490	3.023+j15.127	16.98	13.43	1.138+j8.526	3.024+j15.143

**Niveles de cortocircuito de la Red Nacional de Transmisión**  
**Gerencia de Control Regional Baja California**

Subestación eléctrica	Acronimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
TECOLOTE	TEE-69	69	15.91	10.63	0.376+j2.476	1.294+j6.132	18.36	11.92	0.340+j2.363	1.297+j6.151	18.36	11.92	0.340+j2.363	1.297+j6.151
TECRA	TCR-69	69	5.86	3.10	1.332+j6.668	5.808+j24.235	6.51	3.41	1.308+j6.599	5.839+j24.389	6.51	3.41	1.308+j6.599	5.839+j24.389
TENSHO. CARGA INDUSTRIAL	TSHO-115	115	8.64	9.64	0.753+j7.652	0.486+j5.368	14.51	15.72	0.368+j5.018	0.446+j3.895	14.51	15.72	0.368+j5.018	0.446+j3.895
THOMSOM	THO-230	230	14.17	11.20	1.315+j9.276	3.273+j16.526	16.92	12.93	1.176+j8.553	3.298+j16.328	16.85	12.90	1.186+j8.585	3.299+j16.341
TIJUANA	TJI-69	69	32.78	35.70	0.161+j1.205	0.072+j0.937	38.65	40.53	0.137+j1.126	0.079+j0.994	38.65	40.53	0.137+j1.126	0.079+j0.994
TIJUANA	TJI-69A	69	18.44	21.20	0.353+j2.131	0.082+j1.342	21.11	23.57	0.325+j2.051	0.093+j1.448	21.11	23.57	0.325+j2.051	0.093+j1.448
TIJUANA	TJI-230	230	25.46	27.02	0.725+j5.165	0.639+j4.486	33.40	33.73	0.526+j4.341	0.672+j4.405	33.40	33.73	0.526+j4.342	0.672+j4.405
TOYOTA	TOY-230	230	15.15	12.36	1.167+j8.690	2.654+j14.684	18.38	14.31	0.970+j7.887	2.711+j14.695	18.38	14.31	0.970+j7.887	2.711+j14.695
TRINIDAD	TRI-115	115	1.52	1.49	12.878+j41.792	9.871+j45.749	1.70	1.64	12.584+j41.133	9.924+j46.534	1.70	1.64	12.584+j41.133	9.924+j46.534
UNIVERSIDAD	UND-69	69	14.23	9.02	0.536+j2.748	1.681+j7.487	16.19	10.05	0.503+j2.659	1.683+j7.500	16.19	10.05	0.503+j2.659	1.683+j7.500
VALLE	VAL-69	69	15.74	9.98	0.488+j2.483	1.424+j6.795	18.09	11.17	0.452+j2.379	1.426+j6.808	18.09	11.17	0.452+j2.379	1.426+j6.808
VALLE DE GUADALUPE	VLP-69	69	2.25	1.55	6.159+j16.596	11.069+j40.228	2.50	1.71	6.085+j16.436	11.092+j40.611	2.50	1.71	6.085+j16.436	11.092+j40.611
VALLE DE LAS PALMAS	VPM-69	69	3.21	2.19	5.176+j11.262	7.020+j29.178	3.57	2.42	5.139+j11.162	7.022+j29.275	3.57	2.42	5.139+j11.162	7.022+j29.275
VALLE DE PUEBLA	VPA-230	230	12.38	9.64	1.536+j10.614	4.310+j19.460	14.68	11.04	1.387+j9.853	4.368+j19.350	14.63	11.01	1.397+j9.887	4.370+j19.364
VALLE DORADO	VLD-115	115	7.89	8.55	1.512+j8.283	1.228+j6.464	9.84	10.28	1.208+j7.324	1.249+j6.447	9.84	10.28	1.208+j7.324	1.249+j6.447
VALLECITOS	VLC-69	69	2.45	1.64	6.622+j14.845	10.858+j39.039	2.72	1.81	6.572+j14.724	10.864+j39.221	2.72	1.81	6.572+j14.724	10.864+j39.221
VIGOBITE	VIB-69	69	20.12	13.03	0.359+j1.947	1.107+j5.115	23.18	14.59	0.330+j1.861	1.110+j5.136	23.18	14.59	0.330+j1.861	1.110+j5.136
WISTERIA	WIS-230	230	21.66	19.66	0.811+j6.077	1.278+j7.912	26.98	23.60	0.681+j5.372	1.283+j7.644	26.82	23.50	0.689+j5.403	1.284+j7.655
XOCHIMILCO	XCO-230	230	19.09	16.37	0.922+j6.893	1.758+j10.296	23.51	19.36	0.786+j6.164	1.774+j10.065	23.38	19.29	0.796+j6.197	1.775+j10.078

# Gerencia de Control Regional Baja California

## Sistema Baja California Sur



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## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Baja California sur

