



CENACE[®]
CENTRO NACIONAL DE
CONTROL DE ENERGÍA

Niveles de cortocircuito de la Red Nacional de Transmisión 2027

Dirección de Operación y Planeación
del Sistema
Subdirección de Planeación

Noviembre de 2024

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

Contenido

1. Objetivo
2. Fundamento legal
3. Consideraciones de cálculo
4. Niveles de cortocircuito reportados por nivel de tensión y por Gerencia de Control Regional
5. Referencias
6. Niveles de cortocircuito de la Red Nacional de Transmisión
 - 6.1 Gerencia de Control Regional Central
 - 6.2 Gerencia de Control Regional Oriental
 - 6.3 Gerencia de Control Regional Occidental
 - 6.4 Gerencia de Control Regional Noroeste
 - 6.5 Gerencia de Control Regional Norte
 - 6.6 Gerencia de Control Regional Noreste
 - 6.7 Gerencia de Control Regional Baja California
 - 6.7.1 Sistema Interconectado Baja California
 - 6.7.2 Sistema Interconectado Baja California Sur
 - 6.7.3 Sistema Interconectado Mulegé
 - 6.8 Gerencia de Control Regional Peninsular

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 INTE 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 31 de diciembre de 2021, 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 2027.
- b) Para el escenario de mínima capacidad, se considera red completa (sin contingencia) y las condiciones esperadas para invierno de 2027.
- 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 2027, así como con el Programa Indicativo Para el Retiro de Centrales Eléctricas 2024-2038.
- d) Los modelos eléctricos del Sistema Eléctrico Nacional (SEN) contemplan las obras ya instruidas de los programas de ampliación y modernización para la Red Nacional de Transmisión y los elementos de las Redes Generales de Distribución que correspondan al Mercado Eléctrico Mayorista (PAMRNT) e instruidas en el Programa de Desarrollo del Sistema Eléctrico Nacional (PRODESEN) 2024-2038.

- 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 PAMRNT 2024-2038.
- 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 V36.1, 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, se retiren y no se consideren entre 2024 y 2027.

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.

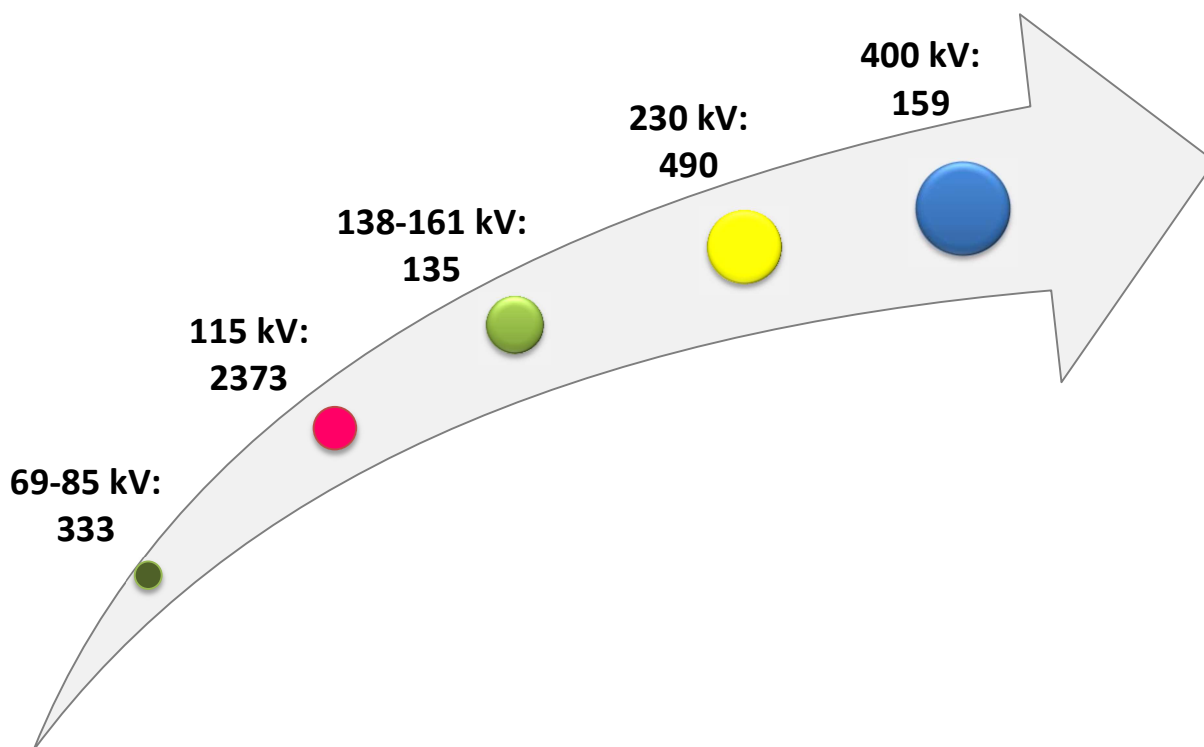
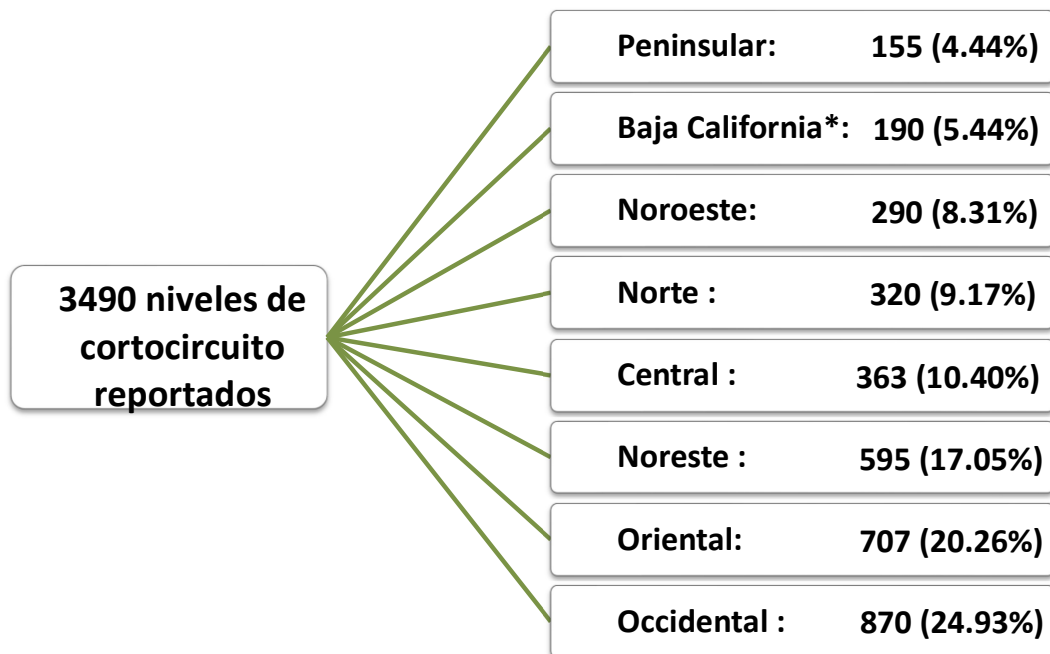


Figura 1: Niveles de cortocircuito por nivel de tensión

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 Interconectados 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: 31/12/2021.
- [4] Programas de ampliación y modernización de la Red Nacional de Transmisión y de los elementos de las Redes Generales de Distribución que correspondan al Mercado Eléctrico Mayorista 2024-2038.
- [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.

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	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
ACEROS CAMESA	ACM-85	85.0	16.99	5.99	0.563+j2.833	2.005+j18.694	20.21	7.83	0.450+j2.632	2.427+j15.140
ACEROS CORSA	ACS-230	230.0	12.80	9.55	1.762+j10.227	3.796+j20.691	14.79	10.83	1.488+j9.763	3.752+j20.431
ACEROS CORSA	ACC-85	85.0	13.34	5.46	0.707+j3.611	2.637+j19.435	15.49	7.60	0.621+j3.430	2.821+j14.061
ACEROS NACIONALES	ACN-85	85.0	17.29	6.32	0.605+j2.773	2.178+j17.502	19.99	8.64	0.526+j2.649	2.500+j13.117
ACOLMAN	ACO-230	230.0	24.88	18.98	0.959+j5.250	2.129+j10.113	29.30	21.74	0.725+j4.932	2.101+j9.982
ACTOPAN	AAN-85	85.0	5.61	1.93	2.613+j8.355	9.829+j58.109	6.29	2.26	2.516+j8.210	10.971+j53.524
ACULCO	AUO-115	115.0	2.84	1.61	4.394+j22.981	14.866+j75.543	3.13	1.77	4.328+j22.929	14.870+j75.561
AEROPUERTO INTERNACIONAL FELIPE ÁNGELES	AFA-230	230.0	15.49	13.14	1.222+j8.486	1.454+j13.102	18.03	15.24	0.951+j8.043	1.359+j12.483
AGUAVIVA	AGV-85	85.0	5.57	1.36	1.951+j8.588	9.716+j90.581	6.22	1.49	1.882+j8.469	9.716+j90.581
ÁGUILAS	AGU-230	230.0	27.22	28.06	1.270+j4.709	0.690+j4.415	32.95	33.34	0.922+j4.337	0.664+j4.224
AGUSTÍN MILLÁN	ANM-115	115.0	17.92	13.25	0.632+j3.652	1.257+j7.516	21.66	15.36	0.511+j3.333	1.259+j7.405
AIFA MANIOBRAS	AFM-230	230.0	15.74	13.34	1.179+j8.352	1.431+j12.939	18.34	15.47	0.909+j7.912	1.339+j12.327
ALMOLOYA	AML-400	400.0	12.51	10.69	3.127+j18.200	2.113+j27.860	15.73	12.67	2.004+j16.020	2.123+j27.712
ALPURA	ALR-85	85.0	17.43	5.84	0.573+j2.756	2.153+j19.465	21.09	7.63	0.442+j2.522	2.574+j15.904
ALTAMIRANO (115 KV)	ATM-115	115.0	2.76	1.62	6.944+j22.994	20.163+j72.130	3.38	2.36	5.707+j20.833	11.907+j48.282
AMOMOLULCO	AMO-85	85.0	8.94	4.58	1.268+j5.338	2.469+j21.082	10.25	5.19	1.153+j5.138	2.572+j20.529
APAPLASTIC	AAP-85	85.0	9.25	4.67	1.182+j5.171	2.684+j20.782	10.62	5.30	1.068+j4.968	2.787+j20.229
APASCO	APA-230	230.0	20.12	17.80	1.066+j6.514	1.120+j9.119	24.27	21.02	0.778+j5.968	1.082+j8.737
APASCO	APA-85	85.0	18.33	3.62	0.434+j2.642	1.462+j35.297	21.43	4.24	0.366+j2.492	2.459+j33.061
APM TERMINALS	ATS-115	115.0	10.13	9.21	1.125+j6.455	1.495+j8.292	13.56	11.65	0.848+j5.318	1.476+j7.880
ARAGÓN	ARA-230	230.0	18.63	17.67	1.210+j7.025	1.362+j8.194	21.75	20.47	0.933+j6.650	1.294+j7.877
ARAGÓN	ARA-85	85.0	9.09	2.80	0.650+j5.357	0.311+j41.847	11.23	3.15	0.536+j4.778	0.311+j41.847
ARCELIA NUEVA	ANU-115	115.0	2.40	1.44	9.593+j26.008	27.046+j78.047	2.98	2.42	7.704+j23.308	8.565+j40.506
ARCELIA NUEVA	ANU-69	69.0	2.17	2.66	4.149+j17.861	0.616+j8.240	2.54	3.07	3.453+j16.920	0.618+j8.250
ARCELOR MITTAL MANIOBRAS	AMM-230	230.0	11.46	11.25	2.211+j11.373	1.779+j11.694	18.67	16.61	1.014+j7.757	1.740+j10.419
ARMEX	ARX-230	230.0	24.16	18.84	0.913+j5.420	2.017+j9.962	29.87	22.55	0.629+j4.849	1.959+j9.455
ARTEAGA	ATG-115	115.0	2.35	1.80	5.741+j27.629	8.576+j53.428	2.96	2.16	5.370+j24.058	8.573+j51.658
ARTEAGA	ATG-69	69.0	1.51	1.60	2.951+j26.229	2.570+j21.508	2.19	2.18	4.076+j19.560	2.758+j20.209
ATENCO	ATE-230	230.0	17.21	17.80	1.872+j7.487	0.752+j6.958	20.59	21.02	1.411+j6.953	0.709+j6.632
ATENCO	ATE-85	85.0	14.90	7.13	0.696+j3.220	0.984+j14.065	17.61	8.23	0.585+j3.010	1.088+j13.516
ATIZAPÁN	ATI-230	230.0	21.50	17.84	1.264+j6.044	1.773+j9.826	25.45	20.73	0.946+j5.662	1.687+j9.507
ATLACOMULCO	ATU-115	115.0	8.19	5.81	1.725+j7.916	3.290+j17.775	9.16	6.45	1.630+j7.803	3.287+j17.743
ATLACOMULCO INDUSTRIAL	AIN-115	115.0	6.38	4.32	2.460+j10.106	5.337+j24.773	7.11	4.78	2.365+j9.995	5.335+j24.742
ATLACOMULCO POTENCIA	AMP-400	400.0	10.00	8.80	3.668+j22.798	2.562+j32.480	12.23	10.29	2.525+j20.625	2.573+j32.360
ATLACOMULCO POTENCIA	AMP-115	115.0	15.69	14.72	0.653+j4.181	0.355+j5.063	17.85	16.57	0.558+j4.054	0.353+j5.025
ATOTONILCO	ANL-85	85.0	2.89	1.18	4.456+j16.388	17.247+j89.668	3.22	1.36	4.341+j16.220	18.411+j83.709
AURORA	AUR-230	230.0	31.78	32.53	0.938+j4.072	0.595+j3.866	38.37	38.43	0.659+j3.749	0.576+j3.748
AURORA	AUR-85	85.0	20.35	2.82	0.372+j2.382	0.079+j47.401	23.66	3.12	0.313+j2.260	0.079+j47.401
AUTOMETALES	AUM-85	85.0	13.25	5.43	0.731+j3.631	2.728+j19.511	15.40	7.72	0.642+j3.445	2.810+j13.685
AVANDARO	AVA-115	115.0	7.15	4.77	2.651+j8.902	6.736+j22.193	8.23	5.39	2.490+j8.516	6.697+j21.855



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
AVANTE TEXTIL	AVT-85	85.0	12.94	6.52	0.813+j3.703	1.225+j15.005	15.18	7.51	0.699+j3.487	1.324+j14.399
AYOTLA	AYO-230	230.0	21.11	20.27	1.218+j6.172	0.847+j7.045	24.58	23.40	0.941+j5.867	0.809+j6.799
AYOTLA	AYO-85	85.0	17.03	2.29	0.464+j2.844	2.991+j58.352	19.59	2.53	0.405+j2.725	2.991+j58.352
AZCAPOTZALCO	AZC-230	230.0	33.68	32.02	0.986+j3.817	2.377+j4.025	41.90	38.52	0.654+j3.424	2.316+j3.929
AZTECA	ATK-230	230.0	27.28	25.73	0.918+j4.780	0.784+j5.717	32.51	30.05	0.658+j4.444	0.759+j5.553
BANCOMER	BBV-230	230.0	22.34	11.82	1.246+j5.811	2.163+j21.779	26.54	13.43	0.924+j5.427	2.098+j21.528
BÁRBARA (SANTA)	BBR-115	115.0	7.83	5.39	1.809+j8.280	4.114+j19.573	9.74	7.91	1.434+j7.360	1.851+j12.517
BARRIENTOS	BAR-85	85.0	19.97	6.96	0.531+j2.400	1.761+j16.178	23.26	9.75	0.452+j2.276	2.083+j11.793
BECTON DICKINSON	BDK-85	85.0	17.07	5.77	0.587+j2.815	2.187+j19.654	20.64	7.52	0.454+j2.576	2.607+j16.092
BOSQUES	BOS-230	230.0	24.28	21.42	1.380+j5.292	1.658+j7.490	29.10	24.95	1.041+j4.911	1.624+j7.340
BUENTONO (SCT)	BUT-B1 230	230.0	21.14	19.84	1.226+j6.159	0.999+j7.477	24.94	23.27	0.938+j5.781	0.923+j7.067
BUENTONO (SCT)	BUT-B2 230	230.0	18.41	18.95	1.532+j7.050	0.930+j6.555	21.52	22.06	1.209+j6.680	0.874+j6.232
CAMPO MORADO	CMO-115	115.0	1.81	1.08	11.484+j34.855	32.524+j105.641	2.18	1.61	9.582+j32.175	13.863+j67.863
CAMPOS HERMANOS	CHE-85	85.0	18.44	6.60	0.571+j2.599	1.984+j16.885	21.39	9.12	0.492+j2.475	2.305+j12.500
CANCHESDA NUEVA	CSN-115	115.0	3.08	1.92	5.885+j20.703	15.431+j58.710	3.41	2.12	5.788+j20.596	15.428+j58.677
CARACOL	ROL-230	230.0	23.27	18.18	1.058+j5.608	2.271+j10.276	27.33	20.76	0.811+j5.283	2.261+j10.187
CARBONER	CSR-115	115.0	5.27	4.77	2.612+j12.316	3.575+j16.062	6.39	5.63	2.328+j11.184	3.560+j15.664
CAREAGA	CAR-85	85.0	19.29	6.32	0.503+j2.494	2.165+j18.083	22.34	9.14	0.435+j2.378	2.182+j12.708
CARTAGENA	CTG-230	230.0	29.37	25.92	0.936+j4.423	0.719+j6.310	35.50	30.39	0.652+j4.062	0.698+j6.156
CARTÓN Y PAPEL DE MÉXICO	CPM-230	230.0	27.97	24.60	0.928+j4.656	1.194+j6.607	33.44	28.67	0.667+j4.317	1.167+j6.450
CAYACAL	CAY-115	115.0	7.39	6.67	1.847+j8.795	2.216+j11.572	9.34	8.10	1.555+j7.667	2.184+j11.167
CAÑAS	CNA-69	69.0	0.72	0.69	21.653+j50.514	21.198+j60.349	1.69	1.41	10.988+j23.439	13.511+j39.600
CEILÁN	CEI-230	230.0	24.66	22.21	1.041+j5.284	1.169+j7.083	29.74	26.26	0.719+j4.858	1.122+j6.771
CEMENTOS ANÁHUAC	CAH-85	85.0	17.25	6.40	0.610+j2.779	1.941+j17.237	20.01	8.71	0.525+j2.646	2.307+j12.994
CEMENTOS APASCO	CEA-85	85.0	10.18	2.61	0.916+j4.735	5.004+j46.608	11.56	2.99	0.851+j4.593	6.001+j44.364
CEMENTOS FORTALEZA	CFZ-85	85.0	2.50	1.04	4.885+j19.031	18.239+j101.008	2.77	1.18	4.787+j18.893	19.381+j96.413
CEMENTOS TOLTECA	TLT-85	85.0	9.51	2.37	0.949+j5.071	6.465+j51.440	10.80	2.71	0.884+j4.921	7.463+j49.191
CERRO DEL CAMPO	CCM-115	115.0	3.40	2.30	6.065+j18.542	14.891+j45.046	4.02	2.94	5.380+j17.346	11.388+j36.523
CERRO GORDO	CRG-230	230.0	36.10	37.34	0.804+j3.589	0.458+j3.306	44.28	44.69	0.547+j3.253	0.440+j3.184
CERRO GORDO	CRG-85	85.0	23.98	8.35	0.396+j2.008	0.953+j13.539	29.26	14.17	0.302+j1.820	0.932+j7.683
CERVECERÍA MODELO	CVM-85	85.0	13.61	4.62	0.705+j3.535	7.262+j23.612	15.52	6.14	0.635+j3.419	7.235+j18.139
CHALCO	CHA-230	230.0	16.71	16.52	2.360+j7.590	2.180+j7.943	19.28	18.94	2.080+j7.283	2.137+j7.695
CHALCO	CHA-85	85.0	12.34	1.79	0.783+j3.898	6.256+j73.860	14.05	1.98	0.717+j3.773	6.256+j73.860
CHALCO	CHA-85B	85.0	12.34	1.79	0.783+j3.898	6.256+j73.860	14.05	1.98	0.717+j3.773	6.256+j73.860
CHAPINGO	CPG-230	230.0	39.16	34.99	0.707+j3.316	0.881+j4.534	47.79	41.13	0.473+j3.020	0.864+j4.463
CHICOLAPAN	CHC-230	230.0	22.74	17.95	1.061+j5.742	1.978+j10.341	26.59	20.57	0.805+j5.435	1.923+j10.146
CHIMALPA	MLP-230	230.0	31.15	32.10	1.124+j4.113	0.872+j3.792	38.36	38.30	0.791+j3.725	0.866+j3.723
CHIMALPA DOS	MLD-400	400.0	24.43	23.07	2.173+j9.200	1.802+j11.002	31.64	28.07	1.254+j7.929	1.805+j10.932
CHIMALPA DOS	MLD-230	230.0	32.60	33.82	1.054+j3.935	0.581+j3.607	40.34	40.46	0.721+j3.549	0.578+j3.540
CHRYSLER DE MÉXICO	KDM-85	85.0	12.27	6.58	0.837+j3.912	1.091+j14.388	14.45	7.65	0.718+j3.666	1.186+j13.646



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
CIUDAD BICENTENARIO	CDB-115	115.0	6.07	4.91	1.327+j10.853	2.324+j18.587	6.78	5.46	1.247+j10.700	2.315+j18.466
COAPA	COA-230	230.0	18.07	15.87	1.463+j7.200	1.792+j10.269	21.33	18.51	1.104+j6.758	1.688+j9.836
COFRADÍA UNO	CFI-230	230.0	28.87	25.28	0.972+j4.496	0.889+j6.519	35.08	29.66	0.667+j4.110	0.870+j6.391
COMALCO	COM-115	115.0	3.74	2.42	4.473+j17.181	10.709+j45.559	4.15	2.67	4.377+j17.067	10.707+j45.522
CONDESA	CDS-230	230.0	21.92	22.66	1.631+j5.834	1.186+j5.348	26.01	26.76	1.279+j5.467	1.117+j5.021
CONTADERO	CTD-230	230.0	23.36	20.95	1.399+j5.511	1.483+j7.517	27.87	24.47	1.057+j5.134	1.424+j7.283
CONTRERAS	CRS-230	230.0	15.96	13.51	1.606+j8.164	1.287+j12.817	18.48	15.54	1.268+j7.801	1.221+j12.348
COVADONGA	CVD-85	85.0	11.88	1.95	0.797+j4.054	4.732+j67.276	13.49	2.15	0.734+j3.933	4.732+j67.276
COYOACÁN	COY-230	230.0	23.17	23.83	1.459+j5.541	1.288+j5.105	27.61	28.24	1.106+j5.174	1.218+j4.784
COYOTEPEC	CYO-85	85.0	7.59	3.31	2.145+j6.100	5.847+j31.069	9.86	4.14	1.500+j5.265	6.261+j27.466
CRUZ AZUL	CCZ-230	230.0	24.30	20.18	0.800+j5.405	1.583+j8.680	30.27	24.37	0.521+j4.797	1.569+j8.188
CUAJIMALPA	CJM-230	230.0	23.43	22.12	1.294+j5.517	0.839+j6.652	27.94	25.79	0.946+j5.141	0.820+j6.489
CUAUHTÉMOC	CMC-230	230.0	21.61	20.10	1.161+j6.035	1.287+j7.434	25.52	23.60	0.873+j5.657	1.210+j7.026
CUAUTITLÁN	CTT-85	85.0	16.78	5.67	0.638+j2.854	2.424+j19.977	20.98	7.43	0.460+j2.531	2.842+j16.399
CUBITOS	CBT-85	85.0	8.59	2.37	1.384+j5.543	7.683+j50.095	9.80	2.92	1.273+j5.360	8.924+j43.467
CULHUACÁN	CUL-230	230.0	18.74	17.35	1.634+j6.893	1.720+j8.634	22.15	20.40	1.279+j6.469	1.587+j8.143
DART DE MÉXICO	DDM-115	115.0	6.36	4.30	2.468+j10.146	5.366+j24.906	7.08	4.76	2.373+j10.034	5.364+j24.874
DEACERO	DCO-85	85.0	20.04	6.97	0.540+j2.389	1.768+j16.142	23.76	9.67	0.441+j2.229	2.150+j12.020
DEPORTIVA	DVA-400	400.0	15.39	13.53	2.689+j14.761	1.428+j21.232	19.42	16.12	1.614+j12.978	1.410+j21.045
DEPORTIVA	DVA-230	230.0	17.14	17.75	1.454+j7.610	0.576+j6.958	20.21	20.63	1.059+j7.150	0.556+j6.758
DIANA	DAA-230	230.0	21.90	22.67	1.639+j5.839	1.209+j5.318	25.98	26.78	1.286+j5.472	1.139+j4.990
DISTRIBUCIÓN BMX	BMX-85	85.0	16.24	5.53	0.630+j2.956	2.431+j20.445	19.64	7.16	0.491+j2.704	2.851+j16.880
DONATO GUERRA	DOG-400	400.0	16.29	15.43	2.607+j13.939	1.352+j16.446	23.84	20.35	1.336+j10.573	1.381+j15.939
DONATO GUERRA	DOG-115	115.0	28.10	25.78	0.324+j2.340	0.248+j2.990	35.73	31.17	0.211+j2.033	0.251+j2.922
DONATO GUERRA	DOG-115B	115.0	29.13	26.64	0.331+j2.255	0.256+j2.908	37.29	32.43	0.216+j1.947	0.257+j2.819
DOS CARLOS	DCA-85	85.0	5.63	1.87	2.083+j8.456	9.622+j60.696	6.34	2.22	1.970+j8.286	10.787+j54.744
ECATEPEC	ECA-230	230.0	22.37	19.14	1.090+j5.835	1.642+j8.812	26.49	22.29	0.818+j5.454	1.551+j8.494
EL CARMEN	CRM-85	85.0	5.35	1.52	2.622+j8.797	14.021+j77.447	6.60	3.79	2.361+j7.836	6.801+j25.388
EL CERRILLO	ECR-230	230.0	12.92	11.55	2.264+j10.023	1.855+j13.852	15.04	13.46	1.825+j9.542	1.698+j13.027
EL GALLO	ELG-115	115.0	2.14	1.31	7.209+j30.169	19.645+j87.702	2.99	3.23	4.498+j24.018	1.642+j18.878
EL ROSAL	RSL-230	230.0	15.86	13.28	1.587+j8.222	1.341+j13.231	18.34	15.22	1.255+j7.864	1.283+j12.823
EL SALTO	SAO-230	230.0	5.77	6.17	3.945+j22.684	1.760+j18.500	7.31	7.52	2.728+j19.786	1.723+j18.193
EL SALTO	SAO-85	85.0	8.55	1.44	0.961+j5.659	18.243+j88.849	13.26	13.99	0.498+j4.040	0.228+j3.356
EL VIDRIO	EVD-230	230.0	20.88	16.02	1.235+j6.240	2.371+j11.921	24.65	18.44	0.960+j5.849	2.309+j11.685
ESMERALDA	ESR-230	230.0	18.36	17.97	1.220+j7.130	1.236+j7.619	21.43	20.84	0.941+j6.750	1.170+j7.306
ESMERALDA	ESR-230B	230.0	18.36	17.97	1.220+j7.130	1.236+j7.619	21.43	20.84	0.941+j6.750	1.170+j7.306
ESMERALDA	ESR-85	85.0	9.44	2.88	0.602+j5.161	0.000+j40.867	11.65	3.23	0.494+j4.606	0.000+j40.867
ESTADIO	EST-230	230.0	15.88	15.54	1.534+j8.222	0.835+j8.900	18.60	17.99	1.141+j7.769	0.802+j8.620
ESTRELLA	ETR-230	230.0	22.11	20.26	1.811+j5.728	2.700+j7.175	26.28	23.56	1.496+j5.353	2.682+j7.009
ESTRELLA	ETR-230B	230.0	17.03	14.11	2.016+j7.533	3.176+j12.244	19.97	16.21	1.681+j7.120	3.142+j12.003



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
FERROCARRILES NACIONALES	FNL-230	230.0	33.85	33.12	0.861+j3.827	0.606+j4.153	41.93	39.71	0.560+j3.438	0.591+j4.025
FERTIMÉX	FTM-230	230.0	5.88	4.31	3.899+j22.225	11.571+j45.426	8.22	6.06	2.480+j17.606	9.099+j35.938
FORD MOTOR COMPANY	FMC-85	85.0	22.35	7.06	0.447+j2.149	1.535+j16.401	27.39	9.56	0.331+j1.943	1.956+j12.845
FRANCISCO DE LOS REYES	FRR-115	115.0	1.89	1.15	9.880+j33.794	27.471+j99.616	2.08	1.26	9.783+j33.688	27.468+j99.582
FUNDIDORA MÉXICO	FUM-85	85.0	20.74	6.92	0.487+j2.316	1.441+j16.492	25.12	9.32	0.374+j2.116	1.862+j12.938
GENERAL MOTORS	GMC-85	85.0	12.63	6.67	0.813+j3.798	1.342+j14.277	14.94	7.78	0.693+j3.545	1.442+j13.515
GUACAMAYAS	GMV-115	115.0	9.40	8.89	1.306+j6.939	1.322+j8.079	12.40	11.34	1.009+j5.801	1.180+j7.435
GUADALUPE	GUA-85	85.0	14.62	5.79	0.693+j3.285	2.530+j18.544	17.26	9.16	0.593+j3.071	2.234+j11.201
HÉROES DE CARRANZA	HRC-230	230.0	17.04	13.22	1.275+j7.688	3.220+j14.192	20.73	15.46	0.949+j6.981	3.216+j13.916
HIDALGO	HDG-85	85.0	6.55	2.10	1.798+j7.275	8.785+j54.419	7.44	2.50	1.659+j7.062	9.941+j49.358
HIPÓDROMO	HIP-85	85.0	15.62	5.18	0.580+j3.087	3.223+j21.904	17.91	7.11	0.510+j2.970	3.212+j16.438
HUASTECA	HTC-85	85.0	14.65	4.81	0.670+j3.283	7.164+j22.853	16.75	6.44	0.600+j3.167	7.137+j17.380
HUETAMO	HTM-115	115.0	2.45	1.48	7.068+j26.137	19.068+j78.357	3.16	2.52	5.216+j22.514	7.411+j39.892
HUETAMO	HTM-69	69.0	1.79	2.09	3.449+j22.020	0.638+j12.751	2.09	2.40	2.767+j20.791	0.641+j12.809
INDIANILLA	INN-85	85.0	8.76	0.17	0.671+j5.560	0.458+j-876.784	10.16	0.19	0.597+j5.279	0.458+j-876.784
INDUSTRIA DE LA DEFENSA NAL.	IDN-85	85.0	15.96	5.13	0.620+j3.012	5.336+j21.889	18.32	7.01	0.551+j2.895	5.315+j16.419
INDUSTRIA MILITAR	INM-85	85.0	9.76	3.92	1.065+j4.914	4.739+j27.093	11.01	5.06	0.994+j4.802	4.753+j21.713
INDUSTRIAL SAN CRISTÓBAL	ISC-85	85.0	14.50	5.42	0.646+j3.321	2.742+j20.205	17.47	9.48	0.521+j3.045	1.463+j10.817
INDUSTRIAS UNIDAS S. A.	INU-115	115.0	9.52	7.30	1.368+j6.836	2.408+j13.123	10.69	8.12	1.272+j6.710	2.407+j13.084
INFIERNILLO	IFR-69	69.0	0.54	0.62	31.273+j66.105	7.121+j47.173	0.99	1.02	20.436+j39.312	6.825+j41.381
INSURGENTES	INS-85	85.0	17.66	6.68	0.571+j2.719	1.688+j16.415	21.45	12.25	0.458+j2.474	1.043+j8.125
IROLO	IRO-230	230.0	13.04	10.80	1.734+j10.036	2.593+j16.384	15.04	12.45	1.472+j9.602	2.410+j15.648
IUSASOL 1	IUN-115	115.0	15.04	13.89	0.688+j4.360	0.437+j5.505	17.09	15.62	0.592+j4.231	0.436+j5.466
IXTAPALUCA	IXL-230	230.0	21.56	20.72	1.165+j6.047	0.733+j6.905	25.13	23.87	0.889+j5.744	0.710+j6.701
IXTAPAN DE LA SAL	IXS-115	115.0	2.39	1.36	6.321+j27.095	19.105+j88.967	4.24	2.83	3.839+j16.811	9.356+j41.852
IXTAPANTONGO	IXT-115	115.0	11.09	8.27	1.172+j5.872	2.232+j11.903	13.99	11.61	0.885+j5.144	1.253+j8.298
IXTLAHUACA DOS	ITD-115	115.0	10.26	7.89	1.232+j6.355	1.753+j12.168	11.52	8.79	1.136+j6.235	1.751+j12.131
IZTAPALAPA	IZT-230	230.0	20.89	18.92	1.276+j6.226	0.970+j8.324	24.80	22.01	0.942+j5.813	0.936+j8.083
JABÓN LA CORONA	JLC-230	230.0	23.22	20.24	1.047+j5.623	1.411+j8.136	27.38	23.46	0.780+j5.278	1.360+j7.901
JAMAICA	JAM-230	230.0	19.34	19.90	1.408+j6.719	0.825+j6.258	22.68	23.23	1.085+j6.349	0.771+j5.938
JAMAICA	JAM-85	85.0	9.46	0.17	0.517+j5.164	0.041+j-877.953	11.01	0.19	0.444+j4.882	0.041+j-877.953
JASSO	JAS-230	230.0	25.21	21.50	0.787+j5.207	1.187+j7.909	31.77	26.40	0.502+j4.571	1.154+j7.308
JASSO	JAS-85	85.0	14.73	2.50	0.413+j3.307	6.423+j51.854	17.17	2.87	0.348+j3.125	7.421+j49.599
JILOTEPEC	JIL-115	115.0	13.48	11.34	0.625+j4.886	0.851+j7.665	15.04	12.56	0.558+j4.823	0.856+j7.677
JILOTEPEC INDUSTRIAL	JID-115	115.0	12.70	10.33	0.673+j5.183	1.195+j8.750	14.15	11.42	0.607+j5.127	1.200+j8.768
JILOTEPEC POTENCIA	JIP-400	400.0	16.24	14.06	1.994+j14.076	2.589+j20.617	19.37	16.16	1.328+j13.049	2.635+j20.698
JILOTEPEC POTENCIA	JIP-230	230.0	22.71	23.82	0.919+j5.775	0.531+j4.993	27.59	28.07	0.638+j5.255	0.542+j4.979
JILOTEPEC POTENCIA	JIP-115	115.0	16.64	16.30	0.432+j3.967	0.273+j4.233	18.59	18.08	0.366+j3.911	0.278+j4.252
JOROBAS	JRB-230	230.0	25.14	19.84	0.881+j5.208	1.858+j9.343	31.24	23.86	0.597+j4.638	1.800+j8.836
JUANDO	JUA-85	85.0	6.52	2.19	2.255+j7.179	7.171+j51.709	7.32	2.53	2.174+j7.045	8.248+j48.560



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
JUCHITEPEC	JCP-85	85.0	6.44	1.44	1.631+j7.438	8.835+j86.361	7.21	1.59	1.562+j7.317	8.835+j86.361
JUGOS DEL VALLE	JDV-85	85.0	7.05	3.09	2.207+j6.604	5.282+j33.452	8.86	3.81	1.622+j5.870	5.697+j29.850
JUGOSMEX	JMX-85	85.0	17.69	6.48	0.565+j2.715	2.057+j17.066	21.16	10.05	0.462+j2.509	1.934+j10.848
KILOMETRO 110	KMC-230	230.0	9.84	9.89	2.260+j13.310	1.802+j13.229	12.05	11.75	1.687+j12.006	1.751+j12.924
KILOMETRO 110	KMC-85	85.0	9.33	2.58	0.948+j5.173	3.885+j46.483	11.47	5.19	0.813+j4.635	3.977+j21.423
KILOMETRO 42	KCD-85	85.0	2.11	0.86	9.295+j21.285	50.231+j114.914	2.38	1.18	9.156+j20.743	44.305+j81.215
KILOMETRO 48	KCO-85	85.0	4.32	2.46	2.138+j11.150	6.067+j36.557	6.23	3.58	1.688+j8.505	4.746+j27.328
KILOMETRO CERO	KCR-230	230.0	22.43	20.91	1.099+j5.818	0.894+j7.177	26.56	24.60	0.811+j5.440	0.820+j6.770
LA CEIBA	LAC-115	115.0	2.59	1.60	6.214+j24.821	16.589+j71.490	3.52	3.29	4.146+j20.358	3.642+j24.802
LA COSTEÑA	LCT-85	85.0	17.34	6.39	0.544+j2.777	1.933+j17.275	20.87	10.81	0.436+j2.550	1.391+j9.711
LA ESTANCIA	LES-115	115.0	6.10	4.18	2.922+j10.478	6.921+j24.978	7.04	4.75	2.720+j10.015	6.831+j24.380
LA LOMA	LOM-85	85.0	14.43	5.47	0.731+j3.321	2.920+j19.926	16.48	7.36	0.658+j3.209	3.121+j15.131
LA MIRA	MIR-115	115.0	6.43	5.42	2.295+j10.073	2.916+j15.714	8.17	6.61	1.961+j8.727	2.764+j14.997
LA PAZ	LAP-400	400.0	27.72	26.84	1.862+j8.121	0.961+j9.185	35.38	32.43	1.106+j7.094	0.952+j9.102
LA PAZ	LAP-230	230.0	27.96	30.02	0.973+j4.648	0.364+j3.787	33.21	35.11	0.700+j4.343	0.353+j3.675
LA QUEBRADA	LAQ-85	85.0	17.17	6.41	0.634+j2.786	2.032+j17.148	20.14	8.76	0.535+j2.626	2.399+j12.910
LAFARGE	LFG-230	230.0	20.59	15.31	0.949+j6.378	2.278+j12.930	25.11	18.07	0.662+j5.779	2.246+j12.416
LAGO	LGO-400	400.0	24.71	15.06	1.658+j9.198	4.073+j27.043	30.90	17.44	0.995+j8.160	4.051+j26.951
LAGO	LGO-230	230.0	22.64	22.73	0.914+j5.794	0.919+j5.740	26.50	26.31	0.661+j5.472	0.895+j5.567
LAGO DE GUADALUPE	LDG-230	230.0	27.86	23.83	0.996+j4.661	1.086+j7.117	33.73	27.85	0.690+j4.275	1.068+j6.994
LAS AMÉRICAS	LAR-230	230.0	23.95	17.13	0.879+j5.475	2.453+j11.928	29.21	20.00	0.595+j4.964	2.444+j11.671
LÁZARO CÁRDENAS DISTRIBUCIÓN	LCD-115	115.0	9.33	8.90	1.330+j6.987	1.283+j7.950	12.28	11.21	1.039+j5.857	1.246+j7.525
LÁZARO CÁRDENAS POTENCIA	LCP-400	400.0	11.56	12.58	3.231+j19.722	0.883+j14.105	29.54	32.38	0.606+j8.580	0.288+j5.618
LÁZARO CÁRDENAS POTENCIA	LCP-230	230.0	16.07	18.95	1.463+j8.135	0.207+j4.077	32.71	37.68	0.407+j4.447	0.136+j2.529
LÁZARO CÁRDENAS POTENCIA	LCP-115	115.0	13.99	15.05	0.570+j4.710	0.199+j3.643	20.43	21.09	0.307+j3.562	0.188+j3.213
LECHERÍA	LEC-85	85.0	24.64	7.93	0.440+j1.942	1.241+j14.572	29.79	11.29	0.340+j1.780	1.650+j10.594
LERMA	LER-85	85.0	0.86	0.46	14.778+j54.859	50.752+j200.452	2.56	2.80	2.362+j20.945	0.338+j10.286
LIQUIMEX	LQX-85	85.0	9.62	3.97	1.538+j4.861	4.802+j26.526	12.03	4.99	1.180+j4.330	5.216+j22.929
LOMAS VERDES	LVE-230	230.0	22.70	19.03	1.226+j5.721	1.607+j9.105	26.99	22.12	0.903+j5.337	1.542+j8.854
LOS REYES	RES-230	230.0	25.41	26.34	1.042+j5.122	0.503+j4.672	29.98	30.59	0.767+j4.812	0.493+j4.563
LOS REYES	RES-85	85.0	17.51	2.51	0.459+j2.764	1.887+j53.004	20.15	2.77	0.401+j2.649	1.887+j53.004
MADERO	MAD-230	230.0	23.41	22.76	0.983+j5.587	1.157+j6.065	27.54	26.42	0.724+j5.255	1.122+j5.879
MAGDALENA	MAG-230	230.0	25.34	25.40	1.115+j5.120	0.801+j5.161	30.40	30.03	0.796+j4.739	0.759+j4.926
MAGDALENA	MAG-85	85.0	19.81	2.09	0.398+j2.445	5.715+j65.238	23.87	2.31	0.307+j2.240	5.715+j65.238
MANIOBRAS APROVECHAMIENTO DE RESIDUALES REFINERÍA	APR-MAN	230.0	27.57	23.10	0.711+j4.764	1.291+j7.509	35.47	29.39	0.427+j4.096	1.179+j6.569
MANIOBRAS EVM II	VMA-400	400.0	23.27	21.46	1.419+j9.823	1.256+j12.388	28.57	25.44	0.871+j8.848	1.234+j12.098
MANIOBRAS EVM II	VMA-230	230.0	19.70	16.12	1.105+j6.649	1.668+j11.177	22.96	18.52	0.882+j6.301	1.612+j10.874
MERCED (A)	MER-230	230.0	17.53	17.20	1.579+j7.409	1.177+j7.950	20.43	19.94	1.256+j7.040	1.112+j7.595
MERCED (B)	MER-230B	230.0	17.53	17.20	1.579+j7.409	1.177+j7.950	20.43	19.94	1.256+j7.040	1.112+j7.595
MILAGROS	MGR-230	230.0	24.54	22.70	1.110+j5.297	1.266+j6.618	29.14	26.42	0.810+j4.946	1.237+j6.451



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
MILLÁN DOS	MDO-400	400.0	15.50	14.11	2.654+j14.662	1.458+j19.238	21.96	18.13	1.399+j11.485	1.477+j18.726
MINERA TIZAPA	MTI-115	115.0	7.37	5.59	1.822+j8.821	3.152+j17.310	8.90	7.04	1.502+j8.065	2.464+j14.482
MOCTEZUMA	MZA-85	85.0	7.86	2.57	0.899+j6.177	1.266+j44.922	9.54	2.88	0.777+j5.604	1.266+j44.922
MORALES	MOS-230	230.0	29.52	28.30	1.141+j4.352	2.710+j4.459	36.14	33.69	0.809+j3.960	2.645+j4.362
MORALES	MOS-85	85.0	17.40	5.49	0.514+j2.773	3.028+j20.961	20.04	7.65	0.444+j2.657	3.017+j15.495
MORELOS	MOR-230	230.0	11.31	9.01	1.925+j11.584	3.717+j20.405	12.87	10.23	1.604+j11.232	3.554+j19.833
NACEL Y NACOBRE	NYN-85	85.0	12.19	5.18	0.881+j3.930	2.778+j20.174	14.06	6.73	0.796+j3.757	3.191+j16.082
NARVARTE	NAR-230	230.0	22.33	23.17	1.576+j5.735	1.234+j5.159	26.53	27.42	1.223+j5.368	1.161+j4.832
NAUCALPAN	NAU-85	85.0	17.44	6.35	0.571+j2.755	1.679+j17.492	20.37	10.01	0.492+j2.605	1.421+j10.790
NECAXA	NEC-85A	85.0	7.84	1.40	1.166+j6.148	18.792+j90.752	11.88	11.85	0.681+j4.492	0.498+j4.481
NECAXA	NEC-85B	85.0	7.84	1.40	1.166+j6.148	18.792+j90.752	11.87	11.83	0.685+j4.497	0.498+j4.481
NECAXA	NEC-85C	85.0	7.84	1.40	1.166+j6.148	18.792+j90.752	11.87	11.83	0.685+j4.497	0.498+j4.481
NECAXA	NEC-85D	85.0	7.84	1.40	1.166+j6.148	18.792+j90.752	11.92	11.88	0.674+j4.479	0.498+j4.481
NESTLÉ	NLE-85	85.0	11.98	6.19	0.877+j4.003	1.566+j15.535	14.03	7.15	0.760+j3.772	1.668+j14.846
NETZAHUALCÓYOTL	NET-85	85.0	14.43	2.46	0.628+j3.343	1.892+j53.150	16.51	2.71	0.564+j3.220	1.892+j53.150
NISSAN	NIS-85	85.0	10.10	5.01	1.070+j4.739	2.554+j19.541	11.65	5.69	0.956+j4.534	2.658+j18.989
NOCHISTONGO	NOC-230	230.0	28.66	24.04	0.784+j4.567	1.306+j7.192	36.17	29.12	0.502+j4.007	1.297+j6.851
NOCHISTONGO	NOC-115	115.0	7.42	6.81	0.951+j8.893	0.844+j11.332	8.31	7.61	0.872+j8.740	0.835+j11.212
NONOALCO	NON-85	85.0	24.97	7.93	0.367+j1.931	1.200+j14.600	32.36	19.45	0.252+j1.649	0.274+j4.994
NOPALA	NOP-400	400.0	27.34	28.25	2.074+j8.189	0.817+j7.641	36.33	35.30	1.156+j6.895	0.817+j7.548
NOPALA	NOP-230A	230.0	28.98	28.11	1.000+j4.471	0.693+j4.977	35.29	33.05	0.675+j4.084	0.695+j4.931
NOPALA	NOP-230B	230.0	28.98	28.11	1.000+j4.471	0.693+j4.977	35.29	33.05	0.675+j4.084	0.695+j4.931
NOPALA	NOP-230C	230.0	29.08	28.43	0.997+j4.457	0.661+j4.852	35.42	33.43	0.672+j4.069	0.663+j4.810
NUEVA XCALA	NXM-230	230.0	9.89	9.92	1.972+j13.280	2.277+j13.133	11.80	11.51	1.557+j12.284	2.274+j13.107
NUEVO FANAL	NFA-85	85.0	19.49	6.87	0.556+j2.455	1.811+j16.310	23.07	9.50	0.457+j2.295	2.191+j12.170
NUTRIGO	NTG-115	115.0	8.26	6.02	1.675+j7.857	2.982+j16.740	9.25	6.69	1.578+j7.738	2.980+j16.703
OCEANÍA	OCE-230	230.0	16.50	15.42	1.728+j7.859	3.233+j9.247	19.17	17.81	1.404+j7.490	3.168+j8.892
OCEANÍA	OCE-230B	230.0	15.17	12.27	1.636+j8.598	9.176+j12.803	17.54	14.04	1.357+j8.218	9.051+j12.470
ODÓN DE BUEN	ODB-230	230.0	15.09	12.84	1.797+j8.612	2.335+j13.231	17.46	14.82	1.444+j8.239	2.190+j12.649
OLIVAR	OLI-230	230.0	23.31	23.22	1.391+j5.525	0.999+j5.691	27.77	27.34	1.039+j5.157	0.959+j5.420
OTUMBA	OTM-230	230.0	18.70	15.23	1.165+j7.005	1.784+j11.905	21.75	17.49	0.939+j6.650	1.721+j11.566
PACHUCA	PAC-85	85.0	8.80	2.45	1.434+j5.390	7.212+j48.583	10.03	2.99	1.323+j5.217	8.377+j42.636
PACHUCA POTENCIA	PHP-400	400.0	11.19	8.38	2.339+j20.507	6.430+j40.952	13.31	9.73	1.607+j19.016	6.274+j39.691
PACHUCA POTENCIA	PHP-230	230.0	9.42	9.74	1.762+j13.984	1.231+j12.685	10.97	11.23	1.396+j13.239	1.169+j12.314
PALIZADA	PLZ-115	115.0	8.04	5.24	2.222+j7.955	5.665+j20.746	9.11	5.84	2.111+j7.737	5.664+j20.698
PANTITLAN	PNT-85	85.0	10.66	2.10	0.978+j4.500	4.324+j60.852	12.10	2.32	0.906+j4.370	4.324+j60.852
PAPELERA EL NEVADO	PDO-115	115.0	4.11	2.45	3.423+j15.796	9.767+j48.149	4.63	2.72	3.254+j15.421	9.768+j48.048
PAPELES HIGIÉNICOS DEL CENTRO	PHC-230	230.0	11.19	8.69	1.985+j11.704	3.913+j21.840	12.89	9.93	1.699+j11.205	3.753+j21.184
PARQUE INDUSTRIAL	PQI-115	115.0	6.61	5.27	1.524+j9.922	2.959+j17.457	7.38	5.86	1.447+j9.784	2.953+j17.364
PARQUE INDUSTRIAL REFORMA	PIR-85	85.0	10.19	2.27	0.952+j4.719	9.164+j54.542	11.88	2.93	0.833+j4.467	10.723+j44.895



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
PASO DE CORTES	PDC-115	115.0	2.64	1.60	7.913+j23.842	22.530+j70.618	2.92	1.77	7.831+j23.710	22.518+j70.522
PATERA	PAT-85	85.0	13.26	5.50	0.708+j3.632	2.269+j19.267	15.36	7.22	0.622+j3.459	2.682+j15.175
PATLA	PTL-85	85.0	5.64	1.25	2.081+j8.454	22.077+j98.105	8.23	7.74	1.360+j6.413	1.361+j7.620
PEMEX	PMX-230	230.0	27.81	26.14	0.748+j4.715	0.548+j5.678	36.18	34.04	0.460+j4.012	0.451+j4.766
PEMEX	PEX-85	85.0	14.54	4.73	0.677+j3.307	8.527+j22.924	16.62	6.29	0.607+j3.191	8.499+j17.451
PEMEX	PEX-85B	85.0	7.09	0.17	0.784+j6.878	0.187+j-877.409	8.14	0.19	0.711+j6.595	0.187+j-877.409
PEMEX -ZONA LCP	PMX-115	115.0	5.29	4.78	2.586+j12.284	3.582+j16.031	6.42	5.64	2.309+j11.146	3.570+j15.629
PEMEX -ZONA TUL	PMX-115	115.0	6.13	5.71	0.367+j10.828	0.661+j13.225	8.47	10.07	0.218+j8.618	0.226+j4.516
PEMEX AZCAPOTZALCO	PXA-85	85.0	15.82	6.04	0.625+j3.039	1.818+j18.112	18.50	9.68	0.540+j2.868	1.428+j10.812
PENSADOR	PEN-230	230.0	20.88	18.40	1.202+j6.245	2.889+j8.516	24.60	21.54	0.914+j5.867	2.770+j8.091
PENSADOR MEXICANO	PSD-85	85.0	6.91	4.19	1.417+j6.955	2.376+j20.851	8.69	5.23	1.186+j6.094	2.279+j18.385
PENWALT	PEW-85	85.0	18.93	7.12	0.504+j2.542	1.552+j15.442	22.58	11.18	0.410+j2.355	1.532+j9.586
PERALVILLO	PEV-230	230.0	17.35	15.63	1.285+j7.544	4.012+j9.554	20.19	18.05	1.006+j7.164	3.888+j9.221
PITIRERA	PIT-400	400.0	10.75	10.33	3.420+j21.200	2.973+j23.172	25.58	26.77	0.756+j9.901	0.578+j7.966
PITIRERA	PIT-230A	230.0	10.86	11.77	1.651+j12.115	0.720+j9.053	17.22	17.93	0.672+j8.455	0.461+j7.341
PITIRERA	PIT-230B	230.0	10.86	11.77	1.651+j12.115	0.720+j9.053	17.22	17.93	0.672+j8.455	0.461+j7.341
PITIRERA	PIT-230C	230.0	10.86	11.77	1.651+j12.115	0.720+j9.053	17.22	17.93	0.672+j8.455	0.461+j7.341
PITIRERA	PIT-230D	230.0	10.86	11.77	1.651+j12.115	0.720+j9.053	17.22	17.93	0.672+j8.455	0.461+j7.341
PLACERES DEL ORO	PLO-115	115.0	1.64	0.96	11.606+j38.749	34.911+j121.494	1.92	1.24	10.360+j36.596	26.324+j97.179
POLANCO	POO-230	230.0	31.38	30.00	1.032+j4.104	2.618+j4.222	38.67	35.88	0.700+j3.711	2.553+j4.125
PROCTER & GAMBLE	PYG-230	230.0	24.80	19.46	0.902+j5.277	2.065+j9.549	30.77	23.37	0.618+j4.707	2.006+j9.042
PRODUCTORA MEXICANA DE TUB.	PMT-115	115.0	6.53	5.75	2.133+j9.938	2.869+j13.905	8.12	6.89	1.842+j8.810	2.840+j13.503
PROPIMEX	PRO-85	85.0	12.23	6.23	0.862+j3.919	1.464+j15.587	14.32	7.17	0.747+j3.696	1.570+j14.959
PUESTO CENTRAL DE CONTROL	PCC-85	85.0	8.58	0.17	0.700+j5.677	0.566+j-876.484	9.94	0.19	0.627+j5.395	0.566+j-876.484
PUESTO CENTRAL DE CONTROL	PCC-85B	85.0	19.94	6.42	0.536+j2.402	6.104+j16.978	24.97	12.39	0.420+j2.120	5.158+j7.364
REFORMA	REF-85	85.0	11.76	4.52	0.914+j4.072	4.004+j23.905	13.34	5.99	0.843+j3.959	4.018+j18.526
REMEDIOS	REM-230	230.0	37.50	41.61	0.919+j3.420	0.294+j2.499	47.38	50.97	0.589+j3.026	0.285+j2.417
REMEDIOS	REM-85	85.0	31.35	8.28	0.293+j1.538	1.078+j14.635	37.55	13.28	0.226+j1.420	1.095+j9.260
ROBERT BOSCH	RBS-85	85.0	12.02	6.28	0.866+j3.990	1.492+j15.224	14.11	7.28	0.748+j3.751	1.591+j14.508
SAFIMEX	SAF-85	85.0	12.86	6.49	0.818+j3.728	1.230+j15.039	15.08	7.48	0.704+j3.511	1.330+j14.430
SAN ANDRÉS	ANS-85	85.0	13.77	1.92	0.658+j3.503	6.934+j69.103	16.12	2.13	0.563+j3.302	6.934+j69.103
SAN ÁNGEL	SNG-230	230.0	24.30	25.15	1.374+j5.290	0.848+j4.855	29.06	29.82	1.022+j4.922	0.809+j4.567
SAN BERNABÉ	BRN-400	400.0	26.73	26.32	2.120+j8.376	1.127+j9.040	35.07	32.38	1.212+j7.143	1.122+j8.972
SAN BERNABÉ	BRN-230	230.0	28.99	30.66	1.119+j4.442	0.398+j3.847	35.32	36.41	0.772+j4.063	0.390+j3.749
SAN FELIPE DEL PROGRESO	FPG-115	115.0	4.32	2.80	3.770+j14.885	9.634+j39.387	4.80	3.09	3.675+j14.759	9.633+j39.348
SAN FRANCISCO	SSO-85	85.0	11.57	6.81	0.905+j4.143	1.049+j13.147	13.67	7.96	0.778+j3.873	1.139+j12.401
SAN FRANCISCO SOYANIQUILPAN	SFS-230	230.0	12.19	10.77	1.729+j10.757	2.466+j14.977	14.93	12.73	1.278+j9.699	2.483+j14.635
SAN ISIDRO	ISO-115	115.0	6.35	5.20	2.330+j10.186	3.383+j16.967	8.02	6.30	2.001+j8.885	3.221+j16.244
SAN MATEO	SMT-115	115.0	5.03	2.99	2.638+j12.934	7.503+j39.438	5.71	3.34	2.470+j12.558	7.504+j39.337
SAN SEBASTIÁN	SSE-115	115.0	4.45	3.05	3.635+j14.484	10.562+j33.916	4.93	3.36	3.552+j14.389	10.561+j33.907



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
SANTA CRUZ	CRU-400	400.0	26.81	25.77	1.946+j8.390	1.205+j9.661	34.12	31.07	1.163+j7.353	1.191+j9.574
SANTA CRUZ	CRU-230	230.0	30.04	33.97	1.004+j4.305	0.287+j2.906	36.61	40.87	0.688+j3.930	0.270+j2.740
SANTA FÉ	SFE-230	230.0	23.65	21.88	1.379+j5.442	1.284+j6.878	28.24	25.63	1.034+j5.067	1.229+j6.639
SANTIAGO TLAUTLA	STU-115	115.0	5.12	3.62	3.049+j12.613	7.309+j28.152	5.69	4.00	2.973+j12.494	7.306+j28.089
SECRETARÍA DE SEGURIDAD PÚBLICA	SSP-85	85.0	10.21	4.06	1.024+j4.697	4.517+j26.297	11.53	5.26	0.953+j4.585	4.532+j20.917
SEDENA	EDN-85	85.0	15.87	6.13	0.713+j3.009	2.107+j17.723	18.44	9.51	0.634+j2.858	1.848+j11.021
SMURFIT KAPPA	SKP-85	85.0	10.21	4.36	0.868+j4.728	3.598+j23.907	11.69	5.45	0.787+j4.552	4.082+j20.076
SUBESTACIÓN CINCO BOMBEO	ENB-115	115.0	12.36	8.27	0.880+j5.301	2.254+j13.139	14.95	9.51	0.714+j4.834	2.255+j13.069
SUBESTACIÓN CUATRO BOMBEO	ECB-115	115.0	25.46	21.07	0.384+j2.580	0.529+j4.199	32.13	25.16	0.266+j2.257	0.531+j4.121
SUBESTACIÓN DOS BOMBEO	EDB-115	115.0	13.78	9.71	0.839+j4.745	1.888+j10.712	16.84	11.68	0.671+j4.285	1.738+j9.914
SUBESTACIÓN SEIS BOMBEO	ESB-115	115.0	13.87	10.76	0.783+j4.721	1.226+j8.855	16.60	12.40	0.649+j4.350	1.224+j8.777
SUBESTACIÓN TRES BOMBEO	ETB-115	115.0	21.70	16.63	0.466+j3.025	0.841+j5.790	26.97	19.57	0.343+j2.686	0.843+j5.712
SUBESTACIÓN UNO BOMBEO	EUB-115	115.0	10.59	10.11	1.100+j6.174	0.738+j7.128	12.55	11.87	0.947+j5.743	0.714+j6.771
TACUBA	TAC-85	85.0	16.82	6.32	0.606+j2.855	1.711+j17.409	20.07	11.15	0.506+j2.642	1.088+j9.084
TACUBAYA	TYA-230	230.0	22.44	22.95	1.495+j5.724	1.075+j5.431	26.67	27.11	1.143+j5.357	1.013+j5.109
TACUBAYA	TYA-85	85.0	9.45	3.84	1.104+j5.075	5.046+j27.538	10.65	4.93	1.033+j4.963	5.060+j22.158
TAXQUEÑA	TAX-230B	230.0	13.61	11.02	1.873+j9.579	2.751+j16.402	15.66	12.68	1.521+j9.200	2.575+j15.709
TAXQUEÑA	TAX-230	230.0	13.61	11.02	1.873+j9.579	2.751+j16.402	15.66	12.68	1.521+j9.200	2.575+j15.709
TAXQUEÑA	TAX-85	85.0	13.01	1.82	0.593+j3.725	8.159+j72.980	15.14	2.01	0.509+j3.530	8.159+j72.980
TECÁMAC	TCM-230	230.0	16.58	13.67	1.132+j7.930	1.596+j13.046	19.30	15.84	0.870+j7.518	1.502+j12.451
TECAMACHALCO	TEH-230	230.0	23.78	20.81	1.415+j5.402	1.786+j7.779	28.44	24.22	1.076+j5.022	1.748+j7.624
TEJUPILCO	TJP-115	115.0	7.84	6.48	1.868+j8.265	2.703+j13.536	9.35	7.74	1.602+j7.642	2.566+j12.405
TEOLOAPAN	TLP-69	69.0	0.86	1.08	18.404+j42.417	2.367+j19.028	0.97	1.21	17.693+j41.562	2.344+j18.918
TENANGO DEL VALLE	TDV-85	85.0	5.23	3.34	2.393+j9.079	3.022+j25.268	5.93	3.74	2.245+j8.825	3.102+j24.916
TEOTIHUACÁN	TTH-400	400.0	32.52	32.35	1.445+j6.953	0.724+j7.235	42.62	40.13	0.792+j5.907	0.720+j7.034
TEOTIHUACÁN	TTH-230	230.0	36.04	33.86	0.687+j3.620	0.540+j4.391	43.79	39.86	0.457+j3.304	0.531+j4.301
TEPEXIC	TEP-85	85.0	7.08	1.35	1.490+j6.766	19.570+j93.240	10.61	10.27	0.929+j5.001	0.701+j5.489
TEXCALTITLAN	TTT-115	115.0	5.71	4.67	2.557+j11.347	3.804+j18.984	6.93	5.68	2.198+j10.308	3.494+j17.140
TEXCOCO	TEX-400	400.0	34.02	34.77	1.495+j6.622	0.635+j6.389	45.13	43.32	0.816+j5.569	0.638+j6.311
TEXCOCO	TEX-230	230.0	43.93	45.17	0.625+j2.957	0.332+j2.779	54.75	53.99	0.391+j2.639	0.333+j2.765
TIANGUISTENCO	TIA-230	230.0	10.29	8.62	2.739+j12.607	2.999+j20.205	11.89	9.89	2.265+j12.075	2.852+j19.546
TINGAMBATO	TIN-115	115.0	5.71	4.73	2.292+j11.409	3.556+j18.522	7.43	6.98	1.617+j9.696	1.592+j11.503
TIQUICHEO	TQC-115	115.0	1.91	1.16	8.241+j33.821	22.680+j99.206	2.43	1.94	6.161+j29.369	9.571+j52.208
TIZAPA MANIOBRAS	TMA-115	115.0	8.13	6.34	1.661+j7.999	2.692+j14.825	9.91	8.14	1.342+j7.243	2.004+j11.998
TIZAYUCA	TIZ-230	230.0	15.08	11.93	1.272+j8.716	2.102+j15.644	17.59	13.82	0.991+j8.243	1.985+j14.966
TLAPEHUALA	TPA-115	115.0	2.48	1.47	8.444+j25.389	24.492+j78.565	3.02	2.15	7.059+j23.136	13.817+j51.698
TLATELULCO MÓVIL	TTO-85	85.0	9.16	6.00	1.206+j5.220	1.196+j13.851	10.65	6.93	1.073+j4.952	1.270+j13.195
TOLUCA	TOL-230	230.0	15.29	14.86	1.887+j8.478	1.008+j9.424	18.05	17.25	1.443+j7.964	0.971+j9.162
TOLUCA	TOL-85	85.0	14.55	7.85	0.677+j3.305	0.650+j12.039	17.52	9.31	0.554+j3.031	0.742+j11.206
TOLUCA 2000	TDK-230	230.0	11.83	9.94	2.388+j10.969	2.195+j17.519	13.65	11.45	1.971+j10.521	2.052+j16.749



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
TOPILEJO	TOP-400	400.0	28.11	27.86	1.935+j7.985	1.196+j8.415	36.43	34.02	1.121+j6.883	1.192+j8.368
TOPILEJO	TOP-230	230.0	24.22	23.86	1.087+j5.373	0.547+j5.741	28.77	27.74	0.769+j5.018	0.538+j5.627
TOTOLTEPEC	TTC-230	230.0	14.46	13.45	2.087+j8.945	1.550+j11.182	16.99	15.69	1.637+j8.439	1.459+j10.632
TRATAMIENTO AGUAS RESIDUALES	RAT-230	230.0	24.28	20.65	0.811+j5.409	1.346+j8.249	30.12	24.74	0.533+j4.820	1.357+j7.893
TREN INTERURBANO MÉXICO-TOLUCA DOS	TTD-230	230.0	21.21	19.30	1.386+j6.107	1.515+j7.986	25.07	22.33	1.036+j5.733	1.498+j7.828
TREN INTERURBANO MÉXICO-TOLUCA UNO	TTU-230	230.0	15.07	11.89	1.651+j8.653	3.139+j15.578	17.51	13.50	1.286+j8.243	3.129+j15.466
TREN SUBURBANO	TSU-230	230.0	23.36	20.62	1.092+j5.579	1.847+j7.746	28.08	24.36	0.766+j5.145	1.741+j7.397
TRIMEX	TRX-85	85.0	18.16	5.99	0.566+j2.642	2.298+j19.051	22.47	7.89	0.413+j2.367	2.716+j15.480
TULA	TUL-400	400.0	28.36	24.33	1.531+j7.999	1.678+j12.087	39.72	37.43	0.724+j6.355	0.696+j7.526
TULA	TUL-230	230.0	34.89	36.56	0.608+j3.757	0.252+j3.287	47.27	51.85	0.324+j3.073	0.123+j2.258
TULANCINGO	TLG-85	85.0	6.32	2.16	2.106+j7.473	7.292+j52.231	7.34	3.47	1.961+j7.087	7.647+j30.982
VALLE DE MÉXICO (230 KV)	VAE-230	230.0	46.29	48.34	0.582+j2.809	0.327+j2.502	56.55	57.47	0.382+j2.554	0.317+j2.445
VALLE DE MÉXICO (85 KV)	VDM-85	85.0	11.46	4.07	0.727+j4.219	3.906+j27.347	14.54	8.99	0.531+j3.674	0.819+j10.577
VALLE SAN PEDRO	VAP-230	230.0	26.97	21.47	0.890+j4.842	1.641+j8.565	31.72	24.58	0.665+j4.556	1.618+j8.471
VALLE TULANCINGO	VTU-85	85.0	4.84	1.98	2.800+j9.740	7.640+j53.677	5.57	3.19	2.656+j9.322	7.806+j30.404
VALLEJO	VAJ-230	230.0	23.36	20.62	1.092+j5.579	1.847+j7.746	28.08	24.36	0.766+j5.145	1.741+j7.397
VALLEJO	VAJ-85	85.0	16.77	6.33	0.478+j2.888	1.565+j17.335	19.71	8.46	0.398+j2.710	2.049+j13.505
VERÓNICA	VRN-230	230.0	20.40	19.10	1.327+j6.374	1.647+j7.683	24.00	22.35	1.039+j5.996	1.570+j7.275
VERÓNICA	VRN-85	85.0	14.04	4.88	0.688+j3.426	3.550+j22.921	16.03	6.60	0.618+j3.310	3.538+j17.454
VERÓNICA	VRN-85B	85.0	7.27	0.17	0.739+j6.708	0.053+j-877.911	8.36	0.19	0.665+j6.425	0.053+j-877.911
VERTIZ	VER-230	230.0	18.74	18.50	1.442+j6.937	2.049+j7.100	21.92	21.54	1.120+j6.568	1.968+j6.768
VICTORIA	VIC-400	400.0	25.17	22.34	1.885+j8.979	1.816+j12.561	32.65	27.52	1.046+j7.711	1.773+j11.989
VICTORIA	VIC-230	230.0	37.72	39.71	0.813+j3.426	0.321+j3.000	47.44	48.46	0.512+j3.036	0.305+j2.872
VICTORIA	VIC-85	85.0	24.75	7.61	0.407+j1.941	1.220+j15.349	30.59	10.49	0.294+j1.740	1.641+j11.796
VIDRIERA LOS REYES	VLR-85	85.0	10.69	4.51	0.825+j4.518	3.408+j23.180	12.26	5.67	0.744+j4.341	3.892+j19.350
VIDRIERA TOLUCA	VDT-85	85.0	13.81	6.77	0.760+j3.472	1.162+j14.633	16.24	7.81	0.648+j3.259	1.262+j14.055
VIDRIO PLANO	VPM-85	85.0	11.52	5.11	0.829+j4.178	2.493+j20.166	13.21	6.75	0.746+j4.017	2.758+j15.577
VILLA DE LAS FLORES	VDF-85	85.0	7.45	3.01	1.438+j6.428	6.662+j35.059	9.17	4.62	1.118+j5.778	4.999+j22.716
VILLA GUERRERO	VGU-115	115.0	1.96	1.12	8.333+j32.798	24.341+j107.897	3.13	2.01	5.781+j22.582	14.581+j60.761
VILLITA	VIL-230	230.0	11.15	10.11	2.248+j11.698	2.963+j14.859	20.52	22.58	0.853+j7.066	0.498+j5.382
VILLITA	VIL-115	115.0	10.87	10.61	1.020+j6.020	0.836+j6.409	14.84	14.18	0.721+j4.869	0.596+j5.580
VITO	VIT-85	85.0	9.80	2.45	0.910+j4.923	6.007+j49.837	11.13	2.80	0.846+j4.776	7.006+j47.584
VITRO FIBRAS	VFI-85	85.0	11.58	5.11	0.824+j4.157	2.518+j20.201	13.29	6.73	0.740+j3.995	2.795+j15.674
VOLCÁN GORDO	VOG-400	400.0	7.56	5.80	4.114+j30.255	4.260+j58.199	9.38	6.87	2.769+j26.939	4.145+j56.552
VOLCÁN GORDO	VOG-115	115.0	8.60	8.63	1.462+j7.585	0.559+j7.637	10.40	10.60	1.182+j6.922	0.506+j6.607
XALOSTOC	XAL-230	230.0	21.78	19.39	1.094+j5.998	1.361+j8.262	25.59	22.47	0.826+j5.648	1.302+j7.983
XOCHIMILCO	XOC-230	230.0	19.73	18.10	1.393+j6.586	1.452+j8.435	23.36	21.31	1.043+j6.164	1.330+j7.950
XOCHITLA	XOH-230	230.0	26.02	19.64	0.898+j5.023	1.840+j9.916	31.39	22.82	0.604+j4.614	1.810+j9.736
YEBUCIBI	YBC-115	115.0	7.69	5.17	2.220+j8.346	5.369+j20.548	8.65	5.75	2.118+j8.177	5.368+j20.512
ZAPATA ENVASES	ZAE-85	85.0	17.76	5.88	0.583+j2.701	2.351+j19.406	22.01	7.72	0.426+j2.415	2.769+j15.832



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
ZICTEPEC	ZIC-85	85.0	5.13	2.86	2.471+j9.233	4.853+j32.064	5.86	3.21	2.295+j8.925	4.935+j31.629
ZIRANDARO	ZIR-69	69.0	1.18	0.94	13.207+j31.042	35.288+j49.196	1.35	1.06	12.523+j29.842	35.291+j49.254
ZUMPANGO	ZUM-85	85.0	7.99	2.44	1.312+j6.003	5.423+j47.850	9.01	2.79	1.240+j5.861	6.420+j45.611

Gerencia de Control Regional Oriental



[Regresar a mapa del SEN](#)



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
AB CALSA	ABL-115	115.0	1.90	1.04	8.508+j33.882	33.203+j118.010	2.22	1.21	7.751+j31.948	31.399+j110.436
ABENT 3T	ABT-230	230.0	8.23	9.20	2.169+j15.982	1.063+j11.631	9.72	10.66	1.770+j14.925	1.063+j11.484
ACACOYAUA	AYA-115	115.0	3.17	2.17	6.236+j20.025	16.379+j47.248	3.72	2.53	5.477+j18.832	15.746+j44.771
ACAHUIZOTLA	AHZ-115	115.0	1.96	1.35	9.317+j32.572	17.095+j78.287	2.35	1.54	7.474+j30.193	17.105+j78.106
ACAJETE	ACJ-115	115.0	5.18	3.35	2.592+j12.562	7.021+j33.097	6.17	3.82	2.155+j11.637	6.992+j32.879
ACALA	AAA-115	115.0	4.96	3.56	3.145+j12.998	9.846+j27.515	5.89	4.15	2.744+j12.097	9.728+j26.381
ACAPULCO	APC-115	115.0	5.37	6.89	4.290+j11.585	1.290+j4.013	7.42	9.20	2.588+j9.497	1.320+j3.898
ACATLÁN	ACA-115	115.0	2.88	1.70	7.148+j21.923	17.150+j69.091	3.19	1.87	7.041+j21.813	17.149+j69.066
ACATZINGO	ACZ-115	115.0	4.41	2.76	5.592+j13.981	10.697+j40.851	4.90	3.05	5.508+j13.859	10.687+j40.775
ACAYUCAN	ACY-115	115.0	10.81	7.36	1.293+j6.007	3.087+j14.540	13.00	8.75	1.095+j5.510	2.904+j13.549
ACEROS TLAXCALA	ATX-230	230.0	6.60	4.91	3.483+j19.815	9.288+j39.937	7.65	5.56	3.005+j18.860	9.207+j39.634
ACTOPAN	AOC-115	115.0	2.99	1.92	6.142+j21.302	12.327+j58.149	3.34	2.13	5.962+j21.017	12.315+j58.054
ACUITLAPILCO	ACU-115	115.0	12.47	7.73	1.095+j5.211	3.279+j14.776	14.07	8.61	1.017+j5.091	3.272+j14.723
ADOLFO RUIZ CORTINEZ	ARC-115	115.0	5.32	6.53	4.369+j11.702	1.370+j5.345	7.31	8.62	2.657+j9.634	1.399+j5.232
AEROPUERTO	ARU-115	115.0	16.73	15.16	0.771+j3.893	1.091+j5.104	22.77	19.64	0.479+j3.171	1.013+j4.632
AEROPUERTO	ARP-69	69.0	4.97	3.59	2.101+j7.734	4.529+j16.702	6.36	4.23	1.947+j6.604	4.529+j16.716
AGRONITROGENADOS	ARG-115	115.0	6.90	4.43	1.722+j9.464	4.985+j25.383	7.91	5.06	1.611+j9.096	4.782+j24.475
AGUA DULCE DOS	ADD-115	115.0	5.23	3.99	2.815+j12.370	5.637+j23.973	5.89	4.45	2.748+j12.092	5.628+j23.793
AGUA FRÍA	AGF-69	69.0	2.84	2.63	4.666+j13.223	4.982+j16.724	3.39	3.04	4.486+j12.119	4.982+j16.737
AGUA SANTA	AGA-115	115.0	9.61	5.62	1.395+j6.766	5.679+j20.933	10.79	6.24	1.312+j6.638	5.671+j20.847
AGUA ZARCA	AZA-115	115.0	1.61	0.93	15.178+j38.335	36.122+j126.486	1.81	1.04	14.224+j37.670	35.912+j125.781
ALMECATLA	LML-115	115.0	35.82	29.65	0.337+j1.823	0.506+j2.994	43.05	35.13	0.258+j1.677	0.485+j2.827
ALTOTONGA DOS	TTG-115	115.0	9.12	9.46	1.246+j7.173	0.529+j6.500	11.63	11.87	0.879+j6.220	0.446+j5.830
ALTZAYANCA	AZY-115	115.0	5.58	3.53	3.273+j11.451	7.506+j31.777	6.28	3.93	3.140+j11.200	7.515+j31.689
ALTZAYANCA MANIOBRAS	AZM-230	230.0	6.97	5.08	3.213+j18.789	9.868+j39.173	8.41	6.03	2.556+j17.181	9.183+j36.596
ALUMINIO	AMN-115	115.0	19.51	20.46	0.661+j3.339	0.557+j2.890	26.87	26.52	0.397+j2.689	0.545+j2.768
ALVARADO DOS	AVD-115	115.0	1.99	1.13	10.948+j31.523	30.404+j105.574	2.32	1.45	9.780+j29.990	23.368+j84.839
AMATLAN DOS	ATD-230	230.0	8.04	8.05	2.947+j16.248	1.495+j16.523	9.92	9.58	2.188+j14.557	1.467+j16.237
AMATLAN DOS	ATD-115	115.0	16.18	17.99	0.794+j4.026	0.238+j2.884	20.15	21.86	0.594+j3.576	0.230+j2.773
AMOZOC	AMZ-115	115.0	7.30	4.72	3.195+j8.516	6.303+j23.273	8.15	5.22	3.113+j8.399	6.300+j23.234
ANA CHIAUTEMPAN SANTA	ANC-115	115.0	14.74	9.60	1.016+j4.390	2.817+j11.425	16.70	10.72	0.938+j4.272	2.811+j11.385
ANDRÉS DOS SAN	ADS-115	115.0	2.10	1.17	11.402+j29.453	27.014+j103.401	2.70	2.32	8.583+j25.676	8.972+j39.310
ANGOSTURA	ANG-400	400.0	7.24	7.23	5.907+j31.332	4.445+j31.986	15.75	19.06	1.453+j16.068	0.352+j7.162
ANGOSTURA	ANG-115	115.0	13.12	12.67	0.789+j4.999	0.471+j5.604	18.72	19.26	0.354+j3.885	0.102+j3.541
ANTUÑANO	AUN-115	115.0	19.10	12.71	0.883+j3.362	1.656+j8.588	21.91	14.30	0.803+j3.235	1.648+j8.514
APAXTLA SWITCHEO	AXS-115	115.0	2.24	1.57	9.891+j27.999	19.754+j64.413	2.72	1.82	7.990+j25.682	19.725+j63.695
APIZACO DOS	API-115	115.0	11.31	7.89	1.404+j5.697	3.536+j13.072	12.79	8.81	1.309+j5.557	3.525+j13.010
AQUASISTEMAS	ASI-115	115.0	2.54	2.49	6.340+j25.400	7.267+j27.005	3.17	2.99	5.040+j22.480	7.152+j26.633
ARRIAGA	ARR-115	115.0	2.63	2.72	7.193+j24.156	3.022+j22.970	3.08	3.12	6.427+j22.821	3.013+j22.756
ATENCINGO	AEN-115	115.0	1.82	1.05	11.449+j34.698	28.886+j113.129	2.01	1.16	11.351+j34.595	28.880+j113.065



