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CENTRO NACIONAL DE
CONTROL DE ENERGÍA

Niveles de cortocircuito de la Red Nacional de Transmisión 2023

Dirección de Operación y Planeación
del Sistema
Subdirección de Planeación

Marzo de 2021

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

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1. Objetivo

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

2. Fundamento legal

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

3. Consideraciones de cálculo

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

- a) A fin de calcular los valores máximos y mínimos en los puntos de interconexión de Centrales Eléctricas y conexión de Centros de Carga, se analizaron los escenarios esperados para 2023.
- b) Para el escenario de mínima capacidad, se considera red completa (sin contingencia) y las condiciones esperadas para invierno de 2023.
- 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 2023, así como con el Programa Indicativo Para el Retiro de Centrales Eléctricas 2020-2034.
- d) Los modelos eléctricos del Sistema Eléctrico Nacional (SEN) contemplan las obras indicadas en los programas de ampliación y modernización de la Red Nacional de Transmisión y los elementos de las Redes Generales de Distribución que correspondan al Mercado Eléctrico Mayorista (PAMRNT) 2020-2034.

- 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 2020-2034.
- g) El método de cálculo es el establecido en el Estándar IEC 60909.
- h) Para efectos de cálculo se utiliza la herramienta de software PSS®E V34.5, con los siguientes parámetros:
 - Taps de los transformadores unitarios.
 - Reactores de Líneas de Transmisión (LT) y barra en servicio y sin cambio.
 - Susceptancia de las LT sin cambio.
 - Reactancia subtransitoria de las unidades de Centrales Eléctricas.
 - Cargas del sistema eléctrico sin cambio.
 - Para el escenario de máxima capacidad se considera el factor $C = 1.1$.
 - Para el escenario de mínima capacidad se considera el factor $C=1.0$.
- i) Se reporta la magnitud de la corriente simétrica inicial I_k'' (r.m.s.)

Los niveles de cortocircuito calculados pueden variar dependiendo de las impedancias de las unidades de las Centrales Eléctricas, transformadores, autotransformadores, transformadores defasadores, reactores, etc., que tienen fecha de entrada en operación entre 2020 y 2023.

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

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

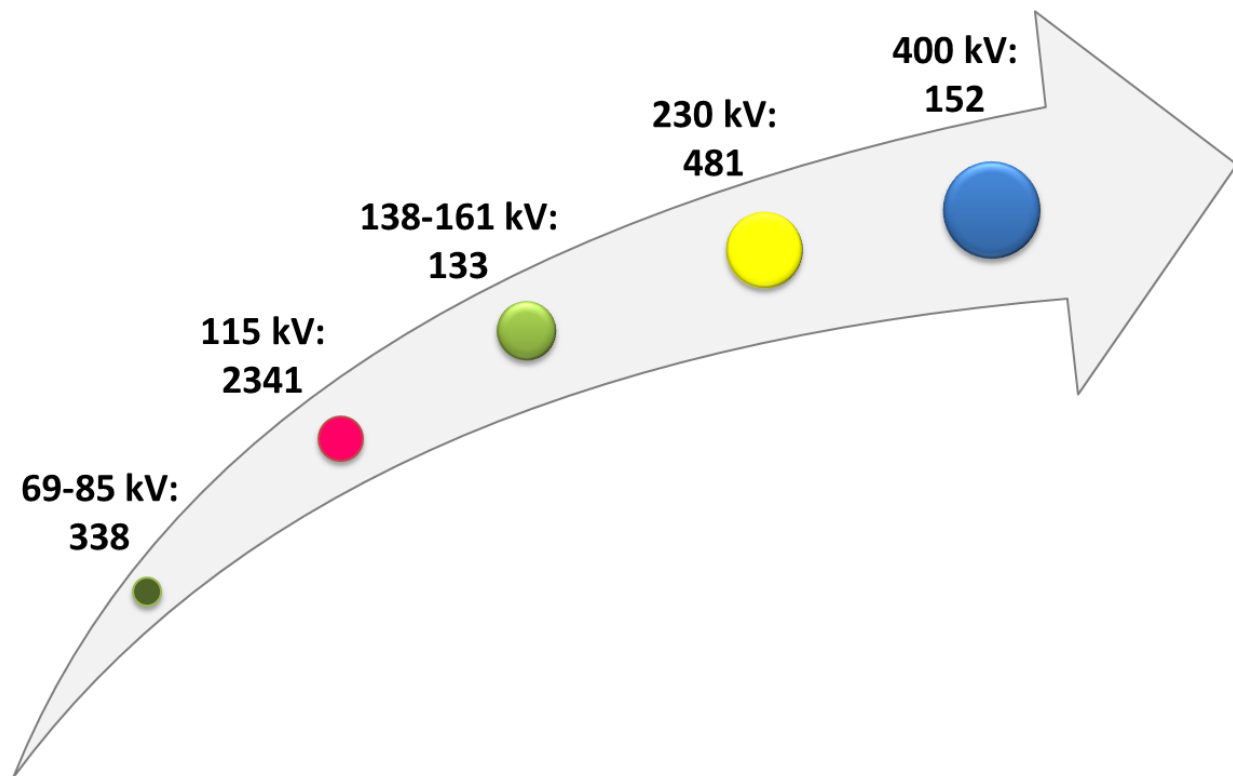
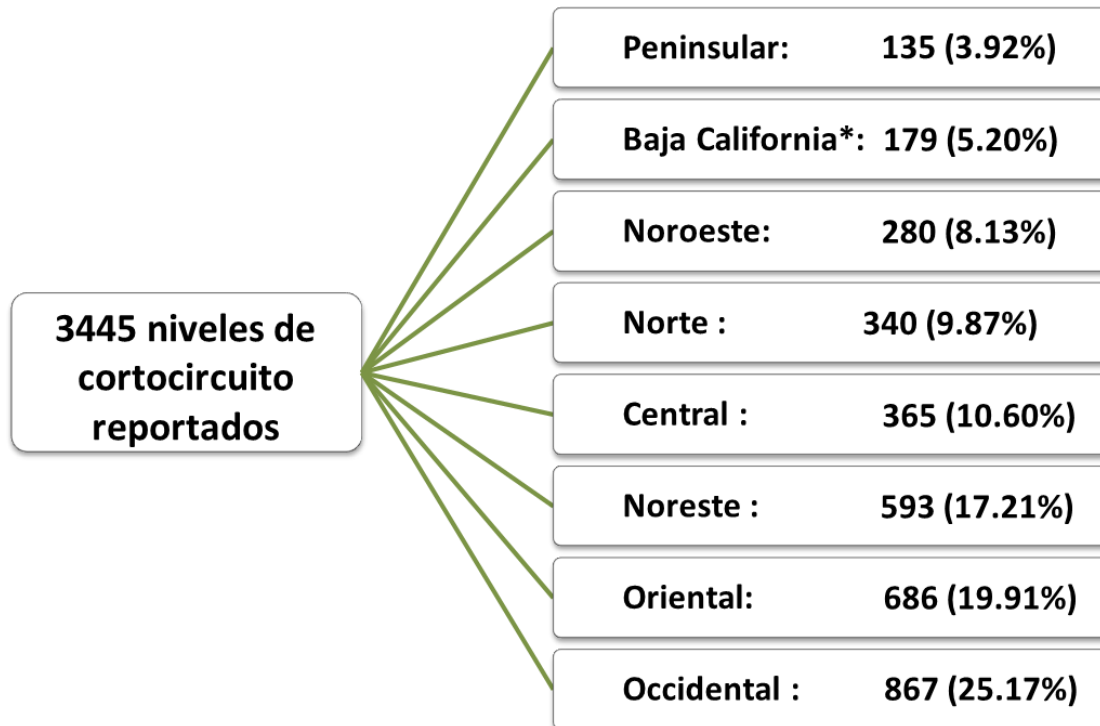


Figura 1: Niveles de cortocircuito por nivel de tensión

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



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

Figura 2: Niveles de cortocircuito por Gerencia de Control Regional

5. Referencias

- [1] Ley de la Industria Eléctrica. DOF: 11/08/2014.
- [2] Reglamento de la Ley de la Industria eléctrica. DOF: 31/10/14.
- [3] Disposiciones Administrativas de carácter general que contienen los criterios de eficiencia, calidad, confiabilidad, continuidad, seguridad y sustentabilidad del Sistema Eléctrico Nacional: Código de Red. DOF: 08/04/2016.
- [4] Programa de Ampliación y Modernización de la Red Nacional de Transmisión y Redes Generales de Distribución del Mercado Eléctrico Mayorista 2020-2034.
- [5] Estándar IEC 60909 Short-circuit currents in three-phase a.c. systems.
- [6] IEEE Standard 551-2006. Recommended Practice for Calculating Short-Circuit Currents in Industrial and Commercial Power Systems.

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



Gerencia de Control Regional Central



Regresar a mapa del SEN



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
ACEROS CAMESA	ACM-85	85	17.78	6.07	0.496+j2.716	2.007+j18.699	20.40	8.21	0.420+j2.613	2.590+j14.228
ACEROS CORSA	ACC-85	85	13.91	5.53	0.663+j3.466	2.636+j19.432	15.88	8.11	0.591+j3.347	2.926+j12.883
ACEROS CORSA	ACS-230	230	12.99	9.61	1.607+j10.092	3.712+j20.762	14.89	10.69	1.380+j9.716	3.772+j21.074
ACEROS NACIONALES	ACN-85	85	17.76	6.37	0.564+j2.704	2.179+j17.502	20.22	9.16	0.500+j2.623	2.641+j12.090
ACOLMAN	ACO-230	230	24.78	19.23	0.926+j5.277	2.069+j9.870	29.33	21.74	0.685+j4.933	2.104+j10.026
ACTOPAN	AAN-85	85	5.76	2.43	2.395+j8.179	8.355+j42.803	6.31	2.67	2.378+j8.219	8.450+j42.887
ACULCO	AUO-115	115	2.43	1.42	5.437+j26.806	16.835+j83.621	2.70	1.57	5.221+j26.542	16.901+j83.895
AEROPUERTO	ATO-85	85	7.54	3.47	1.503+j6.329	3.674+j29.274	8.25	3.79	1.488+j6.370	3.829+j29.511
AGUAVIVA	AGV-85	85	5.75	1.44	1.800+j8.338	8.469+j85.303	6.26	1.58	1.790+j8.438	8.469+j85.303
ÁGUILAS	AGU-230	230	26.50	28.36	1.277+j4.845	0.679+j4.117	32.35	33.10	0.905+j4.423	0.663+j4.226
AGUSTÍN MILLÁN	ANM-115	115	18.10	13.21	0.610+j3.617	1.238+j7.652	21.36	15.05	0.482+j3.386	1.272+j7.604
ALMOLOYA	AML-400	400	12.25	10.69	3.101+j18.600	2.016+j27.266	15.50	12.58	1.938+j16.274	2.186+j27.732
ALPURA	ALR-85	85	18.23	5.91	0.498+j2.645	2.155+j19.472	21.26	7.98	0.407+j2.506	2.737+j14.991
ALTAMIRANO (115 KV)	ATM-115	115	2.76	1.62	6.502+j23.204	20.172+j72.003	3.35	2.38	5.377+j21.113	11.732+j47.144
AMOMOLULCO	AMO-85	85	9.40	4.91	1.145+j5.095	2.549+j19.458	10.28	5.41	1.105+j5.135	2.599+j19.308
APAPLASTIC	AAP-85	85	9.74	5.01	1.080+j4.919	2.764+j19.159	10.65	5.52	1.040+j4.959	2.815+j19.008
APASCO	APA-85	85	20.06	4.67	0.367+j2.419	1.950+j26.565	21.56	5.11	0.346+j2.480	1.994+j26.638
APASCO	APA-230	230	20.32	18.44	1.061+j6.447	1.010+j8.548	24.49	21.11	0.764+j5.916	1.098+j8.775
APM TERMINALS	ATS-115	115	10.58	9.58	1.036+j6.188	1.470+j8.012	13.55	11.66	0.833+j5.327	1.487+j7.835
ARAGÓN	ARA-85	85	10.21	2.87	0.507+j4.781	0.311+j41.847	11.24	3.16	0.473+j4.778	0.311+j41.847
ARAGÓN	ARA-230	230	18.57	18.33	1.149+j7.059	1.227+j7.462	21.84	20.86	0.853+j6.633	1.263+j7.606
ARCELIA NUEVA	ANU-69	69	2.25	2.79	3.924+j17.230	0.553+j7.524	2.52	3.06	3.321+j17.045	0.618+j8.250
ARCELIA NUEVA	ANU-115	115	2.38	1.45	9.129+j26.324	26.963+j77.601	2.95	2.54	7.304+j23.613	7.348+j36.381
ARMEX	ARX-230	230	24.13	19.22	0.952+j5.419	1.922+j9.601	29.95	22.91	0.644+j4.834	1.905+j9.213
ARTEAGA	ATG-69	69	1.60	1.71	2.784+j24.743	2.378+j20.013	2.19	2.19	4.062+j19.557	2.683+j19.924
ARTEAGA	ATG-115	115	2.38	1.84	5.592+j27.388	8.066+j51.367	2.96	2.19	5.330+j24.087	8.246+j50.004
ATENCO	ATE-85	85	16.17	7.96	0.593+j2.976	1.066+j12.451	17.61	8.78	0.552+j3.015	1.117+j12.302
ATENCO	ATE-230	230	16.87	18.16	1.835+j7.657	0.670+j6.356	20.26	20.86	1.359+j7.079	0.714+j6.649
ATIZAPÁN	ATI-230	230	20.96	18.09	1.276+j6.204	1.639+j9.338	25.18	20.65	0.922+j5.728	1.687+j9.529
ATLACOMULCO	ATU-115	115	8.14	5.81	1.617+j7.997	3.245+j17.681	9.00	6.35	1.539+j7.972	3.282+j17.928
ATLACOMULCO INDUSTRIAL	AIN-115	115	6.34	4.31	2.321+j10.217	5.292+j24.679	7.00	4.72	2.242+j10.192	5.330+j24.928
ATLACOMULCO POTENCIA	AMP-115	115	15.95	15.23	0.591+j4.121	0.321+j4.745	17.63	16.41	0.514+j4.111	0.355+j5.037
ATLACOMULCO POTENCIA	AMP-400	400	9.83	8.84	3.617+j23.215	2.404+j31.480	12.07	10.22	2.433+j20.899	2.621+j32.396
ATOTONILCO	ANL-85	85	2.97	1.40	4.243+j15.995	14.464+j70.468	3.25	1.54	4.230+j16.038	14.587+j70.554
AURORA	AUR-85	85	22.09	2.79	0.327+j2.197	0.098+j48.467	23.83	3.06	0.296+j2.246	0.098+j48.467
AURORA	AUR-230	230	32.22	33.53	0.890+j4.024	0.575+j3.731	40.01	39.46	0.587+j3.604	0.600+j3.825
AUTOMETALES	AUM-85	85	13.76	5.50	0.686+j3.501	2.728+j19.509	15.83	8.30	0.607+j3.356	2.895+j12.411
AVANDARO	AVA-115	115	7.19	4.77	2.608+j8.854	6.716+j22.271	8.20	5.36	2.453+j8.567	6.705+j22.016
AVANTE TEXTIL	AVT-85	85	13.86	7.19	0.710+j3.469	1.293+j13.377	15.18	7.96	0.665+j3.493	1.344+j13.200
AYOTLA	AYO-85	85	18.41	2.26	0.397+j2.636	3.150+j59.884	19.72	2.48	0.374+j2.712	3.150+j59.884
AYOTLA	AYO-230	230	21.28	20.54	1.148+j6.133	0.866+j7.018	24.90	23.70	0.857+j5.803	0.808+j6.798
AZCAPOTZALCO	AZC-230	230	31.87	31.42	1.012+j4.041	2.396+j3.914	40.20	37.27	0.646+j3.576	2.443+j4.042