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
AEROPUERTO SAN JOSÉ	ASJ-115	115	2.86	3.18	5.761+j22.477	2.701+j16.108	4.29	4.31	3.384+j16.676	2.775+j16.543	4.29	4.31	3.384+j16.676	2.775+j16.543
AURA SOLAR	ASU-115	115	4.65	5.77	2.551+j14.036	0.838+j6.017	8.33	9.23	1.077+j8.706	0.896+j6.136	8.33	9.23	1.077+j8.706	0.896+j6.136
BLEDALES	BLE-115	115	4.38	5.58	3.048+j14.866	0.949+j5.335	7.86	9.08	1.348+j9.189	1.012+j5.454	7.86	9.08	1.348+j9.189	1.012+j5.454
BUENAVISTA	BUV-115	115	2.08	2.30	9.571+j30.431	3.929+j22.800	2.81	2.87	7.377+j24.943	4.184+j23.953	2.81	2.87	7.377+j24.943	4.184+j23.953
CABO BELLO	CAB-115	115	3.42	4.21	4.567+j18.849	1.353+j8.531	6.09	6.70	1.960+j11.839	1.464+j8.597	6.09	6.70	1.960+j11.839	1.464+j8.597
CABO FALSO	CAF-115	115	3.71	4.35	4.016+j17.451	1.382+j10.009	7.41	7.85	1.408+j9.761	1.250+j8.091	7.41	7.85	1.408+j9.761	1.250+j8.091
CABO REAL	CRE-115	115	3.62	4.53	4.301+j17.808	1.275+j7.255	6.20	7.03	1.927+j11.612	1.335+j7.530	6.20	7.03	1.927+j11.612	1.335+j7.530
CABO SAN LUCAS DOS	CAD-115	115	3.83	4.83	4.027+j16.856	0.900+j6.652	7.63	8.76	1.439+j9.466	0.880+j5.798	7.63	8.76	1.439+j9.466	0.880+j5.798
CABO SOL	CAS-115	115	3.37	4.11	4.608+j19.171	1.342+j8.980	5.75	6.30	2.084+j12.522	1.449+j9.316	5.75	6.30	2.084+j12.522	1.449+j9.316
CAMINO REAL	CAR-115	115	2.86	3.15	5.985+j22.401	4.090+j16.485	4.46	4.41	3.721+j15.945	4.343+j16.333	4.46	4.41	3.721+j15.945	4.343+j16.333
CENTRAL TURBOGÁS LOS CABOS	TCB-230	230	2.15	2.36	13.127+j60.381	5.395+j45.443	4.30	3.80	3.904+j33.756	5.703+j47.094	4.30	3.80	3.904+j33.756	5.703+j47.094
COROMUEL	COR-230	230	3.45	4.17	4.722+j38.179	1.219+j18.710	5.93	6.86	1.544+j24.598	0.793+j14.630	5.93	6.86	1.544+j24.598	0.793+j14.630
EL PALMAR	ELP-115	115	4.06	5.50	3.807+j15.920	0.437+j3.547	7.48	9.42	1.470+j9.647	0.477+j3.734	7.48	9.42	1.470+j9.647	0.477+j3.734
EL PALMAR	ELP-230	230	2.28	2.77	12.501+j56.929	3.048+j27.254	4.41	4.60	4.084+j32.860	3.355+j28.903	4.41	4.60	4.084+j32.860	3.355+j28.903
EL RECREO	RCO-115	115	4.45	5.70	2.907+j14.635	0.890+j5.074	7.98	9.29	1.257+j9.063	0.950+j5.194	7.98	9.29	1.257+j9.063	0.950+j5.194
EL TRIUNFO	ETR-115	115	2.65	2.95	6.919+j24.130	3.007+j17.255	3.91	3.95	4.676+j18.088	3.270+j17.822	3.91	3.95	4.676+j18.088	3.270+j17.822
GENERAL AGUSTÍN OLACHEA	GAO-115	115	3.18	3.91	2.502+j20.725	0.414+j9.303	5.23	6.23	1.067+j13.936	0.287+j7.256	5.23	6.23	1.067+j13.936	0.287+j7.256
INSURGENTES	INS-115	115	2.09	2.64	7.976+j30.752	2.477+j11.704	3.34	4.08	4.504+j21.395	1.982+j9.720	3.34	4.08	4.504+j21.395	1.982+j9.720
LA PAZ	LPZ-115	115	3.83	4.69	3.893+j16.891	1.427+j7.691	6.65	7.33	1.972+j10.806	1.520+j7.795	6.65	7.33	1.972+j10.806	1.520+j7.795
LAS PILAS	LAP-115	115	2.56	2.59	6.111+j25.214	5.558+j24.553	3.66	3.35	4.308+j19.485	5.748+j24.818	3.66	3.35	4.308+j19.485	5.748+j24.818
LORETO	LRO-115	115	0.78	1.02	25.308+j81.301	1.965+j25.218	0.97	1.23	21.389+j72.250	2.167+j27.278	0.97	1.23	21.389+j72.250	2.167+j27.278
MONTE REAL	MOR-115	115	3.03	3.62	5.422+j21.259	1.527+j11.128	4.65	5.09	3.032+j15.395	1.607+j11.586	4.65	5.09	3.032+j15.395	1.607+j11.586
OLAS ALTAS	OLA-115	115	5.13	6.84	2.335+j12.731	0.367+j3.255	9.75	11.98	0.873+j7.442	0.406+j3.287	9.75	11.98	0.873+j7.442	0.406+j3.287
OLAS ALTAS	OLA-230	230	3.31	3.94	5.810+j39.709	2.340+j20.851	5.85	6.31	1.907+j24.879	2.431+j19.396	5.85	6.31	1.907+j24.879	2.431+j19.396
PALMILLA	PAA-115	115	3.68	4.05	3.879+j17.613	2.014+j12.975	6.38	6.15	1.911+j11.279	2.033+j12.593	6.38	6.15	1.911+j11.279	2.033+j12.593
PALMILLA	PML-115	115	3.19	3.84	4.911+j20.239	1.638+j10.142	5.08	5.55	2.508+j14.159	1.727+j10.560	5.08	5.55	2.508+j14.159	1.727+j10.560
PUERTO ESCONDIDO	PES-115	115	0.87	1.09	22.316+j72.730	3.673+j30.779	1.10	1.33	18.447+j63.613	3.885+j32.490	1.10	1.33	18.447+j63.613	3.885+j32.490
PUNTA PRIETA	PUP-115	115	4.59	5.70	2.971+j14.156	1.010+j5.993	10.09	12.21	0.815+j7.194	0.357+j3.454	10.09	12.21	0.815+j7.194	0.357+j3.454
PUNTA PRIETA	PUP-115B	115	4.53	5.54	3.026+j14.344	1.178+j6.618	9.92	11.82	0.843+j7.315	0.425+j3.802	9.92	11.82	0.843+j7.315	0.425+j3.802
REFORMAS AGRARIAS	REA-115	115	2.33	2.30	6.487+j27.733	8.256+j28.422	3.16	2.86	4.963+j22.604	8.695+j29.200	3.16	2.86	4.963+j22.604	8.695+j29.200