**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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
AEXCACO	AXO-115	115.0	3.41	2.58	4.709+j18.918	11.485+j36.469	4.59	4.58	3.199+j15.602	2.079+j15.892
ATLIHUETZIA	ATZ-115	115.0	17.31	12.67	0.930+j3.721	2.007+j7.859	19.73	14.19	0.849+j3.602	2.003+j7.835
ATLIXCO	ATC-115	115.0	8.04	4.60	1.872+j8.039	6.783+j25.932	9.00	5.11	1.786+j7.913	6.768+j25.820
ATLIXCOYOTL	AXT-115	115.0	21.34	13.54	0.766+j3.015	1.924+j8.286	24.63	15.28	0.684+j2.885	1.915+j8.204
AUTO MANUFACTURAS	AMF-115	115.0	16.95	12.52	0.678+j3.858	1.906+j7.870	19.10	13.97	0.615+j3.774	1.908+j7.834
AYUTLA	AYT-115	115.0	0.84	0.47	25.614+j74.582	64.412+j256.320	0.94	0.52	24.643+j73.977	64.191+j255.595
BACHAJON	BAC-115	115.0	1.12	0.70	17.785+j56.621	55.933+j155.689	1.25	0.78	17.398+j56.021	55.953+j155.233
BALSAS	BAA-115	115.0	3.39	2.72	6.634+j18.413	11.819+j32.008	4.37	3.28	4.781+j16.024	11.792+j31.296
BARRA NORTE	BRN-115	115.0	3.07	3.27	4.995+j21.027	4.413+j17.168	3.44	3.65	4.876+j20.683	4.382+j16.964
BELISARIO DOMÍNGUEZ	BDZ-115	115.0	5.96	4.95	2.990+j10.732	3.987+j17.518	7.59	6.20	2.200+j9.370	3.613+j15.647
BELISARIO DOMÍNGUEZ II	BDD-115	115.0	2.28	1.49	9.487+j27.521	24.922+j71.333	2.63	1.70	8.644+j26.357	24.489+j69.284
BENITO JUÁREZ	BJU-115	115.0	7.10	5.51	1.746+j9.183	2.526+j17.521	8.28	6.37	1.566+j8.679	2.474+j16.796
BENTELER	BEN-115	115.0	15.74	9.56	1.053+j4.084	2.209+j12.238	17.89	10.68	0.973+j3.964	2.204+j12.187
BERRIOZÁBAL	BRZ-115	115.0	7.35	5.16	1.673+j8.875	3.941+j20.181	8.76	5.92	1.381+j8.222	3.935+j19.959
BII HIOXO	BII-115	115.0	4.44	5.14	1.502+j14.878	0.325+j8.859	5.68	6.37	1.192+j12.813	0.311+j8.656
BII HIOXO	BII-115B	115.0	3.49	4.21	2.088+j18.929	0.288+j9.208	4.92	5.66	1.388+j14.794	0.275+j8.989
BII NEE STIPA	BNS-115	115.0	5.51	7.26	1.874+j11.899	0.230+j3.544	7.30	9.31	1.190+j9.938	0.242+j3.622
BII STINÚ I	BSU-115	115.0	6.98	9.16	1.846+j9.338	0.229+j2.925	9.69	12.22	1.164+j7.445	0.239+j2.970
BII STINÚ II	BSD-230	230.0	5.12	5.52	2.393+j25.804	2.094+j20.286	6.93	7.04	1.776+j21.011	2.034+j19.984
BIO PAPEL PRINTING	BPP-115	115.0	7.56	5.51	1.914+j8.569	3.168+j18.364	9.51	7.67	1.516+j7.525	1.963+j13.212
BOCA DEL RIO	BDR-115	115.0	15.74	12.25	0.976+j4.105	1.709+j7.650	22.32	17.75	0.593+j3.218	1.115+j5.687
BOCHIL	BCH-115	115.0	3.68	2.34	4.356+j17.528	10.403+j48.044	4.21	2.62	4.048+j16.857	10.404+j47.866
BONFIL	BNL-115	115.0	5.01	5.26	4.692+j12.383	2.309+j11.233	6.71	6.62	3.003+j10.466	2.311+j11.086
BOSQUES	BOE-115	115.0	19.26	13.48	0.694+j3.377	1.679+j7.717	22.03	15.13	0.617+j3.257	1.677+j7.681
BRIDGESTONE	BDG-115	115.0	8.41	6.79	1.380+j7.778	2.421+j13.341	9.44	7.57	1.236+j7.634	2.407+j13.265
BUENA VISTA	BVI-115	115.0	6.58	4.40	2.073+j9.875	6.414+j24.287	8.03	5.06	1.856+j8.906	6.415+j24.255
BUGAMBILIAS	BGB-115	115.0	18.02	11.00	0.911+j3.569	2.701+j10.408	20.62	12.33	0.829+j3.443	2.698+j10.359
BUGAMBILIAS SF6	BGS-115	115.0	17.86	10.87	0.923+j3.600	2.741+j10.553	20.43	12.18	0.841+j3.474	2.738+j10.505
CACALUTA	CLU-115	115.0	1.39	0.81	14.718+j45.443	41.158+j143.604	1.55	0.91	14.211+j44.876	40.272+j139.767
CACTUS PEMEX	CAX-115	115.0	7.50	7.34	1.745+j8.679	1.752+j9.664	8.98	8.51	1.481+j7.999	1.750+j9.628
CACTUS SWITCHEO	CSX-115	115.0	16.85	19.23	0.584+j3.896	0.192+j2.907	19.83	22.28	0.495+j3.649	0.185+j2.841
CALPULALPAN	CPL-115	115.0	4.28	3.69	4.953+j14.688	4.282+j22.706	4.68	4.05	5.016+j14.790	4.265+j22.611
CANTICAS	CIC-115	115.0	13.82	10.75	1.037+j4.692	1.687+j8.947	16.66	12.55	0.917+j4.286	1.687+j8.661
CAPILLA	CAP-115	115.0	5.08	3.17	3.140+j12.676	9.972+j35.349	7.31	4.77	2.299+j9.727	7.490+j24.852
CARACOL	CRL-230	230.0	3.36	3.11	10.632+j38.017	9.393+j48.538	8.95	10.42	1.704+j16.227	0.305+j8.926
CARACOL	CRL-115	115.0	1.81	1.22	11.826+j34.784	25.097+j86.420	2.15	1.39	9.918+j32.473	25.067+j85.700
CARDEL	CAE-115	115.0	4.02	3.39	3.383+j16.186	3.783+j25.473	4.46	3.75	3.299+j16.056	3.770+j25.360
CÁRDENAS	CDN-115	115.0	11.23	9.78	1.291+j5.769	1.854+j8.447	13.14	11.21	1.144+j5.438	1.828+j8.302
CÁRDENAS CENTRO	CDC-115	115.0	10.42	8.37	1.697+j6.143	2.798+j10.785	12.14	9.54	1.552+j5.814	2.765+j10.627
CÁRDENAS DOS	CDD-230	230.0	8.90	8.69	2.547+j14.706	2.480+j16.219	11.21	10.62	1.897+j12.893	2.309+j15.215



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
CÁRDENAS DOS	CDD-115	115.0	13.56	13.54	0.827+j4.825	0.610+j5.013	16.14	15.85	0.675+j4.474	0.566+j4.812
CÁRDENAS SUR	CSU-115	115.0	9.41	7.43	2.230+j6.692	2.972+j12.471	10.90	8.45	2.089+j6.365	2.908+j12.262
CARLOS A. CARRILLO	CAC-115	115.0	3.93	2.40	5.373+j15.998	13.917+j47.172	4.57	2.87	4.956+j15.207	12.641+j42.485
CASABLANCA	SBL-115	115.0	8.21	7.21	1.556+j7.941	6.699+j10.065	9.47	8.16	1.379+j7.590	6.691+j10.036
CATEMACO	CTO-115	115.0	2.28	1.28	10.514+j27.088	24.512+j94.770	2.97	2.69	7.788+j23.333	7.168+j31.669
CAVERNAS TUZANDEPETL	CVN-115	115.0	13.52	10.07	1.022+j4.803	1.969+j9.856	16.48	11.67	0.884+j4.342	1.972+j9.756
CAYACO	CAY-115	115.0	6.16	7.13	3.957+j10.024	0.979+j6.413	8.78	9.54	2.257+j8.009	0.989+j6.276
CAZONES	CZN-115	115.0	8.42	6.30	1.155+j7.796	3.224+j15.547	10.88	7.48	0.909+j6.653	3.224+j15.530
CD. HIDALGO. CHIAPAS.	CGO-115	115.0	2.07	1.46	9.526+j30.699	25.849+j67.455	2.36	1.64	8.872+j29.627	25.907+j66.648
CD. INDUSTRIAL VILLAHERMOSA	CIH-115	115.0	14.11	12.62	0.913+j4.614	1.105+j6.419	16.86	14.54	0.743+j4.269	1.103+j6.392
CEBADAS Y MALTA	CBM-115	115.0	4.07	3.43	5.219+j15.449	5.046+j25.028	4.45	3.77	5.282+j15.550	5.029+j24.933
CECILIO DEL VALLE	CCL-69	69.0	1.72	1.97	1.965+j23.142	1.048+j14.316	2.99	3.78	0.867+j14.609	0.197+j5.466
CEFERESO	CFS-85	85.0	2.51	1.36	3.793+j19.188	12.928+j67.927	2.80	1.51	3.637+j18.903	12.925+j67.689
CEFERESO VILLACOMALTITLAN	CFV-115	115.0	3.04	2.09	6.493+j20.859	16.937+j48.598	3.57	2.43	5.709+j19.666	16.425+j46.364
CELANESE	CLS-115	115.0	12.02	8.64	1.213+j5.391	2.430+j11.829	14.47	9.94	1.074+j4.931	2.433+j11.729
CELCSA MANIOBRAS	CCB-115	115.0	13.38	12.02	0.840+j4.889	0.886+j6.950	15.86	13.90	0.743+j4.545	0.882+j6.789
CEMENTOS APASCO (TABASCO)	CEM-115	115.0	5.17	4.19	2.938+j12.496	7.880+j20.617	6.10	4.79	2.574+j11.690	7.868+j20.495
CEMENTOS APASCO S.A. DE C.V.	CSS-115	115.0	6.01	7.55	4.073+j10.273	0.478+j4.389	8.54	10.26	2.367+j8.218	0.489+j4.256
CEMENTOS CRUZ AZUL (OAXACA)	CCA-115	115.0	4.46	3.22	4.685+j14.144	7.754+j31.350	5.33	3.68	4.226+j13.034	7.726+j31.272
CEMENTOS MOCTEZUMA (MORELOS)	CUM-230	230.0	12.58	11.90	1.985+j10.370	2.295+j12.176	15.00	13.78	1.431+j9.634	2.286+j12.118
CEMENTOS MOCTEZUMA(APAZAPAN)	CMT-115	115.0	4.26	2.78	3.297+j15.234	5.728+j40.183	4.79	3.09	3.094+j14.915	5.707+j40.060
CEMENTOS TOLTECA	TOC-230	230.0	8.43	6.83	2.196+j15.597	5.525+j26.353	9.58	7.64	1.916+j15.128	5.526+j26.362
CEMENTOS VERACRUZ	CVE-115	115.0	10.57	8.36	1.256+j6.157	2.682+j10.963	12.57	9.62	1.060+j5.711	2.682+j10.841
CENTENARIO	CIO-85	85.0	3.73	2.27	2.435+j12.935	6.263+j38.123	4.20	2.53	2.284+j12.643	6.261+j37.887
CENTRAL EÓLICA SURESTE UNO FASE DOS	SUD-230	230.0	8.73	11.53	1.326+j15.147	0.720+j4.150	13.18	16.63	0.822+j11.056	0.716+j4.122
CENTRO DE EXPOSICIONES Y CONVENCIONES FUERTES	CEF-115	115.0	15.44	9.01	1.071+j4.165	2.575+j13.278	17.54	10.06	0.992+j4.044	2.570+j13.226
CERRO AZUL DOS	CDO-115	115.0	4.13	2.38	3.755+j15.638	19.418+j47.885	4.63	2.64	3.655+j15.344	19.404+j47.786
CERRO DE ORO	EDO-400	400.0	17.15	18.13	2.462+j13.237	1.387+j11.429	27.54	25.81	1.117+j9.158	1.352+j10.981
CERRO DE ORO	EDO-115	115.0	18.76	18.14	0.391+j3.518	0.184+j3.936	25.47	23.34	0.211+j2.860	0.208+j3.600
CERVECERA DE VERACRUZ1	CVR-230	230.0	8.24	6.63	2.664+j15.885	6.126+j27.317	10.32	7.82	1.935+j14.024	6.150+j27.060
CERVECERÍA DEL TRÓPICO	CVT-115	115.0	5.93	4.11	2.189+j10.973	4.634+j25.790	6.86	4.69	2.002+j10.452	4.609+j25.191
CERVECERÍA MOCTEZUMA (ORIZABA)	CMA-115	115.0	11.56	10.32	1.635+j5.503	1.729+j7.655	14.49	12.65	1.330+j4.863	1.639+j7.059
CHAPULCO	CPO-115	115.0	8.72	2.93	1.472+j7.472	12.560+j51.270	9.77	3.23	1.389+j7.347	12.567+j51.318
CHICONTEPEC	CHI-115	115.0	3.11	3.74	5.171+j20.738	1.674+j10.404	3.45	4.16	5.100+j20.542	1.645+j10.217
CHIGNAHUAPAN	CHH-115	115.0	2.80	1.71	6.266+j22.880	19.236+j66.241	3.10	1.89	6.153+j22.719	19.205+j66.088
CHILAPA	CIP-115	115.0	3.58	3.30	5.033+j17.843	5.447+j22.718	4.65	4.02	3.166+j15.389	5.444+j22.436
CHILAPAN	CHP-115	115.0	2.21	1.24	10.907+j27.959	25.465+j97.910	2.92	2.81	7.853+j23.772	5.943+j27.372
CHILPANCINGO	CHG-115	115.0	4.55	4.40	4.468+j13.895	2.804+j15.915	6.28	5.59	2.595+j11.329	2.806+j15.657
CHILPANCINGO	CHG-69	69.0	1.60	1.72	1.868+j24.777	0.000+j19.845	2.13	2.31	1.217+j20.546	1.623+j15.612
CHILPANCINGO DOS	CCS-115	115.0	5.25	5.78	3.805+j12.073	1.139+j9.201	7.48	7.68	1.991+j9.552	1.140+j8.920



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
CHILPANCINGO POTENCIA	CGP-230	230.0	3.44	3.74	11.978+j36.639	4.413+j29.250	5.40	5.31	5.257+j26.515	4.540+j27.989
CHILPANCINGO POTENCIA	CGP-115	115.0	5.37	6.35	3.660+j11.806	0.574+j6.737	7.70	8.61	1.855+j9.298	0.573+j6.460
CHINAMECA DOS	CHD-115	115.0	19.38	15.91	0.615+j3.370	0.872+j5.715	25.03	19.47	0.452+j2.882	0.839+j5.418
CHINAMECA POTENCIA	CHM-400	400.0	9.10	8.47	3.545+j25.122	4.532+j31.465	13.84	11.32	2.157+j18.226	4.426+j30.542
CHINAMECA POTENCIA	CHM-115	115.0	21.78	20.25	0.502+j3.007	0.429+j3.833	28.53	25.25	0.350+j2.536	0.414+j3.601
CHONTALPA	CHT-115	115.0	4.03	2.94	4.023+j15.965	12.525+j32.686	4.53	3.28	3.872+j15.640	12.499+j32.541
CIA. GRESS	GRE-115	115.0	13.10	8.30	1.086+j4.950	3.284+j13.500	14.80	9.25	1.008+j4.832	3.278+j13.457
CICLO COMBINADO CENTRO (HUEXCA)	CBE-400	400.0	18.89	18.85	1.671+j12.112	1.068+j12.307	22.49	21.92	1.125+j11.241	1.039+j12.138
CINCO DE MAYO	CIY-115	115.0	15.49	9.92	1.100+j4.143	3.028+j11.117	17.61	11.08	1.019+j4.020	3.026+j11.085
CINTALAPA DOS	CIT-115	115.0	6.31	4.40	2.218+j10.281	4.765+j23.823	7.44	5.01	1.909+j9.628	4.761+j23.637
CIUDAD PEMEX	CPX-115	115.0	7.09	5.60	1.393+j9.254	2.998+j16.669	8.63	6.50	1.062+j8.395	2.989+j16.572
CIUDAD TEXTIL	CDX-115	115.0	10.18	6.30	1.198+j6.409	4.673+j17.998	11.39	7.00	1.131+j6.310	4.649+j17.920
CIVAC	CIV-115	115.0	10.54	9.48	1.090+j6.205	1.213+j8.338	11.91	10.63	0.947+j6.061	1.200+j8.261
CLORO DE TEHUANTEPEC	CLO-115	115.0	13.12	9.56	0.834+j4.992	1.852+j10.632	15.93	11.05	0.690+j4.534	1.855+j10.532
COAPAN	CPA-115	115.0	4.65	2.78	4.145+j13.662	9.505+j42.034	5.19	3.08	4.007+j13.487	9.496+j41.950
COATEPEC	COP-115	115.0	4.64	3.64	2.957+j13.993	5.373+j25.531	5.35	4.12	2.623+j13.399	5.343+j25.190
COATZACOALCOS DOS	CTS-400	400.0	11.39	11.73	2.971+j20.063	2.231+j19.116	17.38	16.04	1.587+j14.534	2.220+j18.345
COATZACOALCOS DOS	CTS-115	115.0	27.10	26.77	0.355+j2.424	0.273+j2.650	35.44	33.54	0.244+j2.046	0.263+j2.471
COATZINTLA	CZT-115	115.0	11.40	11.17	0.917+j5.752	1.903+j5.939	16.20	14.41	0.658+j4.460	1.903+j5.922
COGENERACIÓN DE ENERGÍA LIMPIA DE COSOLEACAQUE	CGC-115	115.0	11.96	11.40	0.899+j5.479	0.617+j6.803	13.96	13.11	0.815+j5.167	0.606+j6.631
COGENERACIÓN NUEVO PEMEX	CNX-115	115.0	16.85	19.23	0.584+j3.896	0.192+j2.907	19.83	22.28	0.495+j3.649	0.185+j2.841
COLOTLIPA	CLT-69	69.0	0.86	0.95	12.199+j44.846	22.968+j26.159	1.31	1.49	6.864+j32.734	10.918+j19.449
COMALA PROVISIONAL	CML-115	115.0	1.61	1.13	13.499+j38.893	27.824+j89.666	1.79	1.30	13.140+j38.588	26.276+j83.092
COMALCALCO	COM-115	115.0	8.54	7.77	1.708+j7.581	3.640+j9.591	9.86	8.84	1.548+j7.240	3.588+j9.438
COMALCALCO ORIENTE	CAO-115	115.0	8.89	8.34	1.455+j7.323	2.107+j8.807	10.30	9.55	1.290+j6.974	2.034+j8.587
COMALCALCO POTENCIA	CMP-230	230.0	5.76	5.26	4.075+j22.704	5.691+j29.400	6.86	6.14	3.404+j21.012	5.443+j28.475
COMALCALCO POTENCIA	CMP-115	115.0	9.19	9.07	1.326+j7.104	1.378+j7.497	10.66	10.43	1.160+j6.752	1.301+j7.245
COMALCALCO SUR	CMU-115	115.0	7.06	6.01	2.362+j9.103	5.254+j13.518	8.07	6.78	2.215+j8.775	5.209+j13.369
COMITÁN	CJT-115	115.0	1.54	1.02	14.541+j40.619	42.796+j100.565	1.75	1.15	13.756+j39.437	42.393+j98.452
COMITAN ORIENTE	CMO-115	115.0	1.39	0.92	15.887+j45.166	47.793+j111.894	1.57	1.03	15.109+j43.996	47.389+j109.780
COMPLEJO PETROQUÍMICO CANGREJERA	CGJ-115	115.0	8.11	4.90	1.807+j7.988	5.621+j23.710	9.32	5.61	1.712+j7.650	5.418+j22.801
COMPLEJO PETROQUÍMICO COSOLEACAQUE	CPQ-115	115.0	6.95	4.39	1.931+j9.359	5.705+j25.776	9.23	6.87	1.352+j7.795	2.224+j16.074
COMPLEJO PETROQUÍMICO INDEPENDENCIA	PEI-115	115.0	10.93	9.17	1.226+j5.951	1.319+j9.510	12.43	10.28	1.117+j5.770	1.316+j9.478
COMPLEJO PETROQUÍMICO MORELOS	PMO-115	115.0	9.38	8.65	1.192+j6.980	2.002+j9.030	10.52	9.63	1.139+j6.850	1.997+j9.003
CONALEP	LEP-115	115.0	7.37	6.78	1.694+j8.852	3.343+j10.964	8.85	7.88	1.391+j8.132	3.334+j10.865
CONEJOS	CNJ-115	115.0	1.39	0.81	14.064+j45.641	41.292+j144.746	1.55	0.91	13.535+j45.009	40.450+j141.031
CONTLA	CNU-115	115.0	21.29	14.28	0.628+j3.055	1.702+j7.548	24.54	16.14	0.549+j2.925	1.693+j7.456
CÓRDOBA	COR-115	115.0	11.85	8.78	1.072+j5.500	2.654+j11.174	14.23	10.12	0.873+j5.057	2.655+j11.079
CÓRDOBA DOS	CBS-115	115.0	13.87	12.03	0.935+j4.693	1.394+j6.854	16.95	14.13	0.734+j4.247	1.390+j6.752
COSCOMATEPEC	CSE-115	115.0	4.79	2.87	2.542+j13.621	11.774+j40.177	5.45	3.20	2.336+j13.189	11.777+j40.075



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
COSOLAPA	CSL-115	115.0	3.58	2.49	2.970+j18.316	5.706+j42.390	4.54	3.23	2.296+j15.923	4.735+j35.286
COSOLEACAQUE	CSQ-115	115.0	11.01	7.40	1.114+j5.925	2.861+j14.678	13.21	8.56	0.945+j5.447	2.818+j14.324
COSTA AZUL	CAZ-115	115.0	5.64	6.45	4.163+j11.004	1.139+j7.370	7.82	8.44	2.462+j9.011	1.141+j7.218
COYOACO MANIOBRAS	CYB-230	230.0	5.55	5.65	3.937+j23.618	2.923+j22.534	7.08	6.92	2.814+j20.443	2.809+j21.649
COYUCA	CYC-115	115.0	4.70	4.60	4.556+j13.368	2.843+j14.859	6.59	6.02	2.742+j10.742	2.824+j13.941
CRISOL TEXTIL	CTX-115	115.0	11.01	7.09	1.063+j5.935	3.916+j15.580	12.32	7.88	0.997+j5.842	3.896+j15.513
CRISTÓBAL SAN	CRI-115	115.0	4.95	3.34	3.395+j12.987	9.503+j31.390	5.79	3.81	3.027+j12.243	9.511+j30.828
CRUCES	CRC-69	69.0	6.76	7.25	1.780+j5.619	1.897+j4.311	9.03	9.19	1.140+j4.715	1.952+j4.223
CRUCES GENERACIÓN	CUG-115	115.0	6.14	7.10	3.942+j10.072	1.033+j6.428	8.76	9.50	2.238+j8.029	1.055+j6.307
CRUZ AZUL MANIOBRAS	CZM-400	400.0	12.33	9.41	2.612+j18.545	7.235+j35.730	15.40	11.05	1.722+j16.409	7.204+j35.438
CRUZ GRANDE	CGN-115	115.0	2.13	1.32	10.426+j29.403	27.233+j83.842	2.46	1.49	9.123+j28.215	27.159+j83.568
CRYO INFRA DOS	CRX-115	115.0	8.78	6.24	1.543+j7.404	3.245+j16.611	10.25	7.13	1.418+j6.984	3.231+j16.220
CRYOINFRA - PRAXAIR	CYX-115	115.0	9.32	7.90	1.222+j7.020	2.414+j11.067	10.46	8.81	1.170+j6.884	2.397+j10.979
CRYOINFRA CÁRDENAS	ICD-115	115.0	10.84	9.34	1.348+j5.974	2.078+j8.956	12.66	10.68	1.201+j5.643	2.052+j8.811
CRYO_INFRA	CRY-115	115.0	13.88	12.12	1.031+j4.670	0.977+j6.934	17.04	14.88	0.889+j4.192	0.935+j6.160
CUAUHTÉMOC	CTM-115	115.0	8.61	5.91	1.836+j7.486	4.102+j17.895	9.72	6.58	1.728+j7.311	4.095+j17.846
CUAUHTÉMOC	CUH-115	115.0	1.20	0.74	13.546+j53.616	46.393+j150.930	1.33	0.82	13.359+j53.316	46.391+j150.909
CUAUTLA	CUA-115	115.0	9.32	7.60	1.382+j6.990	1.749+j11.825	10.39	8.45	1.306+j6.908	1.731+j11.747
CUAUTLA DOS	CUS-115	115.0	7.17	4.87	1.921+j9.061	4.677+j21.896	7.97	5.38	1.845+j8.981	4.674+j21.859
CUAUTLA INDUSTRIAL	CIL-115	115.0	6.37	4.54	2.355+j10.158	5.576+j22.337	7.07	5.02	2.278+j10.079	5.567+j22.279
CUCHAPA PEMEX	CUH-115	115.0	9.04	6.08	1.674+j7.153	3.679+j17.788	10.50	6.88	1.557+j6.779	3.669+j17.609
CUERNAVACA	CUE-85	85.0	5.52	4.74	1.566+j8.754	1.550+j13.202	6.29	5.36	1.418+j8.461	1.548+j12.967
CUETZALAN	CTZ-115	115.0	3.48	2.06	3.493+j18.758	12.084+j57.105	3.95	2.31	3.299+j18.216	12.076+j56.588
CUICATLAN	CUX-115	115.0	1.82	1.16	9.719+j35.175	37.906+j91.596	2.02	1.28	9.511+j34.913	37.883+j91.272
CUICHAPA DOS	CCP-115	115.0	9.29	6.22	1.619+j6.961	3.603+j17.468	10.81	7.05	1.502+j6.587	3.593+j17.289
CUITLÁHUAC	CTH-115	115.0	4.61	2.86	2.738+j14.132	9.032+j39.762	5.25	3.20	2.531+j13.691	9.024+j39.651
CUNDUACÁN	DUA-115	115.0	5.93	4.10	2.009+j11.024	6.147+j25.597	6.74	4.59	1.852+j10.677	6.108+j25.458
CYCNA DE ORIENTE	CYR-400	400.0	9.19	6.65	3.123+j24.929	10.582+j53.276	11.09	7.67	2.230+j22.795	10.485+j52.836
DISTRIBUCIÓN TRC-115	TRC-115	115.0	6.03	3.95	1.892+j10.839	6.051+j27.904	6.98	4.44	1.669+j10.329	6.044+j27.835
DISTRITO INDUSTRIAL	DIN-69	69.0	9.02	9.09	0.476+j4.390	0.616+j4.278	13.25	12.01	0.329+j3.291	0.616+j4.288
DONAJI	DOJ-115	115.0	4.01	2.52	4.184+j16.036	10.190+j44.872	4.62	2.83	3.900+j15.308	10.145+j44.670
DOS BOCAS CICLO COMBINADO	DBC-230	230.0	10.55	9.32	2.185+j12.401	3.868+j17.178	16.26	15.61	1.021+j8.925	1.363+j9.933
DOS BOCAS CICLO COMBINADO	DBC-115	115.0	17.28	14.16	0.843+j3.750	1.397+j6.239	27.27	27.06	0.401+j2.648	0.292+j2.721
DOS BOCAS PEMEX	DBX-115	115.0	4.45	3.17	3.634+j14.488	8.230+j32.038	5.01	3.54	3.460+j14.149	8.154+j31.805
DPA DRAEXLMAIER, PARTES AUTOMOTORAS DE MÉXICO	DXM-115	115.0	10.94	6.82	1.110+j5.969	4.300+j16.539	12.25	7.58	1.043+j5.869	4.276+j16.461
EASTMAN (CHEMICAL)	EAS-115	115.0	6.73	4.31	3.041+j9.379	6.323+j25.868	7.81	4.87	2.870+j8.902	6.290+j25.570
EJUTLA	EJT-115	115.0	3.32	2.64	5.191+j19.311	7.339+j34.819	3.71	3.00	4.928+j19.040	6.969+j33.017
EL CARMEN	CNM-230	230.0	9.31	10.27	2.174+j14.090	1.280+j10.737	11.33	12.14	1.675+j12.783	1.292+j10.570
EL CARMEN	CNM-115	115.0	12.12	13.60	0.736+j5.430	0.389+j3.791	14.10	15.57	0.609+j5.142	0.395+j3.771
EL CASTILLO	ELC-230	230.0	4.93	4.78	5.093+j26.444	3.734+j29.388	6.09	5.73	3.890+j23.654	3.643+j27.910



**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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
EL CASTILLO	ELC-115	115.0	7.62	8.59	1.742+j8.538	0.451+j5.790	9.13	10.20	1.404+j7.879	0.415+j5.418
EL CERRO	CEO-115	115.0	6.68	4.30	2.060+j9.726	5.632+j25.881	7.96	4.91	1.698+j9.017	5.604+j25.608
EL CONDE	ECN-115	115.0	20.41	14.86	0.743+j3.168	1.275+j6.806	23.52	16.82	0.663+j3.033	1.266+j6.720
EL GIRASOL	GIS-115	115.0	1.57	0.98	10.810+j40.920	41.688+j110.822	1.74	1.09	10.602+j40.659	41.665+j110.497
EL GUAYABO	GYB-115	115.0	7.65	4.61	1.923+j8.461	5.550+j25.302	13.01	8.31	1.088+j5.506	3.069+j14.807
EL JÍCARO	JIC-115	115.0	5.49	3.15	2.226+j11.893	8.180+j38.109	6.61	3.89	1.888+j10.890	7.063+j33.414
EL MORAL (OAXACA)	MOR-115	115.0	2.64	1.95	6.984+j24.154	18.628+j48.377	2.94	2.17	6.777+j23.892	18.606+j48.055
EL MORAL (PUEBLA)	MOA-115	115.0	10.25	6.63	1.148+j6.375	3.882+j16.657	11.45	7.36	1.082+j6.285	3.873+j16.610
EL SABINO	SAB-400	400.0	9.11	9.09	4.138+j25.012	3.549+j25.410	16.30	14.20	1.368+j15.521	3.542+j21.950
EL SABINO	SAB-115	115.0	16.61	16.20	0.635+j3.946	0.384+j4.304	22.23	20.62	0.359+j3.266	0.375+j4.017
EL TEJAR	TJR-115	115.0	17.17	14.01	0.850+j3.773	1.414+j6.337	26.60	25.17	0.418+j2.713	0.419+j3.184
EL TREINTA	ETT-115	115.0	5.16	5.16	4.487+j12.060	2.480+j12.704	7.07	6.54	2.768+j9.954	2.507+j12.592
EL TULE	TLE-115	115.0	3.99	3.06	4.342+j16.063	7.001+j31.070	4.49	3.42	4.110+j15.747	6.971+j30.713
EL ZOPO	ZOP-115	115.0	5.71	4.73	2.608+j11.341	6.646+j17.813	6.78	5.44	2.246+j10.532	6.634+j17.691
EMILIANO ZAPATA	EMZ-115	115.0	2.55	1.56	6.838+j25.114	21.699+j72.629	2.87	1.74	6.627+j24.588	21.602+j72.112
ENCANTO	ECT-115	115.0	4.44	4.65	3.536+j14.534	2.140+j12.799	5.40	5.82	2.941+j13.213	1.444+j10.450
ENTABLADERO	ETD-115	115.0	6.21	3.97	1.948+j10.506	9.874+j27.193	7.03	4.43	1.885+j10.218	9.871+j27.117
ESCÁMELA	ECM-115	115.0	10.84	8.53	1.205+j6.004	2.416+j10.846	13.03	9.90	0.989+j5.518	2.403+j10.659
ESFUERZO	ESF-115	115.0	3.37	2.93	4.687+j19.151	8.195+j27.338	3.77	3.27	4.566+j18.807	8.167+j27.156
ESPERANZA	ERZ-115	115.0	6.99	5.98	2.551+j9.143	2.339+j14.187	7.87	6.72	2.419+j8.958	2.279+j13.891
ETLA	ETX-115	115.0	4.02	3.53	4.407+j15.896	7.605+j22.246	4.52	3.95	4.187+j15.598	7.573+j21.879
EXCELOPOLIS	EXE-115	115.0	19.00	11.57	0.847+j3.390	2.397+j9.955	21.80	12.99	0.765+j3.262	2.389+j9.891
FENO QUIMIA	FNQ-115	115.0	7.02	4.35	1.954+j9.252	5.813+j26.325	8.48	5.31	1.694+j8.448	4.942+j23.587
FERMEX	FEM-115	115.0	10.79	8.47	1.702+j5.910	3.091+j10.807	13.31	10.18	1.427+j5.296	2.950+j10.130
FLORES MAGÓN	FLM-115	115.0	3.87	2.81	4.336+j16.596	13.165+j34.261	4.61	3.31	3.753+j15.398	12.782+j32.176
FORJAMEX	FJM-115	115.0	12.94	9.96	1.152+j4.998	2.289+j9.524	14.73	11.14	1.053+j4.845	2.284+j9.504
FORTÍN	FOR-115	115.0	13.83	10.61	0.902+j4.715	2.169+j8.939	16.87	12.35	0.705+j4.272	2.172+j8.837
FRAMBOYANES	FRY-115	115.0	19.48	22.49	0.659+j3.345	0.291+j2.033	26.86	29.75	0.393+j2.690	0.281+j1.899
FRONTERA	FRT-115	115.0	1.64	1.12	11.355+j38.800	38.533+j88.918	1.82	1.24	11.168+j38.501	38.531+j88.897
FRONTERA COMALAPA	FCM-115	115.0	1.04	0.63	18.966+j60.911	53.073+j179.485	1.17	0.71	18.059+j59.857	52.625+j177.409
FUERTES	FUE-115	115.0	16.59	10.74	0.998+j3.875	1.997+j10.382	18.89	12.02	0.919+j3.755	1.992+j10.330
GABINO BARREDA	GBA-115	115.0	9.53	6.71	1.441+j6.819	3.401+j15.431	11.77	8.33	1.178+j6.090	3.177+j13.590
GARITA	GAR-115	115.0	5.78	6.46	3.980+j10.771	1.278+j7.888	8.14	8.49	2.281+j8.672	1.305+j7.781
GAVIOTAS	GAV-115	115.0	13.69	11.72	0.939+j4.756	1.431+j7.285	16.34	13.49	0.765+j4.404	1.428+j7.251
GIRANDAS PEMEX	GIR-115	115.0	4.64	3.02	3.306+j13.910	9.970+j36.140	5.24	3.36	3.156+j13.567	9.952+j35.998
GRAN PRIDECO	GRA-115	115.0	15.03	12.77	0.934+j4.319	1.688+j6.564	19.61	15.55	0.669+j3.663	1.678+j6.430
GRIJALVA	GIA-115	115.0	5.89	3.79	2.805+j10.927	6.150+j29.449	6.99	4.35	2.453+j10.158	6.079+j28.847
GUADALUPE ANALCO	GAN-115	115.0	22.02	15.72	0.695+j2.934	1.386+j6.513	25.38	17.70	0.615+j2.811	1.385+j6.490
GUTIÉRREZ ZAMORA DOS	GZD-115	115.0	5.80	4.09	1.779+j11.302	5.451+j25.220	6.60	4.59	1.664+j10.936	5.424+j25.048
HELIPUERTO	HEL-115	115.0	2.57	2.48	6.486+j25.010	3.893+j28.566	3.17	2.94	4.621+j22.558	3.880+j28.162



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
HUAJUAPAN	HJP-115	115.0	1.84	1.09	10.594+j34.594	27.118+j106.511	2.03	1.21	10.457+j34.464	27.112+j106.434
HUAMANTLA DOS	HUA-115	115.0	9.17	6.37	1.694+j7.041	3.764+j16.419	10.37	7.10	1.586+j6.863	3.762+j16.382
HUAMUXTITLAN	HUU-115	115.0	1.03	0.65	19.072+j61.268	40.570+j172.726	1.19	0.73	17.061+j59.023	40.563+j172.429
HUATULCO	HCO-115	115.0	1.39	0.82	14.771+j45.319	40.833+j143.366	1.55	0.92	14.272+j44.761	39.924+j139.513
HUATUSCO	HTU-115	115.0	3.51	2.04	3.462+j18.577	16.541+j57.535	3.96	2.27	3.253+j18.149	16.543+j57.433
HUAUTLA DE JIMENEZ	HUJ-69	69.0	0.66	0.49	31.858+j50.785	50.820+j111.925	0.73	0.54	31.846+j51.017	50.821+j112.242
HUEJOTZINGO	HJO-115	115.0	13.04	8.49	0.924+j5.009	3.633+j12.807	14.64	9.46	0.859+j4.914	3.606+j12.732
HUEYAPAN	HYN-115	115.0	2.72	2.02	6.110+j23.599	15.939+j47.490	3.51	3.16	4.592+j20.297	6.530+j26.910
HUEYAPAN DE OCAMPO	HOC-115	115.0	3.21	1.77	7.015+j19.484	17.960+j68.910	3.88	2.67	5.947+j17.856	10.450+j43.288
HUIMANGUILLO	HMG-115	115.0	6.34	4.82	2.949+j10.057	6.280+j19.473	7.21	5.41	2.810+j9.735	6.220+j19.264
HUIXTLA	HUX-115	115.0	3.52	2.51	5.857+j17.947	13.641+j39.168	4.18	2.95	5.047+j16.732	13.219+j37.139
HUMEROS DOS	HMD-115	115.0	6.42	6.23	2.036+j10.146	1.868+j11.151	7.81	7.51	1.741+j9.187	1.954+j10.268
HUMEROS LOS	HMS-115	115.0	4.22	4.26	3.134+j15.404	2.590+j15.159	5.23	5.38	2.534+j13.739	1.886+j12.682
HUMEROS TRES	HMT-115	115.0	6.30	6.17	2.014+j10.347	1.406+j11.156	7.54	7.29	1.761+j9.529	1.488+j10.589
IDESA	IDE-115	115.0	9.86	8.02	1.150+j6.634	2.512+j11.431	11.13	8.99	1.091+j6.469	2.485+j11.294
IGUALA	IGU-115	115.0	2.53	2.78	6.836+j25.386	1.163+j19.358	3.11	3.33	4.954+j22.967	1.137+j18.916
INDEPENDENCIA	IPD-115	115.0	3.62	2.30	4.550+j17.789	10.603+j48.824	4.48	3.41	3.634+j15.896	5.207+j31.135
INDUSTRIAL	INT-115	115.0	18.42	12.23	0.871+j3.499	1.728+j8.933	21.04	13.71	0.793+j3.379	1.724+j8.888
INDUSTRIAL CUAUTLA DOS	ICS-115	115.0	6.48	4.73	2.312+j9.977	5.328+j20.996	7.20	5.23	2.235+j9.897	5.318+j20.935
INDUSTRIAL PATRONA	IPA-115	115.0	13.80	11.43	0.942+j4.718	1.630+j7.641	16.84	13.38	0.741+j4.272	1.626+j7.539
INFONAVIT	IFN-115	115.0	18.12	15.67	0.799+j3.575	0.993+j5.306	24.63	19.69	0.531+j2.918	0.964+j5.098
INFRA VILLA HERMOSA	IVH-115	115.0	13.01	11.28	1.081+j4.989	1.473+j7.437	15.43	12.94	0.910+j4.644	1.471+j7.410
INGENIO LA GLORIA	GLR-115	115.0	3.52	3.36	3.716+j18.488	1.751+j21.630	3.88	3.71	3.681+j18.454	1.733+j21.479
INGENIO SAN NICOLÁS	ISN-115	115.0	3.11	1.78	3.556+j21.054	16.286+j67.267	4.44	4.25	2.196+j16.297	1.711+j18.565
IQUISA	IQU-115	115.0	15.49	13.87	0.835+j4.203	0.649+j5.888	19.31	17.35	0.694+j3.717	0.610+j5.101
ISLA	ISL-115	115.0	2.68	1.58	6.928+j23.799	21.476+j73.267	3.01	1.77	6.715+j23.337	21.351+j72.264
ITUNDUJIA	ITU-115	115.0	0.77	0.46	23.179+j82.483	62.346+j254.086	0.85	0.51	22.999+j82.309	62.332+j253.891
IXHUATLAN DE MADERO	IXH-115	115.0	1.51	1.31	9.170+j43.135	24.527+j59.420	1.67	1.45	9.032+j42.790	24.509+j59.291
IXTAPA POTENCIA	ITP-230	230.0	6.10	4.52	3.702+j21.463	10.953+j42.920	8.61	6.02	2.233+j16.811	9.852+j37.558
IXTAPA POTENCIA	ITP-115	115.0	5.57	4.80	1.333+j11.838	2.747+j17.376	8.90	7.08	1.115+j8.127	2.629+j14.280
IXTEPEC	IXP-115	115.0	3.80	3.29	4.239+j16.970	8.767+j24.428	4.71	3.87	3.513+j15.092	8.760+j24.384
IXTEPEC POTENCIA	IPO-400	400.0	7.27	9.17	2.920+j31.627	0.832+j12.157	11.29	13.32	1.409+j22.458	0.839+j12.147
IXTEPEC POTENCIA	IPO-230	230.0	9.86	13.20	0.925+j13.437	0.204+j3.272	15.51	19.84	0.433+j9.406	0.204+j3.248
IXTEPEC POTENCIA	IPO-115	115.0	16.38	19.95	0.234+j4.046	0.105+j1.886	23.78	27.32	0.110+j3.069	0.106+j1.874
IXTLAN DE JUÁREZ	IXJ-115	115.0	3.05	2.03	5.180+j21.132	11.785+j53.151	3.42	2.26	4.970+j20.798	11.764+j52.868
IZUCAR DE MATAMOROS	IZM-115	115.0	2.86	1.65	7.846+j21.853	19.448+j71.823	3.16	1.82	7.749+j21.746	19.442+j71.760
IZUCAR DE MATAMOROS DOS	IZD-115	115.0	2.97	1.72	7.575+j20.995	18.999+j68.449	3.29	1.90	7.480+j20.887	18.993+j68.381
J. B. LOBOS	JBL-115	115.0	15.25	13.36	0.876+j4.264	1.278+j6.082	20.04	16.52	0.598+j3.595	1.243+j5.839
JALACINGO	JAL-230	230.0	7.58	7.20	3.169+j17.232	3.150+j20.041	10.13	9.29	2.071+j14.273	2.819+j17.648
JALACINGO	JAL-115	115.0	9.31	9.82	1.211+j7.027	0.427+j6.030	11.91	12.39	0.844+j6.074	0.344+j5.360



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
JALAPA	JLP-115	115.0	6.65	4.85	1.634+j9.848	4.241+j20.742	7.83	5.52	1.375+j9.231	4.233+j20.663
JALAPA DOS	JLD-115	115.0	4.77	3.82	2.860+j13.628	4.912+j23.791	5.51	4.34	2.520+j13.015	4.880+j23.439
JALPA	JAA-115	115.0	7.62	7.69	1.785+j8.524	6.355+j6.984	8.74	8.71	1.632+j8.191	6.319+j6.931
JARDÍN	JDN-230	230.0	13.33	13.88	1.861+j9.786	1.668+j8.668	19.73	19.46	0.940+j7.344	1.466+j7.544
JARDÍN	JDN-115	115.0	21.29	24.86	0.610+j3.058	0.204+j1.783	29.99	33.43	0.346+j2.411	0.191+j1.666
JIUTEPEC	JIU-115	115.0	9.89	8.53	1.056+j6.632	1.265+j9.833	11.11	9.57	0.943+j6.507	1.228+j9.675
JOJUTLA	JJT-115	115.0	6.60	4.68	2.080+j9.840	4.404+j22.059	7.43	5.20	1.937+j9.632	4.398+j22.023
JUCHITÁN DOS	JUD-230	230.0	5.01	6.49	4.498+j26.111	0.869+j8.807	7.95	9.67	2.210+j18.249	0.859+j8.694
JUCHITÁN DOS	JUD-115	115.0	7.95	10.90	1.541+j8.206	0.121+j1.799	11.43	15.18	0.864+j6.330	0.116+j1.775
JUCHITÁN UNO	JUC-115	115.0	6.32	6.76	2.238+j10.266	1.798+j8.591	8.58	8.57	1.525+j8.371	1.791+j8.547
JUILE	JUI-400	400.0	13.43	12.83	2.536+j17.014	3.276+j19.506	21.86	17.78	1.108+j11.569	3.278+j19.326
JUILE	JUI-230	230.0	10.35	12.06	1.199+j12.772	0.579+j7.468	13.80	15.32	0.590+j10.568	0.567+j7.422
JUILE	JUI-115	115.0	4.13	2.63	4.103+j15.553	9.800+j42.578	4.70	2.96	3.898+j15.039	9.681+j41.939
JUY JUY	JUY-115	115.0	12.34	12.77	0.942+j5.298	0.607+j4.822	15.64	15.54	0.673+j4.622	0.605+j4.702
KILOMETRO VEINTE	KLV-230	230.0	12.83	13.18	1.870+j10.183	1.335+j9.751	17.49	16.83	1.128+j8.275	1.294+j9.393
KILOMETRO VEINTE	KLV-115	115.0	20.57	21.63	0.550+j3.180	0.316+j2.852	26.02	26.32	0.371+j2.782	0.302+j2.764
KIMBERLEY CLARK	KIA-115	115.0	12.56	10.16	1.123+j5.167	1.654+j8.910	14.33	11.48	1.010+j4.994	1.623+j8.757
KIMBERLEY CLARK, PUÉ.	KIC-115	115.0	11.65	9.18	1.223+j5.566	1.936+j10.151	13.26	10.34	1.110+j5.393	1.905+j9.999
KIMBERLEY CLARK, VER.	KIM-115	115.0	12.78	11.08	0.946+j5.110	1.165+j7.505	15.69	13.03	0.723+j4.599	1.167+j7.414
KRUPP METALÚRGICA	KRU-115	115.0	14.09	8.94	0.815+j4.640	2.981+j12.529	15.98	10.01	0.740+j4.510	2.970+j12.426
LA BARRA	LBR-115	115.0	3.49	4.03	4.293+j18.553	1.817+j11.264	3.91	4.51	4.174+j18.209	1.786+j11.060
LA CHOCA	LCH-115	115.0	15.55	13.95	0.866+j4.180	1.172+j5.800	18.59	16.09	0.713+j3.864	1.172+j5.773
LA CIÉNEGA	CIG-230	230.0	3.63	3.61	8.334+j35.670	5.048+j37.042	4.17	4.14	7.437+j34.196	4.844+j35.580
LA CIÉNEGA	CIG-115	115.0	6.49	6.75	2.456+j9.937	1.107+j9.048	7.40	7.72	2.229+j9.620	1.047+j8.606
LA CURVA	LVA-115	115.0	7.52	6.30	1.344+j8.730	2.428+j13.812	9.09	7.31	1.038+j7.964	2.418+j13.716
LA GARZA	LGZ-115	115.0	1.94	1.15	9.775+j32.747	28.262+j101.295	2.18	1.27	9.452+j32.155	28.258+j101.100
LA GLORIA MANIOBRAS	GLM-115	115.0	3.61	3.34	3.700+j18.009	2.274+j22.792	3.99	3.69	3.656+j17.953	2.257+j22.651
LA GRANJA TRES	GRT-115	115.0	10.64	6.48	1.217+j6.123	3.842+j17.895	13.76	9.62	0.891+j5.230	2.418+j11.889
LA GUADALUPE	LGP-115	115.0	1.66	1.10	10.518+j38.605	30.731+j96.058	1.87	1.24	10.073+j37.647	30.338+j94.382
LA ISLA	ISL-115	115.0	9.25	6.59	1.275+j7.063	3.480+j15.743	10.63	7.41	1.159+j6.775	3.469+j15.667
LA MALINCHE	MLC-230	230.0	12.03	13.11	2.220+j10.813	1.008+j8.399	14.22	15.13	1.819+j10.113	1.019+j8.390
LA MALINCHE	MLC-115	115.0	19.41	23.06	0.675+j3.353	0.146+j1.857	22.38	26.21	0.581+j3.211	0.148+j1.872
LA MIRA	MRA-115	115.0	4.71	4.91	4.554+j13.354	2.774+j12.053	6.28	6.16	2.857+j11.273	2.800+j11.953
LA REFORMA	RFA-115	115.0	10.14	7.52	1.124+j6.451	2.722+j13.441	11.67	8.45	1.015+j6.174	2.717+j13.391
LA REINA	RNA-115	115.0	6.51	6.02	2.088+j9.977	2.148+j12.530	7.66	6.95	1.763+j9.371	2.119+j12.190
LA TINAJA	TNJ-115	115.0	2.29	1.24	7.311+j28.101	27.764+j98.238	2.71	1.48	6.568+j26.157	25.962+j90.668
LA TRINITARIA	TNI-115	115.0	1.35	0.89	15.966+j46.417	46.919+j117.345	1.53	1.00	15.175+j45.248	46.516+j115.231
LA UNIÓN	UNN-115	115.0	5.36	2.31	2.645+j12.103	16.529+j59.108	8.43	4.20	1.792+j8.473	9.222+j33.654
LA VENTA DOS	LVD-230	230.0	4.32	5.45	4.977+j30.366	1.511+j11.884	6.71	7.94	2.537+j21.613	1.489+j11.705
LA VENTA DOS	VED-115	115.0	4.74	3.76	3.063+j13.662	5.685+j24.446	5.30	4.18	3.026+j13.440	5.675+j24.267



**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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
LA VENTA MANIOBRAS	VMN-230	230.0	3.84	4.74	5.337+j34.140	1.237+j15.378	5.99	6.87	2.645+j24.240	1.203+j15.121
LA VENTA PEMEX	VEP-115	115.0	4.68	3.68	3.102+j13.850	5.883+j25.171	5.23	4.09	3.068+j13.632	5.873+j24.992
LACANJÁ	LCJ-115	115.0	0.83	0.57	23.793+j76.199	75.606+j172.940	0.94	0.64	22.830+j74.638	75.459+j172.230
LAGUNA DE TRES PALOS	LTP-115	115.0	4.92	5.18	4.704+j12.661	2.327+j11.259	6.56	6.52	3.008+j10.727	2.330+j11.112
LAGUNA VERDE	LAV-400	400.0	15.11	16.30	1.990+j15.158	0.968+j12.067	22.53	25.36	0.854+j11.245	0.380+j7.496
LAGUNA VERDE	LAV-230	230.0	11.01	11.73	1.127+j12.008	0.473+j9.881	13.69	14.34	0.654+j10.647	0.356+j9.219
LAMOSA	LOA-115	115.0	21.62	18.22	0.527+j3.026	0.800+j4.742	24.54	20.45	0.464+j2.940	0.799+j4.709
LAPSOLITE	LSL-115	115.0	15.88	11.50	0.738+j4.115	2.210+j8.709	17.87	12.82	0.676+j4.031	2.213+j8.672
LAS BRISAS	BRS-115	115.0	18.29	16.15	0.756+j3.550	0.787+j5.033	24.88	20.25	0.484+j2.896	0.768+j4.883
LAS CHOAPAS DOS	LHD-115	115.0	3.36	2.08	5.759+j18.885	12.422+j55.172	3.77	2.31	5.639+j18.520	12.412+j54.993
LAS HACIENDAS	LHA-115	115.0	11.53	8.12	1.152+j5.642	2.779+j12.903	13.51	9.20	1.003+j5.313	2.774+j12.854
LAS JUNTAS	LJU-115	115.0	1.76	1.05	10.885+j36.127	28.438+j109.995	1.94	1.16	10.740+j35.988	28.430+j109.901
LAS MARGARITAS	MGs-115	115.0	3.80	2.35	3.325+j17.139	9.918+j48.914	4.42	2.68	2.988+j16.258	9.899+j47.700
LAS MATAS	MAS-115	115.0	11.75	7.97	0.981+j5.566	2.782+j13.514	15.17	10.69	0.722+j4.761	1.911+j10.777
LAS TRANCAS	TRN-115	115.0	6.20	5.40	2.230+j10.479	2.784+j15.184	7.24	6.20	1.912+j9.900	2.758+j14.861
LAS VIGAS DOS	VGS-115	115.0	4.60	3.12	2.882+j14.158	7.333+j34.193	5.60	3.60	2.312+j12.828	7.301+j34.030
LERDO	LRD-115	115.0	1.89	1.05	12.051+j33.069	31.136+j114.872	2.26	1.52	10.215+j30.709	19.380+j76.735
LIBERACIÓN MEXICANA	LMX-115	115.0	2.93	2.30	6.028+j21.867	8.016+j40.624	3.38	2.59	5.506+j20.926	8.012+j40.474
LIBRES	LIB-115	115.0	4.76	3.08	3.770+j13.434	8.307+j35.793	5.40	3.45	3.576+j13.044	8.335+j35.582
LOMA BONITA DOS	LBD-115	115.0	3.46	2.03	5.325+j18.449	17.435+j57.139	3.93	2.29	5.086+j17.891	17.278+j55.803
LOMAS	LMS-115	115.0	10.27	0.17	1.281+j6.339	176.680+j-255.532	21.54	0.18	1.198+j6.212	176.680+j-255.532
LOMAS COCOYOC	LOC-115	115.0	9.22	6.43	1.493+j7.042	3.251+j16.284	10.28	7.12	1.417+j6.960	3.250+j16.253
LOMAS DEL MAR	LMM-115	115.0	5.62	6.42	4.193+j11.048	1.185+j7.433	7.78	8.38	2.492+j9.056	1.187+j7.280
LÓPEZ MATEOS	LME-115	115.0	11.60	9.07	1.676+j5.473	1.977+j10.485	13.89	10.71	1.549+j5.025	1.949+j9.857
LOS AMATES	LAT-230	230.0	3.42	4.17	13.842+j36.237	1.815+j18.415	5.04	5.77	7.376+j28.050	1.874+j17.980
LOS AMATES	LAT-115	115.0	6.29	8.14	3.927+j9.805	0.259+j3.463	9.00	11.23	2.231+j7.802	0.261+j3.310
LOS ARCOS	AOS-115	115.0	14.04	15.00	0.609+j4.689	0.299+j3.820	15.79	16.79	0.526+j4.594	0.298+j3.792
LOS RÍOS	LRS-230	230.0	5.19	5.19	5.068+j25.068	3.606+j25.620	8.47	8.12	2.242+j17.103	2.531+j19.381
LOS RÍOS	LRS-115	115.0	7.21	8.03	1.666+j9.052	0.541+j6.444	9.94	10.71	0.924+j7.292	0.417+j5.768
LUIS GIL PEREZ	LGI-115	115.0	11.44	9.55	0.918+j5.732	2.174+j9.384	13.20	10.78	0.817+j5.472	2.169+j9.330
MACTUMATZA	MAA-115	115.0	9.70	6.11	1.553+j6.669	2.983+j18.724	11.92	7.08	1.256+j5.997	2.973+j18.455
MACULTEPEC	MCL-115	115.0	6.89	5.46	2.292+j9.365	6.168+j16.291	7.87	6.12	2.122+j9.040	6.167+j16.271
MACUSPANA	MCP-115	115.0	5.81	4.90	2.396+j11.165	6.078+j16.903	6.88	5.62	2.072+j10.417	6.068+j16.799
MACUSPANA DOS	MCD-230	230.0	9.70	9.14	2.492+j13.459	2.322+j16.322	13.26	11.48	1.486+j10.919	2.302+j16.061
MACUSPANA DOS	MCD-115	115.0	10.67	11.92	0.918+j6.152	0.318+j4.333	13.31	14.42	0.633+j5.451	0.309+j4.237
MAGDALENA MANIOBRAS	MMA-400	400.0	10.58	6.59	2.382+j21.707	15.342+j59.749	12.38	7.48	1.810+j20.438	15.322+j59.275
MAGDALENA MANIOBRAS DOS	MDM-230	230.0	8.25	8.68	2.427+j15.917	1.704+j13.657	9.95	10.19	1.892+j14.557	1.681+j13.526
MAGUEYITOS	MGY-115	115.0	1.37	0.80	14.489+j46.261	42.050+j145.225	1.53	0.90	13.960+j45.629	41.207+j141.511
MALINALTEPEC	MLN-115	115.0	0.86	0.49	23.427+j73.601	61.719+j245.273	0.96	0.54	22.457+j72.972	61.499+j244.550
MALPASO	MPS-400	400.0	15.09	16.62	2.354+j15.122	1.147+j11.224	29.59	32.37	0.650+j8.559	0.422+j6.072



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
MALPASO	MPS-115	115.0	11.98	11.89	0.537+j5.515	0.334+j5.685	14.34	14.17	0.382+j5.078	0.261+j5.259
MALPASO DOS	MPD-230	230.0	12.44	14.06	1.035+j10.621	0.307+j7.120	17.94	19.68	0.395+j8.130	0.205+j5.921
MALPASO TRES	MPE-115	115.0	11.60	11.25	0.581+j5.693	0.461+j6.270	13.85	13.35	0.427+j5.256	0.388+j5.844
MANDINGA	MDG-115	115.0	9.75	3.80	1.373+j6.667	14.611+j36.086	12.75	4.66	0.944+j5.648	13.660+j33.104
MANIOBRAS GENERADORES EÓLICOS DE MÉXICO	GEM-115	115.0	2.00	2.13	10.165+j31.533	3.874+j27.199	2.31	2.43	9.433+j30.231	3.797+j26.828
MANIOBRAS MEDIA LUNA	MLM-230	230.0	3.80	3.80	10.256+j33.382	6.094+j34.687	7.75	7.20	2.816+j18.648	4.113+j22.405
MANIOBRAS PRO MDF	MPR-115	115.0	7.34	5.92	2.640+j8.657	3.817+j15.189	8.38	6.69	2.509+j8.345	3.731+j14.944
MANIOBRAS SOLAR XOXOCOTLA	SMX-115	115.0	9.31	9.01	1.162+j7.036	0.965+j7.784	10.75	10.23	1.004+j6.717	0.965+j7.774
MANLIO FABIO ALTAMIRANO	MFA-400	400.0	13.26	13.84	2.988+j17.154	2.076+j15.285	19.54	18.77	1.400+j12.928	2.102+j14.439
MANLIO FABIO ALTAMIRANO	MFA-230	230.0	17.01	19.72	1.426+j7.676	0.524+j4.626	24.98	27.18	0.706+j5.805	0.549+j4.369
MANLIO FABIO ALTAMIRANO	MFA-115	115.0	19.67	18.98	0.529+j3.333	0.363+j3.748	25.87	23.89	0.342+j2.803	0.356+j3.503
MANUEL MORENO TORRES	MMT-400	400.0	14.30	17.17	2.585+j15.941	0.578+j8.218	32.73	38.26	0.515+j7.744	0.232+j4.153
MANUEL MORENO TORRES	MMT-115	115.0	13.90	16.53	0.775+j4.715	0.086+j2.521	17.92	20.74	0.510+j4.044	0.083+j2.403
MAPASTEPEC	MAP-115	115.0	4.04	2.71	4.691+j15.761	11.468+j38.888	4.85	3.24	3.981+j14.526	10.551+j35.870
MARTÍNEZ DE LA TORRE DOS	MDD-115	115.0	3.80	3.04	4.321+j16.952	8.764+j29.321	4.44	3.55	3.888+j15.977	8.377+j27.654
MARTÍNEZ DE LA TORRE TRES	MTT-115	115.0	3.71	2.82	4.192+j17.396	9.342+j33.653	4.31	3.25	3.801+j16.512	9.013+j32.225
MATAPIONCHE	MPH-115	115.0	2.45	1.38	6.860+j26.206	25.028+j86.465	2.92	1.66	6.132+j24.247	23.230+j78.902
MATÍAS ROMERO	MRO-115	115.0	6.52	5.34	2.352+j9.904	3.397+j16.673	8.14	6.29	1.909+j8.764	3.369+j16.595
MATÍAS ROMERO POTENCIA	MSP-230	230.0	5.74	5.91	3.786+j22.835	4.336+j20.940	7.97	7.60	2.338+j18.189	4.232+j20.680
MATÍAS ROMERO POTENCIA	MSP-115	115.0	8.99	9.41	1.240+j7.277	0.904+j6.410	11.60	11.57	0.863+j6.239	0.864+j6.306
MAZATAN	MAZ-115	115.0	4.79	3.97	3.077+j13.510	6.551+j21.581	5.81	4.67	2.460+j12.323	6.611+j20.780
MAZATEPEC	MZT-230	230.0	6.73	5.11	2.948+j19.524	8.874+j37.555	10.98	10.50	1.299+j13.237	1.261+j13.389
MEDIA LUNA	MLU-115	115.0	3.27	2.59	6.904+j19.117	12.630+j33.851	4.18	3.11	5.047+j16.743	12.603+j33.140
METALOIDES	MET-115	115.0	19.94	14.32	0.773+j3.238	1.363+j7.147	22.97	16.20	0.694+j3.103	1.353+j7.057
METEPEC	MEC-115	115.0	7.03	4.05	2.333+j9.147	7.944+j29.301	7.86	4.49	2.248+j9.021	7.929+j29.188
METLATONOC	MTL-115	115.0	0.95	0.59	19.991+j66.634	44.472+j192.147	1.09	0.66	17.978+j64.377	44.465+j191.849
MEZCALA	MZL-230	230.0	4.62	5.57	9.514+j27.091	1.315+j14.361	9.10	10.10	2.997+j15.769	1.261+j11.023
MEZCALA	MZL-115	115.0	7.40	8.29	2.703+j8.551	0.394+j6.206	12.26	12.56	0.980+j5.874	0.370+j5.502
MEZCALAPA	MEZ-115	115.0	6.65	4.85	2.413+j9.695	7.067+j20.001	7.60	5.45	2.264+j9.341	7.041+j19.807
MEZCALAPA SWITCHEO	MZW-230	230.0	7.98	6.37	2.490+j16.447	5.492+j29.018	10.57	8.28	1.658+j13.720	4.591+j24.930
MIAHUATLAN	MHT-115	115.0	2.00	1.66	9.959+j31.667	10.761+j52.510	2.22	2.00	9.666+j31.401	8.276+j43.373
MIAHUATLÁN DOS	MUD-115	115.0	2.14	1.72	9.150+j29.624	11.237+j52.561	2.38	2.04	8.864+j29.358	9.347+j45.400
MINAS	MIS-69	69.0	1.46	1.01	5.908+j26.639	15.024+j61.787	2.31	2.45	3.003+j18.765	0.963+j15.769
MINATITLÁN DOS	MID-400	400.0	12.18	13.10	2.878+j18.742	1.556+j15.618	19.26	18.50	1.498+j13.107	1.565+j14.929
MINATITLÁN DOS	MID-115	115.0	26.86	29.57	0.358+j2.445	0.104+j1.882	36.59	38.22	0.220+j1.984	0.107+j1.782
MINATITLÁN UNO	MIU-115	115.0	9.18	5.76	1.301+j7.112	4.334+j19.752	11.04	6.61	1.096+j6.522	4.316+j19.533
MINERA AUTLÁN, PUÉ.	MAU-115	115.0	7.23	6.64	1.894+j8.980	1.364+j11.590	9.32	8.71	1.406+j7.707	1.330+j9.367
MINERA CAPELA	MCA-115	115.0	1.50	0.97	14.822+j41.822	31.171+j111.732	1.75	1.10	12.875+j39.601	31.142+j111.012
MINERA CUZCATLAN	MCN-115	115.0	3.03	2.21	5.739+j21.137	9.834+j45.329	3.39	2.47	5.496+j20.847	9.707+j44.567
MINERA FILOS-BERMEJAL	MFB-115	115.0	5.08	4.37	3.755+j12.523	3.319+j19.239	7.25	5.62	2.022+j9.870	3.295+j18.535



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
MINERA MEDIA LUNA	LUD-230	230.0	3.73	3.68	10.356+j34.081	6.703+j36.528	7.46	6.83	2.911+j19.355	4.722+j24.246
MISANTLA DOS	MSD-115	115.0	2.09	1.61	8.670+j30.503	20.854+j56.623	2.38	1.83	8.224+j29.548	20.461+j54.949
MITLA	MTX-115	115.0	1.95	1.28	9.385+j32.667	19.760+j84.971	2.17	1.42	9.147+j32.368	19.730+j84.612
MOCAMBO	MCB-115	115.0	16.00	13.43	0.995+j4.028	1.805+j6.293	22.25	17.72	0.640+j3.220	1.504+j5.599
MOCAMBO	MCB-115B	115.0	16.00	13.43	0.995+j4.028	1.805+j6.293	22.25	17.72	0.640+j3.220	1.504+j5.599
MOTOZINTLA	MTO-115	115.0	1.69	1.06	13.320+j36.941	36.291+j103.676	1.93	1.19	12.449+j35.823	35.849+j101.613
MOZIMBA	MOZ-115	115.0	5.27	6.01	4.157+j11.898	1.939+j7.731	7.23	7.80	2.466+j9.799	1.961+j7.636
MUNDO IMPERIAL	MIP-115	115.0	4.77	4.65	4.842+j13.053	3.097+j14.769	6.32	5.76	3.146+j11.119	3.100+j14.622
NANCHITAL DOS	NND-115	115.0	13.02	9.10	0.885+j5.022	2.063+j11.615	15.66	10.60	0.760+j4.602	2.048+j11.224
NAONILCO	NAO-115	115.0	4.16	3.32	3.641+j15.533	5.553+j27.555	4.79	3.76	3.302+j14.877	5.518+j27.182
NESTLÉ OLMECA	NST-115	115.0	12.67	10.40	0.967+j5.150	1.645+j8.530	15.85	12.31	0.716+j4.553	1.639+j8.425
NISSAN	NSN-115	115.0	10.23	9.19	1.188+j6.383	1.288+j8.607	11.55	10.30	1.045+j6.239	1.275+j8.532
NOCHIXTLAN	NCH-115	115.0	1.94	1.28	9.748+j32.765	26.745+j83.309	2.15	1.41	9.560+j32.552	26.730+j83.065
NOGALES	NGL-115	115.0	9.31	6.64	1.960+j6.856	3.602+j15.331	11.20	7.73	1.713+j6.292	3.535+j14.894
NORTE	NOR-115	115.0	33.55	27.11	0.422+j1.933	0.572+j3.367	40.01	31.65	0.343+j1.793	0.559+j3.245
NUEVO MORELOS	NMO-115	115.0	3.74	2.28	4.760+j17.123	11.671+j50.691	4.26	2.55	4.519+j16.536	11.602+j50.342
NUEVO PEMEX	NPX-115	115.0	4.55	3.44	3.164+j14.236	10.934+j27.311	5.10	3.81	3.076+j13.990	10.927+j27.245
OAXACA	OAX-115	115.0	4.58	4.07	3.742+j14.009	4.475+j19.457	5.17	4.58	3.509+j13.691	4.441+j19.076
OAXACA DOS	OXD-115	115.0	5.76	5.16	2.914+j11.144	3.262+j15.274	6.55	5.83	2.686+j10.822	3.233+j14.918
OAXACA PONIENTE	OAP-115	115.0	4.92	4.93	3.482+j13.042	2.622+j13.150	5.56	5.58	3.250+j12.721	2.587+j12.763
OAXACA POTENCIA	EXP-230	230.0	3.97	4.05	7.603+j32.560	3.266+j31.622	4.60	4.67	6.720+j31.002	3.123+j30.271
OAXACA POTENCIA	EXP-115	115.0	6.69	7.76	2.402+j9.633	0.404+j5.903	7.64	8.91	2.177+j9.303	0.366+j5.509
OAXACA UNO	OAU-230	230.0	3.47	4.16	6.421+j37.718	2.289+j19.469	5.08	5.71	3.838+j28.509	2.248+j19.218
OCOTLAN	OCT-115	115.0	3.10	2.27	5.584+j20.694	9.513+j43.995	3.46	2.53	5.342+j20.402	9.394+j43.265
OCOZINGO	OCO-115	115.0	1.35	0.88	15.611+j46.669	47.988+j119.498	1.51	0.97	15.217+j46.058	48.009+j119.043
OCOZUCAUTLA	OCZ-115	115.0	6.80	4.65	2.288+j9.489	4.649+j22.907	8.05	5.30	1.994+j8.845	4.645+j22.716
OJO DE AGUA POTENCIA	OJP-400	400.0	12.39	12.86	3.261+j18.352	1.693+j16.709	19.03	17.63	1.929+j13.207	1.686+j16.511
OJO DE AGUA POTENCIA	OJP-115	115.0	20.52	21.11	0.556+j3.188	0.267+j2.973	26.44	26.13	0.364+j2.739	0.267+j2.851
OLINALA	OLN-115	115.0	1.21	0.86	15.352+j52.610	34.705+j116.938	1.40	0.97	13.380+j50.288	34.699+j116.645
OMEALCA	OME-115	115.0	3.25	1.74	3.360+j20.143	16.472+j71.640	4.30	3.16	2.408+j16.796	6.469+j34.906
OMETEPEC	OMT-115	115.0	1.55	0.90	15.766+j39.778	36.992+j132.019	1.74	1.00	14.930+j39.236	36.727+j131.141
ORIENTE	ORT-115	115.0	20.73	15.03	0.706+j3.124	1.299+j6.739	23.81	16.91	0.628+j3.002	1.297+j6.709
ORIZABA	ORI-115	115.0	15.03	13.68	0.929+j4.319	1.006+j5.655	19.42	17.43	0.655+j3.704	0.866+j4.978
OXCHUC	OXC-115	115.0	2.02	1.33	9.604+j31.350	29.919+j79.114	2.28	1.48	9.217+j30.695	29.941+j78.661
PACHAMAMA II MANIOBRAS	MPA-400	400.0	12.47	9.21	2.420+j18.361	9.111+j37.842	15.73	10.96	1.499+j16.078	8.989+j36.713
PAGÉS	PAG-115	115.0	17.94	14.85	0.835+j3.606	1.106+j5.926	24.52	18.80	0.549+j2.927	1.042+j5.599
PAGÉS	PAG-115B	115.0	17.94	14.85	0.835+j3.606	1.106+j5.926	24.52	18.80	0.549+j2.927	1.042+j5.599
PAJARITOS DOS	PJD-115	115.0	15.96	14.35	0.806+j4.082	0.620+j5.658	19.99	18.10	0.663+j3.592	0.574+j4.841
PAKAL	PKN-115	115.0	3.00	2.38	5.365+j21.504	13.968+j36.902	3.59	2.77	4.579+j19.805	13.843+j36.223
PALENQUE	PLQ-115	115.0	2.36	1.80	7.163+j27.190	20.189+j51.027	2.78	2.06	6.362+j25.516	20.064+j50.348



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
PALMAR DE BRAVO	PLB-115	115.0	4.59	3.21	4.900+j13.600	8.046+j32.295	5.12	3.56	4.785+j13.443	8.007+j32.089
PALMAS	PMM-115	115.0	9.90	8.20	0.908+j6.642	2.096+j10.680	13.46	10.09	0.643+j5.389	2.095+j10.664
PANOTLA	PNA-115	115.0	12.08	8.00	1.562+j5.271	3.892+j13.393	13.58	8.89	1.490+j5.166	3.890+j13.370
PANTEPEC	PPC-230	230.0	5.47	5.23	4.011+j23.962	2.777+j27.501	6.39	6.01	3.592+j22.591	2.663+j26.994
PANTEPEC	PPC-115	115.0	8.73	9.87	1.324+j7.494	0.387+j4.984	10.07	11.37	1.214+j7.147	0.356+j4.774
PAPAGAYO	PPG-115	115.0	4.20	2.99	5.376+j14.848	13.760+j32.296	5.38	3.53	3.744+j13.047	13.756+j32.163
PAPALOTLA	PPL-115	115.0	19.70	13.07	0.632+j3.310	1.896+j8.308	22.68	14.80	0.553+j3.173	1.881+j8.180
PAPANOA	PPN-115	115.0	1.25	1.16	12.115+j51.515	39.117+j56.059	2.41	1.99	7.750+j29.336	25.506+j43.217
PAPANTLA DISTRIBUCIÓN	PPD-115	115.0	9.26	6.99	1.104+j7.088	3.097+j13.819	11.35	8.11	0.948+j6.367	3.096+j13.796
PAPANTLA POTENCIA	PPT-400	400.0	15.06	12.96	1.609+j15.251	4.308+j22.343	19.60	15.83	1.001+j12.921	4.360+j21.734
PAPANTLA POTENCIA	PPT-115	115.0	18.67	17.79	0.289+j3.545	0.559+j4.046	22.38	20.79	0.228+j3.256	0.556+j3.969
PAPELERA TUXTEPEC	PTU-230	230.0	5.05	3.63	4.007+j26.002	12.570+j55.773	6.00	4.18	3.346+j24.105	12.535+j54.671
PARAÍSO	PSO-115	115.0	6.90	5.82	2.005+j9.405	3.937+j14.555	7.90	6.59	1.835+j9.059	3.861+j14.322
PARAISO RURAL	PSD-115	115.0	5.14	3.83	3.036+j12.547	6.608+j25.428	5.83	4.29	2.863+j12.207	6.532+j25.195
PAREDÓN PEMEX	PPX-115	115.0	2.67	1.84	6.469+j23.993	22.378+j54.717	2.98	2.04	6.312+j23.649	22.352+j54.523
PARQUE INDUSTRIAL	PRQ-115	115.0	5.56	4.04	2.219+j11.738	7.630+j24.387	6.31	4.52	2.063+j11.397	7.593+j24.294
PARQUE INDUSTRIAL API	PII-115	115.0	5.41	4.10	2.852+j11.942	6.104+j23.365	6.13	4.60	2.680+j11.601	6.028+j23.133
PARQUE INDUSTRIAL DE ENERGÍA RENOVABLE, S.A. DE C.V.	PIE-230	230.0	4.81	5.17	2.613+j27.483	1.707+j21.875	5.38	5.78	2.434+j27.052	1.675+j21.501
PARRILLA	PLL-115	115.0	16.39	14.48	0.700+j3.989	0.974+j5.685	20.10	17.00	0.520+j3.597	0.962+j5.605
PASEO TABASCO	PTB-115	115.0	11.77	13.35	1.048+j5.542	1.857+j3.451	13.83	15.41	0.882+j5.207	1.855+j3.430
PASO DEL TORO	PDT-115	115.0	13.35	9.61	1.193+j4.829	2.317+j10.555	18.27	13.44	0.793+j3.917	1.590+j8.154
PE INGENIO	EIN-230	230.0	3.52	4.16	5.822+j37.238	2.522+j20.627	5.35	5.84	3.076+j27.132	2.489+j20.370
PERIFÉRICO SUR	PES-115	115.0	9.89	6.90	1.246+j6.596	3.296+j15.248	11.50	7.79	1.088+j6.258	3.292+j15.205
PEROTE DOS	PEE-115	115.0	4.82	5.03	2.711+j13.501	2.692+j11.783	6.14	6.12	2.008+j11.721	2.651+j11.666
PETATLÁN	PTT-115	115.0	1.93	1.74	7.439+j33.556	23.393+j40.434	3.07	2.61	5.685+j23.081	18.008+j32.534
PETROQUÍMICA ESCOLIN	PQS-115	115.0	11.51	11.40	0.908+j5.695	1.859+j5.685	16.42	14.78	0.650+j4.401	1.859+j5.668
PEÑITAS	PEA-230	230.0	10.16	8.78	1.788+j12.946	3.351+j19.140	16.41	17.27	0.740+j8.869	0.510+j7.495
PEÑITAS	PEA-115	115.0	4.99	3.65	2.958+j12.974	9.957+j26.271	5.66	4.10	2.805+j12.586	9.919+j26.000
PEÑITAS DOS	PED-115	115.0	5.00	3.66	2.944+j12.947	9.920+j26.193	5.68	4.11	2.791+j12.559	9.882+j25.920
PICHUCALCO	PCO-115	115.0	5.62	3.70	2.597+j11.524	8.952+j29.090	6.37	4.12	2.451+j11.204	8.947+j29.030
PIE DE LA CUESTA	PIC-230	230.0	3.67	4.48	12.717+j33.878	1.806+j16.820	5.43	6.22	6.644+j26.060	1.905+j16.557
PIE DE LA CUESTA	PIC-115	115.0	6.29	8.17	3.605+j9.920	0.271+j3.370	9.12	11.35	1.962+j7.768	0.290+j3.286
PIEDRAS NEGRAS	PNS-115	115.0	5.33	3.04	2.749+j12.155	9.154+j39.497	7.06	4.09	2.085+j10.133	7.388+j31.988
PIER II QUECHOLAC FELIPE ÁNGELES S.A. DE C.V.	PDQ-115	115.0	5.98	5.58	2.863+j10.731	1.597+j13.488	6.70	6.29	2.733+j10.545	1.516+j13.069
PINOTEPA NACIONAL	PIN-115	115.0	1.65	0.96	14.118+j37.809	31.590+j122.678	1.83	1.07	13.627+j37.517	31.097+j120.851
PLAYA DIAMANTE	PDI-115	115.0	5.06	5.29	4.600+j12.298	2.300+j11.230	6.78	6.67	2.901+j10.368	2.303+j11.082
PLAYA NORTE	PYN-115	115.0	18.54	15.25	0.782+j3.495	0.962+j5.839	25.41	19.30	0.505+j2.829	0.918+j5.523
PLAYA VICENTE	PVC-115	115.0	1.86	1.05	9.661+j34.444	36.095+j112.433	2.08	1.17	9.416+j33.892	35.935+j111.092
PLAYAS	PYS-115	115.0	4.75	5.02	4.565+j13.205	2.604+j11.510	6.35	6.31	2.863+j11.131	2.630+j11.409
POCHUTLA	POC-115	115.0	1.63	1.08	13.873+j38.319	30.748+j97.574	1.81	1.24	13.486+j37.992	29.488+j91.800