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
AZTECA	ATK-230	230	27.15	26.56	0.883+j4.811	0.727+j5.287	32.86	30.72	0.599+j4.404	0.742+j5.384
BANCOMER	BBV-230	230	21.66	11.87	1.263+j5.998	2.055+j21.384	26.09	13.37	0.905+j5.524	2.098+j21.564
BÁRBARA (SANTA)	BBR-115	115	7.89	5.09	1.773+j8.232	4.543+j21.842	9.67	7.66	1.390+j7.426	1.886+j13.333
BARRIENTOS	BAR-85	85	20.60	7.02	0.490+j2.331	1.762+j16.178	23.58	10.42	0.427+j2.249	2.224+j10.767
BECTON DICKINSON	BDK-85	85	17.83	5.84	0.511+j2.704	2.189+j19.660	20.81	7.87	0.418+j2.560	2.771+j15.179
BOSQUES	BOS-230	230	23.55	21.49	1.399+j5.463	1.596+j7.208	28.50	24.72	1.031+j5.020	1.621+j7.353
CAMPO MORADO	CMO-115	115	1.80	1.08	10.977+j35.201	32.439+j105.192	2.16	1.66	9.141+j32.505	12.633+j63.711
CAMPOS HERMANOS	CHE-85	85	18.98	6.66	0.529+j2.531	1.984+j16.885	21.66	9.70	0.466+j2.449	2.447+j11.473
CANCHESDA NUEVA	CSN-115	115	3.07	1.92	5.684+j20.870	15.383+j58.613	3.38	2.10	5.605+j20.846	15.425+j58.870
CAÑAS	CNA-69	69	0.74	0.71	21.497+j49.032	20.707+j58.375	1.70	1.41	10.939+j23.303	13.496+j39.465
CARACOL	ROL-230	230	23.15	19.24	1.029+j5.642	1.846+j9.150	27.52	21.88	0.764+j5.253	1.887+j9.282
CARBONSER	CSR-115	115	5.40	4.87	2.529+j12.042	3.540+j15.758	6.39	5.63	2.319+j11.186	3.570+j15.628
CAREAGA	CAR-85	85	20.10	6.39	0.472+j2.395	2.164+j18.077	22.61	9.82	0.420+j2.350	2.247+j11.533
CARTAGENA	CTG-230	230	29.36	26.66	0.914+j4.430	0.673+j5.974	36.35	31.07	0.600+j3.973	0.686+j6.071
CARTÓN Y PAPEL DE MÉXICO	CPM-230	230	27.80	25.22	0.887+j4.694	1.137+j6.263	33.85	29.18	0.600+j4.274	1.159+j6.350
CAYACAL	CAY-115	115	7.62	6.90	1.750+j8.531	2.126+j11.121	9.33	8.11	1.535+j7.678	2.195+j11.106
CEILÁN	CEI-230	230	24.55	23.09	1.030+j5.309	1.082+j6.467	30.16	26.60	0.674+j4.797	1.121+j6.747
CEMENTOS ANÁHUAC	CAH-85	85	17.75	6.45	0.566+j2.706	1.942+j17.237	20.27	9.24	0.499+j2.616	2.458+j11.974
CEMENTOS APASCO	CEA-85	85	10.62	3.10	0.841+j4.542	5.485+j37.849	11.58	3.40	0.817+j4.590	5.529+j37.923
CEMENTOS FORTALEZA	CFZ-85	85	2.50	1.16	4.455+j19.094	16.756+j85.672	2.75	1.28	4.438+j19.133	16.852+j85.756
CEMENTOS TOLTECA	TLT-85	85	9.98	2.78	0.905+j4.836	6.942+j42.664	10.86	3.04	0.882+j4.893	6.986+j42.737
CERRO DEL CAMPO	CCM-115	115	3.43	2.33	5.810+j18.459	14.775+j44.397	4.01	2.97	5.216+j17.465	11.179+j35.735
CERRO GORDO	CRG-85	85	25.42	8.47	0.341+j1.900	0.953+j13.538	32.01	17.60	0.246+j1.668	0.998+j5.781
CERRO GORDO	CRG-230	230	35.85	38.53	0.771+j3.623	0.413+j3.028	45.11	46.00	0.486+j3.202	0.427+j3.083
CERVECERÍA MODELO	CVM-85	85	14.03	4.66	0.662+j3.434	7.261+j23.607	15.69	6.44	0.609+j3.386	7.292+j16.943
CHALCO	CHA-85	85	13.19	1.95	0.666+j3.660	4.863+j67.994	14.14	2.14	0.653+j3.762	4.863+j67.994
CHALCO	CHA-85B	85	13.19	1.95	0.666+j3.660	4.863+j67.994	14.14	2.14	0.653+j3.762	4.863+j67.994
CHALCO	CHA-230	230	16.84	4.41	2.284+j7.548	1.878+j75.138	19.50	19.15	1.994+j7.221	2.137+j7.694
CHAPINGO	CPG-230	230	38.93	35.97	0.677+j3.343	0.825+j4.271	48.88	42.69	0.424+j2.958	0.829+j4.259
CHICOLOAPAN	CHC-230	230	26.12	22.04	0.959+j4.992	1.622+j7.856	31.46	25.28	0.681+j4.592	1.653+j7.941
CHIMALPA	MLP-230	230	29.76	31.83	1.151+j4.311	0.842+j3.611	37.11	37.55	0.785+j3.857	0.863+j3.752
CHIMALPA DOS	MLD-230	230	31.14	33.57	1.077+j4.126	0.547+j3.423	39.01	39.67	0.714+j3.676	0.573+j3.567
CHIMALPA DOS	MLD-400	400	23.10	22.76	2.263+j9.739	1.711+j10.585	30.55	27.63	1.244+j8.223	1.784+j10.900
CHRYSLER DE MÉXICO	KDM-85	85	13.09	7.29	0.741+j3.674	1.122+j12.707	14.46	8.11	0.690+j3.668	1.176+j12.463
CIUDAD BICENTENARIO	CDB-115	115	6.28	5.10	1.415+j10.482	2.225+j17.786	6.66	5.40	1.424+j10.880	2.255+j18.461
COAPA	COA-230	230	18.00	16.33	1.422+j7.238	1.663+j9.684	21.58	18.64	1.040+j6.688	1.720+j9.915
COFRADÍA UNO	CFI-230	230	28.36	25.60	0.973+j4.579	0.846+j6.262	35.21	29.85	0.634+j4.100	0.864+j6.369
COMALCO	COM-115	115	3.72	2.42	4.258+j17.319	10.672+j45.269	4.10	2.66	4.181+j17.308	10.707+j45.552
CONDESA	CDS-230	230	21.48	21.78	1.633+j5.962	2.278+j5.640	25.67	26.63	1.257+j5.549	1.116+j5.022
CONTADERO	CTD-230	230	22.73	21.19	1.423+j5.665	1.389+j7.112	27.38	24.30	1.053+j5.229	1.422+j7.291
CONTRERAS	CRS-230	230	15.76	13.88	1.593+j8.273	1.175+j11.981	18.34	15.52	1.236+j7.868	1.223+j12.346
COVADONGA	CVD-85	85	12.61	1.97	0.694+j3.831	4.629+j66.991	13.56	2.16	0.677+j3.922	4.629+j66.991



**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 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
COYOACÁN	COY-230	230	22.69	23.81	1.461+j5.669	1.539+j4.929	27.22	28.10	1.085+j5.255	1.217+j4.785
COYOTEPEC	CYO-85	85	7.66	3.34	2.003+j6.083	6.633+j30.858	9.84	4.24	1.431+j5.299	7.206+j26.329
CRUZ AZUL	CCZ-230	230	24.97	19.17	0.828+j5.254	2.134+j9.989	31.18	25.02	0.530+j4.654	1.555+j8.021
CUAJIMALPA	CJM-230	230	22.98	22.43	1.294+j5.632	0.801+j6.304	27.53	25.66	0.927+j5.223	0.819+j6.489
CUAUHTÉMOC	CMC-230	230	21.67	20.62	1.144+j6.021	1.256+j7.116	26.01	24.07	0.814+j5.556	1.171+j6.974
CUAUTITLÁN	CTT-85	85	17.46	5.74	0.548+j2.757	2.427+j19.986	21.10	7.77	0.416+j2.525	3.006+j15.485
CULHUACÁN	LUN-230	230	18.74	9.02	1.398+j6.945	1.542+j30.266	22.62	9.94	1.019+j6.376	1.635+j31.271
DEACERO	DCO-85	85	20.80	7.05	0.476+j2.311	1.769+j16.144	24.20	10.38	0.399+j2.195	2.311+j10.935
DEPORTIVA	DVA-230	230	17.05	18.22	1.415+j7.660	0.533+j6.444	19.90	20.46	1.027+j7.267	0.578+j6.816
DEPORTIVA	DVA-400	400	15.02	13.58	2.707+j15.136	1.354+j20.538	19.09	15.99	1.574+j13.211	1.463+j21.089
DIANA	DAA-230	230	21.46	21.95	1.640+j5.967	2.196+j5.509	25.64	26.65	1.264+j5.554	1.138+j4.990
DISTRIBUCIÓN BMX	BMX-85	85	16.92	5.59	0.553+j2.847	2.433+j20.452	19.79	7.47	0.454+j2.690	3.015+j15.967
DISTRIBUCIÓN DRT	DRT-115	115	6.31	4.29	2.329+j10.257	5.321+j24.825	6.97	4.70	2.251+j10.232	5.359+j25.073
DONATO GUERRA	DOG-115	115	28.63	25.67	0.306+j2.299	0.221+j3.123	34.91	29.82	0.182+j2.084	0.262+j3.146
DONATO GUERRA	DOG-115B	115	29.67	26.57	0.312+j2.216	0.233+j3.022	36.41	31.07	0.187+j1.997	0.271+j3.023
DONATO GUERRA	DOG-400	400	16.03	15.27	2.534+j14.186	1.287+j16.641	23.38	20.10	1.272+j10.790	1.695+j16.002
DOS CARLOS	DCA-85	85	5.91	2.51	1.902+j8.087	6.847+j41.514	6.47	2.75	1.890+j8.130	6.970+j41.601
ECATEPEC	ECA-230	230	22.26	19.67	1.061+j5.871	1.516+j8.322	26.74	22.56	0.764+j5.408	1.548+j8.436
EL CARMEN	CRM-85	85	5.59	3.14	2.455+j8.434	7.440+j28.425	6.68	3.87	2.283+j7.757	6.839+j24.747
EL CERRILLO	ECR-230	230	12.70	11.88	2.217+j10.220	1.648+j12.706	14.85	13.39	1.757+j9.678	1.699+j13.036
EL GALLO	ELG-115	115	2.14	1.30	6.931+j30.259	19.879+j88.554	2.98	3.22	4.334+j24.142	1.642+j18.874
EL ROSAL	RSL-230	230	15.67	13.60	1.571+j8.330	1.239+j12.462	18.20	15.20	1.222+j7.932	1.289+j12.819
EL SALTO	SAO-85	85	9.24	7.50	0.819+j5.248	1.698+j8.838	13.53	15.11	0.456+j3.964	0.264+j2.643
EL SALTO	SAO-230	230	6.08	6.56	3.525+j21.558	1.570+j17.003	7.62	7.73	2.494+j19.017	1.740+j18.159
EL VIDRIO	EVD-230	230	14.18	11.12	1.739+j9.204	2.739+j16.975	16.56	12.50	1.400+j8.706	2.838+j17.249
ENERGÍA DEL VALLE DE MÉXICO DOS MANIOBRAS	MAN-230	230	19.82	16.05	1.000+j6.625	1.558+j11.399	22.81	17.79	0.811+j6.353	1.631+j11.744
MANIOBRAS COFUIN	MAN-230	230	9.80	6.81	2.088+j13.394	6.348+j30.822	11.22	7.57	1.819+j12.888	6.436+j31.241
MANIOBRAS SICARTSA	MAN-230	230	11.87	10.63	1.982+j11.005	2.523+j14.448	18.75	14.92	1.023+j7.724	2.561+j13.364
ENERGÍA DEL VALLE DE MÉXICO DOS MANIOBRAS	MAN-400	400	22.60	19.45	1.435+j10.117	1.951+j15.205	27.88	22.57	0.867+j9.072	2.033+j15.451
ESMERALDA	ESR-85	85	10.65	2.95	0.466+j4.583	0.000+j40.867	11.67	3.24	0.436+j4.605	0.000+j40.867
ESMERALDA	ESR-230	230	18.30	18.69	1.158+j7.162	1.097+j6.859	21.52	21.30	0.862+j6.734	1.126+j6.982
ESMERALDA	ESR-230B	230	18.30	18.69	1.158+j7.162	1.097+j6.859	21.52	21.30	0.862+j6.734	1.126+j6.982
ESTADIO	EST-230	230	15.78	15.97	1.500+j8.278	0.770+j8.288	18.36	17.88	1.112+j7.877	0.818+j8.664
ESTRELLA	ETR-230	230	22.11	20.59	1.786+j5.736	2.674+j6.974	27.51	24.47	1.412+j5.119	2.660+j6.868
ESTRELLA	ETR-230B	230	16.75	14.21	2.023+j7.667	3.172+j11.902	20.36	16.45	1.613+j6.991	3.177+j11.935
FERROCARRILES NACIONALES	FNL-230	230	33.53	34.03	0.856+j3.867	0.568+j3.857	42.59	40.46	0.523+j3.389	0.584+j3.973
FERTIMÉX	FTM-230	230	5.99	4.36	3.723+j21.868	11.511+j45.124	8.18	6.04	2.527+j17.680	9.091+j35.913
FISISA	FIS-230	230	15.68	13.19	1.542+j8.328	2.430+j13.198	18.48	14.89	1.174+j7.819	2.495+j13.466
FORD MOTOR COMPANY	FMC-85	85	23.72	7.16	0.378+j2.035	1.537+j16.406	27.71	10.13	0.298+j1.925	2.120+j11.933
FRANCISCO DE LOS REYES	FRR-115	115	1.88	1.15	9.658+j33.982	27.422+j99.517	2.07	1.26	9.578+j33.959	27.466+j99.778
FUNDIDORA MÉXICO	FUM-85	85	21.92	7.02	0.420+j2.199	1.443+j16.497	25.40	9.87	0.343+j2.097	2.026+j12.027
GENERAL MOTORS	GMC-85	85	13.52	7.41	0.716+j3.559	1.369+j12.586	14.95	8.26	0.663+j3.549	1.427+j12.332