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Baja California sur**

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero ( $\Omega$ )											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	$Z_{m(+)}$	$Z_{m(0)}$	3F	1F	$Z_{m(+)}$	$Z_{m(0)}$	3F	1F	$Z_{m(+)}$	$Z_{m(0)}$
ROFOMEX	RFO-115	115	1.49	1.09	10.573+j43.156	26.057+j90.837	1.86	1.27	8.962+j38.154	26.159+j90.979	1.86	1.27	8.962+j38.154	26.159+j90.979
SAN JOSÉ DEL CABO	SJC-115	115	3.39	4.46	4.788+j18.999	0.652+j5.577	5.53	6.76	2.385+j13.001	0.709+j5.936	5.53	6.76	2.385+j13.001	0.709+j5.936
SANTIAGO	SNT-115	115	2.11	2.37	9.738+j29.946	3.252+j21.159	2.85	2.97	7.542+j24.490	3.485+j22.315	2.85	2.97	7.542+j24.490	3.485+j22.315
SANTO DOMINGO	DOM-115	115	1.75	2.02	9.254+j36.889	3.614+j22.588	2.59	2.78	5.734+j27.571	3.609+j22.091	2.59	2.78	5.734+j27.571	3.609+j22.091
TURBO GAS LOS CABOS	TCB-115	115	4.07	4.64	3.431+j15.947	1.131+j10.356	9.39	11.09	0.831+j7.735	0.231+j4.208	9.39	11.09	0.831+j7.735	0.231+j4.208
VILLA CONSTITUCIÓN	VIO-115	115	2.70	3.30	5.201+j24.035	1.502+j11.081	4.80	5.71	2.243+j15.044	0.833+j7.907	4.80	5.71	2.243+j15.044	0.833+j7.907

# Gerencia de Control Regional Baja California

## Sistema Mulegé



*Regresar a mapa del SEN*

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Mulege**

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero ( $\Omega$ )											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	$Z_{m(+)}$	$Z_{m(0)}$	3F	1F	$Z_{m(+)}$	$Z_{m(0)}$	3F	1F	$Z_{m(+)}$	$Z_{m(0)}$
BAHÍA ASUNCIÓN	BAS-115	115	0.35	0.47	44.680+j181.802	3.905+j37.275	0.62	0.79	32.181+j113.514	4.364+j40.398	0.62	0.79	32.181+j113.514	4.364+j40.398
MEZQUITAL	MEZ-115	115	0.55	0.71	14.661+j119.452	5.965+j31.398	1.12	1.33	6.011+j64.844	6.096+j33.034	1.12	1.33	6.011+j64.844	6.096+j33.034
SANTA ROSALÍA	SRI-115	115	0.51	0.67	18.216+j128.776	2.856+j26.638	1.05	1.30	7.048+j69.166	3.120+j28.732	1.05	1.30	7.048+j69.166	3.120+j28.732
TRES VÍRGENES	GLV-115	115	0.57	0.73	12.330+j116.493	3.691+j30.598	1.05	1.27	6.553+j69.092	4.017+j32.849	1.05	1.27	6.553+j69.092	4.017+j32.849
VIZCAÍNO	VIZ-115	115	0.52	0.65	16.841+j127.058	4.184+j32.249	1.27	1.44	4.279+j57.277	4.620+j34.626	1.27	1.44	4.279+j57.277	4.620+j34.626

# Gerencia de Control Regional Peninsular



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## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Peninsular