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
POLIDES A	PLS-115	115.0	11.77	8.64	1.283+j5.493	2.817+j11.472	13.35	9.65	1.184+j5.339	2.812+j11.452
POLIFIL	POF-115	115.0	18.25	14.49	0.705+j3.568	1.220+j6.375	20.63	16.20	0.642+j3.482	1.219+j6.343
POMOCA	PMC-115	115.0	15.96	16.48	0.791+j4.084	0.508+j3.881	19.19	19.21	0.628+j3.753	0.507+j3.860
PONIENTE	PON-115	115.0	23.82	16.57	0.668+j2.706	1.300+j6.338	27.66	18.83	0.587+j2.575	1.289+j6.242
PORCEL	POR-115	115.0	19.94	13.15	0.663+j3.264	1.850+j8.304	22.91	14.84	0.584+j3.134	1.841+j8.213
POTRERO DOS	PTD-115	115.0	6.41	4.64	3.111+j9.883	6.360+j21.268	7.40	5.24	2.909+j9.436	6.353+j21.157
POZA RICA	PRI-230	230.0	13.57	14.89	1.032+j9.734	0.651+j7.138	18.54	19.15	0.538+j7.862	0.664+j6.976
POZA RICA	PRI-115	115.0	15.92	20.52	0.460+j4.144	0.052+j1.367	26.17	31.55	0.188+j2.784	0.052+j1.351
POZA RICA	PRI-69	69.0	13.46	18.55	0.215+j2.951	0.027+j0.522	24.08	31.45	0.065+j1.819	0.028+j0.536
POZA RICA DOS	PRD-400	400.0	22.01	19.65	1.094+j10.437	2.205+j14.002	31.38	25.84	0.540+j8.077	2.207+j12.965
POZA RICA DOS	PRD-230	230.0	14.84	16.63	0.852+j8.905	0.402+j6.051	20.20	21.46	0.426+j7.217	0.397+j5.819
POZA RICA TRES	PRT-69	69.0	8.90	8.13	0.520+j4.448	1.101+j5.640	13.10	10.57	0.357+j3.325	1.101+j5.654
POZO RANEY	PZR-115	115.0	4.22	2.87	5.261+j14.824	26.822+j28.857	5.48	3.41	3.576+j12.835	26.834+j28.747
POZOS HUAZUNTLAN	POZ-115	115.0	5.36	3.46	4.299+j11.611	8.628+j31.753	6.15	3.90	4.135+j11.124	8.595+j31.455
PROCTER & GAMBLE MANUFACTURAS S DE R.L. DE C.V.	PGC-115	115.0	9.12	7.71	1.323+j7.158	1.531+j11.553	10.16	8.58	1.262+j7.073	1.495+j11.423
PROENERMEX SANTA GERTRUDIS	PSG-115	115.0	12.72	10.18	1.011+j5.121	1.891+j8.936	15.91	12.72	0.757+j4.527	1.556+j7.904
PUEBLA DOS	PBD-400	400.0	21.92	22.76	2.188+j10.306	1.171+j9.491	29.35	28.69	1.305+j8.556	1.137+j9.271
PUEBLA DOS	PBD-230	230.0	17.12	18.28	1.162+j7.668	0.461+j6.340	20.09	21.03	0.865+j7.220	0.450+j6.304
PUEBLA DOS	PBD-115	115.0	40.75	39.21	0.312+j1.599	0.148+j1.840	48.81	45.78	0.235+j1.478	0.145+j1.803
PUEBLA DOS	PBD-115B	115.0	40.75	39.21	0.312+j1.599	0.148+j1.840	48.81	45.78	0.235+j1.478	0.145+j1.803
PUEBLA DOS MIL	PDM-115	115.0	32.83	27.77	0.417+j1.979	0.458+j3.114	38.69	31.86	0.339+j1.857	0.456+j3.080
PUEBLA UNO SF6	PSF-115	115.0	19.19	12.64	0.862+j3.351	1.576+j8.728	21.99	14.20	0.783+j3.228	1.571+j8.670
PUENTE DE IXTLA	PTI-85	85.0	2.98	1.60	2.991+j16.180	10.217+j58.320	3.34	1.77	2.837+j15.894	10.215+j58.082
PUERTO CHIAPAS	PUC-115	115.0	3.23	2.40	6.091+j19.632	13.546+j39.581	3.78	2.75	5.448+j18.521	13.605+j38.776
PUERTO ESCONDIDO	PUE-115	115.0	1.29	0.78	18.723+j47.940	40.369+j146.502	1.43	0.88	18.329+j47.694	39.346+j142.122
PUERTO FRANCO	PFR-115	115.0	11.40	9.25	1.582+j5.606	1.793+j9.883	13.65	10.96	1.451+j5.151	1.762+j9.217
PUERTO MADERO	PTM-115	115.0	3.47	2.60	5.708+j18.275	12.093+j36.278	4.08	2.99	5.067+j17.160	12.152+j35.473
PUERTO MARQUEZ	PUM-115	115.0	5.74	6.67	4.106+j10.817	0.985+j6.773	7.99	8.78	2.407+j8.820	0.988+j6.620
PUNTA IXTAPA, GRO.	PUI-115	115.0	4.14	3.16	2.402+j15.847	6.253+j30.307	6.03	4.27	2.097+j11.937	6.066+j26.434
PUNTA LIMÓN	PLI-115	115.0	1.94	1.38	8.312+j33.146	14.482+j74.454	2.14	1.52	8.268+j33.090	14.465+j74.312
QUEMADO	QMD-230	230.0	3.51	4.43	13.684+j35.215	1.052+j14.776	5.23	6.24	7.204+j26.993	1.161+j14.412
QUEMADO	QMD-115	115.0	6.67	8.97	3.750+j9.225	0.131+j2.396	9.85	12.83	2.043+j7.127	0.160+j2.278
QUEMADO	QMD-69	69.0	8.19	10.91	1.354+j4.670	0.022+j1.272	11.44	14.86	0.714+j3.765	0.077+j1.184
REAL DEL BOSQUE	RDB-115	115.0	9.49	6.93	1.489+j6.835	2.699+j14.516	11.65	8.11	1.194+j6.154	2.686+j14.220
REFINERÍA LÁZARO CÁRDENAS RECONFIGURACIÓN	RLC-115	115.0	10.59	6.91	1.137+j6.164	3.512+j16.012	13.73	11.57	0.827+j5.255	0.920+j8.302
REFINERÍA MINATITLÁN	RMN-115	115.0	9.07	5.74	1.255+j7.213	4.367+j19.673	11.29	6.66	0.982+j6.395	4.361+j19.519
REFINERÍA PEMEX	RFP-115	115.0	10.80	7.06	1.100+j6.047	3.413+j15.650	13.99	11.70	0.800+j5.157	0.956+j8.281
REFINERÍA SALINA CRUZ	RSC-115	115.0	3.16	3.06	5.221+j20.376	5.693+j22.889	4.16	3.79	3.754+j17.148	5.545+j22.386
RENACIMIENTO	REN-115	115.0	6.12	7.76	4.025+j10.074	0.408+j4.081	8.75	10.62	2.319+j8.019	0.418+j3.948
RESURRECCIÓN	RSN-115	115.0	14.87	9.83	0.975+j4.356	2.358+j11.106	16.89	10.99	0.896+j4.231	2.353+j11.051



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
REYES MANTECÓN	RMC-115	115.0	5.24	4.61	2.991+j12.318	3.597+j17.473	5.93	5.21	2.763+j11.998	3.549+j17.060
RIO BLANCO	RBO-115	115.0	9.04	6.41	1.659+j7.156	3.573+j15.986	10.79	7.40	1.419+j6.617	3.537+j15.682
RÍO COATAN	RCT-115	115.0	4.02	3.19	4.530+j15.877	5.602+j28.870	5.11	4.21	3.362+j13.888	3.694+j23.217
RÍO COATAN	RCT-69	69.0	1.72	1.97	1.942+j23.093	1.029+j14.252	3.00	3.78	0.858+j14.588	0.212+j5.505
RÍO GRANDE (NEJAPA)	RGD-115	115.0	1.25	0.74	18.638+j49.660	41.777+j158.592	1.39	0.83	18.223+j49.419	40.923+j155.187
RÍO GRANDE (NEJAPA)	RGD-115B	115.0	1.00	0.59	22.390+j62.628	51.561+j199.904	1.10	0.65	21.979+j62.392	50.704+j196.492
RÍO MEDIO	RME-115	115.0	16.02	12.67	0.921+j4.042	1.186+j7.354	21.16	15.41	0.650+j3.389	1.170+j7.220
RODRÍGUEZ CLARA	RDC-115	115.0	2.67	1.63	6.826+j23.870	19.055+j70.284	3.00	1.82	6.624+j23.437	18.927+j69.389
SACRIFICIOS	SCF-115	115.0	16.49	13.88	0.960+j3.911	1.582+j6.112	22.79	18.22	0.628+j3.142	1.354+j5.451
SALINA CRUZ	SAC-115	115.0	3.47	3.31	4.644+j18.578	5.656+j21.575	4.56	4.09	3.345+j15.658	5.541+j21.203
SALOYA	SYA-115	115.0	14.94	12.96	0.943+j4.342	1.268+j6.540	17.81	14.89	0.788+j4.023	1.267+j6.515
SAMARIA	SMI-115	115.0	9.38	6.54	1.290+j6.959	3.428+j16.196	10.80	7.34	1.157+j6.662	3.426+j16.162
SAMARIA	SMI-115B	115.0	9.38	6.54	1.290+j6.959	3.428+j16.196	10.80	7.34	1.157+j6.662	3.426+j16.162
SAN CRISTÓBAL ORIENTE	SCO-115	115.0	4.39	2.91	3.905+j14.595	10.893+j36.616	5.10	3.30	3.542+j13.890	10.918+j36.170
SAN FELIPE OAXACA	SFO-115	115.0	4.53	3.95	3.691+j14.178	4.863+j20.526	5.11	4.45	3.462+j13.854	4.830+j20.145
SAN JACINTO TLACOTEPEC	JTL-115	115.0	1.68	1.04	10.399+j38.086	24.997+j110.452	1.87	1.16	10.052+j37.834	24.554+j108.620
SAN JERÓNIMO	JRN-115	115.0	1.77	1.38	11.480+j35.794	21.511+j65.719	2.82	2.14	6.880+j24.989	16.312+j47.648
SAN JOSÉ CHIAPA	JOC-230	230.0	4.99	3.50	4.341+j26.266	15.299+j58.912	5.86	4.05	3.668+j24.666	14.611+j56.328
SAN LORENZO	LRZ-115	115.0	39.37	34.70	0.302+j1.659	0.283+j2.377	47.78	41.69	0.224+j1.512	0.262+j2.208
SAN LORENZO CACAOTEPEC	SLZ-115	115.0	6.11	6.22	2.677+j10.528	1.731+j10.191	6.96	7.08	2.451+j10.201	1.695+j9.805
SAN LUIS	SNL-115	115.0	2.65	1.49	6.348+j24.224	23.027+j80.528	3.18	1.80	5.623+j22.262	21.231+j72.969
SAN LUIS ACATLÁN	SLU-115	115.0	1.22	0.70	19.491+j50.802	47.079+j171.387	1.37	0.77	18.526+j50.165	46.862+j170.668
SAN LUIS MORELIA	SSM-115	115.0	1.14	0.66	17.868+j55.438	43.828+j181.742	1.26	0.72	17.757+j55.332	43.828+j181.717
SAN LUIS SAN PEDRO	SLS-115	115.0	1.06	0.73	18.606+j59.771	39.626+j144.005	2.30	1.73	8.396+j30.660	23.831+j58.239
SAN MARTIN	MAR-115	115.0	24.25	20.62	0.460+j2.699	0.649+j4.151	27.80	23.30	0.391+j2.598	0.646+j4.114
SAN MARTIN	SMT-115	115.0	4.45	2.89	3.494+j14.518	9.899+j37.738	5.16	3.27	3.142+j13.796	9.906+j37.312
SAN MARTIN POTENCIA	MPT-400	400.0	16.90	14.35	2.280+j13.470	3.271+j20.830	20.64	16.76	1.513+j12.214	3.258+j20.672
SAN MARTIN POTENCIA	MPT-115	115.0	27.22	24.67	0.396+j2.406	0.390+j3.190	31.18	27.90	0.332+j2.319	0.389+j3.158
SAN MIGUEL	SMG-115	115.0	12.79	8.60	0.899+j5.111	4.555+j12.077	14.33	9.58	0.838+j5.029	4.503+j11.987
SAN MIGUEL SANTA FLOR	SMF-115	115.0	1.36	0.84	12.053+j47.487	45.864+j132.266	1.50	0.93	11.844+j47.225	45.841+j131.942
SAN PABLO HUIXTEPEC	HTP-115	115.0	4.47	4.29	3.473+j14.456	2.473+j16.574	5.03	4.84	3.238+j14.154	2.411+j16.089
SAN RAFAEL DOS	RFD-115	115.0	2.27	1.59	7.873+j28.165	23.360+j62.295	2.59	1.81	7.429+j27.206	22.968+j60.621
SANTA ANITA	STN-115	115.0	16.08	14.42	0.929+j4.024	1.535+j5.456	18.28	16.18	0.848+j3.903	1.528+j5.446
SANTA ELENA	SEL-115	115.0	1.39	0.87	16.820+j44.879	36.863+j127.904	1.54	0.98	16.432+j44.600	35.724+j122.873
SANTA FE	SNF-115	115.0	9.79	7.21	1.239+j6.666	2.806+j13.784	11.74	8.29	1.007+j6.139	2.801+j13.693
SANTA ROSA	RSO-115	115.0	1.29	0.76	18.223+j48.240	40.636+j155.840	1.43	0.84	17.791+j47.993	39.878+j152.915
SANTA SOFÍA	SNS-115	115.0	4.04	2.73	3.005+j16.172	9.102+j38.960	4.60	3.08	2.798+j15.642	8.984+j38.419
SANTO DOMINGO	STD-115	115.0	3.47	2.49	4.904+j18.494	9.462+j40.919	4.17	2.85	4.303+j16.994	9.459+j40.891
SARABIA	SRB-115	115.0	5.19	4.66	2.945+j12.456	3.418+j16.902	6.15	5.36	2.616+j11.581	3.382+j16.795
SCHPOINA	SCH-115	115.0	2.78	1.95	6.683+j22.910	20.559+j50.816	3.27	2.25	5.945+j21.558	20.168+j48.720



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
SIMOJOVEL	SMJ-115	115.0	1.29	0.79	13.535+j49.711	41.470+j144.893	1.43	0.87	13.359+j49.380	41.463+j144.826
SÍNTESIS ORGÁNICAS, TLAXCALA	SIA-115	115.0	10.77	7.90	1.402+j6.002	3.048+j12.561	12.19	8.81	1.302+j5.848	3.044+j12.541
SIVESA	SIV-115	115.0	10.87	10.05	1.706+j5.863	1.625+j7.458	13.57	12.31	1.385+j5.202	1.539+j6.868
SN. LORENZO POTENCIA	LRP-400	400.0	21.71	22.06	2.145+j10.421	1.180+j10.244	28.48	27.53	1.291+j8.827	1.093+j9.870
SN. LORENZO POTENCIA	LRP-115	115.0	47.20	46.96	0.259+j1.383	0.105+j1.456	58.55	58.42	0.180+j1.234	0.083+j1.281
SN. LORENZO POTENCIA	LRP-115B	115.0	47.20	46.96	0.259+j1.383	0.105+j1.456	58.55	58.42	0.180+j1.234	0.083+j1.281
SOLEDAD DE DOBLADO	SOD-115	115.0	4.06	2.33	3.975+j15.844	12.140+j51.523	4.67	2.60	3.700+j15.207	12.130+j51.389
SOYALÓ	SOY-115	115.0	5.39	3.67	2.829+j11.987	6.326+j29.011	6.31	4.16	2.521+j11.305	6.328+j28.821
SWITCHEO ARRIAGA	SWA-115	115.0	2.49	2.57	7.598+j25.523	3.639+j24.281	2.90	2.94	6.835+j24.202	3.624+j24.047
SWITCHEO VILLACOMALTITLAN	SWV-115	115.0	3.14	2.18	6.379+j20.181	16.424+j46.234	3.69	2.54	5.595+j18.987	15.911+j44.000
TABACHINES	TBH-85	85.0	5.59	4.72	1.504+j8.652	1.574+j13.560	6.38	5.34	1.356+j8.358	1.572+j13.325
TABASCO POTENCIA	TSP-400	400.0	9.16	9.11	4.017+j24.878	2.718+j25.991	13.13	11.81	1.954+j19.255	2.783+j25.694
TABASCO POTENCIA	TSP-230	230.0	13.97	15.62	1.564+j9.378	0.618+j6.702	19.40	20.28	0.834+j7.485	0.625+j6.594
TABASQUILLO	TBQ-115	115.0	2.28	1.58	8.073+j27.966	26.805+j62.376	2.54	1.75	7.889+j27.661	26.804+j62.355
TACOTALPA	TCT-115	115.0	3.30	2.10	5.176+j19.436	16.257+j52.158	3.70	2.33	5.008+j19.099	16.250+j52.092
TAJÍN	TAJ-115	115.0	13.44	13.96	0.670+j4.896	1.238+j4.242	16.69	16.70	0.552+j4.340	1.238+j4.216
TALLERES Y ACEROS S.A. (TYASA)	TYS-400	400.0	11.93	12.36	3.331+j19.067	1.661+j17.500	18.06	16.76	1.994+j13.924	1.657+j17.319
TALLERES Y ACEROS S.A. (TYASA)	TYS-115	115.0	11.75	8.48	0.601+j5.618	0.086+j12.225	13.71	9.66	0.476+j5.308	0.085+j12.036
TAMARINDO DOS	TDD-115	115.0	5.52	4.08	2.277+j11.810	4.511+j24.343	6.22	4.55	2.121+j11.543	4.506+j24.266
TAMAZULAPAN DOS	TAD-115	115.0	1.70	1.04	11.162+j37.311	29.773+j110.057	1.89	1.15	11.001+j37.150	29.763+j109.912
TAMSA DOS	TSD-230	230.0	12.16	10.82	1.944+j10.744	3.032+j14.735	16.29	13.39	1.209+j8.885	3.057+j14.478
TAMSA DOS	TSD-230B	230.0	12.16	10.82	1.944+j10.744	3.032+j14.735	16.29	13.39	1.209+j8.885	3.057+j14.478
TAMULTE	TAT-115	115.0	14.52	12.30	0.870+j4.489	1.665+j7.117	17.15	14.06	0.741+j4.194	1.662+j7.081
TAMULTÉ DE LAS SABANAS	TAS-115	115.0	5.18	3.92	3.169+j12.416	9.447+j23.647	5.86	4.37	2.996+j12.095	9.445+j23.627
TAMULTE MANIOBRAS	TMM-115	115.0	13.73	11.43	0.846+j4.762	1.571+j7.890	16.08	13.01	0.729+j4.482	1.568+j7.849
TAPACHULA	TCH-115	115.0	4.78	3.64	3.400+j13.480	5.045+j26.408	5.97	4.52	2.552+j11.959	4.445+j23.535
TAPACHULA AEROPUERTO	TAE-115	115.0	7.14	6.28	2.152+j9.046	1.862+j13.032	9.23	7.91	1.462+j7.780	1.799+j11.718
TAPACHULA NORTE	TNE-115	115.0	4.92	3.91	3.320+j13.083	4.347+j23.535	6.25	5.03	2.404+j11.429	3.428+j19.936
TAPACHULA ORIENTE	TOE-115	115.0	5.07	3.87	3.065+j12.734	4.580+j24.940	6.32	4.73	2.281+j11.334	4.238+j22.810
TAPACHULA POTENCIA	THP-400	400.0	3.60	3.70	13.739+j62.724	6.144+j58.814	5.21	5.08	7.497+j48.162	6.805+j51.777
TAPACHULA POTENCIA	THP-115	115.0	8.41	8.39	1.612+j7.726	0.579+j8.008	11.05	10.70	0.998+j6.534	0.639+j7.206
TAPANATEPEC	TNP-115	115.0	2.32	1.77	8.185+j27.431	11.399+j53.982	2.68	2.00	7.542+j26.236	11.393+j53.852
TAPIJULAPA	TPJ-115	115.0	2.27	1.47	7.638+j28.253	25.648+j73.256	2.53	1.62	7.467+j27.919	25.641+j73.189
TAXCO	TXO-115	115.0	2.38	2.02	7.033+j26.958	7.424+j42.200	2.92	2.37	5.163+j24.515	7.412+j41.787
TEAPA, TABASCO.	TTB-115	115.0	5.39	3.76	2.988+j11.944	9.942+j26.777	6.12	4.20	2.824+j11.603	9.936+j26.710
TEAPA, VERACRUZ	TEA-115	115.0	19.09	14.94	0.545+j3.434	1.091+j6.418	23.61	18.76	0.437+j3.063	0.888+j5.510
TECALI	TCL-400	400.0	20.28	20.25	2.137+j11.188	1.553+j11.501	28.12	25.70	1.252+j8.948	1.584+j11.532
TECALI	TCL-230	230.0	16.09	17.60	0.970+j8.196	0.431+j6.167	18.83	20.21	0.693+j7.724	0.432+j6.175
TECALI	TCL-115	115.0	26.37	25.98	0.425+j2.482	0.140+j2.655	30.57	29.34	0.346+j2.364	0.145+j2.703
TECAMACHALCO	TML-115	115.0	7.58	4.87	2.191+j8.484	4.858+j22.918	8.46	5.38	2.102+j8.372	4.862+j22.946



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
TECAMACHALCO II	TLD-115	115.0	7.23	4.66	2.173+j8.927	5.007+j23.897	8.06	5.15	2.087+j8.814	5.012+j23.932
TECNOLÓGICO	TNL-115	115.0	3.54	3.09	4.148+j18.317	6.208+j26.523	4.57	3.73	3.026+j15.709	6.135+j26.283
TECOMAXTLAHUACA	TCX-115	115.0	0.80	0.46	22.410+j79.551	61.698+j261.337	0.89	0.51	22.298+j79.447	61.698+j261.312
TECPAN	TCA-115	115.0	1.28	0.91	15.645+j49.387	32.014+j111.748	2.40	1.76	8.134+j29.268	21.301+j59.842
TEHUACÁN	THN-115	115.0	5.29	3.27	3.684+j12.005	8.117+j34.961	5.91	3.62	3.554+j11.844	8.106+j34.869
TEHUANTEPEC	THT-115	115.0	3.54	2.95	4.663+j18.192	8.558+j29.288	4.47	3.51	3.705+j15.919	8.488+j29.078
TEJALPA	TJA-115	115.0	10.52	9.40	1.096+j6.218	1.243+j8.469	11.88	10.54	0.952+j6.074	1.230+j8.394
TELMAC	TLM-115	115.0	15.62	13.71	0.892+j4.157	1.159+j5.953	17.99	15.61	0.781+j3.984	1.134+j5.822
TEMASCAL DOS	TMD-400	400.0	18.11	19.55	2.438+j12.516	1.250+j10.083	29.78	28.64	1.080+j8.463	1.160+j9.474
TEMASCAL DOS	TMD-230	230.0	14.47	16.59	1.242+j9.089	0.311+j5.741	20.27	22.90	0.615+j7.179	0.277+j4.643
TEMASCAL UNO	TMU-230	230.0	11.76	11.56	1.617+j11.173	1.857+j11.803	16.50	17.61	0.867+j8.810	0.707+j7.026
TEMASCAL UNO	TMU-115	115.0	13.95	7.13	0.701+j4.707	3.536+j18.128	20.45	18.30	0.368+j3.553	0.308+j4.689
TEMAXCALAC	TXB-115	115.0	19.41	15.23	0.572+j3.373	1.252+j6.131	21.95	17.04	0.509+j3.288	1.253+j6.097
TEMIXCO	TMX-85	85.0	5.97	4.67	1.424+j8.098	1.802+j15.015	6.83	5.28	1.278+j7.801	1.800+j14.780
TENOSIQUE	TNQ-115	115.0	2.05	1.52	9.150+j31.021	25.186+j61.498	2.39	1.73	8.276+j29.397	25.049+j60.803
TEPALCINGO	TPL-115	115.0	4.44	2.78	3.143+j14.604	8.286+j40.886	4.92	3.07	3.066+j14.526	8.285+j40.855
TEPEACA	TPE-115	115.0	7.51	5.05	1.433+j8.721	4.827+j21.252	8.38	5.58	1.353+j8.605	4.832+j21.300
TEPEJI	TPI-115	115.0	3.81	2.31	4.645+j16.813	11.175+j50.138	4.22	2.55	4.552+j16.701	11.179+j50.156
TEPEYAC, VERACRUZ	TPY-115	115.0	9.18	6.97	1.106+j7.145	2.974+j13.822	11.84	8.28	0.884+j6.103	2.974+j13.804
TEREFTALATOS	TRT-115	115.0	6.71	4.23	3.054+j9.408	6.541+j26.673	7.78	4.78	2.883+j8.932	6.508+j26.376
TERNIUM MÉXICO - LARGOS PUEBLA	TRP-230	230.0	6.89	5.10	3.612+j18.939	8.392+j38.780	7.76	5.67	3.297+j18.525	8.381+j38.744
TEZIUTLAN	TZT-115	115.0	7.54	7.03	1.783+j8.626	0.985+j10.730	9.78	9.32	1.296+j7.351	0.952+j8.507
TEZIUTLAN	TZT-69	69.0	3.15	3.25	0.722+j12.633	0.203+j11.425	4.30	4.48	0.490+j10.181	0.379+j8.949
TEZIUTLAN DOS	TZD-115	115.0	6.03	4.04	2.193+j10.797	4.719+j26.837	7.47	4.87	1.738+j9.615	4.691+j24.988
TEZOYUCA	TEZ-115	115.0	10.44	9.03	1.207+j6.247	1.526+j9.222	11.81	10.14	1.068+j6.092	1.502+j9.124
TIERRA BLANCA	TBL-115	115.0	4.29	2.41	3.988+j14.972	11.692+j50.295	5.01	2.94	3.647+j14.103	10.264+j44.280
TIERRA COLORADA	TIE-115	115.0	3.02	2.24	6.658+j20.980	9.537+j44.075	3.77	2.62	4.869+j18.739	9.554+j43.948
TIHUATLAN DOS	THD-115	115.0	8.21	5.65	1.493+j7.944	6.110+j18.211	9.48	6.37	1.380+j7.582	6.094+j18.083
TILAPA	TIL-69	69.0	0.98	0.80	15.254+j37.460	24.579+j64.500	1.08	0.87	15.236+j37.703	24.580+j64.817
TIXTLA	TIT-115	115.0	4.35	4.43	4.302+j14.649	2.834+j14.162	5.88	5.61	2.465+j12.166	2.831+j13.882
TLACOACHISTLAHUACA	THU-115	115.0	1.20	0.69	19.110+j52.054	46.220+j172.745	1.34	0.76	18.273+j51.519	45.954+j171.866
TLACOLULA	TLL-115	115.0	2.40	1.63	7.513+j26.574	15.074+j65.143	2.68	1.81	7.277+j26.270	15.043+j64.785
TLACOTALPAN	TTA-115	115.0	2.43	1.41	8.567+j25.925	25.391+j83.330	2.80	1.71	7.864+j24.894	21.747+j72.746
TLACOTEPEC	TTP-115	115.0	2.78	1.62	4.992+j23.382	17.433+j72.833	3.07	1.79	4.903+j23.273	17.437+j72.861
TLACOTEPEC	TCE-115	115.0	1.35	0.87	14.956+j46.863	34.005+j125.853	1.57	0.98	13.042+j44.561	33.975+j125.131
TLALTIZAPAN	TLZ-85	85.0	3.68	2.40	2.278+j13.127	5.550+j34.329	4.15	2.67	2.128+j12.837	5.548+j34.092
TLAPA NUEVA	TAN-115	115.0	1.45	0.94	14.001+j43.654	27.355+j116.917	1.69	1.06	12.003+j41.387	27.348+j116.621
TLAPACOYAN	TLY-115	115.0	4.76	5.82	3.336+j13.557	0.569+j6.342	5.77	7.08	2.795+j12.349	0.464+j5.626
TLATLAUQUITEPEC	TUQ-115	115.0	1.86	1.28	10.612+j34.170	19.155+j81.757	2.21	1.46	8.650+j31.840	19.149+j81.465
TLAXIACO	TXI-115	115.0	1.04	0.63	18.889+j61.258	48.175+j182.622	1.14	0.69	18.709+j61.083	48.162+j182.428



**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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
TONALÁ	TNA-115	115.0	1.69	1.47	11.675+j37.406	16.921+j54.432	1.93	1.66	10.900+j36.143	16.907+j54.197
TONANTZINTLA	TNZ-115	115.0	15.37	8.92	0.881+j4.230	3.343+j13.312	17.49	9.99	0.797+j4.099	3.326+j13.191
TRANSISTMICA (MANIOBRAS SEDENA)	TST-115	115.0	4.33	4.19	3.584+j14.894	4.938+j16.997	5.57	5.08	2.758+j12.819	4.864+j16.813
TRES ESTRELLAS	TTE-400	400.0	19.63	19.34	0.874+j11.735	0.864+j11.895	30.50	31.70	0.363+j8.320	0.332+j6.876
TRES VALLES	TVS-115	115.0	8.15	5.85	1.747+j7.959	3.263+j17.509	10.40	8.46	1.339+j6.896	1.824+j11.873
TROY	TOY-115	115.0	7.38	4.55	1.573+j8.862	4.985+j25.383	8.95	7.81	1.368+j8.041	1.051+j11.808
TULIPÁN	TLN-115	115.0	7.07	6.04	2.375+j9.092	4.518+j13.574	8.06	6.81	2.243+j8.780	4.468+j13.416
TUXPAN DOS	TUD-115	115.0	3.53	2.82	4.636+j18.241	10.620+j31.384	3.96	3.14	4.516+j17.894	10.594+j31.213
TUXPAN VAPOR	TUV-400	400.0	17.17	18.75	1.043+j13.413	0.615+j10.016	29.64	35.09	0.352+j8.563	0.123+j4.447
TUXPANGO	TPG-115	115.0	9.94	7.88	1.353+j6.544	2.207+j11.717	12.49	10.07	1.016+j5.759	1.663+j9.931
TUXTEPEC DOS	TXD-115	115.0	6.02	4.17	2.151+j10.824	4.513+j25.433	6.96	4.75	1.964+j10.304	4.488+j24.834
TUXTEPEC TRES	TPS-115	115.0	8.27	5.84	1.533+j7.884	3.666+j17.798	9.89	6.87	1.314+j7.267	3.636+j16.802
TUXTLA GUTIÉRREZ	TGU-115	115.0	10.70	8.10	1.352+j6.058	2.225+j11.989	13.31	9.56	1.054+j5.386	2.215+j11.721
TUXTLA GUTIÉRREZ DOS	TGD-115	115.0	9.40	6.68	1.666+j6.861	3.081+j15.398	11.56	7.82	1.350+j6.170	3.057+j15.048
TUXTLA NORTE	TXN-115	115.0	10.79	8.11	1.324+j6.010	2.204+j12.064	13.45	9.59	1.021+j5.335	2.191+j11.771
TUXTLA ORIENTE	TXO-115	115.0	7.45	5.00	2.168+j8.639	4.448+j21.618	8.98	5.78	1.838+j7.919	4.408+j21.180
TUXTLA SUR	TXS-115	115.0	12.61	10.31	0.951+j5.179	1.352+j8.695	16.05	12.42	0.668+j4.500	1.344+j8.422
UNILIVER	UNL-115	115.0	3.95	4.63	3.651+j16.422	1.415+j9.249	4.39	5.15	3.507+j16.279	1.402+j9.175
UNIÓN CARBIDE TEAPA	UCT-115	115.0	13.60	9.37	0.949+j4.787	2.217+j11.417	16.25	11.18	0.839+j4.417	2.014+j10.509
UXPANAPA DOS	UXD-115	115.0	6.03	3.86	2.634+j10.700	6.298+j28.978	6.87	4.33	2.517+j10.326	6.288+j28.799
UXPANAPA III	UXT-115	115.0	1.61	0.94	11.442+j39.565	30.294+j125.953	1.80	1.04	11.197+j38.986	30.224+j125.601
UXPANAPA UNO	UXU-115	115.0	3.14	1.85	5.348+j20.425	14.527+j64.144	3.52	2.05	5.231+j20.050	14.517+j63.964
VALLE NACIONAL	VAN-115	115.0	3.13	2.00	4.722+j20.711	11.823+j55.785	3.51	2.23	4.534+j20.294	11.792+j55.339
VALSEQUILLO	VSE-115	115.0	7.98	4.82	1.518+j8.183	5.361+j24.137	8.92	5.34	1.436+j8.061	5.363+j24.121
VEGA DE ALATORRE	VDA-115	115.0	1.38	0.97	16.092+j45.331	31.166+j103.770	1.55	1.09	15.644+j44.384	30.772+j102.092
VENTA	VEN-69	69.0	2.45	2.88	6.096+j15.080	10.107+j4.805	3.97	4.76	2.803+j10.676	2.597+j5.041
VERACRUZ DOS	VRD-230	230.0	14.45	16.05	1.739+j9.027	0.784+j6.456	21.70	22.85	0.850+j6.679	0.705+j5.629
VERACRUZ DOS	VRD-115	115.0	22.34	26.71	0.570+j2.916	0.167+j1.523	32.02	36.73	0.306+j2.260	0.157+j1.389
VERACRUZ UNO	VRU-115	115.0	17.95	14.96	0.822+j3.606	1.146+j5.818	24.82	19.55	0.527+j2.895	1.028+j5.216
VETROTEX	VET-115	115.0	14.52	12.49	0.946+j4.473	1.159+j6.735	16.68	14.20	0.833+j4.300	1.129+j6.583
VIDRIERA DE TIERRA BLANCA	VTB-115	115.0	5.55	3.14	2.286+j11.745	9.343+j38.465	6.63	3.86	1.923+j10.842	8.237+j33.750
VILLA FLORES DOS	VFD-115	115.0	1.57	0.92	12.304+j40.444	36.095+j127.457	1.75	1.02	11.977+j39.864	36.091+j127.262
VILLAHERMOSA CENTRO	VHC-115	115.0	13.04	9.43	1.133+j4.963	2.416+j10.910	15.32	10.69	0.997+j4.661	2.413+j10.870
VILLAHERMOSA DOS	VID-115	115.0	14.00	12.01	0.918+j4.652	1.623+j7.040	16.78	13.87	0.742+j4.290	1.617+j6.997
VILLAHERMOSA NORTE	VHN-230	230.0	10.51	10.31	2.181+j12.446	1.841+j13.654	13.31	12.37	1.536+j10.866	1.858+j13.580
VILLAHERMOSA NORTE	VHN-115	115.0	16.79	18.55	0.747+j3.884	0.289+j2.965	20.30	21.79	0.583+j3.550	0.287+j2.945
VILLAHERMOSA PONIENTE	VIP-115	115.0	13.57	11.10	1.002+j4.790	1.954+j8.116	16.02	12.68	0.856+j4.478	1.952+j8.085
VILLAHERMOSA UNO	VIU-115	115.0	7.76	7.25	1.651+j8.398	8.184+j8.308	8.92	8.20	1.474+j8.050	8.176+j8.282
VISTAMAR	VIS-115	115.0	10.67	7.98	1.554+j6.024	2.524+j12.418	12.65	9.28	1.427+j5.595	2.510+j11.911
VOLKSWAGEN	VWG-115	115.0	41.66	37.84	0.291+j1.567	0.255+j2.088	50.92	45.92	0.212+j1.419	0.233+j1.913



**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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
XALAPA DE DÍAZ	JDD-230	230.0	5.45	4.22	3.523+j24.120	12.226+j44.293	6.51	4.88	2.829+j22.269	12.209+j43.331
XICOTENCATL	XIT-115	115.0	17.43	16.41	0.740+j3.736	0.653+j4.514	20.19	18.84	0.628+j3.563	0.623+j4.366
XICOTEPEC	XIP-85	85.0	6.82	1.34	1.513+j7.032	20.075+j93.653	9.97	8.95	0.994+j5.321	1.548+j7.023
XOCHICALCO	XCH-85	85.0	2.90	1.41	3.140+j16.608	13.200+j69.156	3.25	1.57	2.985+j16.321	13.198+j68.918
XOXTLA-CORONANGO	XCR-115	115.0	16.85	10.71	0.726+j3.873	2.458+j10.456	19.28	12.08	0.645+j3.732	2.439+j10.304
YAUTEPEC POTENCIA	YTP-400	400.0	23.83	23.63	1.850+j9.512	1.344+j9.913	30.27	28.50	1.123+j8.316	1.346+j9.880
YAUTEPEC POTENCIA	YTP-230	230.0	19.03	21.58	1.125+j6.888	0.356+j4.522	22.69	25.16	0.741+j6.395	0.356+j4.534
YAUTEPEC POTENCIA	YTP-115	115.0	19.55	20.01	0.355+j3.378	0.161+j3.166	22.11	22.48	0.279+j3.291	0.160+j3.139
YECAPIXTLA	YCP-230	230.0	10.60	9.35	1.811+j12.391	2.607+j17.408	12.15	10.55	1.450+j11.938	2.574+j17.305
YOLOMECATL	YOL-115	115.0	1.43	0.88	13.617+j44.462	35.815+j128.828	1.58	0.97	13.441+j44.283	35.802+j128.637
YUCUDAA	YUC-115	115.0	1.75	1.09	11.093+j36.265	29.615+j101.970	1.94	1.21	10.918+j36.084	29.603+j101.781
ZACAPOAXTLA	ZXP-115	115.0	2.62	1.98	5.900+j24.623	17.203+j47.142	3.00	2.24	5.592+j23.677	17.288+j46.257
ZACATEPEC	ZTP-115	115.0	2.03	1.24	7.859+j31.713	21.982+j92.471	2.26	1.37	7.659+j31.338	22.010+j92.259
ZANATEPEC	ZNT-115	115.0	2.48	1.70	7.441+j25.761	14.226+j62.336	2.87	1.91	6.866+j24.519	14.222+j62.276
ZAPATA	ZAP-230	230.0	14.69	14.61	1.903+j8.835	1.380+j9.114	18.06	17.32	1.270+j7.986	1.368+j9.023
ZAPATA	ZAP-115	115.0	15.47	17.49	0.645+j4.242	0.171+j2.817	17.71	19.91	0.503+j4.092	0.164+j2.760
ZAPATA	ZAP-85	85.0	7.61	7.54	0.893+j6.382	0.189+j6.659	8.81	8.68	0.751+j6.081	0.187+j6.424
ZAPATA DOS	ZPD-115	115.0	7.15	7.91	1.688+j9.129	0.631+j6.648	9.83	10.52	0.946+j7.370	0.507+j5.971
ZAPATA ORIENTE	ZPO-115	115.0	4.28	3.43	3.539+j15.100	9.950+j25.377	5.14	3.97	3.003+j13.876	9.899+j25.055
ZAPATA PONIENTE	EZA-115	115.0	3.90	3.30	4.050+j16.521	8.713+j24.898	4.81	3.92	3.253+j14.816	8.584+j24.215
ZIHUATANEJO	ZIH-115	115.0	3.76	2.78	2.905+j17.395	7.578+j35.525	5.39	3.72	2.545+j13.310	7.320+j30.958
ZIHUATANEJO DOS	ZHD-115	115.0	3.81	2.81	2.868+j17.186	7.150+j35.181	5.70	3.98	2.430+j12.580	6.715+j28.610
ZINACATEPEC	ZIP-115	115.0	2.83	1.65	6.935+j22.401	17.701+j71.850	3.14	1.82	6.803+j22.235	17.693+j71.766
ZINACATEPEC	ZIP-69	69.0	1.79	2.04	3.111+j22.023	0.000+j14.167	1.95	2.22	3.081+j22.274	0.000+j14.482
ZOCAC	ZOC-230	230.0	13.04	12.69	2.036+j9.977	2.205+j10.895	15.96	15.04	1.559+j9.021	2.124+j10.592
ZOCAC	ZOC-115	115.0	18.15	17.70	0.710+j3.590	0.524+j3.939	21.07	20.40	0.597+j3.415	0.494+j3.787
ZONGOLICA	ZGL-115	115.0	4.17	2.41	2.771+j15.698	12.560+j49.425	5.50	4.93	1.934+j13.137	2.558+j17.723

Gerencia de Control Regional Occidental



[Regresar a mapa del SEN](#)



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
3M	P3M-115	115.0	16.91	16.13	1.075+j3.776	0.887+j4.424	21.55	19.50	0.715+j3.313	0.881+j4.377
ABASOLO	ABS-115	115.0	8.78	8.57	1.736+j7.359	1.642+j7.942	9.89	9.69	1.560+j7.218	1.594+j7.683
ABASOLO DOS	ABA-230	230.0	6.12	5.45	4.518+j21.233	4.076+j29.485	6.99	6.19	3.802+j20.542	3.886+j28.814
ABASOLO DOS	ABA-115	115.0	9.61	10.17	1.488+j6.745	0.632+j5.757	10.85	11.56	1.311+j6.601	0.581+j5.486
ABASTOS	ABT-115	115.0	7.84	7.04	2.357+j8.131	2.485+j11.224	9.11	8.06	2.045+j7.750	2.457+j11.060
ACÁMBARO	AQM-110	115.0	5.20	3.64	3.559+j12.274	7.578+j28.446	6.01	4.12	3.242+j11.715	7.515+j28.210
ACAPONETA	ACP-115	115.0	1.22	0.82	20.186+j50.406	52.872+j122.165	1.38	0.92	19.222+j49.312	52.802+j121.768
ACATLÁN	ATN-400	400.0	11.03	12.36	8.060+j19.315	1.940+j14.432	21.02	19.75	1.939+j11.927	1.984+j14.283
ACATLÁN	ATN-230	230.0	14.73	17.90	3.286+j8.396	0.451+j4.320	23.65	26.32	1.072+j6.081	0.452+j4.281
ACATLÁN	ATN-115	115.0	11.63	14.21	1.092+j5.603	0.107+j2.625	14.34	17.07	0.501+j5.067	0.108+j2.652
ACATLÁN	ATN-69	69.0	22.16	25.22	0.414+j1.749	0.059+j1.157	27.77	30.61	0.206+j1.564	0.058+j1.140
ACERLAN SA	ACR-115	115.0	11.66	11.13	1.470+j5.503	1.273+j6.390	14.58	13.29	1.196+j4.864	1.272+j6.343
ACERLAN SA	ACR-69	69.0	11.56	10.19	0.949+j3.314	1.043+j4.729	13.81	11.83	0.721+j3.089	1.039+j4.652
ACERO SAN LUIS	ACE-115	115.0	16.00	14.94	1.238+j3.961	1.169+j4.909	20.24	18.00	0.876+j3.501	1.155+j4.825
ACUEDUCTO	ACU-69	69.0	12.89	8.81	0.928+j2.948	1.556+j7.233	15.42	10.08	0.693+j2.756	1.551+j7.195
ACUEDUCTO II	AUD-115	115.0	2.96	2.55	3.906+j22.118	5.528+j32.799	3.75	3.17	2.787+j19.269	4.980+j29.737
AEROESPACIAL	ARL-115	115.0	15.28	11.49	0.855+j4.260	1.479+j8.519	17.45	13.08	0.780+j4.111	1.415+j8.262
AEROPUERTO	AER-115	115.0	5.05	4.04	3.632+j12.626	6.711+j22.171	5.84	4.60	3.275+j12.062	6.655+j21.943
AEROPUERTO ZACATECAS	AEZ-115	115.0	6.44	5.50	2.723+j9.951	3.196+j15.248	7.50	6.27	2.272+j9.465	3.185+j15.161
AEROTECH	AET-115	115.0	15.43	11.63	0.836+j4.222	1.440+j8.393	17.62	13.28	0.762+j4.075	1.354+j8.086
AGAVE	AVE-115	115.0	2.71	2.31	8.230+j23.053	13.366+j34.976	3.03	2.56	7.845+j22.833	13.321+j34.744
AGOSTADERITO	AGO-115	115.0	13.09	10.35	1.133+j4.944	1.169+j9.043	15.53	11.87	0.840+j4.628	1.163+j8.997
AGROGEN, S.A. DE C.V.	AGR-115	115.0	11.14	7.54	1.388+j5.798	2.714+j14.227	12.28	8.33	1.300+j5.806	2.691+j14.150
AGROINDUSTRIAL	AIL-115	115.0	6.24	3.94	2.922+j10.238	9.226+j27.847	6.97	4.37	2.755+j10.109	9.212+j27.719
AGUA AZUL	AGZ-230	230.0	8.97	7.93	4.416+j14.129	4.839+j20.057	12.10	9.84	2.145+j11.880	4.788+j19.845
AGUAMILPA	AGM-400	400.0	5.87	5.35	10.388+j37.963	9.186+j50.044	13.81	15.91	1.571+j18.323	0.611+j11.070
AGUAMILPA	AGM-115	115.0	2.29	1.69	7.746+j28.003	23.227+j55.268	2.78	1.96	6.250+j25.564	23.166+j54.884
AGUAPRIETA	APR-230	230.0	8.94	8.29	4.447+j14.179	3.410+j18.090	13.82	13.12	1.660+j10.441	1.720+j12.127
AGUASCALIENTES NORTE	AGN-115	115.0	17.29	12.80	0.988+j3.712	0.663+j7.918	20.84	14.70	0.707+j3.433	0.662+j7.909
AGUASCALIENTES ORIENTE	AGS-230	230.0	16.02	17.05	2.262+j7.974	1.180+j6.721	21.47	21.49	1.170+j6.702	1.179+j6.712
AGUASCALIENTES ORIENTE	AGS-115	115.0	21.84	23.86	0.747+j2.947	0.210+j2.282	26.95	28.45	0.469+j2.669	0.210+j2.290
AGUASCALIENTES PONIENTE	AGP-115	115.0	12.85	10.17	1.144+j5.040	0.812+j9.252	15.16	11.62	0.855+j4.740	0.802+j9.212
AGUASCALIENTES POTENCIA	APT-400	400.0	14.54	16.26	4.901+j15.109	1.425+j10.908	21.44	21.99	1.885+j11.697	1.425+j10.920
AGUASCALIENTES POTENCIA	APT-230	230.0	17.89	20.40	2.065+j7.130	0.573+j4.703	24.38	26.27	0.999+j5.908	0.570+j4.690
AGUASCALIENTES POTENCIA	APT-115	115.0	20.90	21.75	0.711+j3.096	0.212+j2.819	26.34	26.35	0.412+j2.743	0.208+j2.773
AGUASCALIENTES SUR	ASS-115	115.0	13.10	9.79	1.168+j4.930	1.658+j10.093	15.55	11.18	0.872+j4.616	1.656+j10.073
AGUASCALIENTES UNO	AGT-230	230.0	12.19	11.13	2.687+j10.552	2.735+j13.777	15.46	13.35	1.592+j9.312	2.705+j13.703
AGUASCALIENTES UNO	AGT-115	115.0	16.11	15.32	0.890+j4.024	0.545+j4.747	19.25	17.80	0.609+j3.744	0.528+j4.702
AGYDSA	AGY-69	69.0	19.57	18.58	0.647+j1.930	0.375+j2.352	24.38	22.36	0.420+j1.748	0.355+j2.262
AHRESTY	ART-115	115.0	7.20	6.44	2.736+j8.812	3.122+j12.112	8.43	7.38	2.302+j8.354	3.101+j11.984



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
AHUACATLÁN	AHN-110	115.0	0.90	0.57	26.576+j68.997	70.022+j187.495	1.39	0.72	14.122+j50.519	70.343+j187.656
ALAMEDA	ALA-69	69.0	9.00	7.34	1.242+j4.250	1.967+j7.164	10.57	8.41	0.999+j4.022	1.948+j7.081
ALAMOS	ALS-230	230.0	9.07	8.05	4.401+j13.961	4.257+j19.838	12.28	9.99	2.122+j11.703	4.194+j19.622
ALAMOS	ALS-69	69.0	10.58	11.99	0.847+j3.667	0.167+j2.462	12.62	14.23	0.612+j3.418	0.153+j2.301
ALFA NISSAN	ALF-115	115.0	13.17	11.82	1.113+j4.916	0.907+j6.732	15.72	13.71	0.813+j4.576	0.893+j6.638
ALFA NISSAN MANIOBRAS	AIS-115	115.0	14.99	14.70	0.998+j4.314	0.465+j4.698	18.11	17.28	0.698+j3.973	0.451+j4.604
ALKANOVA	ALK-69	69.0	6.13	4.65	1.453+j6.329	2.530+j12.448	7.07	5.27	1.216+j6.082	2.516+j12.290
ALMERIA	ALM-69	69.0	3.26	2.07	5.169+j11.053	11.998+j31.020	3.72	2.31	4.808+j10.767	11.997+j31.003
ALUPRINT	ALU-115	115.0	18.67	19.74	1.040+j3.401	0.474+j2.962	24.12	24.35	0.683+j2.950	0.468+j2.913
ALZA	ALZ-115	115.0	6.93	5.89	2.765+j9.180	3.992+j14.070	8.10	6.76	2.324+j8.708	3.947+j13.863
ALZADA	AZA-115	115.0	3.19	2.61	6.331+j19.842	8.969+j33.413	3.71	2.97	5.596+j18.877	8.947+j33.305
AMATITÁN	AMT-69	69.0	3.08	2.38	4.723+j12.054	6.532+j23.416	4.03	3.28	3.455+j10.322	5.064+j17.610
AMECA	AMK-115	115.0	2.18	1.41	7.179+j29.653	20.701+j77.818	2.48	1.57	6.275+j28.744	20.702+j77.845
AMERI AXLE& MANUF DE MEX S.A. DE C.V.	AXL-115	115.0	7.09	6.40	2.562+j9.008	4.601+j11.554	7.94	7.13	2.397+j8.884	4.594+j11.499
AMISTAD BAJÍO	AMB-115	115.0	19.01	9.90	0.687+j3.425	3.086+j12.772	20.40	10.79	0.569+j3.534	3.075+j12.792
ANDARES	ADS-69	69.0	13.32	11.24	0.889+j2.856	0.715+j4.630	15.98	13.00	0.654+j2.663	0.708+j4.585
ANGAMACUTIRO DOS	ARD-115	115.0	3.13	2.10	7.462+j19.890	16.676+j49.577	3.58	2.36	6.868+j19.190	16.674+j49.536
ANTEA	NTA-115	115.0	15.57	14.05	1.259+j4.075	0.385+j5.719	17.57	15.69	1.171+j3.989	0.384+j5.714
ANTÚNEZ	ANN-115	115.0	2.86	2.41	7.296+j22.063	7.362+j35.388	3.92	3.66	4.672+j18.060	3.432+j22.512
ANTÚNEZ	ANN-69	69.0	2.84	3.20	3.523+j13.599	0.238+j9.433	4.35	4.71	2.251+j9.808	0.488+j7.952
APA	APA-115	115.0	15.68	15.76	0.938+j4.128	0.598+j4.142	19.03	18.62	0.658+j3.782	0.583+j4.056
APASCO	APP-115	115.0	5.20	3.95	3.917+j12.141	8.845+j23.272	6.35	4.59	3.190+j11.059	8.838+j23.126
APASEO	APS-110	115.0	19.49	15.41	0.757+j3.322	1.286+j5.975	18.43	14.88	0.624+j3.913	1.341+j6.675
APASEO ORIENTE	APO-115	115.0	14.31	10.21	1.572+j4.366	2.779+j9.861	10.89	8.36	2.184+j6.340	3.274+j12.402
APATZINGÁN	APZ-161	161.0	2.61	2.58	9.731+j34.194	4.155+j36.959	3.60	3.42	6.034+j27.739	3.512+j33.098
APATZINGÁN	APZ-115	115.0	3.79	4.12	5.439+j16.650	1.467+j13.397	5.34	5.76	3.227+j13.279	1.153+j10.847
ARANCIA	ARN-115	115.0	13.18	12.32	1.078+j4.921	1.100+j5.989	16.70	14.81	0.824+j4.296	1.100+j5.943
ARANDAS	ARS-115	115.0	2.68	2.24	8.355+j23.276	13.858+j36.864	2.99	2.49	7.970+j23.057	13.814+j36.639
ARBOLEDAS	ABL-115	115.0	7.32	5.91	2.448+j8.736	4.275+j14.971	8.40	6.67	2.104+j8.438	4.259+j14.888
ARELLANO	ARE-115	115.0	12.17	9.23	1.204+j5.321	1.660+j10.547	14.38	10.53	0.909+j4.997	1.658+j10.521
ARIO DE ROSALES	ADR-69	69.0	1.39	0.78	11.144+j26.306	26.381+j93.480	2.18	1.36	6.943+j18.912	15.278+j54.493
ARMERÍA	AIA-115	115.0	4.86	3.47	3.589+j13.169	9.707+j28.542	5.90	4.01	2.864+j12.049	9.694+j28.379
ARRAYANAL	AYL-115	115.0	5.59	4.22	3.227+j11.420	7.289+j22.264	6.90	4.93	2.517+j10.275	7.284+j22.132
ARTEVA SPECIAL TES S.R.L. C.V.	ATV-115	115.0	15.13	13.90	1.025+j4.268	1.049+j5.456	17.02	15.49	0.939+j4.188	1.050+j5.462
ASCENTY MANIOBRAS	AVM-115	115.0	26.40	22.41	0.450+j2.474	0.570+j3.812	31.31	25.91	0.374+j2.302	0.567+j3.746
ASMOLES	ASM-115	115.0	5.34	4.32	3.882+j11.817	7.939+j19.674	6.51	5.04	3.157+j10.773	7.932+j19.554
ASUNCIÓN	ASU-115	115.0	17.00	14.11	0.924+j3.796	0.950+j6.244	20.38	16.27	0.647+j3.524	0.950+j6.248
ATENQUITE GUADALAJARA	TIT-69	69.0	nan	nan	nan+jnan	nan+jnan	14.07	9.12	0.947+j2.967	2.138+j7.910
ATEQUIZA	ATQ-400	400.0	11.10	12.25	7.807+j19.292	2.072+j15.126	21.57	19.69	1.802+j11.638	2.090+j15.008
ATEQUIZA	ATQ-230	230.0	15.07	18.28	3.184+j8.218	0.472+j4.254	23.92	26.71	1.066+j6.013	0.464+j4.174



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
ATEQUIZA	ATQ-69	69.0	16.67	21.58	0.630+j2.306	0.032+j0.774	20.69	26.68	0.403+j2.079	0.028+j0.697
ATOTONILCO	ATO-115	115.0	4.77	6.02	4.411+j13.203	0.655+j5.303	5.38	6.82	4.027+j12.957	0.605+j5.044
AUTLÁN	AUT-115	115.0	1.20	1.10	17.777+j52.480	15.891+j67.871	1.35	1.23	16.971+j51.469	15.922+j68.083
AVENTEC	AVN-115	115.0	16.76	15.90	1.087+j3.810	0.904+j4.527	21.32	19.19	0.727+j3.347	0.898+j4.480
AYALA	AYA-115	115.0	12.06	8.58	1.285+j5.356	2.735+j11.879	13.70	9.61	1.094+j5.217	2.725+j11.829
AYOTLAN	AYN-115	115.0	3.48	3.00	6.034+j18.079	8.700+j26.983	3.90	3.34	5.649+j17.840	8.661+j26.780
AYOTLAN NORTE	ANT-115	115.0	3.29	3.15	6.508+j19.082	7.835+j21.620	3.69	3.51	6.124+j18.849	7.787+j21.373
AYUNTAMIENTO	AYU-115	115.0	12.40	9.02	1.211+j5.214	1.843+j11.246	14.66	10.27	0.915+j4.897	1.841+j11.224
AZUFRES SWITCHEO	AZS-115	115.0	8.57	8.18	1.724+j7.551	1.165+j9.222	11.08	10.18	1.234+j6.478	1.113+j8.933
AZUFRES SWITCHEO SUR	AZW-115	115.0	7.75	6.94	1.883+j8.355	2.301+j11.802	10.01	8.57	1.353+j7.168	2.248+j11.514
BANDERAS	BAN-115	115.0	4.23	4.15	5.318+j14.783	5.177+j15.797	5.06	4.82	4.306+j13.769	5.176+j15.759
BARRACUDA	BCD-115	115.0	12.45	9.47	1.353+j5.158	1.911+j10.201	15.26	11.02	0.985+j4.683	1.902+j10.134
BAÑÓN	BON-110	115.0	2.64	2.43	10.375+j22.879	7.403+j31.335	3.04	2.77	9.489+j22.044	7.149+j30.714
BELTICOS S.A. DE C.V.	BEL-69	69.0	8.48	5.60	1.404+j4.482	3.323+j11.472	9.79	6.30	1.188+j4.314	3.319+j11.443
BICENTENARIO	BCT-115	115.0	7.22	7.34	2.433+j8.874	1.701+j8.576	9.06	8.86	1.725+j7.874	1.684+j8.442
BMW	BMW-230	230.0	9.58	8.87	3.622+j13.381	3.641+j16.819	13.06	11.13	2.135+j10.981	3.601+j16.630
BOCAS	BOC-115	115.0	4.47	3.71	3.420+j14.449	7.693+j22.788	5.09	4.16	3.116+j14.017	7.693+j22.776
BOLAÑOS	BLA-110	115.0	0.90	0.57	34.464+j65.489	61.459+j192.723	0.99	0.63	34.159+j65.259	61.440+j192.675
BONLAN	BNL-115	115.0	16.46	14.70	1.113+j3.878	1.097+j5.386	20.87	17.61	0.754+j3.417	1.092+j5.339
BOQUILLA	BOQ-115	115.0	2.30	1.27	8.707+j27.506	26.139+j96.263	2.56	1.40	8.558+j27.257	26.057+j96.029
BOTELLO	BOT-115	115.0	4.01	2.76	4.984+j15.804	11.108+j37.503	4.70	3.12	4.300+j14.944	11.106+j37.462
BUENA VISTA NORTE	BVN-115	115.0	12.72	9.95	1.427+j5.021	2.295+j9.293	14.33	11.09	1.338+j4.917	2.294+j9.290
BUENAVISTA	BNA-115	115.0	13.87	10.94	1.353+j4.590	1.751+j8.469	15.65	12.19	1.264+j4.493	1.750+j8.463
BUGAMBILIAS	BUG-69	69.0	10.46	9.88	1.097+j3.645	0.571+j4.484	12.15	11.45	0.887+j3.496	0.526+j4.261
C. H. SANTA ROSA	SRO-69	69.0	2.80	2.59	5.586+j13.095	4.121+j17.266	4.05	4.54	3.220+j10.335	0.832+j7.386
C.H. LA YESCA	LYE-400	400.0	4.65	3.21	10.148+j48.671	27.624+j113.239	10.15	4.60	1.618+j24.978	27.636+j112.759
CABLESA	CAB-115	115.0	8.35	8.43	2.007+j7.693	0.834+j7.725	9.13	9.23	1.884+j7.774	0.831+j7.743
CALERA	CAL-230	230.0	6.06	6.91	6.330+j20.965	1.717+j13.918	7.40	8.25	4.705+j19.159	1.674+j13.703
CALERA	CAL-115	115.0	9.87	12.44	1.937+j6.440	0.235+j2.596	11.93	14.89	1.487+j5.937	0.222+j2.505
CALERA INDUSTRIAL	CAI-115	115.0	6.90	5.16	2.483+j9.295	4.094+j18.935	8.31	6.13	1.934+j8.569	3.708+j17.838
CALVILLO	CVO-115	115.0	4.08	2.52	3.759+j15.837	7.523+j45.959	4.58	2.79	3.465+j15.579	7.505+j45.913
CAMPESTRE	CPE-115	115.0	7.99	7.63	2.290+j7.991	1.860+j9.400	9.24	8.72	1.988+j7.650	1.846+j9.280
CAMPOS	CAO-115	115.0	10.34	8.88	1.377+j6.270	1.760+j9.424	14.35	11.19	0.711+j5.038	1.749+j9.238
CAPILLA DE GUADALUPE	CIA-115	115.0	2.31	1.36	9.020+j27.302	24.191+j85.265	2.58	2.34	8.519+j26.950	5.363+j36.841
CAPULÍN	CPL-230	230.0	12.38	13.05	3.664+j10.083	1.620+j9.016	18.09	17.35	1.492+j7.935	1.617+j8.972
CARAPAN DISTRIBUCIÓN	CRD-115	115.0	9.10	5.85	1.624+j7.112	4.164+j18.996	10.24	6.51	1.465+j6.983	4.159+j18.957
CARAPAN POTENCIA	CRP-400	400.0	9.80	9.72	5.614+j22.899	2.738+j24.002	12.96	12.01	2.640+j19.421	2.801+j24.070
CARAPAN POTENCIA	CRP-230	230.0	12.96	15.55	2.530+j9.932	0.462+j5.148	16.67	19.36	1.358+j8.656	0.464+j5.124
CARAPAN POTENCIA	CRP-115	115.0	13.90	16.61	1.082+j4.654	0.186+j2.452	16.89	19.83	0.726+j4.262	0.185+j2.412
CARTONES PODEROSA S.A. DE	PON-115	115.0	12.62	11.92	1.311+j5.095	1.177+j6.078	15.97	14.33	1.037+j4.455	1.177+j6.031



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
CASTILLO	CST-69	69.0	16.56	15.44	0.712+j2.298	0.689+j2.851	20.36	18.27	0.494+j2.095	0.688+j2.810
CASTRO DEL RIO	CDR-115	115.0	10.94	7.25	1.384+j5.909	3.259+j14.983	12.36	8.08	1.225+j5.780	3.254+j14.944
CATARINA	CTA-69	69.0	4.36	2.84	3.803+j8.304	8.248+j22.435	5.02	3.18	3.442+j8.018	8.247+j22.418
CAÑADA	KDA-400	400.0	13.36	14.58	4.959+j16.565	1.746+j12.987	18.96	19.12	2.081+j13.232	1.759+j13.040
CAÑADA	KDA-230	230.0	16.67	19.90	2.027+j7.703	0.413+j4.115	22.42	25.54	0.971+j6.444	0.416+j4.135
CAÑADA	KDA-115	115.0	18.69	18.60	0.758+j3.472	0.292+j3.616	22.35	21.72	0.497+j3.229	0.291+j3.602
CD. HIDALGO	CDH-115	115.0	5.27	3.80	3.436+j12.131	8.887+j25.940	6.09	4.30	3.156+j11.576	8.870+j25.789
CELANECE (OCOTLAN)	CME-115	115.0	4.94	3.61	4.433+j12.700	9.076+j26.854	5.71	4.07	3.943+j12.161	9.074+j26.813
CELAYA AEROPUERTO	CAE-110	115.0	13.37	11.25	1.189+j4.823	1.744+j7.573	14.89	12.53	1.074+j4.784	1.724+j7.481
CELAYA DOS	CYA-230	230.0	15.03	13.54	1.935+j8.619	1.780+j11.641	17.49	15.43	1.538+j8.207	1.751+j11.571
CELAYA DOS	CYA-115	115.0	22.13	23.52	0.634+j2.932	0.308+j2.456	24.80	26.32	0.524+j2.898	0.294+j2.418
CELAYA I	CLY-115	115.0	14.66	11.60	1.090+j4.397	1.980+j7.869	16.18	12.81	0.980+j4.407	1.968+j7.832
CELAYA III	CEY-230	230.0	15.70	13.83	1.992+j8.219	2.052+j11.721	18.52	15.92	1.545+j7.735	2.008+j11.588
CELAYA III	CEY-115	115.0	17.02	17.66	0.827+j3.812	0.381+j3.470	19.08	19.87	0.712+j3.761	0.358+j3.361
CELAYA INDUSTRIAL	CYI-110	115.0	17.41	17.08	0.855+j3.716	0.976+j3.920	19.36	18.91	0.738+j3.699	0.967+j3.931
CELAYA PONIENTE	CLP-115	115.0	12.07	9.28	1.402+j5.317	2.830+j10.082	13.45	10.30	1.289+j5.275	2.816+j10.027
CELAYA SUR	CYS-115	115.0	11.31	7.96	1.486+j5.678	3.691+j12.757	12.46	8.78	1.376+j5.696	3.681+j12.739
CEMENTOS MOCTEZUMA (MATEHUALA)	CMZ-115	115.0	1.24	1.09	24.181+j47.772	18.132+j73.863	1.40	1.24	22.924+j46.807	17.688+j71.364
CEMEX MÉXICO S.A. DE C.V. (C.D GUZMÁN)	CMX-115	115.0	3.69	3.01	5.094+j17.247	6.790+j29.424	4.23	3.40	4.424+j16.690	6.735+j29.082
CEMEX MÉXICO S.A. DE C.V. (GUADALAJARA)	CMX-69	69.0	5.77	4.18	1.937+j6.630	3.301+j14.401	6.63	4.72	1.698+j6.391	3.287+j14.240
CEMEX MÉXICO S.A. DE C.V. (HUICHAPAN)	CMX-230	230.0	6.61	4.86	3.671+j19.758	9.090+j40.803	8.06	5.72	2.943+j17.877	9.064+j39.363
CENTRO	CTR-115	115.0	4.20	4.09	5.183+j14.932	4.021+j16.634	5.04	4.76	4.106+j13.911	4.014+j16.560
CENTRO LOGÍSTICO JALISCO	CLJ-230	230.0	9.75	8.48	4.098+j12.995	5.103+j19.087	13.49	10.60	1.855+j10.670	5.102+j19.035
CENTRO LOGÍSTICO JALISCO	CLJ-115	115.0	5.73	4.90	2.960+j11.201	6.052+j16.416	6.67	5.58	2.360+j10.687	6.044+j16.418
CEPAMISA	CMS-115	115.0	7.44	6.94	2.408+j8.590	2.225+j10.690	8.55	7.89	2.111+j8.278	2.209+j10.565
CERRO BLANCO	CBL-400	400.0	7.46	7.23	9.410+j29.487	6.683+j33.361	14.81	12.75	1.944+j17.042	5.452+j24.931
CERRO DEL MERCADO	COM-115	115.0	5.45	4.88	3.285+j11.730	4.354+j15.873	6.62	5.70	2.571+j10.736	4.339+j15.748
CERRO GORDO	GOC-115	115.0	15.45	12.92	1.092+j4.156	1.386+j6.686	17.75	14.63	0.899+j4.015	1.367+j6.604
CERRO HUECO	CHC-69	69.0	0.92	0.53	20.009+j38.267	43.903+j133.215	1.23	0.75	15.915+j31.890	34.090+j97.607
CERVECERÍA MODELO DE GUADALAJARA	MOD-69	69.0	11.10	8.67	1.097+j3.418	1.404+j6.467	13.03	9.90	0.877+j3.248	1.389+j6.403
CH ZIMAPAN	ZMN-230	230.0	4.16	3.73	5.858+j31.406	6.396+j42.500	7.57	8.78	2.147+j19.181	0.651+j11.274
CH ZIMAPAN	ZMN-115	115.0	4.28	5.04	2.256+j15.358	0.716+j8.492	5.83	7.19	1.188+j12.463	0.169+j5.432
CHAMELA	CML-115	115.0	1.43	1.13	13.287+j44.546	32.015+j77.240	1.62	1.26	12.508+j43.444	32.002+j77.090
CHAPALA	CHA-69	69.0	4.57	2.85	2.677+j8.300	6.132+j23.745	5.19	3.18	2.445+j8.088	6.128+j23.668
CHAPALILLA	CPI-115	115.0	1.10	0.70	21.002+j56.805	54.289+j153.649	1.88	0.91	9.008+j37.746	54.605+j153.810
CHARAPAN	CHN-115	115.0	4.18	3.13	4.814+j15.123	10.830+j30.036	4.79	3.52	4.331+j14.635	10.796+j29.926
CHARCAS	CAK-110	115.0	5.35	6.14	3.044+j12.035	1.782+j7.417	6.45	7.28	2.479+j11.057	1.770+j7.241
CHARCAS POTENCIA	CHK-230	230.0	3.38	3.74	8.701+j38.369	2.471+j28.077	4.05	4.39	6.808+j35.440	2.420+j27.618
CHARCAS POTENCIA	CHK-115	115.0	6.00	7.48	2.526+j10.768	0.340+j4.536	7.32	9.01	1.962+j9.787	0.328+j4.360
CHILATÁN	CHL-115	115.0	1.70	1.73	12.799+j36.872	6.937+j37.000	2.52	2.38	7.151+j28.138	6.401+j33.375



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
CHIPILO	CHI-115	115.0	10.11	8.52	1.469+j6.400	3.006+j9.810	11.56	9.59	1.345+j6.175	2.999+j9.776
CICLO COMBINADO TIERRA MOJADA S. DE R.L. DE C.V.	TIM-400	400.0	10.65	10.95	7.817+j20.229	3.575+j19.805	21.31	17.38	1.668+j11.806	3.597+j19.682
CIENEGUILLAS	CGS-115	115.0	5.24	4.28	3.519+j12.179	5.630+j20.372	6.03	4.84	3.066+j11.723	5.619+j20.279
CIENEGUILLAS	CGS-115.0	115.0	5.34	3.92	4.209+j11.690	7.964+j24.748	6.50	4.54	3.389+j10.721	7.956+j24.678
CIFUNSA DEL BAJÍO S.A. DE C.V.	CIF-115	115.0	22.62	22.57	0.688+j2.853	0.459+j2.928	26.44	25.94	0.536+j2.710	0.452+j2.887
CIHUATLAN	CHT-115	115.0	3.13	2.74	5.812+j20.419	10.945+j28.287	3.67	3.13	5.067+j19.272	10.934+j28.138
CIMATARIO	CIM-115	115.0	12.70	10.83	1.299+j5.065	0.436+j8.003	14.28	12.06	1.200+j4.972	0.436+j8.001
CIUDAD GUZMÁN	CGM-230	230.0	4.53	4.42	8.235+j28.134	4.385+j31.331	5.60	5.29	5.695+j25.433	4.169+j30.460
CIUDAD GUZMÁN	CGM-115	115.0	6.22	7.19	2.851+j10.290	0.612+j6.381	7.33	8.45	2.185+j9.716	0.557+j6.039
COAHUAYANA	CHY-115	115.0	1.92	1.28	10.930+j32.813	30.021+j81.147	2.19	1.43	10.166+j31.815	30.013+j81.010
COALCOMÁN	CMN-115	115.0	1.25	1.07	20.516+j49.203	21.283+j76.516	1.40	1.19	19.771+j48.244	21.394+j76.733
COBANO	CBN-161	161.0	3.20	2.96	6.929+j28.229	6.357+j35.419	4.99	4.08	3.612+j20.155	6.183+j34.056
COBANO	CBN-69	69.0	2.31	1.34	5.675+j16.263	13.481+j53.440	5.76	5.89	1.508+j7.455	0.612+j7.362
COBRECEL	COB-115	115.0	8.27	6.93	1.806+j7.820	3.044+j12.309	9.16	7.68	1.692+j7.788	3.027+j12.232
COCULA	CLA-115	115.0	4.75	3.84	3.787+j13.465	8.602+j22.370	5.68	4.42	2.895+j12.534	8.603+j22.397
COENEO	CNE-115	115.0	10.05	7.34	1.588+j6.415	2.563+j13.713	12.04	8.42	1.221+j5.943	2.555+j13.663
COLIMA DOS	CMD-230	230.0	6.02	6.28	5.739+j21.281	2.866+j19.281	8.41	8.14	3.101+j17.086	2.834+j18.911
COLIMA DOS	CMD-115	115.0	8.68	10.44	1.948+j7.397	0.380+j3.804	11.22	13.13	1.243+j6.388	0.363+j3.670
COLIMA NORTE	CNO-115	115.0	6.14	5.73	2.961+j10.393	3.084+j12.787	7.55	6.77	2.249+j9.403	3.067+j12.653
COLIMILLA	CLL-69	69.0	10.39	8.71	1.109+j3.669	1.335+j5.921	13.22	12.37	0.764+j3.225	0.652+j3.948
COLINAS	COI-115	115.0	10.79	8.07	1.509+j5.968	2.270+j12.163	13.01	9.31	1.142+j5.497	2.262+j12.112
COLINAS DEL RINCÓN PARQUE INDUSTRIAL	RPI-115	115.0	13.52	10.55	1.030+j4.802	1.823+j8.874	15.37	11.81	0.847+j4.675	1.825+j8.872
COLOMO	COL-230	230.0	8.68	10.40	3.446+j14.902	1.030+j7.670	14.90	16.49	0.968+j9.758	0.995+j6.901
COLOMO	COL-115	115.0	13.36	16.31	1.128+j4.839	0.175+j2.289	20.07	23.26	0.454+j3.611	0.167+j2.137
COLOMO DISTRIBUCIÓN	CDI-115	115.0	13.22	16.05	1.148+j4.890	0.203+j2.377	19.78	22.78	0.475+j3.662	0.196+j2.225
COLON	CLN-230	230.0	11.18	11.23	4.157+j11.131	2.093+j11.650	15.86	14.50	1.922+j9.008	2.088+j11.614
COMPOSTELA	CMP-110	115.0	3.22	2.61	8.038+j18.999	10.262+j33.639	3.83	3.00	6.990+j17.723	10.227+j33.472
CONDEMBARO	CON-115	115.0	2.02	1.69	10.336+j31.237	16.347+j49.669	2.55	2.05	7.735+j27.539	16.091+j47.268
CONDUCTORES MONTERREY	CDM-115	115.0	17.41	16.46	1.086+j3.655	0.749+j4.442	22.24	19.88	0.729+j3.203	0.743+j4.395
CONIN	CNI-230	230.0	15.77	16.75	1.832+j8.220	0.676+j6.936	18.69	19.41	1.427+j7.685	0.679+j6.914
CONIN	CNI-115	115.0	23.76	28.95	0.571+j2.735	0.081+j1.298	27.20	32.85	0.474+j2.643	0.080+j1.301
CORONEO	COO-110	115.0	2.07	1.45	12.711+j29.425	29.493+j67.395	2.33	1.61	12.035+j28.902	29.490+j67.414
CORTÁZAR	CZR-115	115.0	7.11	6.46	2.187+j9.075	2.961+j11.780	7.86	7.15	2.075+j9.054	2.947+j11.727
COTIJA	CTJ-115	115.0	5.05	3.32	3.704+j12.619	8.734+j32.466	5.72	3.71	3.343+j12.312	8.732+j32.428
CRUCERO	CCR-115	115.0	2.07	1.97	10.735+j30.286	7.544+j36.115	2.96	2.63	6.411+j23.855	7.270+j33.259
CRUZ AZUL	CZA-230	230.0	5.67	4.13	5.166+j22.835	12.819+j47.902	6.66	4.70	3.964+j21.587	12.805+j47.843
CRYOINFRA	CRI-115	115.0	9.17	9.47	1.894+j6.986	1.417+j6.402	10.34	10.61	1.754+j6.842	1.413+j6.367
CRYOINFRA	CRY-115	115.0	20.34	22.60	0.823+j3.159	0.412+j2.246	23.06	25.41	0.736+j3.080	0.412+j2.253
CUADRO DE MANIOBRAS PESMA	CDM-230	230.0	8.63	5.86	2.354+j15.198	8.992+j36.116	9.72	6.52	2.084+j14.888	8.988+j36.084
CUADRO DE MANIOBRAS VIDANTA	CMV-115	115.0	4.88	5.46	4.263+j12.914	2.283+j9.039	5.92	6.45	3.240+j11.907	2.281+j8.996