**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 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
GUACAMAYAS	GYM-115	115	9.80	9.27	1.197+j6.671	1.277+j7.720	12.37	11.49	0.984+j5.819	1.174+j7.159
GUADALUPE	GUA-85	85	15.12	5.86	0.647+j3.181	2.529+j18.541	17.98	10.26	0.543+j2.953	2.245+j9.591
HÉROES DE CARRANZA	HRC-230	230	10.52	7.80	2.160+j12.436	5.864+j25.234	12.78	9.08	1.682+j11.301	5.845+j24.689
HIPÓDROMO	HIP-85	85	16.17	5.23	0.543+j2.985	3.222+j21.899	18.13	7.53	0.489+j2.937	3.272+j15.244
HUASTECA	HTC-85	85	15.13	4.85	0.630+j3.181	7.163+j22.848	16.95	6.77	0.576+j3.133	7.194+j16.184
HUETAMO	HTM-69	69	1.88	2.21	3.201+j20.999	0.582+j11.644	2.08	2.40	2.645+j20.872	0.641+j12.809
HUETAMO	HTM-115	115	2.45	1.47	6.691+j26.315	19.257+j78.941	3.14	2.52	4.953+j22.729	7.401+j39.708
INDIANILLA	INN-85	85	9.92	0.17	0.658+j4.901	0.458-j876.784	12.74	0.19	0.522+j4.205	0.458-j876.784
INDUSTRIA DE LA DEFENSA NAL.	IDN-85	85	16.54	5.18	0.584+j2.910	5.334+j21.884	18.55	7.40	0.530+j2.862	5.374+j15.224
INDUSTRIA MILITAR	INM-85	85	10.01	3.95	1.029+j4.795	4.737+j27.088	11.13	5.27	0.975+j4.753	4.818+j20.538
INDUSTRIAL SAN CRISTÓBAL	ISC-85	85	15.11	5.49	0.571+j3.197	2.748+j20.163	20.06	13.31	0.394+j2.661	1.103+j6.773
INDUSTRIAS UNIDAS S. A.	INU-115	115	9.61	7.42	1.297+j6.783	2.375+j12.804	10.61	8.08	1.221+j6.774	2.408+j13.096
INFIERNILLO	IFR-69	69	0.56	0.64	31.179+j64.605	6.510+j44.374	0.99	1.02	20.426+j39.159	6.832+j41.342
INSURGENTES	INS-85	85	18.29	6.76	0.525+j2.632	1.688+j16.412	23.25	14.74	0.382+j2.290	0.998+j6.307
IROLO	IRO-230	230	13.19	10.36	1.565+j9.943	3.037+j18.142	15.08	11.45	1.348+j9.595	3.160+j18.651
IUSASOL 1	IUN-115	115	15.28	14.35	0.626+j4.300	0.403+j5.182	16.89	15.48	0.549+j4.288	0.437+j5.478
IXTAPALUCA	IXL-230	230	21.72	21.24	1.096+j6.015	0.693+j6.643	25.45	24.16	0.808+j5.682	0.708+j6.701
IXTAPAN DE LA SAL	IXS-115	115	2.39	1.37	5.910+j27.093	18.997+j88.236	4.21	2.83	3.683+j16.947	9.359+j41.883
IXTAPANTONGO	IXT-115	115	11.19	7.58	1.133+j5.826	2.660+j14.171	13.83	10.88	0.837+j5.215	1.379+j9.432
IXTLAHUACA DOS	ITD-115	115	10.30	8.00	1.139+j6.344	1.716+j11.878	11.37	8.71	1.063+j6.333	1.751+j12.161
IZTAPALAPA	IZT-230	230	20.46	19.10	1.283+j6.362	0.966+j7.982	25.40	22.47	0.874+j5.685	0.971+j8.015
JABÓN LA CORONA	JLC-230	230	23.09	20.83	0.996+j5.664	1.312+j7.641	27.60	23.80	0.706+j5.244	1.353+j7.789
JAMAICA	JAM-85	85	10.82	0.17	0.504+j4.508	0.041-j877.953	14.10	0.19	0.370+j3.811	0.041-j877.953
JAMAICA	JAM-230	230	19.39	20.31	1.377+j6.708	0.813+j6.035	23.64	24.14	0.993+j6.099	0.766+j5.830
JASSO	JAS-85	85	16.19	2.97	0.352+j3.011	6.895+j43.058	17.25	3.24	0.334+j3.112	6.939+j43.132
JASSO	JAS-230	230	25.65	22.28	0.798+j5.116	1.100+j7.514	32.33	26.82	0.498+j4.490	1.145+j7.231
JILOTEPEC	JIL-115	115	7.96	6.36	1.561+j8.197	2.666+j14.433	9.04	7.05	1.366+j7.964	2.725+j14.677
JILOTEPEC INDUSTRIAL	JID-115	115	7.25	5.63	1.685+j9.006	3.147+j16.791	8.24	6.24	1.476+j8.735	3.213+j17.064
JILOTEPEC POTENCIA	JIP-115	115	8.38	7.04	1.436+j7.796	2.223+j12.269	9.58	7.82	1.228+j7.525	2.288+j12.542
JILOTEPEC POTENCIA	JIP-230	230	4.94	4.12	5.054+j26.396	8.395+j42.093	5.91	4.72	4.083+j24.361	8.623+j42.531
JOROBAS	JRB-230	230	25.11	20.27	0.920+j5.208	1.764+j8.982	31.33	24.25	0.612+j4.622	1.746+j8.594
JUANDO	JUA-85	85	6.69	2.65	2.078+j7.032	6.970+j40.458	7.32	2.90	2.058+j7.078	7.034+j40.537
JUCHITEPEC	JCP-85	85	6.68	1.54	1.483+j7.201	7.490+j80.734	7.25	1.69	1.473+j7.301	7.490+j80.734
JUGOS DEL VALLE	JDV-85	85	7.11	3.10	2.067+j6.585	7.073+j33.227	8.84	3.87	1.551+j5.905	7.645+j28.701
JUGOSMEX	JMX-85	85	18.46	6.56	0.504+j2.611	2.057+j17.054	22.75	11.90	0.397+j2.340	1.981+j8.684
KILOMETRO 110	KMC-85	85	10.32	4.61	0.778+j4.692	4.003+j22.085	11.78	5.41	0.753+j4.519	3.964+j20.412
KILOMETRO 110	KMC-230	230	10.75	10.78	1.906+j12.205	1.692+j12.200	12.99	12.38	1.450+j11.151	1.787+j12.763
KILOMETRO 42	KCD-85	85	2.16	1.06	9.121+j20.800	44.499+j82.098	2.39	1.19	9.096+j20.626	44.043+j79.860
KILOMETRO 48	KCO-85	85	4.38	2.69	2.003+j11.014	5.291+j31.916	6.19	3.80	1.640+j8.570	4.257+j24.649
KILOMETRO CERO	KCR-230	230	22.49	21.47	1.079+j5.805	0.870+j6.862	27.09	25.06	0.749+j5.339	0.839+j6.748
LA CEIBA	LAC-115	115	2.59	1.59	5.937+j24.911	16.822+j72.340	3.50	3.28	3.971+j20.495	3.642+j24.790
LA COSTEÑA	LCT-85	85	18.13	6.48	0.480+j2.664	1.935+j17.263	23.27	14.06	0.348+j2.294	1.301+j6.807



**Niveles de cortocircuito de la Red Nacional de Transmisión
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Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
LA ESTANCIA	LES-115	115	6.17	4.20	2.868+j10.377	6.886+j24.947	7.02	4.74	2.691+j10.047	6.836+j24.517
LA LOMA	LOM-85	85	14.75	5.51	0.689+j3.256	2.919+j19.924	16.60	7.76	0.630+j3.190	3.233+j14.061
LA MIRA	MIR-115	115	6.61	5.60	2.154+j9.817	2.777+j15.085	8.14	7.36	1.917+j8.764	1.895+j11.675
LA PAZ	LAP-230	230	28.24	31.06	0.915+j4.612	0.333+j3.554	33.79	35.74	0.629+j4.277	0.352+j3.675
LA PAZ	LAP-400	400	26.74	26.84	1.872+j8.430	0.916+j8.790	35.02	32.77	1.058+j7.176	0.933+j8.816
LA QUEBRADA	LAQ-85	85	17.71	6.48	0.568+j2.712	2.033+j17.150	20.51	9.38	0.489+j2.586	2.560+j11.775
LAFARGE	LFG-230	230	20.70	15.55	0.950+j6.345	2.229+j12.663	25.23	18.12	0.654+j5.753	2.253+j12.421
LAGO	LGO-230	230	22.73	24.01	0.875+j5.776	0.781+j4.957	26.55	27.10	0.612+j5.468	0.822+j5.161
LAGO	LGO-400	400	24.07	15.51	1.659+j9.448	3.657+j25.437	30.52	17.59	0.956+j8.269	3.866+j26.470
LAGO DE GUADALUPE	LDG-230	230	27.34	24.07	0.998+j4.753	1.046+j6.873	33.78	27.99	0.658+j4.273	1.063+j6.976
LAS AMÉRICAS	LAR-230	230	24.41	18.03	0.907+j5.364	2.252+j11.069	30.05	21.22	0.597+j4.824	2.211+j10.744
LÁZARO CÁRDENAS DISTRIBUCIÓN	LCD-115	115	9.72	9.29	1.230+j6.722	1.220+j7.559	12.26	11.25	1.017+j5.869	1.256+j7.442
LÁZARO CÁRDENAS POTENCIA	LCP-115	115	14.87	16.01	0.487+j4.437	0.185+j3.405	20.39	21.06	0.296+j3.570	0.198+j3.205
LÁZARO CÁRDENAS POTENCIA	LCP-230	230	16.75	19.71	1.245+j7.829	0.188+j3.925	32.59	37.18	0.388+j4.466	0.142+j2.634
LÁZARO CÁRDENAS POTENCIA	LCP-400	400	11.95	13.15	2.744+j19.134	0.787+j12.984	29.46	32.33	0.587+j8.604	0.314+j5.593
LECHERÍA	LEC-85	85	25.87	8.02	0.380+j1.859	1.242+j14.574	30.39	12.21	0.305+j1.750	1.816+j9.570
LERMA	LER-85	85	0.87	0.46	14.672+j54.608	50.733+j198.643	2.56	2.80	2.351+j20.951	0.341+j10.277
LIQUIMEX	LQX-85	85	9.81	4.00	1.426+j4.797	5.003+j26.475	12.04	5.13	1.125+j4.340	5.576+j21.952
LOMAS VERDES	LVE-230	230	21.99	19.16	1.243+j5.908	1.499+j8.711	26.53	21.94	0.885+j5.434	1.542+j8.890
LOS REYES	RES-85	85	18.76	2.47	0.408+j2.583	1.987+j54.300	20.27	2.72	0.379+j2.636	1.987+j54.300
LOS REYES	RES-230	230	25.62	27.10	0.983+j5.089	0.474+j4.454	30.57	31.13	0.692+j4.728	0.492+j4.568
MADERO	MAD-230	230	23.33	23.94	0.947+j5.612	1.008+j5.274	27.71	27.32	0.667+j5.230	1.040+j5.464
MAGDALENA	MAG-85	85	21.24	2.07	0.362+j2.282	5.736+j66.309	23.64	2.28	0.304+j2.263	5.736+j66.309
MAGDALENA	MAG-230	230	25.33	26.16	1.090+j5.127	0.738+j4.852	31.96	31.48	0.714+j4.514	0.743+j4.802
MANIOBRAS ASL	ASL-MAN	230	15.63	11.61	1.156+j8.416	2.708+j17.192	18.11	12.84	0.893+j8.016	2.859+j17.826
MATILDE	MAT-85	85	3.19	1.40	3.295+j15.023	16.536+j72.726	3.50	1.53	3.274+j15.082	16.580+j72.799
MERCED (A)	MER-230	230	17.57	17.57	1.546+j7.398	1.137+j7.644	21.21	20.61	1.162+j6.789	1.109+j7.493
MERCED (B)	MER-230B	230	17.57	17.57	1.546+j7.398	1.137+j7.644	21.21	20.61	1.162+j6.789	1.109+j7.493
MILAGROS	MGR-85	85	12.97	2.30	0.722+j3.715	2.621+j56.464	14.21	2.53	0.683+j3.738	2.621+j56.464
MILLÁN DOS	MDO-400	400	15.25	13.99	2.590+j14.924	1.391+j19.337	21.57	17.93	1.336+j11.703	1.743+j18.797
MINERA TIZAPA	MTI-115	115	7.46	5.52	1.709+j8.733	3.291+j17.997	8.84	6.93	1.425+j8.140	2.498+j14.876
MOCTEZUMA	MZA-85	85	8.68	2.63	0.727+j5.610	1.266+j44.922	9.55	2.89	0.693+j5.607	1.266+j44.922
MORALES	MOS-85	85	18.08	5.54	0.477+j2.672	3.027+j20.955	20.31	8.14	0.423+j2.623	3.077+j14.300
MORALES	MOS-230	230	18.35	3.67	1.426+j7.096	2.430+j94.252	21.73	20.86	1.095+j6.632	1.589+j7.494
MORELOS	MOR-230	230	11.23	9.27	1.911+j11.665	3.435+j19.251	12.81	10.23	1.577+j11.296	3.568+j19.826
NACEL Y NACOBRE	NYN-85	85	12.78	5.26	0.821+j3.751	2.779+j20.172	14.34	7.06	0.764+j3.686	3.336+j15.101
NARVARTE	NAR-230	230	21.87	22.90	1.578+j5.862	1.726+j5.116	26.18	27.29	1.202+j5.449	1.160+j4.833
NAUCALPAN	NAU-85	85	18.06	6.42	0.547+j2.662	1.676+j17.480	20.94	11.13	0.471+j2.535	1.432+j9.320
NECAXA	NEC-85A	85	8.42	6.51	1.024+j5.737	2.246+j10.740	12.10	12.51	0.640+j4.416	0.557+j3.900
NECAXA	NEC-85B	85	8.42	6.51	1.024+j5.737	2.246+j10.740	12.08	12.49	0.643+j4.422	0.557+j3.900
NECAXA	NEC-85C	85	8.42	6.51	1.024+j5.737	2.246+j10.740	12.08	12.49	0.643+j4.422	0.557+j3.900
NECAXA	NEC-85D	85	8.42	6.51	1.024+j5.737	2.246+j10.740	12.13	12.54	0.633+j4.403	0.557+j3.900