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
AH KIM PECH	AKI-115	115	4.37	3.84	5.427+j14.201	6.484+j20.803	5.84	4.83	3.607+j11.979	6.477+j20.270	5.84	4.83	3.607+j11.979	6.477+j20.270
AK TUNCHEN	AUC-115	115	4.07	2.84	5.629+j15.318	10.264+j36.018	4.93	3.26	4.267+j14.176	10.271+j36.147	4.93	3.26	4.267+j14.176	10.271+j36.147
AKUMAL II	AKD-115	115	3.59	2.38	6.392+j17.368	12.741+j44.806	4.30	2.71	5.064+j16.229	12.742+j44.881	4.30	2.71	5.064+j16.229	12.742+j44.881
ALOM	ALO-115	115	11.44	10.75	1.743+j5.537	1.535+j7.009	17.16	15.04	0.862+j4.167	1.314+j6.220	17.16	15.04	0.862+j4.167	1.314+j6.220
AVENTURA PALACE	AVP-115	115	3.59	2.77	5.806+j17.549	8.707+j33.717	4.32	3.19	4.337+j16.346	8.727+j33.957	4.32	3.19	4.337+j16.346	8.727+j33.957
BALAM	BLM-115	115	9.22	12.04	2.925+j6.578	0.176+j2.148	15.17	19.15	1.210+j4.660	0.167+j1.996	15.17	19.15	1.210+j4.660	0.167+j1.996
BALAM	BLM-230	230	4.71	5.63	10.531+j26.165	1.023+j14.567	7.35	8.21	4.263+j19.415	0.994+j14.302	7.35	8.21	4.263+j19.415	0.994+j14.302
BICENTERARIO	BIN-115	115	8.99	8.14	2.147+j7.066	1.914+j9.765	12.17	10.12	1.338+j5.851	1.923+j9.730	12.17	10.12	1.338+j5.851	1.923+j9.730
BONAMPAK	BNP-115	115	8.92	11.30	3.062+j6.783	0.400+j2.690	14.95	18.42	1.239+j4.724	0.295+j2.293	14.95	18.42	1.239+j4.724	0.295+j2.293
BONFIL	BNI-115	115	7.72	7.74	3.243+j7.970	1.977+j8.252	12.15	11.00	1.383+j5.851	1.857+j7.853	12.15	11.00	1.383+j5.851	1.857+j7.853
CALICA	CLC-115	115	5.12	4.56	4.298+j12.235	4.126+j17.322	6.42	5.38	2.830+j11.026	4.146+j17.562	6.42	5.38	2.830+j11.026	4.146+j17.562
CALKINI II	CKD-115	115	3.14	1.96	6.662+j20.099	18.326+j56.750	3.71	2.22	5.575+j18.893	18.313+j56.622	3.71	2.22	5.575+j18.893	18.313+j56.622
CANCUN	CNC-115	115	8.92	11.04	3.048+j6.789	0.521+j3.085	15.35	18.57	1.161+j4.616	0.318+j2.456	15.35	18.57	1.161+j4.616	0.318+j2.456
CANDELARIA	CAN-115	115	1.52	1.11	12.021+j42.080	33.579+j86.024	1.77	1.26	10.105+j40.090	33.618+j86.272	1.77	1.26	10.105+j40.090	33.618+j86.272
CANEK	CEK-115	115	8.03	8.24	3.278+j7.589	1.570+j7.504	12.57	11.70	1.502+j5.612	1.481+j7.148	12.57	11.70	1.502+j5.612	1.481+j7.148
CAPTACIÓN	CAP-115	115	4.32	2.99	5.100+j14.516	8.255+j34.854	5.52	3.54	3.516+j12.757	8.189+j34.585	5.52	3.54	3.516+j12.757	8.189+j34.585
CAUCEL POTENCIA	CCP-115	115	13.22	16.64	1.499+j4.795	0.167+j2.187	20.13	24.00	0.694+j3.561	0.177+j2.150	20.13	24.00	0.694+j3.561	0.177+j2.150
CAUCEL POTENCIA	CCP-230	230	8.02	9.91	4.540+j15.915	0.943+j7.912	12.17	13.99	1.902+j11.849	0.954+j8.079	12.17	13.99	1.902+j11.849	0.954+j8.079
CAYAL	CYL-115	115	2.32	1.61	8.805+j27.252	18.174+j64.444	2.83	1.87	6.799+j24.895	18.169+j63.937	2.83	1.87	6.799+j24.895	18.169+j63.937
CD. DEL CARMEN	CRE-115	115	1.87	2.15	14.896+j32.205	1.224+j22.962	2.97	3.85	6.872+j23.632	0.314+j11.664	2.97	3.85	6.872+j23.632	0.314+j11.664
CEMENTOS MAYA	CMY-115	115	9.24	7.45	2.242+j6.828	3.229+j12.161	13.66	11.04	1.201+j5.210	2.211+j9.240	13.66	11.04	1.201+j5.210	2.211+j9.240
CENTRO	CNO-115	115	11.69	10.87	1.862+j5.366	1.610+j7.035	16.95	14.47	1.034+j4.184	1.481+j6.630	16.95	14.47	1.034+j4.184	1.481+j6.630
CHAAC	HAA-115	115	7.88	9.52	3.303+j7.756	0.814+j3.929	12.31	14.13	1.513+j5.736	0.779+j3.739	12.31	14.13	1.513+j5.736	0.779+j3.739
CHAMPOTON	CMO-115	115	3.70	2.79	6.117+j16.866	8.689+j34.724	4.82	3.37	3.956+j14.625	8.682+j34.380	4.82	3.37	3.956+j14.625	8.682+j34.380
CHEMAX	CEX-115	115	3.02	2.63	5.489+j21.279	6.815+j31.142	3.82	3.10	4.291+j18.633	7.240+j32.003	3.82	3.10	4.291+j18.633	7.240+j32.003
CHETUMAL NORTE	CTE-115	115	2.90	2.93	8.476+j21.301	4.933+j21.800	4.46	4.04	4.256+j15.823	4.871+j20.962	4.46	4.04	4.256+j15.823	4.871+j20.962
CHICBUL	CBU-115	115	2.98	2.38	7.469+j21.012	9.611+j38.368	3.89	2.90	4.582+j18.225	9.590+j37.643	3.89	2.90	4.582+j18.225	9.590+j37.643
CHICHÍ SUÁREZ	CCS-115	115	14.82	19.28	1.404+j4.253	0.164+j1.600	22.21	27.33	0.685+j3.216	0.179+j1.661	22.21	27.33	0.685+j3.216	0.179+j1.661
CHICHÍ SUÁREZ	CCS-230	230	7.98	9.64	4.871+j15.912	0.972+j8.848	12.05	13.42	2.130+j11.935	1.042+j9.154	12.05	13.42	2.130+j11.935	1.042+j9.154
CHOLUL	HOL-115	115	11.68	11.29	1.804+j5.391	1.759+j6.251	16.24	14.31	1.086+j4.365	1.769+j6.301	16.24	14.31	1.086+j4.365	1.769+j6.301