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
CUAUHTÉMOC	SCC-115	115.0	3.38	2.63	5.766+j18.796	9.647+j35.030	3.94	2.99	5.034+j17.829	9.632+j34.920
CUERÁMARO	CUE-110	115.0	7.19	5.06	2.062+j8.997	6.932+j19.767	8.06	5.63	1.894+j8.861	6.916+j19.687
CUITZEO MORELIA	CTZ-115	115.0	5.01	3.63	3.867+j12.674	9.510+j26.844	5.63	4.06	3.638+j12.440	9.424+j26.573
CUITZEO OCOTLAN	CZO-115	115.0	8.02	6.47	2.572+j7.874	3.598+j13.767	9.23	7.39	2.182+j7.603	3.525+j13.378
CUITZILLOS	CZS-115	115.0	5.89	5.09	3.144+j10.831	4.315+j16.143	6.81	5.82	2.807+j10.349	4.247+j15.901
CUMBRES	CUB-115	115.0	16.96	17.33	0.919+j3.805	0.450+j3.656	20.39	20.22	0.638+j3.524	0.449+j3.663
CUMMINS FILTRACIÓN	CSF-115	115.0	13.04	8.46	1.304+j4.922	2.434+j13.172	16.11	9.79	0.934+j4.437	2.424+j13.096
CUPATITZIO	CPT-161	161.0	3.64	3.70	5.383+j24.942	3.244+j24.266	5.73	5.21	2.529+j17.650	3.114+j23.198
CUPRO	CPO-115	115.0	18.68	19.74	1.095+j3.382	0.593+j2.940	24.18	24.41	0.737+j2.929	0.585+j2.883
CUQUIO	CUQ-115	115.0	2.04	1.33	9.534+j31.101	30.710+j79.487	2.28	1.55	9.041+j30.736	27.530+j72.264
DAIDO METAL	DAI-69	69.0	6.09	3.82	1.802+j6.290	3.980+j17.797	6.91	4.26	1.588+j6.137	3.978+j17.776
DAL-TILE MÉXICO S. DE R.L. DE C.V	DLT-115	115.0	17.48	16.57	0.786+j3.715	0.820+j4.352	20.05	18.77	0.645+j3.585	0.814+j4.316
DANISCO MEXICANA	DAM-115	115.0	5.21	3.97	4.002+j12.098	8.957+j23.067	6.35	4.60	3.267+j11.035	8.949+j22.929
DANONE DE MÉXICO S.A. DE C.V.	DNN-115	115.0	10.49	7.46	1.505+j6.146	4.280+j13.382	11.87	8.33	1.347+j6.004	4.276+j13.347
DAÑU	DAN-230	230.0	11.97	10.70	1.964+j10.917	2.502+j14.818	16.04	13.77	1.253+j9.018	2.476+j13.379
DE ACERO MORELIA	DEO-115	115.0	8.03	7.32	2.303+j7.938	2.424+j10.551	9.38	8.43	1.984+j7.526	2.384+j10.352
DELCO REMY	DLC-115	115.0	17.52	17.02	1.034+j3.646	0.738+j4.076	22.52	20.72	0.673+j3.173	0.731+j4.027
DENSO	DEN-115	115.0	6.86	5.50	2.491+j9.347	3.754+j16.453	7.66	6.12	2.320+j9.242	3.723+j16.319
DESCANSADERO	DSC-69	69.0	0.68	0.62	23.707+j54.017	25.374+j71.754	1.72	1.38	10.913+j23.031	14.338+j42.348
DESTILADERAS	DST-115	115.0	3.79	3.42	5.587+j16.620	5.119+j22.666	4.49	3.93	4.556+j15.623	5.117+j22.622
DICUMSA	DIC-115	115.0	17.39	16.40	1.087+j3.660	0.754+j4.474	22.20	19.81	0.731+j3.208	0.748+j4.427
DISTEX	DTX-115	115.0	16.34	15.26	1.110+j3.909	0.926+j4.848	18.43	17.03	1.023+j3.829	0.927+j4.854
DOLORES HIDALGO	DHD-115	115.0	6.92	4.67	2.854+j9.164	4.952+j22.965	7.71	5.18	2.773+j9.062	4.949+j22.865
DOMINICA	DMN-115	115.0	3.02	3.71	2.870+j21.818	0.257+j9.704	3.86	4.63	2.001+j18.839	0.249+j9.434
DOMO SAN PEDRO	DSP-115	115.0	nan	nan	nan+jnan	nan+jnan	1.82	0.86	8.618+j39.246	59.512+j164.927
DON VASCO	VCO-115	115.0	2.69	2.03	8.254+j23.222	15.134+j46.540	3.04	2.26	7.782+j22.769	15.119+j46.423
EATON	EAT-115	115.0	15.37	13.27	1.212+j4.147	1.250+j6.265	19.31	15.76	0.847+j3.686	1.243+j6.217
EDOSA	EDO-69	69.0	6.92	4.71	1.725+j5.495	3.370+j13.426	7.99	5.31	1.496+j5.280	3.366+j13.349
EL ARBOLITO	ABO-115	115.0	4.30	3.01	5.974+j14.230	12.299+j33.191	4.94	3.38	5.578+j13.696	12.266+j33.049
EL CAJÓN	CJN-400	400.0	6.58	5.89	9.748+j33.711	10.159+j46.408	11.88	9.34	2.274+j21.257	8.923+j37.966
EL CAMPANARIO	CAM-115	115.0	16.27	13.07	0.887+j3.983	1.452+j6.928	18.43	14.67	0.794+j3.883	1.430+j6.859
EL COLEGIO	ELC-115	115.0	7.26	6.83	2.639+j8.751	2.515+j10.690	8.36	7.86	2.351+j8.419	2.362+j10.277
EL GRANJENO	EGJ-115	115.0	13.06	10.99	1.407+j4.883	2.050+j7.689	14.87	12.34	1.225+j4.757	2.045+j7.661
EL GRULLO	GRU-110	115.0	0.81	0.96	28.370+j76.551	4.308+j45.320	0.91	1.06	27.558+j75.560	4.413+j46.042
EL MARQUÉS	MRQ-115	115.0	16.42	15.10	0.996+j3.920	1.547+j4.861	18.57	16.90	0.898+j3.830	1.547+j4.865
EL MARQUÉS ORIENTE	MQO-115	115.0	15.31	13.12	0.936+j4.233	1.317+j6.378	17.27	14.63	0.839+j4.144	1.317+j6.382
EL MIRADOR	MRR-115	115.0	5.37	4.77	3.745+j11.773	3.863+j16.627	6.62	5.71	2.796+j10.676	3.696+j15.947
EL MONTEON	MTN-115	115.0	2.80	2.28	9.213+j21.830	16.124+j36.510	3.27	2.59	8.169+j20.757	16.118+j36.463
EL PALMAR	EPM-115	115.0	4.09	2.20	5.082+j15.427	15.123+j56.291	4.58	2.44	4.934+j15.177	15.042+j56.058
EL PARDILLO	PRL-110	115.0	3.49	2.52	5.352+j18.232	11.504+j39.339	3.97	2.82	4.900+j17.736	11.492+j39.247



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
EL POTOSÍ	EPS-400	400.0	10.71	11.59	5.064+j20.967	1.881+j16.760	13.91	14.28	2.702+j18.067	1.900+j16.833
EL POTOSÍ	EPS-230	230.0	14.15	16.83	2.307+j9.096	0.472+j4.958	18.63	21.25	1.296+j7.732	0.473+j4.954
EL POTOSÍ	EPS-115	115.0	23.49	26.14	0.581+j2.766	0.158+j1.982	28.78	31.04	0.362+j2.512	0.159+j1.988
EL REALITO	ELR-115	115.0	2.49	1.45	5.106+j26.170	16.140+j82.768	2.75	1.60	5.029+j26.065	16.123+j82.605
EL REFUJO	RFJ-115	115.0	3.43	2.06	6.096+j18.400	16.272+j55.810	3.87	2.98	5.594+j18.035	7.850+j35.044
EL SALTO	ESJ-69	69.0	14.12	10.76	0.763+j2.716	0.996+j5.385	16.88	12.35	0.553+j2.536	0.995+j5.367
EL SAUCITO	MSU-115	115.0	6.87	6.46	2.885+j9.220	1.656+j11.503	7.97	7.34	2.475+j8.827	1.657+j11.485
EL SAUZ	SAU-400	400.0	14.98	9.54	1.879+j15.297	6.042+j41.322	17.53	10.87	1.220+j14.436	5.941+j40.710
EL SAUZ	SAU-230	230.0	14.72	14.04	1.803+j8.838	1.282+j10.255	18.20	17.18	1.256+j7.929	1.060+j9.391
EL SAUZ	SAU-115	115.0	19.81	20.64	0.724+j3.272	0.267+j2.950	29.05	31.68	0.400+j2.482	0.123+j1.888
EL SOL	SOL-69	69.0	12.92	9.44	0.988+j2.920	1.673+j6.284	15.36	10.82	0.766+j2.748	1.661+j6.231
EL SOL (BUS B)	SOL-69B	69.0	16.63	12.69	0.726+j2.283	1.030+j4.519	20.19	14.71	0.508+j2.111	1.024+j4.482
EL SOL (CARAPAN)	ESO-115	115.0	4.32	2.97	4.756+j14.598	12.038+j34.225	4.91	3.32	4.327+j14.231	12.031+j34.179
EL TARAY	TAY-115	115.0	4.39	2.80	3.904+j14.606	2.290+j41.303	4.94	3.10	3.615+j14.340	2.272+j41.257
EL TORO	TOO-115	115.0	11.02	5.77	1.339+j5.873	5.800+j21.737	12.45	6.40	1.156+j5.753	5.802+j21.742
EL ZAPOTILLO	EZP-115	115.0	2.97	1.98	5.754+j21.622	16.283+j53.181	3.31	2.21	5.431+j21.382	16.063+j52.746
EMMAN TABLEROS S.A. DE C.V.	EMM-115	115.0	5.78	4.13	3.209+j11.029	5.940+j24.516	6.57	4.65	2.819+j10.760	5.867+j24.126
EMPAQUES MODERNOS	EMP-69	69.0	7.37	4.83	1.984+j5.026	4.275+j13.287	8.48	5.42	1.774+j4.852	4.274+j13.269
ENCARNACIÓN DE DÍAZ	ENC-110	115.0	4.92	3.35	3.380+j13.061	8.198+j31.518	5.77	3.80	2.848+j12.326	8.151+j31.377
ENVASES INNOVATIVOS	ENV-69	69.0	14.14	10.90	0.818+j2.696	1.178+j5.205	16.91	12.53	0.613+j2.518	1.173+j5.180
ENVASES UNIVERSALES	EVS-69	69.0	12.12	11.07	0.916+j3.157	0.913+j4.131	14.55	12.92	0.688+j2.932	0.909+j4.054
ENVASES Y TAPAS	EYT-115	115.0	6.69	4.96	2.568+j9.590	4.376+j19.857	8.03	5.87	2.019+j8.865	3.990+j18.760
EÓLICA CERRITOS (MESA MORENOS) MANIOBRAS	ECM-230	230.0	5.27	4.35	5.373+j24.602	9.150+j40.112	6.66	5.17	3.691+j21.605	9.091+j39.866
ESTADIO CORREGIDORA	ECO-115	115.0	13.67	9.71	0.956+j4.762	1.091+j10.759	15.16	10.72	0.860+j4.741	1.090+j10.763
ESTANCIA DE ANIMAS	EDA-115	115.0	3.77	2.64	6.143+j16.526	14.299+j37.551	4.30	2.96	5.659+j16.013	14.296+j37.501
ESTANCITA	ETA-115	115.0	0.79	0.55	29.238+j78.775	14.850+j193.910	0.96	0.64	22.364+j72.544	14.659+j190.181
EXPERIENCIA	EXP-69	69.0	7.94	5.29	1.214+j4.869	3.202+j12.158	9.23	5.98	0.975+j4.645	3.189+j12.095
EZEQUIEL MONTES	EZM-110	115.0	7.31	5.29	2.578+j8.711	4.216+j19.018	8.30	5.95	2.434+j8.453	4.137+j18.788
EI TUITO	ETU-115	115.0	2.73	2.11	7.034+j23.244	10.540+j44.418	3.18	2.39	5.922+j22.202	10.532+j44.343
FERTIMEX	FER-69	69.0	4.90	3.39	2.346+j7.779	4.486+j18.440	5.60	3.81	2.107+j7.540	4.471+j18.279
FIBERWEB DE MÉXICO S.A. DE C.V.	VTC-115	115.0	9.45	8.02	1.684+j6.822	3.287+j10.290	10.73	8.98	1.573+j6.623	3.286+j10.288
FLAMINGOS	FLA-115	115.0	5.27	6.15	4.013+j11.951	1.462+j7.062	6.44	7.34	3.003+j10.940	1.461+j7.030
FLEXTRONICS PLANTA SUR	SLT-69	69.0	9.54	8.38	1.213+j3.998	0.932+j5.861	11.02	9.63	1.003+j3.849	0.887+j5.638
FLUVIAL	FLU-115	115.0	4.65	4.90	4.582+j13.508	2.531+j11.924	5.62	5.75	3.534+j12.506	2.524+j11.850
FORJAS	FRJ-115	115.0	13.75	12.48	1.020+j4.719	1.201+j6.191	15.43	13.88	0.933+j4.641	1.202+j6.197
FRESNILLO INDUSTRIAL	FRI-110	115.0	6.82	6.64	3.038+j9.251	2.510+j10.228	7.90	7.56	2.635+j8.858	2.511+j10.213
FRESNILLO NORTE	FRN-115	115.0	7.77	9.18	2.430+j8.191	0.590+j4.627	9.04	10.55	2.041+j7.814	0.590+j4.619
FRESNILLO POTENCIA	FSO-230	230.0	4.44	5.50	8.296+j28.736	0.970+j12.804	5.22	6.39	6.773+j27.161	0.972+j12.775
FRESNILLO POTENCIA	FSO-115	115.0	8.04	10.02	2.331+j7.922	0.226+j3.422	9.37	11.56	1.944+j7.547	0.227+j3.415
FRESNILLO SUR	FNO-115	115.0	7.37	7.10	2.780+j8.568	1.996+j9.891	8.60	8.11	2.367+j8.160	1.996+j9.868



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
FRESNO	FRE-69	69.0	12.60	10.78	0.958+j3.012	0.899+j4.701	14.92	12.42	0.739+j2.842	0.883+j4.634
GENERADORA ELÉCTRICA SAN RAFAEL, S.A.P.I. DE C.V.	SRA-115	115.0	2.73	2.06	6.439+j23.452	18.458+j44.450	3.39	2.42	4.931+j20.987	18.396+j44.067
GENERAL MOTORS DE MÉXICO	GMC-115	115.0	7.48	5.51	2.365+j8.560	5.062+j17.705	8.38	6.12	2.197+j8.439	5.051+j17.629
GENERAL TIRE	GRP-115	115.0	6.33	4.11	2.619+j10.154	7.941+j26.301	7.07	4.56	2.475+j10.036	7.933+j26.262
GKN	GKN-115	115.0	8.80	7.41	1.672+j7.358	2.785+j11.442	9.76	8.22	1.558+j7.322	2.766+j11.358
GÓMEZ PORTUGAL	GOP-115	115.0	9.06	6.38	1.640+j7.139	3.524+j16.194	10.41	7.17	1.365+j6.885	3.514+j16.159
GRAHAM PACKAGING PLASTIC	GRH-115	115.0	10.38	7.42	1.540+j6.206	4.292+j13.414	11.74	8.28	1.383+j6.063	4.287+j13.378
GRÁN JARDÍN	GJA-115	115.0	10.82	8.20	1.434+j5.965	2.370+j11.804	12.34	9.22	1.227+j5.788	2.347+j11.711
GUADALAJARA DOS	GUD-230	230.0	13.02	15.15	3.599+j9.546	0.818+j5.955	19.38	20.89	1.434+j7.400	0.802+j5.857
GUADALAJARA DOS	GUD-161	161.0	5.53	7.53	2.379+j16.639	0.121+j3.420	6.57	8.93	1.288+j15.505	0.114+j3.229
GUADALAJARA DOS	GUD-69	69.0	26.10	30.63	0.407+j1.471	0.073+j0.859	33.53	38.03	0.205+j1.291	0.071+j0.842
GUADALAJARA INDUSTRIAL	GUI-230	230.0	10.59	10.88	4.190+j11.825	1.800+j11.530	14.69	13.89	1.960+j9.751	1.807+j11.530
GUADALAJARA INDUSTRIAL	GUI-69	69.0	19.95	23.17	0.601+j1.904	0.085+j1.186	24.35	27.52	0.397+j1.756	0.084+j1.185
GUADALAJARA NORTE	GUN-230	230.0	9.89	9.77	4.230+j12.740	2.225+j13.879	15.67	15.55	1.504+j9.200	1.152+j9.465
GUADALAJARA NORTE	GUN-69	69.0	19.01	22.06	0.520+j2.030	0.102+j1.235	24.46	27.89	0.274+j1.770	0.075+j1.131
GUADALAJARA ORIENTE	GDO-230	230.0	12.12	13.25	3.674+j10.325	1.216+j8.175	18.58	18.47	1.332+j7.747	1.203+j7.917
GUADALAJARA ORIENTE	GDO-69	69.0	21.21	24.16	0.443+j1.825	0.088+j1.199	27.28	30.06	0.219+j1.591	0.086+j1.160
GUADALAJARA UNO	GDU-230	230.0	11.93	12.93	3.951+j10.403	1.357+j8.572	17.27	17.16	1.710+j8.282	1.347+j8.520
GUADALAJARA UNO	GDU-69	69.0	25.77	28.48	0.480+j1.469	0.111+j1.120	33.04	35.02	0.269+j1.299	0.108+j1.100
GUADALCAZAR	GDL-115	115.0	1.41	1.59	21.259+j42.033	3.772+j32.223	1.60	1.84	20.020+j41.001	3.217+j29.111
GUADALUPE	GPE-110	115.0	7.79	6.92	2.446+j8.161	3.151+j11.339	9.18	7.98	2.009+j7.694	3.115+j11.160
GUANAJUATO	GTO-115	115.0	8.06	5.11	1.847+j8.033	5.576+j21.758	9.03	5.69	1.683+j7.911	5.552+j21.621
GUANAJUATO SUR	GSU-115	115.0	9.21	6.02	1.645+j7.021	4.431+j18.141	10.35	6.70	1.481+j6.898	4.418+j18.050
GUARDIÁN INDUSTRIE VP	GDI-115	115.0	9.12	7.32	1.884+j7.035	2.800+j12.333	10.27	8.19	1.796+j6.879	2.776+j12.232
GUASCARO	GSO-115	115.0	5.54	3.76	3.443+j11.478	7.778+j27.884	6.31	4.21	3.074+j11.158	7.773+j27.841
GUAYABITOS	GYS-115	115.0	2.72	2.16	9.618+j22.424	17.295+j39.809	3.18	2.45	8.574+j21.342	17.287+j39.755
GUEVARA	GVA-115	115.0	0.88	0.64	26.849+j70.630	8.266+j163.655	1.08	0.75	20.009+j64.277	8.076+j159.930
HACIENDA	HDA-115	115.0	12.57	9.59	1.407+j5.093	2.785+j9.808	14.00	10.65	1.295+j5.053	2.772+j9.758
HACIENDA NUEVA	HNV-115	115.0	4.80	3.97	3.819+j13.299	5.905+j21.742	5.53	4.54	3.346+j12.782	5.720+j21.152
HENKEL CAPITAL S.A. DE C.V.	RSS-115	115.0	14.62	13.87	1.048+j4.420	1.034+j5.172	16.71	15.67	0.907+j4.276	1.029+j5.137
HERDEZ	HER-115	115.0	16.84	14.20	1.118+j3.782	1.050+j6.077	21.38	16.93	0.761+j3.329	1.044+j6.030
HIGUERILLAS	HIG-69	69.0	14.62	7.96	1.086+j2.499	2.153+j9.376	17.42	9.00	0.887+j2.354	2.152+j9.368
HILASAL MEXICANA S.A.B. DE C.V.	HYL-69	69.0	6.14	4.60	2.434+j6.009	4.795+j12.116	7.08	5.19	2.207+j5.784	4.791+j12.039
HIROTEC MÉXICO S.A. DE C.V.	AVT-115	115.0	7.32	7.06	2.482+j8.727	3.835+j9.336	8.20	7.88	2.317+j8.604	3.828+j9.281
HONDA DE MÉXICO S.A. DE C.V. EL SALTO	HON-69	69.0	12.87	9.43	0.850+j2.976	1.254+j6.369	15.28	10.77	0.640+j2.796	1.253+j6.350
HORUS MANIOBRAS	HOM-230	230.0	8.24	6.35	3.431+j15.752	8.266+j29.418	10.21	7.42	2.218+j14.137	8.267+j29.424
HUACANA	HUC-69	69.0	1.25	0.76	14.515+j28.270	28.981+j89.838	1.80	1.18	11.079+j21.711	21.641+j59.665
HUANACAXTLE	HUA-115	115.0	4.04	3.82	5.335+j15.532	4.324+j18.857	4.82	4.42	4.311+j14.531	4.322+j18.818
HUANIMARO	HNM-115	115.0	3.72	2.87	4.769+j17.177	12.101+j31.704	4.14	3.18	4.592+j17.040	12.053+j31.445
HUENTITÁN	HUN-69	69.0	10.00	7.78	1.175+j3.805	1.992+j7.131	12.33	9.99	0.885+j3.442	1.653+j5.820



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
HUICHAPAN	HCH-115	115.0	1.64	0.90	12.777+j38.327	39.608+j133.661	1.82	1.00	12.624+j38.089	39.526+j133.426
HUMEDADES	HUM-115	115.0	1.42	1.01	15.906+j44.120	31.481+j99.433	1.66	1.16	14.682+j41.445	30.915+j96.338
HUNTSMAN INTERNATIONAL DE MÉXICO	HMA-115	115.0	2.73	1.69	5.696+j23.666	15.292+j67.409	3.04	1.88	5.304+j23.401	15.219+j67.019
IBÍDEM	IBD-115	115.0	14.16	13.61	1.296+j4.506	1.000+j5.181	17.90	16.56	0.908+j3.979	0.946+j4.985
IBM DE MÉXICO S.A. DE C.V.	IBM-69	69.0	23.09	23.88	0.448+j1.666	0.260+j1.538	29.09	28.86	0.246+j1.486	0.258+j1.521
IBM-ALKA	IBA-69	69.0	24.40	26.57	0.429+j1.575	0.175+j1.227	31.00	32.47	0.227+j1.395	0.172+j1.210
IMMSA	IMM-115	115.0	4.40	4.53	4.047+j14.529	4.610+j13.069	5.22	5.26	3.480+j13.555	4.598+j12.893
IND MINERA MÉXICO	MNR-230	230.0	9.40	8.28	3.504+j13.681	4.623+j19.336	11.89	9.88	2.298+j12.073	4.617+j19.279
INDEPENDENCIA	INE-115	115.0	7.72	7.22	2.332+j8.282	2.124+j10.246	8.90	8.23	2.033+j7.952	2.110+j10.127
INDUSTRIAL SAN FRANCISCO	ISF-115	115.0	10.82	8.52	1.390+j5.976	1.681+j11.012	12.50	9.65	1.121+j5.735	1.664+j10.940
INGENIO TALA	ING-69	69.0	0.85	0.53	24.056+j40.542	45.556+j124.607	1.10	0.73	20.599+j34.084	38.182+j94.393
INNOPACK	INN-115	115.0	9.91	7.20	1.632+j6.495	3.666+j13.805	11.18	8.03	1.448+j6.368	3.657+j13.769
INVISTA	INV-115	115.0	17.26	19.22	1.039+j3.705	0.492+j2.627	19.49	21.54	0.952+j3.625	0.493+j2.633
IRAPUATO II	IRA-230	230.0	19.29	19.24	1.665+j6.680	1.143+j6.862	23.96	23.00	1.082+j5.999	1.128+j6.768
IRAPUATO II	IRA-115	115.0	25.28	27.78	0.582+j2.561	0.191+j1.919	29.74	32.25	0.431+j2.418	0.185+j1.878
IRAPUATO INDUSTRIAL	IRI-115	115.0	12.67	9.69	1.274+j5.083	2.884+j9.653	14.42	10.87	1.117+j4.940	2.880+j9.618
IRAPUATO PONIENTE	IPP-115	115.0	13.83	9.74	1.078+j4.677	2.197+j10.618	15.74	10.91	0.921+j4.548	2.193+j10.584
IRAPUATO UNO	IRP-110	115.0	20.65	17.20	0.768+j3.123	1.054+j5.043	23.94	19.53	0.612+j2.989	1.050+j5.010
IRAPUATO VILLAS	IRV-115	115.0	15.89	11.74	0.959+j4.066	1.756+j8.425	18.18	13.19	0.803+j3.935	1.752+j8.392
ITALAISE	ITA-115	115.0	11.29	8.05	1.381+j5.718	2.970+j12.619	12.77	8.98	1.281+j5.575	2.970+j12.618
IXTLAHUACAN	ITC-400	400.0	8.25	6.76	8.266+j26.748	9.245+j45.731	15.35	9.62	1.809+j16.453	9.261+j45.270
IXTLAN	ITL-115	115.0	6.24	4.68	3.070+j10.185	7.174+j20.092	7.12	5.25	2.717+j9.897	7.166+j20.022
JABIL CIRCUIT DE MÉXICO	JBL-69	69.0	11.34	7.42	0.978+j3.376	2.097+j8.838	13.40	8.43	0.748+j3.184	2.093+j8.804
JACONA	JCN-115	115.0	9.40	7.68	1.833+j6.824	2.730+j11.493	10.92	8.72	1.488+j6.521	2.719+j11.429
JAGUAR	CBO-69	69.0	14.65	10.15	0.784+j2.605	1.273+j6.221	17.79	12.22	0.557+j2.399	1.113+j5.722
JALOSTOTITLAN	JLT-115	115.0	6.90	5.48	2.391+j9.314	4.107+j16.635	7.86	6.18	2.074+j9.053	4.039+j16.399
JALPA	JAP-115	115.0	2.25	1.35	9.593+j27.887	9.689+j88.741	2.50	1.49	9.293+j27.648	9.670+j88.694
JARAL DEL PROGRESO	JDP-115	115.0	4.81	2.99	3.730+j13.284	11.371+j37.266	5.35	3.31	3.586+j13.168	11.362+j37.227
JARRETADERAS	JDA-115	115.0	4.92	5.55	4.244+j12.820	2.200+j8.642	5.96	6.57	3.222+j11.815	2.198+j8.601
JATCO	JAT-115	115.0	10.97	8.05	1.370+j5.893	2.035+j12.510	12.88	9.14	1.075+j5.570	2.032+j12.484
JATCO II	JTC-115	115.0	11.96	10.38	1.139+j5.435	1.326+j7.985	14.14	12.00	0.839+j5.095	1.288+j7.828
JEREZ	JRZ-115	115.0	2.05	1.46	11.121+j30.389	22.929+j68.309	2.30	1.62	10.664+j29.961	22.917+j68.215
JESÚS DEL MONTE	JEM-110	115.0	10.92	8.31	1.404+j5.916	2.839+j11.452	12.35	9.29	1.221+j5.788	2.830+j11.423
JESÚS MARÍA	JMA-115	115.0	2.90	2.42	7.537+j21.648	12.394+j34.333	3.23	2.69	7.153+j21.419	12.353+j34.122
JIQUILPAN	JIQ-115	115.0	7.59	5.34	2.261+j8.449	4.843+j19.239	8.72	5.99	1.911+j8.153	4.845+j19.202
JOCOTEPEC	JCT-69	69.0	3.76	2.22	3.277+j10.082	9.062+j31.322	4.22	2.46	3.067+j9.909	9.061+j31.305
JOYUELAS	JYU-110	115.0	5.41	3.73	3.500+j11.756	8.563+j27.520	6.05	4.14	3.326+j11.608	8.546+j27.460
JUAN JOSÉ ARREOLA	JUJ-115	115.0	5.24	5.43	3.519+j12.168	2.741+j11.038	6.11	6.27	2.854+j11.616	2.691+j10.714
JUAN RULFO	JRU-115	115.0	1.87	1.25	11.817+j33.467	27.110+j83.719	2.10	1.39	11.150+j33.014	27.064+j83.454
JULIÁN CARRILLO	JCR-115	115.0	5.07	3.38	4.144+j12.421	9.984+j31.255	5.72	3.75	3.918+j12.159	9.985+j31.259



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
JUPITER MANIOBRAS	JPM-400	400.0	18.97	16.91	2.026+j12.001	2.337+j16.384	22.92	19.74	1.292+j11.008	2.329+j16.215
JUPITER MANIOBRAS	JPM-115	115.0	31.49	30.08	0.344+j2.080	0.239+j2.392	37.27	34.90	0.275+j1.940	0.237+j2.344
JUPITER MANIOBRAS DOS	JMD-115	115.0	16.80	12.59	0.853+j3.858	1.718+j7.719	19.31	14.20	0.774+j3.702	1.716+j7.669
JURICA	JUR-110	115.0	11.88	9.80	1.782+j5.299	0.822+j9.243	13.33	10.91	1.694+j5.209	0.820+j9.215
KELLOGG'S DE MÉXICO S.R.L. DE C.V.	KEL-115	115.0	8.00	7.73	2.151+j8.019	1.259+j9.130	8.75	8.46	2.028+j8.101	1.257+j9.148
KIMBERLY CLARK DE MÉXICO	KIM-115	115.0	13.57	10.99	1.153+j4.757	1.795+j8.136	18.46	13.65	0.770+j3.880	1.778+j7.940
KODAK DE MÉXICO S.A. DE C.V.	KDK-69	69.0	11.72	7.82	1.029+j3.241	2.007+j8.246	13.81	8.88	0.811+j3.069	2.001+j8.209
KRUPP	KRP-115	115.0	18.10	18.64	1.038+j3.519	0.562+j3.324	23.27	22.84	0.680+j3.064	0.556+j3.277
LA BARCA	BRC-115	115.0	7.71	6.38	2.767+j8.152	4.166+j13.375	8.88	7.26	2.381+j7.871	4.117+j13.114
LA BUFA MANIOBRAS	BFM-230	230.0	4.89	3.98	6.465+j26.383	11.521+j44.261	5.95	4.63	4.765+j24.068	11.493+j44.128
LA CALIFORNIA	CLF-115	115.0	11.43	8.87	1.367+j5.643	2.112+j10.640	12.85	9.94	1.290+j5.537	2.080+j10.459
LA CUEVA	CUV-115	115.0	5.58	4.09	3.273+j11.430	7.388+j23.869	6.39	4.59	2.899+j11.047	7.362+j23.778
LA ESPERANZA	LAE-115	115.0	5.93	5.30	3.568+j10.613	3.700+j14.796	7.34	6.40	2.667+j9.589	3.415+j13.969
LA ESPIGA	ESP-115	115.0	16.23	13.37	0.872+j3.996	1.261+j6.597	18.35	15.09	0.782+j3.902	1.210+j6.443
LA ESTRELLA	ELA-115	115.0	3.38	2.98	5.721+j18.795	5.734+j26.901	3.95	3.40	4.988+j17.821	5.706+j26.790
LA FRAGUA	FRA-115	115.0	12.91	10.50	1.173+j5.008	2.077+j8.432	14.66	11.75	1.072+j4.865	2.077+j8.431
LA GRIEGA	GRI-115	115.0	8.22	7.02	2.205+j7.774	2.573+j11.953	9.22	7.85	2.113+j7.636	2.532+j11.821
LA HUERTA	LHT-115	115.0	2.07	1.84	9.536+j30.674	10.895+j42.726	2.37	2.07	8.749+j29.596	10.893+j42.664
LA JOYA	LJY-115	115.0	16.62	15.10	0.997+j3.867	1.036+j5.106	19.17	17.19	0.804+j3.724	1.018+j5.027
LA LOMA	LLM-115	115.0	12.28	9.24	1.266+j5.256	2.252+j10.509	13.70	10.25	1.176+j5.198	2.238+j10.486
LA MANGA	MAN-230	230.0	8.60	6.12	2.707+j15.199	8.515+j33.156	9.98	6.97	2.266+j14.454	8.383+j32.625
LA MANSIÓN	MNS-115	115.0	12.49	9.70	1.112+j5.197	1.955+j9.702	15.83	11.72	0.829+j4.540	1.902+j9.277
LA MORA	MRA-115	115.0	10.65	8.01	1.446+j6.067	3.399+j11.909	12.03	8.94	1.262+j5.940	3.399+j11.896
LA PALMA	PLM-115	115.0	18.34	13.43	0.666+j3.558	1.371+j7.464	21.38	15.28	0.586+j3.365	1.366+j7.384
LA PIEDAD	LPI-115	115.0	4.91	3.56	4.177+j12.860	9.734+j27.227	5.59	3.98	3.770+j12.519	9.726+j27.179
LA PIEDAD PONIENTE	LPP-115	115.0	4.24	2.89	4.822+j14.880	12.750+j35.307	4.81	3.23	4.399+j14.518	12.744+j35.262
LA PILA	SPI-230	230.0	11.24	11.11	2.976+j11.438	2.094+j12.095	15.47	14.10	1.626+j9.302	2.080+j12.026
LA PILA	SPI-115	115.0	19.49	20.91	0.947+j3.273	0.393+j2.708	25.59	26.13	0.584+j2.793	0.384+j2.657
LA PRIMAVERA (BAJÍO)	PRI-230	230.0	8.75	8.23	4.418+j14.510	3.618+j17.744	12.04	10.42	2.016+j11.958	3.570+j17.453
LA RESOLANA	LRE-115	115.0	8.20	8.05	1.810+j7.897	2.542+j8.170	9.84	9.37	1.190+j7.326	2.543+j8.196
LA SOLEDAD	SDD-115	115.0	10.27	8.24	1.480+j6.294	3.884+j10.602	11.59	9.22	1.389+j6.147	3.876+j10.511
LA VEGA	LVG-69	69.0	2.12	1.35	6.068+j17.822	11.643+j49.300	2.43	1.53	5.500+j17.190	11.534+j48.597
LA VENTA	LVT-69	69.0	5.36	3.89	2.382+j7.042	3.735+j15.448	6.72	4.79	1.765+j6.282	3.376+j13.996
LA VENTILLA	VLT-115	115.0	5.29	4.16	3.539+j12.052	6.105+j21.948	6.14	4.71	3.150+j11.477	6.098+j21.891
LA VIRGEN	LVR-115	115.0	4.92	3.07	3.383+j13.075	8.206+j36.874	5.48	3.41	3.180+j12.942	8.183+j36.781
LABORATORIOS PISA	LBP-69	69.0	6.64	4.25	1.688+j5.753	3.538+j15.762	7.57	4.74	1.474+j5.600	3.536+j15.742
LAGOS DE MORENO	LGS-110	115.0	5.16	3.24	3.243+j12.460	7.625+j34.937	5.75	3.59	3.042+j12.329	7.603+j34.844
LAGOS GALERA	LGG-115	115.0	5.07	3.19	3.135+j12.710	7.736+j35.378	5.66	3.54	2.931+j12.566	7.714+j35.285
LAGUNA LARGA	LGL-115	115.0	1.99	1.16	10.539+j31.636	31.268+j100.301	2.20	1.28	10.361+j31.499	31.215+j100.028
LAGUNA SAN VICENTE	LSV-230	230.0	11.24	11.54	3.359+j11.323	1.807+j10.813	15.60	14.85	1.914+j9.168	1.770+j10.642



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
LAGUNA SECA	LAS-110	115.0	4.73	4.06	4.912+j13.142	6.041+j20.158	5.49	4.62	4.364+j12.568	6.006+j19.980
LAGUNA VICENTE DOS	LVD-230	230.0	11.30	11.66	3.352+j11.261	1.744+j10.588	15.69	15.03	1.908+j9.110	1.707+j10.416
LAGUNA VICENTE DOS	LVD-115	115.0	18.84	20.39	0.978+j3.386	0.368+j2.721	24.79	25.69	0.605+j2.883	0.353+j2.621
LAGUNILLAS	LAG-115	115.0	3.76	3.02	5.317+j16.848	9.899+j29.093	4.26	3.38	4.894+j16.442	9.888+j28.994
LALA DERIVADOS LÁCTEOS S.A. DE C.V.	LAL-115	115.0	10.66	7.69	1.467+j6.053	4.070+j12.820	12.06	8.59	1.310+j5.910	4.065+j12.784
LAMOSA	LAM-115	115.0	14.99	12.86	1.242+j4.250	1.358+j6.511	18.78	15.24	0.877+j3.790	1.352+j6.463
LAMPOTAL	LPL-115	115.0	5.24	4.19	3.632+j12.133	5.627+j21.489	6.06	4.75	3.157+j11.630	5.607+j21.355
LAPEM	LPM-115	115.0	10.43	7.85	1.723+j6.131	3.719+j12.072	11.80	8.77	1.566+j5.988	3.715+j12.037
LAS BRISAS	BRI-115	115.0	7.29	6.78	2.367+j8.791	2.166+j10.955	9.57	8.39	1.435+j7.494	2.129+j10.650
LAS COLINAS	LCN-115	115.0	10.41	9.60	1.697+j6.146	1.518+j7.876	11.74	10.88	1.527+j6.031	1.428+j7.582
LAS DELICIAS	LDE-230	230.0	21.23	23.10	1.023+j6.169	0.444+j4.683	25.13	26.97	0.768+j5.761	0.428+j4.572
LAS FAJAS	FAJ-110	115.0	0.97	0.61	28.364+j62.427	69.450+j178.652	1.07	0.67	27.957+j62.127	69.450+j178.644
LAS FRESAS	LFR-400	400.0	15.25	14.75	3.850+j14.646	2.813+j16.475	19.92	18.25	1.948+j12.600	2.783+j16.038
LAS FRESAS	LFR-115	115.0	23.39	22.09	0.574+j2.780	0.389+j3.327	27.18	25.26	0.418+j2.655	0.384+j3.280
LAS PINTAS	LPS-69	69.0	14.74	10.43	0.889+j2.552	1.125+j5.977	17.51	11.87	0.685+j2.408	1.125+j5.976
LAS TORRES	LTL-115	115.0	13.69	10.41	1.157+j4.710	4.270+j8.545	15.58	11.69	0.975+j4.585	4.280+j8.515
LAS VARAS	VRS-115	115.0	2.63	2.01	10.177+j23.087	17.633+j45.491	3.07	2.28	9.131+j21.943	17.616+j45.404
LEAR CORP (SELVA)	LCO-115	115.0	14.91	12.76	1.249+j4.275	1.383+j6.568	18.65	15.12	0.884+j3.815	1.377+j6.520
LEÓN ALFARO	LNA-115	115.0	11.02	8.79	1.544+j5.824	2.235+j10.383	12.46	9.83	1.361+j5.701	2.226+j10.338
LEÓN CUATRO	LNC-230	230.0	10.66	10.19	3.017+j12.084	2.413+j13.988	12.43	11.62	2.317+j11.525	2.421+j14.000
LEÓN CUATRO	LNC-115	115.0	16.63	17.84	0.973+j3.873	0.464+j3.158	19.01	20.17	0.796+j3.759	0.462+j3.150
LEÓN MALECÓN	LNМ-115	115.0	11.63	9.98	1.621+j5.473	1.650+j8.402	13.21	11.23	1.433+j5.341	1.627+j8.312
LEÓN NORTE	LNN-115	115.0	14.58	11.94	1.106+j4.416	2.594+j7.142	16.67	13.48	0.918+j4.283	2.570+j7.083
LEÓN ORIENTE	LNO-110	115.0	12.50	11.25	1.367+j5.135	1.462+j6.939	14.15	12.61	1.192+j5.022	1.453+j6.910
LEÓN PONIENTE	LNP-110	115.0	13.73	10.30	1.167+j4.693	2.165+j9.430	15.69	11.58	0.975+j4.553	2.151+j9.366
LEÓN TRES	LNT-230	230.0	12.15	11.56	2.710+j10.590	2.155+j12.453	14.47	13.41	1.919+j9.909	2.097+j12.321
LEÓN TRES	LNT-115	115.0	19.62	21.30	0.866+j3.271	0.355+j2.574	22.84	24.64	0.672+j3.126	0.333+j2.482
LEÓN UNO	LNU-230	230.0	14.59	15.04	2.343+j8.794	1.279+j8.231	17.47	17.52	1.639+j8.199	1.274+j8.200
LEÓN UNO	LNU-115	115.0	19.93	21.97	0.759+j3.243	0.229+j2.413	23.06	25.12	0.577+j3.115	0.224+j2.384
LINDAVISTA	LIV-115	115.0	7.95	6.87	2.172+j8.065	3.026+j11.910	9.16	7.79	1.831+j7.764	3.005+j11.814
LOGISTIK	LOG-115	115.0	14.23	13.82	1.299+j4.483	0.971+j5.003	18.00	16.86	0.910+j3.954	0.914+j4.800
LOMAS	LMS-69	69.0	12.22	9.22	0.970+j3.113	1.927+j6.154	14.42	10.52	0.754+j2.944	1.923+j6.126
LOMBARDÍA	LMB-69	69.0	2.23	1.32	6.024+j16.807	13.449+j53.551	5.17	4.91	2.033+j8.234	1.551+j9.970
LORETO	LOR-115	115.0	4.55	2.98	4.702+j13.805	10.263+j36.182	5.14	3.32	4.391+j13.522	10.263+j36.164
LOS CHARCOS	LCH-115	115.0	5.79	4.13	3.347+j10.963	7.385+j24.214	6.58	4.62	2.979+j10.688	7.372+j24.118
LOS FRESNOS	FRS-115	115.0	9.95	7.30	1.507+j6.501	3.219+j13.578	11.21	8.14	1.340+j6.377	3.210+j13.514
LOS HERNÁNDEZ	HDZ-110	115.0	1.41	1.11	19.155+j42.858	31.290+j78.904	1.59	1.25	18.262+j42.064	31.034+j78.281
LOS OLIVOS (IRAPUATO)	OLV-115	115.0	13.00	9.00	1.107+j4.985	2.380+j11.688	14.76	10.05	0.950+j4.858	2.377+j11.652
LOS REYES	RYS-115	115.0	4.05	2.72	4.883+j15.634	11.987+j38.539	4.59	3.04	4.480+j15.275	11.977+j38.481
LOS SAUCES	LSA-115	115.0	9.61	6.78	2.141+j6.571	4.043+j15.040	10.82	7.55	1.968+j6.456	4.031+j14.985



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
LUIS MOYA	LMY-110	115.0	5.19	3.63	4.793+j11.874	6.714+j28.628	5.98	4.10	4.382+j11.401	6.706+j28.586
MABE LEISER (SLP)	MBL-115	115.0	17.18	16.66	1.066+j3.714	0.822+j4.161	21.94	20.20	0.706+j3.253	0.816+j4.114
MAHLE	MAH-115	115.0	11.05	9.21	1.560+j5.805	3.196+j9.066	12.87	10.47	1.281+j5.528	3.195+j9.075
MALPASO	MPO-115	115.0	3.05	2.26	7.749+j20.324	11.827+j43.288	3.45	2.52	7.295+j19.883	11.816+j43.195
MANIOBRAS AISIN TAKAOKA	MTK-115	115.0	9.41	6.07	1.573+j6.878	3.973+j18.270	10.59	6.75	1.414+j6.750	3.968+j18.231
MANIOBRAS ANTARES	MAT-230	230.0	9.31	8.08	3.303+j13.868	4.663+j20.266	12.68	10.03	1.855+j11.367	4.648+j20.178
MANIOBRAS BMW	MBM-230	230.0	9.60	8.90	3.618+j13.347	3.622+j16.743	13.10	11.17	2.131+j10.947	3.582+j16.554
MANIOBRAS GENERAL MOTORS	MGM-230	230.0	10.18	8.24	2.932+j12.710	4.868+j21.725	11.86	9.37	2.293+j12.104	4.847+j21.627
MANIOBRAS GETRAG	MGT-115	115.0	7.61	4.94	1.859+j8.525	4.739+j22.343	8.52	5.52	1.698+j8.402	4.633+j22.042
MANIOBRAS GKN	MGK-115	115.0	8.91	7.53	1.656+j7.265	2.728+j11.228	9.88	8.35	1.542+j7.229	2.709+j11.143
MANIOBRAS HONDA	MHN-115	115.0	14.21	10.35	0.978+j4.569	2.343+j9.625	15.45	11.31	0.864+j4.649	2.334+j9.653
MANIOBRAS HUIMILÁN	MHU-115	115.0	2.99	2.25	8.109+j20.705	18.935+j40.031	3.40	2.51	7.432+j20.163	18.933+j40.049
MANIOBRAS IBERDROLA	MIB-115	115.0	13.27	10.66	1.191+j4.859	1.944+j8.463	18.12	13.24	0.792+j3.953	1.926+j8.263
MANIOBRAS KASAI	MKI-115	115.0	17.16	17.28	0.858+j3.773	0.684+j3.732	19.70	19.60	0.676+j3.645	0.679+j3.704
MANIOBRAS MEXSOLAR	MMX-115	115.0	10.09	9.09	1.309+j6.451	2.043+j8.506	11.66	10.32	1.163+j6.157	2.023+j8.458
MANIOBRAS SOLEM	MSL-230	230.0	8.03	8.75	3.509+j16.165	1.674+j12.382	10.19	10.68	2.221+j14.164	1.657+j12.274
MANIOBRAS TOYOTA	TOM-230	230.0	12.01	8.98	2.032+j10.872	3.726+j21.910	13.67	10.05	1.701+j10.551	3.725+j21.904
MANIOBRAS VESTA PARK	MVP-115	115.0	25.10	20.86	0.451+j2.607	0.641+j4.202	29.38	23.88	0.380+j2.457	0.639+j4.150
MANIOBRAS WORLD TRADE CENTER DOS	MWD-230	230.0	9.24	8.22	3.611+j13.907	4.357+j19.271	12.51	10.21	2.114+j11.483	4.327+j19.117
MANUFACTURAS KALTEX S.A. DE C.V.	KAL-115	115.0	10.91	6.88	1.609+j5.870	4.294+j16.199	14.02	8.23	1.251+j5.055	4.226+j15.655
MANUFACTURAS VITROMEX I	VTM-115	115.0	9.11	7.28	1.930+j7.032	3.814+j12.181	10.33	8.15	1.818+j6.831	3.813+j12.177
MANUFACTURAS VITROMEX II	VT2-115	115.0	9.38	8.73	1.794+j6.850	2.957+j8.162	10.65	9.79	1.681+j6.649	2.956+j8.158
MANZANILLO	MNZ-400	400.0	7.30	8.87	8.049+j30.606	1.048+j14.978	18.79	23.04	1.092+j13.474	0.242+j6.035
MANZANILLO	MNZ-230	230.0	8.32	10.19	3.408+j15.589	0.570+j7.224	14.00	16.10	0.954+j10.392	0.489+j6.322
MARABIS CONMONFORT	MRC-115	115.0	8.23	5.63	2.374+j7.715	6.622+j18.045	9.16	6.24	2.279+j7.641	6.617+j18.029
MARAVATIO	MAV-115	115.0	2.19	1.89	8.830+j28.960	9.854+j44.266	2.46	2.12	8.504+j28.417	9.522+j43.423
MARGARITAS	MRS-115	115.0	14.34	10.75	1.067+j4.506	1.546+j9.154	16.93	12.25	0.793+j4.241	1.546+j9.154
MATANCHEN	MEN-115	115.0	2.92	1.90	4.569+j22.271	12.150+j57.995	3.42	2.16	3.691+j21.020	12.089+j57.613
MATEHUALA SUBESTACIÓN	MHS-110	115.0	2.15	1.97	11.345+j28.748	8.300+j38.552	2.61	2.53	9.387+j26.348	5.558+j30.264
MATEHUALA SUR	MHR-115	115.0	2.15	2.14	10.833+j28.939	5.088+j31.337	2.58	2.63	9.103+j26.783	4.072+j26.820
MAZAMITLA	MTA-400	400.0	9.20	7.53	6.509+j24.237	8.537+j40.921	13.57	9.69	2.257+j18.577	8.545+j40.362
MAZDA MANIOBRAS	MMZ-115	115.0	13.46	9.60	0.996+j4.831	2.397+j10.608	15.29	10.75	0.855+j4.699	2.390+j10.571
MEADWEST VACO (SAINT GO BAIN)	MEA-115	115.0	13.84	11.60	1.346+j4.605	1.742+j7.381	17.15	13.65	0.982+j4.144	1.735+j7.333
MELAUQUE	MLQ-115	115.0	3.51	4.09	5.017+j18.253	2.517+j10.568	4.14	4.76	4.255+j17.125	2.505+j10.419
METAL FOARMING	SMF-115	115.0	11.47	9.67	1.502+j5.589	1.799+j8.853	14.09	11.41	1.113+j5.063	1.744+j8.657
MEXICHEM DERIVADOS	MCH-115	115.0	10.63	8.33	1.765+j5.990	3.556+j10.852	11.97	9.28	1.671+j5.869	3.555+j10.851
MEXICHEM DERIVADOS	MCH-69	69.0	10.69	9.88	1.217+j3.521	1.433+j4.417	12.73	11.48	0.990+j3.296	1.429+j4.340
MÉXICO	MXJ-69	69.0	12.45	11.00	1.039+j3.026	0.640+j4.462	14.78	12.70	0.812+j2.851	0.632+j4.405
MEXTICACAN	MXT-115	115.0	3.05	2.02	5.797+j20.972	15.872+j52.588	3.41	2.25	5.469+j20.731	15.581+j52.055
MEZQUITÁN	MZI-110	115.0	1.12	0.78	18.302+j56.134	55.384+j127.290	1.38	0.90	14.148+j50.837	55.385+j127.318



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
MICHELIN	MIC-115	115.0	17.69	15.73	0.794+j3.669	0.930+j5.066	19.96	17.56	0.707+j3.589	0.931+j5.072
MICHELÍN MANIOBRAS	MMH-115	115.0	9.64	6.96	2.026+j6.580	3.614+j14.416	10.86	7.76	1.853+j6.466	3.601+j14.362
MICROPARQUE	MPQ-115	115.0	19.10	19.20	0.900+j3.358	0.744+j3.339	21.62	21.51	0.813+j3.279	0.744+j3.345
MIGUEL AUZA	MGU-115	115.0	0.81	0.50	34.702+j74.227	84.076+j216.192	0.90	0.56	34.297+j73.934	84.076+j216.184
MINA FRESNILLO	CMF-115	115.0	6.22	5.56	3.300+j10.160	2.713+j14.257	7.17	6.29	2.890+j9.770	2.714+j14.239
MINA LA PAZ	MLP-115	115.0	1.93	1.68	12.963+j31.920	11.887+j48.475	2.36	2.24	10.599+j29.110	6.765+j35.530
MINA PEÑOLES	PNO-115	115.0	3.64	2.75	4.972+j17.575	11.053+j34.222	4.13	3.08	4.519+j17.115	11.042+j34.133
MINA SAN JAVIER	MSJ-115	115.0	6.87	4.94	2.428+j9.349	5.572+j20.265	7.89	5.56	2.148+j9.003	5.556+j20.179
MINA SAUCITO	SUM-115	115.0	4.92	3.91	4.119+j12.840	5.300+j23.392	5.62	4.39	3.707+j12.459	5.301+j23.375
MINAS	MNA-69	69.0	4.78	3.78	2.814+j7.836	3.431+j14.625	6.20	4.94	1.970+j6.785	2.806+j12.182
MINATITLÁN	MTC-115	115.0	6.04	4.48	2.988+j10.588	6.087+j21.665	7.50	5.24	2.271+j9.465	6.082+j21.538
MINERA PEÑASQUITO	PNQ-400	400.0	4.62	3.23	8.043+j49.347	26.344+j111.329	5.40	3.66	6.464+j46.561	26.309+j111.130
MINERALES Y MINAS MEXICANAS BOLAÑOS	BOL-115	115.0	0.90	0.57	34.652+j65.556	61.648+j192.794	0.99	0.63	34.347+j65.326	61.629+j192.746
MINSA, S.A. DE C.V.	MIN-69	69.0	9.52	5.35	1.729+j3.810	3.929+j13.445	11.03	6.00	1.531+j3.666	3.928+j13.436
MIRAMAR	MRM-115	115.0	8.05	7.04	2.170+j7.962	3.822+j11.170	10.55	8.61	1.473+j6.763	3.814+j11.020
MIRAVALLE	MIL-69	69.0	15.26	8.74	1.028+j2.399	1.821+j8.322	18.30	9.90	0.822+j2.249	1.821+j8.317
MISIÓN HILLS	MHI-115	115.0	10.76	8.22	1.329+j6.025	2.925+j11.528	12.15	9.16	1.229+j5.883	2.925+j11.527
MOCTEZUMA	MZM-115	115.0	5.70	5.25	2.927+j11.273	2.865+j14.393	6.67	6.00	2.516+j10.656	2.870+j14.332
MOJONERA	MOJ-69	69.0	15.29	10.78	0.749+j2.495	1.155+j5.772	18.66	13.07	0.523+j2.289	0.995+j5.274
MONARCA	MNC-115	115.0	6.05	4.00	3.324+j10.461	8.018+j26.688	6.83	4.46	3.193+j10.210	8.016+j26.628
MONTENEGRO	MNG-115	115.0	11.68	9.43	1.796+j5.392	1.201+j9.790	13.11	10.50	1.707+j5.301	1.194+j9.753
MORALETE	MTE-115	115.0	6.17	5.80	3.011+j10.336	3.345+j12.363	7.59	6.86	2.298+j9.348	3.328+j12.229
MORELIA	MEL-115	115.0	9.32	9.93	2.002+j6.834	1.198+j5.782	10.85	11.47	1.705+j6.510	1.180+j5.649
MORELIA DOS	MRD-115	115.0	8.11	7.89	2.238+j7.880	1.704+j8.778	9.36	9.01	1.940+j7.557	1.691+j8.662
MORELIA INDUSTRIAL	MOI-115	115.0	8.41	7.76	2.198+j7.580	2.095+j9.782	9.85	8.97	1.880+j7.174	2.056+j9.585
MORELIA NORTE	MOR-115	115.0	8.84	8.62	2.132+j7.205	1.798+j7.974	10.29	9.94	1.831+j6.858	1.763+j7.791
MORELIA POTENCIA	MRP-230	230.0	5.79	5.79	5.278+j22.318	2.712+j23.033	6.78	6.66	4.116+j21.134	2.653+j22.769
MORELIA POTENCIA	MRP-115	115.0	10.00	11.75	1.743+j6.405	0.371+j3.768	11.67	13.65	1.448+j6.089	0.354+j3.642
MORELOS	MRE-115	115.0	13.54	10.63	1.133+j4.772	1.557+j8.799	16.02	12.15	0.846+j4.479	1.556+j8.795
MORELOS (LEÓN)	MRL-115	115.0	13.19	11.50	1.224+j4.884	1.389+j7.117	14.97	12.89	1.045+j4.767	1.387+j7.101
MOROLEÓN	MLO-110	115.0	5.01	3.17	3.859+j12.686	11.167+j34.511	5.60	3.52	3.672+j12.521	11.120+j34.371
MUELLE	MLE-115	115.0	4.28	4.44	5.072+j14.678	4.416+j13.122	5.13	5.19	4.013+j13.665	4.409+j13.048
NAL DE CONDOC ELEC S.A DE C.V	CDT-115	115.0	14.21	13.94	0.994+j4.567	0.839+j4.871	18.17	16.94	0.739+j3.950	0.839+j4.825
NESTLÉ MÉXICO S.A. DE C.V.	NST-115	115.0	10.43	6.98	1.603+j6.162	3.775+j15.348	11.65	7.73	1.516+j6.085	3.776+j15.354
NISSAN	NIS-115	115.0	11.08	8.34	1.329+j5.841	1.899+j11.769	12.98	9.46	1.037+j5.531	1.897+j11.753
NISSAN MANIOBRAS	NSS-115	115.0	11.35	8.47	1.302+j5.703	1.883+j11.680	13.31	9.62	1.010+j5.393	1.881+j11.664
NITROPISO	NTP-115	115.0	13.04	9.32	1.304+j4.922	2.027+j11.032	16.11	10.84	0.934+j4.437	2.016+j10.956
NIÑOS HÉROES	NHE-230	230.0	8.39	7.62	4.595+j15.152	4.220+j20.257	11.39	9.52	2.180+j12.637	4.174+j19.975
NOGALES	NGA-115	115.0	11.77	10.25	1.148+j5.523	1.444+j8.017	13.40	11.51	1.043+j5.349	1.440+j8.007
NOGALITO	NGT-115	115.0	3.95	3.72	5.537+j15.877	5.057+j19.287	4.72	4.31	4.430+j14.825	5.050+j19.213



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
NUCOR MANIOBRAS	NUM-115	115.0	7.61	7.38	2.394+j8.395	3.670+j8.856	8.53	8.23	2.229+j8.272	3.663+j8.801
NUEVA ITALIA	NVI-69	69.0	2.44	1.71	5.109+j15.521	7.514+j36.679	4.80	4.10	2.567+j8.765	3.215+j13.595
NUEVA JAUJA	JAU-115	115.0	6.27	6.09	2.987+j10.152	2.530+j11.303	8.15	7.50	1.959+j8.746	2.489+j11.027
NUEVA PEDREGAL	NPD-115	115.0	7.81	5.37	2.047+j8.248	3.445+j19.807	8.70	5.94	1.959+j8.161	3.444+j19.802
NUEVA PEDREGAL	PDL-115	115.0	10.20	8.12	1.810+j6.255	3.042+j11.092	12.01	9.27	1.506+j5.892	3.038+j11.061
NUEVO VALLARTA POTENCIA	NVT-230	230.0	3.19	4.09	13.093+j39.508	1.315+j14.295	4.01	5.03	9.143+j35.300	1.330+j14.241
NUEVO VALLARTA POTENCIA	NVT-115	115.0	5.92	7.95	3.564+j10.634	0.208+j2.700	7.34	9.72	2.558+j9.615	0.208+j2.669
NYPRO KANAAK SA CV	NKA-69	69.0	12.53	9.46	0.849+j3.065	1.614+j6.065	15.08	10.93	0.614+j2.841	1.602+j6.006
OBLATOS	OBL-69	69.0	11.12	10.07	0.963+j3.450	0.721+j4.671	13.96	13.19	0.667+j3.067	0.535+j3.660
OCOTLÁN	OCN-230	230.0	7.01	6.28	4.823+j18.323	3.968+j25.295	8.45	7.36	3.254+j16.977	3.789+j24.708
OCOTLÁN	OCN-115	115.0	12.24	12.81	1.590+j5.186	0.617+j4.712	14.47	15.05	1.205+j4.902	0.568+j4.450
OJO CALIENTE	OCL-110	115.0	6.92	5.30	3.251+j9.022	5.372+j17.585	8.35	6.14	2.642+j8.339	5.364+j17.516
OJO SECO	OJO-110	115.0	10.46	7.23	1.553+j6.152	4.247+j14.274	11.51	7.95	1.441+j6.182	4.242+j14.281
OJUELOS	OJU-115	115.0	1.91	1.09	11.674+j32.719	25.857+j110.840	2.12	1.20	11.493+j32.539	25.855+j110.820
OMEGA	OMG-115	115.0	7.97	5.88	1.869+j8.113	3.173+j16.959	9.45	6.73	1.475+j7.589	3.129+j16.793
OMYA MÉXICO S.A. DE C.V.	OMY-115	115.0	13.12	6.78	1.137+j4.931	8.038+j17.637	16.37	7.80	0.895+j4.371	8.043+j17.572
P. H. TROJES	TJS-115	115.0	1.78	1.58	13.464+j34.804	12.538+j49.780	2.02	1.77	12.723+j33.837	12.597+j49.880
PABELLÓN	PAB-115	115.0	7.28	4.96	2.268+j8.837	4.027+j21.541	8.31	5.58	1.987+j8.561	4.027+j21.524
PACHAMAMA MANIOBRAS	MPM-400	400.0	11.83	12.31	5.045+j18.862	2.453+j17.167	16.39	15.76	2.072+j15.357	2.469+j17.232
PAILERÍA	PAI-115	115.0	17.20	16.69	1.098+j3.701	0.792+j4.159	21.92	20.20	0.738+j3.249	0.786+j4.112
PALO ALTO	PAO-115	115.0	5.34	3.41	4.096+j11.749	7.674+j32.719	6.04	3.80	3.820+j11.472	7.673+j32.709
PÁNFILO NATERA	PFN-115	115.0	3.10	2.05	4.839+j20.836	25.076+j48.923	3.54	2.30	4.221+j20.166	25.067+j48.853
PARACHO II	POD-115	115.0	6.33	5.58	3.359+j9.945	4.080+j14.138	7.47	6.43	2.818+j9.358	4.025+j13.988
PARQUE DE TECNOLOGÍA	PTE-69	69.0	10.50	6.67	1.118+j3.624	2.287+j10.085	12.54	8.33	0.869+j3.384	1.724+j8.621
PARQUE INDUSTRIAL	PQI-69	69.0	19.15	17.87	0.600+j1.991	0.466+j2.494	23.62	21.13	0.395+j1.813	0.462+j2.469
PARQUE INDUSTRIAL COLINAS DE APASEO	API-115	115.0	7.64	5.17	2.614+j8.282	6.594+j20.117	6.80	4.84	3.233+j10.250	7.090+j22.659
PARQUE INDUSTRIAL COLINAS DE LEÓN	ICL-115	115.0	14.41	10.89	1.108+j4.474	1.830+j8.898	16.49	12.25	0.917+j4.333	1.820+j8.846
PARQUE INDUSTRIAL FINSA QUERETARO	PFQ-115	115.0	11.67	9.38	1.794+j5.400	1.255+j9.864	13.10	10.45	1.706+j5.309	1.247+j9.825
PARQUE INDUSTRIAL GUANAJUATO CENTRAL	IGC-115	115.0	12.96	10.06	1.253+j4.967	2.803+j9.150	14.76	11.29	1.097+j4.824	2.799+j9.114
PARQUE INNOVACIÓN	PQN-115	115.0	14.66	12.37	1.005+j4.416	1.588+j6.857	16.52	13.79	0.907+j4.326	1.588+j6.860
PARQUE PIEL	PAP-115	115.0	14.48	12.73	1.112+j4.449	1.591+j6.278	16.52	14.33	0.930+j4.321	1.587+j6.253
PARQUE SOLAR SANTIAGO MANIOBRAS	MSG-230	230.0	5.60	5.03	5.217+j23.131	5.908+j31.285	7.18	6.07	3.489+j20.043	5.821+j30.940
PÁTZCUARO NORTE	PTN-115	115.0	3.31	3.06	6.172+j19.058	5.501+j24.553	3.78	3.45	5.601+j18.493	5.478+j24.369
PÁTZCUARO SUR	PCS-115	115.0	3.33	2.85	6.127+j18.950	7.538+j29.107	3.79	3.20	5.602+j18.439	7.519+j28.959
PEDREGAL	PDG-115	115.0	6.84	6.35	2.712+j9.322	3.760+j11.412	7.84	7.20	2.395+j8.997	3.747+j11.301
PELETIZADORA ALZADA	PAL-115	115.0	3.18	2.58	6.346+j19.915	9.339+j34.234	3.70	2.93	5.610+j18.953	9.318+j34.125
PEMSA	PEM-115	115.0	10.00	7.50	2.118+j6.294	3.835+j12.711	11.07	8.30	2.006+j6.285	3.817+j12.636
PENAL	PNL-69	69.0	9.01	6.11	1.102+j4.282	2.590+j10.404	10.54	6.92	0.873+j4.066	2.588+j10.368
PÉNJAMO	PNJ-115	115.0	3.83	2.69	5.195+j16.524	10.731+j37.999	4.26	2.98	5.018+j16.389	10.679+j37.727
PERFORMANCE FIBERS MÉXICO	PER-115	115.0	13.82	16.50	1.245+j4.639	0.450+j2.426	15.52	18.44	1.158+j4.560	0.450+j2.432



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
PERIBAN	PBN-115	115.0	3.82	2.62	5.236+j16.592	13.177+j38.944	4.32	2.93	4.811+j16.202	13.162+j38.871
PETROQUÍMICA	INP-69	69.0	8.78	7.38	1.577+j4.256	2.425+j6.689	10.31	8.46	1.350+j4.032	2.421+j6.612
PEÑA COLORADA	PEC-115	115.0	5.79	4.25	3.142+j11.020	6.475+j23.111	7.17	4.95	2.423+j9.900	6.470+j22.984
PEÑASCO	PNS-115	115.0	10.73	7.64	1.428+j6.022	2.742+j13.438	12.44	8.61	1.197+j5.750	2.741+j13.432
PEÑITAS	PEN-115	115.0	3.24	2.20	5.640+j19.704	14.840+j47.486	3.82	2.50	4.710+j18.525	14.775+j47.095
PEÑUELAS	PEN-115	115.0	6.70	5.07	2.258+j9.654	3.445+j19.139	7.96	5.84	1.801+j9.001	3.363+j18.860
PINAR	PNR-69	69.0	15.40	11.12	0.698+j2.491	0.930+j5.509	18.74	12.95	0.480+j2.288	0.902+j5.402
PINZÁNDARO	PIZ-115	115.0	2.08	1.80	10.632+j30.060	11.720+j45.535	2.80	2.26	7.262+j25.099	11.516+j43.105
PIRELLI NEUMÁTICOS S.A. DE C.V.	PIR-115	115.0	6.52	5.13	2.686+j9.824	4.374+j17.963	7.27	5.70	2.516+j9.720	4.343+j17.829
PITILLAL	PTL-115	115.0	4.91	5.42	4.231+j12.840	1.787+j9.611	5.96	6.41	3.196+j11.833	1.780+j9.538
PM CIGATAM PS S. DE R.L. DE C.V.	CIG-69	69.0	11.67	7.78	1.040+j3.251	2.021+j8.298	13.75	8.84	0.822+j3.080	2.015+j8.261
PONCITLAN	PNC-115	115.0	3.96	2.61	5.020+j16.003	11.329+j41.258	4.45	2.91	4.630+j15.736	11.256+j40.869
PORCELANITE SJI	POR-115	115.0	7.83	7.65	2.201+j8.191	1.226+j9.021	8.56	8.38	2.077+j8.273	1.224+j9.039
POTOSÍ SOLAR MANIOBRAS	MFP-400	400.0	6.15	5.35	5.534+j37.119	10.029+j53.594	7.93	6.44	3.037+j31.910	9.994+j53.427
POTRERILLOS	POS-400	400.0	13.37	13.46	4.494+j16.681	2.418+j16.832	17.40	16.51	2.276+j14.419	2.442+j16.810
POTRERILLOS	POS-230	230.0	14.81	16.32	2.155+j8.702	0.690+j6.489	17.79	19.10	1.427+j8.085	0.695+j6.505
POTRERILLOS	POS-115	115.0	20.94	21.12	0.648+j3.104	0.299+j3.091	24.24	23.99	0.465+j2.977	0.301+j3.095
POTRERO SOLAR MANIOBRAS	POM-400	400.0	9.30	9.34	5.234+j24.285	2.673+j24.419	11.97	11.37	2.568+j21.064	2.692+j24.494
PPG	PPG-115	115.0	13.37	12.19	1.098+j4.845	1.342+j6.265	16.91	14.61	0.846+j4.235	1.342+j6.218
PRADERA	PAD-115	115.0	3.01	2.88	7.100+j20.917	5.322+j24.638	4.11	3.77	4.524+j17.163	5.067+j22.240
PRAXAIR MÉXICO S.A. DE C.V. (GUADALAJARA)	PRA-69	69.0	10.36	8.35	1.314+j3.615	1.485+j6.475	12.12	9.53	1.095+j3.445	1.469+j6.408
PRIMERO DE MAYO	PMY-400	400.0	8.01	9.03	4.302+j28.495	1.570+j19.111	10.77	11.54	2.279+j23.472	1.534+j18.822
PROCTER & GAMBLE MANIOBRAS (IRAPUATO)	PGM-115	115.0	11.58	4.93	1.464+j5.545	7.639+j27.928	13.10	5.47	1.306+j5.419	7.637+j27.854
PROCTER & GAMBLE QUERETARO	P&G-115	115.0	6.88	4.61	2.799+j9.237	7.185+j22.840	6.24	4.39	3.419+j11.203	7.681+j25.382
PROD FARMACÉUTICOS COLLINS	CNS-69	69.0	15.16	11.39	0.804+j2.501	1.161+j5.123	18.22	13.09	0.594+j2.331	1.159+j5.104
PROD MET MEX DE POSTES SA CV	AMX-69	69.0	12.27	6.56	1.239+j3.000	2.699+j11.459	14.40	7.38	1.043+j2.859	2.699+j11.451
PRODUCTOS GATORADE	GAT-69	69.0	4.83	3.02	2.522+j7.855	5.731+j22.316	5.49	3.38	2.291+j7.641	5.726+j22.239
PUEBLO NUEVO	PNV-115	115.0	6.08	4.21	2.973+j10.501	8.449+j24.025	6.80	4.69	2.804+j10.370	8.429+j23.862
PUENTE GRANDE	PGN-69	69.0	7.64	6.86	1.395+j5.026	0.948+j6.969	9.16	7.91	1.089+j4.658	0.961+j7.005
PUENTE GRANDE DOS	PTD-115	115.0	2.41	0.95	7.543+j26.442	51.222+j145.189	3.06	1.13	6.318+j23.041	47.817+j137.411
PUENTE GRANDE DOS	PTD-69	69.0	7.69	6.91	1.385+j4.988	0.932+j6.919	9.23	7.97	1.080+j4.622	0.945+j6.955
PUERTA GRANDE	PUG-115	115.0	7.77	6.05	2.320+j8.228	4.182+j15.247	8.94	6.83	1.974+j7.931	4.171+j15.178
PUERTA QUERÉTARO	PQO-115	115.0	11.75	9.02	1.348+j5.485	2.322+j10.530	13.37	10.13	1.262+j5.317	2.306+j10.442
PUERTO INTERIOR	PTI-115	115.0	7.19	5.81	2.403+j8.919	3.482+j15.451	8.03	6.47	2.233+j8.814	3.443+j15.296
PUERTO INTERIOR (FONDEPORT)	FDP-115	115.0	8.72	7.79	1.999+j7.350	3.000+j9.882	11.62	9.64	1.306+j6.149	2.992+j9.731
PUNTA DE MITA	PMI-115	115.0	3.52	2.88	5.861+j17.925	6.196+j30.841	4.15	3.29	4.828+j16.930	6.194+j30.798
PURÉPECHA POTENCIA	PRH-400	400.0	8.39	7.54	6.629+j26.701	5.665+j36.411	11.37	9.36	2.840+j22.158	5.716+j36.316
PURÉPECHA POTENCIA	PRH-115	115.0	16.10	16.13	0.839+j4.037	0.437+j4.086	19.37	18.81	0.509+j3.736	0.438+j4.085
PURÉPERO	PRP-115	115.0	7.74	6.73	2.218+j8.291	4.275+j11.691	8.99	7.66	1.857+j7.911	4.274+j11.652
PURUANDIRO	PUR-115	115.0	2.93	1.93	7.440+j21.385	17.376+j55.017	3.36	2.17	6.789+j20.616	17.374+j54.976



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
PURUARÁN	PUU-69	69.0	1.25	0.71	14.110+j28.643	30.932+j99.666	1.82	1.14	10.116+j21.915	21.156+j64.108
QUERÉTARO I	QRO-230	230.0	17.62	18.91	1.667+j7.348	0.696+j5.969	20.67	21.71	1.322+j6.942	0.706+j6.006
QUERÉTARO I	QRO-115	115.0	25.78	31.61	0.572+j2.511	0.080+j1.154	29.45	35.82	0.485+j2.432	0.080+j1.160
QUERÉTARO INDUSTRIAL	QRI-110	115.0	9.08	8.98	1.773+j7.096	0.798+j7.557	9.92	9.82	1.650+j7.178	0.795+j7.575
QUERÉTARO MANIOBRAS	QMR-110	115.0	10.40	11.28	1.380+j6.233	0.469+j4.895	11.34	12.31	1.256+j6.314	0.466+j4.913
QUERÉTARO NORTE	QRN-115	115.0	14.31	13.94	1.360+j4.434	0.762+j4.982	16.12	15.56	1.269+j4.349	0.761+j4.983
QUERÉTARO ORIENTE	QRE-115	115.0	12.03	10.60	1.552+j5.294	0.488+j7.857	13.52	11.79	1.456+j5.203	0.488+j7.855
QUERÉTARO PONIENTE	QPE-115	115.0	11.76	8.76	1.272+j5.499	1.833+j11.324	12.97	9.67	1.184+j5.506	1.810+j11.247
QUERÉTARO POTENCIA	QRP-400	400.0	19.34	17.74	2.203+j11.736	1.827+j15.037	23.62	20.77	1.328+j10.671	1.859+j15.035
QUERÉTARO POTENCIA	QRP-230	230.0	23.31	26.42	1.096+j5.591	0.316+j3.674	27.00	30.16	0.787+j5.352	0.318+j3.692
QUERÉTARO POTENCIA	QRP-115	115.0	28.18	34.90	0.433+j2.316	0.049+j0.998	29.50	36.71	0.327+j2.454	0.047+j1.016
QUERÉTARO POTENCIA MANIOBRAS	QPM-400	400.0	21.28	18.74	1.967+j10.671	2.374+j15.037	26.08	22.05	1.182+j9.667	2.366+j14.855
QUERÉTARO SUR	QRS-115	115.0	18.45	12.77	0.719+j3.526	1.494+j8.270	19.84	13.90	0.620+j3.629	1.490+j8.268
QUINCEO	QNC-115	115.0	9.03	9.17	2.068+j7.060	1.507+j6.931	10.50	10.57	1.770+j6.727	1.485+j6.784
RANCHO GRANDE	RAG-115	115.0	2.58	1.79	8.314+j24.397	17.379+j57.183	2.88	1.99	7.913+j24.050	17.380+j57.175
REXAM BEVERAGE CAN AM S.A.	RXM-115	115.0	11.53	9.28	1.376+j5.594	2.257+j9.672	12.89	10.30	1.289+j5.516	2.257+j9.678
REXEL	RES-115	115.0	6.55	4.34	2.918+j9.709	7.302+j24.577	7.42	4.85	2.777+j9.437	7.299+j24.510
REYMA	RYM-115	115.0	14.14	11.47	1.114+j4.562	1.850+j7.760	16.12	12.88	0.931+j4.435	1.844+j7.730
RÍO GRANDE	RGR-110	115.0	1.41	0.91	17.694+j43.711	44.970+j117.136	1.56	1.00	17.286+j43.394	44.970+j117.128
RIO GRANDE II	RIG-115	115.0	1.49	0.96	15.924+j41.754	41.680+j110.658	1.65	1.06	15.516+j41.434	41.680+j110.650
ROMITA	RTA-115	115.0	8.38	6.27	1.759+j7.725	3.130+j15.597	9.40	6.98	1.590+j7.604	3.119+j15.522
S.I.A.P.A. (TOLUQUILLA)	SPB-69	69.0	15.66	11.30	0.818+j2.408	1.246+j5.363	18.86	12.97	0.608+j2.242	1.244+j5.347
S.I.A.P.A. PLANTA 2	STO-69	69.0	4.69	3.38	2.384+j8.161	4.760+j17.742	5.34	3.80	2.145+j7.923	4.746+j17.581
S.I.A.P.A. PTA BOMBEO STA CRUZ	SCH-69	69.0	2.66	1.51	4.646+j14.239	12.328+j47.423	2.98	1.68	4.414+j14.028	12.323+j47.345
SAHUAYO	SHY-115	115.0	7.32	5.12	2.223+j8.793	4.559+j20.292	8.39	5.75	1.864+j8.503	4.550+j20.205
SALAHUA	SLH-115	115.0	8.46	6.99	2.079+j7.571	4.015+j12.165	11.20	8.54	1.384+j6.372	4.007+j12.014
SALAMANCA	SLM-400	400.0	19.04	19.93	2.915+j11.773	1.124+j10.505	25.74	26.67	1.328+j9.780	0.806+j8.805
SALAMANCA	SLM-230	230.0	25.18	28.87	1.161+j5.144	0.244+j3.271	32.86	36.44	0.629+j4.401	0.214+j3.135
SALAMANCA	SLM-115	115.0	22.76	25.69	0.546+j2.865	0.119+j1.928	26.54	29.63	0.406+j2.722	0.114+j1.893
SALAMANCA COGENERACIÓN	SCG-230	230.0	25.04	28.06	1.180+j5.171	0.358+j3.591	32.78	35.39	0.642+j4.409	0.331+j3.462
SALAMANCA DOS	SMD-400	400.0	18.37	18.76	3.182+j12.160	1.614+j11.727	24.84	24.38	1.443+j10.124	1.462+j10.707
SALAMANCA DOS	SMD-230	230.0	11.84	9.18	2.273+j10.978	5.003+j20.366	14.07	10.54	1.710+j10.239	4.977+j20.236
SALAMANCA DOS	SMD-115	115.0	20.29	20.09	0.586+j3.219	0.350+j3.359	23.34	22.85	0.447+j3.097	0.342+j3.319
SALAMANCA NORTE	SLN-115	115.0	15.27	10.36	1.027+j4.227	2.733+j10.175	17.46	11.62	0.886+j4.088	2.727+j10.140
SALAMANCA PONIENTE	SPO-115	115.0	16.91	14.42	0.723+j3.858	1.071+j5.867	19.33	16.25	0.583+j3.734	1.064+j5.828
SALAMANCA SUR	SSU-110	115.0	17.63	20.07	0.800+j3.680	0.165+j2.406	20.26	22.89	0.659+j3.544	0.161+j2.372
SALERO	SLR-400	400.0	6.87	5.12	5.243+j33.200	14.579+j66.590	8.31	5.91	3.754+j30.333	14.543+j66.391
SALINAS	SNA-115	115.0	1.64	0.95	10.331+j39.196	64.916+j112.225	1.84	1.06	9.708+j38.533	64.907+j112.155
SALITRE	STE-115	115.0	3.61	2.20	4.522+j17.828	7.135+j53.443	4.04	2.44	4.225+j17.576	7.117+j53.396
SALVATIERRA	SVT-110	115.0	5.45	3.72	3.385+j11.706	9.646+j27.570	6.10	4.14	3.214+j11.536	9.626+j27.500