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
NESTLÉ	NLE-85	85	12.75	6.81	0.781+j3.768	1.615+j13.878	14.04	7.56	0.732+j3.775	1.670+j13.660
NETZAHUALCÓYOTL	NET-85	85	15.15	2.43	0.582+j3.187	1.911+j54.218	16.57	2.67	0.545+j3.211	1.911+j54.218
NISSAN	NIS-85	85	10.70	5.40	0.974+j4.483	2.635+j17.920	11.69	5.95	0.934+j4.523	2.685+j17.770
NOCHISTONGO	NOC-115	115	7.71	7.17	0.990+j8.559	0.744+j10.532	8.10	7.49	0.997+j8.959	0.774+j11.207
NOCHISTONGO	NOC-230	230	30.75	26.11	0.791+j4.246	1.235+j6.575	39.32	32.51	0.485+j3.683	1.121+j5.970
NONOALCO	NON-85	85	26.53	8.05	0.332+j1.820	1.199+j14.596	36.30	27.98	0.199+j1.474	0.157+j2.855
NOPALA	NOP-230A	230	27.77	27.95	1.025+j4.671	0.646+j4.768	34.13	32.39	0.669+j4.228	0.688+j4.973
NOPALA	NOP-230B	230	27.77	27.95	1.025+j4.671	0.646+j4.768	34.13	32.39	0.669+j4.228	0.688+j4.973
NOPALA	NOP-230C	230	27.86	28.26	1.021+j4.656	0.616+j4.645	34.25	32.76	0.666+j4.213	0.656+j4.850
NOPALA	NOP-400	400	25.63	27.74	2.167+j8.747	0.718+j7.222	34.84	34.63	1.150+j7.201	0.774+j7.476
NUEVO AEROUERTO INTERNACIONAL MANIOBRAS	NAI-MAN	230	21.93	23.24	0.936+j5.981	0.878+j5.065	25.74	26.35	0.665+j5.635	0.916+j5.266
NUEVO FANAL	NFA-85	85	20.21	6.95	0.492+j2.378	1.812+j16.312	23.49	10.20	0.415+j2.260	2.352+j11.078
NUTRIGO	NTG-115	115	8.28	6.08	1.569+j7.861	2.945+j16.450	9.14	6.64	1.492+j7.850	2.980+j16.733
OCEANÍA	OCE-230	230	16.54	15.71	1.695+j7.847	3.193+j8.942	19.86	18.33	1.311+j7.238	3.164+j8.790
OCEANÍA	OCE-230B	230	15.14	12.62	1.574+j8.628	8.945+j12.014	17.60	14.33	1.278+j8.200	8.775+j12.056
ODÓN DE BUEN	ODB-230	230	14.93	13.26	1.757+j8.721	2.089+j12.229	17.31	14.78	1.385+j8.324	2.190+j12.649
OLIVAR	OLI-230	230	22.83	23.78	1.388+j5.649	0.911+j5.180	27.38	27.21	1.014+j5.238	0.959+j5.421
OTUMBA	OTM-230	230	18.79	15.09	1.052+j6.989	1.707+j12.237	21.58	16.72	0.863+j6.714	1.782+j12.592
PACHUCA	PAC-85	85	9.46	3.67	1.268+j5.032	4.443+j29.419	10.32	4.02	1.256+j5.075	4.566+j29.505
PACHUCA POTENCIA	PHP-230	230	12.31	13.05	1.222+j10.715	0.836+j8.956	13.99	14.41	0.964+j10.400	0.895+j9.465
PACHUCA POTENCIA	PHP-400	400	11.48	9.54	2.332+j19.976	4.293+j32.218	13.68	10.84	1.615+j18.502	4.563+j32.841
PALIZADA	PLZ-115	115	8.07	5.26	2.164+j7.935	5.663+j20.647	9.07	5.83	2.064+j7.783	5.683+j20.682
PANTITLAN	PNT-85	85	11.04	2.08	0.924+j4.347	4.344+j61.921	12.16	2.29	0.879+j4.351	4.344+j61.921
PAPELERA EL NEVADO	PDO-115	115	4.12	2.44	3.408+j15.733	9.746+j48.279	4.61	2.71	3.272+j15.517	9.783+j48.255
PAPELERA SAN RAFAEL	PSR-85	85	4.03	1.22	3.108+j11.777	12.529+j95.934	4.40	1.34	3.099+j11.877	12.529+j95.934
PAPELES HIGIÉNICOS DEL CENTRO	PHC-230	230	11.37	8.48	1.809+j11.536	4.296+j23.316	12.99	9.39	1.574+j11.131	4.406+j23.788
PARQUE INDUSTRIAL	PQI-115	115	6.57	5.29	1.642+j9.966	2.949+j17.257	7.04	5.65	1.619+j10.243	2.972+j17.791
PARQUE INDUSTRIAL REFORMA	PIR-85	85	11.51	3.25	0.710+j4.203	7.491+j36.053	12.34	3.57	0.722+j4.316	7.636+j35.813
PASO DE CORTES	PDC-115	115	2.64	1.60	7.896+j23.858	22.530+j70.547	2.92	1.77	7.821+j23.741	22.525+j70.526
PATERA	PAT-85	85	13.96	5.59	0.648+j3.454	2.269+j19.266	15.69	7.60	0.591+j3.389	2.826+j14.194
PATLA	PTL-85	85	5.93	4.92	1.936+j8.045	3.422+j12.941	8.33	8.24	1.322+j6.342	1.356+j6.489
PEMEX	PEX-85	85	15.02	4.77	0.636+j3.205	8.526+j22.919	16.82	6.60	0.582+j3.157	8.555+j16.255
PEMEX	PEX-85B	85	7.84	0.17	0.787+j6.209	0.187-j877.409	9.73	0.19	0.651+j5.512	0.187-j877.409
PEMEX	PMX-230	230	27.81	26.53	0.760+j4.715	0.519+j5.506	36.05	33.99	0.462+j4.025	0.450+j4.772
PEMEX AZCAPOTZALCO	PXA-85	85	16.29	6.10	0.593+j2.954	1.817+j18.107	19.07	10.84	0.506+j2.786	1.414+j9.208
PEMEX -ZLCP	PMX-115	115	5.41	4.88	2.498+j12.016	3.558+j15.756	6.41	5.65	2.294+j11.155	3.580+j15.601
PEMEX -ZLCP	PMX-115	115	6.64	6.16	0.354+j9.988	0.617+j12.342	8.47	10.07	0.218+j8.620	0.226+j4.516
PENSADOR	PEN-230	230	20.94	18.89	1.184+j6.231	2.761+j8.159	25.06	21.89	0.854+j5.765	2.790+j8.071
PENWALT	PEW-85	85	19.82	7.21	0.449+j2.435	1.552+j15.442	24.19	13.20	0.354+j2.203	1.598+j7.684
PERALVILLO	PEV-230	230	17.31	16.20	1.222+j7.576	3.783+j8.765	20.27	18.51	0.926+j7.147	3.613+j8.807
PITIRERA	PIT-230A	230	11.28	12.34	1.443+j11.686	0.661+j8.403	17.17	17.89	0.664+j8.481	0.463+j7.333
PITIRERA	PIT-230B	230	11.28	12.34	1.443+j11.686	0.661+j8.403	17.17	17.89	0.664+j8.481	0.463+j7.333



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
PITIRERA	PIT-230C	230	11.28	12.34	1.443+j11.686	0.661+j8.403	17.17	17.89	0.664+j8.481	0.463+j7.333
PITIRERA	PIT-230D	230	11.28	12.34	1.443+j11.686	0.661+j8.403	17.17	17.89	0.664+j8.481	0.463+j7.333
PITIRERA	PIT-400	400	11.03	10.68	2.933+j20.722	2.922+j22.044	25.51	26.80	0.734+j9.931	0.624+j7.864
PLACERES DEL ORO	PLO-115	115	1.64	0.96	11.139+j38.971	34.919+j121.365	1.91	1.25	10.007+j36.884	26.139+j96.018
POLANCO	POO-230	230	29.81	29.45	1.057+j4.328	2.654+j4.114	37.22	34.77	0.691+j3.863	2.703+j4.242
PROCTER & GAMBLE	PYG-230	230	24.77	19.88	0.941+j5.277	1.970+j9.188	30.86	23.75	0.633+j4.691	1.952+j8.800
PRODUCTORA MEXICANA DE TUB.	PMT-115	115	6.72	5.92	2.037+j9.673	2.787+j13.475	8.11	6.89	1.823+j8.820	2.851+j13.445
PROGRESO	PGS-85	85	3.43	1.60	4.680+j13.525	14.834+j61.832	3.76	1.76	4.660+j13.570	14.899+j61.911
PROPISEX	PRO-85	85	13.05	6.85	0.767+j3.683	1.529+j13.951	14.33	7.58	0.720+j3.697	1.584+j13.764
PUERTA DE HIERRO	PTH-85	85	7.07	4.89	1.282+j6.819	1.600+j16.211	8.59	5.85	1.132+j6.181	1.626+j15.031
PUESTO CENTRAL DE CONTROL	PCC-85	85	9.70	0.17	0.693+j5.014	0.566-j876.484	12.40	0.19	0.559+j4.317	0.566-j876.484
PUESTO CENTRAL DE CONTROL	PCC-85B	85	20.95	6.50	0.503+j2.288	6.104+j16.973	27.30	15.05	0.370+j1.943	5.037+j5.224
REFORMA	REF-85	85	12.11	4.56	0.875+j3.955	4.003+j23.900	13.50	6.29	0.822+j3.913	4.083+j17.351
REMEDIOS	REM-85	85	33.55	8.39	0.264+j1.439	1.077+j14.629	38.32	14.78	0.212+j1.393	1.160+j8.086
REMEDIOS	REM-230	230	35.26	40.74	0.947+j3.644	0.268+j2.364	45.21	49.18	0.582+j3.178	0.285+j2.488
ROBERT BOSCH	RBS-85	85	12.80	6.93	0.770+j3.755	1.532+j13.555	14.12	7.70	0.720+j3.754	1.587+j13.324
SAFIMEX	SAF-85	85	13.76	7.17	0.715+j3.494	1.298+j13.410	15.08	7.92	0.670+j3.517	1.348+j13.231
SAN ANDRÉS	ANS-85	85	14.44	1.91	0.606+j3.344	6.955+j70.174	16.01	2.10	0.548+j3.326	6.955+j70.174
SAN ÁNGEL	SNG-230	230	23.76	25.86	1.375+j5.417	0.750+j4.308	28.63	29.67	1.000+j5.003	0.809+j4.568
SAN BERNABÉ	BRN-230	230	28.38	31.14	1.115+j4.545	0.372+j3.566	34.68	36.15	0.753+j4.144	0.390+j3.748
SAN BERNABÉ	BRN-400	400	25.31	25.96	2.193+j8.857	1.067+j8.681	33.93	31.90	1.195+j7.391	1.117+j8.947
SAN DIEGO	SDI-85	85	7.15	4.95	1.268+j6.743	1.569+j16.039	8.67	5.90	1.120+j6.127	1.601+j14.910
SAN FELIPE DEL PROGRESO	FPG-115	115	4.35	2.81	3.706+j14.823	9.600+j39.068	4.79	3.08	3.630+j14.814	9.634+j39.360
SAN FRANCISCO	SSO-85	85	12.83	7.60	0.771+j3.746	1.019+j11.763	14.23	8.40	0.716+j3.725	1.092+j11.676
SAN FRANCISCO SOYANIQUILPAN	SFS-230	230	6.07	6.01	4.193+j21.467	2.960+j22.418	7.57	7.08	3.142+j19.033	3.243+j22.883
SAN ISIDRO	ISO-115	115	6.53	5.36	2.189+j9.931	3.274+j16.416	7.99	7.39	1.957+j8.924	1.694+j11.235
SAN MATEO	SMT-115	115	5.05	2.99	2.624+j12.873	7.482+j39.569	5.66	3.32	2.489+j12.655	7.519+j39.544
SAN SEBASTIÁN	SSE-115	115	4.25	2.91	3.713+j15.169	10.696+j35.702	4.71	3.20	3.613+j15.082	10.723+j35.864
SANTA CRUZ	CRU-230	230	30.02	34.94	0.978+j4.314	0.262+j2.705	38.99	43.71	0.605+j3.697	0.248+j2.599
SANTA CRUZ	CRU-400	400	25.85	25.78	1.965+j8.714	1.144+j9.240	33.90	31.89	1.120+j7.409	1.080+j8.968
SANTA FÉ	SFE-230	230	23.05	22.16	1.396+j5.591	1.205+j6.480	27.77	25.46	1.025+j5.160	1.227+j6.644
SANTIAGO TLAUTLA	STU-115	115	4.92	3.50	3.316+j13.092	7.494+j28.901	5.36	3.81	3.259+j13.236	7.515+j29.304
SECRETARÍA DE SEGURIDAD PÚBLICA	SSP-85	85	10.48	4.09	0.988+j4.579	4.516+j26.292	11.66	5.49	0.934+j4.536	4.596+j19.742
SMURFIT KAPPA	SKP-85	85	10.70	4.42	0.811+j4.514	3.598+j23.905	11.84	5.63	0.766+j4.493	4.240+j19.205
SUBESTACIÓN CINCO BOMBEO	ENB-115	115	12.46	7.95	0.864+j5.259	2.378+j14.194	14.66	8.99	0.665+j4.939	2.413+j14.189
SUBESTACIÓN CUATRO BOMBEO	ECB-115	115	25.85	20.97	0.367+j2.542	0.495+j4.343	31.37	24.27	0.234+j2.316	0.530+j4.335
SUBESTACIÓN DOS BOMBEO	EDB-115	115	13.91	9.46	0.824+j4.702	1.902+j11.359	16.57	11.34	0.628+j4.363	1.730+j10.344
SUBESTACIÓN SEIS BOMBEO	ESB-115	115	13.99	9.49	0.765+j4.683	1.819+j11.368	16.35	10.71	0.612+j4.425	1.854+j11.360
SUBESTACIÓN TRES BOMBEO	ETB-115	115	21.95	16.55	0.441+j2.993	0.791+j5.939	26.35	18.99	0.306+j2.755	0.826+j5.932
SUBESTACIÓN UNO BOMBEO	EUB-115	115	10.67	6.68	1.080+j6.126	3.100+j17.098	12.34	7.94	0.892+j5.852	2.768+j15.480
TACUBA	TAC-85	85	17.39	6.39	0.569+j2.764	1.710+j17.404	21.05	13.07	0.460+j2.522	1.029+j7.245
TACUBAYA	TYA-85	85	9.68	3.87	1.068+j4.956	5.045+j27.533	10.76	5.13	1.015+j4.914	5.125+j20.983