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Peninsular

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
CHUBURNA	CBR-115	115	10.56	9.65	1.945+j5.980	1.977+j8.060	14.48	12.06	1.196+j4.901	1.987+j8.082	14.48	12.06	1.196+j4.901	1.987+j8.082
CONCORDIA	CNR-115	115	1.79	1.92	15.753+j33.678	3.372+j30.719	2.77	3.20	7.671+j25.270	2.461+j19.418	2.77	3.20	7.671+j25.270	2.461+j19.418
DZITAS	DZI-115	115	3.44	2.37	4.784+j18.713	13.603+j43.534	4.24	2.77	3.977+j16.771	13.581+j43.005	4.24	2.77	3.977+j16.771	13.581+j43.005
DZITNUP	DZT-400	400	3.62	3.60	19.572+j60.703	13.283+j63.826	5.08	4.62	8.206+j49.344	13.392+j64.826	5.08	4.62	8.206+j49.344	13.392+j64.826
DZYTIA	DYT-115	115	12.34	13.52	1.568+j5.145	0.930+j4.096	17.31	17.54	0.868+j4.130	0.948+j4.176	17.31	17.54	0.868+j4.130	0.948+j4.176
ESCÁRCEGA	ESA-115	115	5.41	6.91	3.538+j11.761	0.153+j4.553	7.40	9.11	1.655+j9.729	0.190+j4.798	7.40	9.11	1.655+j9.729	0.190+j4.798
ESCÁRCEGA	ESA-230	230	3.54	4.31	11.293+j35.747	0.958+j18.324	5.27	6.03	4.966+j27.246	1.201+j18.405	5.27	6.03	4.966+j27.246	1.201+j18.405
ESCÁRCEGA	ESA-400	400	4.27	4.61	10.594+j52.993	3.435+j43.067	5.48	5.54	5.327+j46.074	3.751+j45.103	5.48	5.54	5.327+j46.075	3.751+j45.103
HECELCHACAN	HCE-115	115	2.95	1.80	7.136+j21.328	14.899+j63.928	3.53	2.06	5.824+j19.827	14.902+j63.777	3.53	2.06	5.824+j19.827	14.902+j63.777
HÉROES	HRO-115	115	9.91	8.12	2.180+j6.336	3.098+j10.915	13.44	9.98	1.408+j5.249	3.091+j10.891	13.44	9.98	1.408+j5.249	3.091+j10.891
HIDROGENADORA YUCATECA	HRA-115	115	11.57	10.56	1.831+j5.438	1.703+j7.445	18.71	18.21	0.802+j3.821	0.685+j4.523	18.71	18.21	0.802+j3.821	0.685+j4.523
HOLPECHEN	HOP-115	115	1.21	0.78	16.272+j52.206	43.553+j139.102	1.38	0.87	14.926+j50.750	43.555+j138.950	1.38	0.87	14.926+j50.750	43.555+j138.950
HUNABKU	HBK-115	115	7.99	9.79	3.317+j7.614	0.716+j3.595	12.57	14.69	1.522+j5.610	0.677+j3.387	12.57	14.69	1.522+j5.610	0.677+j3.387
HUNUCMA	HNC-115	115	6.55	4.84	2.795+j9.745	4.283+j20.740	8.29	5.69	1.984+j8.583	4.291+j20.711	8.29	5.69	1.984+j8.583	4.291+j20.711
HUXECTAMAN	HUX-115	115	9.50	7.85	2.180+j6.643	2.823+j11.287	14.13	11.73	1.143+j5.042	1.842+j8.476	14.13	11.73	1.143+j5.042	1.842+j8.476
IBEROESTAR	IBR-115	115	6.81	6.29	2.948+j9.295	2.614+j11.877	8.86	7.62	1.575+j8.095	2.636+j12.064	8.86	7.62	1.575+j8.095	2.636+j12.064
INSURGENTES	INS-115	115	2.92	2.98	8.371+j21.168	4.495+j21.096	4.50	4.13	4.160+j15.678	4.434+j20.259	4.50	4.13	4.160+j15.678	4.434+j20.259
ISLA DE TRIS	ILT-115	115	1.87	2.09	14.798+j32.309	3.196+j24.937	2.94	3.64	6.895+j23.902	2.458+j13.926	2.94	3.64	6.895+j23.902	2.458+j13.926
ITZAES	IZE-115	115	10.50	9.11	2.052+j5.979	2.169+j9.246	15.40	12.74	1.120+j4.607	1.705+j7.842	15.40	12.74	1.120+j4.607	1.705+j7.842
ITZIMNA	IZI-115	115	11.45	12.14	1.752+j5.529	1.591+j4.757	15.80	15.56	1.040+j4.505	1.602+j4.812	15.80	15.56	1.040+j4.505	1.602+j4.812
IZAMAL	IZL-115	115	3.06	1.85	6.208+j20.773	17.595+j61.957	3.59	2.09	5.495+j19.595	17.605+j61.794	3.59	2.09	5.495+j19.595	17.605+j61.794
KABAH	KAB-115	115	8.20	10.14	3.255+j7.415	0.636+j3.338	13.03	15.42	1.462+j5.409	0.595+j3.121	13.03	15.42	1.462+j5.409	0.595+j3.121
KALA	KAL-115	115	5.06	4.83	4.525+j12.307	4.025+j14.829	7.09	6.36	2.622+j9.965	4.016+j14.262	7.09	6.36	2.622+j9.965	4.016+j14.262
KAMBUL	KBL-115	115	1.81	2.01	12.278+j34.556	2.801+j26.105	2.25	2.37	9.436+j31.050	3.048+j27.944	2.25	2.37	9.436+j31.050	3.048+j27.944
KANASÍN POTENCIA	KNP-115	115	13.33	19.40	1.513+j4.745	0.072+j0.503	19.57	28.25	0.757+j3.654	0.075+j0.517	19.57	28.25	0.757+j3.654	0.075+j0.517
KANASÍN POTENCIA	KNP-230	230	8.63	10.21	4.552+j14.700	1.377+j8.850	13.27	14.38	1.892+j10.847	1.433+j9.044	13.27	14.38	1.892+j10.847	1.433+j9.044
KAY	KAY-115	115	6.85	6.19	3.009+j9.210	3.237+j12.271	9.73	7.96	1.373+j7.378	3.233+j12.259	9.73	7.96	1.373+j7.378	3.233+j12.259
KEEH	KEE-115	115	7.57	7.44	3.187+j8.166	2.176+j8.915	11.73	10.30	1.372+j6.074	2.129+j8.738	11.73	10.30	1.372+j6.074	2.129+j8.738
KEKEN	KEK-115	115	7.75	8.24	3.193+j7.952	1.877+j6.706	11.74	11.48	1.474+j6.043	1.867+j6.554	11.74	11.48	1.474+j6.043	1.867+j6.554
KOHUNLICH	KHU-115	115	5.79	4.59	4.128+j10.709	4.633+j20.007	7.97	5.71	2.432+j8.838	4.554+j19.688	7.97	5.71	2.432+j8.838	4.554+j19.688

## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Peninsular

Subestación eléctrica	Acronímico	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(1)</sub>
KOPTE	KOP-115	115	4.28	2.47	4.360+j14.905	16.586+j46.849	4.97	2.77	3.845+j14.192	16.600+j46.910	4.97	2.77	3.845+j14.192	16.600+j46.910
KUKULKAN	KUK-115	115	8.07	8.52	3.246+j7.565	1.298+j6.814	12.65	12.18	1.471+j5.583	1.234+j6.516	12.65	12.18	1.471+j5.583	1.234+j6.516
LAGUNA DE TÉRMINOS	LTE-115	115	1.79	1.92	15.722+j33.544	3.410+j30.752	2.78	3.21	7.645+j25.135	2.499+j19.451	2.78	3.21	7.645+j25.135	2.499+j19.451
LÁZARO CÁRDENAS	LAC-115	115	2.07	1.42	11.683+j29.861	27.065+j71.479	2.75	1.70	8.086+j25.309	27.065+j71.109	2.75	1.70	8.086+j25.309	27.065+j71.109
LEE	LEE-115	115	7.38	4.10	2.084+j8.751	9.811+j29.171	9.32	4.74	1.325+j7.720	9.815+j29.237	9.32	4.74	1.325+j7.720	9.815+j29.237
LERMA	LRA-115	115	6.31	8.38	3.573+j9.892	0.113+j3.117	9.72	13.30	1.619+j7.338	0.105+j2.494	9.72	13.30	1.619+j7.338	0.105+j2.494
LERMA	LRA-230	230	3.27	3.98	13.077+j38.486	0.902+j20.229	4.81	5.78	5.935+j29.768	0.841+j18.357	4.81	5.78	5.935+j29.768	0.841+j18.357
MAHAHUAL	MHH-115	115	1.11	0.64	20.903+j55.795	63.908+j182.133	1.35	0.73	17.240+j51.262	63.906+j181.757	1.35	0.73	17.240+j51.262	63.906+j181.757
MALECÓN	MAC-115	115	8.87	11.08	3.068+j6.827	0.478+j2.940	15.04	18.33	1.209+j4.703	0.318+j2.412	15.04	18.33	1.209+j4.703	0.318+j2.412
MAXCANU	MAX-115	115	4.64	2.91	4.622+j13.550	11.846+j38.227	5.60	3.33	3.699+j12.496	11.829+j38.156	5.60	3.33	3.699+j12.496	11.829+j38.156
MAYA KOBÁ	MYK-115	115	6.60	6.31	3.204+j9.535	2.461+j11.182	8.56	7.66	1.775+j8.344	2.476+j11.365	8.56	7.66	1.775+j8.344	2.476+j11.365
MÉRIDA COUNTRY CLUB	MCR-115	115	7.09	5.59	2.609+j8.996	4.180+j16.569	8.80	6.56	1.970+j8.063	4.158+j16.516	8.80	6.56	1.970+j8.063	4.158+j16.516
MÉRIDA II	MDA-115	115	12.51	12.40	1.711+j5.023	1.290+j5.548	21.08	23.79	0.675+j3.398	0.272+j2.627	21.08	23.79	0.675+j3.398	0.272+j2.627
MÉRIDA ORIENTE	MDN-115	115	11.53	10.50	1.907+j5.433	2.275+j7.322	16.27	13.37	1.136+j4.344	2.267+j7.298	16.27	13.37	1.136+j4.344	2.267+j7.298
MÉRIDA POTENCIA	MDP-230	230	8.38	11.04	4.143+j15.295	0.258+j5.245	12.76	15.81	1.682+j11.325	0.297+j5.593	12.76	15.81	1.682+j11.325	0.297+j5.593
METROPOLITANA	MTO-115	115	10.56	9.44	1.987+j5.965	2.255+j8.461	15.61	13.45	1.046+j4.559	1.749+j7.011	15.61	13.45	1.046+j4.559	1.749+j7.011
MOON PALACE	MPA-115	115	6.49	5.54	3.053+j9.765	3.772+j14.897	8.81	6.88	1.506+j8.148	3.775+j14.933	8.81	6.88	1.506+j8.148	3.775+j14.933
MUNA	MNA-115	115	5.31	3.78	3.598+j11.971	7.400+j26.763	6.42	4.34	2.757+j11.043	7.408+j26.890	6.42	4.34	2.757+j11.043	7.408+j26.890
NACHI COCOM	NCM-115	115	14.08	16.18	1.544+j4.456	0.701+j3.026	21.22	22.67	0.771+j3.354	0.674+j2.947	21.22	22.67	0.771+j3.354	0.674+j2.947
NICHUPTE	NCT-115	115	8.35	10.48	3.217+j7.276	0.511+j3.028	13.28	16.03	1.444+j5.305	0.475+j2.814	13.28	16.03	1.444+j5.305	0.475+j2.814
NICTE HA	NIH-115	115	7.92	9.27	3.191+j7.756	0.967+j4.518	12.42	13.64	1.406+j5.710	0.942+j4.364	12.42	13.64	1.406+j5.710	0.942+j4.364
NIZUC	NIZ-115	115	9.61	13.45	2.721+j6.349	0.103+j0.866	16.80	23.48	0.959+j4.241	0.091+j0.812	16.80	23.48	0.959+j4.241	0.091+j0.812
NIZUC	NIZ-230	230	5.35	6.08	9.131+j23.071	1.966+j15.863	8.34	8.86	3.467+j17.158	1.743+j14.931	8.34	8.86	3.467+j17.158	1.743+j14.931
NORTE	NTE-115	115	14.07	17.97	1.435+j4.495	0.206+j1.882	20.54	24.76	0.735+j3.479	0.224+j1.962	20.54	24.76	0.735+j3.479	0.224+j1.962
NORTE	NTE-230	230	7.74	9.27	4.849+j16.458	1.140+j9.483	11.59	12.80	2.137+j12.425	1.202+j9.772	11.59	12.80	2.137+j12.425	1.202+j9.772
OXXUTZCAB	OXX-115	115	3.88	2.85	4.870+j16.391	7.413+j35.106	4.66	3.26	3.803+j15.204	7.435+j35.380	4.66	3.26	3.803+j15.204	7.435+j35.380
OXTANKAH	OXT-115	115	2.79	2.60	8.883+j22.044	9.053+j27.625	4.24	3.50	4.658+j16.576	8.990+j26.786	4.24	3.50	4.658+j16.576	8.990+j26.786
PALMAR	PMR-115	115	1.98	1.71	12.168+j31.232	10.583+j48.662	2.80	2.35	6.272+j25.321	10.136+j42.267	2.80	2.35	6.272+j25.321	10.136+j42.267
PHOTOEMERIS SUSTENTABLE	PHS-115	115	1.76	2.01	12.544+j35.576	2.100+j24.340	2.19	2.37	9.629+j31.948	2.359+j26.273	2.19	2.37	9.629+j31.948	2.359+j26.273
PLAYA CAR	PLY-115	115	7.76	7.61	3.086+j7.982	1.661+j8.992	10.50	9.45	1.620+j6.766	1.681+j9.231	10.50	9.45	1.620+j6.766	1.681+j9.231