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
SAMSUNG	SAM-115	115.0	9.16	8.43	2.058+j6.946	2.265+j8.845	10.25	9.37	1.968+j6.849	2.264+j8.838
SAN AGUSTÍN	SAG-69	69.0	11.42	8.70	1.080+j3.317	1.383+j6.631	13.37	9.94	0.870+j3.161	1.364+j6.541
SAN ANDRÉS	ADE-115	115.0	8.71	7.17	2.238+j7.285	2.748+j12.262	10.07	8.24	1.849+j7.011	2.672+j11.811
SAN ANTONIO	SAN-115	115.0	7.78	5.47	2.459+j8.167	4.211+j18.909	8.99	6.23	2.137+j7.836	4.210+j18.885
SAN CARLOS	SCA-115	115.0	11.13	9.39	1.574+j5.753	1.880+j9.094	12.57	10.51	1.399+j5.640	1.861+j9.033
SAN CLEMENTE	SCM-115	115.0	1.55	1.09	13.620+j40.634	38.818+j89.970	2.00	1.28	9.491+j35.308	38.819+j89.997
SAN CLEMENTE	SCM-69	69.0	1.01	0.01	7.754+j38.5481	2.208+j-14.886.32	11.31	0.01	5.318+j32.9481	2.208+j-14.886.321
SAN DIEGO PEÑUELAS	SDP-115	115.0	4.63	2.89	3.677+j13.849	10.185+j39.035	5.14	3.19	3.601+j13.744	10.169+j38.873
SAN FELIPE	SFL-115	115.0	1.89	1.25	10.709+j33.535	31.429+j82.817	2.08	1.38	10.629+j33.440	31.425+j82.716
SAN FRANCISCO	SFC-115	115.0	3.23	2.83	7.644+j19.060	11.973+j26.754	3.81	3.24	6.607+j18.010	11.971+j26.717
SAN FRANCISCO DE LOS ROMO	SFR-115	115.0	10.30	8.10	1.472+j6.275	1.788+j11.588	11.87	9.17	1.202+j6.033	1.765+j11.497
SAN FRANCISCO DEL RINCÓN	SFQ-110	115.0	9.87	6.97	1.494+j6.559	3.188+j14.772	11.11	7.75	1.311+j6.440	3.190+j14.777
SAN GASPAR	GPR-69	69.0	20.21	21.99	0.472+j1.914	0.162+j1.494	25.80	27.06	0.247+j1.680	0.161+j1.454
SAN ILDEFONSO	SFS-115	115.0	24.04	19.70	0.546+j2.708	0.736+j4.525	29.13	23.12	0.457+j2.465	0.724+j4.402
SAN JERÓNIMO	SJE-115	115.0	2.51	1.83	8.922+j24.882	18.306+j53.206	2.81	2.03	8.529+j24.534	18.307+j53.199
SAN JORGE	SAJ-115	115.0	2.02	1.29	8.051+j31.898	22.020+j85.783	2.24	1.43	7.659+j31.633	21.946+j85.392
SAN JORGE	SAJ-69	69.0	7.39	5.13	1.647+j5.133	3.021+j12.161	8.56	5.79	1.419+j4.918	3.017+j12.085
SAN JOSÉ DE GRACIA	JOG-115	115.0	3.06	1.97	7.938+j20.189	18.434+j54.511	3.43	2.19	7.588+j19.898	18.435+j54.474
SAN JOSÉ ITURBIDE	SJI-230	230.0	11.23	10.68	1.926+j11.666	1.752+j13.493	12.95	12.08	1.608+j11.162	1.780+j13.569
SAN JOSÉ ITURBIDE	SJI-230	230.0	11.23	10.68	1.926+j11.666	1.752+j13.493	12.95	12.08	1.608+j11.162	1.780+j13.569
SAN JOSÉ ITURBIDE	SJI-115	115.0	16.73	19.63	0.724+j3.902	0.201+j2.201	19.42	22.50	0.618+j3.709	0.202+j2.204
SAN JUAN ZITÁCUARO	SJZ-115	115.0	5.98	3.92	3.394+j10.580	8.123+j27.381	6.73	4.37	3.270+j10.340	8.122+j27.324
SAN JUAN DE LOS LAGOS	JDL-115	115.0	6.79	5.42	2.618+j9.424	5.088+j16.408	7.77	6.11	2.283+j9.117	5.062+j16.315
SAN JUAN DE LOS LAGOS II	SJD-230	230.0	7.25	6.80	3.976+j17.888	2.895+j21.805	8.62	7.84	2.837+j16.704	2.903+j21.826
SAN JUAN DE LOS LAGOS II	SJD-115	115.0	10.24	11.29	1.290+j6.353	0.452+j4.677	11.80	12.86	0.997+j6.107	0.447+j4.652
SAN JUAN DEL RÍO	SJR-110	115.0	13.98	11.96	1.097+j4.621	1.298+j7.041	18.96	14.92	0.733+j3.781	1.284+j6.858
SAN JUAN DEL RÍO MANIOBRAS	SJM-110	115.0	14.64	13.46	0.964+j4.431	1.195+j5.597	18.64	16.28	0.713+j3.853	1.186+j5.494
SAN JUAN DEL RIO ORIENTE	SJO-115	115.0	11.51	8.58	1.479+j5.575	3.163+j11.247	15.06	10.37	1.097+j4.722	3.134+j11.004
SAN JUAN NORTE	SJN-115	115.0	15.75	17.12	0.904+j4.117	0.457+j3.178	20.68	21.51	0.629+j3.476	0.448+j3.087
SAN JUAN POTENCIA	SJP-230	230.0	11.08	10.30	2.376+j11.745	1.786+j14.630	13.87	12.32	1.668+j10.401	1.810+j14.382
SAN JUAN POTENCIA	SJP-115	115.0	17.02	21.39	0.813+j3.816	0.123+j1.514	22.26	27.28	0.564+j3.232	0.122+j1.468
SAN LUIS DE LA PAZ	SAP-110	115.0	17.21	14.83	0.685+j3.797	0.984+j5.623	19.56	16.80	0.608+j3.684	0.970+j5.478
SAN LUIS DE LA PAZ II	SPA-230	230.0	19.43	20.23	1.169+j6.733	0.749+j5.942	23.19	23.74	0.876+j6.239	0.720+j5.786
SAN LUIS DE LA PAZ II	SPA-115	115.0	21.86	22.48	0.443+j3.004	0.251+j2.772	25.02	25.88	0.367+j2.896	0.234+j2.610
SAN LUIS DOS	SLD-230	230.0	12.04	12.34	2.721+j10.690	1.780+j10.099	15.84	15.33	1.587+j9.081	1.756+j10.020
SAN LUIS DOS	SLD-115	115.0	16.92	18.08	0.881+j3.824	0.334+j3.174	20.70	21.58	0.601+j3.477	0.318+j3.088
SAN LUIS I	SLP-230	230.0	11.93	12.89	3.302+j10.626	1.198+j8.674	16.31	16.53	1.934+j8.743	1.180+j8.553
SAN LUIS I (BUS A)	SLP-115	115.0	20.96	24.58	0.937+j3.026	0.192+j1.789	27.66	31.21	0.581+j2.576	0.186+j1.742
SAN LUIS INDUSTRIAL	SLI-110	115.0	15.87	13.89	1.184+j4.012	1.214+j5.864	20.02	16.56	0.821+j3.555	1.208+j5.817
SAN LUIS NORTE	SNE-115	115.0	8.60	6.37	1.749+j7.521	3.328+j15.463	9.86	7.16	1.503+j7.250	3.324+j15.448



**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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
SAN LUIS ORIENTE	SLO-110	115.0	13.80	11.32	1.256+j4.645	1.851+j7.761	16.76	13.16	0.934+j4.257	1.845+j7.714
SAN LUIS PONIENTE	SLW-110	115.0	10.03	8.72	1.723+j6.392	1.739+j9.471	11.69	9.93	1.450+j6.079	1.730+j9.431
SAN LUIS PROGRESO	SPR-110	115.0	11.37	8.79	1.552+j5.628	2.469+j10.716	13.53	10.08	1.239+j5.254	2.462+j10.664
SAN MARTIN	SMR-230	230.0	9.34	8.32	4.282+j13.555	4.164+j19.076	12.78	10.38	1.998+j11.257	4.129+j18.911
SAN MIGUEL	MIG-115	115.0	3.40	2.28	5.122+j18.858	12.187+j46.751	3.80	2.53	4.804+j18.601	12.119+j46.515
SAN MIGUEL ALLENDE SUR	SMS-115	115.0	9.04	6.10	2.062+j7.047	4.969+j17.271	10.11	6.76	1.976+j6.951	4.968+j17.266
SAN MIGUEL DE ALLENDE	MAL-115	115.0	10.99	7.93	1.496+j5.852	2.769+j12.739	12.34	8.81	1.410+j5.751	2.768+j12.738
SAN NICOLÁS	SNS-69	69.0	4.68	2.96	2.512+j8.136	5.810+j22.600	5.32	3.31	2.281+j7.920	5.806+j22.522
SAN PEDRO	PDR-115	115.0	12.26	9.91	1.265+j5.265	2.092+j9.033	14.62	11.41	0.966+j4.903	2.082+j8.970
SAN RAFAEL MANIOBRAS	SRM-115	115.0	2.76	2.08	6.378+j23.237	18.233+j43.940	3.42	2.44	4.883+j20.796	18.171+j43.556
SAN ROQUE	SRQ-115	115.0	11.84	8.77	1.213+j5.474	2.215+j11.288	13.40	9.78	1.030+j5.353	2.217+j11.293
SAN VICENTE	VTE-115	115.0	5.41	6.66	3.855+j11.657	1.163+j5.231	6.63	8.01	2.843+j10.644	1.163+j5.197
SANMINA-SCI SYSTEMS DE MEXICO	SCI-69	69.0	10.60	7.05	1.101+j3.593	2.252+j9.161	12.40	7.98	0.899+j3.416	2.250+j9.144
SANMINA-SCISYSTEMS MÉXICO	SCR-115	115.0	10.60	8.34	1.490+j6.085	2.635+j11.049	11.98	9.33	1.306+j5.957	2.614+j10.994
SANMINA-SCISYSTEMS MÉXICO	SCR-69	69.0	16.22	13.43	0.713+j2.351	0.837+j3.904	19.64	15.60	0.508+j2.172	0.832+j3.880
SANTA CRUZ	SCZ-115	115.0	6.01	4.02	3.665+j10.416	8.464+j26.068	6.65	4.44	3.557+j10.385	8.450+j26.030
SANTA CRUZ	SCU-69	69.0	13.93	10.74	0.888+j2.719	1.256+j5.267	16.58	12.31	0.676+j2.555	1.254+j5.246
SANTA FE	STF-230	230.0	10.76	9.99	2.340+j12.116	2.176+j15.044	12.29	11.20	2.017+j11.712	2.214+j15.185
SANTA FE	STF-115	115.0	17.15	19.47	0.795+j3.790	0.237+j2.479	19.47	21.91	0.708+j3.683	0.238+j2.494
SANTA FE II	SFD-115	115.0	7.22	5.92	2.402+j8.883	3.414+j14.888	8.06	6.59	2.232+j8.778	3.383+j14.754
SANTA FÉ IV	STC-115	115.0	8.39	7.02	2.053+j7.639	2.565+j12.302	9.41	7.87	1.883+j7.529	2.496+j12.062
SANTA FE TRES	SFT-115	115.0	7.27	5.86	2.363+j8.816	3.403+j15.381	8.13	6.53	2.193+j8.710	3.358+j15.208
SANTA MARÍA	STM-400	400.0	18.80	17.01	2.428+j12.044	2.725+j15.907	23.32	20.19	1.363+j10.808	2.737+j15.722
SANTA MARÍA	STM-115	115.0	26.71	25.34	0.489+j2.437	0.419+j2.859	27.70	26.53	0.367+j2.611	0.410+j2.960
SANTA MARÍA	SNM-115	115.0	7.70	7.42	2.370+j8.292	1.793+j9.543	8.88	8.46	2.070+j7.956	1.781+j9.430
SANTIAGO	SNG-115	115.0	8.31	7.14	1.941+j7.746	2.028+j11.797	9.56	8.06	1.678+j7.453	2.017+j11.753
SANTIAGO IXCUINTLA	SNI-115	115.0	4.04	2.87	4.329+j15.863	11.326+j34.659	4.85	3.31	3.409+j14.669	11.262+j34.270
SANTIAGO UNDAMEO	SUN-115	115.0	5.36	4.56	3.563+j11.857	6.414+j17.825	6.11	5.14	3.222+j11.517	6.403+j17.723
SANTIAGUITO	STG-115	115.0	8.94	8.66	2.103+j7.126	1.722+j8.063	10.44	10.04	1.799+j6.762	1.669+j7.827
SAPAL PROC AGUAS RESID	SPL-115	115.0	11.33	9.05	1.433+j5.682	3.036+j9.844	12.83	10.12	1.249+j5.554	3.034+j9.825
SATÉLITE	SEI-115	115.0	10.82	8.09	1.501+j5.951	2.223+j12.149	13.05	9.33	1.134+j5.479	2.215+j12.098
SATÉLITE	SAT-115	115.0	14.77	11.94	1.086+j4.362	1.895+j7.453	16.57	13.28	0.998+j4.294	1.890+j7.448
SAYULA	SYL-115	115.0	3.33	2.75	6.273+j18.908	11.121+j30.545	3.79	3.10	5.610+j18.418	11.076+j30.281
SCHAEFFLER MANIOBRAS	SFM-115	115.0	7.56	4.92	1.877+j8.580	4.766+j22.432	8.46	5.50	1.716+j8.457	4.655+j22.116
SENDERO	SDE-115	115.0	10.68	8.33	1.603+j6.006	2.674+j11.160	12.62	9.53	1.299+j5.640	2.665+j11.101
SERVICIOS AGUAMILPA	SEA-110	115.0	2.14	1.58	8.304+j29.847	25.084+j58.977	2.59	1.83	6.807+j27.408	25.023+j58.594
SERVICIOS EL CAJÓN	SCJ-115	115.0	1.97	1.27	10.629+j31.982	23.280+j86.813	2.76	1.54	6.515+j25.603	23.336+j86.693
SERVICIOS LA YESCA	SLY-115	115.0	0.63	0.40	37.444+j98.772	104.589+j263.550	0.87	0.48	24.589+j80.765	104.915+j263.711
SHULMANN	SHU-115	115.0	17.04	16.24	1.059+j3.749	0.863+j4.405	21.78	19.66	0.698+j3.280	0.856+j4.357
SIBASA	SIB-230	230.0	12.94	11.22	2.223+j10.016	2.941+j14.699	15.07	12.80	1.776+j9.532	2.896+j14.567



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
SIDERÚRGICA GUADALAJARA	SGG-161	161.0	3.04	2.53	7.549+j29.617	12.092+j47.445	3.49	2.86	6.447+j28.543	12.085+j47.254
SIEMENS	SIE-69	69.0	9.46	8.25	1.224+j4.031	0.971+j6.009	10.92	9.48	1.014+j3.882	0.926+j5.785
SILAO	SIL-115	115.0	14.18	13.59	1.242+j4.515	1.221+j5.149	16.15	15.39	1.071+j4.393	1.202+j5.052
SILAO POTENCIA	SIP-230	230.0	13.03	12.81	2.623+j9.845	1.659+j10.632	15.44	14.83	1.967+j9.256	1.629+j10.514
SILAO POTENCIA	SIP-115	115.0	17.03	20.00	0.976+j3.774	0.213+j2.172	19.53	22.89	0.808+j3.651	0.202+j2.097
SIPOSA (GASA)	GAS-115	115.0	13.85	11.80	1.305+j4.611	1.236+j7.225	17.13	13.87	0.946+j4.156	1.230+j7.173
SISTEMAS JUÁREZ	SIS-69	69.0	18.49	14.92	0.689+j2.041	0.790+j3.628	22.68	17.39	0.479+j1.872	0.788+j3.610
SOLEDAD DE GRACIANO SÁNCHEZ	SGS-110	115.0	11.38	8.74	1.237+j5.703	1.776+j10.996	13.33	9.94	0.980+j5.391	1.768+j10.952
STIVA LEON	STI-115	115.0	3.79	3.12	5.390+j16.646	9.060+j27.375	4.42	3.57	4.659+j15.871	8.953+j26.952
TABACALERA	TBK-110	115.0	6.65	6.11	2.762+j9.588	2.861+j12.309	8.68	7.51	1.774+j8.229	2.824+j12.025
TACUBAYA	TYA-115	115.0	2.26	1.45	9.283+j27.883	22.297+j74.930	2.50	1.61	9.107+j27.753	22.245+j74.658
TALA	TLA-69	69.0	4.37	3.71	3.011+j8.601	2.349+j13.934	5.27	4.38	2.449+j7.952	2.241+j13.233
TALA ELECTRIC	ELT-69	69.0	4.18	3.46	3.089+j9.028	2.723+j15.287	5.01	4.07	2.527+j8.379	2.614+j14.586
TALPA	TPA-69	69.0	0.50	0.01	29.787+j74.454	2.295+j-14.897.307	70.71	0.01	18.510+j58.699	2.295+j-14.897.307
TAMARINDOS	TMI-115	115.0	5.76	7.68	3.703+j10.925	0.323+j2.908	7.12	9.38	2.682+j9.908	0.316+j2.835
TAMAZULA	TAZ-115	115.0	2.73	2.01	6.861+j23.301	12.051+j49.006	3.10	2.25	6.191+j22.745	11.996+j48.663
TANGAMANGA	TMG-115	115.0	9.81	8.07	1.812+j6.520	2.488+j10.890	11.45	9.17	1.529+j6.190	2.482+j10.856
TANGANCÍCUARO	TGR-115	115.0	8.14	7.70	2.231+j7.851	2.907+j9.110	9.41	8.77	1.887+j7.525	2.891+j9.028
TANQUE TENORIO (DEGREMONT)	TQT-115	115.0	16.44	14.57	1.140+j3.875	0.940+j5.537	20.80	17.41	0.784+j3.423	0.935+j5.490
TAPALPA	TLP-115	115.0	2.80	2.24	7.205+j22.553	14.034+j39.087	3.17	2.51	6.547+j22.069	13.975+j38.832
TAPEIXTLES	TAP-115	115.0	11.52	12.44	1.398+j5.593	0.740+j4.426	16.46	16.60	0.717+j4.378	0.725+j4.265
TAPEIXTLES	TAP-69	69.0	3.70	4.90	1.076+j10.725	0.099+j2.843	4.46	5.94	0.764+j9.791	0.087+j2.503
TAPEIXTLES POTENCIA	TPX-400	400.0	7.13	8.66	8.266+j31.304	1.139+j15.363	17.16	19.60	1.299+j14.750	0.940+j9.218
TAPEIXTLES POTENCIA	TPX-230	230.0	9.30	11.95	3.284+j13.890	0.320+j4.844	16.52	20.08	0.825+j8.804	0.291+j4.127
TAPEIXTLES POTENCIA	TPX-115	115.0	14.48	16.92	1.003+j4.473	0.207+j2.617	22.43	24.59	0.347+j3.237	0.191+j2.391
TARANDACUAO	TDC-115	115.0	2.77	2.22	6.931+j22.915	10.566+j40.594	3.13	2.50	6.607+j22.368	10.361+j40.024
TARETAN	TAR-69	69.0	1.66	0.66	7.226+j22.943	37.730+j127.117	2.24	1.06	5.871+j18.680	24.706+j80.797
TARIMBARO	TRB-115	115.0	6.69	5.97	2.875+j9.495	3.628+j13.116	7.66	6.82	2.595+j9.177	3.484+j12.723
TECHNICOLOR MEXICANA S. DE R.L. DE C.V.	TNI-69	69.0	11.95	8.02	1.016+j3.175	1.945+j8.008	14.10	9.12	0.798+j3.003	1.939+j7.971
TECNOLÓGICO	TAG-115	115.0	14.56	11.98	1.061+j4.434	1.347+j7.398	17.32	13.74	0.776+j4.146	1.346+j7.398
TECOLAPA	TOA-115	115.0	5.58	4.30	3.776+j11.291	8.096+j21.018	6.84	5.01	3.041+j10.228	8.088+j20.881
TECOLOTLAN	TCT-115	115.0	2.40	1.75	8.301+j26.364	22.833+j54.257	2.95	2.03	6.302+j23.937	22.834+j54.285
TECOMÁN	TEC-115	115.0	4.83	3.55	4.234+j13.082	10.227+j26.719	5.84	4.10	3.499+j12.005	10.216+j26.572
TECOMÁN SUR	TES-115	115.0	3.98	2.87	5.077+j15.907	13.214+j33.506	4.73	3.28	4.340+j14.835	13.203+j33.359
TECOMATES	TCS-115	115.0	1.67	1.46	12.258+j37.763	13.942+j55.495	1.90	1.63	11.460+j36.711	13.949+j55.505
TECOZAUTLA	TCZ-115	115.0	2.23	1.31	9.437+j28.231	29.323+j88.267	2.48	1.44	9.286+j27.989	29.241+j88.033
TECUALA	TEL-115	115.0	1.08	0.72	23.537+j57.062	61.343+j141.644	1.21	0.80	22.571+j55.976	61.273+j141.246
TECUAN	TCN-115	115.0	6.60	4.26	2.859+j9.652	5.260+j26.121	7.54	4.77	2.571+j9.339	5.257+j26.091
TEJEDA	TJD-115	115.0	10.72	14.03	1.310+j6.054	0.391+j1.759	11.67	15.28	1.190+j6.147	0.388+j1.777
TEOCALTICHE	TEO-115	115.0	4.42	3.04	3.936+j14.487	9.284+j34.268	4.97	3.38	3.643+j14.243	9.279+j34.243



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
TEOCUITATLAN	TTL-115	115.0	2.55	2.28	7.191+j24.979	8.122+j34.563	2.88	2.56	6.560+j24.494	7.936+j34.107
TEPALCATEPEC DOS	TPD-115	115.0	1.51	1.61	14.282+j41.559	5.047+j35.637	2.15	2.21	8.610+j32.875	4.217+j31.261
TEPATITLÁN	TPT-115	115.0	5.46	3.40	3.832+j11.543	10.059+j32.771	6.26	4.40	3.341+j11.175	6.906+j25.573
TEPETONGO	TGO-115	115.0	1.29	0.93	15.613+j48.883	38.867+j104.334	1.44	1.03	15.154+j48.457	38.855+j104.240
TEPEYAC	TPY-115	115.0	16.78	12.44	0.811+j3.873	1.558+j7.936	19.39	14.11	0.728+j3.695	1.546+j7.847
TEPIC DOS	TED-400	400.0	7.02	7.35	9.860+j31.372	4.174+j28.416	15.23	15.47	1.856+j16.572	2.302+j15.725
TEPIC DOS	TED-230	230.0	7.90	9.74	4.508+j16.204	0.743+j7.298	12.63	15.23	1.414+j11.476	0.456+j5.627
TEPIC DOS	TED-115	115.0	10.67	12.82	1.462+j6.049	0.208+j3.115	15.14	17.69	0.592+j4.788	0.148+j2.734
TEPIC INDUSTRIAL	TID-110	115.0	7.18	7.16	2.620+j8.870	1.683+j9.211	9.61	9.01	1.575+j7.434	1.653+j8.955
TEPIC UNO	TES-115	115.0	8.22	8.31	2.168+j7.778	1.430+j7.705	11.17	10.63	1.202+j6.429	1.393+j7.406
TEQUILA	TQA-115	115.0	0.95	0.62	24.760+j65.743	12.988+j181.264	1.18	0.73	17.945+j59.288	12.798+j177.537
TEQUILA	TQA-69	69.0	1.98	2.65	8.072+j18.386	0.349+j5.272	2.61	3.42	5.649+j15.826	0.365+j5.006
TEQUISQUIAPAN	TEQ-115	115.0	7.82	4.72	2.152+j8.212	8.819+j23.723	9.09	5.31	1.958+j7.794	8.793+j23.628
TERMINAL DE GAS MANZANILLO	TGM-115	115.0	10.34	8.88	1.377+j6.270	1.760+j9.424	14.35	11.19	0.711+j5.038	1.749+j9.238
TERMOENVASES EXPANDIBLES	TER-115	115.0	15.61	14.15	1.029+j4.127	1.199+j5.437	17.86	15.98	0.846+j4.000	1.194+j5.409
TERRAPLENA	TRP-115	115.0	6.24	7.33	2.190+j10.404	1.114+j5.809	7.83	8.97	1.487+j9.211	1.100+j5.650
TESISTAN	TSN-400	400.0	10.73	12.00	8.326+j19.840	2.047+j14.928	21.72	20.13	1.808+j11.556	2.078+j14.322
TESISTAN	TSN-230	230.0	13.67	16.65	3.457+j9.077	0.441+j4.620	22.34	25.04	1.086+j6.447	0.438+j4.411
TESISTAN	TSN-69	69.0	28.17	28.82	0.368+j1.365	0.107+j1.329	37.48	36.09	0.157+j1.159	0.106+j1.302
TESISTÁN (BUS B)	TSN-69B	69.0	18.89	21.32	0.387+j2.073	0.062+j1.399	24.07	26.36	0.157+j1.814	0.062+j1.346
TETRAPAK	TTK-115	115.0	14.96	9.26	0.950+j4.335	6.852+j10.979	16.16	10.13	0.851+j4.438	6.848+j10.978
TISAMATIC	TIS-115	115.0	17.54	17.55	1.087+j3.625	0.614+j3.756	22.43	21.36	0.729+j3.173	0.608+j3.706
TLAJOMULCO POTENCIA	TLJ-400	400.0	10.53	11.40	8.119+j20.364	2.414+j17.109	19.38	17.54	2.019+j12.954	2.454+j17.048
TLAJOMULCO POTENCIA	TLJ-230	230.0	12.99	15.14	3.519+j9.594	0.657+j5.971	19.32	20.74	1.347+j7.441	0.663+j5.979
TLALTENANGO	TLO-110	115.0	1.86	1.11	10.042+j34.298	19.651+j106.127	2.06	1.23	9.738+j34.062	19.632+j106.079
TOLIMAN	TLI-115	115.0	1.59	1.03	13.157+j39.643	31.759+j105.050	1.78	1.14	12.489+j39.195	31.713+j104.785
TOTOTLAN	TTO-115	115.0	4.89	3.49	4.114+j12.931	9.910+j28.167	5.54	4.04	3.703+j12.649	9.275+j26.337
TREJO	TRJ-115	115.0	8.31	6.84	2.276+j7.658	5.087+j12.148	9.34	7.63	2.115+j7.531	5.084+j12.110
TREMEC	TRE-115	115.0	17.20	15.35	0.832+j3.769	0.965+j5.165	19.40	17.13	0.746+j3.690	0.965+j5.171
TRES MARÍAS	TSM-115	115.0	7.16	5.92	2.382+j8.964	3.148+j14.905	8.30	6.77	2.068+j8.557	3.088+j14.649
TRES NACIONES	TEN-115	115.0	16.01	13.99	1.164+j3.981	1.077+j5.868	20.23	16.69	0.799+j3.520	1.070+j5.820
TRIARA	TTR-115	115.0	12.58	11.63	1.560+j5.043	0.612+j6.624	14.13	12.96	1.466+j4.956	0.612+j6.620
TRIGUILLOS	TGS-115	115.0	2.73	1.93	8.735+j22.720	17.902+j51.410	3.07	2.16	8.397+j22.238	17.834+j51.168
TURBORREACTORES S.A. DE C.V.	REA-115	115.0	17.49	19.03	1.015+j3.659	0.527+j2.826	19.75	21.33	0.928+j3.579	0.527+j2.832
TUXPAN	TUX-115	115.0	3.21	2.89	7.399+j19.287	9.284+j26.088	3.67	3.26	6.735+j18.735	9.229+j25.745
TUXPAN	TXP-115	115.0	5.55	3.73	3.374+j11.484	9.039+j28.168	6.30	4.17	3.196+j11.143	9.035+j28.074
TUZANIA	TUZ-230	230.0	11.92	12.54	3.766+j10.487	1.635+j9.438	18.69	17.87	1.317+j7.705	1.538+j8.761
UNIVERSIDAD AUTÓNOMA DE GUADALAJARA	UAG-69	69.0	16.10	13.67	0.753+j2.358	0.641+j3.761	19.61	16.01	0.523+j2.172	0.629+j3.695
UNIVERSIDAD DEL VALLE DE MÉXICO	UVM-69	69.0	18.50	14.92	0.689+j2.041	0.790+j3.628	22.68	17.39	0.479+j1.872	0.788+j3.610
UNIVEX	UVX-115	115.0	4.37	3.28	4.862+j14.397	8.977+j28.897	4.86	3.64	4.721+j14.254	8.973+j28.862



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
URIANGATO	URG-115	115.0	5.05	3.41	3.829+j12.569	9.940+j30.562	5.65	3.79	3.644+j12.408	9.917+j30.488
URUAPAN ORIENTE	UOT-115	115.0	6.29	5.78	3.359+j10.009	3.212+j12.983	7.87	7.11	2.446+j8.954	2.843+j11.979
URUAPAN POTENCIA	UPP-230	230.0	4.14	4.22	7.670+j31.168	3.321+j30.179	5.66	5.46	4.275+j25.468	3.039+j28.660
URUAPAN POTENCIA	UPP-161	161.0	3.88	4.19	4.701+j23.485	1.548+j18.670	5.90	5.88	2.332+j17.175	1.416+j17.660
URUAPAN POTENCIA	UPP-115	115.0	7.21	8.34	2.783+j8.779	0.585+j5.537	9.40	10.71	1.792+j7.564	0.509+j4.977
URUAPAN TRES	UPT-115	115.0	7.29	7.47	2.893+j8.631	1.995+j8.232	9.38	9.67	1.965+j7.534	1.507+j6.985
URUAPAN TRES	UPT-69	69.0	2.58	0.87	3.256+j15.094	27.856+j102.131	3.94	1.65	2.050+j10.932	14.855+j55.841
USI	USI-69	69.0	7.42	5.14	1.581+j5.130	3.293+j12.090	8.87	6.24	1.291+j4.768	2.954+j10.778
USM	USM-115	115.0	7.09	6.66	2.559+j9.011	4.204+j10.406	7.94	7.42	2.394+j8.887	4.197+j10.351
VALLARTA POTENCIA	VTP-230	230.0	3.19	4.09	13.069+j39.455	1.318+j14.659	4.01	5.03	9.111+j35.249	1.303+j14.487
VALLARTA POTENCIA	VTP-115	115.0	5.81	7.85	3.666+j10.816	0.185+j2.608	7.20	9.61	2.645+j9.799	0.178+j2.534
VALLARTA UNO	VRT-115	115.0	4.70	4.99	4.617+j13.358	2.500+j11.457	5.68	5.87	3.565+j12.353	2.493+j11.383
VALLE DE AGUASCALIENTES	VAG-115	115.0	14.30	11.12	1.026+j4.529	1.465+j8.503	16.82	12.69	0.759+j4.276	1.464+j8.494
VALLE DE GUADALUPE	VGP-115	115.0	5.16	3.63	3.628+j12.351	8.975+j27.780	5.83	4.13	3.281+j12.093	8.389+j26.672
VALLE DE LAS DELICIAS	VDL-115	115.0	4.57	3.33	4.219+j13.900	10.335+j28.960	5.22	3.75	3.814+j13.468	10.332+j28.920
VALLE DE SANTIAGO	VAS-115	115.0	11.88	8.93	1.357+j5.424	3.066+j10.689	13.43	9.98	1.213+j5.303	3.058+j10.650
VALLE DE TECOMAN	VAT-115	115.0	2.73	1.83	7.672+j23.061	19.322+j56.950	3.16	2.06	6.917+j22.042	19.314+j56.813
VALLE DEL MEZQUITAL	VDM-230	230.0	5.70	4.83	4.376+j22.891	7.451+j35.093	7.30	5.79	2.869+j19.804	7.401+j34.884
VALLE DORADO	VDO-115	115.0	5.06	5.88	4.111+j12.456	1.871+j7.452	6.16	6.99	3.094+j11.447	1.870+j7.414
VALLE VERDE	VAV-115	115.0	3.29	3.28	6.388+j19.112	3.921+j20.234	4.53	4.36	4.052+j15.620	3.631+j17.760
VALLEJO (ANTES CARLOTA)	CAR-115	115.0	12.87	9.02	1.106+j5.041	2.073+j11.571	14.09	9.92	1.014+j5.084	2.060+j11.530
VALPARAISO	VPS-110	115.0	1.27	0.83	18.868+j48.901	44.095+j128.040	1.41	0.92	18.471+j48.560	44.095+j128.033
VAQUERÍAS MANIOBRAS	VQM-230	230.0	5.99	5.58	4.151+j21.777	4.108+j26.799	7.55	6.69	2.773+j19.147	4.025+j26.492
VELCON	VEL-115	115.0	12.00	9.64	1.345+j5.365	2.291+j9.323	13.36	10.72	1.231+j5.326	2.270+j9.231
VENUSTIANO CARRANZA	VNC-115	115.0	5.35	3.58	3.275+j11.974	7.288+j29.934	6.06	4.00	2.910+j11.687	7.272+j29.819
VERGELES	VGL-115	115.0	3.56	2.51	6.796+j17.382	18.087+j38.051	4.02	2.79	6.293+j17.047	18.084+j38.069
VIDRIERA	VRA-115	115.0	15.69	13.64	1.198+j4.059	1.245+j6.028	19.75	16.23	0.834+j3.602	1.240+j5.981
VIDRIERA GUADALAJARA	VID-69	69.0	18.89	17.46	0.662+j2.002	0.445+j2.607	23.42	20.89	0.436+j1.820	0.425+j2.518
VIDRIERA QUERÉTARO	VRR-115	115.0	10.56	8.48	1.574+j6.087	2.516+j10.625	11.80	9.40	1.487+j6.009	2.517+j10.631
VILLA DE ÁLVAREZ	VDA-115	115.0	7.09	7.11	2.498+j9.029	1.856+j9.105	8.88	8.55	1.788+j8.032	1.839+j8.971
VILLA DE ARISTA	VAR-115	115.0	2.68	2.27	10.047+j22.683	10.667+j36.622	3.15	2.61	8.840+j21.440	10.575+j36.025
VILLA DE REYES	VDR-230	230.0	12.48	12.16	2.766+j10.270	2.218+j11.298	20.41	17.04	1.144+j7.065	2.200+j11.191
VILLA DE REYES	VDR-115	115.0	9.79	10.52	1.340+j6.648	0.576+j5.355	11.93	12.48	0.940+j6.048	0.568+j5.293
VILLA HIDALGO	VHO-115	115.0	3.40	2.24	6.701+j18.345	15.365+j47.481	3.84	2.49	6.296+j17.957	15.365+j47.447
VILLA JIMÉNEZ	VIJ-115	115.0	5.15	3.74	3.893+j12.303	7.971+j26.271	6.02	4.24	3.347+j11.654	7.969+j26.230
VILLA JUÁREZ	VJU-115	115.0	8.61	6.16	1.701+j7.518	2.833+j16.711	9.86	6.92	1.429+j7.266	2.833+j16.696
VILLAGRÁN	VIG-110	115.0	7.83	6.62	2.044+j8.230	3.223+j12.750	8.67	7.32	1.932+j8.201	3.207+j12.680
VINITECK S.A. DE C.V.	VIN-69	69.0	6.13	4.65	1.452+j6.330	2.530+j12.448	7.06	5.27	1.215+j6.083	2.516+j12.290
VISTA HERMOSA	VIH-115	115.0	7.90	5.90	2.594+j7.995	5.228+j16.126	9.10	6.66	2.232+j7.713	5.219+j16.036
VIZARRÓN	VIZ-110	115.0	2.55	1.31	8.306+j24.664	26.122+j96.234	2.84	1.45	8.157+j24.417	26.040+j96.001



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
VOLCANES	VCS-69	69.0	0.66	0.01	19.674+j56.7602	477+j-14,917.972	0.90	0.01	13.544+j46.8842	477+j-14,917.972
VOLKSWAGEN	VWS-115	115.0	6.99	5.66	2.485+j9.169	3.698+j15.755	7.81	6.30	2.315+j9.064	3.667+j15.620
VYNMSA	VYN-115	115.0	7.50	4.93	1.926+j8.641	4.752+j22.216	8.40	5.52	1.764+j8.519	4.594+j21.786
XALISCO	XLS-115	115.0	6.64	6.21	2.605+j9.656	2.094+j11.902	8.63	7.62	1.624+j8.309	2.063+j11.632
YERBABUENA	YER-115	115.0	4.73	3.00	3.518+j13.579	8.748+j37.369	5.36	3.48	3.095+j13.277	7.725+j34.819
YURÉCUARO	YUR-115	115.0	5.35	4.13	3.828+j11.793	6.214+j22.579	6.07	4.63	3.447+j11.521	6.192+j22.467
ZACAPU	ZCP-110	115.0	5.04	3.71	4.501+j12.388	9.136+j25.828	5.82	4.18	4.031+j11.880	9.134+j25.787
ZACATECAS	ZCT-115	115.0	6.52	5.46	3.076+j9.712	4.327+j15.542	7.59	6.22	2.631+j9.257	4.315+j15.443
ZACATECAS II	ZCD-230	230.0	6.53	6.79	5.640+j19.535	2.808+j17.923	7.94	8.04	4.130+j17.919	2.729+j17.638
ZACATECAS II	ZCD-115	115.0	9.75	11.25	1.922+j6.530	0.473+j4.113	11.69	13.34	1.494+j6.067	0.446+j3.960
ZACATECAS SUR	ZCS-115	115.0	6.65	5.63	3.054+j9.510	4.097+j14.883	7.75	6.42	2.612+j9.055	4.082+j14.778
ZALATITAN	ZLT-69	69.0	12.06	8.96	0.843+j3.194	1.408+j6.587	14.43	10.29	0.615+j2.975	1.404+j6.548
ZAMORA	ZMA-110	115.0	7.81	6.19	2.351+j8.167	4.261+j14.566	8.99	6.99	2.004+j7.872	4.250+j14.493
ZAMORA POTENCIA	ZRP-230	230.0	7.58	6.78	3.969+j17.060	4.333+j23.337	9.11	7.88	2.679+j15.808	4.290+j23.205
ZAMORA POTENCIA	ZRP-115	115.0	10.37	11.24	1.517+j6.223	0.648+j4.893	12.11	12.99	1.179+j5.916	0.623+j4.780
ZAPOPAN	ZPA-230	230.0	8.59	7.92	4.538+j14.786	3.832+j19.041	11.73	9.95	2.123+j12.275	3.780+j18.753
ZAPOPAN	ZPA-69	69.0	20.30	19.86	0.631+j1.858	0.305+j2.096	25.42	24.04	0.405+j1.676	0.285+j2.007
ZAPOTILTIC	ZTI-115	115.0	4.60	4.29	4.308+j13.775	4.916+j16.888	5.33	4.91	3.642+j13.209	4.861+j16.545
ZAPOTLANEJO	ZPO-400	400.0	9.63	9.87	8.338+j22.477	3.636+j22.266	17.47	14.80	2.018+j14.400	3.680+j22.130
ZAPOTLANEJO	ZPO-230	230.0	12.96	14.81	3.470+j9.638	0.804+j6.487	20.12	20.90	1.195+j7.162	0.812+j6.394
ZAPOTLANEJO DISTRIBUCIÓN	ZAD-115	115.0	2.68	1.30	8.460+j23.327	33.934+j97.970	3.18	1.55	6.709+j21.993	30.530+j90.194
ZARAGOZA	ZAG-115	115.0	5.28	4.32	2.656+j12.292	3.815+j20.643	6.07	4.87	2.292+j11.815	3.797+j20.566
ZIBATA	ZBT-115	115.0	9.65	7.37	1.808+j6.642	3.598+j12.750	10.83	8.22	1.715+j6.524	3.578+j12.674
ZIMAPAN	ZIM-115	115.0	2.34	1.92	6.811+j27.502	13.478+j45.213	2.88	2.31	5.637+j24.730	12.919+j42.131
ZINÁPARO	ZID-115	115.0	5.51	4.17	3.596+j11.512	8.342+j22.129	6.29	4.68	3.203+j11.160	8.339+j22.088
ZINAPÉCUARO	ZIN-115	115.0	7.31	6.13	2.061+j8.848	2.445+j14.421	8.88	7.38	1.647+j8.055	2.190+j13.550
ZITÁCUARO	ZIT-115	115.0	6.63	4.38	2.878+j9.591	7.250+j24.413	7.52	4.89	2.736+j9.319	7.247+j24.346
ZITÁCUARO DOS	ZTD-115	115.0	6.38	4.14	2.876+j10.007	7.443+j26.282	7.22	4.62	2.744+j9.743	7.441+j26.217
ZOLTECH	CYD-69	69.0	14.48	15.61	0.745+j2.648	0.387+j2.128	17.69	18.68	0.518+j2.422	0.383+j2.051
ZOQUIPAN	ZQP-69	69.0	13.53	10.38	0.790+j2.836	1.343+j5.464	16.42	12.06	0.554+j2.611	1.330+j5.402
ZUMPIMITO	ZMP-69	69.0	2.53	0.89	3.549+j15.362	26.974+j99.008	3.95	1.72	2.133+j10.880	13.976+j52.722

Gerencia de Control Regional Noroeste



[Regresar a mapa del SEN](#)



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
ACUÍCOLA	ACU-115	115.0	2.05	1.40	8.481+j31.331	26.273+j73.306	2.34	1.56	8.008+j30.228	26.252+j73.193
AGRÍCOLA SONOYTA	AGS-115	115.0	0.65	0.43	27.968+j97.986	68.063+j252.632	0.75	0.48	25.397+j93.484	68.062+j252.568
AGUA PRIETA	AGI-115	115.0	4.64	3.09	2.723+j14.063	6.047+j35.337	5.55	3.54	2.281+j12.968	6.033+j34.939
AGUA PRIETA DOS	AGD-230	230.0	8.10	8.46	2.363+j16.225	2.432+j14.646	15.65	17.07	0.692+j9.309	0.507+j6.226
AGUA ZARCA	AGZ-115	115.0	4.40	4.24	4.574+j14.391	3.301+j16.588	5.90	5.26	2.955+j12.018	3.298+j16.578
AHOME	AHO-115	115.0	4.74	3.39	3.033+j13.671	8.724+j29.276	5.47	3.83	2.855+j13.031	8.712+j29.157
ÁLAMOS	AAM-115	115.0	1.77	1.17	17.579+j33.046	33.997+j89.071	2.09	1.45	16.299+j30.992	27.050+j76.440
ALTAR	ALT-115	115.0	2.57	1.82	7.295+j24.808	15.678+j55.670	3.44	2.29	5.156+j20.577	14.491+j51.223
ANGOSTURA	ANG-115	115.0	4.64	3.32	4.112+j13.707	8.210+j30.280	5.72	3.95	3.588+j12.263	8.131+j28.456
ANTIMONIO	ANT-115	115.0	2.61	2.23	6.854+j24.493	9.850+j37.350	3.93	2.89	4.052+j18.161	9.848+j37.211
ARROYO SECO	ASE-115	115.0	1.80	1.24	10.066+j35.549	28.527+j82.700	2.40	1.60	7.262+j29.568	25.430+j71.650
BACHIGUALATO	BCH-115	115.0	4.55	2.38	2.941+j14.291	15.849+j52.309	5.30	2.67	2.587+j13.535	15.831+j52.062
BÁCUM	BAC-400	400.0	8.51	8.70	3.190+j26.956	3.044+j24.969	10.87	10.54	1.947+j23.299	3.093+j25.091
BÁCUM	BAC-230	230.0	12.02	13.01	1.464+j10.951	0.715+j8.444	15.84	16.20	0.931+j9.176	0.732+j8.418
BÁCUM	BAC-115	115.0	17.38	16.70	0.500+j3.787	0.338+j4.266	22.12	20.13	0.347+j3.283	0.354+j4.220
BACURATO	BRT-115	115.0	3.38	2.20	3.586+j19.321	10.715+j50.154	6.11	6.53	1.327+j11.871	0.335+j7.182
BAGOTES	BGT-115	115.0	12.71	12.19	1.485+j5.007	2.279+j5.479	18.39	16.29	1.036+j3.833	2.323+j5.062
BAMOA	BMO-115	115.0	2.70	1.76	8.719+j22.992	19.960+j60.706	3.13	2.00	8.253+j21.786	19.923+j59.428
BANDERAS	BND-115	115.0	12.82	10.78	0.898+j5.101	1.315+j7.990	16.13	12.88	0.696+j4.475	1.309+j7.785
BIZANI	BZI-115	115.0	3.62	3.35	4.980+j17.660	6.304+j22.005	6.22	4.99	2.221+j11.524	5.580+j19.682
BUENA VISTA	BNV-230	230.0	7.36	6.80	5.130+j17.287	4.408+j22.496	10.56	8.76	3.009+j13.504	4.367+j21.771
CABORCA	CBA-115	115.0	3.89	2.90	4.403+j16.472	6.942+j33.848	6.91	4.94	1.661+j10.446	3.881+j22.843
CAJEME	CAJ-115	115.0	13.09	11.32	0.816+j5.004	1.174+j7.340	16.43	13.48	0.624+j4.402	1.174+j7.204
CAMPO GOBIERNO	CMG-115	115.0	9.54	8.20	1.411+j6.814	1.988+j10.134	12.20	9.80	0.990+j5.903	1.999+j10.077
CARDONAL	CRD-115	115.0	2.05	1.44	8.444+j31.198	26.274+j68.835	2.35	1.62	7.972+j30.095	26.253+j68.722
CARRIZO	CRZ-115	115.0	3.62	3.52	5.798+j17.420	6.024+j18.876	4.63	4.42	4.755+j15.024	5.417+j17.167
CENTENARIO	CNT-115	115.0	12.52	10.48	1.113+j5.183	1.705+j8.066	15.87	12.59	0.922+j4.510	1.684+j7.902
CENTINELA	CLA-115	115.0	8.14	6.53	1.675+j7.982	4.124+j13.637	9.43	7.39	1.548+j7.585	4.122+j13.609
CERRO CAÑEDO	CCA-115	115.0	3.44	2.55	5.095+j18.600	8.936+j38.545	5.58	3.94	2.421+j12.859	6.228+j28.756
CHIMENEAS	CHS-230	230.0	2.47	3.03	15.771+j51.295	2.494+j24.734	3.42	3.97	9.426+j41.601	2.521+j24.853
CHIMENEAS	CHS-115	115.0	4.73	5.59	4.237+j13.389	0.634+j7.696	6.44	7.21	2.614+j11.027	0.642+j7.746
CHINITOS	CHI-115	115.0	2.20	1.48	8.924+j28.801	25.048+j70.365	2.50	1.65	8.533+j27.894	25.031+j69.791
CHOACAHUI	CHO-400	400.0	11.84	13.69	2.046+j19.398	0.667+j10.673	15.42	17.24	1.007+j16.442	0.660+j10.509
CHOACAHUI	CHO-230	230.0	18.23	20.03	0.681+j7.251	0.340+j4.587	24.47	25.85	0.359+j5.959	0.362+j4.419
CIUDAD OBREGÓN CUATRO	COC-230	230.0	9.95	10.33	2.034+j13.193	1.713+j11.663	13.62	13.21	1.286+j10.648	1.696+j11.388
CIUDAD OBREGÓN CUATRO	COC-115	115.0	15.16	13.47	0.722+j4.320	0.829+j5.954	19.55	16.40	0.523+j3.700	0.818+j5.773
CIUDAD OBREGÓN DOS	COD-115	115.0	15.84	14.66	0.646+j4.143	0.736+j5.134	20.31	17.80	0.466+j3.566	0.739+j5.008
CIUDAD OBREGÓN TRES	COT-230	230.0	8.62	8.68	2.358+j15.226	2.053+j14.906	11.47	10.84	1.583+j12.640	2.030+j14.582
CIUDAD OBREGÓN TRES	COT-115	115.0	15.43	14.43	0.653+j4.254	0.554+j5.152	19.97	17.82	0.457+j3.629	0.546+j4.881
CIUDAD OBREGÓN UNO	OBU-115	115.0	13.99	12.04	0.860+j4.668	1.217+j6.930	17.84	14.51	0.655+j4.041	1.209+j6.740



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

Subestación Eléctrica	Acronónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
COCORIT	CCI-115	115.0	11.28	7.98	0.949+j5.809	2.650+j12.905	13.88	9.30	0.760+j5.208	2.649+j12.707
COMEDERO	CMR-115	115.0	3.54	1.64	3.842+j18.344	20.778+j81.162	5.98	6.66	1.622+j12.104	0.301+j7.444
COMPUERTAS	CMP-115	115.0	10.61	8.36	1.118+j6.154	2.071+j10.954	13.13	9.85	0.922+j5.485	2.050+j10.801
COSTA RICA	CSA-115	115.0	5.48	4.13	2.921+j11.768	5.737+j23.231	6.56	4.74	2.468+j10.856	5.752+j23.174
CRUZ DE PIEDRA	CDP-115	115.0	6.28	5.94	2.478+j10.275	2.147+j12.241	7.52	6.93	2.152+j9.466	2.113+j12.047
CULIACÁN CENTRO	CCC-115	115.0	11.37	10.24	1.276+j5.698	1.731+j7.532	15.84	13.28	0.780+j4.546	1.680+j6.921
CULIACÁN CINCO	CUI-115	115.0	12.08	11.34	1.177+j5.368	1.415+j6.374	16.72	14.40	0.709+j4.310	1.436+j6.184
CULIACÁN CUATRO	CUC-115	115.0	12.79	12.37	1.119+j5.069	1.214+j5.534	17.61	15.64	0.671+j4.091	1.230+j5.467
CULIACÁN LIBRAMIENTO	CLI-115	115.0	10.73	10.00	1.345+j6.042	1.865+j7.257	14.54	12.61	0.865+j4.948	1.869+j6.951
CULIACÁN MILENIUM	CMI-115	115.0	10.85	11.05	1.322+j5.977	1.722+j5.484	14.57	14.96	0.858+j4.938	1.475+j4.293
CULIACÁN NORTE	CUN-115	115.0	11.54	10.94	1.258+j5.616	1.478+j6.476	16.04	14.69	0.769+j4.489	1.290+j5.518
CULIACÁN ORIENTE	CUO-115	115.0	11.78	11.88	1.263+j5.492	1.263+j5.292	16.57	15.90	0.769+j4.339	1.219+j4.659
CULIACÁN PONIENTE	CPO-400	400.0	7.25	7.64	6.143+j31.274	3.513+j26.142	10.68	10.21	2.624+j23.651	3.534+j26.133
CULIACÁN PONIENTE	CPO-115	115.0	14.91	12.62	0.782+j4.385	0.876+j6.778	20.02	15.69	0.437+j3.622	0.859+j6.532
CULIACÁN SUR	CUS-115	115.0	11.05	9.96	1.262+j5.876	1.719+j7.747	14.78	12.29	0.809+j4.875	1.735+j7.636
CULIACÁN TRES	CUT-230	230.0	8.40	9.54	3.329+j15.453	1.435+j9.838	12.40	13.04	1.634+j11.670	1.389+j9.494
CULIACÁN TRES	CUT-115	115.0	13.61	13.98	1.028+j4.770	0.683+j4.395	20.14	19.94	0.527+j3.589	0.557+j3.527
CULIACÁN UNO	CUU-115	115.0	13.23	13.05	1.090+j4.899	1.061+j5.061	18.89	18.76	0.614+j3.818	0.649+j3.767
DEL MAR	DMA-115	115.0	11.89	11.45	1.251+j5.444	1.269+j6.072	18.37	16.05	0.616+j3.928	1.244+j5.554
DERIVACIÓN	DER-115	115.0	8.57	6.72	1.870+j7.520	3.890+j13.625	11.33	8.25	1.371+j6.296	3.815+j13.161
DESEO	DSE-115	115.0	2.32	1.90	8.288+j27.338	17.508+j44.364	3.33	2.46	5.509+j21.225	16.782+j42.039
DYNATECH	DYN-115	115.0	12.03	12.65	1.767+j5.228	2.075+j4.274	17.90	18.02	1.191+j3.903	1.863+j3.615
EL DORADO	EDR-115	115.0	1.69	1.11	11.287+j37.676	19.610+j99.290	1.90	1.23	10.808+j36.799	19.625+j99.232
EL FRESNAL	EFR-230	230.0	9.08	10.72	2.265+j14.448	0.564+j8.548	15.65	17.42	0.840+j9.298	0.529+j6.060
EL FRESNAL	EFR-115	115.0	7.27	5.66	1.005+j9.076	0.847+j17.084	9.19	6.72	0.610+j7.925	0.826+j16.615
EL FUERTE	EFU-115	115.0	3.06	2.06	6.890+j20.602	15.195+j50.761	4.99	5.28	3.314+j14.255	1.213+j12.229
EL FUERTE PENAL	EFP-115	115.0	2.94	2.08	7.356+j21.379	14.835+j48.319	4.27	3.64	4.697+j16.466	6.377+j25.041
EL HABAL	HBL-230	230.0	7.48	8.00	3.566+j17.388	1.631+j14.187	13.62	13.51	1.134+j10.666	1.597+j10.810
EL HABAL	HBL-115	115.0	11.80	11.43	1.110+j5.515	0.992+j6.071	18.39	16.14	0.476+j3.942	0.955+j5.539
EL LLANO	LNO-115	115.0	3.68	2.72	6.046+j17.003	10.813+j35.650	4.69	3.21	4.820+j14.802	10.810+j35.582
EL MAYO	EMY-230	230.0	5.77	6.01	4.259+j22.610	2.462+j19.931	8.39	7.98	2.533+j17.215	2.510+j19.514
EL MAYO	EMY-115	115.0	8.95	9.93	1.340+j7.297	0.548+j5.144	12.53	13.06	0.840+j5.767	0.560+j4.987
EMPALME	EPM-115	115.0	9.53	8.59	1.371+j6.833	1.574+j9.160	11.47	9.99	1.165+j6.263	1.565+j9.078
EMPALME CICLO COMBINADO	ECC-400	400.0	9.04	10.46	2.467+j25.415	0.951+j15.089	11.22	12.67	1.423+j22.600	0.909+j14.736
EMPALME CICLO COMBINADO	ECC-230	230.0	12.79	15.11	1.104+j10.320	0.359+j5.815	15.50	17.99	0.833+j9.389	0.346+j5.667
ESCUINAPA	EPA-115	115.0	1.65	0.99	9.011+j39.251	35.982+j114.377	1.89	1.11	8.292+j37.815	35.929+j113.862
ESPERANZA	ESP-230	230.0	5.50	5.42	4.691+j23.677	3.551+j25.007	7.67	7.09	2.793+j18.834	3.372+j23.531
ESPERANZA	ESP-115	115.0	9.37	8.55	1.473+j6.932	1.046+j9.116	12.35	10.50	1.010+j5.826	1.026+j9.004
ESTACIÓN TORRES	ETO-115	115.0	3.64	2.33	5.894+j17.263	14.797+j46.589	4.30	2.69	5.452+j16.104	14.485+j45.145
ÉVORA	EVO-115	115.0	8.37	7.07	1.487+j7.796	1.567+j12.103	11.43	9.34	0.966+j6.317	1.490+j10.187



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
FÁTIMA	FMA-115	115.0	9.98	9.16	1.240+j6.537	1.315+j8.375	11.76	10.52	1.108+j6.111	1.309+j8.329
FLORES MAGÓN	FMG-115	115.0	11.85	8.75	0.916+j5.528	2.241+j11.188	14.91	10.37	0.717+j4.846	2.216+j10.996
FUNDICIÓN	FUC-115	115.0	4.99	3.36	3.870+j12.739	9.341+j31.330	6.05	3.89	3.376+j11.585	9.209+j30.689
GRUPO MÉXICO (SE MINA)	SMI-230	230.0	5.28	4.00	6.887+j24.171	11.716+j48.227	6.85	4.78	4.688+j20.808	11.675+j47.500
GUAMÚCHIL	GML-115	115.0	7.57	6.05	1.693+j8.602	2.367+j15.098	10.07	7.73	1.171+j7.154	2.289+j13.275
GUAMÚCHIL DOS	GMD-230	230.0	6.37	5.99	4.071+j20.440	3.910+j24.121	8.68	7.64	2.534+j16.628	3.618+j22.727
GUAMÚCHIL DOS	GMD-115	115.0	8.87	7.80	1.362+j7.361	1.085+j10.431	12.34	10.57	0.843+j5.857	1.012+j8.445
GUASAVE	GSV-115	115.0	5.51	3.95	2.839+j11.700	7.632+j25.138	6.67	4.60	2.451+j10.674	7.636+j24.314
GUAYMAS CERESO	GYC-230	230.0	10.35	11.07	1.725+j12.716	1.423+j10.418	12.83	13.24	1.288+j11.316	1.425+j10.338
GUAYMAS CERESO	GYC-115	115.0	15.29	14.51	0.574+j4.303	0.445+j5.071	18.53	16.93	0.455+j3.916	0.447+j5.064
HERMOSILLO AEROPUERTO	HAE-230	230.0	9.24	9.76	3.045+j14.047	2.612+j11.852	16.50	17.70	1.097+j8.785	0.982+j7.009
HERMOSILLO CERESO	HCE-115	115.0	12.28	12.29	1.574+j5.171	1.770+j5.116	18.38	17.33	1.014+j3.842	1.594+j4.454
HERMOSILLO CINCO	HLI-230	230.0	11.26	12.28	2.381+j11.554	1.442+j8.796	18.24	18.08	0.963+j7.951	1.331+j8.150
HERMOSILLO CINCO	HLI-115	115.0	15.58	15.98	0.952+j4.154	0.621+j3.918	27.59	31.36	0.370+j2.621	0.146+j1.726
HERMOSILLO CUATRO	HLC-230	230.0	9.99	11.18	2.736+j13.007	1.279+j9.044	16.62	17.08	1.123+j8.719	1.214+j8.029
HERMOSILLO CUATRO	HLC-115	115.0	17.14	18.72	0.864+j3.776	0.373+j2.895	27.77	28.37	0.419+j2.596	0.405+j2.446
HERMOSILLO DOS	HLD-115	115.0	13.38	12.12	1.115+j4.834	1.215+j6.420	19.59	15.92	0.646+j3.671	1.228+j6.199
HERMOSILLO LA MANGA	HMA-115	115.0	8.97	7.17	2.188+j7.073	2.978+j12.675	11.90	8.78	1.726+j5.890	3.004+j12.347
HERMOSILLO LOMAS	HLM-230	230.0	9.44	10.75	3.036+j13.732	1.232+j8.950	15.94	16.69	1.224+j9.084	1.190+j7.868
HERMOSILLO LOMAS	HLM-115	115.0	15.73	17.21	0.886+j4.128	0.344+j3.140	24.28	24.41	0.426+j2.978	0.368+j2.950
HERMOSILLO MANIOBRAS	HMB-115	115.0	8.73	8.32	1.776+j7.394	1.096+j8.715	12.63	11.37	1.110+j5.673	1.019+j7.692
HERMOSILLO MISIÓN	HMI-115	115.0	11.68	11.66	1.319+j5.529	1.407+j5.559	16.41	15.29	0.859+j4.367	1.440+j5.255
HERMOSILLO NUEVE	HLN-115	115.0	15.61	16.97	1.272+j4.060	0.777+j3.154	24.89	25.63	0.753+j2.836	0.699+j2.607
HERMOSILLO OCHO	HLO-115	115.0	12.85	11.94	1.205+j5.023	1.491+j6.195	19.85	17.25	0.643+j3.623	1.327+j5.217
HERMOSILLO SEIS	HLS-115	115.0	12.68	12.39	1.177+j5.101	1.300+j5.476	18.27	16.47	0.721+j3.932	1.325+j5.161
HERMOSILLO SIETE	HLE-115	115.0	11.99	9.30	1.159+j5.414	2.029+j10.169	17.09	11.80	0.677+j4.219	2.029+j9.828
HERMOSILLO TRES	HLT-230	230.0	10.07	11.12	2.844+j12.871	1.542+j9.426	16.71	16.70	1.156+j8.662	1.498+j8.671
HERMOSILLO TRES	HLT-115	115.0	14.18	12.11	0.943+j4.586	0.915+j7.061	21.52	16.32	0.460+j3.363	0.892+j6.599
HERMOSILLO UNO	HLU-115	115.0	15.46	16.89	1.179+j4.130	0.746+j3.137	24.85	25.73	0.653+j2.866	0.653+j2.579
HERNANDO DE VILLAFañE	HVF-115	115.0	5.02	3.46	2.952+j12.888	8.453+j29.824	6.04	4.02	2.545+j11.815	8.458+j28.887
HIERRO DE SONORA	HDS-115	115.0	5.59	3.75	3.120+j11.470	7.793+j28.199	6.65	4.30	2.846+j10.616	7.767+j27.890
HORNILLOS	HRS-115	115.0	2.60	1.72	8.311+j24.106	18.762+j61.636	4.09	3.85	4.423+j17.311	4.209+j20.846
HUATABAMPO	HPO-115	115.0	5.98	4.40	2.320+j10.854	6.524+j22.093	7.65	5.24	1.807+j9.370	6.490+j21.732
HUITES	HTS-230	230.0	2.98	1.64	6.836+j43.993	37.032+j149.667	7.77	8.38	1.258+j18.748	0.432+j11.725
HUMAYA	HYA-115	115.0	5.58	2.90	2.244+j11.684	10.788+j43.422	8.63	8.84	1.099+j8.396	0.396+j7.085
IMURIS	IMR-115	115.0	3.40	2.89	5.826+j18.636	10.195+j28.134	4.36	3.46	4.282+j16.194	10.190+j28.096
INDUSTRIAL CABORCA	ICA-230	230.0	2.60	2.72	13.823+j49.211	7.635+j43.862	5.12	4.44	4.288+j28.210	6.516+j41.018
INDUSTRIAL CABORCA	ICA-115	115.0	4.16	3.30	4.089+j15.419	5.077+j28.064	7.81	6.29	1.340+j9.250	1.782+j16.027
INDUSTRIAL SAN CARLOS	ISC-115	115.0	4.06	4.00	4.767+j15.632	3.353+j16.888	5.34	4.92	3.104+j13.313	3.350+j16.885
ISLA MUSALÁ	ISM-115	115.0	13.25	14.07	1.115+j4.886	0.627+j4.044	19.43	19.99	0.615+j3.708	0.530+j3.237



**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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
JAIME SEVILLA POYASTRO	JSP-115	115.0	11.45	11.60	1.258+j5.661	1.483+j5.319	15.62	15.98	0.788+j4.608	1.172+j4.088
JOSÉ ÁNGEL ESPINOZA	JAE-115	115.0	1.67	1.04	12.467+j37.777	32.809+j106.167	2.51	2.11	7.070+j28.270	11.842+j44.000
JUAN JOSÉ RÍOS	JJR-115	115.0	7.26	5.42	1.609+j8.997	4.565+j17.781	8.73	6.27	1.366+j8.253	4.537+j17.522
LA CARIDAD	LCD-230	230.0	7.46	5.81	3.055+j17.548	8.468+j32.080	9.18	6.78	2.286+j15.738	8.460+j31.706
LA CARIDAD FUNDICIÓN	LCF-230	230.0	9.86	9.62	1.704+j13.354	2.198+j14.391	12.05	11.34	1.178+j12.065	2.189+j14.131
LA CARIDAD GENERACIÓN	LCG-230	230.0	11.62	12.79	1.435+j11.339	0.568+j8.360	14.48	15.43	0.913+j10.046	0.559+j8.100
LA CHOYA	LCH-115	115.0	2.31	2.07	6.783+j27.894	16.778+j35.494	3.07	2.55	4.481+j23.341	16.778+j35.431
LA CRUZ	LCZ-115	115.0	1.09	0.69	16.692+j58.801	51.963+j157.893	1.23	0.77	15.999+j57.243	51.918+j157.340
LA HIGUERA	HGA-400	400.0	6.92	7.54	6.638+j32.722	2.463+j24.535	10.33	10.21	2.771+j24.440	2.509+j24.611
LA HIGUERA	HGA-230	230.0	9.43	11.84	2.851+j13.789	0.316+j5.325	13.95	16.55	1.318+j10.385	0.327+j5.186
LA HIGUERA	HGA-115	115.0	15.30	19.32	0.872+j4.252	0.081+j1.594	21.65	26.14	0.460+j3.341	0.090+j1.536
LA MISA	LMA-115	115.0	3.53	2.67	5.490+j17.963	9.941+j35.611	4.08	3.02	5.158+j17.163	9.906+j35.417
LA PINTA	LPN-115	115.0	2.16	1.85	8.225+j29.551	11.548+j45.180	2.88	2.25	5.751+j24.742	11.550+j45.110
LA PRIMAVERA	PMV-115	115.0	10.92	9.56	1.256+j5.949	1.749+j8.453	14.81	11.89	0.784+j4.868	1.767+j8.245
LADRILLERAS	LAD-115	115.0	12.72	11.11	1.119+j5.098	1.511+j7.350	18.27	14.35	0.648+j3.944	1.529+j7.135
LEYVA SOLANO	LVS-115	115.0	4.53	3.34	3.018+j14.332	9.119+j28.953	5.32	3.81	2.691+j13.458	9.114+j28.474
LLANO BLANCO	LLB-115	115.0	2.65	1.77	6.986+j24.062	16.786+j60.040	3.67	2.28	4.660+j19.347	15.182+j54.166
LOS ALGODONES	ALG-115	115.0	4.25	2.74	3.671+j15.167	11.869+j39.709	4.81	3.05	3.542+j14.771	11.867+j39.682
LOS MOCHIS COLINAS	LMC-115	115.0	13.54	10.35	0.847+j4.831	1.719+j9.118	17.51	12.50	0.635+j4.123	1.690+j8.910
LOS MOCHIS DOS	LMD-230	230.0	9.58	8.60	2.242+j13.674	3.410+j17.795	13.37	11.05	1.365+j10.837	3.317+j17.093
LOS MOCHIS DOS	LMD-115	115.0	9.83	7.09	1.074+j6.665	1.622+j14.387	12.55	8.75	0.809+j5.763	1.571+j13.205
LOS MOCHIS INDUSTRIAL	LMI-230	230.0	9.73	9.12	1.969+j13.509	2.518+j15.564	14.18	12.80	1.117+j10.241	2.128+j13.026
LOS MOCHIS INDUSTRIAL	LMI-115	115.0	14.75	12.18	0.681+j4.448	0.928+j7.151	19.47	15.02	0.463+j3.723	0.888+j6.912
LOS MOCHIS TRES	LMT-115	115.0	12.97	10.67	0.948+j5.032	1.696+j8.101	16.54	12.85	0.746+j4.352	1.672+j7.934
LOS MOCHIS UNO	LMU-115	115.0	13.78	10.80	0.826+j4.748	1.625+j8.498	17.82	13.08	0.618+j4.051	1.599+j8.292
LOUISIANA	LOU-230	230.0	12.32	12.89	1.395+j10.686	1.146+j8.618	17.83	17.96	0.768+j8.155	1.039+j7.450
LOUISIANA	LOU-115	115.0	17.28	16.75	0.486+j3.812	0.293+j4.038	22.94	21.04	0.312+j3.168	0.281+j3.919
LUIS DONALDO COLOSIO	LDO-115	115.0	4.10	3.29	4.799+j15.457	8.097+j26.965	5.45	3.99	3.323+j12.975	8.094+j26.918
MANIOBRA MINA COBRE DEL MAYO	MCM-115	115.0	3.04	2.01	8.967+j19.937	17.875+j52.451	3.76	2.74	7.693+j17.861	10.951+j39.839
MANIOBRAS APASCO	MAP-115	115.0	6.59	4.45	2.098+j9.853	5.883+j23.956	9.05	6.00	1.375+j7.953	4.879+j19.786
MANIOBRAS AT SOLAR V	MNV-230	230.0	3.12	4.19	10.968+j41.126	0.888+j10.261	12.41	14.55	0.900+j11.738	0.662+j6.221
MANIOBRAS BLUEMEX	MBL-115	115.0	6.98	7.05	2.086+j9.285	1.142+j9.224	8.44	8.31	1.761+j8.475	1.108+j9.030
MANIOBRAS CERVECERA OBREGÓN	MCO-115	115.0	12.54	10.25	1.059+j5.188	1.768+j8.653	15.73	12.18	0.854+j4.563	1.759+j8.465
MANIOBRAS DON DIEGO	DDS-MAN	230.0	3.86	4.45	8.318+j33.376	2.957+j20.715	5.93	6.27	3.935+j24.306	2.889+j20.429
MANIOBRAS EL PILAR	MPR-115	115.0	4.83	5.15	4.046+j13.143	1.694+j11.191	6.63	6.58	2.454+j10.742	1.682+j11.140
MANIOBRAS FRESNILLO	MFN-115	115.0	2.27	1.84	8.999+j27.844	13.204+j48.208	3.12	2.27	6.194+j22.558	13.202+j48.116
MANIOBRAS MI RANCHITO SUR	MMR-115	115.0	5.37	5.11	2.968+j11.999	2.505+j14.057	6.68	6.07	2.417+j10.658	2.516+j14.019
MANIOBRAS MUNISOL	MMU-115	115.0	5.77	4.90	3.605+j10.933	3.234+j17.445	7.18	5.79	3.072+j9.693	3.236+j17.287
MANIOBRAS OREJANA	MAO-230	230.0	3.64	4.04	6.736+j35.826	3.616+j25.473	5.76	5.80	2.945+j25.177	3.554+j24.583
MANIOBRAS PUERTO PEÑASCO	MPP-115	115.0	2.08	2.46	6.169+j31.360	1.204+j17.010	2.60	3.00	4.419+j27.703	1.200+j16.946



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
MANIOBRAS TASTIOTA FV	MTS-115	115.0	3.81	2.29	3.932+j16.985	14.126+j50.303	4.36	2.56	3.714+j16.335	14.117+j50.229
MARINA	MRN-115	115.0	9.42	7.11	1.693+j6.841	2.400+j13.717	13.53	9.05	1.048+j5.296	2.367+j13.189
MAZATLÁN AEROPUERTO	MAE-115	115.0	9.23	10.54	1.653+j7.003	1.612+j4.228	12.96	14.31	1.042+j5.540	1.580+j3.765
MAZATLÁN CENTRO	MAC-115	115.0	11.88	11.28	1.225+j5.453	1.528+j6.276	18.30	15.73	0.595+j3.946	1.505+j5.761
MAZATLÁN DOS	MZD-400	400.0	6.93	7.54	7.833+j32.386	2.662+j25.075	12.44	11.81	2.009+j20.328	2.512+j23.334
MAZATLÁN DOS	MZD-230	230.0	8.37	9.57	3.143+j15.553	0.550+j9.905	17.33	20.44	0.673+j8.402	0.165+j4.535
MAZATLÁN DOS	MZD-115	115.0	15.87	17.11	0.824+j4.103	0.175+j3.274	27.62	27.00	0.230+j2.634	0.143+j2.812
MAZATLÁN EL CID	CID-115	115.0	9.87	7.22	1.655+j6.524	2.482+j13.921	14.36	9.20	1.013+j4.985	2.451+j13.397
MAZATLÁN EMILIANO ZAPATA	MZZ-115	115.0	10.56	8.55	1.376+j6.137	1.903+j10.532	15.50	11.14	0.767+j4.649	1.875+j10.050
MAZATLÁN NORTE	MZN-115	115.0	12.32	11.85	1.199+j5.255	1.043+j5.926	19.35	16.77	0.564+j3.731	1.016+j5.407
MAZATLÁN ORIENTE	MZO-115	115.0	10.34	8.64	1.518+j6.242	2.190+j9.961	15.17	11.33	0.891+j4.732	2.163+j9.454
MAZATLÁN TECNOLÓGICO	MTE-115	115.0	10.61	9.14	1.580+j6.053	2.096+j9.014	15.69	12.11	0.960+j4.554	2.067+j8.519
MAZATLÁN UNO	MZU-115	115.0	13.67	12.69	0.977+j4.759	1.025+j5.873	22.13	18.12	0.370+j3.279	0.996+j5.394
MOCHIS CENTRO	MCE-115	115.0	13.01	10.35	1.034+j4.998	1.907+j8.681	16.66	12.47	0.830+j4.306	1.882+j8.477
MOCHIS LAS VILLAS	MLV-115	115.0	11.86	9.20	0.870+j5.529	1.817+j10.142	14.88	10.92	0.680+j4.863	1.793+j9.962
MOCUZARI	MRI-115	115.0	2.09	1.38	13.776+j28.646	27.866+j75.950	2.59	2.03	11.484+j25.771	12.121+j50.645
MORELOS-LA ATRAVESADA	MLA-115	115.0	4.20	3.34	4.412+j15.176	7.127+j27.171	4.89	3.79	4.081+j14.373	7.093+j26.976
NACUZARI	NRI-230	230.0	12.24	11.61	1.719+j10.713	2.509+j12.488	16.37	14.46	0.981+j8.867	2.500+j12.114
NAINARI	NNR-115	115.0	13.69	11.80	0.749+j4.792	1.126+j7.071	17.28	14.16	0.560+j4.189	1.124+j6.869
NARANJO	NJO-115	115.0	3.94	2.56	3.547+j16.495	11.103+j42.483	4.59	2.91	3.202+j15.582	11.092+j41.910
NAVOJOA	NVJ-115	115.0	9.13	6.83	1.402+j7.132	2.863+j14.312	12.64	8.75	0.905+j5.707	2.612+j13.118
NAVOJOA CENTENARIO	NVC-115	115.0	8.03	5.94	1.672+j8.098	3.605+j16.554	10.75	7.46	1.171+j6.691	3.340+j15.331
NAVOJOA INDUSTRIAL	NVI-115	115.0	5.98	4.86	2.519+j10.811	4.447+j18.159	7.68	5.82	2.009+j9.293	4.463+j18.005
NAVOJOA NORTE	NVN-115	115.0	7.90	5.63	1.742+j8.223	3.827+j18.155	10.52	7.01	1.235+j6.832	3.544+j16.881
NAVOJOA ORIENTE	NVO-115	115.0	9.12	6.31	1.322+j7.161	2.783+j16.755	12.61	8.16	0.831+j5.734	2.405+j14.971
NAVOLATO	NTO-115	115.0	4.21	2.90	3.704+j15.343	9.880+j35.744	4.92	3.28	3.282+j14.490	9.885+j35.656
NOGALES	NGS-115	115.0	4.18	4.09	4.638+j15.193	3.083+j16.714	5.53	5.05	2.977+j12.872	3.079+j16.711
NOGALES AEROPUERTO	NGA-230	230.0	2.81	3.51	14.290+j45.022	2.354+j19.518	4.05	4.78	8.067+j35.173	2.327+j19.425
NOGALES AEROPUERTO	NGA-115	115.0	5.17	6.05	3.878+j12.231	0.724+j7.408	7.24	7.95	2.286+j9.830	0.711+j7.355
NOGALES NORTE	NGN-115	115.0	4.33	4.60	4.616+j14.613	1.948+j12.621	5.78	5.76	2.964+j12.284	1.948+j12.632
NOVILLO	NVL-115	115.0	2.00	0.85	6.881+j32.408	46.413+j160.626	4.41	5.33	1.744+j16.456	0.403+j6.776
NUEVO NOGALES	NNG-115	115.0	4.62	4.71	4.386+j13.684	2.352+j13.466	6.26	5.92	2.754+j11.329	2.353+j13.483
NUEVO PROGRESO	NPO-115	115.0	4.42	3.01	3.356+j14.632	6.775+j35.771	5.27	3.43	2.914+j13.538	6.761+j35.373
OASIS	OAS-115	115.0	2.52	1.59	9.475+j24.559	22.798+j69.145	2.96	1.80	8.727+j23.109	22.771+j68.969
OBSERVATORIO	OBS-230	230.0	5.81	5.08	5.947+j22.076	7.004+j32.201	8.10	6.39	3.514+j17.687	6.966+j31.640
OCUCA	OCU-115	115.0	3.24	2.40	5.730+j19.675	10.773+j40.713	4.30	2.92	4.043+j16.497	10.588+j39.712
ORIENTE	ORI-115	115.0	2.36	1.98	6.885+j27.285	9.836+j43.321	3.15	2.41	4.570+j22.725	9.836+j43.259
OVIACHIC	OVI-115	115.0	2.25	1.57	13.944+j26.022	24.620+j63.175	2.90	2.63	10.439+j22.915	5.764+j31.253
PARQUE INDUSTRIAL HERMOSILLO NORTE	PIH-115	115.0	13.63	13.32	1.012+j4.765	0.992+j5.133	19.97	17.75	0.550+j3.615	1.015+j4.941
PARTICULAR MINA ÁLAMO DORADO	PAD-115	115.0	1.57	1.01	15.782+j39.092	36.600+j107.645	2.09	1.54	12.191+j32.735	22.478+j68.948



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
PARTICULAR MINA PIEDRAS VERDES	PVD-115	115.0	2.24	1.34	12.530+j26.838	29.787+j84.427	2.68	1.74	11.249+j24.784	21.161+j68.825
PARTICULAR SAUZAL	PSZ-115	115.0	0.86	0.51	23.214+j73.727	69.377+j222.807	1.43	1.92	10.321+j50.148	0.454+j12.287
PIAXTLA	PXT-115	115.0	1.61	1.00	11.328+j39.585	32.135+j113.250	1.85	1.12	10.638+j38.030	32.091+j112.698
PLANTA GUAYMAS DOS	PGD-230	230.0	10.78	11.30	1.646+j12.209	1.677+j10.667	13.39	13.54	1.215+j10.838	1.673+j10.564
PLANTA GUAYMAS DOS	PGD-115	115.0	12.94	11.21	0.746+j5.075	1.024+j7.478	15.53	12.98	0.619+j4.662	1.017+j7.427
PLAYA ENCANTO	PYE-115	115.0	2.28	1.99	7.555+j28.185	10.043+j40.721	3.04	2.43	5.154+j23.485	10.044+j40.654
PORTALES	PTS-115	115.0	13.60	12.34	1.063+j4.765	1.130+j6.296	20.04	16.45	0.608+j3.593	1.154+j5.938
PROGRESO	PRG-115	115.0	5.40	3.79	2.812+j11.969	7.767+j26.836	6.20	4.26	2.657+j11.467	7.783+j26.790
PROVIDENCIA	PRO-115	115.0	15.24	13.98	0.618+j4.312	0.795+j5.468	19.15	16.68	0.457+j3.787	0.811+j5.400
PUEBLITOS	PUE-115	115.0	13.61	12.84	1.024+j4.771	1.097+j5.674	19.94	16.98	0.560+j3.620	1.119+j5.477
PUEBLO NUEVO	PNO-230	230.0	7.29	7.98	3.351+j17.900	1.650+j13.249	12.04	12.00	1.607+j12.023	1.516+j11.648
PUEBLO NUEVO	PNO-115	115.0	10.02	7.07	1.163+j6.522	2.258+j14.725	14.24	9.39	0.675+j5.086	1.863+j12.825
PUERTO LIBERTAD	PLD-230	230.0	3.13	4.15	10.934+j40.935	1.321+j11.452	13.47	16.36	0.717+j10.823	0.284+j4.750
PUERTO PEÑASCO	PPA-115	115.0	2.52	2.44	6.389+j25.600	6.433+j28.196	3.41	3.05	4.087+j21.036	6.433+j28.133
QUILA	QLA-115	115.0	2.44	1.59	7.697+j26.108	7.228+j71.196	2.78	1.77	7.224+j25.223	7.244+j71.138
QUIROGA	QRG-115	115.0	10.58	9.00	1.522+j6.085	2.853+j9.171	14.51	11.35	1.067+j4.917	2.896+j8.811
RÍO SONORA	RIS-115	115.0	13.50	15.33	1.121+j4.791	0.694+j3.095	20.10	22.06	0.646+j3.575	0.682+j2.603
ROCA FUERTE	RFT-115	115.0	12.63	9.49	0.799+j5.196	1.899+j10.352	15.06	10.86	0.676+j4.804	1.899+j10.335
ROLANDO GARCÍA URREA	RGU-115	115.0	13.24	14.25	1.579+j4.762	1.430+j3.698	20.19	20.78	1.030+j3.467	1.284+j3.090
ROSARIO	ROS-115	115.0	2.31	1.47	6.467+j27.980	26.085+j73.878	2.69	1.66	5.771+j26.544	26.037+j73.380
RUIZ CORTINES	RUC-115	115.0	4.55	3.07	2.675+j14.332	9.126+j34.402	5.30	3.48	2.412+j13.566	9.099+j34.114
SAHUARO	SHO-115	115.0	2.39	1.95	8.375+j26.442	11.513+j45.451	3.37	2.43	5.560+j20.976	11.511+j45.353
SALVADOR ALVARADO	SAA-115	115.0	6.96	5.55	2.074+j9.316	3.386+j16.336	9.08	6.99	1.563+j7.889	3.318+j14.536
SAN CARLOS	SCR-115	115.0	5.70	3.63	2.591+j11.350	7.885+j30.659	6.50	4.05	2.463+j10.954	7.883+j30.631
SAN NICOLÁS	SNC-115	115.0	1.79	1.38	14.063+j34.343	25.451+j65.420	2.03	1.54	13.590+j33.245	25.432+j65.310
SAN RAFAEL	SRF-115	115.0	6.18	4.58	2.457+j10.452	5.722+j21.146	7.73	5.50	2.001+j9.230	5.686+j19.871
SAN RAFAEL AMPLIACIÓN	SRA-115	115.0	6.18	4.58	2.457+j10.452	5.722+j21.146	7.73	5.50	2.001+j9.230	5.686+j19.871
SANALONA	SLA-115	115.0	2.56	1.86	11.900+j22.997	18.008+j52.579	3.12	3.01	10.257+j21.000	4.447+j26.084
SANTA ANA	STA-230	230.0	4.74	7.09	8.634+j26.680	0.519+j0.121	8.83	13.11	3.246+j16.212	0.542+j0.127
SANTA ANA	STA-115	115.0	7.16	7.70	2.488+j8.938	0.555+j7.448	11.27	10.76	1.088+j6.391	0.554+j7.374
SANTA FE	STF-115	115.0	10.06	7.99	1.282+j6.477	2.420+j11.413	13.01	9.80	0.867+j5.548	2.284+j10.786
SANTA MARÍA	STM-115	115.0	5.24	3.67	2.909+j12.345	8.034+j27.708	6.31	4.27	2.512+j11.299	8.039+j26.837
SEIS DE ABRIL	SSA-230	230.0	2.68	3.25	13.616+j47.662	2.269+j23.882	6.34	6.31	3.268+j22.815	2.220+j23.110
SEIS DE ABRIL	SSA-115	115.0	4.64	6.05	3.756+j13.799	0.382+j4.417	9.75	11.35	0.996+j7.422	0.381+j4.278
SELECTA	SEL-115	115.0	1.82	1.18	10.716+j34.891	30.604+j90.503	2.07	1.32	10.197+j33.746	30.583+j90.390
SERI	SER-400	400.0	6.65	6.89	4.834+j34.415	3.224+j30.911	9.02	8.71	2.319+j28.068	3.264+j30.975
SERI	SER-230	230.0	11.35	12.79	2.118+j11.509	0.918+j7.756	17.56	18.20	0.917+j8.269	0.938+j7.406
SIEMPRE VIVA	SVV-115	115.0	3.37	3.29	5.384+j18.949	6.854+j20.117	5.62	4.74	2.621+j12.732	6.610+j19.165
SONOYTA	SNY-115	115.0	0.87	0.59	20.869+j73.578	48.073+j180.228	1.02	0.67	18.321+j69.081	48.072+j180.164
SUBESTACIÓN BAHÍA DE KINO	SBK-115	115.0	1.78	1.38	16.252+j33.617	25.451+j65.420	2.02	1.54	15.779+j32.521	25.432+j65.310