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
TACUBAYA	TYA-230	230	21.98	21.42	1.498+j5.852	1.028+j6.597	26.31	26.98	1.122+j5.438	1.012+j5.109
TAXQUEÑA	TAX-85	85	13.88	1.81	0.577+j3.489	8.179+j74.052	15.16	1.99	0.535+j3.520	8.179+j74.052
TAXQUEÑA	TAX-230	230	13.50	11.40	1.818+j9.669	2.461+j15.231	15.54	12.65	1.451+j9.287	2.576+j15.709
TAXQUEÑA	TAX-230B	230	13.50	11.40	1.818+j9.669	2.461+j15.231	15.54	12.65	1.451+j9.287	2.576+j15.709
TECÁMAC	TCM-230	230	16.46	12.60	1.107+j7.990	2.183+j15.430	19.09	13.93	0.849+j7.605	2.319+j16.034
TECAMACHALCO	TEH-230	230	23.07	20.89	1.434+j5.574	1.717+j7.488	27.87	24.00	1.066+j5.131	1.744+j7.637
TEJUPILCO	TJP-115	115	8.01	6.63	1.747+j8.099	2.655+j13.239	9.31	7.70	1.541+j7.693	2.572+j12.511
TEOLOAPAN	TLP-69	69	0.87	1.10	18.277+j41.895	2.069+j17.394	0.97	1.20	17.686+j41.753	2.344+j18.918
TENANGO DEL VALLE	TDV-85	85	5.43	4.07	2.169+j8.781	1.744+j18.162	6.00	4.45	2.104+j8.752	1.831+j18.417
TEOTIHUACÁN	TTH-230	230	35.92	34.41	0.653+j3.639	0.515+j4.237	43.69	39.49	0.423+j3.317	0.549+j4.411
TEOTIHUACÁN	TTH-400	400	31.37	31.60	1.451+j7.216	0.772+j7.372	41.81	38.77	0.761+j6.028	0.814+j7.527
TEPEXIC	TEP-85	85	7.55	5.54	1.348+j6.355	3.021+j13.222	10.78	10.64	0.890+j4.927	0.778+j5.071
TEXCALTITLAN	TTT-115	115	5.84	4.82	2.392+j11.116	3.698+j18.262	6.90	5.66	2.114+j10.378	3.497+j17.171
TEXCOCO	TEX-230	230	43.48	45.99	0.602+j2.994	0.310+j2.630	55.24	54.79	0.355+j2.620	0.333+j2.728
TEXCOCO	TEX-400	400	32.63	34.68	1.502+j6.917	0.615+j6.017	44.30	43.31	0.780+j5.682	0.647+j6.171
TIANGUISTENCO	TIA-230	230	10.17	8.81	2.685+j12.778	2.729+j19.027	11.79	9.84	2.198+j12.194	2.853+j19.551
TINGAMBATO	TIN-115	115	5.73	4.57	2.205+j11.367	3.857+j20.073	7.39	6.85	1.555+j9.763	1.620+j12.024
TIQUICHEO	TQC-115	115	1.91	1.16	7.961+j33.902	22.916+j100.062	2.43	1.93	5.984+j29.497	9.571+j52.196
TIZAPA MANIOBRAS	TMA-115	115	8.24	6.25	1.552+j7.909	2.831+j15.513	9.84	7.99	1.269+j7.315	2.037+j12.392
TIZAYUCA	TIZ-230	230	15.00	11.84	1.252+j8.767	2.156+j15.861	17.46	13.16	0.969+j8.308	2.285+j16.431
TLAPEHUALA	TPA-115	115	2.47	1.47	7.992+j25.636	24.468+j78.328	3.00	2.19	6.708+j23.427	13.383+j49.765
TLATELULCO MÓVIL	TTO-85	85	10.50	6.81	0.982+j4.570	1.048+j12.316	11.64	7.42	0.925+j4.546	1.157+j12.539
TOLUCA	TOL-85	85	15.76	8.93	0.576+j3.060	0.653+j10.309	17.50	10.00	0.522+j3.040	0.710+j10.021
TOLUCA	TOL-230	230	14.99	15.04	1.864+j8.658	0.960+j8.912	17.68	16.99	1.414+j8.141	1.020+j9.307
TOLUCA 2000	TDK-230	230	11.62	10.18	2.340+j11.181	1.981+j16.341	13.49	11.40	1.899+j10.664	2.052+j16.759
TOPILEJO	TOP-230	230	23.86	24.43	1.079+j5.459	0.518+j5.316	28.41	27.65	0.747+j5.087	0.558+j5.617
TOPILEJO	TOP-400	400	26.71	27.49	1.996+j8.412	1.146+j8.099	35.39	33.68	1.106+j7.092	1.187+j8.293
TOTOLTEPEC	TTC-230	230	14.19	13.77	2.045+j9.130	1.411+j10.319	16.76	15.61	1.577+j8.571	1.461+j10.644
TRATAMIENTO AGUAS RESIDUALES	RAT-230	230	25.13	18.91	0.836+j5.217	2.238+j10.331	31.31	25.68	0.539+j4.633	1.334+j7.639
TREN INTERURBANO MÉXICO-TOLUCA DOS	TTD-230	230	20.83	19.53	1.384+j6.222	1.479+j7.646	24.75	22.24	1.015+j5.814	1.498+j7.828
TREN INTERURBANO MÉXICO-TOLUCA UNO	TTU-230	230	14.91	11.96	1.643+j8.752	3.118+j15.314	17.35	13.46	1.266+j8.325	3.132+j15.473
TREN SUBURBANO	TSU-230	230	23.28	21.50	1.081+j5.602	1.643+j7.056	28.46	24.65	0.720+j5.082	1.744+j7.377
TRIMEX	TRX-85	85	18.99	6.06	0.484+j2.538	2.301+j19.060	22.63	8.27	0.374+j2.356	2.880+j14.567
TULA	TUL-230	230	34.88	37.21	0.621+j3.756	0.229+j3.154	47.07	51.76	0.327+j3.086	0.123+j2.265
TULA	TUL-400	400	27.68	24.68	1.557+j8.197	1.618+j11.452	39.22	37.37	0.721+j6.437	0.715+j7.449
TULANCINGO	TLG-85	85	6.71	3.23	1.889+j7.068	7.266+j30.085	7.51	3.68	1.849+j6.949	7.264+j28.779
UNIVERSIDADES	UNI-85	85	9.26	3.49	1.224+j5.157	5.122+j31.159	10.09	3.83	1.215+j5.208	5.249+j31.186
VALLE DE MÉXICO (230 KV)	VAE-230	230	45.26	48.42	0.541+j2.884	0.302+j2.427	58.12	63.07	0.316+j2.493	0.186+j1.953
VALLE DE MÉXICO (85 KV)	VDM-85	85	12.13	4.15	0.615+j4.000	3.965+j27.137	20.56	23.54	0.261+j2.613	0.102+j1.803
VALLE SAN PEDRO	VAP-230	230	16.52	11.83	1.323+j7.929	2.358+j17.548	19.31	13.30	1.035+j7.495	2.394+j17.701
VALLE TULANCINGO	VTU-85	85	5.08	2.91	2.606+j9.294	7.657+j30.351	5.67	3.32	2.568+j9.160	7.632+j28.855
VALLEJO	VAJ-85	85	18.12	6.47	0.422+j2.675	1.565+j17.333	20.14	8.92	0.377+j2.654	2.207+j12.634



**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 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
VALLEJO	VAJ-230	230	23.28	21.50	1.081+j5.602	1.643+j7.056	28.46	24.65	0.720+j5.082	1.744+j7.377
VERÓNICA	VRN-85	85	14.49	4.92	0.651+j3.325	3.548+j22.915	16.21	6.96	0.597+j3.277	3.598+j16.259
VERÓNICA	VRN-85B	85	8.06	0.17	0.740+j6.040	0.053-j877.911	10.04	0.19	0.604+j5.343	0.053-j877.911
VERÓNICA	VRN-230	230	20.45	3.71	1.313+j6.358	2.577+j94.607	24.45	22.83	0.982+j5.893	1.476+j7.196
VERTIZ	VER-230	230	18.79	18.88	1.411+j6.926	1.971+j6.847	22.82	22.32	1.027+j6.317	1.968+j6.663
VICTORIA	VIC-85	85	26.45	7.73	0.340+j1.824	1.221+j15.354	31.00	11.18	0.263+j1.722	1.804+j10.884
VICTORIA	VIC-230	230	37.32	41.01	0.809+j3.465	0.282+j2.704	48.29	49.58	0.475+j2.988	0.299+j2.820
VICTORIA	VIC-400	400	24.46	23.47	2.031+j9.222	1.476+j10.797	32.60	28.88	1.074+j7.717	1.526+j10.779
VIDRIERA LOS REYES	VLR-85	85	11.23	4.58	0.768+j4.303	3.408+j23.179	12.43	5.87	0.723+j4.283	4.050+j18.479
VIDRIERA TOLUCA	VDT-85	85	14.87	7.51	0.657+j3.234	1.237+j13.013	16.25	8.29	0.614+j3.266	1.287+j12.850
VIDRIO PLANO	VPM-85	85	11.91	5.17	0.783+j4.044	2.493+j20.165	13.52	7.17	0.714+j3.927	2.866+j14.360
VILLA DE LAS FLORES	VDF-85	85	7.61	3.11	1.318+j6.314	6.832+j33.893	10.04	5.87	0.950+j5.292	4.746+j16.297
VILLA GUERRERO	VGU-115	115	1.97	1.12	7.878+j32.831	24.232+j107.167	3.12	2.01	5.595+j22.740	14.584+j60.792
VILLITA	VIL-115	115	11.43	11.16	0.909+j5.737	0.802+j6.068	14.79	14.55	0.700+j4.888	0.568+j5.150
VILLITA	VIL-230	230	11.48	10.38	2.028+j11.388	2.904+j14.557	20.21	22.31	0.864+j7.175	0.490+j5.357
VITO	VIT-85	85	10.27	2.88	0.850+j4.701	6.480+j41.047	11.19	3.16	0.825+j4.754	6.524+j41.120
VITRO FIBRAS	VFI-85	85	11.99	5.17	0.777+j4.018	2.518+j20.200	13.59	7.14	0.709+j3.908	2.905+j14.486
VOLCÁN GORDO	VOG-115	115	8.89	9.14	1.299+j7.352	0.454+j6.916	10.33	10.55	1.108+j6.982	0.509+j6.637
VOLCÁN GORDO	VOG-400	400	7.51	5.84	4.038+j30.473	4.026+j57.253	9.30	6.83	2.679+j27.180	4.341+j56.745
XALOSTOC	XAL-230	230	21.67	20.01	1.039+j6.040	1.250+j7.681	25.76	22.79	0.748+j5.620	1.296+j7.864
XICOTEPEC	XIP-85	85	7.26	7.89	1.366+j6.624	0.307+j5.147	10.12	11.55	0.950+j5.248	0.413+j3.257
XOCHIMILCO	XOC-230	230	19.67	18.59	1.347+j6.615	1.361+j8.000	23.86	21.46	0.968+j6.046	1.410+j8.154
XOCHITLA	XCH-230	230	22.32	15.86	0.980+j5.868	2.671+j13.034	27.06	18.27	0.662+j5.358	2.684+j12.966
YEBUCIBI	YBC-115	115	7.72	5.21	2.169+j8.317	5.351+j20.381	8.61	5.74	2.078+j8.221	5.377+j20.520
ZAPATA ENVASES	ZAE-85	85	18.54	5.94	0.500+j2.599	2.354+j19.414	22.16	8.08	0.385+j2.405	2.934+j14.919
ZARAGOZA	ZAR-230	230	24.59	19.31	1.075+j5.293	1.915+j9.782	30.28	22.34	0.732+j4.768	1.948+j9.855
ZICTEPEC	ZIC-85	85	5.38	3.20	2.194+j8.854	4.286+j27.550	5.99	3.52	2.107+j8.770	4.359+j27.734
ZIRANDARO	ZIR-69	69	1.22	0.96	12.923+j30.087	35.231+j48.087	1.35	1.06	12.371+j29.968	35.291+j49.254
ZUMPANGO	ZUM-85	85	8.24	2.86	1.180+j5.837	5.909+j39.109	8.98	3.14	1.161+j5.897	5.953+j39.182