## Niveles de cortocircuito de la Red Nacional de Transmisión Gerencia de Control Regional Peninsular

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
PLAYA DEL CARMEN	PCN-115	115	8.03	10.09	2.994+j7.705	0.206+j3.297	10.96	13.09	1.529+j6.486	0.226+j3.536	10.96	13.09	1.529+j6.486	0.226+j3.536
PLAYA DEL CARMEN	PCN-230	230	4.56	5.31	10.052+j27.337	1.843+j16.952	6.38	6.93	4.603+j22.422	1.992+j17.844	6.38	6.93	4.603+j22.422	1.992+j17.844
PLAYA MUJERES	PMU-115	115	6.67	6.60	3.619+j9.276	2.230+j9.994	9.59	8.71	1.894+j7.376	2.220+j9.841	9.59	8.71	1.894+j7.376	2.220+j9.841
POKTAPOK	PKP-115	115	8.69	10.97	3.136+j6.966	0.467+j2.804	14.20	17.24	1.343+j4.966	0.420+j2.566	14.20	17.24	1.343+j4.966	0.420+j2.566
POLYUC	PYU-115	115	1.60	1.21	14.462+j38.764	20.103+j79.694	1.97	1.39	11.532+j35.303	20.354+j80.747	1.97	1.39	11.532+j35.303	20.354+j80.747
PONIENTE	PTE-115	115	12.50	13.54	1.626+j5.057	0.831+j4.260	18.34	18.23	0.840+j3.892	0.838+j4.241	18.34	18.23	0.840+j3.892	0.838+j4.241
POPOLNAH	PPH-115	115	2.65	1.65	7.303+j23.968	16.367+j68.966	3.13	1.87	6.117+j22.513	16.356+j68.915	3.13	1.87	6.117+j22.513	16.356+j68.915
PUERTO JUÁREZ	PJU-115	115	8.96	10.94	2.998+j6.781	0.495+j3.341	14.58	16.84	1.263+j4.847	0.468+j3.143	14.58	16.84	1.263+j4.847	0.468+j3.143
PUERTO MORELOS	PMO-115	115	8.01	7.78	2.618+j7.862	1.789+j8.857	10.90	9.72	1.254+j6.583	1.819+j9.062	10.90	9.72	1.254+j6.583	1.819+j9.062
PUERTO PROGRESO	PPO-115	115	5.40	4.12	3.023+j11.925	5.675+j23.193	6.43	4.76	2.464+j11.094	5.535+j22.780	6.43	4.76	2.464+j11.094	5.535+j22.780
PUNTA SAM	PSA-115	115	7.78	7.70	3.192+j7.914	1.818+j8.610	11.81	10.51	1.470+j6.009	1.808+j8.458	11.81	10.51	1.470+j6.009	1.808+j8.458
RIVIERA MAYA	RMV-115	115	9.53	11.06	2.386+j6.544	0.319+j4.149	13.41	14.43	1.068+j5.340	0.358+j4.408	13.41	14.43	1.068+j5.340	0.358+j4.408
RIVIERA MAYA	RMV-230	230	5.39	6.92	8.847+j23.006	0.444+j8.453	7.93	9.67	3.649+j18.053	0.502+j8.988	7.93	9.67	3.649+j18.053	0.502+j8.988
RIVIERA MAYA	RMV-400	400	3.33	4.14	24.157+j65.021	1.839+j29.340	4.82	5.63	9.964+j51.769	2.057+j31.257	4.82	5.63	9.964+j51.769	2.057+j31.257
SABANCUY	SBY-115	115	3.17	2.81	7.725+j19.452	6.433+j28.778	4.42	3.68	4.068+j16.013	6.325+j26.970	4.42	3.68	4.068+j16.013	6.325+j26.970
SAMULA	SAM-115	115	5.03	4.93	4.549+j12.393	3.512+j13.883	7.09	6.57	2.593+j9.970	3.504+j13.281	7.09	6.57	2.593+j9.970	3.504+j13.281
SAMULA II	SAD-115	115	4.62	4.62	4.729+j13.585	3.106+j14.338	6.36	6.07	2.790+j11.148	3.096+j13.735	6.36	6.07	2.790+j11.148	3.096+j13.735
SAN IGNACIO	IGN-115	115	8.17	8.01	1.814+j7.926	1.312+j8.718	10.15	9.70	1.261+j7.085	1.172+j8.305	10.15	9.70	1.261+j7.085	1.172+j8.305
SAN PEDRO	SAE-115	115	2.13	1.36	5.585+j30.722	26.645+j79.746	2.56	1.57	4.666+j28.131	26.650+j79.079	2.56	1.57	4.666+j28.131	26.650+j79.079
SANTA LUCIA	SLC-230	230	4.22	3.16	7.563+j30.526	15.184+j61.705	7.55	8.25	2.376+j19.189	0.851+j15.088	7.55	8.25	2.377+j19.189	0.851+j15.088
SANTO DOMINGO	SDM-115	115	3.24	3.53	4.731+j19.968	2.329+j15.357	3.65	3.89	4.465+j19.487	2.472+j16.283	3.65	3.89	4.465+j19.487	2.472+j16.283
SIHOCHAC	SHC-115	115	2.83	1.94	7.520+j22.253	12.934+j54.710	3.53	2.27	5.466+j19.973	12.928+j54.325	3.53	2.27	5.466+j19.973	12.928+j54.325
SUCILA	SUC-115	115	3.27	2.86	5.111+j19.651	8.303+j27.938	3.79	3.23	4.613+j18.691	8.374+j28.401	3.79	3.23	4.613+j18.691	8.374+j28.401
SUR	SUR-115	115	12.47	12.64	1.739+j5.033	1.354+j5.156	18.82	18.00	0.874+j3.782	1.155+j4.536	18.82	18.00	0.874+j3.782	1.155+j4.536
TEKAX II	TKD-115	115	2.90	2.13	6.811+j21.883	9.929+j46.866	3.47	2.43	5.473+j20.344	9.974+j47.288	3.47	2.43	5.473+j20.344	9.974+j47.288
TEMAX II	TXS-115	115	3.41	2.99	4.625+j18.931	6.472+j26.996	3.84	3.30	4.349+j18.504	6.528+j27.695	3.84	3.30	4.349+j18.504	6.528+j27.695
TICUL I	TIU-115	115	7.79	7.87	2.590+j8.126	1.860+j8.164	9.74	9.34	1.794+j7.280	1.874+j8.401	9.74	9.34	1.794+j7.280	1.874+j8.401
TICUL II	TIC-115	115	10.10	12.60	1.615+j6.371	0.087+j2.849	13.10	15.57	0.819+j5.517	0.101+j3.086	13.10	15.57	0.819+j5.517	0.101+j3.086
TICUL II	TIC-230	230	8.02	10.44	5.155+j15.744	0.417+j5.381	12.15	14.98	2.147+j11.833	0.480+j5.604	12.15	14.98	2.147+j11.833	0.480+j5.604
TICUL II	TIC-400	400	4.57	5.55	15.197+j48.158	1.807+j25.011	6.64	7.48	6.193+j37.761	2.033+j26.364	6.64	7.48	6.193+j37.761	2.033+j26.364