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
SUBESTACIÓN CANANEA	SCN-230	230.0	7.27	6.91	5.118+j17.546	3.924+j21.160	10.51	8.99	2.933+j13.580	3.875+j20.445
SUBESTACIÓN CANANEA	SCN-115	115.0	6.84	5.79	1.604+j9.574	0.957+j15.083	8.49	6.90	1.060+j8.540	0.918+j14.481
SUBESTACIÓN CANANEA SUR	CNS-230	230.0	6.51	5.31	6.075+j19.471	7.917+j33.598	8.84	6.54	3.904+j16.065	7.875+j32.872
SUBESTACIÓN CENTRO	SCE-230	230.0	5.82	4.55	6.560+j21.849	9.857+j41.061	7.69	5.50	4.365+j18.482	9.816+j40.334
SUBESTACIÓN CINCO	SBI-115	115.0	3.28	2.48	4.605+j19.722	15.094+j37.107	3.83	2.82	4.134+j18.619	15.073+j36.994
SUBESTACIÓN COLINAS	SCL-115	115.0	11.59	9.55	1.250+j5.590	1.908+j9.214	16.26	12.08	0.778+j4.423	1.920+j8.977
SUBESTACIÓN CONCENTRADORA	SCO-230	230.0	5.78	4.57	6.754+j21.970	9.828+j40.382	7.56	5.50	4.589+j18.759	9.786+j39.656
SUBESTACIÓN CUATRO	SBC-115	115.0	3.05	2.06	6.695+j20.741	14.999+j50.866	3.55	2.33	6.178+j19.597	14.978+j50.753
SUBESTACIÓN CULIACÁN POTENCIA	SCP-230	230.0	8.52	10.00	3.319+j15.236	1.082+j8.384	12.68	13.84	1.603+j11.411	1.076+j8.132
SUBESTACIÓN CULIACÁN POTENCIA	SCP-115	115.0	13.88	14.67	0.969+j4.683	0.422+j3.953	20.21	19.71	0.499+j3.580	0.438+j3.724
SUBESTACIÓN DIEZ	SBZ-115	115.0	2.97	1.94	6.478+j21.383	14.836+j56.205	3.45	2.18	6.010+j20.286	14.817+j56.095
SUBESTACIÓN DOS	SBD-115	115.0	5.95	4.68	2.611+j10.846	4.978+j19.626	7.37	5.49	2.107+j9.687	4.957+j19.514
SUBESTACIÓN ESDE	SES-230	230.0	6.15	4.90	6.275+j20.671	8.901+j37.386	8.23	5.97	4.099+j17.274	8.860+j36.660
SUBESTACIÓN GUAYMAS UNO	SGU-115	115.0	11.38	8.10	0.963+j5.754	2.570+j12.714	13.47	9.22	0.837+j5.357	2.568+j12.687
SUBESTACIÓN NUEVE	SBN-115	115.0	1.78	1.14	12.581+j35.025	29.972+j96.258	2.03	1.27	12.056+j33.897	29.950+j96.145
SUBESTACIÓN OCHO	SBO-115	115.0	1.75	1.18	12.947+j35.589	26.798+j89.311	1.99	1.32	12.470+j34.501	26.780+j89.202
SUBESTACIÓN PERICOS	SPE-115	115.0	4.34	2.87	4.255+j14.708	10.842+j37.268	5.07	3.25	3.889+j13.861	10.831+j36.848
SUBESTACIÓN PONIENTE	SPO-230	230.0	5.77	4.56	6.759+j21.990	9.849+j40.456	7.56	5.50	4.595+j18.780	9.807+j39.730
SUBESTACIÓN PUNTO P	SPP-115	115.0	9.18	8.22	1.562+j7.064	1.356+j9.715	12.05	10.05	1.100+j5.960	1.338+j9.606
SUBESTACIÓN SANTA INÉS	STI-115	115.0	3.73	2.75	5.494+j16.908	9.618+j35.572	4.40	3.13	5.024+j15.811	9.600+j35.462
SUBESTACIÓN SEIS	SBS-115	115.0	2.55	1.82	6.730+j25.116	20.127+j53.759	2.94	2.05	6.258+j24.013	20.106+j53.646
SUBESTACIÓN SIETE	SBE-115	115.0	4.44	3.09	4.422+j14.281	8.370+j33.497	5.31	3.54	3.955+j13.182	8.352+j33.388
SUBESTACIÓN TRES	SBT-115	115.0	4.56	3.26	4.269+j13.909	8.172+j31.016	5.47	3.73	3.802+j12.808	8.153+j30.906
SUBESTACIÓN UNO	SBU-115	115.0	2.39	1.68	9.235+j26.245	17.486+j60.164	2.74	1.89	8.760+j25.154	17.467+j60.054
SUBESTACIÓN VILLA UNIÓN	SVU-115	115.0	9.01	8.27	1.683+j7.178	2.375+j9.016	12.56	10.69	1.065+j5.717	2.341+j8.549
TAMAZULA	TZU-115	115.0	5.76	4.24	2.675+j11.212	6.518+j22.955	7.14	5.05	2.219+j9.990	6.482+j21.680
TASTIOTA	TST-115	115.0	2.11	1.42	9.324+j30.000	24.190+j73.937	2.42	1.59	8.805+j28.855	24.169+j73.824
TEACAPÁN	TEA-115	115.0	1.40	0.85	10.685+j46.150	40.439+j133.763	1.59	0.95	9.961+j44.712	40.385+j133.244
TECNOLÓGICO HERMOSILLO	TCG-115	115.0	10.79	8.40	1.321+j6.012	2.420+j11.165	14.82	10.42	0.842+j4.856	2.436+j10.927
TERRAMARA	TER-115	115.0	2.96	1.84	7.963+j20.972	19.562+j60.415	3.48	2.08	7.320+j19.650	19.520+j60.164
TETABATE	TTB-115	115.0	12.15	10.49	0.949+j5.381	1.585+j7.887	15.17	12.50	0.746+j4.756	1.578+j7.685
TOBARITO	TBR-115	115.0	6.48	4.45	2.402+j9.955	6.345+j23.451	7.61	5.05	2.199+j9.340	6.334+j23.270
TOPOLOBAMPO	TPO-230	230.0	7.44	6.44	2.426+j17.692	4.508+j25.136	12.75	13.01	0.984+j11.415	0.863+j10.293
TOPOLOBAMPO	TPO-115	115.0	6.62	3.46	2.260+j9.772	9.239+j36.125	7.85	3.93	2.051+j9.076	9.213+j35.919
TOPOLOBAMPO DOS	TPD-400	400.0	11.76	13.75	2.017+j19.534	0.496+j10.237	15.23	17.27	1.006+j16.654	0.481+j10.040
TRES RÍOS	TSR-115	115.0	13.05	12.49	1.095+j4.970	1.131+j5.606	18.49	17.27	0.624+j3.900	0.857+j4.586
UNIÓN ENERGÉTICA DEL NOROESTE	UEN-230	230.0	8.00	8.31	2.383+j16.435	2.567+j15.105	15.29	16.47	0.714+j9.524	0.660+j6.719
URES	URE-115	115.0	1.94	1.17	9.417+j32.817	27.661+j97.477	2.22	1.32	8.908+j31.614	27.637+j97.011
VALLE DEL MAYO	VMY-115	115.0	4.45	3.01	3.368+j14.540	10.381+j34.725	5.45	3.51	2.855+j13.094	10.275+j34.079
VALLE DEL YAQUI	VDY-115	115.0	5.13	3.57	3.979+j12.315	8.404+j28.718	5.88	4.00	3.824+j11.820	8.419+j28.674



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
VALLE DEL YAQUI DOS	VYD-115	115.0	3.84	2.36	4.385+j16.720	14.410+j47.839	4.39	2.64	4.180+j16.107	14.399+j47.658
VENADILLO	VND-115	115.0	9.61	7.64	1.512+j6.742	2.061+j12.075	13.89	9.84	0.869+j5.187	2.026+j11.546
VICAM	VCM-115	115.0	4.16	2.80	3.515+j15.570	9.901+j38.074	4.73	3.12	3.344+j15.069	9.900+j38.023
VILLA ÁNGEL FLORES	VAF-115	115.0	8.24	6.23	1.592+j7.899	3.327+j15.427	10.20	7.29	1.198+j7.059	3.328+j15.304
VILLA GUADALUPE	VGU-115	115.0	3.18	1.94	5.201+j20.193	14.828+j59.118	3.59	2.16	5.047+j19.689	14.844+j59.071
VILLA JUÁREZ	VIJ-115	115.0	2.71	1.67	6.515+j23.624	19.491+j67.164	3.16	1.90	5.998+j22.325	19.246+j66.101
VILLA MERCEDES	VME-115	115.0	11.21	9.52	1.214+j5.795	1.832+j8.914	15.53	11.97	0.749+j4.644	1.854+j8.714
VILLAS DEL CEDRO	VDC-115	115.0	11.34	10.25	1.373+j5.693	1.721+j7.477	15.42	13.40	0.913+j4.647	1.476+j6.595
VILLAS DEL PITIC	VPI-115	115.0	13.86	15.03	1.444+j4.568	1.185+j3.498	21.45	22.19	0.903+j3.283	1.054+j2.908
VIÑEDOS	VNO-115	115.0	4.81	3.00	4.474+j13.050	11.222+j37.179	5.87	3.46	3.933+j11.813	11.159+j36.809

Gerencia de Control Regional Norte



[Regresar a mapa del SEN](#)



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

Subestación Eléctrica	Acronímico	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
ABRAHAM GONZÁLEZ	ABG-115	115.0	5.32	4.58	3.002+j12.118	4.626+j17.962	6.58	5.45	2.305+j10.860	4.554+j17.438
AEROPUERTO	AEP-115	115.0	9.25	7.44	1.749+j6.961	4.201+j11.720	12.17	9.01	1.231+j5.872	4.198+j11.641
AGNICO EAGLE	AGE-115	115.0	2.07	2.28	8.432+j30.960	5.904+j22.531	2.34	2.57	7.800+j30.277	5.873+j22.139
ALDAMA	AMA-115	115.0	4.11	3.07	4.381+j15.559	12.414+j30.182	4.81	3.51	3.881+j14.672	12.337+j29.736
ALTARES	ATR-115	115.0	0.74	0.49	39.191+j80.477	102.013+j198.830	0.82	0.55	38.702+j79.841	101.961+j198.626
ALTAVISTA	ALV-115	115.0	2.21	2.03	11.193+j27.915	9.481+j37.206	2.53	2.32	10.216+j27.008	9.302+j35.804
ÁLVARO OBREGÓN	AVO-115	115.0	4.28	3.28	4.581+j14.828	10.253+j27.933	4.99	3.72	4.046+j14.070	10.248+j27.862
AMADO NERVO	AMN-115	115.0	2.10	2.05	12.040+j29.230	12.190+j31.508	2.37	2.30	11.753+j28.542	12.138+j31.374
AMÉRICAS	AMR-115	115.0	10.48	9.13	1.615+j6.123	2.402+j8.907	13.39	10.97	1.134+j5.334	2.377+j8.790
ANAPRA	APR-115	115.0	7.31	6.09	1.840+j8.897	5.361+j13.617	9.24	7.24	1.322+j7.791	5.366+j13.589
ARENALES	ARE-115	115.0	8.17	10.12	2.074+j7.862	0.497+j3.477	10.10	12.27	1.558+j7.060	0.490+j3.404
ARMENDÁRIZ	ARM-115	115.0	3.01	2.09	6.114+j21.191	17.152+j48.200	3.59	2.43	5.279+j19.669	16.796+j46.716
ASCENSIÓN	AON-115	115.0	4.65	4.77	2.933+j13.968	2.420+j13.032	5.37	5.44	2.593+j13.339	2.399+j12.849
ASCENSIÓN DOS	AOD-230	230.0	2.87	3.24	8.388+j45.550	2.243+j30.485	3.36	3.75	7.079+j42.946	2.138+j29.802
ASCENSIÓN DOS	AOD-115	115.0	4.96	6.29	2.560+j13.144	0.265+j4.951	5.74	7.27	2.227+j12.525	0.241+j4.715
AUMA	AUM-115	115.0	10.81	9.51	1.366+j5.987	2.084+j8.471	14.15	11.83	0.868+j5.089	1.985+j7.987
AUTLÁN	NAZ-230	230.0	10.88	11.15	2.299+j11.983	1.563+j11.271	17.11	16.78	1.064+j8.469	1.396+j8.949
AUTOMOTIVE LIGHTING	ALI-115	115.0	14.83	15.47	1.176+j4.320	1.045+j3.786	22.47	21.22	0.648+j3.185	1.040+j3.691
AVALOS	AVL-230	230.0	10.36	11.68	3.181+j12.415	1.199+j8.702	16.89	18.41	1.357+j8.543	0.998+j6.529
AVALOS	AVL-115	115.0	15.83	18.70	0.987+j4.078	0.241+j2.331	22.77	26.29	0.503+j3.168	0.199+j1.936
AZTECAS	AZT-115	115.0	11.99	10.73	1.487+j5.333	2.662+j7.035	16.82	13.60	0.977+j4.231	2.662+j6.969
BABISAS	BBS-115	115.0	4.22	3.77	4.665+j15.036	5.188+j20.795	5.07	4.54	4.039+j13.839	4.390+j18.955
BACIS	BAC-115	115.0	0.55	0.35	54.884+j108.088	39.802+j292.427	0.61	0.39	54.391+j107.472	39.748+j292.220
BASASEACHIC	BAS-115	115.0	2.37	2.83	7.257+j27.018	2.572+j14.331	2.69	3.20	6.629+j26.319	2.543+j13.960
BENITO JUÁREZ	BJZ-115	115.0	5.93	4.98	2.542+j10.913	6.721+j16.432	7.11	5.74	2.158+j10.048	6.721+j16.438
BIOPAPEL	BIO-115	115.0	5.40	5.00	3.044+j11.906	4.138+j14.717	6.32	5.74	2.775+j11.209	4.065+j14.549
BISMARCK	BSM-115	115.0	1.62	1.20	13.122+j38.821	30.445+j77.661	1.81	1.34	12.779+j38.232	30.419+j77.420
BOLÍVAR	BLV-115	115.0	1.67	1.44	13.068+j37.657	19.336+j55.047	1.89	1.63	12.071+j36.754	19.141+j53.622
BOQUILLA	BOQ-115	115.0	4.25	3.87	4.708+j14.911	4.266+j19.784	5.09	4.63	4.116+j13.759	3.760+j18.294
BUENA VISTA	BUV-115	115.0	2.49	2.05	6.376+j25.846	14.886+j41.336	2.82	2.30	6.034+j25.218	14.865+j41.152
BÚFALO	BUF-115	115.0	3.16	2.38	7.004+j19.801	13.601+j39.511	3.71	2.73	6.340+j18.637	13.363+j38.727
CAHUISORI POTENCIA	CPO-230	230.0	1.42	1.64	23.077+j90.730	2.644+j57.160	1.62	1.86	20.585+j87.692	2.541+j56.077
CAHUISORI POTENCIA	CPO-115	115.0	2.46	3.11	6.939+j26.033	0.564+j10.394	2.80	3.53	6.310+j25.340	0.533+j10.002
CAMARGO DOS	CGD-230	230.0	5.99	7.11	5.789+j21.412	1.146+j11.901	8.95	10.05	2.939+j16.046	1.152+j11.010
CAMARGO DOS	CGD-115	115.0	8.57	10.66	1.726+j7.555	0.177+j3.267	11.59	13.96	0.990+j6.225	0.173+j3.107
CAMARGO UNO	CGU-115	115.0	5.82	5.09	2.566+j11.115	3.460+j15.963	7.29	6.10	1.856+j9.842	3.435+j15.557
CANATLAN DOS	CND-115	115.0	4.66	5.28	2.725+j13.983	2.360+j8.974	5.48	6.13	2.358+j13.129	2.330+j8.797
CANATLAN DOS POTENCIA	CAP-230	230.0	3.33	3.44	6.734+j39.331	5.832+j35.632	4.08	4.08	5.315+j35.422	5.745+j35.297
CANATLAN DOS POTENCIA	CAP-115	115.0	4.89	5.76	2.394+j13.375	0.834+j7.377	5.76	6.73	2.033+j12.513	0.799+j7.191
CARICHIC	CRC-115	115.0	1.85	1.29	9.162+j34.736	24.281+j79.538	2.09	1.43	8.586+j33.900	24.285+j79.502



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
CAROLINAS	CAS-115	115.0	10.68	9.95	1.607+j6.006	2.191+j7.323	13.67	12.05	1.128+j5.224	2.161+j7.222
CARTAGENA	CAR-115	115.0	12.53	11.64	1.424+j5.105	2.164+j6.157	17.86	14.98	0.900+j3.989	2.166+j6.105
CASAS GRANDES	CGR-115	115.0	7.57	7.72	1.667+j8.609	1.982+j8.068	9.13	9.04	1.325+j7.889	1.975+j8.026
CATEDRAL	CAT-115	115.0	0.84	0.60	31.822+j72.039	68.591+j161.960	0.94	0.66	30.785+j71.419	68.350+j160.463
CATERPILLAR	CTP-115	115.0	12.20	10.27	1.074+j5.335	1.983+j8.295	15.12	12.09	0.834+j4.758	1.986+j8.233
CEMENTOS SAMALAYUCA	CMS-115	115.0	4.77	3.80	3.597+j13.440	9.396+j22.879	5.84	4.43	2.993+j12.142	9.389+j22.771
CERESO	CER-115	115.0	7.33	6.56	2.296+j8.760	4.379+j11.483	9.56	8.00	1.700+j7.450	4.371+j11.375
CERESO JUÁREZ	CEJ-115	115.0	6.75	5.88	2.494+j9.512	5.175+j13.292	8.67	7.09	1.898+j8.203	5.167+j13.184
CERRO DEL MERCADO	CME-115	115.0	8.23	8.03	1.740+j7.877	2.803+j8.247	10.16	9.54	1.403+j7.050	2.798+j8.175
CERROS BLANCOS	CRB-115	115.0	1.68	1.15	10.514+j37.998	32.511+j89.316	1.90	1.27	10.103+j37.164	32.512+j89.317
CHALCHIHUITES	CHL-115	115.0	1.26	0.85	17.359+j49.652	52.380+j117.959	1.41	0.94	16.964+j49.023	52.336+j117.839
CHAMIZAL	CZL-115	115.0	14.81	15.32	1.164+j4.331	1.031+j3.901	22.35	20.87	0.644+j3.203	1.029+j3.839
CHARCOS	CHA-115	115.0	0.82	0.56	24.998+j77.061	80.551+j179.842	0.91	0.61	24.604+j76.417	80.506+j179.721
CHAVEÑA	CVA-115	115.0	13.16	12.66	1.308+j4.871	1.774+j5.375	19.03	16.51	0.791+j3.756	1.777+j5.332
CHIHUAHUA NORTE	CUN-230	230.0	9.06	8.77	3.586+j14.211	3.292+j16.024	13.30	11.77	1.874+j10.824	3.184+j15.022
CHIHUAHUA NORTE	CUN-115	115.0	12.86	14.19	1.287+j5.002	0.601+j3.734	17.01	17.87	0.813+j4.215	0.573+j3.655
CHIHUAHUA PLANTA	CUP-115	115.0	12.39	11.57	1.394+j5.173	1.811+j6.307	16.40	14.35	0.904+j4.362	1.777+j6.139
CHIHUAHUA PONIENTE	CPN-115	115.0	10.16	8.84	1.735+j6.298	3.033+j9.051	12.93	10.62	1.266+j5.505	3.017+j8.881
CHUVISCAR	CHU-230	230.0	9.38	9.95	3.330+j13.765	1.836+j11.876	14.95	17.25	1.447+j9.660	0.596+j5.933
CHUVISCAR	CHU-115	115.0	14.66	16.66	1.086+j4.396	0.372+j2.959	20.62	23.10	0.593+j3.492	0.243+j2.418
CIÉNEGA	CIE-115	115.0	0.57	0.36	55.197+j102.374	137.807+j287.742	0.63	0.40	54.713+j101.789	137.753+j287.536
CIÉNEGA DOS	CID-115	115.0	0.58	0.37	54.344+j101.108	135.924+j282.863	0.64	0.40	53.860+j100.521	135.870+j282.656
CLID	CLI-115	115.0	6.51	5.58	2.404+j9.916	7.729+j13.562	8.18	6.64	1.890+j8.724	7.723+j13.486
COLEGIO	CLG-115	115.0	13.46	12.22	1.350+j4.745	2.175+j6.077	19.68	15.91	0.819+j3.619	2.172+j5.999
COLINA	CLN-115	115.0	3.80	3.24	5.785+j16.480	9.068+j24.919	4.54	3.93	5.112+j15.251	7.309+j22.466
COMPLEJO DE SEGURIDAD	CSG-115	115.0	9.13	7.80	1.816+j7.046	3.491+j10.487	11.61	9.48	1.317+j6.149	3.408+j10.034
COMPLEJO INDUSTRIAL	CIN-115	115.0	10.61	9.92	1.684+j6.028	2.271+j7.282	13.59	12.03	1.197+j5.241	2.241+j7.157
COMPLEJO LALA	CLA-115	115.0	13.83	10.17	1.121+j4.668	3.164+j9.491	17.32	11.98	0.889+j4.123	3.157+j9.369
COMPONENTES	COM-115	115.0	11.35	11.27	1.547+j5.641	1.547+j5.839	14.69	13.81	1.067+j4.857	1.518+j5.745
CONCHEÑO	CON-115	115.0	1.93	2.04	9.473+j33.013	8.322+j27.915	2.18	2.29	8.834+j32.345	8.289+j27.519
CONCORDIA	CCD-115	115.0	13.29	13.52	1.172+j4.856	0.992+j4.708	18.20	17.80	0.679+j3.954	0.889+j4.217
CONDEMBARO	LSC-115	115.0	10.05	8.20	1.834+j6.346	3.961+j10.362	12.33	9.59	1.568+j5.711	3.965+j10.296
CONEJOS MÉDANOS	CJM-115	115.0	2.53	2.72	6.795+j25.376	4.157+j20.317	3.21	3.33	5.214+j22.168	4.055+j19.872
CORONEL	CRN-115	115.0	8.68	5.90	1.495+j7.504	4.538+j17.890	10.48	6.80	1.203+j6.865	4.527+j17.756
CREEL	CRL-115	115.0	1.24	0.96	17.292+j50.619	39.620+j93.233	1.39	1.06	16.646+j49.980	39.575+j92.977
CUADRO DE MANIOBRAS BISMARCK	CMB-115	115.0	2.41	2.02	7.244+j26.628	16.011+j40.287	2.71	2.26	6.901+j26.038	15.985+j40.046
CUADRO DE MANIOBRAS BORDER	MBO-230	230.0	10.52	10.70	2.504+j12.369	2.466+j11.742	17.90	15.76	1.006+j8.100	2.496+j11.242
CUADRO DE MANIOBRAS CEMENTOS	CMC-115	115.0	5.04	4.06	3.398+j12.726	8.630+j21.137	6.21	4.75	2.795+j11.426	8.623+j21.029
CUADRO DE MANIOBRAS ELECTROLUX	CME-115	115.0	15.97	17.80	1.029+j4.028	0.519+j2.838	24.77	25.20	0.514+j2.904	0.520+j2.754
CUADRO DE MANIOBRAS FOXCONN	TRS-400	400.0	7.23	8.22	5.301+j31.518	1.725+j20.421	10.27	10.98	2.663+j24.598	1.780+j19.902



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

Subestación Eléctrica	Acronónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
CUADRO DE MANIOBRAS FOXCONN	CMF-115	115.0	9.52	7.77	1.707+j6.764	4.073+j11.005	12.60	9.45	1.191+j5.672	4.071+j10.930
CUADRO DE MANIOBRAS GUADALUPE AGUILERA	MGA-230	230.0	4.26	4.56	5.107+j30.755	4.010+j24.772	5.41	5.56	3.711+j26.721	4.017+j24.599
CUADRO DE MANIOBRAS INTERNACIONAL WIRE	CMI-115	115.0	8.15	7.95	1.724+j7.966	3.106+j8.263	10.20	9.53	1.347+j7.031	3.099+j8.188
CUADRO DE MANIOBRAS LA LUCHA	MLU-230	230.0	4.66	4.70	5.236+j28.007	3.605+j27.595	6.10	5.82	3.484+j23.706	3.611+j27.218
CUADRO DE MANIOBRAS LA PARRILLA	CMP-115	115.0	1.72	1.33	15.090+j35.511	27.985+j67.191	1.93	1.48	14.802+j34.824	27.932+j67.056
CUADRO DE MANIOBRAS NAICA	NAC-115	115.0	2.92	2.11	10.266+j20.284	17.520+j45.703	3.43	2.42	9.579+j19.011	17.282+j44.724
CUADRO DE MANIOBRAS SAN FRANCISCO	PDA-115	115.0	1.62	0.93	18.202+j36.816	45.104+j124.019	1.80	1.03	17.854+j36.323	45.072+j123.762
CUADRO DE MANIOBRAS SAN FRANCISCO	CMF-115	115.0	2.73	2.98	8.248+j22.890	2.848+j18.151	3.16	3.48	7.271+j21.943	2.671+j16.756
CUADRO DE MANIOBRAS VITROMEX	VIM-115	115.0	13.03	13.23	1.236+j4.945	1.225+j4.768	17.77	17.31	0.745+j4.041	1.148+j4.323
CUATRO SIGLOS	CSS-115	115.0	10.41	8.84	1.825+j6.108	3.419+j9.189	14.24	11.01	1.276+j4.969	3.403+j9.053
CUAUHTÉMOC	CHC-115	115.0	7.21	7.95	2.602+j8.839	1.845+j6.430	8.87	9.48	2.040+j7.981	1.852+j6.399
CUAUHTÉMOC DOS	CHD-230	230.0	5.24	6.32	6.592+j24.473	1.220+j12.746	6.76	7.88	4.604+j21.102	1.217+j12.565
CUAUHTÉMOC DOS	CHD-115	115.0	8.52	11.05	1.982+j7.539	0.175+j2.543	10.60	13.52	1.467+j6.735	0.168+j2.470
CUESTA	CUE-115	115.0	13.15	12.13	1.435+j4.839	2.096+j5.984	19.52	16.39	0.866+j3.641	1.930+j5.578
DELICIAS	DEL-115	115.0	7.87	6.67	1.929+j8.209	2.464+j12.820	10.82	8.76	1.102+j6.658	2.110+j11.340
DELICIAS DOS	DLD-115	115.0	8.06	6.70	2.088+j7.969	6.186+j11.963	11.20	8.86	1.250+j6.400	5.831+j10.482
DELPHI	DPH-115	115.0	14.84	11.78	0.969+j4.368	2.281+j7.651	18.79	14.00	0.739+j3.816	2.282+j7.566
DELPHI	DLP-115	115.0	14.93	15.73	1.169+j4.289	1.025+j3.636	22.67	21.64	0.642+j3.156	1.021+j3.553
DIAGONAL	DGN-115	115.0	11.37	8.55	1.109+j5.734	2.981+j11.241	14.03	10.01	0.853+j5.133	2.978+j11.123
DINAMITA	DIN-115	115.0	4.75	3.04	3.343+j13.564	11.107+j35.943	5.45	3.41	3.092+j13.051	11.091+j35.792
DIVISADERO	DIV-115	115.0	0.93	0.68	25.035+j66.523	60.099+j137.594	1.04	0.75	24.374+j65.936	60.052+j137.334
DIVISIÓN DEL NORTE	DDN-230	230.0	9.15	8.88	3.420+j14.100	3.296+j15.778	13.60	11.96	1.720+j10.602	3.242+j14.911
DIVISIÓN DEL NORTE	DDN-115	115.0	13.82	15.25	1.204+j4.650	0.595+j3.477	18.66	19.49	0.733+j3.845	0.572+j3.390
DUNAS	DUN-115	115.0	3.84	2.86	4.624+j16.653	13.610+j32.450	4.60	3.29	4.020+j15.354	13.602+j32.342
DURANGO DOS	DGD-230	230.0	7.62	8.49	2.947+j17.183	1.801+j11.961	10.31	10.93	1.850+j14.049	1.807+j11.621
DURANGO DOS	DGD-115	115.0	10.98	13.38	1.088+j5.946	0.287+j2.800	14.18	16.82	0.759+j5.094	0.279+j2.721
DURANGO UNO	DGU-115	115.0	9.41	9.67	1.404+j6.918	1.910+j6.234	11.80	11.66	1.082+j6.091	1.909+j6.171
DURAPLAY	DUR-115	115.0	2.19	2.00	11.263+j28.148	9.730+j37.772	2.51	2.29	10.286+j27.242	9.551+j36.370
EL CAPULIN	ECU-115	115.0	3.73	3.06	4.399+j17.225	10.790+j27.758	4.30	3.44	4.039+j16.517	10.785+j27.706
EL SABINAL	ESB-115	115.0	1.57	1.04	9.671+j41.298	22.015+j104.475	1.75	1.15	9.338+j40.737	21.991+j104.236
EL SALTO	ESL-115	115.0	1.24	0.79	19.902+j49.491	64.812+j130.434	1.38	0.87	19.850+j49.182	64.810+j130.369
EL SAUCITO	SAU-115	115.0	9.72	7.82	1.807+j6.586	3.108+j11.464	12.28	9.28	1.325+j5.800	3.083+j11.334
EL SAUZ	ESZ-115	115.0	3.20	2.47	8.303+j19.045	14.859+j36.105	3.67	2.78	7.822+j18.282	14.831+j36.026
EL TRÉBOL	TRE-115	115.0	1.93	1.60	8.986+j33.265	10.862+j54.790	2.27	1.83	7.594+j31.332	10.824+j54.334
EL VERGEL	ELV-115	115.0	8.73	5.51	1.545+j7.444	4.667+j20.433	10.40	6.29	1.299+j6.899	4.652+j20.264
ENCINO	ENO-400	400.0	6.27	7.08	6.873+j36.176	1.433+j25.032	9.53	10.23	2.532+j26.538	1.014+j21.462
ENCINO	ENO-230	230.0	13.29	16.86	2.354+j9.707	0.295+j3.958	24.18	29.95	0.777+j5.992	0.186+j2.652
ENCINO DOS	END-230	230.0	13.30	16.76	2.351+j9.706	0.334+j4.107	23.94	29.02	0.785+j6.051	0.286+j2.998
EÓLICA HUIMILPAN (SAN PEDRO) MANIOBRAS IXMIQUILPAN	MAU-115	115.0	14.31	10.09	0.962+j4.538	2.111+j10.267	18.09	11.90	0.720+j3.973	2.101+j10.131
ESCALÓN	ESC-115	115.0	1.92	1.22	13.178+j31.913	32.145+j89.076	2.17	1.35	12.714+j31.187	32.125+j88.928



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
El CAMELLO	CLO-115	115.0	1.18	0.86	17.568+j53.492	47.195+j110.461	1.31	0.95	17.252+j52.965	47.168+j110.217
FLEXTRONICS	FLE-115	115.0	13.91	13.53	1.100+j4.644	1.653+j4.926	20.49	17.95	0.593+j3.514	1.654+j4.845
FORD	FRD-115	115.0	11.29	11.27	1.535+j5.679	1.540+j5.760	14.58	13.82	1.055+j4.896	1.512+j5.665
FORD MANIOBRAS	FOM-115	115.0	11.66	11.86	1.481+j5.496	1.342+j5.307	15.16	14.62	1.001+j4.712	1.313+j5.213
FOXCONN DOS	FXD-115	115.0	4.69	2.25	2.821+j13.859	23.978+j55.807	5.63	2.54	2.292+j12.767	23.984+j55.779
FRANCISCO VILLA	FVL-230	230.0	7.50	8.00	4.733+j17.057	2.454+j14.443	13.78	15.27	1.647+j10.471	0.754+j7.533
FRANCISCO VILLA	FVL-115	115.0	11.13	12.18	1.380+j5.806	0.524+j4.468	17.09	19.03	0.571+j4.234	0.171+j2.988
FUENTES	FTS-115	115.0	10.98	9.42	1.717+j5.800	3.198+j8.486	15.17	11.81	1.174+j4.669	3.187+j8.378
FUENTES MARES	FMR-115	115.0	13.80	13.76	1.132+j4.676	0.898+j4.842	19.05	17.95	0.646+j3.780	0.856+j4.483
FUNDILAG	FDL-115	115.0	11.00	8.98	1.241+j5.908	2.664+j9.768	13.47	10.49	1.000+j5.331	2.667+j9.706
GALEANA	GNA-115	115.0	6.49	6.98	2.204+j9.984	2.150+j7.813	7.86	8.21	1.796+j9.120	2.151+j7.815
GAMMON LAKE	GML-115	115.0	1.85	1.92	9.117+j34.675	9.428+j30.536	2.09	2.16	8.487+j33.984	9.397+j30.143
GASASEACHIC	GAS-115	115.0	1.96	2.08	9.368+j32.634	7.915+j26.989	2.20	2.33	8.729+j31.966	7.882+j26.593
GAVILÁN	GAV-115	115.0	1.34	0.97	15.114+j47.074	42.330+j97.285	1.51	1.08	14.585+j46.084	42.331+j97.301
GÉMINIS	GEM-115	115.0	12.14	10.97	1.525+j5.254	2.561+j6.767	17.12	13.99	1.023+j4.142	2.558+j6.685
GENERAL TRÍAS	GTR-115	115.0	4.67	3.61	3.458+j13.778	10.391+j24.898	5.49	4.11	2.953+j12.983	10.381+j24.840
GRANJERO	GJO-115	115.0	12.58	11.93	1.439+j5.077	2.610+j5.623	17.97	15.51	0.894+j3.964	2.590+j5.511
GRUPO ESSEX MÉXICO	GEX-115	115.0	9.97	8.57	1.648+j6.454	3.157+j9.440	12.11	9.99	1.395+j5.868	3.159+j9.364
GUACHOCHI	GCH-115	115.0	0.67	0.49	30.678+j93.913	82.478+j193.031	0.75	0.54	29.641+j93.098	82.239+j191.537
GUADALUPE VICTORIA	GVR-115	115.0	1.90	1.44	11.389+j32.961	8.923+j69.213	2.17	1.61	10.842+j31.835	8.916+j69.136
GUADIANA	GDN-115	115.0	6.78	5.78	2.363+j9.501	5.366+j13.974	8.18	6.70	2.023+j8.695	5.364+j13.911
GUANACEVI	GVI-115	115.0	0.57	0.39	41.897+j109.376	109.621+j249.781	0.63	0.44	40.852+j108.677	109.359+j248.252
GUENACEVI DURANGO	GVD-115	115.0	0.58	0.41	40.690+j106.141	106.012+j241.614	0.65	0.45	39.644+j105.436	105.750+j240.086
HACIENDAS	HDS-115	115.0	9.25	7.60	1.891+j6.925	3.365+j11.439	11.60	9.01	1.419+j6.134	3.348+j11.281
HÉRCULES	HCL-230	230.0	1.15	0.94	30.368+j111.915	42.837+j185.178	1.35	1.08	25.220+j104.975	42.687+j183.460
HÉRCULES POTENCIA	HCP-400	400.0	3.12	2.03	8.431+j73.427	50.027+j187.446	3.86	2.39	5.443+j65.669	49.209+j182.034
HUMEDADES	LRT-115	115.0	7.97	6.13	3.159+j7.707	5.910+j14.670	9.58	7.08	2.879+j7.061	5.906+j14.554
IBERDROLA	IEL-115	115.0	27.51	33.42	0.448+j2.372	0.075+j1.148	39.41	46.32	0.235+j1.838	0.070+j1.027
INDUSTRIAL JUÁREZ	INJ-115	115.0	13.93	13.56	1.322+j4.579	1.671+j4.890	20.96	19.00	0.782+j3.395	1.363+j4.370
INDUSTRIAS SUPERIOR	ISP-115	115.0	11.26	11.24	1.536+j5.692	1.556+j5.794	14.55	13.77	1.056+j4.908	1.527+j5.700
INSURGENTES	IGS-115	115.0	15.57	17.99	1.062+j4.130	0.469+j2.512	23.86	25.34	0.555+j3.010	0.474+j2.484
INTERCERAMIC	ITC-115	115.0	10.45	9.70	1.711+j6.119	2.376+j7.520	13.35	11.74	1.224+j5.333	2.345+j7.395
INTERMEX ORIENTE	INO-115	115.0	12.33	13.03	1.377+j5.207	3.559+j3.512	17.49	17.21	0.841+j4.090	3.547+j3.425
INTERMEX SUR	INS-115	115.0	13.12	13.01	1.259+j4.903	1.465+j4.987	18.96	17.11	0.744+j3.779	1.465+j4.903
INTERNATIONAL WIRE	INW-115	115.0	8.01	7.84	1.764+j8.098	3.131+j8.320	10.01	9.39	1.387+j7.163	3.124+j8.245
JABIL	JAB-115	115.0	10.36	9.59	1.724+j6.173	2.426+j7.633	13.22	11.60	1.237+j5.386	2.396+j7.508
JANOS	JOS-115	115.0	4.48	3.94	3.211+j14.452	5.523+j20.186	5.19	4.47	2.861+j13.791	5.513+j20.078
JARDÍN	JAR-115	115.0	15.26	12.90	1.009+j4.231	1.837+j6.500	19.80	16.01	0.744+j3.612	1.733+j6.075
JERÓNIMO ORTIZ MARTÍNEZ	JOM-400	400.0	5.24	4.93	5.979+j43.662	5.283+j52.290	6.73	5.95	3.187+j37.611	5.355+j52.253
JERÓNIMO ORTIZ MARTÍNEZ	JOM-230	230.0	8.88	10.79	2.310+j14.781	0.661+j7.005	12.03	14.14	1.355+j12.065	0.675+j6.683



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
JERÓNIMO ORTIZ MARTÍNEZ	JOM-115	115.0	11.27	13.98	0.933+j5.816	0.155+j2.482	14.36	17.41	0.648+j5.045	0.153+j2.416
JIMÉNEZ	JEZ-115	115.0	3.94	3.06	5.194+j16.026	11.345+j29.452	4.73	3.53	4.421+j14.803	11.301+j29.191
JUÁREZ	JRZ-115	115.0	10.05	8.32	1.571+j6.416	3.173+j10.269	13.49	10.21	1.062+j5.310	3.169+j10.175
KILOMETRO OCHENTA Y OCHO	KOO-115	115.0	5.09	3.75	3.714+j12.507	7.376+j26.008	6.44	4.55	2.889+j10.967	7.021+j24.525
LA FLOR	LAF-115	115.0	1.59	1.15	9.561+j40.567	35.687+j82.659	1.79	1.28	9.269+j39.794	35.684+j82.592
LA MORA	EDU-115	115.0	6.72	4.62	2.471+j9.570	8.097+j22.004	7.85	5.23	2.234+j9.028	8.090+j21.881
LA PARILLA	LPA-115	115.0	1.63	1.23	15.656+j37.682	30.668+j74.160	1.82	1.37	15.368+j36.995	30.616+j74.024
LA PERLA	LPL-115	115.0	2.89	3.06	6.658+j22.022	6.413+j18.088	3.51	3.63	5.397+j20.093	6.386+j17.711
LA SALADA	LSA-115	115.0	1.81	1.41	10.239+j35.316	25.979+j62.662	2.02	1.57	9.899+j34.745	25.952+j62.420
LA TRINIDAD	LTR-230	230.0	9.08	10.72	1.925+j14.498	0.734+j7.951	12.91	15.23	1.030+j11.265	0.472+j6.166
LA UNIÓN	LAU-115	115.0	18.44	13.67	0.774+j3.516	1.807+j7.160	24.21	16.50	0.544+j2.967	1.797+j7.026
LAGOS	LAG-115	115.0	12.91	11.86	1.498+j4.920	2.261+j6.119	18.74	15.56	0.941+j3.782	2.215+j5.911
LAGUNA ENCINILLAS	LEN-230	230.0	3.69	2.55	6.005+j35.522	21.881+j81.460	4.45	2.93	4.545+j32.508	21.862+j81.135
LALA	LAL-115	115.0	19.63	17.23	0.744+j3.299	1.313+j4.628	26.62	22.72	0.495+j2.699	1.108+j4.014
LAS CUATAS	CUA-115	115.0	2.18	1.56	4.741+j30.147	26.623+j62.087	2.47	1.74	4.360+j29.213	26.623+j62.103
LÁZARO CÁRDENAS	LCS-115	115.0	5.66	4.11	2.860+j11.374	6.990+j24.101	7.27	5.02	2.006+j9.850	6.635+j22.619
LEBARON	LEB-115	115.0	2.48	1.94	6.881+j25.829	18.874+j45.754	2.83	2.17	6.467+j24.974	18.875+j45.756
LEONI CABLE	LEO-115	115.0	8.01	9.16	2.115+j8.013	1.214+j5.105	9.89	11.00	1.600+j7.211	1.207+j5.032
LEXMARK	LEX-115	115.0	10.24	8.53	1.664+j6.268	3.870+j9.674	13.82	10.51	1.148+j5.158	3.871+j9.594
LEXMARK DOS	LXD-115	115.0	10.46	9.22	1.293+j6.216	3.176+j8.386	14.18	11.48	0.783+j5.090	3.176+j8.305
LIBERTAD	LTD-115	115.0	12.34	10.91	1.555+j5.152	2.447+j7.097	17.85	14.36	0.997+j3.968	2.264+j6.715
LIBERTAD (MONTEMORELOS)	SPD-115	115.0	6.24	4.50	2.489+j10.347	6.428+j22.071	7.47	5.18	2.078+j9.548	6.412+j21.900
LIBERTAD (VICTORIA)	TRR-115	115.0	12.39	9.41	1.008+j5.261	2.537+j10.155	15.54	11.13	0.738+j4.642	2.523+j9.992
LÓPEZ MATEOS	LZM-115	115.0	3.51	3.34	5.073+j18.242	7.482+j20.543	4.05	3.80	4.485+j17.464	7.465+j20.404
MANIOBRAS CENTAURO	MAC-115	115.0	5.51	5.10	2.947+j11.690	4.135+j14.361	6.46	5.86	2.675+j10.989	4.067+j14.202
MANIOBRAS CERRO DEL MERCADO	MCM-115	115.0	7.75	6.93	1.900+j8.357	4.042+j10.960	9.49	8.14	1.562+j7.535	4.038+j10.891
MANIOBRAS CIENTO OCHO	MCO-115	115.0	4.62	3.66	4.238+j13.736	7.546+j24.639	5.41	4.16	3.705+j12.972	7.541+j24.571
MANIOBRAS MARÍA SOLAR	MMS-230	230.0	4.53	5.61	5.479+j28.807	0.893+j12.544	5.82	6.98	3.808+j24.819	0.895+j12.564
MANIOBRAS MINA MULATOS	MMT-115	115.0	1.19	1.02	17.067+j52.924	31.313+j78.917	1.33	1.13	16.408+j52.311	31.275+j78.512
MANIOBRAS MVC	MVC-115	115.0	8.37	8.25	1.576+j7.770	2.445+j7.942	10.44	9.87	1.228+j6.888	2.443+j7.879
MANIOBRAS PARQUE EÓLICO	MPE-115	115.0	1.39	0.72	13.144+j45.951	82.327+j162.869	1.52	0.79	13.388+j46.172	82.296+j162.649
MANIOBRAS PEÑALES	MPL-230	230.0	9.62	8.77	2.698+j13.539	3.670+j17.495	14.53	12.69	1.390+j9.958	3.068+j14.114
MANIOBRAS SABINAS	MAS-115	115.0	1.26	0.81	21.339+j48.373	54.587+j129.610	1.40	0.89	20.947+j47.766	54.543+j129.490
MANIOBRAS SANTA MARÍA	MMS-115	115.0	7.85	9.86	1.602+j8.308	0.257+j3.305	9.69	11.92	1.195+j7.439	0.258+j3.306
MANIOBRAS SANTA MARIA	MMS-115	115.0	7.85	9.86	1.602+j8.308	0.257+j3.305	9.69	11.92	1.195+j7.439	0.258+j3.306
MANIOBRAS SANTA ROSA	MSR-115	115.0	3.98	3.06	4.398+j16.094	12.458+j29.308	4.63	3.47	3.864+j15.293	12.457+j29.268
MANIOBRAS TREINTA Y CUATRO	MTC-115	115.0	5.45	5.14	3.423+j11.701	5.068+j13.505	6.51	5.96	2.855+j10.856	5.072+j13.469
MANIOBRAS VILLANUEVA	MVI-400	400.0	6.63	6.96	5.166+j34.461	3.954+j29.750	9.28	9.04	2.654+j27.259	3.945+j29.275
MANITOBA	MBA-115	115.0	5.68	4.68	2.902+j11.319	4.324+j18.786	6.76	5.37	2.376+j10.532	4.318+j18.720
MANTE	SCT-115	115.0	19.99	18.85	0.694+j3.248	1.076+j3.786	26.92	24.23	0.456+j2.675	0.987+j3.492



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
MAPIMI	MPI-115	115.0	2.58	1.49	5.480+j25.183	19.577+j80.063	2.89	1.65	5.222+j24.689	19.562+j79.927
MASISA	MSS-115	115.0	6.39	5.68	2.320+j10.129	5.091+j13.449	7.68	6.59	1.981+j9.305	5.086+j13.377
MÉDANOS	MED-115	115.0	10.82	8.83	1.518+j5.943	3.345+j9.765	14.84	10.96	0.969+j4.826	3.331+j9.636
MENONITAS	MEN-115	115.0	2.85	2.35	6.609+j22.376	14.281+j35.678	3.25	2.64	6.071+j21.639	14.270+j35.563
MEOQUI	MOQ-115	115.0	6.15	4.53	2.627+j10.472	7.670+j21.129	8.02	5.61	1.773+j8.938	7.315+j19.647
MESTEÑAS	MES-230	230.0	1.94	2.25	18.926+j65.629	2.700+j41.380	2.44	2.75	14.105+j58.288	2.568+j39.712
MESTEÑAS	MES-115	115.0	3.35	4.29	5.429+j19.070	0.367+j6.938	4.17	5.28	4.104+j17.047	0.332+j6.494
MILENIO	MIL-115	115.0	7.68	7.42	1.725+j8.468	3.254+j9.079	9.36	8.72	1.421+j7.673	3.253+j9.018
MINA CERRO DEL MERCADO	CDM-115	115.0	7.62	6.30	1.953+j8.489	5.220+j13.315	9.32	7.35	1.616+j7.666	5.217+j13.247
MINERA AUTLÁN TAP	MAX-115	115.0	14.82	10.53	0.906+j4.389	2.003+j9.766	18.82	12.46	0.665+j3.824	1.992+j9.629
MINERA DEL TORO	MDT-115	115.0	1.24	0.84	17.591+j50.571	53.327+j120.108	1.38	0.93	17.196+j49.942	53.283+j119.988
MINERA DOLORES	MDO-115	115.0	0.82	0.64	25.677+j76.728	58.342+j139.515	0.91	0.70	25.007+j76.155	58.302+j139.107
MINERA ROBLE	MRO-115	115.0	1.51	0.87	19.249+j39.590	48.353+j131.392	1.68	0.97	18.898+j39.103	48.320+j131.134
MINERA SAN JUAN	SAJ-115	115.0	0.71	0.49	39.127+j84.329	86.478+j201.984	0.79	0.54	38.093+j83.784	86.234+j200.482
MIRAVALLE	MIR-115	115.0	16.71	13.43	0.753+j3.900	1.446+j6.740	21.56	16.23	0.525+j3.347	1.431+j6.577
MITLA	MLA-115	115.0	11.17	9.84	1.418+j5.770	1.903+j8.141	15.41	12.35	0.889+j4.656	1.898+j8.049
MOCTEZUMA	MCZ-400	400.0	5.35	6.03	7.558+j42.497	1.804+j29.038	7.58	7.92	3.568+j33.331	1.874+j29.255
MOCTEZUMA	MCZ-230	230.0	10.51	13.03	2.517+j12.380	0.430+j5.420	15.82	18.39	1.177+j9.158	0.443+j5.376
MOCTEZUMA	MCZ-115	115.0	12.44	15.78	0.797+j5.278	0.074+j1.980	16.71	20.42	0.420+j4.351	0.074+j1.996
MONTE VERDE	MTV-115	115.0	1.93	1.50	9.106+j33.106	5.734+j64.215	2.17	1.67	8.727+j32.435	5.723+j64.106
NAICA	NAI-115	115.0	2.92	2.11	10.252+j20.281	17.564+j45.874	3.43	2.42	9.565+j19.006	17.328+j44.900
NAMIQUIPA	NQA-115	115.0	2.52	2.09	6.845+j25.462	13.941+j40.151	2.86	2.35	6.317+j24.729	13.923+j39.976
NAZAS	NAZ-115	115.0	20.33	22.58	0.666+j3.197	0.260+j2.291	28.38	30.44	0.386+j2.545	0.232+j2.042
NICOLÁS BRAVO	NCB-115	115.0	1.21	0.89	15.537+j52.574	43.457+j106.596	1.35	0.98	14.997+j51.863	43.438+j106.419
NOMBRE DE DIOS	NDD-115	115.0	10.82	10.03	1.637+j5.915	2.288+j7.304	13.92	12.19	1.152+j5.118	2.257+j7.170
NORTE CERESO	NCE-230	230.0	14.07	17.77	1.932+j9.238	0.219+j3.587	28.11	33.01	0.569+j5.165	0.246+j2.891
NUEVA HOLANDA	NHO-115	115.0	1.89	1.50	9.256+j33.948	12.339+j61.425	2.21	1.71	7.848+j32.026	12.300+j60.969
NUEVO CASAS GRANDES	NCG-230	230.0	5.93	7.06	3.953+j22.026	1.087+j11.724	7.46	8.64	2.752+j19.374	1.058+j11.555
NUEVO CASAS GRANDES	NCG-115	115.0	8.95	11.57	1.219+j7.315	0.135+j2.414	10.91	13.93	0.900+j6.635	0.127+j2.340
NUEVO IDEAL	NID-115	115.0	1.52	1.15	16.802+j40.191	38.794+j77.678	1.71	1.27	16.369+j39.440	38.754+j77.490
OASIS	OAS-115	115.0	2.08	1.75	8.798+j30.744	9.603+j48.768	2.45	2.02	7.388+j28.823	9.564+j48.310
OCAMPO	OCP-115	115.0	9.89	8.53	1.754+j6.480	3.260+j9.449	12.62	10.30	1.274+j5.645	3.238+j9.200
OJINAGA	OJI-115	115.0	1.00	0.74	22.775+j62.514	49.327+j127.256	1.13	0.83	21.315+j60.741	49.285+j126.793
ORIENTE VEINTIUNO	OTV-115	115.0	12.01	10.36	1.369+j5.354	2.738+j7.724	16.91	13.13	0.831+j4.239	2.731+j7.620
PALMAREJO	PAL-115	115.0	0.66	0.46	38.210+j92.301	94.933+j214.462	0.74	0.51	37.538+j91.784	94.884+j214.200
PALOMAR	PMR-115	115.0	8.58	6.85	1.950+j7.490	3.556+j13.197	10.65	8.05	1.475+j6.699	3.536+j13.070
PALOMAS	PMS-115	115.0	1.53	1.17	11.774+j41.801	32.255+j77.047	1.71	1.30	11.428+j41.215	32.229+j76.805
PAPELERA CHIHUAHUA	PCH-115	115.0	10.14	8.99	1.595+j6.353	2.714+j8.722	13.12	11.09	1.097+j5.458	2.631+j8.269
PARQUE	PQE-115	115.0	15.58	17.05	1.163+j4.100	0.792+j3.061	24.87	25.80	0.587+j2.878	0.580+j2.559
PARQUE PIEL	EZT-115	115.0	3.87	2.65	5.401+j16.306	17.333+j37.139	4.41	2.97	5.174+j15.751	17.310+j36.930



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
PARRAL	PAR-115	115.0	2.07	1.83	11.916+j29.752	11.466+j43.608	2.37	2.08	10.937+j28.852	11.286+j42.204
PASO DEL AGULIA	PSA-115	115.0	10.43	7.39	1.530+j6.180	4.626+j13.464	12.63	8.54	1.295+j5.636	4.618+j13.342
PASO DEL NORTE	PNR-230	230.0	8.82	10.52	3.412+j14.667	1.255+j7.690	14.23	15.53	1.567+j10.141	1.285+j7.607
PASO DEL NORTE	PNR-115	115.0	16.54	20.69	1.014+j3.884	0.210+j1.601	25.99	30.41	0.511+j2.763	0.215+j1.577
PATRIA	PAT-115	115.0	11.22	9.67	1.552+j5.709	3.018+j8.253	15.50	12.13	1.006+j4.604	3.005+j8.148
PEÑITAS	AND-230	230.0	10.71	11.05	2.308+j12.180	1.793+j11.152	15.71	15.02	1.226+j9.216	1.819+j10.449
PEÑUELAS	ADI-115	115.0	6.45	5.00	3.007+j9.842	7.441+j17.842	7.60	5.72	2.734+j9.210	7.420+j17.636
POLVORÍN	TMA-115	115.0	1.39	0.90	15.163+j45.469	43.281+j116.909	1.53	1.00	15.058+j45.181	43.237+j116.702
PONDERCEL	POE-115	115.0	5.61	5.97	3.063+j11.428	2.416+j9.473	6.66	6.94	2.582+j10.661	2.392+j9.379
PORVENIR	PRR-115	115.0	1.73	1.20	10.643+j36.950	34.726+j82.123	1.96	1.34	10.089+j35.873	34.667+j81.967
PUENTE DE NEGROS	PDN-115	115.0	4.86	3.91	3.966+j13.072	8.437+j22.074	5.67	4.45	3.650+j12.346	8.399+j21.961
PUERTO JUSTO	PTJ-115	115.0	1.84	1.63	12.664+j33.725	16.104+j47.390	2.10	1.85	11.657+j32.854	15.899+j45.949
QUEVEDO	QVD-230	230.0	3.06	3.57	10.063+j42.269	1.836+j25.110	3.67	4.21	8.005+j39.025	1.773+j24.648
QUEVEDO	QVD-115	115.0	5.20	6.48	2.847+j12.440	0.268+j5.327	6.13	7.58	2.332+j11.688	0.251+j5.155
QUINCE DE OCTUBRE	QDO-115	115.0	6.94	6.19	2.191+j9.318	4.423+j12.344	8.42	7.22	1.845+j8.480	4.422+j12.283
QUINCEO	PHS-115	115.0	23.03	19.66	0.585+j2.822	0.777+j4.305	31.77	24.82	0.359+j2.271	0.764+j4.162
RANCHO LUCERO	RLO-115	115.0	12.05	8.30	1.130+j5.393	2.924+j12.668	14.90	9.67	0.882+j4.820	2.913+j12.533
REFORMA	REA-230	230.0	11.46	13.47	2.603+j11.295	0.903+j6.361	20.60	21.74	0.997+j7.020	0.927+j5.917
REFORMA	REA-115	115.0	17.44	21.70	0.922+j3.693	0.167+j1.574	28.14	32.92	0.432+j2.560	0.160+j1.462
REGIO MÁRMOL	REM-115	115.0	4.41	2.83	3.627+j14.618	12.232+j38.499	5.04	3.17	3.375+j14.105	12.216+j38.347
REVOLUCIÓN	REV-115	115.0	7.82	5.97	2.186+j8.207	5.898+j15.347	9.32	6.86	1.914+j7.602	5.890+j15.200
RIO FLORIDO	RIF-115	115.0	3.50	2.74	5.311+j18.237	12.925+j32.290	4.25	3.19	4.326+j16.611	12.906+j32.086
RIVEREÑA	RVA-115	115.0	15.07	15.97	1.169+j4.247	0.989+j3.531	23.05	22.21	0.638+j3.103	0.982+j3.403
ROBERT BOSH	ROB-115	115.0	11.78	10.69	1.603+j5.406	2.570+j6.912	16.68	13.84	1.041+j4.252	2.501+j6.649
ROBINSON	RNN-115	115.0	11.32	10.47	1.405+j5.697	1.994+j7.082	14.95	13.18	0.907+j4.801	1.911+j6.629
RUIZ CORTINES	RCS-115	115.0	3.99	3.89	3.884+j16.193	3.923+j17.539	4.62	4.44	3.363+j15.448	3.906+j17.366
SABINAS	SAB-115	115.0	1.23	0.79	21.840+j49.303	55.757+j132.646	1.37	0.88	21.448+j48.697	55.713+j132.527
SALVARCAR	SVC-115	115.0	12.45	11.09	1.323+j5.166	2.626+j6.847	17.67	14.17	0.808+j4.053	2.628+j6.767
SAMALAYACA SUR	SYS-230	230.0	12.01	12.74	2.329+j10.804	1.809+j9.014	27.39	29.72	0.543+j5.305	0.578+j4.060
SAMALAYUCA	SYC-230	230.0	12.21	13.16	2.290+j10.632	1.634+j8.390	29.36	34.19	0.473+j4.952	0.226+j2.883
SAN ANTONIO DE BELÉN	ABE-115	115.0	1.35	0.87	19.498+j45.286	50.470+j118.954	1.50	0.97	19.107+j44.673	50.426+j118.834
SAN BUENAVENTURA	SBV-115	115.0	4.21	3.48	3.741+j15.303	9.787+j24.061	4.92	3.95	3.337+j14.461	9.787+j24.062
SAN FRANCISCO DE BORJA	SFB-115	115.0	1.54	0.99	12.104+j41.325	36.241+j110.277	1.73	1.09	11.539+j40.573	36.239+j110.235
SAN FRANCISCO DE LOS ROMO	AMS-115	115.0	12.81	9.13	1.059+j5.076	2.691+j11.144	15.93	10.72	0.815+j4.511	2.676+j10.965
SAN FRANCISCO DEL ORO	SFO-115	115.0	2.48	2.52	9.257+j25.130	5.482+j24.996	2.86	2.91	8.281+j24.188	5.305+j23.601
SAN IGNACIO	SIG-115	115.0	2.35	1.66	7.781+j27.151	24.366+j58.656	2.70	1.87	7.230+j26.070	24.307+j58.500
SAN ISIDRO	SID-115	115.0	7.24	5.92	2.234+j8.897	4.831+j14.552	9.16	7.05	1.705+j7.790	4.773+j14.397
SAN JERÓNIMO	SJE-115	115.0	5.08	2.37	2.616+j12.797	23.032+j53.659	6.14	2.68	2.088+j11.703	23.038+j53.631
SAN MARTIN	MRT-115	115.0	1.24	0.80	21.589+j48.849	55.171+j131.127	1.39	0.89	21.197+j48.242	55.127+j131.007
SAN MIGUEL DE ALLENDE	LJT-115	115.0	16.07	12.86	0.759+j4.062	1.982+j6.972	20.58	15.39	0.529+j3.510	1.983+j6.888



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
SAN PEDRO POTENCIA	SPP-230	230.0	2.31	2.57	14.272+j55.564	3.803+j40.458	2.72	2.98	11.949+j52.371	3.688+j39.915
SAN PEDRO POTENCIA	SPP-115	115.0	3.86	4.78	4.305+j16.642	0.612+j7.430	4.48	5.51	3.713+j15.890	0.575+j7.187
SANTA BÁRBARA	BBA-115	115.0	2.58	2.69	9.079+j24.088	4.266+j22.338	2.98	3.12	8.109+j23.136	4.094+j20.950
SANTA MARÍA DEL ORO	SMO-115	115.0	0.81	0.59	29.142+j76.615	69.024+j160.958	0.90	0.65	28.098+j75.848	68.775+j159.450
SANTIAGO DOS	SGD-230	230.0	1.69	1.83	25.927+j74.102	5.179+j61.762	1.99	2.16	22.168+j69.846	4.438+j56.922
SANTIAGO DOS	SGD-115	115.0	2.94	3.40	7.594+j21.266	0.927+j13.815	3.42	4.00	6.624+j20.305	0.755+j12.427
SANTIAGO PAPASQUIARO	SGP-115	115.0	1.10	0.78	25.715+j54.308	61.769+j118.917	1.23	0.87	25.256+j53.609	61.724+j118.722
SANTIAGO UNO	SGU-115	115.0	2.87	3.28	7.848+j21.739	1.405+j14.902	3.34	3.84	6.877+j20.780	1.233+j13.514
SANTOS SOLAR MANIOBRAS	SSM-115	115.0	11.24	13.26	0.885+j5.839	0.602+j3.179	14.81	16.72	0.507+j4.907	0.603+j3.195
SAUZAL	SAZ-115	115.0	10.55	8.66	1.627+j6.080	3.572+j9.816	14.41	10.76	1.071+j4.955	3.541+j9.642
SEIS Y MEDIO	SYM-115	115.0	4.58	3.21	4.095+j13.915	12.463+j30.850	5.36	3.63	3.567+j13.139	12.458+j30.784
SETENTA Y TRES	SAT-115	115.0	1.79	1.36	10.644+j35.459	28.292+j67.419	2.02	1.51	10.102+j34.733	28.281+j67.304
SOMBRERETE	SOM-115	115.0	1.18	0.76	22.734+j51.467	58.060+j138.592	1.31	0.84	22.342+j50.858	58.016+j138.472
TABALAOPA	TBL-115	115.0	11.94	11.79	1.470+j5.361	1.743+j5.571	15.99	15.13	0.978+j4.461	1.668+j5.118
TACUBAYA	TBA-115	115.0	2.95	3.17	6.488+j21.517	5.891+j16.901	3.60	3.78	5.226+j19.588	5.864+j16.525
TAKATA	TAK-115	115.0	16.08	13.34	0.769+j4.057	1.549+j6.507	20.67	16.01	0.537+j3.492	1.553+j6.445
TECNOLÓGICO	TEC-115	115.0	11.20	10.12	1.682+j5.687	2.684+j7.357	15.64	12.93	1.130+j4.531	2.654+j7.161
TEPIC UNO	GPL-230	230.0	11.77	12.92	2.059+j11.096	0.748+j8.292	19.21	20.81	0.862+j7.553	0.500+j5.849
TERRANOVA	TER-230	230.0	11.14	12.97	2.787+j11.588	0.876+j6.879	20.73	21.55	1.004+j6.973	0.900+j6.201
TERRANOVA	TER-115	115.0	17.72	22.08	0.919+j3.634	0.161+j1.534	28.79	33.56	0.412+j2.503	0.162+j1.452
TINAJAS	TIN-115	115.0	2.78	2.08	4.053+j23.568	18.712+j44.596	3.19	2.34	3.639+j22.616	18.712+j44.612
TORREONCITOS SOLAR	TOS-115	115.0	3.40	2.68	5.542+j18.700	13.174+j32.856	4.14	3.12	4.533+j17.046	13.155+j32.652
TORRES	TOR-115	115.0	14.27	14.08	1.171+j4.504	1.656+j4.562	21.17	18.83	0.662+j3.386	1.657+j4.481
TRECE SOLAR MANIOBRAS	TSM-115	115.0	2.39	2.14	6.873+j26.876	6.895+j36.844	2.85	2.48	5.587+j24.983	6.858+j36.395
TRES HERMANOS	THS-115	115.0	1.83	1.71	11.544+j34.431	17.080+j40.270	2.15	1.97	10.172+j32.410	17.045+j39.827
VADO SANTA MARÍA	VSM-115	115.0	1.66	1.41	10.265+j38.679	3.763+j61.881	1.86	1.57	9.897+j37.970	3.755+j61.807
VALLARTA UNO	LED-230	230.0	10.97	10.85	2.322+j11.879	2.240+j12.348	18.15	18.70	0.971+j7.987	1.137+j7.270
VALLE DE JUÁREZ	VJZ-230	230.0	9.89	10.86	3.022+j13.076	1.499+j9.761	17.16	16.79	1.182+j8.431	1.419+j8.986
VALLE DE JUÁREZ	VJZ-115	115.0	16.57	19.71	1.050+j3.867	0.299+j2.087	26.79	30.07	0.501+j2.680	0.249+j1.824
VALLE DE TECOMAN	MAT-115	115.0	10.85	9.83	1.415+j5.951	2.253+j7.718	13.50	11.74	1.122+j5.291	2.236+j7.529
VALLE DEL MEZQUITAL	PLA-115	115.0	0.98	0.53	20.415+j64.889	108.923+j217.510	1.07	0.58	20.727+j65.214	108.892+j217.289
VALLE ESPERANZA	VEZ-115	115.0	2.14	1.51	5.300+j30.518	27.517+j64.972	2.44	1.69	4.874+j29.555	27.518+j64.988
VERDE INDEPENDENCIA UNO	VIU-115	115.0	9.00	7.38	1.434+j7.237	4.539+j11.485	11.81	8.95	0.922+j6.112	4.540+j11.404
VICENTE GUERRERO	VGR-115	115.0	1.86	1.28	12.174+j33.518	34.148+j77.411	2.09	1.42	11.791+j32.872	34.105+j77.292
VICENTE GUERRERO	VGR-FIC	115.0	1.46	1.17	18.068+j41.671	30.816+j73.418	1.63	1.30	17.780+j40.984	30.763+j73.283
VIDRIERA CHIHUAHUA MANIOBRAS	VCM-115	115.0	5.80	4.20	2.792+j11.100	7.417+j23.420	7.48	5.15	1.935+j9.577	7.062+j21.938
VILLA AHUMADA	VAH-115	115.0	2.15	1.61	9.113+j29.447	24.716+j57.520	2.45	1.80	8.623+j28.477	24.717+j57.537
VIÑEDOS	VDS-115	115.0	13.11	9.65	1.157+j4.931	3.239+j10.016	16.33	11.34	0.919+j4.377	3.232+j9.893
WERNER	WER-115	115.0	11.66	10.38	1.589+j5.466	2.799+j7.310	16.27	13.13	1.087+j4.355	2.797+j7.228
WRANGLER	WRA-115	115.0	8.27	7.00	2.061+j7.755	6.759+j10.854	11.58	9.33	1.232+j6.187	6.404+j9.374



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
ZARAGOZA	ZZA-115	115.0	14.33	14.31	1.305+j4.446	1.476+j4.424	21.65	19.70	0.745+j3.290	1.408+j4.162

Gerencia de Control Regional Noreste



[Regresar a mapa del SEN](#)



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
ACERO	AEO-115	115.0	9.52	8.64	1.138+j6.884	1.556+j9.013	11.19	9.91	0.948+j6.455	1.554+j8.955
ACEROS PLANOS	APM-115	115.0	21.72	15.27	0.623+j2.993	1.303+j6.811	24.96	17.13	0.534+j2.877	1.305+j6.821
ACUARIO	ACU-138	138.0	12.76	11.60	1.465+j6.068	1.502+j8.200	15.11	13.36	1.242+j5.666	1.495+j8.109
ACUÑA	AUA-138	138.0	6.11	6.81	2.695+j12.763	1.200+j8.948	7.87	8.65	2.067+j10.948	1.139+j8.011
ACUÑA DOS	ACD-138	138.0	6.40	7.09	2.295+j12.230	1.122+j8.765	8.66	9.56	1.533+j10.007	0.954+j7.166
AEROPUERTO	AER-400	400.0	13.35	15.37	3.287+j16.979	1.232+j11.280	18.95	20.64	1.694+j13.296	1.244+j10.506
AEROPUERTO	AER-230	230.0	16.94	21.04	1.600+j7.673	0.286+j3.545	23.52	28.24	0.892+j6.145	0.282+j3.258
AEROPUERTO	AER-138	138.0	18.72	22.48	0.870+j4.167	0.189+j2.224	24.38	28.50	0.577+j3.549	0.184+j2.112
AEROPUERTO NORTE	ANE-115	115.0	13.27	6.60	1.005+j4.900	4.309+j19.697	15.04	7.34	0.903+j4.770	4.308+j19.691
AEROPUERTO OMA MONTERREY	OMA-115	115.0	16.67	12.63	0.667+j3.927	1.638+j7.642	20.82	14.99	0.513+j3.470	1.624+j7.450
AFI STEEL FOUNDRY	ASF-115	115.0	16.79	13.07	0.592+j3.909	1.550+j7.184	20.26	15.43	0.445+j3.576	1.505+j6.855
AGUA NUEVA	AGN-115	115.0	10.94	10.70	1.170+j5.955	0.828+j6.449	12.78	12.26	1.000+j5.626	0.817+j6.400
AGUAS TRATADAS	ATM-115	115.0	11.03	7.72	1.033+j5.932	2.919+j13.507	13.76	9.86	0.813+j5.245	2.284+j11.424
AHUACATLAN	AHU-115	115.0	3.35	2.01	5.427+j19.091	14.535+j57.627	3.69	2.21	5.401+j19.047	14.540+j57.583
ALAMO	ALM-115	115.0	10.87	8.55	1.306+j5.968	2.593+j10.781	12.37	9.59	1.189+j5.782	2.588+j10.734
ÁLCALI MANIOBRAS	ACM-115	115.0	23.10	25.05	0.419+j2.844	0.336+j2.159	25.92	28.08	0.371+j2.794	0.326+j2.121
ALCOA PRIVADA	APV-115	115.0	13.70	6.80	0.971+j4.749	4.184+j19.142	15.54	7.56	0.870+j4.619	4.183+j19.137
ALEN DEL NORTE	ADN-115	115.0	11.01	8.28	1.156+j5.918	2.925+j11.627	12.48	9.25	1.053+j5.757	2.927+j11.620
ALIANZA REAL	AIR-115	115.0	20.20	15.46	0.503+j3.248	0.898+j6.245	23.10	17.34	0.423+j3.133	0.898+j6.245
ALLENDE	ALN-115	115.0	3.87	2.27	3.802+j16.722	12.694+j52.006	4.30	2.51	3.703+j16.594	12.670+j51.864
ALLENDE DOS	AED-138	138.0	5.46	4.32	2.722+j14.342	4.799+j25.717	6.98	5.19	2.007+j12.386	4.716+j25.064
ALMACENTRO DEFINITIVO	ALE-115	115.0	19.89	15.25	0.567+j3.290	1.198+j6.275	25.59	18.36	0.432+j2.821	1.187+j6.119
ALPES	ALP-115	115.0	9.70	7.40	1.181+j6.742	2.712+j12.966	11.06	8.32	1.050+j6.521	2.699+j12.848
ALTAMIRA	ALT-400	400.0	20.60	20.15	1.118+j11.155	2.023+j12.069	30.59	31.13	0.576+j8.284	1.081+j8.105
ALTAMIRA	ALT-230	230.0	19.82	23.49	0.636+j6.668	0.378+j3.799	24.17	28.56	0.483+j6.024	0.296+j3.484
ALTAMIRA	ALT-115	115.0	25.79	27.96	0.358+j2.549	0.187+j2.024	30.55	32.82	0.315+j2.370	0.177+j1.943
ALTAMIRA DE AGUA Y DRENAJE DE MONTERREY	AAD-115	115.0	24.60	17.86	0.542+j2.644	1.014+j5.671	28.68	20.39	0.448+j2.507	0.998+j5.567
ALTAMIRA III Y IV	ATC-400	400.0	21.29	23.60	0.934+j10.809	0.819+j7.846	34.83	41.29	0.395+j7.283	0.386+j4.629
ALTAMIRA V	ATV-400	400.0	21.25	23.57	0.938+j10.825	0.819+j7.846	34.75	41.25	0.398+j7.299	0.384+j4.620
ALTAMIRANO	ATR-115	115.0	7.47	5.75	1.543+j8.748	3.362+j16.605	8.73	6.53	1.333+j8.257	3.354+j16.522
ALTOS HORNOS DE MÉXICO	AHM-400	400.0	8.60	9.42	4.325+j26.503	1.866+j20.917	11.52	11.94	2.487+j21.911	1.912+j20.418
AMERICAN INDUSTRIES	AIN-138	138.0	15.02	15.62	1.200+j5.167	0.879+j4.714	19.01	19.08	0.891+j4.522	0.870+j4.570
AMERICAN INDUSTRIES DULCES NOMBRES	AID-115	115.0	16.80	14.29	0.554+j3.912	1.119+j5.936	21.30	17.52	0.386+j3.407	1.094+j5.591
AMÉRICAS	AME-115	115.0	15.85	10.72	0.800+j4.112	1.986+j10.008	18.30	12.06	0.677+j3.934	1.985+j9.998
AMISTAD	AMI-138	138.0	3.42	2.97	5.305+j22.687	7.642+j32.966	4.96	5.52	3.120+j17.392	1.182+j12.283
AMPAD	AMP-138	138.0	9.69	10.56	1.697+j8.047	1.006+j6.345	11.18	12.06	1.496+j7.695	0.985+j6.227
ANÁHUAC	ANH-138	138.0	2.22	1.39	8.119+j34.917	20.292+j98.421	2.55	1.56	7.304+j33.594	20.269+j98.248
ANÁHUAC POTENCIA	ANP-400	400.0	15.91	24.72	1.560+j14.435	1.978+j-0.832	19.94	31.99	1.035+j12.701	2.199+j-1.433
ANÁHUAC POTENCIA	ANP-115	115.0	19.22	25.11	0.502+j3.418	0.279+j1.030	21.96	28.82	0.453+j3.296	0.317+j0.950
ANÁHUAC TAM.POTENCIA	ATP-400	400.0	10.94	13.07	2.944+j20.901	0.821+j12.437	16.24	19.74	1.341+j15.589	0.430+j8.238