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 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
AB CALSA	ABL-115	115	1.89	1.04	7.512+j34.378	32.926+j117.213	2.19	1.21	6.977+j32.538	31.490+j110.797
ABENT 3T	ABT-230	230	8.28	9.46	1.904+j15.931	0.940+j10.772	9.62	10.59	1.642+j15.099	1.043+j11.499
ACACOYAU	AYA-115	115	2.96	2.10	6.285+j21.535	16.284+j47.166	3.47	2.43	5.522+j20.292	15.682+j45.226
ACAHUIZOTLA	AHZ-115	115	1.95	1.34	9.243+j32.847	17.102+j78.429	2.34	1.53	7.459+j30.371	17.128+j78.319
ACAJETE	ACJ-115	115	5.22	3.39	2.406+j12.485	6.969+j32.666	6.13	3.82	2.062+j11.727	6.980+j32.806
ACALA	AAA-115	115	4.30	3.10	3.711+j14.972	11.086+j31.675	5.00	3.55	3.360+j14.206	10.902+j30.616
ACAPULCO	APC-115	115	5.21	6.68	4.209+j12.028	1.272+j3.825	7.27	8.98	2.523+j9.731	1.317+j3.918
ACATLÁN	ACA-115	115	2.84	1.99	7.084+j22.249	11.529+j52.128	3.15	2.17	6.979+j22.145	11.816+j53.172
ACATZINGO	ACZ-115	115	4.38	2.76	5.533+j14.117	10.666+j40.628	4.86	3.04	5.452+j14.010	10.689+j40.774
ACAYUCAN	ACY-115	115	10.82	7.41	1.200+j6.019	3.068+j14.385	12.94	8.73	1.046+j5.548	2.904+j13.549
ACEROS TLAXCALA	ATX-230	230	6.64	4.92	3.648+j19.656	9.217+j40.163	7.67	5.57	3.194+j18.781	9.207+j39.644
ACTOPAN	AOC-115	115	3.00	1.93	6.046+j21.284	12.360+j57.599	3.33	2.13	5.940+j21.131	12.383+j57.867
ACUITLAPILCO	ACU-115	115	11.57	7.16	1.144+j5.621	4.018+j15.908	13.00	7.94	1.073+j5.515	4.015+j15.885
ADOLFO RUIZ CORTINEZ	ARC-115	115	5.16	6.34	4.300+j12.130	1.351+j5.160	7.16	8.42	2.602+j9.857	1.396+j5.251
AEROPUERTO	ARP-69	69	5.88	3.88	1.936+j6.492	4.527+j16.667	6.35	4.23	1.938+j6.619	4.529+j16.715
AEROPUERTO	ARU-115	115	18.22	17.94	0.621+j3.591	0.958+j3.725	23.13	21.98	0.455+j3.125	0.943+j3.619
AGRONITROGENADOS	ARG-115	115	6.94	4.45	1.588+j9.439	4.966+j25.231	7.88	5.05	1.509+j9.143	4.781+j24.461
AGUA DULCE DOS	ADD-115	115	5.28	4.02	2.766+j12.276	5.618+j23.809	5.90	4.46	2.735+j12.080	5.626+j23.772
AGUA FRÍA	AGF-69	69	3.11	2.78	4.450+j12.017	4.980+j16.689	3.39	3.04	4.454+j12.141	4.982+j16.737
AGUA SANTA	AGA-115	115	9.59	5.83	1.372+j6.785	5.282+j19.635	10.76	6.46	1.293+j6.666	5.286+j19.651
AGUA ZARCA	AZA-115	115	1.33	0.76	19.718+j45.829	48.651+j155.769	1.51	0.84	18.351+j44.865	48.698+j155.871
ALMECATLA	LML-115	115	36.00	30.25	0.318+j1.817	0.495+j2.877	42.72	35.06	0.248+j1.691	0.485+j2.814
ALTOTONGA DOS	TTG-115	115	9.46	10.55	1.071+j6.937	0.467+j4.849	11.61	12.65	0.807+j6.237	0.458+j4.680
ALTZAYANCA	AZY-115	115	5.57	3.54	3.132+j11.493	7.482+j31.726	6.25	3.92	3.017+j11.286	7.487+j31.686
ALTZAYANCA MANIOBRAS	AZM-230	230	7.04	5.11	3.214+j18.580	9.813+j39.236	8.43	6.04	2.618+j17.124	9.183+j36.593
ALUMINIO	AMN-115	115	17.65	19.62	0.647+j3.706	0.506+j2.603	22.12	23.81	0.486+j3.266	0.518+j2.619
ALVARADO DOS	AVD-115	115	1.97	1.13	10.452+j32.045	30.283+j104.756	2.29	1.45	9.364+j30.435	23.368+j84.838
AMATLAN DOS	ATD-115	115	16.34	18.56	0.729+j3.998	0.202+j2.621	19.83	21.63	0.572+j3.638	0.229+j2.775
AMATLAN DOS	ATD-230	230	8.11	8.29	2.752+j16.140	1.299+j15.362	9.72	9.47	2.155+j14.865	1.459+j16.256
AMOZOC	AMZ-115	115	7.30	4.73	3.183+j8.515	6.291+j23.150	8.14	5.22	3.109+j8.417	6.302+j23.234
ANA CHIAUTEMPAN SANTA	ANC-115	115	14.42	9.42	1.022+j4.488	2.973+j11.624	16.27	10.48	0.952+j4.387	2.972+j11.605
ANDRÉS DOS SAN	ADS-115	115	2.08	1.17	11.000+j29.924	26.963+j103.060	2.68	2.32	8.277+j25.994	8.972+j39.310
ANGOSTURA	ANG-115	115	10.38	10.13	0.927+j6.331	0.569+j6.841	13.31	13.48	0.565+j5.456	0.178+j5.243
ANGOSTURA	ANG-400	400	7.25	6.65	5.101+j31.431	6.754+j40.085	15.18	18.29	1.372+j16.681	0.376+j7.550
ANTUÑANO	AUN-115	115	19.11	12.78	0.866+j3.365	1.650+j8.503	21.81	14.28	0.792+j3.253	1.649+j8.507
APAXTLA SWITCHEO	AXS-115	115	2.30	1.62	9.246+j27.334	20.281+j61.492	2.81	1.92	7.442+j24.951	19.618+j59.060
APIZACO DOS	API-115	115	11.33	7.91	1.384+j5.693	3.540+j13.052	12.72	8.78	1.302+j5.591	3.537+j13.029
API	API-115	115	5.37	4.31	2.463+j12.119	6.309+j20.806	6.03	4.76	2.353+j11.883	6.370+j21.057
AQUASISTEMAS	ASI-115	115	2.47	2.50	6.132+j26.171	6.926+j25.858	3.16	3.04	4.777+j22.637	6.803+j25.325
ARRIAGA	ARR-115	115	2.46	2.62	7.221+j25.984	2.945+j21.971	2.87	2.95	6.522+j24.596	3.037+j23.152
ATENCINGO	AEN-115	115	1.80	1.12	11.251+j35.079	24.687+j101.604	1.99	1.23	11.143+j34.962	24.891+j102.255
ATEXCACO	AXO-115	115	3.45	2.76	4.384+j18.725	11.080+j31.886	4.60	4.66	3.032+j15.582	2.284+j15.172



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
ATLIHUETZIA	ATZ-115	115	17.21	12.61	0.917+j3.747	2.040+j7.906	19.48	14.06	0.847+j3.652	2.040+j7.888
ATLIXCO	ATC-115	115	8.00	4.86	1.820+j8.094	6.021+j23.648	8.99	5.39	1.721+j7.943	6.028+j23.676
ATLIXCOYOTL	AXT-115	115	21.19	13.53	0.752+j3.042	1.943+j8.245	24.31	15.16	0.677+j2.927	1.940+j8.234
AUTO MANUFACTURAS	AMF-115	115	17.08	12.72	0.620+j3.838	1.895+j7.685	18.95	13.92	0.575+j3.812	1.908+j7.831
AYUTLA	AYT-115	115	0.76	0.42	29.679+j82.688	77.510+j286.396	0.84	0.47	28.276+j81.771	77.559+j286.501
BALSAS	BAA-115	115	3.24	2.53	6.477+j19.448	12.977+j35.276	4.14	3.11	4.713+j16.984	12.326+j32.862
BARRA NORTE	BRN-115	115	3.10	3.46	4.879+j20.872	3.265+j14.685	3.40	3.76	4.878+j20.946	3.359+j15.103
BELISARIO DOMÍNGUEZ	BDZ-115	115	5.11	4.55	3.500+j12.520	3.695+j17.221	6.39	5.50	2.642+j11.121	3.565+j16.468
BELISARIO DOMÍNGUEZ II	BDD-115	115	2.14	1.45	9.388+j29.563	24.696+j71.068	2.47	1.64	8.523+j28.304	24.427+j69.907
BENITO JUÁREZ	BJU-115	115	7.16	5.75	1.568+j9.134	2.318+j16.273	8.20	6.34	1.464+j8.788	2.473+j16.796
BENTELER	BEN-115	115	15.77	9.61	1.038+j4.079	2.199+j12.135	17.84	10.66	0.966+j3.978	2.203+j12.177
BERRIOZÁBAL	BRZ-115	115	5.20	3.43	2.202+j12.583	6.526+j31.858	5.99	3.85	1.975+j12.035	6.530+j31.820
BII HIOXO	BII-115	115	4.45	5.27	1.487+j14.833	0.267+j8.011	5.65	6.35	1.195+j12.865	0.310+j8.657
BII HIOXO	BII-115B	115	3.49	4.30	2.080+j18.916	0.235+j8.297	4.90	5.65	1.392+j14.847	0.275+j8.990
BII NEE STIPA	BNS-115	115	6.20	8.12	1.799+j10.563	0.217+j3.389	8.46	10.56	1.166+j8.552	0.242+j3.620
BII STINÚ I	BSU-115	115	6.88	9.13	1.708+j9.502	0.220+j2.792	9.62	12.15	1.078+j7.519	0.240+j2.967
BII STINÚ II	BSD-230	230	5.12	5.62	2.354+j25.840	1.841+j18.954	6.88	7.00	1.780+j21.170	2.032+j19.997
BIO PAPEL PRINTING	BPP-115	115	7.64	6.47	1.801+j8.496	1.771+j13.354	9.49	7.66	1.474+j7.557	1.964+j13.211
BOCA DEL MONTE	BDM-115	115	2.29	1.40	6.128+j28.278	26.764+j80.513	2.56	1.55	5.961+j27.923	26.778+j80.582
BOCA DEL RIO	BDR-115	115	16.99	12.99	0.723+j3.840	1.297+j7.428	22.32	16.76	0.509+j3.232	1.127+j6.541
BOCHIL	BCH-115	115	3.63	2.31	4.350+j17.744	10.794+j48.432	4.13	2.58	4.115+j17.198	10.800+j48.385
BONFIL	BNL-115	115	4.83	5.11	4.673+j12.925	2.298+j10.991	6.52	6.45	2.978+j10.795	2.339+j11.145
BOSQUES	BOE-115	115	19.21	13.57	0.674+j3.390	1.670+j7.601	21.81	15.06	0.606+j3.294	1.680+j7.682
BRIDGESTONE	BDG-115	115	8.50	7.19	1.324+j7.698	2.067+j11.921	9.39	7.85	1.198+j7.688	2.105+j12.169
BUENA VISTA	BVI-115	115	7.28	4.61	1.868+j8.925	6.413+j24.144	7.99	5.06	1.856+j8.953	6.418+j24.227
BUGAMBILIAS	BGB-115	115	17.64	10.84	0.908+j3.654	2.823+j10.492	20.07	12.07	0.833+j3.543	2.825+j10.512
BUGAMBILIAS SF6	BGS-115	115	17.47	10.70	0.921+j3.688	2.870+j10.647	19.87	11.92	0.846+j3.577	2.872+j10.667
CACTUS PEMEX	CAX-115	115	7.56	7.55	1.642+j8.632	1.615+j9.123	8.96	8.51	1.424+j8.029	1.751+j9.626
CACTUS SWITCHEO	CSX-115	115	17.18	20.14	0.494+j3.834	0.163+j2.636	19.75	22.28	0.448+j3.670	0.183+j2.833
CALPULALPAN	CPL-115	115	4.28	3.77	4.700+j14.799	4.085+j21.658	4.61	4.02	4.795+j15.113	4.265+j22.611
CANTICAS	CIC-115	115	14.07	11.02	0.945+j4.623	1.665+j8.697	16.74	12.61	0.867+j4.275	1.686+j8.632
CAPILLA	CAP-115	115	4.99	3.11	2.896+j12.982	9.981+j36.112	6.95	4.47	2.240+j10.269	7.960+j26.934
CARACOL	CRL-115	115	1.77	1.19	11.638+j35.745	27.493+j87.586	2.10	1.38	9.826+j33.366	26.827+j85.146
CARACOL	CRL-230	230	3.28	2.70	10.178+j39.190	14.324+j64.376	8.87	10.22	1.578+j16.389	0.285+j9.352
CARDEL	CAE-115	115	4.09	3.50	3.474+j15.854	3.694+j24.279	4.48	3.77	3.489+j15.930	3.836+j25.226
CÁRDENAS	CDN-115	115	11.06	10.02	1.142+j5.891	1.633+j7.887	12.74	11.19	1.044+j5.638	1.666+j8.059
CÁRDENAS DOS	CDD-115	115	13.48	13.84	0.712+j4.872	0.511+j4.701	15.68	15.58	0.610+j4.619	0.519+j4.832
CÁRDENAS DOS	CDD-230	230	8.85	8.84	2.208+j14.838	2.222+j15.497	11.00	10.52	1.715+j13.171	2.215+j15.273
CÁRDENAS SUR	CSU-115	115	8.34	7.58	1.730+j7.767	2.326+j10.268	9.48	8.38	1.639+j7.527	2.440+j10.583
CARLOS A. CARRILLO	CAC-115	115	3.93	2.45	5.166+j16.108	13.680+j45.779	4.54	2.87	4.814+j15.355	12.642+j42.483
CASABLANCA	SBL-115	115	9.47	6.98	1.255+j6.898	2.876+j14.450	10.90	7.80	1.126+j6.607	2.889+j14.560
CATEMACO	CTO-115	115	2.27	1.28	10.162+j27.491	24.470+j94.482	2.95	2.68	7.530+j23.600	7.168+j31.669