**Niveles de cortocircuito de la Red Nacional de Transmisión  
Gerencia de Control Regional Peninsular**

Subestación eléctrica	Acrónimo	Tensión (KV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)											
			NCC mínimo 2021				NCC máximo 2021				NCC máximo 2021 PRODESEN			
			3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>	3F	1F	Z <sub>m(0)</sub>	Z <sub>m(0)</sub>
TIXMEHUAC	TXM-115	115	1.91	1.28	8.789+j33.674	21.201+j83.644	2.21	1.44	7.449+j32.136	21.246+j84.067	2.21	1.44	7.449+j32.136	21.246+j84.067
TIZIMIN	TZM-115	115	3.97	3.68	4.190+j16.172	4.977+j20.117	4.78	4.25	3.535+j14.875	5.080+j20.561	4.78	4.25	3.535+j14.875	5.080+j20.561
TULUM	TUM-115	115	2.74	1.82	7.947+j22.867	15.609+j58.756	3.23	2.07	6.739+j21.572	15.581+j58.604	3.23	2.07	6.739+j21.572	15.581+j58.604
UCU	UCU-115	115	6.80	5.03	2.681+j9.390	4.062+j19.894	8.65	5.94	1.871+j8.233	4.070+j19.867	8.65	5.94	1.871+j8.233	4.070+j19.867
UMAN	UMA-115	115	6.45	4.11	3.471+j9.697	8.733+j26.717	8.17	4.84	2.594+j8.552	8.601+j26.293	8.17	4.84	2.594+j8.552	8.601+j26.293
VALLADOLID	VAD-115	115	8.04	10.34	1.400+j8.141	0.095+j2.794	13.53	18.12	0.477+j5.377	0.043+j1.933	13.53	18.12	0.477+j5.377	0.043+j1.933
VALLADOLID	VAD-230	230	8.55	10.74	2.468+j15.341	0.085+j5.793	12.65	15.78	0.801+j11.517	0.070+j5.281	12.65	15.78	0.801+j11.517	0.070+j5.281
VALLADOLID DISTRIBUCIÓN	VDD-115	115	6.77	5.86	1.932+j9.610	6.298+j13.170	10.31	8.03	1.033+j7.011	6.304+j12.508	10.31	8.03	1.033+j7.011	6.304+j12.508
XCALACOCO	XLC-115	115	6.90	6.37	2.903+j9.177	2.428+j11.758	8.99	7.73	1.535+j7.975	2.451+j11.953	8.99	7.73	1.535+j7.975	2.451+j11.953
XPUJIL	XPU-115	115	1.62	1.27	8.767+j40.004	18.722+j72.273	1.97	1.48	5.829+j36.532	18.707+j71.986	1.97	1.48	5.829+j36.532	18.707+j71.986
XUL HA	XUL-115	115	3.64	4.92	6.465+j17.074	0.160+j4.143	6.28	8.28	2.410+j11.379	0.100+j3.310	6.28	8.28	2.410+j11.379	0.100+j3.310
XUL HA	XUL-230	230	2.06	2.54	21.947+j60.566	1.666+j28.891	3.27	3.79	8.612+j43.836	1.399+j26.908	3.27	3.79	8.612+j43.836	1.399+j26.908
YAL KU	YLK-115	115	7.38	8.16	3.227+j8.394	1.173+j6.368	9.87	10.23	1.771+j7.186	1.192+j6.600	9.87	10.23	1.771+j7.186	1.192+j6.600
YAXCHE	YXE-115	115	6.49	5.70	3.556+j9.589	3.134+j14.163	9.23	7.30	1.829+j7.702	3.124+j14.011	9.23	7.30	1.829+j7.702	3.124+j14.011
ZAC NICTÉ	ZNE-115	115	7.06	7.05	3.099+j8.874	1.344+j9.435	9.32	8.66	1.649+j7.660	1.363+j9.633	9.32	8.66	1.649+j7.660	1.363+j9.633