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
ANÁHUAC TAM.POTENCIA	ATP-230	230.0	14.85	19.75	1.418+j8.829	0.154+j3.022	18.40	24.02	0.984+j7.877	0.146+j2.915
ANGOSTURA	ANG-115	115.0	10.49	8.08	0.993+j6.248	2.565+j11.743	11.91	9.04	0.885+j6.070	2.563+j11.717
ANILLO PERIFÉRICO	APF-115	115.0	11.95	8.92	0.951+j5.474	2.002+j11.048	13.50	9.96	0.856+j5.341	1.989+j11.010
ANZALDUAS	ANZ-138	138.0	14.04	12.54	1.270+j5.529	1.491+j7.671	17.34	14.84	0.967+j4.962	1.473+j7.534
ANZALDUAS RODÉ	ANR-138	138.0	11.68	9.33	1.623+j6.624	2.586+j11.802	14.13	10.90	1.315+j6.060	2.518+j11.505
APASCO	APC-230	230.0	9.96	8.33	2.305+j13.131	4.663+j20.687	11.55	9.46	1.914+j12.496	4.652+j20.584
APODACA	APD-115	115.0	16.88	11.25	0.796+j3.853	1.965+j9.640	19.67	12.72	0.692+j3.648	1.956+j9.609
ARCO VIAL	ARV-115	115.0	22.62	26.49	0.497+j2.893	0.476+j1.578	25.57	29.79	0.439+j2.822	0.474+j1.573
ARROYO DEL COYOTE	ADC-400	400.0	3.35	3.48	12.924+j67.814	4.717+j61.292	4.59	4.47	7.353+j54.873	5.043+j59.710
ARROYO DEL COYOTE	ADC-230	230.0	4.57	5.09	6.582+j28.325	1.533+j20.305	5.92	6.31	4.481+j24.276	1.557+j20.031
ARROYO DEL COYOTE	ADC-138	138.0	8.81	11.49	2.333+j8.733	0.160+j2.796	11.58	14.78	1.575+j7.400	0.162+j2.692
ARTEAGA	ATG-115	115.0	4.38	4.33	4.181+j14.585	3.645+j15.269	5.35	5.14	3.419+j13.210	3.611+j14.942
ARTES GRAFICAS	AGR-115	115.0	18.31	12.91	0.719+j3.555	1.540+j8.032	21.18	14.56	0.626+j3.392	1.535+j8.005
ARVIN MERITOR	AVM-115	115.0	12.47	6.23	1.067+j5.216	4.569+j20.837	14.11	6.92	0.965+j5.086	4.568+j20.831
ATLAPEXCO	APX-115	115.0	2.84	2.70	5.823+j22.665	7.921+j25.693	3.14	2.99	5.771+j22.530	7.915+j25.589
AURORA	AUR-138	138.0	3.37	3.02	7.485+j22.449	7.825+j31.159	3.83	3.42	7.067+j21.764	7.671+j30.369
AXTLA	AXA-115	115.0	4.86	3.21	3.533+j13.197	8.704+j33.621	5.35	3.53	3.516+j13.196	8.701+j33.565
AZTECAS	AZT-115	115.0	2.94	1.79	6.571+j21.614	20.698+j62.694	3.29	2.01	6.366+j21.274	20.016+j61.233
AZTLÁN	AZN-138	138.0	14.95	13.45	1.251+j5.179	1.509+j7.059	18.75	16.17	0.940+j4.579	1.457+j6.825
BAJÍO	BAO-115	115.0	2.48	1.74	6.601+j25.974	14.758+j59.324	2.86	1.95	6.112+j24.835	14.746+j59.138
BALL METAL BEVERAGE	BMB-115	115.0	15.94	11.04	0.739+j4.100	1.897+j9.521	17.78	12.22	0.686+j4.049	1.899+j9.531
BARRETAL	BET-115	115.0	3.34	2.26	7.330+j18.446	16.545+j45.510	3.69	2.49	7.297+j18.409	16.538+j45.430
BARRY CALLEBAUT	BAC-115	115.0	19.26	10.31	0.609+j3.393	2.574+j12.167	22.03	11.51	0.527+j3.273	2.570+j12.150
BASF	BSF-115	115.0	14.95	10.56	0.829+j4.363	1.984+j9.821	17.59	12.77	0.757+j4.083	1.738+j8.719
BERLÍN	BRN-115	115.0	16.52	11.70	0.748+j3.950	2.175+j8.721	21.01	13.92	0.630+j3.418	2.161+j8.530
BICENTENARIO	BIC-115	115.0	7.06	6.08	1.564+j9.280	2.692+j13.668	7.79	6.69	1.533+j9.253	2.717+j13.740
BIOFILM	BFL-115	115.0	16.26	11.13	0.734+j4.017	1.987+j9.562	19.25	13.73	0.665+j3.735	1.661+j8.248
BLACK & DECKER	BAD-138	138.0	15.39	13.50	1.116+j5.054	1.293+j7.346	19.35	16.23	0.805+j4.457	1.236+j7.103
BOMBEO LOMA LARGA	BLL-115	115.0	22.82	15.18	0.607+j2.846	1.302+j7.193	26.48	17.19	0.513+j2.710	1.296+j7.118
BOMBEO NUEVA CASTILLA III	BNC-115	115.0	10.41	5.31	1.167+j6.268	5.040+j24.268	11.71	5.89	1.081+j6.145	5.024+j24.214
BOMBEO PORVENIR	POR-115	115.0	3.17	2.27	6.446+j19.923	18.487+j42.312	3.51	2.50	6.395+j19.786	18.501+j42.262
BRAVO	BRA-115	115.0	2.05	1.28	9.534+j30.928	29.376+j85.617	2.27	1.42	9.465+j30.813	29.416+j85.506
CADEREYTA	CYN-115	115.0	14.66	11.22	0.716+j4.472	1.310+j8.604	17.58	13.25	0.576+j4.115	1.234+j8.141
CADEREYTA II (1)	CDT-115B2	115.0	12.43	8.75	0.959+j5.256	2.746+j11.762	14.28	9.85	0.847+j5.043	2.744+j11.725
CADEREYTA II (2)	CDT-115B1	115.0	12.43	8.75	0.959+j5.256	2.746+j11.762	14.28	9.85	0.847+j5.043	2.744+j11.725
CAMARGO	CAM-138	138.0	5.76	3.36	3.885+j13.279	11.185+j42.180	6.79	4.45	3.381+j12.456	7.465+j32.535
CAMPESTRE	CPR-138	138.0	7.24	7.33	2.788+j10.644	1.734+j10.515	9.18	8.87	2.010+j9.332	1.737+j10.409
CAMPO TAMAULIPAS	CTS-115	115.0	11.11	7.67	1.343+j5.822	3.346+j13.677	12.62	8.58	1.298+j5.638	3.339+j13.607
CAPELLANIA	CAP-115	115.0	11.72	9.25	0.902+j5.591	2.022+j10.030	13.61	10.51	0.766+j5.310	2.028+j9.925
CARBÓN DOS	CBD-400	400.0	8.40	8.23	5.064+j27.032	3.959+j29.239	23.20	27.52	0.695+j10.928	0.349+j6.251



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
CARPLASTIC	CIS-115	115.0	17.03	12.44	0.679+j3.840	1.716+j8.034	21.25	14.69	0.534+j3.396	1.705+j7.875
CASA BLANCA	CBL-138	138.0	10.26	8.40	1.686+j7.577	2.455+j12.926	11.95	9.53	1.472+j7.187	2.450+j12.861
CASTECH	CAS-115	115.0	16.67	12.99	0.598+j3.937	1.578+j7.215	20.08	15.27	0.453+j3.609	1.540+j6.926
CATERPILA JAGUAR	CJR-115	115.0	11.85	5.94	1.120+j5.488	4.791+j21.818	13.39	6.59	1.018+j5.358	4.790+j21.813
CEDROS	CED-230	230.0	12.21	12.40	1.967+j10.699	1.393+j10.321	14.50	14.44	1.526+j9.956	1.374+j10.138
CEDROS	CED-115	115.0	25.66	28.35	0.503+j2.538	0.208+j1.855	31.65	34.33	0.375+j2.277	0.205+j1.765
CEJA	CJA-115	115.0	3.08	2.23	4.241+j21.127	17.706+j43.152	3.43	2.47	4.097+j20.872	17.693+j43.072
CELULOSA	CEL-115	115.0	19.19	13.53	0.642+j3.401	1.438+j7.673	21.98	15.16	0.556+j3.276	1.438+j7.672
CEMENTOS ANÁHUAC	CAN-115	115.0	13.35	12.49	0.929+j4.887	1.333+j5.881	15.07	14.04	0.880+j4.765	1.371+j5.801
CEMENTOS HIDALGO	CEH-115	115.0	6.81	4.54	2.639+j9.387	8.775+j22.796	7.59	5.02	2.559+j9.275	8.775+j22.797
CEMENTOS MEXICANOS	CEM-115	115.0	25.64	19.61	0.498+j2.541	0.896+j4.902	29.85	22.25	0.406+j2.412	0.894+j4.878
CEMEX (VALLES)	CMX-115	115.0	7.26	5.38	2.399+j8.823	4.310+j18.271	8.11	5.98	2.340+j8.693	4.349+j18.174
CENTEC	CNE-115	115.0	10.33	7.17	1.539+j6.239	3.509+j14.538	11.80	8.03	1.419+j6.025	3.508+j14.479
CENTRAL	CEN-138	138.0	12.48	11.87	1.468+j6.215	1.256+j7.495	14.67	13.62	1.255+j5.840	1.249+j7.425
CENTRAL ANÁHUAC	CAH-230	230.0	14.82	19.73	1.413+j8.848	0.149+j3.020	18.35	23.95	0.981+j7.901	0.142+j2.920
CENTRAL DULCES NOMBRES	CDU-400	400.0	25.97	29.02	2.041+j8.656	0.571+j6.156	40.38	43.70	0.894+j6.226	0.404+j4.891
CENTRAL DULCES NOMBRES	CDU-115	115.0	11.21	13.54	0.288+j5.915	0.058+j2.873	18.17	20.28	0.109+j4.019	0.055+j2.765
CENTRAL DULCES NOMBRES II	DNO-115	115.0	22.21	21.78	0.458+j2.954	0.231+j3.157	24.66	24.23	0.421+j2.931	0.222+j3.110
CENTRAL IBERDROLA COGENERACIÓN RAMOS	ICR-115	115.0	14.98	12.72	0.575+j4.395	0.999+j6.759	18.03	15.25	0.430+j4.029	0.937+j6.226
CERRALVO	CER-115	115.0	3.05	2.19	6.017+j20.904	16.395+j44.571	3.41	2.43	5.804+j20.637	16.382+j44.630
CERRO PRIETO	CEP-115	115.0	4.70	4.06	2.452+j13.909	5.724+j20.069	5.25	4.51	2.364+j13.703	5.723+j20.037
CHAIREL	CHR-115	115.0	17.37	14.38	0.673+j3.763	1.712+j6.050	20.17	16.42	0.622+j3.568	1.700+j5.943
CHAMPAYAN	CPY-400	400.0	24.26	26.04	0.917+j9.475	0.990+j7.718	37.38	42.17	0.428+j6.782	0.607+j4.947
CHAPACAO	CHW-115	115.0	4.32	3.05	4.051+j14.836	13.766+j31.804	4.80	3.38	4.000+j14.685	13.766+j31.747
CHRYSLER CAMIONES PLANTA MOTORES SUR	CPS-115	115.0	12.85	10.90	0.963+j5.075	1.784+j7.760	14.80	12.30	0.851+j4.862	1.780+j7.744
CHRYSLER DE MÉXICO	CYM-115	115.0	19.18	16.10	0.742+j3.381	1.184+j5.335	23.06	18.81	0.606+j3.108	1.169+j5.192
CHRYSLER PLANTA CAMIONES	CYC-115	115.0	13.21	11.43	0.917+j4.942	1.651+j7.193	15.23	12.93	0.805+j4.727	1.647+j7.177
CIBIOSA (FERSINSA)	CIB-115	115.0	11.85	8.52	0.927+j5.524	2.209+j11.989	13.73	9.64	0.796+j5.258	2.223+j11.911
CIFUNSA	CIF-115	115.0	17.91	14.89	0.786+j3.624	1.171+j5.857	21.01	17.03	0.667+j3.412	1.170+j5.800
CIMA	CIM-138	138.0	12.24	12.97	1.408+j6.356	0.738+j5.606	14.32	14.93	1.205+j6.001	0.722+j5.505
CITROFRUT	CIT-115	115.0	4.46	2.69	3.866+j14.387	11.189+j42.793	4.96	2.98	3.820+j14.226	11.189+j42.756
CIUDAD INDUSTRIAL	CID-230	230.0	4.49	4.76	7.108+j28.680	3.186+j24.683	5.81	5.86	4.966+j24.655	3.165+j24.338
CIUDAD INDUSTRIAL	CID-138	138.0	7.09	7.82	2.950+j10.840	1.059+j8.126	9.01	9.58	2.159+j9.483	1.040+j7.962
CLOSURES INTERIORES	CLI-138	138.0	10.78	9.38	1.848+j7.154	2.314+j10.671	12.74	10.79	1.599+j6.693	2.298+j10.524
CODEFRONT	CFT-138	138.0	2.84	2.05	5.260+j27.592	10.626+j59.307	3.29	2.32	4.456+j26.253	10.606+j59.142
COMPAÑÍA CERVECERA DE COAHUILA	CVC-138	138.0	6.88	6.75	2.449+j11.320	2.096+j12.122	8.89	8.29	1.865+j9.682	2.088+j11.767
CONCEPCIÓN DEL ORO	CDO-115	115.0	1.45	0.84	15.024+j43.309	36.951+j141.408	1.60	0.92	14.833+j43.024	36.939+j141.357
CONCORDIA	CCR-115	115.0	17.80	16.00	0.609+j3.679	0.911+j4.906	20.28	17.97	0.526+j3.562	0.912+j4.912
CONDUCTORES MONTERREY	CDY-115	115.0	22.30	16.84	0.578+j2.920	1.318+j5.730	27.87	19.81	0.453+j2.581	1.296+j5.679
CONTEC MEXICANA	CON-115	115.0	20.43	19.94	0.422+j3.223	0.557+j3.452	26.76	25.57	0.255+j2.717	0.532+j3.107



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
CONTROLADORA DE TERMINALES	COT-115	115.0	18.04	8.84	0.657+j3.621	3.097+j14.852	20.59	9.86	0.574+j3.500	3.088+j14.817
CONTRY	CNY-115	115.0	23.24	15.22	0.553+j2.803	1.382+j7.248	26.99	17.27	0.458+j2.667	1.369+j7.152
CORONA	CRO-138	138.0	8.51	7.77	1.951+j9.159	2.087+j11.892	11.61	9.78	1.319+j7.435	2.078+j11.532
CORPORATE PROPERTIES OF AMÉRICA	CPA-115	115.0	10.31	5.21	1.272+j6.310	5.458+j24.761	11.61	5.78	1.171+j6.181	5.457+j24.756
COSMOPOLIS	CPL-115	115.0	15.09	9.59	0.842+j4.319	2.547+j11.702	17.17	10.71	0.755+j4.185	2.545+j11.689
CRUZ DE ATAQUE	CRQ-115	115.0	0.86	0.65	20.299+j74.352	60.153+j139.165	0.95	0.72	20.152+j74.022	60.135+j139.035
CRYOINFRA	CRY-115	115.0	nan	nan	nan+jnan	nan+jnan	18.04	15.09	0.805+j3.968	1.150+j6.459
CRYOINFRA SCMS	COF-115	115.0	33.94	15.07	0.371+j1.921	1.758+j9.144	45.29	17.56	0.252+j1.593	1.735+j9.093
CUADRO DE MANIOBRAS EÓLICA DE COAHUILA	MEH-230	230.0	5.68	7.26	3.216+j23.140	0.941+j8.232	6.40	8.16	2.936+j22.623	0.936+j8.127
CUADRO DE MANIOBRAS PRESA GRANDE	PGE-400	400.0	7.68	5.18	3.732+j29.840	16.367+j72.140	11.93	12.16	1.580+j21.235	1.521+j20.500
CUADRO DE MANIOBRAS PROMAX	MPX-115	115.0	26.09	13.69	0.474+j2.500	1.873+j9.274	30.31	15.35	0.392+j2.377	1.873+j9.274
CUADRO MANIOBRAS DE ABSORMEX	MBX-115	115.0	19.27	14.85	0.615+j3.390	1.263+j6.438	23.26	19.28	0.535+j3.094	0.891+j5.053
CUADRO MANIOBRAS EÓLICO SANTA CATARINA	MEO-230	230.0	14.37	11.79	1.493+j9.117	3.661+j14.927	16.83	13.44	1.165+j8.599	3.633+j14.866
CUATRO CIÉNEGAS	CCE-115	115.0	1.65	1.08	16.280+j36.726	37.037+j98.131	1.84	1.19	16.097+j36.362	37.034+j98.067
CUMBRES FRONTERA	CUF-230	230.0	11.93	12.25	2.061+j10.938	1.396+j10.440	15.40	15.04	1.300+j9.396	1.388+j10.242
CUMBRES FRONTERA	CUF-138	138.0	18.37	20.89	0.941+j4.234	0.330+j2.858	23.59	25.95	0.642+j3.659	0.319+j2.756
CUMBRES ORIENTE	CBO-115	115.0	13.68	11.62	0.729+j4.800	1.863+j7.215	15.39	12.95	0.654+j4.702	1.862+j7.214
CUMBRES PONIENTE	CMN-115	115.0	16.76	14.04	0.610+j3.914	1.431+j6.114	18.96	15.69	0.535+j3.814	1.431+j6.112
DE ACERO	DEA-230	230.0	10.08	9.11	2.271+j12.982	3.107+j17.141	11.80	10.44	1.829+j12.241	3.089+j16.957
DE ACERO CLAVOS MONTERREY	DCM-115	115.0	30.88	22.31	0.446+j2.103	0.906+j4.543	35.43	24.40	0.372+j2.028	0.957+j4.764
DE ACERO POTENCIA	DEP-400	400.0	19.21	11.49	2.113+j11.832	5.192+j35.995	24.42	13.32	1.232+j10.328	5.232+j36.088
DECOFINMEX	DFX-138	138.0	11.74	10.16	1.531+j6.610	1.883+j9.996	13.83	11.64	1.309+j6.201	1.876+j9.906
DENSO	DSO-115	115.0	18.16	12.44	0.747+j3.579	1.706+j8.542	21.12	14.05	0.649+j3.396	1.699+j8.513
DENSO GUADALUPE	DGP-115	115.0	14.96	8.88	0.839+j4.357	2.593+j13.308	17.00	9.91	0.752+j4.229	2.591+j13.283
DERRAMADERO	DMD-400	400.0	14.20	12.30	2.733+j16.027	4.017+j23.557	17.68	14.57	1.719+j14.268	3.937+j23.285
DERRAMADERO	DMD-115	115.0	21.26	21.80	0.458+j3.089	0.304+j2.887	24.81	24.96	0.357+j2.922	0.301+j2.879
DÍAZ ORDAZ	DOR-138	138.0	6.25	3.97	3.453+j12.271	8.705+j33.755	7.29	4.71	3.070+j11.626	7.645+j30.851
DINASTÍA	DNA-115	115.0	22.02	12.99	0.565+j2.962	1.592+j9.166	25.67	14.60	0.462+j2.807	1.593+j9.183
DIRONA	DIR-115	115.0	17.05	8.43	0.692+j3.831	3.155+j15.516	19.44	9.41	0.608+j3.708	3.140+j15.465
DIRONA Y FORJA	DFO-115	115.0	17.05	8.44	0.693+j3.832	3.164+j15.492	19.43	9.41	0.608+j3.709	3.150+j15.444
DOFASCO DE MÉXICO	DAO-115	115.0	17.76	8.64	0.668+j3.678	3.155+j15.257	20.27	9.64	0.585+j3.556	3.143+j15.216
DULCES NOMBRES AYD	RDN-115	115.0	7.28	4.67	1.721+j8.952	5.756+j23.770	8.44	5.27	1.568+j8.514	5.746+j23.604
DYNASOL	DYN-115	115.0	16.18	12.54	0.821+j4.021	1.733+j7.531	18.65	14.20	0.777+j3.838	1.726+j7.459
EARTH TECH	ETH-115	115.0	7.74	3.27	1.490+j8.444	9.201+j42.881	9.55	4.02	1.182+j7.552	7.754+j38.450
ÉBANO	EBN-115	115.0	4.41	3.12	4.196+j14.474	13.373+j31.078	4.90	3.45	4.146+j14.318	13.366+j31.012
EL ABRA	ABR-115	115.0	2.37	1.61	9.347+j26.347	17.225+j65.438	2.77	1.95	8.389+j24.999	13.673+j57.923
EL CANADÁ	ECN-115	115.0	18.30	9.93	0.600+j3.578	2.237+j12.620	20.92	11.13	0.514+j3.453	2.206+j12.518
EL COCO	COC-115	115.0	18.89	24.26	0.521+j3.477	0.344+j1.175	21.56	27.82	0.472+j3.354	0.381+j1.095
EL CUCHILLO	CCL-230	230.0	7.44	7.30	3.126+j17.577	2.391+j18.770	8.87	8.48	2.549+j16.266	2.358+j18.585
EL CUCHILLO	CCL-115	115.0	12.12	13.38	0.913+j5.403	0.399+j3.921	14.06	15.38	0.775+j5.137	0.385+j3.840



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
EL FRAILE	FAI-400	400.0	25.06	26.58	1.391+j9.112	0.593+j7.683	31.24	31.97	0.802+j8.093	0.585+j7.587
EL GUERREÑO	GRR-400	400.0	11.42	12.06	3.485+j19.918	2.519+j17.816	15.84	15.64	1.835+j15.933	2.578+j17.008
EL GUERREÑO	GRR-138	138.0	18.05	22.02	0.864+j4.328	0.124+j2.146	23.17	27.40	0.575+j3.738	0.129+j2.117
EL HIGO DOS	HGD-115	115.0	2.32	1.34	6.036+j28.012	20.888+j88.885	2.55	1.48	6.037+j28.016	20.873+j88.795
EL MIRADOR	MIO-115	115.0	27.96	20.35	0.481+j2.325	0.982+j4.948	32.89	23.39	0.387+j2.187	0.966+j4.833
EL PORVENIR	EPR-138	138.0	7.63	7.01	2.320+j10.180	1.945+j13.203	8.93	8.03	2.055+j9.601	1.924+j13.067
EL REGIONMONTANO	RGM-400	400.0	13.82	11.84	2.733+j16.484	4.116+j24.808	17.66	14.29	1.648+j14.293	4.096+j24.290
EL REGIONMONTANO	RGM-115	115.0	28.82	27.26	0.363+j2.275	0.337+j2.683	35.07	32.13	0.258+j2.066	0.334+j2.640
EL SARAPE	SRP-230	230.0	11.82	11.77	2.034+j11.053	1.955+j11.238	13.96	13.63	1.607+j10.340	1.945+j11.094
ELECTRICIDAD ÁGUILA ALTAMIRA	EAA-400	400.0	21.11	23.02	0.956+j10.896	0.986+j8.388	34.60	40.60	0.405+j7.331	0.460+j4.903
ELENA	ELN-115	115.0	14.40	13.29	0.808+j4.538	1.097+j5.715	17.36	16.47	0.690+j4.149	0.887+j4.859
EMERSON	EMR-138	138.0	10.48	8.05	1.791+j7.391	3.018+j14.276	13.27	9.87	1.337+j6.468	2.815+j13.277
EMERSON DOS	EMD-138	138.0	13.23	9.79	1.455+j5.845	2.867+j12.139	16.32	11.49	1.142+j5.247	2.810+j11.890
EMPALME	EML-138	138.0	7.20	5.03	2.918+j10.678	6.019+j24.860	8.53	5.82	2.556+j9.953	5.866+j24.070
ENERGÍA MK KF	KAF-115	115.0	19.09	15.31	0.621+j3.421	1.037+j6.006	22.92	19.36	0.548+j3.140	0.795+j4.924
ENERTEK	ETK-115	115.0	19.55	16.17	0.578+j3.347	1.035+j5.473	23.54	20.23	0.502+j3.062	0.821+j4.597
EÓLICA CIUDAD VICTORIA	ECV-115	115.0	12.25	12.77	0.733+j5.372	0.863+j4.684	13.57	14.17	0.699+j5.335	0.869+j4.634
EÓLICA GUADALUPE MANIOBRAS	EGM-400	400.0	8.44	8.41	3.048+j27.190	3.496+j27.491	9.76	9.58	2.457+j25.907	3.496+j27.380
EÓLICA LA MESA	ELM-115	115.0	6.17	5.90	1.904+j10.587	1.965+j12.102	6.80	6.46	1.877+j10.568	2.019+j12.282
EÓLICA TRES MESAS	EMS-115	115.0	4.94	3.34	0.228+j13.442	8.087+j32.150	5.53	3.73	0.195+j13.205	8.080+j31.784
ÉOLICA TRES MESAS FASE CUATRO	EMC-115	115.0	3.81	3.69	1.218+j17.380	1.003+j19.087	4.33	4.18	1.110+j16.832	1.000+j18.723
ESCOBEDO	ESC-400	400.0	25.05	25.69	2.118+j8.973	1.348+j8.440	35.21	33.42	1.164+j7.120	1.349+j8.260
ESCOBEDO	ESC-230	230.0	18.41	15.58	1.344+j7.088	2.348+j10.917	22.30	18.11	0.977+j6.478	2.347+j10.874
ESCOBEDO	ESC-115	115.0	24.60	20.08	0.459+j2.660	0.619+j4.488	28.60	22.73	0.361+j2.528	0.619+j4.497
ESCOBEDO - 115 B	ESC-115B	115.0	39.33	40.29	0.269+j1.666	0.132+j1.568	46.74	46.64	0.190+j1.551	0.132+j1.569
ESPERANZAS	ESP-115	115.0	2.45	1.75	6.825+j26.189	14.238+j58.266	2.83	1.96	6.330+j25.062	14.226+j58.081
ESTANZUELA (1)	ETZ-115	115.0	17.22	13.21	0.615+j3.807	1.350+j7.242	19.71	14.98	0.519+j3.669	1.326+j7.100
ESTANZUELA (2)	ETZ-115B	115.0	21.25	14.74	0.633+j3.060	1.396+j7.132	24.58	16.77	0.537+j2.922	1.372+j6.990
ESTRELLA	ELL-115	115.0	6.77	4.91	1.570+j9.676	4.419+j20.495	7.48	5.42	1.536+j9.641	4.419+j20.445
FALCÓN MEXICANO	FAM-138	138.0	5.05	2.99	4.490+j15.109	12.524+j46.758	6.26	5.22	3.542+j13.549	2.952+j22.298
FARO	FAR-115	115.0	18.20	11.86	0.714+j3.578	1.779+j9.338	20.90	13.35	0.619+j3.439	1.773+j9.263
FÉLIX U. GÓMEZ	FUG-115	115.0	27.66	20.41	0.477+j2.352	0.878+j4.884	32.43	23.28	0.383+j2.219	0.873+j4.832
FINSA	FIT-115	115.0	15.03	10.23	0.783+j4.347	2.254+j10.401	17.08	11.44	0.701+j4.218	2.249+j10.362
FINSA	FIS-115	115.0	16.03	13.70	0.677+j4.085	1.339+j6.130	18.78	15.68	0.552+j3.850	1.338+j6.065
FINSA GUADALUPE	FIG-115	115.0	17.75	12.77	0.659+j3.683	1.538+j7.968	19.83	14.14	0.607+j3.633	1.539+j7.976
FINSA LAREDO	FIL-138	138.0	7.20	7.48	3.162+j10.600	2.080+j9.642	9.14	9.09	2.373+j9.292	2.082+j9.540
FIRESTONE	FRS-115	115.0	14.45	7.87	0.913+j4.503	3.390+j15.756	16.42	8.76	0.812+j4.373	3.388+j15.751
FLEX AMÉRICAS	FME-115	115.0	14.98	10.58	0.548+j4.399	1.837+j9.829	17.61	12.62	0.481+j4.120	1.660+j8.962
FOMERREY	FOM-115	115.0	10.98	8.25	1.161+j5.932	2.938+j11.686	12.43	9.21	1.060+j5.778	2.939+j11.679
FREIGHTLINER	FRI-115	115.0	11.06	8.64	1.123+j5.897	2.611+j10.757	12.63	9.69	1.011+j5.696	2.607+j10.743



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
FRISA	FSA-115	115.0	19.56	17.63	0.480+j3.360	0.899+j4.411	21.91	19.66	0.430+j3.305	0.890+j4.379
FRONTERA	FRO-400	400.0	9.54	10.29	4.009+j23.872	2.025+j19.723	13.19	13.34	2.137+j19.147	2.073+j19.097
FRONTERA	FRO-230	230.0	10.81	12.92	1.863+j12.140	0.431+j6.493	13.50	15.73	1.234+j10.746	0.426+j6.354
FRONTERA	FRO-115	115.0	11.79	14.23	0.783+j5.575	0.129+j2.801	13.97	16.65	0.608+j5.191	0.126+j2.738
FUENTES	FTE-138	138.0	8.57	8.46	1.877+j9.111	1.671+j9.535	11.71	10.83	1.216+j7.383	1.641+j9.111
FUNDICIÓN	FDC-115	115.0	18.63	14.98	0.539+j3.524	1.227+j6.058	22.92	18.16	0.387+j3.163	1.155+j5.594
FUNDIDORA	FUN-115	115.0	25.81	19.44	0.499+j2.524	0.918+j5.024	30.37	23.06	0.400+j2.372	0.790+j4.628
G. E. PLASTIC	GEP-115	115.0	9.04	5.71	1.358+j7.216	4.212+j19.824	10.35	6.60	1.285+j6.935	3.970+j18.739
GALVASID	GLS-115	115.0	23.29	16.97	0.538+j2.799	1.167+j5.923	28.43	19.69	0.424+j2.534	1.151+j5.882
GARCIA	GAC-115	115.0	9.79	8.28	0.877+j6.725	2.291+j10.265	10.87	9.16	0.825+j6.667	2.286+j10.249
GENERACIÓN ELÉCTRICA HUINALA	GEH-115	115.0	7.82	7.88	0.766+j8.451	0.744+j8.285	8.61	8.78	0.733+j8.448	0.695+j7.972
GENERAL MOTOR	GMO-115	115.0	12.16	9.36	1.059+j5.355	2.240+j10.132	14.01	10.57	0.935+j5.128	2.240+j10.072
GIRASOLES	GRS-115	115.0	16.56	13.23	0.663+j3.955	1.460+j6.883	18.83	14.82	0.579+j3.836	1.460+j6.882
GOLLEK	GOK-115	115.0	4.63	3.47	2.186+j14.161	6.149+j28.166	5.36	4.30	1.941+j13.483	4.238+j23.305
GRANJAS	GRA-115	115.0	7.95	5.86	1.466+j8.219	3.518+j17.010	9.27	6.64	1.267+j7.772	3.513+j16.944
GUADALUPE	GDL-115	115.0	22.85	15.62	0.606+j2.842	1.372+j6.811	26.17	17.36	0.524+j2.742	1.394+j6.899
GUILLFORD MILLS	GUI-115	115.0	14.56	10.58	0.751+j4.497	1.878+j9.574	16.83	12.09	0.698+j4.282	1.831+j9.313
GÜEMEZ	GUE-400	400.0	10.56	10.73	2.635+j21.720	2.249+j20.805	12.35	12.37	2.169+j20.457	2.231+j20.525
GÜEMEZ	GUE-115	115.0	14.82	16.48	0.478+j4.456	0.223+j3.128	16.45	18.38	0.444+j4.417	0.217+j3.049
H.C. INDUSTRIAS	HCI-115	115.0	13.13	9.70	1.160+j4.921	2.360+j10.164	15.15	10.95	1.040+j4.707	2.358+j10.105
HIDALGO	HID-115	115.0	7.49	5.12	2.340+j8.547	8.095+j19.665	8.36	5.67	2.260+j8.435	8.095+j19.666
HIDALGO	HDG-115	115.0	15.70	13.03	0.735+j4.166	1.916+j6.645	18.13	14.81	0.684+j3.970	1.905+j6.550
HUASTECA	HST-115	115.0	3.68	2.24	4.680+j17.429	12.792+j51.187	4.05	2.47	4.659+j17.403	12.793+j51.141
HUEJUTLA II	HJD-115	115.0	3.97	3.27	3.967+j16.241	8.044+j26.337	4.38	3.61	3.947+j16.206	8.038+j26.238
HUERTAS	HUS-115	115.0	7.16	6.28	1.220+j9.194	2.876+j12.886	8.06	7.01	1.133+j8.989	2.875+j12.854
HUICHIHUAYAN	HUH-115	115.0	3.25	1.95	5.894+j19.532	15.162+j59.265	3.59	2.15	5.864+j19.471	15.172+j59.218
HUINALA	HUI-400	400.0	26.45	29.62	2.052+j8.486	0.553+j6.002	41.31	44.79	0.904+j6.082	0.387+j4.753
HUINALA	HUI-230	230.0	21.69	25.37	1.063+j6.031	0.288+j3.480	31.45	36.19	0.511+j4.616	0.229+j2.867
HUINALA	HUI-115	115.0	26.14	31.18	0.331+j2.518	0.072+j1.316	36.18	44.08	0.165+j2.012	0.046+j0.971
HUINALÁ (BUS B)	HUI-230B	230.0	21.85	25.33	1.047+j5.987	0.332+j3.587	31.69	36.17	0.500+j4.582	0.260+j2.945
HUINALÁ (BUS B)	HUI-115B	115.0	22.89	28.00	0.380+j2.876	0.071+j1.319	31.56	39.34	0.199+j2.306	0.046+j0.974
HUINALA DOS	HUO-400	400.0	26.31	29.45	2.050+j8.534	0.556+j6.041	41.11	44.68	0.900+j6.113	0.373+j4.735
HYLSA MANIOBRAS	HYM-400	400.0	23.67	23.11	2.488+j9.436	1.676+j10.390	33.53	30.08	1.481+j7.431	1.654+j10.064
HYLSA NORTE	EHN-230	230.0	13.92	11.03	1.759+j9.376	4.039+j16.582	17.18	12.95	1.293+j8.405	4.025+j16.402
IBERDROLA COGENERACIÓN ALTAMIRA	IBC-115	115.0	19.51	18.73	0.510+j3.365	0.450+j3.850	22.70	21.60	0.468+j3.183	0.448+j3.734
IMIS	IMI-115	115.0	9.20	7.05	1.548+j7.051	3.374+j13.418	10.44	7.90	1.423+j6.848	3.370+j13.352
IMSA	INM-115	115.0	10.55	11.20	0.936+j6.223	0.688+j5.196	12.60	13.11	0.738+j5.752	0.677+j5.098
IMSA PARTICULARES	IMO-115	115.0	18.42	12.35	0.709+j3.534	1.755+j8.756	21.07	13.82	0.619+j3.410	1.754+j8.751
INDUSTRIA VIDRIERA DE COAHUILA	IVC-138	138.0	7.52	6.43	2.302+j10.348	3.116+j15.715	9.98	7.90	1.667+j8.626	3.107+j15.356
INFONAVIT	INV-138	138.0	10.01	8.45	1.692+j7.774	2.275+j12.382	11.59	9.56	1.491+j7.415	2.271+j12.337



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
INFONAVIT	INF-115	115.0	15.68	13.24	0.723+j4.171	1.987+j6.375	18.11	15.05	0.672+j3.976	1.978+j6.290
INGENIO SAN MIGUEL EL NARANJO	MGN-115	115.0	2.56	2.61	8.756+j24.397	3.406+j24.570	3.10	3.40	7.235+j22.386	2.382+j17.562
INTERNACIONAL REGIOMONTANA DE ACERO	IRG-115	115.0	18.32	13.68	0.615+j3.572	1.453+j7.171	23.17	16.28	0.476+j3.116	1.443+j7.018
INTERPUERTO	IPR-115	115.0	13.29	6.92	0.823+j4.926	3.418+j18.490	15.11	7.70	0.716+j4.781	3.416+j18.486
IQUISA NORESTE	IQN-115	115.0	14.78	11.24	0.620+j4.449	1.933+j8.529	16.55	12.49	0.562+j4.377	1.928+j8.512
JABIL	JAB-138	138.0	10.60	8.22	1.774+j7.307	2.922+j13.836	13.39	10.05	1.332+j6.408	2.746+j12.941
JARACHINA	JRA-138	138.0	16.01	14.73	1.130+j4.847	1.171+j6.269	20.29	18.09	0.814+j4.241	1.062+j5.872
JARDÍN DOS	JAD-138	138.0	12.39	11.25	1.492+j6.255	1.512+j8.468	14.59	12.91	1.275+j5.870	1.505+j8.391
JERÓNIMO POTENCIA	JEP-400	400.0	19.29	18.91	2.460+j11.719	1.840+j12.646	25.09	23.15	1.463+j10.020	1.839+j12.569
JERÓNIMO POTENCIA	JEP-115	115.0	33.67	30.41	0.347+j1.941	0.253+j2.602	39.60	34.72	0.263+j1.825	0.254+j2.614
JERÓNIMO POTENCIA (BUS B)	JEP-115B	115.0	30.94	27.69	0.370+j2.114	0.232+j2.906	36.50	31.63	0.278+j1.981	0.233+j2.923
JIMÉNEZ	JIM-115	115.0	1.57	1.06	13.236+j40.246	41.588+j94.317	1.73	1.17	13.205+j40.213	41.579+j94.233
JOHNSON AND CONTROL	JCC-115	115.0	11.69	7.09	1.005+j5.588	3.495+j16.400	13.21	7.88	0.903+j5.455	3.494+j16.392
JOHNSON CONTROL	JHC-115	115.0	14.70	12.52	0.605+j4.476	1.520+j6.713	16.41	13.90	0.553+j4.417	1.515+j6.697
JOSEFA ZOZAYA	JZO-115	115.0	15.12	9.58	0.843+j4.310	2.402+j11.758	16.83	10.55	0.790+j4.266	2.420+j11.847
JUÁREZ	JUZ-138	138.0	17.38	17.31	1.022+j4.468	0.911+j4.648	22.26	21.18	0.719+j3.871	0.896+j4.525
JUÁREZ NORTE	JNO-115	115.0	13.67	10.81	0.789+j4.793	1.669+j8.549	17.11	12.99	0.602+j4.227	1.644+j8.204
KALOS GUADALUPE	KGP-115	115.0	16.13	12.20	0.590+j4.074	1.783+j7.912	19.76	14.37	0.440+j3.670	1.778+j7.700
KEMET	KMM-138	138.0	8.48	6.56	1.963+j9.189	3.354+j17.562	9.73	7.37	1.761+j8.831	3.350+j17.517
KEMET	KMT-115	115.0	20.03	14.50	0.637+j3.253	1.563+j6.941	24.74	16.91	0.509+j2.907	1.542+j6.889
KEMET VICTORIA	KWM-115	115.0	6.69	5.30	1.786+j9.764	5.312+j17.014	7.39	5.84	1.754+j9.732	5.321+j16.989
KIKAPU	KIK-115	115.0	2.26	1.55	7.297+j28.500	16.938+j67.610	2.59	1.74	6.808+j27.360	16.927+j67.425
KRAFT	KRA-115	115.0	31.22	22.65	0.442+j2.081	0.886+j4.456	35.78	24.72	0.368+j2.008	0.941+j4.690
KRAFT FOODS DE MÉXICO	KRF-115	115.0	13.83	8.62	0.875+j4.720	2.781+j13.236	15.69	9.60	0.775+j4.589	2.781+j13.237
LA ESFERA	LEF-115	115.0	13.38	9.53	1.032+j4.853	2.691+j10.655	15.19	10.71	0.936+j4.717	2.667+j10.513
LA FE	LAF-115	115.0	33.60	25.13	0.396+j1.936	0.713+j3.915	41.31	28.88	0.307+j1.741	0.734+j3.985
LA ROSITA	RSI-115	115.0	4.07	2.93	4.784+j15.578	14.164+j32.492	4.52	3.24	4.733+j15.441	14.178+j32.442
LA SILLA (1)	SLL-115	115.0	15.70	10.28	0.794+j4.154	2.325+j10.670	17.88	11.50	0.706+j4.022	2.323+j10.644
LA SILLA (2)	SLL-115B	115.0	15.66	10.25	0.797+j4.165	2.335+j10.715	17.83	11.46	0.709+j4.034	2.333+j10.689
LADRILLERA	LDA-115	115.0	3.78	2.68	3.429+j17.209	8.158+j38.511	4.21	2.96	3.329+j17.033	8.157+j38.486
LADRILLERA REVOLUCIÓN	LRR-115	115.0	22.36	16.55	0.594+j2.910	1.065+j6.007	26.00	19.05	0.497+j2.765	1.017+j5.800
LAGO	LAO-138	138.0	6.87	6.80	3.221+j11.135	2.520+j11.739	8.65	8.18	2.440+j9.830	2.523+j11.637
LAGUNA	LGA-115	115.0	3.33	2.67	7.817+j18.320	12.796+j32.230	3.82	3.09	7.269+j17.673	12.568+j30.132
LAGUNA DEL CONEJO	LDC-115	115.0	21.52	18.26	0.518+j3.041	0.844+j4.706	26.13	23.40	0.444+j2.759	0.616+j3.767
LAGUNAS DE MIRALTA	LGM-115	115.0	16.71	13.15	0.667+j3.918	1.713+j7.069	19.36	14.95	0.617+j3.722	1.706+j6.986
LAJAS	LAJ-400	400.0	11.69	10.66	2.643+j19.583	4.211+j25.173	14.04	12.40	1.879+j17.996	4.221+j24.998
LAJAS	LAJ-115	115.0	9.30	12.13	0.621+j7.113	0.091+j2.141	10.54	13.73	0.534+j6.908	0.089+j2.109
LAMOSA	LMS-115	115.0	14.83	11.01	0.689+j4.423	2.140+j8.902	18.00	12.88	0.540+j4.021	2.135+j8.690
LAMOSA LAREDO	LAL-138	138.0	7.11	7.19	3.189+j10.750	2.354+j10.604	9.00	8.70	2.399+j9.443	2.356+j10.498
LAMPAZOS	LAM-400	400.0	8.71	6.23	3.921+j26.229	12.902+j57.004	12.56	8.24	1.830+j20.138	11.992+j51.074



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
LAREDO PONIENTE	LAP-138	138.0	6.15	5.63	3.430+j12.497	3.031+j16.308	7.64	6.67	2.634+j11.172	3.022+j16.173
LAS BRISAS	BRI-115	115.0	17.22	14.79	0.868+j3.757	1.003+j5.680	20.08	16.88	0.749+j3.559	1.001+j5.630
LAS CRUCES	CRU-115	115.0	1.51	1.19	14.448+j41.459	26.806+j74.952	1.80	1.54	12.209+j38.609	19.863+j58.508
LAS GLORIAS	GLO-400	400.0	20.19	17.06	2.199+j11.223	2.593+j17.641	27.16	21.25	1.189+j9.276	2.536+j17.015
LAS GLORIAS	GLO-115	115.0	40.61	34.79	0.277+j1.611	0.271+j2.449	48.98	40.38	0.191+j1.479	0.269+j2.434
LAS LOMAS	LLM-138	138.0	11.97	10.00	1.645+j6.447	2.236+j10.476	16.04	13.60	1.130+j5.344	1.784+j8.409
LAS MESAS	MES-115	115.0	11.25	11.38	0.620+j5.867	0.370+j5.656	12.32	12.54	0.611+j5.895	0.364+j5.582
LAS NORIAS	NOI-115	115.0	0.95	0.59	23.973+j65.531	67.679+j188.277	1.05	0.65	23.950+j65.502	67.670+j188.192
LAS PALMAS	PLM-115	115.0	7.76	6.51	1.371+j8.443	2.840+j13.209	8.57	7.17	1.339+j8.412	2.854+j13.222
LAS TORRES	LTO-138	138.0	11.13	10.66	1.538+j6.989	1.347+j8.234	12.95	12.16	1.336+j6.636	1.335+j8.157
LAURO VILLAR	LVI-230	230.0	8.40	9.26	3.268+j15.475	1.641+j11.949	9.89	10.71	2.733+j14.511	1.609+j11.775
LAURO VILLAR	LVI-138	138.0	12.65	14.15	1.331+j6.154	0.513+j4.511	14.83	16.37	1.130+j5.801	0.492+j4.393
LECHUGAL	LEC-115	115.0	14.68	11.04	0.857+j4.441	2.060+j8.752	16.78	12.39	0.750+j4.287	2.061+j8.751
LEGO REAL ESTATE	LGR-115	115.0	12.54	6.26	1.060+j5.185	4.543+j20.726	14.19	6.96	0.959+j5.056	4.542+j20.720
LEONA	LEO-115	115.0	14.01	9.98	0.934+j4.646	2.144+j10.266	16.37	11.29	0.776+j4.394	2.145+j10.272
LERMAS	LER-115	115.0	19.68	14.18	0.501+j3.337	1.447+j7.161	22.12	15.57	0.435+j3.273	1.484+j7.329
LG	LGE-115	115.0	18.21	12.44	0.744+j3.568	1.717+j8.559	21.22	14.07	0.645+j3.381	1.709+j8.529
LIBERTAD (MONTEMORELOS)	LBT-115	115.0	7.49	7.90	0.988+j8.807	2.314+j7.235	8.45	8.85	0.901+j8.601	2.312+j7.203
LIBERTAD (VICTORIA)	LBT-115	115.0	7.38	5.96	1.528+j8.865	4.372+j14.876	8.15	6.57	1.495+j8.833	4.380+j14.852
LIBRAMIENTO	LBR-115	115.0	2.66	1.70	8.235+j23.576	17.815+j64.828	3.06	2.00	7.587+j22.656	15.286+j59.848
LINARES	LSN-115	115.0	3.82	2.68	2.935+j17.144	8.661+j38.571	4.33	3.10	2.744+j16.653	7.679+j36.026
LINDA VISTA	LDV-115	115.0	4.96	3.04	2.392+j13.161	8.063+j37.966	5.54	3.38	2.342+j12.971	8.012+j37.756
LLANO GRANDE	LLG-230	230.0	9.12	10.33	3.062+j14.242	1.296+j10.007	10.80	12.01	2.533+j13.283	1.278+j9.863
LLANO GRANDE	LLG-138	138.0	12.90	14.74	1.329+j6.029	0.404+j4.098	15.14	17.01	1.128+j5.677	0.398+j4.050
LLERA DE CANALES	LLC-400	400.0	8.83	6.25	2.862+j25.994	11.385+j57.668	10.37	7.16	2.415+j24.370	11.301+j56.771
LOMA LARGA	LOL-115	115.0	30.10	23.76	0.451+j2.159	0.618+j3.930	35.58	27.47	0.356+j2.021	0.603+j3.826
LOS NOVILLOS	LNV-230	230.0	5.52	5.92	4.085+j23.703	2.449+j19.106	7.52	7.80	2.588+j19.257	2.238+j17.082
LOS NOVILLOS	LNV-138	138.0	7.65	8.73	1.752+j10.273	0.671+j6.549	10.33	11.62	1.135+j8.408	0.609+j5.586
LUVATA	LUV-115	115.0	17.34	12.33	0.676+j3.770	1.629+j8.335	19.37	13.65	0.623+j3.719	1.630+j8.345
MABE	MAB-115	115.0	16.97	13.35	0.820+j3.826	1.543+j6.934	20.03	15.33	0.692+j3.579	1.536+j6.840
MAGNA FORMEX SALTILLO	MFS-115	115.0	26.12	25.58	0.450+j2.502	0.376+j2.694	34.26	34.59	0.293+j2.112	0.271+j2.063
MAGNA POWER TRAIN	MGP-115	115.0	23.92	23.87	0.502+j2.729	0.402+j2.781	30.68	31.61	0.347+j2.355	0.300+j2.159
MAGNÉTICOS DE MÉXICO	MME-138	138.0	7.10	7.54	3.112+j10.789	1.786+j9.127	9.00	9.17	2.327+j9.461	1.786+j9.026
MALE PISTONES	MPI-115	115.0	21.23	18.89	0.600+j3.069	0.786+j4.233	26.36	23.27	0.452+j2.734	0.727+j3.814
MANIOBRAS DULCES NOMBRES II	MDU-115	115.0	23.11	21.68	0.462+j2.835	0.350+j3.422	25.74	24.11	0.421+j2.806	0.344+j3.392
MANIOBRAS PARQUE EOLICO EL MEZQUITE	MMQ-230	230.0	6.90	6.21	3.029+j19.000	6.344+j24.991	7.82	6.96	2.734+j18.481	6.337+j24.902
MANIOBRAS RANCHO NORTE	MRN-400	400.0	7.89	5.64	3.905+j28.991	14.804+j63.171	10.71	8.12	2.158+j23.625	10.142+j45.932
MANIOBRAS TRACTEBEL ENERGÍA DE PANUCO	ENP-115	115.0	16.74	14.72	0.782+j3.889	0.942+j5.645	19.35	16.72	0.736+j3.701	0.945+j5.612
MANNESMANN SACH	MSC-115	115.0	20.93	18.45	0.609+j3.113	0.821+j4.392	25.94	22.66	0.460+j2.778	0.762+j3.973
MANTE	MAN-115	115.0	1.39	1.56	17.458+j44.620	4.910+j31.733	1.73	1.90	13.711+j39.895	4.807+j31.243



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
MANUEL	MUL-115	115.0	6.90	2.98	2.547+j9.275	12.098+j46.029	7.77	3.33	2.466+j9.067	11.821+j45.442
MATAMOROS	MTM-138	138.0	13.63	12.89	1.381+j5.681	1.270+j6.949	16.27	14.97	1.154+j5.263	1.261+j6.844
MATAMOROS	MTM-69	69.0	4.55	4.82	0.492+j8.751	0.147+j7.331	5.05	5.33	0.435+j8.664	0.147+j7.349
MATAMOROS POTENCIA	MMP-230	230.0	11.26	12.66	2.252+j11.571	1.205+j8.498	13.62	14.89	1.754+j10.578	1.203+j8.415
MATAMOROS POTENCIA	MMP-138	138.0	15.15	18.37	1.060+j5.150	0.280+j2.719	18.03	21.49	0.864+j4.784	0.275+j2.680
MATRIMAR	MTR-115	115.0	3.19	2.22	5.681+j19.995	15.877+j45.671	3.56	2.45	5.493+j19.755	15.865+j45.713
MAXITILE	MAX-138	138.0	6.33	6.02	3.299+j12.141	2.526+j14.397	7.90	7.18	2.505+j10.805	2.514+j14.252
MAYTAG	MYG-138	138.0	10.51	8.10	1.788+j7.370	2.992+j14.152	13.29	9.92	1.338+j6.455	2.799+j13.188
MESAS	MES-400	400.0	24.05	24.68	0.729+j9.574	0.507+j8.249	27.63	28.30	0.519+j9.178	0.488+j7.974
METALDYNE SINTERED COMPONENTS MÉXICO S. DE R.L DE C.V.	MST-115	115.0	22.48	22.66	0.546+j2.903	0.428+j2.866	28.36	29.54	0.393+j2.545	0.329+j2.254
METALSA	MSA-115	115.0	25.89	19.80	0.475+j2.521	0.913+j4.849	32.22	23.27	0.358+j2.238	0.896+j4.806
METRO CUAUHTÉMOC	MCU-115	115.0	19.97	13.55	0.646+j3.261	1.581+j7.895	22.98	15.25	0.553+j3.130	1.578+j7.859
METRO LINCOLN	MLI-115	115.0	15.96	7.19	0.798+j4.083	3.919+j19.004	18.60	8.04	0.671+j3.870	3.920+j19.012
MEXICHEM FLUOR	MEF-138	138.0	10.16	8.28	1.923+j7.601	2.916+j13.065	11.87	9.43	1.696+j7.183	2.907+j12.960
MÉXICO	MEX-138	138.0	14.44	13.24	1.266+j5.370	1.503+j6.966	18.21	15.95	0.954+j4.718	1.486+j6.781
MEZQUITAL	MZQ-115	115.0	13.95	8.96	0.861+j4.681	2.730+j12.431	15.85	10.00	0.780+j4.541	2.729+j12.415
MEZQUITAL PROVISIONAL	MZP-115	115.0	nan	nan	nan+jnan	nan+jnan	15.71	9.71	0.786+j4.583	2.859+j12.962
MICARE	MCR-138	138.0	9.01	9.48	1.826+j8.654	1.286+j7.460	12.50	12.41	1.178+j6.912	1.250+j6.990
MICARE DOS	MDS-138	138.0	9.63	10.85	1.365+j8.163	0.639+j5.475	14.10	15.13	0.670+j6.181	0.559+j4.849
MIGUEL ALEMÁN	MIG-138	138.0	5.14	3.02	4.460+j14.858	12.475+j46.650	6.16	4.47	3.750+j13.713	5.937+j29.888
MINA TAYAHUA	MTU-115	115.0	1.28	0.75	16.904+j48.921	43.123+j155.399	1.42	0.83	16.712+j48.638	43.111+j155.349
MINERA	MIE-115	115.0	4.16	4.69	2.757+j15.736	1.668+j10.451	4.95	5.49	2.278+j14.579	1.656+j10.267
MINERA AUTLÁN	MIA-230	230.0	6.62	4.71	3.148+j19.818	10.729+j43.560	7.49	5.26	2.984+j19.267	10.714+j43.407
MIRAMAR	MID-115	115.0	18.32	15.39	0.585+j3.576	1.005+j5.651	21.57	18.22	0.527+j3.345	0.923+j5.220
MIRAMAR DOS	MMD-230	230.0	15.39	16.45	0.896+j8.583	0.824+j7.463	17.93	18.99	0.788+j8.107	0.801+j7.261
MIRAVALLE	MAV-115	115.0	22.92	18.05	0.512+j2.851	1.376+j5.070	26.34	20.30	0.430+j2.739	1.377+j5.080
MISIONES	MSI-115	115.0	10.27	6.92	1.500+j6.286	4.315+j15.285	11.57	7.73	1.403+j6.152	4.291+j15.144
MITRAS	MIT-115B2	115.0	23.44	18.67	0.481+j2.791	1.072+j4.889	26.86	20.99	0.405+j2.688	1.072+j4.887
MODELO	MOD-115	115.0	20.80	13.02	0.603+j3.134	1.845+j8.724	23.84	14.57	0.522+j3.018	1.845+j8.723
MODINE	MNE-138	138.0	7.15	7.32	3.188+j10.676	2.274+j10.168	9.06	8.87	2.400+j9.370	2.276+j10.064
MOLANGO	MOL-115	115.0	1.56	1.10	12.689+j40.615	35.790+j88.418	1.72	1.22	12.669+j40.582	35.783+j88.317
MOLINO	MLN-115	115.0	2.75	1.52	4.653+j23.702	18.784+j80.970	3.02	1.68	4.671+j23.744	18.759+j80.856
MONCLOVA	MON-230	230.0	10.09	10.94	2.132+j12.981	1.260+j10.215	12.47	13.12	1.516+j11.617	1.232+j10.014
MONCLOVA	MON-115	115.0	11.65	13.79	0.825+j5.639	0.212+j3.096	14.03	16.37	0.626+j5.167	0.201+j2.998
MONTE KRISTAL	MKL-115	115.0	9.50	5.79	1.343+j6.855	4.345+j19.949	10.67	6.43	1.255+j6.728	4.343+j19.923
MONTEMORELOS	MTN-115	115.0	3.59	2.54	3.716+j18.103	9.029+j40.490	3.99	2.81	3.616+j17.927	9.027+j40.464
MONTERREY	MTY-115	115.0	39.58	17.16	0.326+j1.646	1.525+j8.115	54.88	20.17	0.206+j1.315	1.503+j8.064
MONTERREY POTENCIA SF6	MTP-400	400.0	25.58	27.10	2.252+j8.742	0.839+j7.549	37.75	37.19	1.205+j6.620	0.770+j7.030
MONTERREY POTENCIA SF6	MTP-115	115.0	35.73	35.03	0.318+j1.831	0.135+j1.975	56.77	50.32	0.197+j1.271	0.121+j1.785
MONTERREY POTENCIA SF6 (BUS B)	MTP-115B	115.0	40.70	39.69	0.317+j1.600	0.145+j1.761	56.87	51.24	0.198+j1.269	0.123+j1.710



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
MONTOI	MTI-115	115.0	18.50	9.16	0.639+j3.531	2.994+j14.262	21.14	10.22	0.556+j3.410	2.986+j14.233
MORELOS	MRL-115	115.0	8.73	6.51	1.322+j7.487	3.259+j15.036	9.90	7.30	1.193+j7.276	3.249+j14.947
MÚNICH	MUN-115	115.0	9.53	6.63	0.983+j6.895	3.128+j15.825	10.67	7.35	0.901+j6.786	3.129+j15.837
MUSEO	MSO-115	115.0	10.01	7.86	1.400+j6.480	3.164+j11.701	11.26	8.78	1.339+j6.347	3.204+j11.593
NARANJOS	NRJ-115	115.0	3.26	1.98	5.144+j19.696	22.689+j55.862	3.63	2.19	5.057+j19.446	22.673+j55.767
NARCISO MENDOZA	NMZ-138	138.0	6.25	5.68	3.439+j12.271	3.296+j16.302	7.77	6.73	2.648+j10.968	3.295+j16.188
NAVA	NAV-230	230.0	8.82	9.48	2.855+j14.783	1.914+j11.879	16.02	15.62	1.008+j9.060	1.688+j9.504
NAVA	NAV-138	138.0	8.87	10.08	1.603+j8.837	0.666+j5.747	12.65	13.80	0.896+j6.870	0.583+j5.095
NAVIDAD	NVD-115	115.0	1.70	1.79	12.053+j37.071	7.351+j32.917	2.10	2.13	9.709+j33.447	7.282+j32.489
NAVISTAR	NAS-115	115.0	14.37	9.12	0.829+j4.546	2.561+j12.338	16.26	10.15	0.748+j4.429	2.560+j12.336
NEMAK	NEK-115	115.0	15.70	12.78	0.599+j4.185	1.538+j6.965	17.57	14.21	0.544+j4.120	1.531+j6.941
NGM CERÁMICA	NGM-115	115.0	12.88	6.75	1.014+j5.055	4.094+j18.747	14.58	7.51	0.913+j4.925	4.093+j18.741
NOGALAR	NOG-115	115.0	37.24	33.66	0.371+j1.744	0.331+j2.335	44.24	38.67	0.283+j1.626	0.333+j2.345
NOKIA	NOK-138	138.0	14.59	10.68	1.279+j5.308	2.599+j11.270	18.25	12.65	0.964+j4.705	2.525+j10.973
NORTE	NRE-138	138.0	10.05	7.24	1.954+j7.682	3.959+j16.810	12.00	8.39	1.642+j7.118	3.832+j16.346
NUEVA CASTILLA	NUC-115	115.0	11.61	5.86	1.047+j5.622	4.566+j22.066	13.08	6.51	0.961+j5.499	4.550+j22.012
NUEVA ESCOBEDO	NUE-115	115.0	24.22	19.55	0.447+j2.704	0.713+j4.653	27.93	22.05	0.367+j2.590	0.713+j4.653
NUEVA ROSITA	NUR-230	230.0	5.44	6.01	4.902+j23.905	1.743+j17.617	7.42	7.74	3.207+j19.426	1.734+j17.084
NUEVA ROSITA	NUR-115	115.0	6.75	8.37	1.531+j9.711	0.242+j4.169	8.48	10.32	1.058+j8.545	0.231+j3.985
NUEVO LAREDO	NUL-138	138.0	7.33	7.65	3.126+j10.410	2.065+j9.344	9.32	9.30	2.336+j9.105	2.066+j9.240
NUEVO PROGRESO	NVP-138	138.0	9.28	6.98	2.202+j8.297	3.931+j16.777	11.72	8.73	1.719+j7.278	3.537+j14.933
NUEVO SANTANDER	NST-115	115.0	6.74	6.25	1.669+j9.708	2.110+j11.980	7.43	6.86	1.640+j9.685	2.147+j12.119
NUNCIOS	NUN-115	115.0	8.56	6.49	1.083+j7.676	3.050+j14.885	9.82	7.38	0.935+j7.376	2.999+j14.547
NUTEC FIBRATEC S.A. DE C.V.	NUF-115	115.0	17.89	14.59	0.794+j3.625	1.473+j6.069	21.32	16.90	0.663+j3.360	1.464+j5.946
OBISPADO	OBI-115	115.0	19.18	0.97	0.628+j3.405	45.131+j192.348	21.94	1.07	0.542+j3.284	45.130+j192.353
OBRA DE TOMA	ODT-115	115.0	1.75	1.19	12.878+j35.736	31.947+j85.737	1.92	1.31	12.849+j35.714	31.987+j85.880
OJO CALIENTE	OJC-138	138.0	6.55	6.13	3.243+j11.730	2.825+j14.447	8.18	7.30	2.456+j10.428	2.826+j14.337
OLIVO	OVO-115	115.0	9.12	7.89	1.090+j7.196	2.499+j10.409	10.09	8.72	1.057+j7.161	2.504+j10.374
ORIENTE	OTE-138	138.0	12.42	12.41	1.444+j6.253	1.021+j6.581	14.56	14.25	1.237+j5.891	1.012+j6.506
ORIÓN	ORN-115	115.0	23.87	13.14	0.510+j2.735	2.122+j9.368	27.63	14.70	0.422+j2.610	2.123+j9.385
ORIZATLAN	ORZ-138	138.0	11.94	9.61	1.528+j6.493	2.336+j11.395	15.16	11.72	1.124+j5.670	2.222+j10.770
OXFORD	OXF-115	115.0	14.86	11.12	0.762+j4.402	1.772+j8.813	17.99	13.33	0.601+j4.014	1.665+j8.166
OZULUAMA	OZL-115	115.0	3.29	2.16	5.289+j19.455	19.999+j48.281	3.66	2.39	5.229+j19.267	19.972+j48.153
P. IND. COLONIAL	PIC-138	138.0	10.54	8.11	1.778+j7.346	2.989+j14.169	13.37	9.96	1.322+j6.420	2.782+j13.155
P. IND. PUENTE	PIP-138	138.0	9.59	7.22	2.122+j8.035	3.990+j16.127	11.86	8.62	1.717+j7.187	3.855+j15.394
P.I. DEL NORTE	INO1-138	138.0	13.45	9.91	1.429+j5.750	2.830+j12.034	16.63	11.65	1.115+j5.152	2.768+j11.772
P.I. SANTA MARÍA	PSM-115	115.0	21.25	19.23	0.506+j3.084	0.695+j4.065	26.88	24.64	0.347+j2.695	0.588+j3.418
PANUCO	PAN-115	115.0	4.93	2.50	2.117+j13.300	11.552+j52.498	5.38	2.75	2.154+j13.394	11.515+j52.343
PARQUE DE INVESTIGACIONES E INNOVACIÓN TECNOLÓGICA	IIT-115	115.0	9.89	7.42	0.875+j6.653	2.644+j13.166	11.80	8.63	0.708+j6.148	2.619+j12.821
PARQUE EÓLICO VICENTE GUERRERO	VIG-115	115.0	6.97	7.53	1.451+j9.415	0.778+j7.362	7.69	8.38	1.420+j9.393	0.739+j7.123



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 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
PARQUE IND. ACUÑA	PIU-138	138.0	6.49	6.81	2.167+j12.075	1.428+j10.499	8.69	8.93	1.459+j9.985	1.301+j9.132
PARQUE INDL. ESTRELLA	EST-115	115.0	14.58	7.91	0.911+j4.463	3.380+j15.712	16.57	8.81	0.809+j4.333	3.379+j15.707
PARQUE INDUSTRIAL	PAI-138	138.0	13.14	11.36	1.356+j5.912	1.659+j8.869	16.80	13.95	0.972+j5.125	1.586+j8.394
PARQUE INDUSTRIAL AMISTAD-AEROPUERTO	PIA-115	115.0	10.44	7.30	1.108+j6.261	3.007+j14.266	12.14	8.33	0.959+j5.938	2.973+j13.963
PARQUE INDUSTRIAL APODACA TECHNOLOGY PARK	PQT-115	115.0	11.96	7.91	0.899+j5.478	2.994+j13.787	13.51	8.80	0.808+j5.345	2.990+j13.768
PARQUE INDUSTRIAL DEL NORTE	INO2-138	138.0	13.44	9.91	1.430+j5.752	2.831+j12.036	16.62	11.65	1.115+j5.153	2.769+j11.774
PARQUE INDUSTRIAL ESCOBEDO	PIE-115	115.0	17.89	14.26	0.589+j3.664	1.262+j6.427	20.40	15.99	0.506+j3.545	1.262+j6.424
PARQUE INDUSTRIAL LA SILLA	SIA-115	115.0	12.88	8.96	0.878+j5.080	2.598+j11.647	15.55	10.37	0.727+j4.640	2.587+j11.481
PARQUE INDUSTRIAL MONTERREY - APODACA	PMA-115	115.0	18.15	12.45	0.748+j3.581	1.699+j8.524	21.10	14.06	0.650+j3.401	1.693+j8.496
PARQUE INDUSTRIAL ORADEL	PIO-138	138.0	6.88	7.11	3.098+j11.164	1.835+j10.329	8.69	8.62	2.305+j9.819	1.818+j10.180
PARQUE INDUSTRIAL SALTILLO RAMOS ARIZPE	ISR1-115	115.0	21.50	20.10	0.587+j3.032	0.643+j3.690	26.80	25.27	0.437+j2.690	0.565+j3.180
PARQUE INDUSTRIAL SALTILLO RAMOS ARIZPE	ISR2-115	115.0	16.64	13.10	0.601+j3.945	1.565+j7.075	20.01	15.36	0.457+j3.622	1.534+j6.822
PEMEX	PEM-115	115.0	43.42	37.16	0.325+j1.494	0.388+j2.274	50.15	39.60	0.256+j1.434	0.461+j2.582
PEMEX CADEREYTA	PCD-230	230.0	9.39	9.01	2.485+j13.924	2.652+j15.745	12.05	10.98	1.753+j11.999	2.614+j15.437
PEMEX CRIOGÉNICA	PXC-138	138.0	7.45	5.02	2.250+j10.453	5.434+j25.719	9.04	6.66	1.805+j9.529	3.310+j19.875
PEMEX NARANJOS	PMX-115	115.0	3.13	1.91	5.375+j20.504	23.535+j57.784	3.49	2.11	5.288+j20.255	23.519+j57.689
PEMEX-REFINERÍA	PRF-115	115.0	7.98	4.01	1.442+j8.193	8.605+j31.956	9.94	5.86	1.121+j7.261	4.216+j22.296
PERFILES	PFS-115	115.0	25.40	19.29	0.484+j2.569	0.953+j5.011	31.50	22.62	0.367+j2.289	0.937+j4.968
PERIFERICO	PRO-115	115.0	10.51	16.73	0.821+j6.264	0.012+j-0.739	11.75	18.72	0.750+j6.172	0.012+j-0.739
PESQUERÍA	PQA-115	115.0	17.49	13.23	0.613+j3.747	1.421+j7.338	19.89	14.86	0.538+j3.632	1.412+j7.273
PETROCEL	GPT-115	115.0	14.54	11.38	0.923+j4.472	2.336+j8.098	17.26	14.20	0.829+j4.149	1.833+j6.773
PETROLERA	PER-138	138.0	13.79	12.59	1.258+j5.641	1.419+j7.385	16.99	14.88	0.958+j5.069	1.412+j7.295
PEÑOLES	PÑL-115	115.0	18.11	14.86	0.786+j3.581	1.438+j5.910	21.61	17.24	0.655+j3.316	1.428+j5.787
PHEPS DODGE	PHD-115	115.0	11.65	5.85	1.135+j5.583	4.865+j22.149	13.16	6.49	1.033+j5.453	4.864+j22.144
PIEDRAS NEGRAS	PNE-138	138.0	8.68	8.61	1.839+j8.990	1.506+j9.308	11.92	11.04	1.175+j7.258	1.479+j8.927
PIEDRAS NEGRAS POTENCIA	PNG-230	230.0	8.05	8.36	3.018+j16.227	2.257+j14.551	13.27	12.41	1.261+j10.932	2.173+j12.958
PIEDRAS NEGRAS POTENCIA	PNG-138	138.0	9.82	10.88	1.507+j7.975	0.670+j5.748	13.94	14.59	0.850+j6.231	0.641+j5.350
PLANTA	PTA-138	138.0	12.50	11.26	1.495+j6.198	1.576+j8.562	14.76	12.93	1.273+j5.801	1.569+j8.476
PLANTA BOMBEO DOS	PBD-115	115.0	11.33	9.97	1.021+j5.770	2.051+j8.020	13.07	11.32	0.888+j5.517	2.042+j7.952
PLANTA BOMBEO UNO	PBU-115	115.0	5.44	4.18	2.295+j11.998	8.042+j21.923	6.12	4.66	2.155+j11.739	8.029+j21.843
PLANTA DE AGUAS RESIDUALES NORTE	RNO-115	115.0	19.55	12.91	0.547+j3.352	1.553+j8.500	22.41	14.47	0.462+j3.226	1.548+j8.483
PLANTA DE BOMBEO 0	PB0-115	115.0	2.85	1.98	4.606+j22.849	19.474+j50.701	3.17	2.19	4.462+j22.594	19.462+j50.621
PLANTA DE BOMBEO LA SILLA	PBS-115	115.0	14.53	9.38	0.851+j4.491	2.506+j11.833	16.50	10.49	0.762+j4.361	2.496+j11.768
PLANTA DE BOMBEO SAN ROQUE DE AYD	PBR-115	115.0	14.14	9.10	0.874+j4.613	2.613+j12.233	16.04	10.16	0.787+j4.486	2.606+j12.186
PLANTA DE BOMBEO SANTA ROSA APODACA	PBA-115	115.0	12.64	8.45	0.839+j5.186	2.776+j12.785	14.30	9.42	0.748+j5.053	2.772+j12.767
PLANTA DUPONT	DUT-115	115.0	16.57	14.57	0.788+j3.928	0.942+j5.709	19.15	16.54	0.743+j3.741	0.945+j5.677
PLANTA EL SALTO	STO-115	115.0	2.36	2.08	9.781+j26.402	10.633+j38.316	2.96	3.07	7.561+j23.509	3.726+j21.907
PLANTA FALCÓN	PFA-115	115.0	4.07	4.90	3.372+j15.969	0.279+j8.151	4.72	5.58	2.790+j15.232	0.289+j8.358
PLAYA	PLY-115	115.0	7.88	5.13	1.186+j8.337	4.780+j21.500	9.15	5.97	1.063+j7.914	4.487+j20.332
PLAZA SF6	PZA-400	400.0	18.71	18.41	2.544+j12.076	1.712+j12.936	24.35	22.59	1.526+j10.322	1.693+j12.798



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
PLAZA SF6	PZA-115	115.0	36.58	29.14	0.374+j1.776	0.380+j3.193	43.90	33.91	0.281+j1.640	0.373+j3.118
POLARIS	POI-115	115.0	16.05	13.34	0.587+j4.094	1.259+j6.554	20.21	16.22	0.420+j3.588	1.234+j6.209
POLICYD	PLC-115	115.0	18.39	15.47	0.661+j3.549	1.153+j5.590	21.33	17.64	0.618+j3.368	1.145+j5.512
POLVORÍN	POL-115	115.0	16.67	13.85	0.712+j3.919	1.312+j6.333	20.66	17.38	0.578+j3.488	1.079+j5.482
POSCO DE MÉXICO	PCO-115	115.0	20.81	14.44	0.444+j3.160	1.364+j7.320	25.21	19.15	0.376+j2.872	0.886+j5.626
PRAX AIR	PAX-115	115.0	27.20	20.67	0.509+j2.387	0.856+j4.684	31.68	23.38	0.420+j2.267	0.856+j4.686
PRIMEX	PRX-115	115.0	19.90	15.84	0.576+j3.287	1.065+j5.841	24.10	20.85	0.496+j2.990	0.688+j4.438
PROEZA GREDE	PGR-115	115.0	19.63	15.70	0.591+j3.330	1.923+j5.639	22.43	17.63	0.511+j3.215	1.923+j5.639
PROLAMSA	POM-115	115.0	17.16	8.45	0.682+j3.808	3.148+j15.521	19.56	9.43	0.597+j3.685	3.132+j15.468
PROLEC	PLE-115	115.0	17.16	11.72	0.714+j3.802	2.016+j9.044	19.62	13.13	0.624+j3.669	2.014+j9.030
PROLEC PARTICULAR	PLP-115	115.0	23.67	17.38	0.527+j2.755	1.126+j5.744	28.97	20.20	0.412+j2.487	1.110+j5.702
PROLOGIS	POG-138	138.0	10.89	8.59	1.721+j7.108	2.732+j13.045	13.77	10.47	1.291+j6.233	2.581+j12.250
PROLOGIS-APODACA	PLG-115	115.0	19.84	14.40	0.609+j3.290	1.370+j7.016	22.87	16.23	0.523+j3.150	1.367+j6.990
PROPARK	PPK-115	115.0	6.15	3.85	2.031+j10.603	6.967+j29.342	7.07	4.33	1.878+j10.165	6.957+j29.176
PROPASA	PDP-115	115.0	19.93	14.51	0.640+j3.270	1.536+j6.903	24.62	16.93	0.512+j2.922	1.514+j6.851
PTA BOMBEO CUATRO	PBC-115	115.0	25.24	19.10	0.409+j2.598	0.922+j5.093	30.33	22.04	0.303+j2.389	0.919+j5.051
PTA DE TRATAMIENTO DE AGUAS RESIDUALES NORESTE	RNE-115	115.0	11.17	7.30	0.965+j5.864	3.272+j15.071	12.60	8.12	0.874+j5.731	3.268+j15.052
PTA. BOMBEO TRES	PBT-115	115.0	10.22	6.71	1.168+j6.393	4.601+j16.084	11.66	7.51	1.054+j6.172	4.599+j16.046
PUENTE INTERNACIONAL	PUI-138	138.0	7.79	6.85	2.045+j10.025	2.734+j14.193	10.42	8.50	1.379+j8.301	2.706+j13.784
PUENTES (1)	PTS-115B2	115.0	17.10	8.30	0.715+j3.817	3.287+j15.886	20.52	9.41	0.600+j3.508	3.264+j15.835
PUENTES (2)	PTS-115B1	115.0	15.28	10.23	0.779+j4.275	2.006+j10.589	19.17	12.04	0.663+j3.752	1.992+j10.398
PUERTO	PUO-115	115.0	24.52	17.44	0.330+j2.688	1.034+j5.947	29.94	22.30	0.270+j2.424	0.801+j4.934
PUERTO ALTAMIRA ELÉCTRICA	PAE-400	400.0	21.68	24.25	0.908+j10.616	0.778+j7.444	35.68	43.00	0.370+j7.110	0.338+j4.255
PUERTO ALTAMIRA ELÉCTRICA	PAE-115	115.0	26.07	18.79	0.293+j2.530	0.917+j5.467	32.03	24.28	0.233+j2.268	0.685+j4.462
QUÍMICA FLUOR	QFL-138	138.0	10.16	8.28	1.924+j7.600	2.916+j13.065	11.88	9.43	1.697+j7.182	2.907+j12.960
RAMOS ARIZPE	RRA-115	115.0	21.10	18.44	0.625+j3.083	0.870+j4.441	25.90	22.13	0.483+j2.778	0.836+j4.187
RAMOS ARIZPE POTENCIA	RAP-400	400.0	21.79	19.81	2.011+j10.406	2.542+j13.623	28.32	24.53	1.132+j8.899	2.261+j12.977
RAMOS ARIZPE POTENCIA	RAP-115	115.0	27.78	28.75	0.414+j2.354	0.234+j2.152	37.05	40.57	0.255+j1.955	0.118+j1.466
RASSINI	RNI-138	138.0	7.05	5.61	2.433+j11.042	4.093+j19.575	9.25	6.80	1.767+j9.313	4.066+j19.194
RAYÓN	RAY-115	115.0	2.44	1.60	7.909+j26.031	24.449+j65.497	2.70	1.77	7.840+j25.911	24.489+j65.387
REAL DE PALMAS	RDP-115	115.0	18.31	12.72	0.605+j3.575	1.639+j8.254	21.05	14.29	0.506+j3.433	1.638+j8.243
REBOMBEO I	RBU-115	115.0	2.80	1.98	7.928+j22.388	17.097+j50.417	3.08	2.17	7.899+j22.366	17.136+j50.558
REBOMBEO II	RBD-115	115.0	4.06	3.11	4.593+j15.683	9.097+j29.985	4.48	3.42	4.564+j15.661	9.135+j30.125
REFINERÍA MADERO	RMA-115	115.0	12.39	8.92	0.970+j5.271	2.417+j11.406	15.86	11.84	0.737+j4.547	1.730+j9.183
REGIDORES	RGS-115	115.0	9.02	6.57	1.213+j7.258	3.120+j15.354	10.54	7.44	1.028+j6.854	3.117+j15.295
REYNOSA	REY-138	138.0	14.95	13.61	1.184+j5.195	1.244+j6.892	18.60	16.26	0.879+j4.629	1.212+j6.704
REYNOSA CENTRO	RYC-138	138.0	11.21	9.24	1.607+j6.926	2.521+j11.482	13.55	10.72	1.309+j6.334	2.518+j11.391
RHEEM	RHM-138	138.0	7.15	7.32	3.188+j10.676	2.274+j10.168	9.06	8.87	2.400+j9.370	2.276+j10.064
RICSA	RIS-138	138.0	10.14	7.72	1.989+j7.598	3.676+j14.916	12.49	9.15	1.618+j6.827	3.583+j14.367
RIEL	RIE-115	115.0	28.00	19.52	0.478+j2.322	1.063+j5.361	32.40	21.76	0.395+j2.220	1.083+j5.457