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
CAVERNAS TUZANDEPETL	CVN-115	115	13.70	10.20	0.978+j4.746	1.958+j9.728	16.47	11.67	0.872+j4.347	1.972+j9.754
CAYACO	CAY-115	115	5.94	6.91	3.882+j10.479	0.951+j6.169	8.54	9.27	2.198+j8.263	0.988+j6.299
CAZONES	CZN-115	115	9.94	6.85	0.911+j6.620	3.220+j15.434	10.86	7.48	0.900+j6.667	3.224+j15.530
CD. HIDALGO. CHIAPAS.	CGO-115	115	1.91	1.40	9.999+j33.301	25.769+j67.778	2.18	1.56	9.292+j32.232	25.904+j67.868
CD. INDUSTRIAL VILLAHERMOSA	CIH-115	115	13.30	12.09	0.860+j4.919	1.094+j6.620	15.54	13.59	0.739+j4.640	1.120+j6.787
CEBADAS Y MALTA	CBM-115	115	4.07	3.50	4.966+j15.558	4.849+j23.979	4.38	3.74	5.061+j15.871	5.029+j24.932
CÉCILIO DEL VALLE	CCL-69	69	1.99	2.35	2.128+j19.920	0.521+j10.625	2.92	3.67	0.995+j14.957	0.144+j5.841
CEFERESO	CFS-85	85	2.85	1.43	3.025+j16.947	12.934+j67.265	3.08	1.56	3.016+j17.282	12.924+j67.688
CEFERESO VILLACOMALTITLAN	CFV-115	115	2.83	2.03	6.521+j22.550	16.779+j48.415	3.31	2.34	5.726+j21.287	16.358+j46.878
CELANESE	CLS-115	115	12.17	8.75	1.175+j5.329	2.420+j11.702	14.48	9.95	1.067+j4.931	2.434+j11.728
CELCSA MANIOBRAS	CCB-115	115	13.60	12.45	0.767+j4.820	0.832+j6.572	15.86	13.91	0.712+j4.550	0.882+j6.785
CEMENTOS APASCO (TABASCO)	CEM-115	115	5.27	4.41	2.465+j12.353	5.609+j19.255	6.10	4.92	2.221+j11.770	5.844+j19.833
CEMENTOS APASCO S.A. DE C.V.	CSS-115	115	5.80	7.31	4.010+j10.713	0.447+j4.153	8.33	9.97	2.316+j8.453	0.487+j4.279
CEMENTOS CRUZ AZUL (OAXACA)	CCA-115	115	4.42	3.22	4.345+j14.387	7.702+j31.061	5.28	3.66	3.957+j13.246	7.726+j31.270
CEMENTOS MOCTEZUMA (MORELOS)	CUM-230	230	12.49	11.29	1.933+j10.452	2.985+j13.747	14.83	13.69	1.392+j9.751	2.280+j12.113
CEMENTOS MOCTEZUMA(APAZAPAN)	CMT-115	115	4.26	2.80	3.146+j15.264	5.738+j39.711	4.75	3.08	3.017+j15.076	5.759+j39.936
CEMENTOS TOLTECA	TOC-230	230	8.53	6.92	2.143+j15.418	5.482+j25.921	9.56	7.63	1.893+j15.159	5.521+j26.326
CEMENTOS VERACRUZ	CVE-115	115	10.66	8.47	1.180+j6.117	2.662+j10.758	12.50	9.60	1.024+j5.754	2.683+j10.841
CENTENARIO	CIO-85	85	3.92	2.34	2.146+j12.344	6.270+j37.469	4.20	2.53	2.129+j12.683	6.260+j37.886
CENTRAL EÓLICA SURESTE UNO FASE DOS	SUD-230	230	8.70	11.56	1.289+j15.203	0.698+j3.945	12.98	16.40	0.827+j11.220	0.717+j4.174
CENTRO DE EXPOSICIONES Y CONVENCIONES FUERTES	CEF-115	115	15.47	9.06	1.056+j4.160	2.565+j13.175	17.49	10.05	0.985+j4.058	2.569+j13.217
CERRO AZUL DOS	CDO-115	115	4.16	2.43	3.653+j15.539	19.519+j46.587	4.57	2.67	3.647+j15.564	19.532+j46.710
CERRO DE ORO	EDO-115	115	19.40	19.22	0.333+j3.406	0.175+j3.559	25.37	23.32	0.195+j2.872	0.209+j3.599
CERRO DE ORO	EDO-400	400	16.84	18.15	2.270+j13.524	1.294+j10.899	26.91	25.48	1.087+j9.377	1.352+j10.981
CERVECERÍA DEL TRÓPICO	CVT-115	115	5.96	4.22	1.989+j10.953	4.494+j24.834	6.80	4.68	1.873+j10.570	4.608+j25.191
CERVECERÍA MOCTEZUMA (ORIZABA)	CMA-115	115	11.95	10.65	1.196+j5.428	1.681+j7.415	14.76	12.79	0.943+j4.857	1.639+j7.059
CHAPULCO	CPO-115	115	8.68	5.07	1.432+j7.510	5.422+j23.344	9.71	5.61	1.356+j7.400	5.425+j23.393
CHICONTEPEC	CHI-115	115	2.62	3.26	6.362+j24.534	1.617+j10.484	2.88	3.56	6.360+j24.582	1.651+j10.793
CHIGNAHUAPAN	CHH-115	115	2.79	1.71	6.135+j22.983	19.204+j66.071	3.09	1.89	6.037+j22.886	19.205+j66.090
CHILAPA	CIP-115	115	3.54	3.25	4.887+j18.106	5.442+j22.841	4.58	3.95	3.100+j15.631	5.482+j22.756
CHILAPAN	CHP-115	115	2.19	1.24	10.537+j28.392	25.420+j97.606	2.90	2.80	7.582+j24.055	5.943+j27.372
CHILPANCINGO	CHG-69	69	1.73	1.86	1.787+j22.976	0.000+j17.953	2.05	2.25	1.241+j21.312	1.696+j15.503
CHILPANCINGO	CHG-115	115	4.49	4.32	4.350+j14.137	2.820+j16.129	6.17	5.48	2.564+j11.554	2.846+j15.973
CHILPANCINGO DOS	CCS-115	115	5.16	5.63	3.686+j12.316	1.167+j9.468	7.33	7.46	1.950+j9.775	1.188+j9.274
CHILPANCINGO POTENCIA	CGP-115	115	5.30	6.22	3.537+j12.016	0.569+j6.858	7.55	8.35	1.812+j9.501	0.608+j6.774
CHILPANCINGO POTENCIA	CGP-230	230	3.35	3.53	11.702+j37.851	4.509+j32.899	5.32	5.09	5.112+j26.958	4.806+j30.360
CHINAMECA DOS	CHD-115	115	19.63	16.29	0.543+j3.338	0.851+j5.537	24.90	19.44	0.421+j2.903	0.839+j5.418
CHINAMECA POTENCIA	CHM-115	115	22.14	20.94	0.433+j2.967	0.403+j3.630	28.37	25.20	0.322+j2.554	0.414+j3.601
CHINAMECA POTENCIA	CHM-400	400	9.13	8.63	3.154+j25.084	4.293+j30.253	13.73	11.27	2.059+j18.384	4.425+j30.543
CHONTALPA	CHT-115	115	4.00	2.96	3.823+j16.166	12.304+j32.127	4.47	3.27	3.723+j15.915	12.336+j32.299
CIA. GRESS	GRE-115	115	12.92	8.20	1.086+j5.023	3.398+j13.643	14.53	9.11	1.016+j4.922	3.397+j13.623
CICLO COMBINADO CENTRO (HUEXCA)	CBE-400	400	17.72	18.55	1.827+j12.903	0.928+j11.427	21.18	21.12	1.217+j11.930	1.041+j12.133



Subestación eléctrica	Acronimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
CINCO DE MAYO	CIY-115	115	14.52	9.33	1.161+j4.422	3.552+j11.695	16.41	10.36	1.087+j4.315	3.556+j11.737
CINTALAPA DOS	CIT-115	115	4.83	3.33	2.971+j13.410	6.533+j31.770	5.57	3.73	2.711+j12.822	6.542+j31.834
CIUDAD PEMEX	CPX-115	115	7.25	5.75	1.191+j9.085	2.928+j16.228	8.59	6.51	0.951+j8.451	2.939+j16.468
CIUDAD TEXTIL	CDX-115	115	10.17	6.35	1.151+j6.424	4.567+j17.774	11.32	6.98	1.096+j6.358	4.649+j17.915
CIVAC	CIY-115	115	10.69	10.28	1.040+j6.121	0.860+j6.917	11.82	11.19	0.915+j6.110	0.897+j7.165
CLORO DE TEHUANTEPEC	CLO-115	115	13.40	9.71	0.830+j4.884	1.842+j10.505	16.05	11.08	0.715+j4.493	1.855+j10.530
COAPAN	CPA-115	115	4.56	2.77	4.008+j14.006	10.010+j41.534	5.08	3.06	3.875+j13.842	10.031+j41.687
COATEPEC	COP-115	115	4.67	3.70	2.706+j13.957	5.301+j24.888	5.30	4.11	2.468+j13.565	5.343+j25.167
COATZACOALCOS DOS	CTS-115	115	27.90	27.94	0.296+j2.361	0.254+j2.486	35.45	33.67	0.217+j2.049	0.261+j2.450
COATZACOALCOS DOS	CTS-400	400	11.47	11.99	2.584+j19.965	2.096+j18.212	17.24	15.98	1.494+j14.658	2.211+j18.319
COATZINTLA	CZT-115	115	14.90	13.31	0.662+j4.406	1.898+j5.821	16.16	14.41	0.654+j4.472	1.903+j5.922
COGENERACIÓN DE ENERGÍA LIMPIA DE COSOLEACAQUE	CGC-115	115	12.16	11.92	0.826+j5.397	0.542+j6.277	13.96	13.12	0.786+j5.172	0.607+j6.629
COGENERACIÓN NUEVO PEMEX	CNX-115	115	17.18	20.14	0.494+j3.834	0.163+j2.636	19.75	22.28	0.448+j3.670	0.183+j2.833
COLOTLIPA	CLT-69	69	0.89	1.00	12.077+j43.050	22.964+j24.265	1.22	1.41	7.989+j35.135	10.611+j19.181
COMALCALCO	COM-115	115	8.54	7.53	1.517+j7.626	2.974+j10.717	9.73	8.37	1.412+j7.370	3.017+j10.902
COMALCALCO ORIENTE	CAO-115	115	8.90	8.39	1.249+j7.353	1.648+j8.846	10.14	9.31	1.142+j7.110	1.706+j9.084
COMALCALCO POTENCIA	CMP-115	115	9.22	9.25	1.130+j7.116	1.039+j7.240	10.50	10.24	1.023+j6.880	1.100+j7.511
COMALCALCO POTENCIA	CMP-230	230	5.72	5.33	3.599+j22.933	4.752+j28.591	6.76	6.05	3.093+j21.395	5.006+j29.181
COMALCALCO SUR	CMU-115	115	7.05	5.97	2.183+j9.163	4.742+j13.929	7.97	6.62	2.092+j8.918	4.820+j14.146
COMITÁN	CJT-115	115	1.44	0.98	13.663+j43.966	42.720+j101.648	1.63	1.11	12.943+j42.801	42.305+j100.019
COMPLEJO PETROQUÍMICO CANGREJERA	CGJ-115	115	8.28	4.96	1.714+j7.829	5.602+j23.557	9.37	5.63	1.665+j7.615	5.417+j22.788
COMPLEJO PETROQUÍMICO COSOLEACAQUE	CPQ-115	115	6.98	4.41	1.864+j9.331	5.695+j25.670	9.22	6.87	1.327+j7.807	2.224+j16.074
COMPLEJO PETROQUÍMICO INDEPENDENCIA	PEI-115	115	11.29	9.53	1.170+j5.761	1.215+j9.058	12.46	10.28	1.135+j5.751	1.316+j9.477
COMPLEJO PETROQUÍMICO MORELOS	PMO-115	115	9.50	8.99	1.023+j6.916	1.870+j8.430	10.44	9.62	1.015+j6.919	1.997+j9.002
CONALEP	LEP-115	115	7.53	6.99	1.456+j8.692	3.146+j10.545	8.81	7.90	1.245+j8.194	3.166+j10.802
CONEJOS	CNJ-115	115	1.42	0.79	13.330+j44.981	36.657+j154.675	1.58	0.87	12.818+j44.319	36.681+j154.808
CONTLA	CNU-115	115	21.18	14.26	0.610+j3.075	1.725+j7.529	24.29	16.02	0.539+j2.958	1.720+j7.497
CÓRDOBA	COR-115	115	11.93	8.88	0.999+j5.476	2.641+j10.999	14.09	10.08	0.841+j5.114	2.655+j11.080
CÓRDOBA DOS	CBS-115	115	13.98	12.26	0.864+j4.670	1.369+j6.629	16.72	14.03	0.706+j4.310	1.390+j6.753
COSCOMATEPEC	CSE-115	115	4.78	2.87	2.420+j13.664	11.805+j40.072	5.41	3.19	2.256+j13.306	11.819+j40.140
COSOLAPA	CSL-115	115	4.29	2.78	2.311+j15.287	5.991+j40.458	5.38	3.44	1.812+j13.465	5.709+j36.007
COSOLEACAQUE	CSQ-115	115	11.08	7.48	1.034+j5.905	2.841+j14.508	13.17	8.55	0.907+j5.472	2.819+j14.324
COSTA AZUL	CAZ-115	115	5.46	6.28	4.096+j11.446	1.102+j7.078	7.63	8.23	2.410+j9.262	1.140+j7.242
COYOACO MANIOBRAS	CYM-230	230	5.41	5.66	4.079+j24.182	2.536+j21.336	6.83	6.68	3.038+j21.178	2.821+j22.430
COYUCA	CYC-115	115	4.59	4.52	4.467+j13.763	2.815+j14.648	6.48	5.93	2.683+j10.947	2.821+j13.958
CRISOL TEXTIL	CTX-115	115	11.02	7.15	1.015+j5.941	3.822+j15.353	12.24	7.85	0.963+j5.887	3.896+j15.509
CRISTÓBAL SAN	CRI-115	115	3.78	2.50	4.930+j16.875	13.617+j42.273	4.33	2.83	4.597+j16.216	13.568+j41.612
CRUCES	CRC-69	69	6.69	7.20	1.756+j5.687	1.893+j4.202	8.90	9.07	1.122+j4.793	1.952+j4.226
CRUCES GENERACIÓN	CUG-115	115	5.92	6.87	3.868+j10.525	1.012+j6.229	8.53	9.25	2.179+j8.276	1.053+j6.328
CRUZ AZUL MANIOBRAS	CZM-400	400	12.07	9.86	2.614+j18.957	5.960+j31.571	15.24	11.59	1.720+j16.581	6.079+j32.037
CRUZ GRANDE	CGN-115	115	1.93	1.20	12.098+j32.134	31.767+j92.083	2.25	1.35	10.545+j30.659	31.815+j92.184
CRYO INFRA DOS	CRX-115	115	7.25	5.06	2.169+j8.895	4.535+j20.678	8.35	5.67	2.061+j8.498	4.548+j20.704