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
RIO	RIO-115	115.0	25.19	17.06	0.531+j2.582	1.072+j6.319	29.39	19.39	0.438+j2.446	1.065+j6.244
RIO BRAVO	RIB-230	230.0	12.67	12.05	2.048+j10.281	2.331+j12.217	18.39	19.51	1.060+j7.871	0.726+j6.724
RIO BRAVO	RIB-138	138.0	15.15	14.89	1.230+j5.112	0.815+j5.615	22.06	24.35	0.678+j3.915	0.244+j3.063
RIO BRAVO III	RBT-400	400.0	10.78	12.87	2.944+j21.221	0.869+j12.621	16.04	19.51	1.331+j15.784	0.442+j8.300
RIO BRAVO IV	RBC-400	400.0	10.86	13.00	2.925+j21.071	0.814+j12.441	16.02	19.51	1.333+j15.804	0.442+j8.300
RIO BRAVO PONIENTE	RBP-138	138.0	11.44	9.00	1.578+j6.781	2.304+j12.542	15.05	11.74	1.077+j5.724	1.904+j10.760
RIO ESCONDIDO	REC-400	400.0	8.34	8.32	5.108+j27.209	3.469+j28.049	22.75	26.50	0.717+j11.142	0.454+j6.771
RIO ESCONDIDO	REC-230	230.0	10.45	12.63	2.392+j12.481	0.585+j6.218	22.63	27.58	0.519+j6.434	0.120+j2.772
RIO ESCONDIDO	REC-138	138.0	9.93	11.71	1.276+j7.925	0.293+j4.390	14.68	16.68	0.581+j5.940	0.209+j3.753
RIO SALADO	SDO-138	138.0	3.59	2.46	6.078+j21.362	13.668+j51.023	4.21	3.68	5.345+j20.127	5.227+j29.431
RÍO VERDE	RVE-115	115.0	2.21	1.38	8.799+j28.679	26.925+j80.050	2.45	1.52	8.730+j28.564	26.965+j79.939
ROCKWELL	ROW-115	115.0	16.95	12.00	0.692+j3.856	1.683+j8.600	18.92	13.28	0.640+j3.807	1.684+j8.608
SABINAS	SAB-115	115.0	4.55	3.72	3.003+j14.291	5.351+j23.711	5.55	4.34	2.416+j12.945	5.340+j23.526
SABINAS HIDALGO	SAH-115	115.0	1.94	2.05	10.490+j32.656	2.789+j29.151	2.14	2.27	10.363+j32.494	2.714+j28.616
SALITRILLO	SLT-115	115.0	4.28	3.54	2.839+j15.234	8.291+j24.122	4.78	3.92	2.751+j15.029	8.290+j24.090
SALITRILLOS	SLT-138	138.0	5.68	7.02	1.880+j13.900	0.976+j6.026	6.51	7.98	1.627+j13.367	0.990+j5.996
SALTILLO	SAL-230	230.0	12.28	13.45	1.932+j10.643	0.917+j7.997	14.48	15.60	1.525+j9.971	0.912+j7.891
SALTILLO	SAL-115	115.0	23.35	25.38	0.577+j2.785	0.222+j2.169	27.80	29.69	0.461+j2.586	0.220+j2.125
SAN AGUSTÍN	AUS-115	115.0	26.29	18.82	0.498+j2.476	1.003+j5.444	30.77	21.49	0.404+j2.339	0.994+j5.361
SAN BARTOLO	SBT-115	115.0	1.11	0.89	14.187+j58.087	41.402+j97.004	1.23	0.98	14.043+j57.750	41.384+j96.874
SAN BERNABÉ	BER-115	115.0	15.84	10.78	0.761+j4.122	2.125+j9.872	17.92	12.01	0.684+j4.017	2.125+j9.871
SAN CARLOS POTENCIA	SCP-400	400.0	8.25	7.39	3.118+j27.816	5.656+j37.474	9.53	8.41	2.532+j26.542	5.576+j37.022
SAN CRISTOBAL	CRB-138	138.0	10.16	7.56	1.710+j7.656	3.350+j15.650	12.42	9.47	1.340+j6.926	2.558+j13.479
SAN FERNANDO	FDO-115	115.0	0.82	0.49	28.703+j75.547	78.877+j230.199	0.90	0.54	28.685+j75.520	78.867+j230.114
SAN JORGE	JOR-115	115.0	18.19	9.67	0.710+j3.580	2.441+j13.078	21.21	10.84	0.592+j3.393	2.442+j13.095
SAN JUAN	JAN-115	115.0	6.16	4.05	2.094+j10.571	6.871+j26.780	7.17	4.60	1.903+j10.008	6.845+j26.433
SAN MARCOS	MCO-115	115.0	7.44	4.96	1.605+j8.784	4.904+j21.734	8.76	5.68	1.415+j8.220	4.878+j21.387
SAN MARTIN	SMA-115	115.0	11.26	7.61	0.921+j5.822	2.358+j14.204	12.67	8.45	0.838+j5.705	2.358+j14.201
SAN NICOLÁS	NIC-400	400.0	23.38	23.18	2.359+j9.591	1.610+j10.053	32.60	29.82	1.375+j7.669	1.611+j9.856
SAN NICOLÁS	NIC-115	115.0	33.17	29.87	0.347+j1.972	0.212+j2.667	39.20	34.21	0.262+j1.845	0.213+j2.676
SAN NICOLÁS (BUS B)	NIC-115B	115.0	25.78	25.34	0.375+j2.548	0.212+j2.708	29.75	28.70	0.293+j2.438	0.214+j2.719
SAN ROBERTO	RBO-115	115.0	0.89	0.95	33.810+j66.626	20.637+j56.580	1.06	1.11	30.062+j62.172	20.533+j56.089
SAN ROQUE	ROQ-115B	115.0	18.46	12.51	0.673+j3.533	1.839+j8.535	21.10	14.03	0.589+j3.410	1.837+j8.510
SANDOVAL	SDV-138	138.0	8.36	7.35	2.471+j9.199	3.036+j13.318	9.83	8.44	2.183+j8.645	3.011+j13.129
SANTA AMALIA TAMAULIPAS	AAT-115	115.0	19.98	19.13	0.491+j3.287	0.446+j3.788	23.30	22.11	0.448+j3.102	0.441+j3.666
SANTA CATARINA	CAT-115	115.0	11.29	8.48	1.114+j5.775	2.870+j11.374	12.74	9.45	1.023+j5.642	2.872+j11.366
SANTA CRUZ	STZ-115	115.0	20.88	15.46	0.544+j3.133	1.246+j6.404	23.49	17.16	0.486+j3.071	1.251+j6.431
SANTA ELENA	STE-115	115.0	10.55	6.62	0.955+j6.221	3.765+j17.133	11.90	7.36	0.857+j6.080	3.763+j17.120
SANTANDER	SNT-138	138.0	16.01	15.56	1.056+j4.864	0.875+j5.438	20.16	18.82	0.751+j4.283	0.846+j5.280
SANTO DOMINGO	DON-400	400.0	24.14	24.10	2.446+j9.251	1.415+j9.573	34.54	31.77	1.427+j7.216	1.385+j9.203



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
SANTO DOMINGO	DON-115	115.0	41.38	42.41	0.335+j1.569	0.114+j1.497	49.86	49.58	0.245+j1.444	0.113+j1.493
SANTO DOMINGO VIEJO PROVISIONAL	DVP-115	115.0	22.25	16.47	0.577+j2.927	1.370+j5.973	27.82	19.36	0.451+j2.587	1.349+j5.922
SELLO ROJO	SER-115	115.0	4.33	3.15	2.376+j15.161	7.098+j31.720	4.99	3.87	2.132+j14.484	5.193+j26.876
SENDERO NACIONAL	SEN-138	138.0	11.16	9.37	1.621+j6.951	2.139+j11.251	13.09	10.69	1.399+j6.546	2.132+j11.165
SERVER	SVR-115	115.0	7.52	5.57	1.721+j8.660	4.702+j17.489	8.50	6.24	1.589+j8.441	4.689+j17.372
SIDERÚRGICA	SIG-138	138.0	12.28	10.94	1.474+j6.318	1.661+j8.934	14.51	12.57	1.252+j5.909	1.654+j8.845
SIDERÚRGICA DEL GOLFO S.A.	SGA-230	230.0	9.44	7.80	2.485+j13.844	4.787+j22.758	12.66	10.84	1.488+j11.443	3.182+j17.263
SIECOR	SIE-138	138.0	13.72	10.09	1.390+j5.637	2.774+j11.858	17.02	11.88	1.075+j5.037	2.709+j11.585
SINÁÍ	SIN-138	138.0	12.45	10.02	1.420+j6.238	2.251+j10.918	15.42	12.35	1.080+j5.579	1.878+j9.823
SOLIDARIDAD	SRD-115	115.0	15.11	10.19	0.785+j4.322	2.282+j10.530	17.09	11.34	0.708+j4.215	2.282+j10.529
SORIANA CEDIS	SOC-115	115.0	13.73	7.79	0.947+j4.741	3.347+j15.551	15.58	8.67	0.846+j4.611	3.346+j15.548
SOTO LA MARINA	SOT-115	115.0	1.05	0.70	20.749+j59.892	58.815+j145.537	1.15	0.77	20.721+j59.871	58.856+j145.681
SPARTECH	SEH-115	115.0	14.50	10.75	0.783+j4.512	1.862+j9.208	17.51	12.84	0.622+j4.124	1.755+j8.562
STIVA	STV-115	115.0	16.35	12.13	0.697+j4.001	1.804+j8.104	20.31	14.33	0.545+j3.554	1.793+j7.923
TAMALIN	TLN-115	115.0	2.99	1.87	5.826+j21.449	23.041+j57.671	3.32	2.07	5.755+j21.239	23.021+j57.567
TAMAULIPAS	TAM-115	115.0	14.16	10.77	0.873+j4.607	2.298+j8.885	16.73	12.64	0.788+j4.295	2.211+j8.372
TAMAZUNCHALE 115	TZE-115	115.0	6.79	5.23	1.823+j9.600	3.783+j18.158	7.45	5.75	1.814+j9.627	3.777+j18.083
TAMAZUNCHALE 400	TMH-400	400.0	23.81	24.62	0.734+j9.672	0.438+j8.104	27.31	28.21	0.530+j9.288	0.418+j7.817
TAMBACA	TBC-115	115.0	3.39	2.33	5.416+j18.845	16.597+j43.496	3.75	2.57	5.350+j18.720	16.637+j43.387
TAMOS	TMO-400	400.0	17.11	14.58	1.323+j13.434	4.128+j20.397	23.20	19.27	0.822+j10.917	3.562+j17.620
TAMOS	TMO-115	115.0	20.34	18.29	0.490+j3.227	0.757+j4.355	23.81	21.31	0.441+j3.036	0.706+j4.145
TAMPICO	TPC-230	230.0	15.19	15.21	1.011+j8.684	1.403+j8.998	17.87	17.60	0.873+j8.129	1.387+j8.822
TAMPICO	TPC-115	115.0	25.57	27.54	0.382+j2.568	0.261+j2.102	30.48	32.40	0.333+j2.373	0.255+j2.033
TAMPIQUITO	TPQ-115	115.0	24.05	15.98	0.479+j2.719	1.270+j6.834	27.81	17.95	0.392+j2.597	1.270+j6.838
TANCOL	TCL-115	115.0	16.45	14.09	0.677+j3.979	1.858+j5.887	19.05	16.04	0.626+j3.783	1.849+j5.806
TECHNOCAST	THC-115	115.0	14.01	10.13	0.780+j4.674	2.063+j9.990	16.90	12.09	0.619+j4.277	1.946+j9.302
TECNOLÓGICO POTENCIA SF6	TEC-400	400.0	18.20	17.51	2.655+j12.406	1.879+j14.163	23.68	21.49	1.612+j10.604	1.844+j13.925
TECNOLÓGICO POTENCIA SF6	TEC-115	115.0	39.77	37.01	0.352+j1.632	0.211+j2.045	48.25	44.41	0.257+j1.492	0.187+j1.904
TEKSID	TKS-115	115.0	8.60	7.84	1.138+j7.636	1.774+j9.851	9.98	8.93	0.962+j7.253	1.771+j9.789
TELEFLEX	TLX-138	138.0	6.92	6.74	2.820+j11.170	2.093+j12.299	8.71	8.09	2.044+j9.855	2.095+j12.193
TEMPOAL II	TED-115	115.0	2.45	1.52	6.026+j26.419	17.954+j74.555	2.70	1.68	6.014+j26.398	17.946+j74.473
TERNIUM MANIOBRAS	TNM-400	400.0	11.68	8.68	2.698+j19.590	7.793+j39.685	15.74	11.80	1.382+j16.075	5.979+j31.995
TEXTILERAS	TXE-115	115.0	15.63	11.66	0.693+j4.191	1.650+j8.475	18.14	13.38	0.639+j3.976	1.604+j8.214
TIERRA NUEVA	TNA-115	115.0	5.95	4.41	3.475+j10.596	7.360+j21.661	6.58	4.87	3.441+j10.558	7.353+j21.581
TOPO CHICO	THO-115	115.0	20.78	15.96	0.608+j3.137	1.030+j6.007	23.90	17.95	0.522+j3.011	1.030+j6.009
TOSHIBA	TOS-115	115.0	11.65	5.85	1.135+j5.583	4.865+j22.149	13.16	6.49	1.033+j5.453	4.864+j22.144
TRANE	TNE-115	115.0	16.35	12.13	0.697+j4.001	1.804+j8.104	20.31	14.33	0.545+j3.554	1.793+j7.923
TRES MESAS MANIOBRAS	TMS-400	400.0	8.62	6.28	2.815+j26.652	11.851+j55.700	10.05	7.16	2.384+j25.176	11.800+j55.055
TRIARA II	TII-115	115.0	18.74	13.62	0.686+j3.476	1.366+j7.422	21.64	15.36	0.597+j3.322	1.363+j7.396
TRICO COMPTS.	TCO-138	138.0	11.51	9.87	1.548+j6.749	1.964+j10.409	13.52	11.28	1.327+j6.343	1.956+j10.323



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
TUBACERO MONTERREY	TBM-115	115.0	20.97	15.44	0.609+j3.107	1.440+j6.410	26.05	18.09	0.482+j2.762	1.419+j6.358
UCAR	UCA-230	230.0	14.27	12.04	1.697+j9.149	3.395+j14.103	17.88	14.41	1.209+j8.080	3.359+j13.739
UNIDAD DEPORTIVA	UDP-138	138.0	6.75	6.61	3.288+j11.335	3.226+j12.175	8.50	7.94	2.496+j10.009	3.221+j12.050
UNIVERSIDAD	UNI-115	115.0	15.83	5.88	0.829+j4.113	5.207+j24.936	18.68	6.58	0.676+j3.851	5.208+j24.944
UNIVERSIDAD SACH	UNT-115	115.0	15.66	12.07	0.741+j4.173	1.621+j7.922	18.85	14.38	0.636+j3.822	1.488+j7.395
VALADECES	VDL-138	138.0	6.55	4.14	3.333+j11.702	8.394+j32.383	7.70	5.08	2.915+j11.006	6.832+j28.197
VALLE	VLL-115	115.0	22.61	15.07	0.525+j2.889	1.346+j7.227	26.11	16.92	0.436+j2.763	1.346+j7.232
VALLE ALTO	VAL-115	115.0	12.10	10.22	1.073+j5.383	1.980+j8.326	13.67	11.47	1.010+j5.245	2.023+j8.208
VALLE DEL ROBLE	VRO-115	115.0	9.25	6.24	1.222+j7.072	3.718+j17.197	10.74	7.14	1.081+j6.715	3.641+j16.731
VALLE HERMOSO	VHE-138	138.0	3.12	2.69	8.099+j24.201	9.350+j36.817	3.54	3.04	7.678+j23.518	9.195+j36.027
VALLE ORIENTE	VOT-115	115.0	35.56	27.89	0.390+j1.826	0.435+j3.391	42.59	32.38	0.297+j1.689	0.428+j3.314
VALLE PONIENTE	VAP-115	115.0	14.98	11.49	0.849+j4.351	1.591+j8.317	17.37	12.97	0.715+j4.144	1.592+j8.328
VALLE SOLEADO DEFINITIVO	VSL-115	115.0	20.75	13.46	0.647+j3.134	1.675+j8.225	23.30	14.71	0.584+j3.080	1.726+j8.449
VALLE SUR	VSR-138	138.0	3.58	3.41	7.004+j21.140	6.306+j24.973	4.08	3.88	6.590+j20.453	6.151+j24.182
VALLES	VES-115	115.0	12.19	10.23	1.052+j5.343	1.961+j8.386	13.76	11.47	0.994+j5.213	2.000+j8.289
VENTIKA MANIOBRAS	VKM-230	230.0	6.72	7.22	3.319+j19.481	2.435+j15.559	7.66	8.16	2.952+j18.847	2.428+j15.440
VERDE CO.	VEC-138	138.0	9.55	7.11	2.129+j8.063	4.077+j16.539	11.85	8.56	1.716+j7.195	3.893+j15.592
VICTORIA	VRA-115	115.0	7.42	6.00	1.526+j8.813	3.892+j14.816	8.20	6.62	1.494+j8.781	3.905+j14.806
VIDRIERA MONTERREY	VMO-115	115.0	23.15	16.66	0.557+j2.813	1.176+j6.114	26.82	18.83	0.464+j2.683	1.174+j6.084
VILLA DE CASAS	VDC-115	115.0	2.26	1.55	10.458+j27.443	23.197+j65.902	2.49	1.70	10.429+j27.421	23.237+j66.044
VILLA DE GARCIA	VDG-400	400.0	27.13	28.27	1.823+j8.314	1.254+j7.465	37.18	36.08	0.945+j6.767	1.254+j7.395
VILLA DE GARCIA	VDG-230	230.0	23.11	26.92	0.924+j5.671	0.288+j3.332	28.09	31.91	0.602+j5.164	0.288+j3.341
VILLA DE GARCIA	VDG-115	115.0	26.35	53.23	0.420+j2.484	0.104+j-1.357	30.14	61.95	0.354+j2.398	0.105+j-1.364
VILLA DE JUÁREZ DOS	VJD-115	115.0	10.55	7.29	1.084+j6.198	3.086+j14.412	12.80	8.50	0.894+j5.637	3.060+j14.066
VILLA DE SANTIAGO	VDS-115	115.0	9.10	5.85	1.705+j7.097	5.443+j18.674	10.22	6.52	1.607+j6.965	5.419+j18.532
VILLA FLORIDA	VLV-138	138.0	15.21	13.91	1.123+j5.117	1.169+j6.704	19.06	16.76	0.813+j4.526	1.113+j6.464
VISTEON	VIS-115	115.0	16.16	11.20	0.721+j4.045	1.950+j9.370	18.41	12.55	0.639+j3.916	1.945+j9.332
WHIRLPOOL	WHI-115	115.0	14.15	10.39	0.804+j4.622	1.952+j9.603	17.05	12.38	0.643+j4.234	1.845+j8.957
WHIRLPOOL APODACA	WHA-115	115.0	24.95	18.82	0.492+j2.616	0.992+j5.169	30.83	22.02	0.376+j2.339	0.976+j5.127
XICOTENCATL II	XID-115	115.0	1.73	1.09	12.112+j36.406	34.699+j99.350	1.94	1.24	11.652+j35.769	32.858+j96.013
XOCHIPILLI	XOC-115	115.0	9.11	7.77	1.224+j7.182	2.072+j10.924	10.79	8.93	1.015+j6.690	2.065+j10.841
YESOS INDUSTRIALES DEL NORTE	YIN-115	115.0	27.20	10.00	0.482+j2.393	5.607+j14.010	31.57	11.15	0.402+j2.278	5.608+j14.011
ZACUALTIPÁN	ZAC-115	115.0	1.12	0.74	18.038+j56.413	50.469+j143.522	1.23	0.81	18.018+j56.381	50.463+j143.421
ZAPALINAME	ZPL-115	115.0	11.42	8.84	1.137+j5.703	2.179+j10.704	13.06	9.94	1.013+j5.500	2.175+j10.638
ZINC NACIONAL	ZNA-115	115.0	25.23	13.24	0.490+j2.585	1.944+j9.590	29.26	14.83	0.408+j2.463	1.944+j9.590

Gerencia de Control Regional Baja California

Sistema Interconectado Baja California



Regresar a mapa del SEN



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
ACUEDUCTO	ACU-115	115.0	3.51	2.66	3.059+j18.686	10.456+j35.807	4.16	3.06	2.746+j17.352	10.437+j35.128
AEROPUERTO DOS	APD-230	230.0	13.45	10.80	1.186+j9.800	3.563+j16.725	15.02	11.99	1.159+j9.654	3.594+j16.686
AGUAS DE ENSENADA	AUE-115	115.0	8.30	8.50	1.404+j7.876	1.408+j7.376	10.49	10.55	1.094+j6.874	1.344+j6.802
BAJA RECYCLING	B.REC	69.0	14.40	13.19	0.404+j2.738	0.643+j3.470	16.50	14.91	0.373+j2.630	0.643+j3.462
BAJÍO	BAJ-69	69.0	6.23	2.16	2.072+j6.054	10.722+j41.307	6.97	2.38	2.039+j5.950	10.719+j41.282
CACHANILLA	KCH-161	161.0	18.71	14.90	0.547+j4.937	1.795+j8.575	21.40	16.92	0.505+j4.751	1.761+j8.390
CÁRDENAS	CNA-69	69.0	14.36	9.99	0.536+j2.722	1.288+j6.291	16.88	11.41	0.481+j2.551	1.283+j6.223
CARRANZA	CNZ-161	161.0	18.38	15.48	0.557+j5.026	1.590+j7.710	20.68	17.36	0.533+j4.917	1.573+j7.600
CAÑÓN	KON-115	115.0	3.26	2.29	5.122+j19.704	10.708+j45.249	3.71	2.56	4.877+j19.063	10.663+j44.914
CEMENTOS	CEC-115	115.0	7.93	7.19	1.506+j8.238	5.196+j10.063	9.93	8.72	1.200+j7.260	5.103+j9.526
CENTENARIO	CNT-230	230.0	20.37	15.83	0.715+j6.478	2.671+j11.803	23.67	18.27	0.647+j6.137	2.630+j11.357
CENTINELA	CTA-69	69.0	2.61	3.04	3.725+j14.793	11.348+j4.905	2.88	3.35	3.713+j14.759	11.347+j4.888
CENTRO	CRO-230	230.0	19.93	15.95	0.734+j6.622	1.794+j11.444	23.30	18.52	0.655+j6.236	1.753+j10.948
CENTRO	CRO-161	161.0	23.00	21.29	0.434+j4.018	0.704+j4.934	26.59	24.49	0.390+j3.825	0.681+j4.766
CERRO PRIETO CUATRO	CPC-161	161.0	14.87	14.75	0.646+j6.216	0.802+j6.326	16.45	16.31	0.640+j6.184	0.804+j6.298
CERRO PRIETO DOS	CPD-230	230.0	24.42	23.14	0.581+j5.408	0.933+j6.214	28.22	27.17	0.529+j5.149	0.826+j5.674
CERRO PRIETO TRES	CPT-230	230.0	24.11	22.38	0.610+j5.474	1.074+j6.642	28.19	27.19	0.543+j5.153	0.819+j5.654
CERRO PRIETO UNO	CPU-161	161.0	14.10	12.73	0.747+j6.550	1.350+j8.596	15.65	14.13	0.736+j6.493	1.338+j8.521
CESPT	CPT-69	69.0	13.75	9.37	0.461+j2.861	1.383+j6.819	15.86	10.59	0.421+j2.731	1.376+j6.765
CETYS	CTY-230	230.0	13.56	11.25	1.130+j9.724	2.956+j15.511	15.14	12.48	1.104+j9.585	2.996+j15.500
CETYS	CTY-161	161.0	21.48	19.67	0.481+j4.300	0.865+j5.415	24.38	22.28	0.453+j4.169	0.842+j5.289
CHAPULTEPEC	CHQ-230	230.0	11.54	8.06	1.425+j11.420	6.381+j25.635	12.84	8.96	1.396+j11.291	6.343+j25.362
CICLO COMBINADO MEXICALI	CCM-230	230.0	28.31	23.01	0.462+j4.667	1.208+j7.762	36.81	37.18	0.329+j3.955	0.335+j3.802
CIPRÉS	CIP-230	230.0	6.03	6.02	3.612+j21.724	2.577+j22.312	7.57	7.43	2.787+j19.090	2.280+j20.647
CIPRÉS	CIP-115	115.0	9.30	10.74	1.228+j7.031	0.405+j4.337	12.02	13.88	0.916+j6.007	0.320+j3.701
COLONET	COE-115	115.0	2.24	1.43	8.474+j28.468	19.379+j77.226	2.52	1.60	8.213+j27.844	19.333+j76.888
COMISIÓN ESTATAL DE SERVICIOS PÚBLICOS DE TIJUANA	CES-69	69.0	18.18	14.39	0.338+j2.165	0.722+j3.864	21.81	16.73	0.285+j1.989	0.718+j3.796
CUCAPÁH	CUC-400	400.0	8.69	7.63	2.055+j26.510	4.010+j37.303	9.84	8.56	1.893+j25.737	3.982+j37.111
CUCAPÁH	CUC-230	230.0	25.97	22.58	0.537+j5.084	1.372+j7.244	30.43	26.24	0.475+j4.776	1.355+j6.955
DURAZNO	DRA-69	69.0	12.64	9.49	0.560+j3.102	1.056+j6.208	14.57	10.76	0.516+j2.963	1.038+j6.126
DYNAMIC PLASTICS	PLA-69	69.0	16.38	14.29	0.422+j2.396	0.596+j3.450	19.00	16.35	0.381+j2.274	0.591+j3.394
EL ARRAJAL	ARJ-230	230.0	2.46	2.33	8.465+j53.415	7.099+j62.465	2.72	2.59	8.389+j53.084	6.813+j61.152
EL ARRAJAL	ARJ-230	230.0	2.46	2.33	8.465+j53.415	7.099+j62.465	2.72	2.59	8.389+j53.084	6.813+j61.152
EL ARRAJAL	ARJ-115	115.0	3.50	4.13	2.911+j18.747	0.909+j10.228	3.87	4.61	2.890+j18.641	0.839+j9.744
EL ARRAJAL	ARJ-115	115.0	3.50	4.13	2.911+j18.747	0.909+j10.228	3.87	4.61	2.890+j18.641	0.839+j9.744
ENCINAL	ENL-69	69.0	4.39	3.92	1.474+j8.957	1.992+j12.187	4.88	4.37	1.447+j8.867	1.936+j11.984
ENSENADA	EDA-115	115.0	8.13	8.21	1.459+j8.036	1.690+j7.836	10.17	10.02	1.164+j7.089	1.650+j7.397
FÁBRICAS MONTERREY	FAM-115	115.0	7.87	7.63	1.515+j8.301	2.099+j9.056	9.81	9.27	1.215+j7.342	2.059+j8.603
FEVISA	FEV-161	161.0	12.66	9.54	1.005+j7.271	2.955+j14.239	14.27	10.67	0.966+j7.102	2.933+j14.108
FLORIDO	FLO-69	69.0	14.10	9.31	0.521+j2.777	1.612+j7.007	16.16	10.45	0.487+j2.667	1.611+j6.984



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
FRANCISCO VILLA	FCO-69	69.0	13.51	10.13	0.501+j2.906	1.486+j5.722	15.48	11.41	0.463+j2.793	1.485+j5.691
FRONTERA	FTA-69	69.0	22.22	16.15	0.307+j1.767	0.798+j3.730	26.23	18.47	0.271+j1.648	0.797+j3.707
GALLO	GLL-115	115.0	8.24	8.20	1.451+j7.931	2.052+j7.988	10.35	10.06	1.147+j6.961	2.011+j7.496
GOLFO DE SANTA CLARA	GSC-400	400.0	5.40	4.76	2.614+j42.722	12.955+j58.856	5.99	5.27	2.511+j42.361	12.937+j58.618
GONZÁLEZ ORTEGA	GOR-161	161.0	20.41	18.34	0.478+j4.530	1.077+j5.960	22.84	20.54	0.462+j4.453	1.062+j5.852
GUERRERO	GER-69	69.0	18.70	13.05	0.397+j2.094	1.008+j4.797	22.31	15.01	0.345+j1.934	1.006+j4.744
HIDALGO	HGO-161	161.0	10.80	9.87	1.017+j8.547	1.977+j10.826	11.91	10.90	1.014+j8.527	1.961+j10.745
HIPÓDROMO	HMO-69	69.0	27.82	21.23	0.278+j1.405	0.625+j2.698	34.10	24.85	0.232+j1.264	0.624+j2.666
HUNTER	HTR-69	69.0	16.71	11.31	0.420+j2.346	1.221+j5.679	19.60	12.85	0.375+j2.204	1.220+j5.650
HYUNDAI	HIU-69	69.0	27.01	17.62	0.271+j1.450	0.637+j3.783	32.47	20.35	0.235+j1.329	0.630+j3.723
INDUSTRIAL	INA-69	69.0	24.90	18.42	0.270+j1.577	0.666+j3.223	29.71	21.20	0.234+j1.456	0.666+j3.198
JATAY	JAT-115	115.0	3.73	2.80	2.880+j17.563	9.841+j34.377	4.41	3.21	2.581+j16.360	9.824+j33.840
JOYA	JOY-115	115.0	7.95	8.45	1.022+j8.290	1.381+j6.770	13.16	13.69	0.589+j5.517	1.290+j4.812
KENWORTH	KEN-230	230.0	6.76	8.13	2.249+j19.512	1.973+j9.480	7.54	9.09	2.194+j19.247	1.956+j9.234
LA ENCANTADA	ENA-69	69.0	17.33	17.93	0.402+j2.263	0.358+j2.040	20.13	20.69	0.366+j2.146	0.352+j1.984
LA HERRADURA	HRA-230	230.0	21.42	19.87	0.781+j6.150	1.292+j7.536	28.49	25.07	0.534+j5.100	1.309+j7.224
LA HERRADURA	HRA-69	69.0	26.70	29.62	0.199+j1.479	0.083+j1.049	31.69	34.61	0.169+j1.373	0.084+j1.042
LA JOVITA	JOV-230	230.0	7.72	8.53	1.900+j17.105	0.887+j13.105	9.12	9.99	1.652+j15.926	0.874+j12.679
LA MESA	LMS-69	69.0	22.26	16.83	0.342+j1.756	0.710+j3.455	26.49	19.37	0.298+j1.627	0.708+j3.420
LA ROSITA	ROA-230	230.0	33.53	29.17	0.400+j3.940	0.916+j5.584	42.44	40.01	0.300+j3.429	0.621+j3.983
LAGO	LGO-69	69.0	15.17	11.49	0.505+j2.577	1.006+j5.051	17.55	13.04	0.461+j2.454	1.003+j5.004
LIBRAMIENTO MANIOBRAS	LMA-230	230.0	23.64	22.93	0.604+j5.584	0.888+j5.997	26.81	25.87	0.575+j5.419	0.903+j5.913
LOMAS	LOS-230	230.0	6.10	5.76	3.499+j21.484	3.357+j25.767	7.66	7.03	2.698+j18.869	3.163+j24.338
LOMAS	LOS-115	115.0	8.56	9.69	1.315+j7.646	0.488+j5.103	10.72	12.00	1.037+j6.731	0.449+j4.703
LOMAS	LOS-69	69.0	2.59	2.73	2.897+j15.114	0.634+j13.079	2.89	3.17	2.789+j14.880	0.515+j11.267
MABAMEX	MAB-69	69.0	17.07	10.98	0.394+j2.300	1.013+j6.135	19.81	12.42	0.359+j2.183	1.008+j6.092
MANEADERO	MND-115	115.0	7.37	7.68	1.655+j8.853	1.123+j7.926	9.14	9.41	1.345+j7.878	1.040+j7.312
MANIOBRAS GONZÁLEZ ORTEGA	MGO-161	161.0	19.76	15.43	0.469+j4.682	1.217+j8.510	21.98	17.22	0.458+j4.630	1.190+j8.372
MANIOBRAS PARQUE INDUSTRIAL SUR	MIS-230	230.0	16.16	13.41	1.159+j8.133	2.779+j13.027	21.69	16.97	0.812+j6.684	2.742+j12.238
MANIOBRAS PUERTO PEÑASCO	CFP-400	400.0	4.39	5.70	2.614+j52.506	1.023+j16.345	4.82	6.28	2.572+j52.661	0.989+j15.885
MANIOBRAS SAN LUIS	ESL-230	230.0	18.03	19.75	0.648+j7.334	0.498+j5.260	19.61	21.73	0.660+j7.420	0.482+j5.084
MATRIX	MATRIX-69	69.0	10.95	6.45	0.845+j3.538	2.437+j10.999	12.48	7.20	0.808+j3.417	2.437+j10.975
MESA INDUSTRIAL GROUP	MGI-69	69.0	15.32	9.96	0.555+j2.540	1.446+j6.644	17.71	11.22	0.518+j2.420	1.445+j6.620
METRÓPOLI POTENCIA	MEP-230	230.0	21.68	21.31	0.812+j6.070	1.046+j6.379	31.00	29.24	0.496+j4.685	1.019+j5.634
METRÓPOLI POTENCIA	MEP-69	69.0	31.31	31.59	0.175+j1.260	0.120+j1.235	38.17	37.97	0.139+j1.139	0.114+j1.175
MEXICALI DOS	MXI-230	230.0	29.14	26.02	0.490+j4.530	1.017+j6.052	34.30	30.47	0.429+j4.237	0.991+j5.747
MEXICALI DOS	MXI-161	161.0	27.20	26.53	0.339+j3.401	0.469+j3.611	31.92	30.91	0.290+j3.190	0.448+j3.464
MEXICALI ORIENTE	MOE-161	161.0	16.11	14.34	0.652+j5.733	1.366+j7.755	18.05	16.06	0.629+j5.629	1.344+j7.630
MÉXICO	MXC-69	69.0	17.58	11.36	0.457+j2.219	1.303+j5.848	20.81	12.96	0.406+j2.066	1.302+j5.804
MINERA	MIN-115	115.0	1.50	1.04	10.970+j43.001	31.481+j98.202	1.65	1.15	10.946+j42.897	31.410+j97.718



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

Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
MISIÓN	MSN-115	115.0	3.43	2.68	3.082+j19.085	10.147+j34.431	4.10	3.11	2.755+j17.600	10.123+j33.567
MONTECITO	MUE-69	69.0	17.29	13.03	0.428+j2.264	0.909+j4.472	20.17	14.85	0.384+j2.138	0.907+j4.432
NACOZARI	NZI-161	161.0	16.64	12.80	0.693+j5.542	1.898+j10.416	18.81	14.37	0.661+j5.397	1.875+j10.287
OJOS NEGROS	ONG-69	69.0	1.24	0.94	11.264+j30.110	16.464+j60.678	1.37	1.05	11.153+j29.878	16.344+j58.864
ÓPTICA	OPT-69	69.0	23.12	16.82	0.267+j1.702	0.745+j3.587	27.37	19.26	0.233+j1.584	0.745+j3.563
ORIZABA	OZA-230	230.0	22.84	17.61	0.651+j5.778	1.954+j10.759	26.79	20.50	0.578+j5.422	1.906+j10.270
P. I. VALLE SUR	VAL-69	69.0	15.81	9.98	0.487+j2.472	1.427+j6.797	18.59	11.34	0.436+j2.317	1.425+j6.750
PACÍFICO	PAF-69	69.0	23.79	17.61	0.263+j1.654	0.698+j3.373	29.02	20.53	0.215+j1.495	0.697+j3.335
PACKARD	PKD-161	161.0	21.94	19.34	0.482+j4.209	1.038+j5.824	25.23	22.05	0.441+j4.029	1.020+j5.695
PANAMERICANA FRACCIONAMIENTO	PNM-115	115.0	6.38	5.49	1.340+j10.328	3.464+j15.148	9.59	7.61	0.892+j7.565	3.381+j13.217
PANAMERICANA POTENCIA	PAP-230	230.0	17.60	18.08	1.078+j7.470	0.887+j6.940	25.90	25.71	0.625+j5.605	0.855+j5.931
PANAMERICANA POTENCIA	PAP-69	69.0	36.64	41.88	0.151+j1.077	0.047+j0.683	47.36	52.94	0.105+j0.919	0.046+j0.652
PARQUE INDUSTRIAL	PID-230	230.0	17.72	19.08	0.671+j7.464	0.624+j5.700	19.28	21.00	0.683+j7.547	0.607+j5.522
PARQUE INDUSTRIAL LOS OLIVOS	POL-69	69.0	17.50	18.77	0.396+j2.241	0.286+j1.795	20.35	21.71	0.361+j2.123	0.280+j1.738
PARQUE INDUSTRIAL PACÍFICO	PFCO	69.0	15.13	12.44	0.451+j2.595	0.862+j4.260	17.73	14.23	0.404+j2.438	0.861+j4.229
PLANTA DE BOMBEO UNO	PB1-69	69.0	13.35	6.98	0.633+j2.917	2.633+j10.845	15.54	7.86	0.581+j2.759	2.629+j10.785
POPOTLA	POP-115	115.0	4.86	4.27	1.902+j13.524	5.718+j18.693	6.48	5.43	1.493+j11.169	5.674+j17.117
PRESIDENTE JUÁREZ	PJZ-230	230.0	19.70	21.95	0.956+j6.673	0.548+j4.725	33.75	41.78	0.403+j4.309	0.170+j2.129
PRESIDENTE JUÁREZ	PJZ-115	115.0	9.07	10.49	0.701+j7.283	0.202+j4.387	16.19	19.20	0.277+j4.503	0.109+j2.425
PUERTO NUEVO	PNU-115	115.0	3.98	3.80	2.475+j16.504	5.637+j18.388	4.98	4.68	2.100+j14.502	5.594+j16.855
PUNTA CHINA	PCH-115	115.0	2.31	2.04	7.388+j27.727	9.588+j38.935	2.63	2.31	7.093+j26.851	9.513+j38.386
RÍO	RII-69	69.0	22.69	15.96	0.347+j1.721	0.875+j3.882	27.35	18.45	0.298+j1.575	0.873+j3.843
RÍO NUEVO	RIN-161	161.0	19.58	16.10	0.548+j4.714	1.476+j7.668	22.46	18.32	0.505+j4.525	1.448+j7.489
RSI HOME PRODUCTS	RSI-69	69.0	24.77	20.80	0.250+j1.589	0.480+j2.485	29.52	24.22	0.214+j1.469	0.474+j2.429
RUBÍ	RUB-230	230.0	13.78	13.65	1.373+j9.537	1.487+j9.893	20.01	19.18	0.816+j7.255	1.429+j8.422
RUBÍ	RUB-69	69.0	28.53	28.99	0.189+j1.383	0.132+j1.331	36.20	35.90	0.136+j1.203	0.127+j1.258
RUIZ CORTINEZ	RZC-230	230.0	13.37	12.43	1.171+j9.864	1.815+j11.925	14.73	13.75	1.167+j9.845	1.802+j11.786
RUIZ CORTINEZ	RZC-161	161.0	13.53	14.34	0.705+j6.836	0.612+j5.614	14.92	15.88	0.702+j6.817	0.596+j5.533
RUMOROSA	RUM-230	230.0	10.14	8.56	1.553+j12.998	2.733+j20.085	11.60	9.72	1.443+j12.512	2.727+j19.695
RUMOROSA	RUM-69	69.0	10.21	13.52	0.350+j3.884	0.051+j1.033	11.34	15.03	0.339+j3.849	0.050+j1.017
SAMSUNG	SAM-230	230.0	19.18	17.59	0.919+j6.863	1.559+j8.675	26.50	23.14	0.603+j5.478	1.532+j7.930
SAN FELIPE	SAF-115	115.0	2.17	1.78	5.957+j29.998	11.450+j49.643	2.40	1.96	5.927+j29.870	11.427+j49.341
SAN LUIS REY	SRY-230	230.0	12.07	9.56	1.224+j10.936	4.650+j19.054	13.29	10.57	1.220+j10.927	4.633+j18.876
SAN MATÍAS	SMT-115	115.0	2.66	2.85	5.820+j24.314	2.091+j19.949	2.94	3.15	5.767+j24.135	2.097+j19.858
SAN QUINTÍN	SQN-115	115.0	1.30	0.77	16.872+j48.128	39.768+j152.080	1.45	0.85	16.581+j47.541	39.719+j151.735
SAN SIMÓN	SMN-115	115.0	1.03	0.60	20.000+j60.985	50.765+j198.929	1.15	0.66	19.703+j60.406	50.716+j198.584
SAN VICENTE	SVE-115	115.0	3.08	2.14	5.516+j20.868	11.777+j48.441	3.50	2.41	5.256+j20.168	11.724+j48.055
SÁNCHEZ TABOADA	STB-230	230.0	25.15	21.17	0.595+j5.247	1.653+j8.043	29.16	24.33	0.541+j4.981	1.636+j7.797
SANTA ISABEL	SIS-230	230.0	26.73	22.41	0.531+j4.939	1.371+j7.659	32.22	27.39	0.446+j4.512	1.258+j6.788
SANTA ISABEL	SIS-161	161.0	26.16	25.46	0.326+j3.538	0.539+j3.775	30.34	29.52	0.286+j3.358	0.491+j3.601



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
SAUZAL	SAZ-115	115.0	3.38	2.61	3.337+j19.342	9.984+j35.957	3.99	2.99	3.002+j18.066	9.945+j35.379
SEMINARIO	SIO-69	69.0	15.18	8.98	0.478+j2.580	1.728+j7.881	17.56	10.11	0.437+j2.457	1.726+j7.846
SHARP	SHA-115	115.0	8.28	8.79	0.826+j7.978	0.699+j6.620	14.00	14.45	0.397+j5.200	0.622+j4.729
SIDERÚRGICA	CSC-230	230.0	16.38	12.22	1.046+j8.037	3.291+j16.006	18.70	13.92	0.986+j7.747	3.200+j15.513
SKYWORKS	SKW-161	161.0	18.80	15.79	0.589+j4.910	1.282+j7.633	21.28	17.79	0.559+j4.773	1.258+j7.503
SONY	SON-69	69.0	11.05	6.17	0.692+j3.539	2.564+j11.894	12.60	6.90	0.648+j3.417	2.561+j11.848
TAYCO	TYC-69	69.0	16.17	12.61	0.450+j2.422	0.880+j4.466	18.77	14.35	0.407+j2.298	0.877+j4.420
TECATE DOS	TCD-69	69.0	7.69	5.49	0.903+j5.102	2.235+j11.203	8.63	6.14	0.873+j5.002	2.193+j11.069
TECATE UNO	TCU-69	69.0	8.74	3.60	0.975+j4.451	6.079+j23.337	9.85	3.99	0.943+j4.348	6.072+j23.302
TECNOLÓGICO	TEK-230	230.0	21.56	18.56	0.678+j6.122	1.809+j8.909	24.48	20.99	0.640+j5.931	1.801+j8.730
TECOLOTE	TEE-69	69.0	16.01	10.69	0.377+j2.459	1.290+j6.081	18.96	12.21	0.325+j2.289	1.288+j6.032
TECRA	TCR-69	69.0	8.42	3.39	1.045+j4.615	6.506+j24.965	9.48	3.76	1.013+j4.512	6.499+j24.930
TENSHO	TSHO-115	115.0	8.50	9.27	0.788+j7.770	0.532+j5.885	14.59	15.66	0.361+j4.992	0.455+j3.996
THOMSOM	THO-230	230.0	20.58	16.04	0.756+j6.409	2.455+j11.635	23.62	18.24	0.703+j6.143	2.438+j11.389
TIJUANA I	TJI-230	230.0	24.72	26.61	0.705+j5.325	0.540+j4.193	35.48	36.82	0.423+j4.095	0.548+j3.759
TIJUANA I	TJI-69	69.0	39.15	45.15	0.123+j1.010	0.041+j0.612	48.74	55.34	0.091+j0.894	0.040+j0.589
TIJUANA I	TJI-69A	69.0	18.49	20.57	0.350+j2.126	0.098+j1.505	21.58	23.98	0.311+j2.006	0.092+j1.438
TOYOTA	TOY-230	230.0	15.46	12.62	1.102+j8.518	2.630+j14.150	19.60	15.22	0.840+j7.403	2.641+j13.764
TRINIDAD	TRI-115	115.0	2.53	1.96	6.569+j25.370	10.938+j48.165	2.83	2.17	6.444+j25.014	10.932+j48.032
UNIVERSIDAD	UND-69	69.0	14.56	9.16	0.521+j2.687	1.672+j7.387	16.86	10.33	0.476+j2.555	1.671+j7.358
VALLE DE GUADALUPE	VLP-69	69.0	2.25	1.53	6.150+j16.573	11.137+j41.328	2.51	1.71	6.068+j16.386	11.093+j40.610
VALLE DE LAS PALMAS	VPM-69	69.0	3.22	2.19	5.172+j11.240	7.012+j29.371	3.58	2.42	5.127+j11.110	7.020+j29.260
VALLE DE PUEBLA	VPA-230	230.0	21.62	19.43	0.673+j6.104	1.532+j8.012	24.48	21.87	0.642+j5.932	1.543+j7.911
VALLECITOS	VLC-69	69.0	2.45	1.63	6.617+j14.826	10.867+j39.517	2.73	1.81	6.558+j14.675	10.863+j39.213
VICTORIA POTENCIA	VIC-230	230.0	7.93	5.21	2.163+j16.615	10.544+j41.665	8.79	5.77	2.134+j16.486	10.505+j41.391
VIGOBITE	VIB-69	69.0	21.10	13.49	0.336+j1.858	1.093+j4.966	24.95	15.37	0.296+j1.731	1.093+j4.939
WISTERIA	WIS-230	230.0	29.84	25.71	0.483+j4.425	1.154+j6.434	35.57	30.63	0.413+j4.085	1.104+j5.965
XOCHIMILCO	XCO-230	230.0	26.22	21.12	0.554+j5.034	1.606+j8.526	30.79	24.61	0.490+j4.719	1.569+j8.147

Gerencia de Control Regional Baja California

Sistema Interconectado Baja California Sur



Regresar a mapa del SEN



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
AEROPUERTO SAN JOSÉ	ASJ-115	115.0	2.26	2.20	12.866+j26.382	8.311+j31.292	4.17	3.29	4.122+j17.015	8.293+j30.579
AURA SOLAR	ASU-115	115.0	4.23	5.20	4.877+j14.936	1.024+j6.853	10.09	10.42	0.984+j7.174	1.056+j6.469
BLEDALES	BLE-115	115.0	4.30	4.66	4.787+j14.666	2.665+j11.661	10.36	8.83	1.069+j6.969	2.564+j10.415
BUENA VISTA	BUV-115	115.0	1.93	1.44	12.729+j31.880	17.127+j67.433	2.94	1.85	6.350+j24.028	16.943+j66.356
CABO BELLO	CAB-115	115.0	2.39	2.67	12.843+j24.675	4.020+j19.126	5.39	5.00	2.957+j13.223	3.790+j16.288
CABO DEL SOL	CAS-115	115.0	2.38	2.66	12.787+j24.752	3.819+j19.282	5.17	4.75	3.101+j13.780	3.752+j17.476
CABO FALSO	CAF-115	115.0	2.48	2.89	12.359+j23.748	2.693+j15.681	6.33	6.44	2.358+j11.302	2.228+j10.678
CABO REAL	CRE-115	115.0	2.52	3.08	12.180+j23.320	2.340+j12.217	5.58	5.79	2.886+j12.778	2.327+j11.422
CABO SAN LUCAS DOS	CAD-115	115.0	2.54	3.05	12.309+j23.084	2.268+j13.373	6.50	6.80	2.388+j10.986	1.872+j9.549
CAMINO REAL	CAR-115	115.0	2.84	1.91	7.266+j22.188	10.611+j57.076	5.22	2.67	3.100+j13.630	9.798+j53.193
CENTRAL TURBOGÁS LOS CABOS	TCB-230	230.0	1.37	1.80	43.343+j86.706	2.567+j28.848	3.59	4.17	6.973+j40.133	1.894+j23.532
COROMUEL	COR-230	230.0	2.23	2.98	18.156+j56.824	0.894+j14.926	5.26	6.50	2.664+j27.657	0.660+j11.832
COROMUEL	COR-115	115.0	4.72	5.82	3.931+j13.520	1.044+j6.028	13.68	15.93	0.570+j5.309	0.532+j3.032
EL PALMAR	ELP-230	230.0	1.44	1.90	42.085+j82.349	2.542+j26.420	3.74	4.35	7.152+j38.346	2.344+j22.551
EL PALMAR	ELP-115	115.0	2.70	3.69	11.678+j21.645	0.418+j5.243	6.56	8.21	2.408+j10.873	0.405+j4.437
EL RECREO	RCO-115	115.0	4.30	4.73	4.795+j14.687	2.390+j11.032	10.31	8.97	1.031+j7.008	2.345+j10.017
EL TRIUNFO	ETR-115	115.0	2.52	1.91	8.861+j24.758	11.318+j50.497	4.22	2.60	4.128+j16.828	10.908+j48.411
ERENDIRA	ERE-115	115.0	4.56	5.23	4.298+j13.911	1.665+j8.887	14.90	16.58	0.471+j4.879	0.491+j3.377
GENERAL AGUSTÍN OLACHEA	GAO-115	115.0	1.43	1.76	12.723+j44.646	1.603+j20.760	3.31	4.20	2.614+j21.918	0.306+j8.032
INSURGENTES	INS-115	115.0	1.33	1.45	17.855+j46.731	12.309+j35.703	2.69	2.71	6.103+j26.486	7.534+j25.585
LA PAZ	LPZ-115	115.0	4.06	4.15	4.965+j15.601	3.539+j14.919	9.26	7.52	1.379+j7.764	3.280+j12.981
LAS PILAS	LAP-115	115.0	1.92	1.74	10.912+j32.823	13.804+j43.296	3.38	2.64	4.654+j21.077	11.334+j38.147
LORETO	LRO-115	115.0	0.64	0.46	36.396+j96.831	54.160+j221.081	0.90	0.58	23.574+j77.427	49.095+j210.591
LOS FILOS	LFI-115	115.0	2.48	1.95	7.346+j25.719	12.926+j46.942	3.91	2.61	3.782+j18.286	12.478+j45.026
MONTE REAL	MOR-115	115.0	2.33	2.36	12.775+j25.511	6.979+j26.981	4.44	3.65	3.886+j15.988	6.964+j26.259
OLAS ALTAS	OLA-230	230.0	2.22	2.91	19.952+j56.251	2.094+j17.791	5.59	6.42	2.869+j25.951	2.119+j15.880
OLAS ALTAS	OLA-115	115.0	4.61	6.16	4.662+j13.630	0.373+j3.586	12.27	14.57	0.778+j5.902	0.395+j3.110
PALMILLA	PAA-115	115.0	3.72	3.60	5.323+j17.059	4.822+j18.928	8.22	6.42	1.540+j8.755	4.283+j15.839
PALMILLA	PML-115	115.0	2.34	2.56	12.726+j25.293	4.994+j20.974	4.70	4.22	3.478+j15.145	4.981+j20.205
PUERTO ESCONDIDO	PES-115	115.0	0.70	0.52	33.280+j88.267	46.994+j189.836	1.02	0.67	20.564+j68.719	41.938+j179.358
PUNTA PRIETA	PUP-115	115.0	4.65	5.57	4.219+j13.633	1.355+j7.148	15.53	19.52	0.422+j4.683	0.195+j1.811
PUNTA PRIETA II	PUP-115B	115.0	4.61	5.47	4.243+j13.773	1.399+j7.498	15.16	19.23	0.449+j4.798	0.148+j1.751
REFORMAS AGRARIAS	REA-115	115.0	2.28	1.79	8.087+j28.040	14.648+j50.562	3.50	2.38	4.362+j20.406	14.041+j48.238
ROFOMEX	RFO-115	115.0	1.14	0.90	25.976+j52.045	30.440+j100.880	1.53	1.11	20.773+j43.006	29.241+j98.148
SAN JOSÉ DEL CABO	SJC-115	115.0	2.47	2.77	12.530+j23.733	4.205+j18.136	5.12	4.72	3.381+j13.866	4.192+j17.386
SANTIAGO	SNT-115	115.0	1.93	1.51	13.311+j31.728	16.794+j61.182	2.99	1.97	6.053+j23.633	16.689+j60.357
SANTO DOMINGO	DOM-115	115.0	1.18	1.16	19.286+j52.775	16.979+j57.000	2.18	1.90	7.406+j32.647	12.187+j46.861
TURBOGÁS LOS CABOS	TCB-115	115.0	2.56	3.19	11.708+j23.119	0.955+j11.201	7.42	9.19	1.694+j9.701	0.187+j4.165
VILLA CONSTITUCIÓN	VIO-115	115.0	1.55	1.68	14.530+j40.434	8.162+j31.628	3.55	3.95	3.649+j20.225	1.945+j14.222

Gerencia de Control Regional Baja California

Sistema Interconectado 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 (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
BAHÍA ASUNCIÓN	BAS-115	115.0	0.35	0.44	46.405+j183.835	7.789+j61.295	0.57	0.69	34.954+j123.314	7.601+j60.277
MEZQUITAL	MEZ-115	115.0	0.51	0.65	18.475+j130.032	6.443+j37.220	1.19	1.36	4.950+j60.927	6.407+j36.670
SANTA ROSALÍA	SRI-115	115.0	0.47	0.62	22.095+j139.232	2.738+j29.402	1.18	1.42	4.975+j61.955	2.632+j28.554
TRES VÍRGENES	GLV-115	115.0	0.51	0.64	16.620+j128.768	6.636+j44.690	1.09	1.22	6.144+j66.680	6.608+j44.232
VIZCAÍNO	VIZ-115	115.0	0.51	0.61	17.745+j129.433	7.579+j49.385	1.08	1.17	6.563+j67.479	7.502+j48.906

Gerencia de Control Regional Peninsular



[Regresar a mapa del SEN](#)



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
AH KIM PECH	AKI-115	115.0	4.69	4.02	4.179+j13.528	6.449+j20.278	5.97	4.88	3.296+j11.790	6.422+j19.445
AK TUNCHEN	AUC-115	115.0	8.45	6.72	1.995+j7.598	3.254+j13.568	10.15	7.76	1.578+j7.023	3.252+j13.470
AKBAL	AKL-115	115.0	2.85	1.81	7.793+j21.998	16.150+j61.167	3.24	2.03	7.323+j21.317	16.124+j60.925
AKUMAL II	AKD-115	115.0	7.12	5.15	2.428+j9.000	4.778+j19.440	8.42	5.88	2.007+j8.433	4.776+j19.342
ALOM	ALO-115	115.0	15.96	13.88	0.849+j4.074	1.312+j5.889	20.86	16.93	0.621+j3.446	1.300+j5.767
AVENTURA PALACE	AVP-115	115.0	8.54	7.50	1.930+j7.533	2.526+j10.733	10.26	8.71	1.513+j6.956	2.524+j10.633
BALAM	BLM-230	230.0	6.36	7.19	5.198+j20.216	1.057+j13.851	8.77	9.44	2.901+j16.409	0.979+j13.104
BALAM	BLM-115	115.0	13.58	17.13	1.412+j4.680	0.186+j1.889	19.71	24.04	0.788+j3.621	0.169+j1.709
BICENTERARIO	BIN-115	115.0	12.82	11.34	1.213+j5.035	2.096+j6.982	15.86	13.40	0.995+j4.496	2.089+j6.888
BONAMPAK	BNP-115	115.0	12.37	15.05	1.604+j5.122	0.414+j2.508	18.13	21.36	0.896+j3.927	0.339+j2.183
BONFIL	BNI-115	115.0	9.87	9.01	1.839+j6.467	2.047+j8.436	13.83	11.73	1.075+j5.171	1.888+j7.894
BUENA VISTA (SET7)	BNV-115	115.0	2.48	1.66	8.674+j25.349	24.133+j61.652	3.22	1.97	6.546+j21.689	24.100+j61.126
CALICA	CLC-115	115.0	8.92	8.50	1.909+j7.198	2.331+j8.221	10.94	10.03	1.428+j6.524	2.331+j8.178
CALKINI II	CKD-115	115.0	3.41	2.06	5.504+j18.691	17.760+j54.813	3.91	2.31	5.128+j17.959	17.749+j54.620
CANCUN	CNC-115	115.0	12.29	13.98	1.601+j5.158	0.647+j3.424	18.51	20.87	0.837+j3.856	0.375+j2.590
CANDELARIA II	CAS-115	115.0	1.80	1.24	9.300+j35.773	33.926+j80.013	2.04	1.39	8.754+j34.695	33.923+j79.930
CANEK	CEK-115	115.0	11.71	11.81	1.635+j5.428	1.225+j5.422	16.39	15.48	0.991+j4.343	1.157+j5.118
CAUCEL POTENCIA	CCP-230	230.0	10.16	10.98	2.205+j12.879	1.093+j10.295	13.60	14.30	1.389+j10.648	1.024+j9.168
CAUCEL POTENCIA	CCP-115	115.0	18.20	20.92	0.710+j3.579	0.213+j2.250	24.13	26.63	0.490+j2.987	0.207+j2.158
CAYAL	CYL-115	115.0	2.42	1.63	7.427+j26.466	18.283+j64.997	2.86	1.86	6.496+j24.668	18.254+j64.207
CD. DEL CARMEN	CRE-115	115.0	3.70	4.28	3.848+j17.516	1.838+j10.527	5.40	6.51	2.101+j13.356	0.846+j7.205
CEMENTOS MAYA	CMY-115	115.0	13.13	10.92	1.111+j4.934	2.072+j7.826	16.91	13.28	0.860+j4.231	2.020+j7.542
CENTRO	CNO-115	115.0	15.63	12.72	1.002+j4.128	1.692+j6.987	19.93	15.19	0.784+j3.580	1.682+j6.892
CHAAC	HAA-115	115.0	10.06	11.67	1.945+j6.305	0.823+j3.813	14.01	15.51	1.214+j5.069	0.795+j3.617
CHAMPOTON	CMO-115	115.0	3.95	2.74	4.357+j16.231	9.643+j37.992	4.79	3.16	3.614+j14.819	9.621+j37.616
CHANKANAAB	CHB-115	115.0	6.58	4.90	3.486+j9.465	6.726+j19.342	8.32	5.77	2.593+j8.382	6.732+j19.339
CHANKANAAB II	CHS-115	115.0	6.78	5.82	3.407+j9.188	5.271+j13.647	8.59	6.93	2.525+j8.118	5.276+j13.644
CHEMAX	CEX-115	115.0	3.12	2.10	5.066+j20.663	15.938+j49.818	3.79	2.43	4.475+j18.769	15.898+j49.160
CHEMUYIL (SET5)	CHY-115	115.0	5.71	3.87	3.072+j11.224	6.577+j27.462	6.65	4.37	2.648+j10.656	6.575+j27.357
CHETUMAL NORTE	CTE-115	115.0	3.23	3.32	6.546+j19.489	3.880+j18.506	4.80	4.49	3.771+j14.750	3.859+j17.842
CHICBUL	CBU-115	115.0	2.98	2.00	5.289+j21.636	14.078+j53.495	3.47	2.25	4.717+j20.504	14.075+j53.390
CHOLUL	HOL-115	115.0	13.03	11.29	1.239+j4.944	2.366+j7.150	16.05	13.28	1.025+j4.435	2.361+j7.072
CHUBURNA	CBR-115	115.0	12.82	10.57	1.238+j5.030	2.005+j8.336	15.83	12.41	1.021+j4.499	1.997+j8.243
CHUNHUHUB	CHH-230	230.0	2.84	2.80	10.968+j45.464	6.838+j48.423	3.68	3.44	7.183+j39.019	6.727+j47.545
CHUNHUHUB	CHH-115	115.0	4.10	4.90	3.445+j15.806	0.709+j8.354	5.12	5.99	2.434+j14.047	0.669+j8.047
CONCORDIA	CNR-115	115.0	3.36	3.42	4.547+j19.245	3.985+j18.280	4.75	4.83	2.768+j15.134	2.992+j14.957
CONKAL	CNK-115	115.0	9.76	7.70	1.675+j6.593	3.884+j11.743	11.64	8.85	1.470+j6.103	3.878+j11.662
DZITAS	DZI-115	115.0	3.59	2.42	4.359+j17.999	13.439+j43.266	4.34	2.80	3.884+j16.364	13.414+j42.587
DZITNUP	DZT-400	400.0	9.67	11.87	3.341+j23.646	0.738+j10.707	11.51	13.94	2.089+j21.973	0.730+j10.542
DZYTIA	DYT-115	115.0	12.71	10.41	1.007+j5.127	2.024+j8.777	15.50	12.11	0.802+j4.643	2.017+j8.696



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
EL TINTAL (SET3)	TIN-115	115.0	2.56	1.64	6.686+j25.055	21.864+j66.113	2.98	1.85	6.098+j23.703	21.844+j65.835
ENVASES UNIVERSALES DE MEXICO	EUM-115	115.0	4.01	2.80	3.412+j16.213	9.790+j36.870	4.57	3.13	3.180+j15.660	9.784+j36.780
ESCÁRCEGA	ESA-400	400.0	5.86	6.37	6.153+j38.941	1.986+j30.164	7.61	7.91	3.349+j33.231	1.925+j29.619
ESCÁRCEGA	ESA-230	230.0	6.54	8.08	3.763+j19.965	0.557+j8.814	9.38	11.12	1.839+j15.467	0.531+j8.400
ESCÁRCEGA	ESA-115	115.0	7.32	9.01	1.299+j8.975	0.091+j4.027	9.23	11.11	0.774+j7.872	0.088+j3.945
HECELCHACAN	HCE-115	115.0	3.10	1.83	6.130+j20.524	14.917+j64.145	3.60	2.07	5.589+j19.496	14.906+j63.800
HÉROES	HRO-115	115.0	12.57	10.31	1.290+j5.121	2.950+j8.316	15.32	12.01	1.093+j4.642	2.946+j8.248
HIDROGENADORA YUCATECA	HRA-115	115.0	18.34	19.26	0.721+j3.547	0.521+j3.035	25.33	25.41	0.473+j2.845	0.472+j2.758
HOLPECHEN	HOP-115	115.0	1.24	0.79	15.416+j51.093	43.571+j139.321	1.40	0.88	14.852+j50.100	43.559+j138.972
HUNABKU	HBK-115	115.0	10.35	12.19	1.930+j6.120	0.725+j3.462	14.45	16.31	1.206+j4.908	0.693+j3.254
HUNUCMA	HNC-115	115.0	5.04	3.52	2.513+j12.920	7.656+j29.309	5.81	3.96	2.280+j12.366	7.650+j29.219
HUJECTAMAN	HUX-115	115.0	14.87	12.98	0.986+j4.355	1.531+j6.211	19.42	15.96	0.740+j3.686	1.487+j5.974
IBEROESTAR	IBR-115	115.0	8.14	7.01	1.792+j7.957	2.649+j11.829	9.98	8.25	1.253+j7.210	2.632+j11.661
INSURGENTES	INS-115	115.0	3.26	3.48	6.470+j19.333	2.888+j16.366	4.85	4.74	3.697+j14.592	2.870+j15.736
ITZAES	IZE-115	115.0	14.48	12.16	1.060+j4.461	1.620+j7.022	18.56	14.67	0.826+j3.847	1.593+j6.853
ITZIMNA	IZI-115	115.0	13.19	12.35	1.179+j4.895	2.212+j5.788	16.25	14.61	0.967+j4.389	2.205+j5.697
IXCHEL	IXC-115	115.0	7.25	6.26	2.837+j8.710	6.111+j12.178	9.15	7.48	2.196+j7.675	6.094+j11.996
IZAMAL	IZL-115	115.0	3.29	1.93	5.438+j19.409	17.022+j60.730	3.77	2.16	5.159+j18.664	17.027+j60.483
KABAH	KAB-115	115.0	10.74	12.77	1.860+j5.896	0.646+j3.197	15.13	17.26	1.141+j4.691	0.613+j2.984
KALA	KAL-115	115.0	5.50	5.11	3.270+j11.620	3.995+j14.291	7.27	6.45	2.323+j9.772	3.963+j13.407
KAMBUL	KBL-115	115.0	2.77	3.00	6.452+j23.119	2.022+j18.380	3.35	3.53	5.316+j21.171	2.024+j18.365
KANASÍN POTENCIA	KNP-230	230.0	11.41	11.62	2.070+j11.455	1.712+j11.020	15.20	14.73	1.313+j9.522	1.700+j10.432
KANASÍN POTENCIA	KNP-115	115.0	17.67	24.30	0.761+j3.679	0.093+j0.708	22.84	31.34	0.555+j3.149	0.089+j0.587
KANTENÁH	KTH-400	400.0	4.83	5.56	11.042+j46.510	2.416+j29.446	6.16	6.86	6.897+j40.649	2.376+j28.704
KANTENÁH	KTH-115	115.0	11.45	13.74	1.313+j5.648	0.177+j2.940	14.22	16.73	0.900+j5.057	0.175+j2.837
KAY	KAY-115	115.0	8.08	6.84	1.840+j8.014	3.239+j12.285	10.51	8.29	1.152+j6.856	3.227+j12.151
KEEH	KEE-115	115.0	9.43	8.55	1.850+j6.796	2.196+j8.975	13.07	10.89	1.090+j5.479	2.136+j8.699
KEKEN	KEK-115	115.0	12.06	13.30	1.445+j5.311	0.952+j3.871	16.59	17.34	0.862+j4.318	0.945+j3.717
KIMBILA (SET1)	KIM-115	115.0	3.54	2.05	5.006+j18.068	15.550+j57.568	4.05	2.29	4.753+j17.410	15.553+j57.380
KINICH AHAU	KAH-230	230.0	4.42	5.29	5.605+j29.490	1.549+j15.427	7.76	8.93	2.105+j18.712	1.196+j11.400
KOHUNLICH	KHN-115	115.0	12.00	12.35	1.400+j5.355	1.045+j4.972	16.12	15.67	0.869+j4.448	1.037+j4.813
KOPTE	KOP-115	115.0	4.66	3.37	3.625+j13.784	10.098+j29.015	5.25	3.75	3.498+j13.456	10.094+j28.957
KUKULKAN	KUK-115	115.0	11.05	10.69	1.748+j5.747	1.303+j6.529	15.38	13.87	1.079+j4.625	1.229+j6.187
LAGUNA DE TÉRMINOS	LTE-115	115.0	3.38	3.43	4.529+j19.111	4.023+j18.314	4.79	4.85	2.751+j15.000	3.030+j14.991
LÁZARO CÁRDENAS	LAC-115	115.0	2.40	1.57	8.977+j26.155	26.135+j66.375	3.08	1.85	6.931+j22.669	26.104+j65.888
LEE	LEE-115	115.0	8.47	4.28	1.316+j7.729	9.826+j29.350	9.97	4.83	1.116+j7.241	9.823+j29.284
LEONA VICARIO	LEV-400	400.0	5.01	5.64	10.437+j44.921	2.963+j30.830	6.50	7.05	6.170+j38.592	2.967+j29.831
LEONA VICARIO	LEV-115	115.0	13.54	15.73	1.224+j4.748	0.318+j2.883	18.49	20.57	0.717+j3.883	0.316+j2.746
LERMA	LRA-230	230.0	3.70	4.26	8.289+j34.885	1.103+j22.120	5.06	5.78	4.897+j28.425	0.864+j18.454
LERMA	LRA-115	115.0	7.07	8.98	2.322+j9.105	0.141+j3.473	10.13	13.01	1.336+j7.084	0.106+j2.505



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
MAHAHUAL	MHH-115	115.0	1.20	0.67	18.100+j52.078	62.929+j176.939	1.43	0.76	16.013+j48.601	62.894+j176.443
MALECON CANCÚN	MLN-115	115.0	12.17	14.16	1.624+j5.210	0.575+j3.142	18.02	20.46	0.884+j3.955	0.409+j2.577
MANIOBRAS EÓLICA PROGRESO	MEP-115	115.0	6.14	6.89	1.916+j10.649	0.923+j9.165	7.06	7.83	1.716+j10.198	0.903+j9.023
MAXCANU	MAX-115	115.0	5.47	3.26	3.441+j11.639	10.890+j35.106	6.34	3.67	3.170+j11.073	10.883+j35.006
MAYA KOBÁ	MYK-115	115.0	8.10	7.19	1.971+j7.955	2.508+j11.034	9.97	8.46	1.397+j7.189	2.506+j10.979
MÉRIDA II	MDA-115	115.0	20.92	26.25	0.588+j3.118	0.133+j1.214	29.96	37.36	0.339+j2.414	0.081+j0.930
MÉRIDA IV	MDC-115	115.0	20.80	26.61	0.575+j3.140	0.048+j1.078	29.49	37.28	0.333+j2.454	0.038+j0.864
MÉRIDA ORIENTE	MDN-115	115.0	13.60	11.26	1.166+j4.740	2.071+j7.682	16.89	13.27	0.955+j4.218	2.067+j7.596
MÉRIDA POTENCIA	MDP-230	230.0	10.27	11.19	2.095+j12.754	0.972+j9.884	13.90	15.35	1.280+j10.429	0.577+j7.573
METROPOLITANA	MTO-115	115.0	14.72	12.90	1.000+j4.399	1.683+j6.195	19.00	15.68	0.764+j3.768	1.655+j6.031
MOON PALACE	MPA-115	115.0	7.46	5.97	1.918+j8.693	3.837+j15.122	9.38	7.07	1.282+j7.684	3.824+j14.975
NACHI COCOM	NCM-230	230.0	9.20	7.42	2.511+j14.214	5.153+j24.458	11.85	8.95	1.716+j12.210	5.145+j23.859
NACHI COCOM	NCM-115	115.0	19.44	18.40	0.753+j3.331	1.066+j3.899	25.52	22.65	0.543+j2.810	1.061+j3.823
NICHUPTE	NCT-115	115.0	11.28	13.62	1.770+j5.613	0.521+j2.839	15.88	18.47	1.086+j4.468	0.490+j2.627
NICTE HA	NIH-115	115.0	9.98	11.17	1.887+j6.382	0.975+j4.437	13.98	14.79	1.138+j5.101	0.953+j4.259
NIZUC	NIZ-230	230.0	6.91	7.43	4.769+j18.611	1.889+j15.229	9.54	9.85	2.572+j15.094	1.614+j13.787
NIZUC	NIZ-115	115.0	12.58	17.42	1.483+j5.063	0.100+j0.909	19.37	26.43	0.726+j3.701	0.084+j0.748
NORTE	NTE-230	230.0	9.93	10.38	2.364+j13.162	1.452+j11.780	13.08	13.08	1.558+j11.057	1.451+j11.157
NORTE	NTE-115	115.0	17.44	20.19	0.826+j3.717	0.268+j2.380	22.33	25.07	0.616+j3.212	0.257+j2.276
OXTANKAH	OXT-115	115.0	3.10	2.91	6.939+j20.242	7.997+j24.330	4.55	3.83	4.163+j15.509	7.975+j23.665
PESCADORES	PSD-115	115.0	7.89	6.94	2.175+j8.129	2.734+j11.579	9.65	8.11	1.630+j7.387	2.739+j11.561
PETEMPICH (SET4)	PTP-115	115.0	7.49	6.04	1.915+j8.653	3.760+j14.819	9.45	7.17	1.269+j7.620	3.747+j14.676
PHOTOEMERIS SUSTENTABLE	PHS-115	115.0	2.69	2.97	6.616+j23.822	1.764+j17.745	3.25	3.50	5.448+j21.811	1.766+j17.732
PLAYA CAR	PLY-115	115.0	10.50	9.25	1.795+j6.064	1.731+j8.754	13.57	11.14	1.197+j5.247	1.737+j8.751
PLAYA DEL CARMEN	PCN-230	230.0	5.84	6.41	5.410+j22.084	1.987+j16.703	7.52	7.90	3.346+j19.141	2.019+j16.551
PLAYA DEL CARMEN	PCN-115	115.0	11.01	13.22	1.705+j5.786	0.276+j3.059	14.35	16.58	1.107+j4.967	0.282+j3.056
PLAYA MUJERES	PMU-115	115.0	8.67	7.87	2.160+j7.347	2.255+j9.766	11.26	9.60	1.521+j6.308	2.238+j9.584
POKTAPOK	PKP-115	115.0	11.73	14.26	1.717+j5.393	0.477+j2.644	16.88	19.73	1.008+j4.207	0.440+j2.418
POLYUC	PYU-115	115.0	4.02	4.70	3.583+j16.120	1.113+j9.322	5.00	5.72	2.574+j14.365	1.075+j9.022
PONIENTE	PTE-115	115.0	16.06	15.58	0.891+j4.037	0.867+j4.485	20.66	18.99	0.669+j3.471	0.861+j4.395
POPOLNAH	PPH-115	115.0	2.85	2.16	5.589+j22.587	11.363+j44.273	3.23	2.42	5.283+j21.950	11.360+j44.192
PUERTO JUÁREZ	PJU-115	115.0	12.97	15.05	1.481+j4.902	0.487+j2.992	18.63	20.58	0.846+j3.829	0.456+j2.773
PUERTO MORELOS	PMO-115	115.0	9.70	8.76	1.523+j6.673	1.819+j8.885	12.25	10.58	0.990+j5.880	1.787+j8.612
PUERTO PROGRESO	PPO-115	115.0	4.99	4.87	2.674+j13.041	3.219+j15.869	5.69	5.48	2.472+j12.593	3.199+j15.728
PUERTO REAL	PTR-230	230.0	2.76	3.70	9.828+j47.052	0.352+j11.760	3.80	5.02	5.705+j37.977	0.393+j11.630
PUERTO REAL	PTR-115	115.0	4.55	6.44	2.869+j14.294	0.039+j1.808	6.39	9.05	1.610+j11.310	0.049+j1.775
PUNTA SAM	PSA-115	115.0	10.64	9.47	1.708+j6.002	1.838+j8.374	14.40	11.83	1.074+j4.955	1.821+j8.192
RIVIERA MAYA	RMV-400	400.0	4.95	5.92	11.757+j45.169	2.027+j23.970	6.54	7.58	6.916+j38.217	1.921+j22.939
RIVIERA MAYA	RMV-230	230.0	7.10	8.73	4.528+j18.143	0.503+j8.403	9.44	11.28	2.602+j15.252	0.465+j7.950
RIVIERA MAYA	RMV-115	115.0	12.13	13.19	1.294+j5.318	0.356+j4.191	15.75	16.68	0.788+j4.570	0.317+j3.866



Subestación Eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2027				NCC máximo 2027			
			3F	1F	ZTH(+)	ZTH(0)	3F	1F	ZTH(+)	ZTH(0)
SABANCUY	SBY-115	115.0	2.60	1.68	6.347+j24.723	17.287+j65.517	3.01	1.89	5.742+j23.548	17.280+j65.369
SAMULA	SAM-115	115.0	5.45	5.19	3.246+j11.752	3.535+j13.582	7.25	6.60	2.262+j9.813	3.500+j12.652
SAMULA II	SAD-115	115.0	4.99	4.80	3.476+j12.830	3.132+j14.580	6.53	6.04	2.499+j10.903	3.098+j13.641
SAN IGNACIO	IGN-115	115.0	6.86	7.13	1.580+j9.553	1.481+j9.994	7.94	8.11	1.379+j9.097	1.468+j9.875
SAN PEDRO	SAE-115	115.0	2.17	1.37	5.253+j30.206	26.608+j79.875	2.59	1.57	4.627+j27.858	26.610+j79.013
SANTA LUCIA	SLC-230	230.0	4.88	5.29	5.212+j26.704	3.156+j20.842	8.98	10.28	1.767+j16.167	0.743+j10.110
SANTO DOMINGO	SDM-115	115.0	3.76	3.92	3.626+j17.296	2.649+j15.397	4.19	4.38	3.581+j17.069	2.596+j15.134
SIAN KA'AN (SET6)	SIK-115	115.0	2.16	1.72	5.565+j30.299	12.249+j52.797	2.53	1.96	4.534+j28.549	12.209+j52.490
SIHOCHAC	SHC-115	115.0	2.97	1.94	5.940+j21.537	13.366+j56.314	3.55	2.22	5.122+j19.950	13.339+j55.768
SUCILA	SUC-115	115.0	3.79	3.18	3.927+j17.066	8.244+j26.835	4.28	3.56	3.818+j16.618	8.233+j26.712
SUR	SUR-115	115.0	17.78	17.45	0.825+j3.643	1.106+j3.800	23.43	21.69	0.601+j3.059	1.094+j3.694
TEKAX II	TKD-115	115.0	3.67	2.49	4.822+j17.432	9.083+j42.859	4.24	2.80	4.378+j16.643	9.079+j42.808
TEMAX II	TXS-115	115.0	3.90	3.56	3.599+j16.642	5.907+j21.270	4.34	3.94	3.559+j16.466	5.893+j21.152
TICUL I	TIU-115	115.0	8.95	8.50	1.743+j7.212	2.114+j8.354	10.51	9.78	1.532+j6.775	2.102+j8.248
TICUL II	TIC-400	400.0	7.68	8.02	4.828+j29.685	3.026+j26.245	9.64	9.74	2.887+j26.186	2.832+j25.449
TICUL II	TIC-230	230.0	11.89	13.68	1.872+j11.008	0.653+j6.842	15.23	17.09	1.134+j9.526	0.586+j6.448
TICUL II	TIC-115	115.0	12.10	14.03	0.778+j5.430	0.127+j3.261	14.54	16.61	0.568+j4.990	0.115+j3.155
TIXMEHUAC	TXM-115	115.0	2.21	1.40	6.800+j29.219	20.350+j79.628	2.51	1.56	6.355+j28.431	20.345+j79.578
TIZIMIN	TZM-115	115.0	4.91	4.46	2.794+j13.225	4.605+j17.772	5.67	5.06	2.636+j12.607	4.602+j17.656
TULUM	TUM-115	115.0	3.41	2.18	6.540+j18.357	13.592+j50.665	3.91	2.45	6.074+j17.666	13.566+j50.423
UAYMA (SET2)	UAY-115	115.0	5.70	4.89	2.252+j11.421	4.783+j16.844	7.85	6.24	1.649+j9.152	4.734+j15.875
UCU	UCU-115	115.0	9.79	7.80	1.363+j6.645	2.896+j11.661	11.80	9.02	1.138+j6.084	2.889+j11.571
UMAN	UMA-115	115.0	12.25	8.85	1.369+j5.244	3.239+j11.207	15.33	10.40	1.126+j4.630	3.211+j11.050
VALLADOLID	VAD-230	230.0	9.56	11.68	1.490+j13.806	0.183+j6.400	13.45	16.25	0.692+j10.834	0.123+j5.208
VALLADOLID	VAD-115	115.0	8.50	10.71	1.118+j7.730	0.103+j3.045	14.08	17.78	0.463+j5.165	0.042+j1.945
VALLADOLID DISTRIBUCIÓN	VDD-115	115.0	7.19	6.07	1.601+j9.095	6.261+j13.298	10.72	8.06	0.993+j6.740	6.265+j12.442
XCALACOCO	XLC-115	115.0	8.26	7.10	1.765+j7.846	2.461+j11.726	10.13	8.37	1.230+j7.101	2.443+j11.535
XCUNYA	XCN-115	115.0	9.63	7.47	1.222+j6.786	3.085+j13.173	11.41	8.52	1.021+j6.320	3.079+j13.101
XPUJIL	XPU-115	115.0	1.71	1.31	6.707+j38.135	18.708+j71.962	2.04	1.50	5.198+j35.492	18.685+j71.623
XUL HA	XUL-230	230.0	2.30	2.90	16.143+j55.366	1.162+j22.586	3.58	4.31	7.325+j40.174	0.867+j19.744
XUL HA	XUL-115	115.0	4.17	5.62	4.609+j15.258	0.140+j3.681	6.94	9.13	1.971+j10.336	0.084+j2.843
YAXCHE	YXE-115	115.0	11.32	11.17	1.467+j5.681	1.205+j6.002	15.14	14.02	0.911+j4.737	1.202+j5.865
YAXKIN	YXN-115	115.0	9.64	9.95	1.901+j6.623	1.544+j6.062	12.17	12.01	1.338+j5.851	1.549+j6.052
ZAC NICTÉ	ZNE-115	115.0	9.07	8.32	1.863+j7.081	1.395+j9.250	11.38	9.89	1.274+j6.289	1.400+j9.220
ZAMA	ZMA-115	115.0	3.64	2.30	5.912+j17.253	12.979+j48.678	4.18	2.57	5.459+j16.610	12.963+j48.472