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
CRYO_INFRA	CRY-115	115	14.39	12.78	0.898+j4.525	0.915+j6.445	17.41	15.20	0.804+j4.117	0.927+j6.047
CRYOINFRA - PRAXAIR	CYX-115	115	9.43	8.15	1.053+j6.959	2.305+j10.567	10.39	8.80	1.045+j6.953	2.397+j10.977
CRYOINFRA CÁRDENAS	ICD-115	115	10.68	9.56	1.197+j6.098	1.857+j8.397	12.28	10.66	1.100+j5.845	1.890+j8.569
CUAUHTÉMOC	CTM-115	115	8.61	5.91	1.772+j7.503	4.107+j17.913	9.66	6.56	1.678+j7.369	4.092+j17.847
CUAUTLA	CUA-115	115	9.42	7.80	1.380+j6.911	1.659+j11.356	10.32	8.42	1.316+j6.952	1.731+j11.746
CUAUTLA DOS	CUS-115	115	7.20	4.91	1.897+j9.031	4.661+j21.619	7.89	5.36	1.834+j9.072	4.674+j21.858
CUAUTLA INDUSTRIAL	CIL-115	115	6.43	4.60	2.397+j10.037	5.527+j21.964	7.06	5.02	2.335+j10.079	5.567+j22.277
CUCHAPA PEMEX	CUH-115	115	9.12	6.14	1.574+j7.108	3.660+j17.624	10.50	6.89	1.492+j6.797	3.667+j17.588
CUERNAVACA	CUE-85	85	6.34	5.23	1.136+j7.661	1.557+j12.549	6.68	5.54	1.115+j8.002	1.547+j12.966
CUETZALAN	CTZ-115	115	3.51	2.09	3.301+j18.620	11.981+j56.057	3.94	2.32	3.173+j18.274	12.001+j55.975
CUICATLAN	CUX-115	115	1.44	1.05	13.036+j44.220	37.527+j90.844	1.59	1.15	12.859+j44.027	37.565+j91.213
CUICHAPA DOS	CCP-115	115	9.38	6.28	1.521+j6.915	3.584+j17.304	10.81	7.05	1.439+j6.604	3.592+j17.267
CUITLÁHUAC	CTH-115	115	4.61	2.88	2.627+j14.146	8.996+j39.498	5.21	3.19	2.465+j13.791	9.023+j39.653
CUNDUACÁN	DUA-115	115	5.91	4.00	1.872+j11.080	5.673+j26.907	6.67	4.44	1.763+j10.805	5.682+j27.001
CYCNA DE ORIENTE	CYR-400	400	9.05	6.88	3.149+j25.322	9.275+j48.949	11.02	7.90	2.250+j22.950	9.496+j49.665
DISTRIBUCIÓN TRC-115	TRC-115	115	5.88	3.90	1.880+j11.144	5.816+j28.011	6.74	4.36	1.705+j10.701	5.824+j28.103
DISTRITO INDUSTRIAL	DIN-69	69	12.50	11.31	0.325+j3.171	0.587+j4.158	13.21	12.00	0.329+j3.300	0.616+j4.288
DONAJI	DOJ-115	115	4.00	2.53	4.039+j16.103	10.150+j44.645	4.61	2.83	3.804+j15.394	10.145+j44.669
DOS BOCAS CICLO COMBINADO	DBC-115	115	23.50	23.79	0.467+j2.786	0.356+j2.725	33.79	36.58	0.252+j2.146	0.164+j1.778
DOS BOCAS CICLO COMBINADO	DBC-230	230	10.68	9.35	1.978+j12.280	3.920+j17.375	13.38	11.08	1.413+j10.826	3.963+j17.456
DOS BOCAS DOS	DBD-400	400	11.31	11.57	3.090+j20.184	2.555+j19.033	15.75	15.32	1.644+j16.043	2.055+j17.649
DOS BOCAS PEMEX	DBX-115	115	4.54	3.53	3.028+j14.305	8.593+j25.997	5.08	3.90	2.919+j14.069	8.654+j26.247
DPA DRAEXLMAIER, PARTES AUTOMOTORAS DE MÉXICO	DXM-115	115	10.93	6.88	1.064+j5.981	4.194+j16.315	12.17	7.56	1.009+j5.915	4.276+j16.456
EASTMAN (CHEMICAL)	EAS-115	115	6.74	4.33	2.913+j9.415	6.301+j25.690	7.76	4.87	2.788+j8.984	6.290+j25.571
EJUTLA	EJT-115	115	2.82	2.21	5.705+j22.817	9.012+j42.145	3.14	2.43	5.487+j22.584	9.083+j42.612
EL CARMEN	CNM-115	115	12.31	13.99	0.633+j5.356	0.277+j3.622	13.94	15.37	0.555+j5.209	0.299+j3.879
EL CARMEN	CNM-230	230	9.32	10.48	1.882+j14.120	1.182+j10.154	11.17	12.04	1.526+j12.986	1.251+j10.614
EL CASTILLO	ELC-115	115	7.76	8.98	1.559+j8.408	0.367+j5.094	9.03	10.12	1.317+j7.979	0.414+j5.396
EL CASTILLO	ELC-230	230	4.97	4.96	4.754+j26.287	3.199+j26.834	6.03	5.71	3.760+j23.934	3.631+j27.720
EL CERRO	CEO-115	115	6.78	4.37	1.874+j9.614	5.573+j25.369	7.89	4.90	1.606+j9.114	5.597+j25.558
EL CONDE	ECN-115	115	20.40	14.95	0.721+j3.174	1.268+j6.715	23.38	16.77	0.649+j3.056	1.266+j6.713
EL GIRASOL	GIS-115	115	1.28	0.90	14.130+j49.971	41.308+j110.069	1.41	0.99	13.954+j49.777	41.345+j110.438
EL GUAYABO	GYB-115	115	7.85	4.75	1.590+j8.303	5.220+j24.501	12.90	8.15	0.939+j5.585	3.200+j15.324
EL JÍCARO	JIC-115	115	5.51	3.22	2.059+j11.865	7.940+j36.896	6.58	3.88	1.804+j10.960	7.085+j33.500
EL MORAL (OAXACA)	MOR-115	115	2.43	1.89	7.755+j26.149	18.254+j47.629	2.70	2.08	7.580+j25.955	18.290+j47.996
EL MORAL (PUEBLA)	MOA-115	115	10.26	6.67	1.097+j6.378	3.844+j16.475	11.37	7.33	1.047+j6.337	3.873+j16.606
EL SABINO	SAB-115	115	16.89	16.61	0.531+j3.896	0.371+j4.133	21.72	20.28	0.324+j3.348	0.375+j4.038
EL SABINO	SAB-400	400	9.13	9.09	3.589+j25.026	3.473+j25.584	15.92	13.97	1.316+j15.899	3.543+j22.057
EL TEJAR	TJR-115	115	21.85	20.73	0.494+j2.998	0.519+j3.520	30.73	30.28	0.280+j2.360	0.328+j2.578
EL TREINTA	ETT-115	115	5.01	5.04	4.415+j12.489	2.461+j12.548	6.93	6.43	2.713+j10.176	2.505+j12.620
EL TULE	TLE-115	115	3.49	2.87	4.840+j18.381	6.862+j30.630	3.90	3.17	4.649+j18.137	6.896+j31.001
EL ZOPO	ZOP-115	115	5.80	4.83	2.203+j11.238	5.304+j17.685	6.74	5.40	1.956+j10.651	5.485+j18.184



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
EMILIANO ZAPATA	EMZ-115	115	2.45	1.54	7.036+j26.166	21.678+j72.483	2.75	1.71	6.867+j25.652	21.602+j72.111
ENCANTO	ECT-115	115	4.49	4.85	3.362+j14.393	2.081+j11.305	5.38	5.94	2.862+j13.275	1.493+j9.626
ENTABLADERO	ETD-115	115	6.39	4.04	1.893+j10.209	9.839+j26.956	7.02	4.43	1.869+j10.232	9.871+j27.116
ESCÁMELA	ECM-115	115	10.91	8.63	1.120+j5.984	2.399+j10.653	12.92	9.87	0.944+j5.573	2.403+j10.659
ESFUERZO	ESF-115	115	3.40	3.01	4.597+j18.967	7.930+j26.332	3.73	3.29	4.597+j19.038	7.970+j26.630
ESPERANZA	ERZ-115	115	6.96	6.12	2.482+j9.218	2.170+j13.343	7.79	6.68	2.378+j9.070	2.282+j13.889
ETLA	ETX-115	115	3.62	3.34	4.994+j17.653	7.459+j21.793	4.04	3.68	4.812+j17.441	7.493+j22.193
EXCELOPOLIS	EXE-115	115	18.73	11.49	0.835+j3.444	2.450+j9.977	21.38	12.82	0.760+j3.331	2.447+j9.981
FENO QUIMIA	FNQ-115	115	7.05	4.37	1.898+j9.218	5.804+j26.219	8.47	5.31	1.675+j8.458	4.942+j23.587
FERMEX	FEM-115	115	10.88	8.58	1.626+j5.884	3.064+j10.600	13.22	10.15	1.393+j5.345	2.950+j10.130
FLORES MAGÓN	FLM-115	115	3.55	2.65	4.359+j18.193	13.251+j35.490	4.15	3.07	3.859+j17.157	12.849+j33.878
FORJAMEX	FJM-115	115	13.01	9.95	1.129+j4.975	2.314+j9.602	14.67	11.13	1.044+j4.868	2.284+j9.505
FORTÍN	FOR-115	115	13.93	10.74	0.830+j4.692	2.160+j8.772	16.67	12.28	0.673+j4.329	2.173+j8.840
FRAMBOYANES	FRY-115	115	20.55	28.55	0.543+j3.185	0.222+j0.504	26.13	36.47	0.389+j2.768	0.226+j0.452
FRONTERA	FRT-115	115	1.36	1.04	12.773+j47.209	37.888+j87.776	1.50	1.14	12.643+j46.955	37.907+j87.936
FRONTERA COMALAPA	FCM-115	115	1.00	0.62	17.857+j64.007	52.842+j179.218	1.12	0.69	16.937+j62.809	52.565+j178.041
FUERTES	FUE-115	115	16.63	10.80	0.983+j3.870	1.987+j10.278	18.84	12.00	0.912+j3.769	1.991+j10.321
GABINO BARREDA	GBA-115	115	9.61	7.12	1.322+j6.780	3.138+j13.895	11.70	8.31	1.120+j6.141	3.178+j13.589
GARITA	GAR-115	115	5.60	6.27	3.909+j11.202	1.260+j7.712	7.96	8.30	2.226+j8.897	1.302+j7.800
GAVIOTAS	GAV-115	115	12.72	10.24	0.920+j5.138	1.726+j9.060	14.94	11.56	0.786+j4.825	1.737+j9.153
GIRANDAS PEMEX	GIR-115	115	5.44	3.71	2.558+j11.940	7.212+j28.523	6.09	4.10	2.482+j11.725	7.228+j28.643
GRAN PRIDECO	GRA-115	115	15.67	14.52	0.821+j4.157	1.619+j5.034	19.23	17.19	0.667+j3.739	1.622+j4.983
GRIJALVA	GIA-115	115	6.37	4.19	2.440+j10.133	5.442+j26.180	7.51	4.78	2.163+j9.479	5.375+j25.757
GUADALUPE ANALCO	GAN-115	115	18.02	13.05	0.854+j3.583	2.357+j7.560	20.47	14.52	0.782+j3.481	2.363+j7.619
GUTIÉRREZ ZAMORA DOS	GZD-115	115	5.94	4.16	1.709+j11.055	5.426+j24.995	6.60	4.59	1.644+j10.952	5.428+j25.018
HELIPUERTO	HEL-115	115	2.49	2.44	6.600+j25.819	3.838+j27.892	3.06	2.86	4.777+j23.385	3.920+j28.452
HUAJUAPAN	HJP-115	115	1.81	1.15	10.795+j35.154	23.585+j96.727	1.99	1.26	10.664+j35.032	23.772+j97.384
HUAMANTLA DOS	HUA-115	115	9.15	6.36	1.614+j7.072	3.775+j16.454	10.29	7.08	1.521+j6.934	3.757+j16.384
HUAMUXTITLAN	HUU-115	115	1.02	0.65	18.657+j62.095	40.566+j172.856	1.18	0.73	16.721+j59.763	40.607+j172.765
HUATULCO	HCO-115	115	1.41	0.79	13.848+j44.925	36.893+j153.717	1.58	0.87	13.346+j44.319	36.918+j153.857
HUATUSCO	HTU-115	115	3.50	2.04	3.304+j18.663	16.615+j57.499	3.93	2.26	3.138+j18.307	16.628+j57.568
HUAUTLA DE JIMENEZ	HUJ-69	69	0.66	0.49	30.784+j51.545	50.817+j110.915	0.72	0.53	30.839+j52.716	50.821+j112.242
HUEJOTZINGO	HJO-115	115	13.04	8.59	0.876+j5.017	3.507+j12.553	14.53	9.43	0.824+j4.959	3.606+j12.728
HUEYAPAN	HYN-115	115	2.75	2.13	5.770+j23.425	15.533+j42.907	3.52	3.20	4.411+j20.290	6.735+j26.190
HUEYAPAN DE OCAMPO	HOC-115	115	3.19	1.77	6.816+j19.666	17.930+j68.706	3.86	2.67	5.813+j17.995	10.450+j43.288
HUIMANGUILLO	HMG-115	115	5.95	4.86	2.638+j10.836	5.823+j17.916	6.69	5.36	2.558+j10.620	5.944+j18.233
HUIXTLA	HUX-115	115	3.22	2.41	5.988+j19.765	13.418+j38.906	3.81	2.79	5.150+j18.474	13.156+j37.755
HUIXTLA DOS	HUD-115	115	3.24	2.44	5.926+j19.613	13.192+j38.389	3.84	2.82	5.088+j18.319	12.936+j37.255
HUMEROS DOS	HMD-115	115	6.76	6.56	1.575+j9.696	1.541+j10.666	8.12	7.73	1.336+j8.898	1.598+j10.234
HUMEROS LOS	HMS-115	115	4.37	4.30	2.732+j14.949	2.903+j15.725	5.34	5.47	2.233+j13.493	1.794+j12.638
HUMEROS TRES	HMT-115	115	6.59	6.50	1.598+j9.940	1.149+j10.518	7.78	7.46	1.402+j9.288	1.274+j10.552
IDESA	IDE-115	115	9.99	8.25	0.997+j6.573	2.416+j10.994	11.06	8.98	0.980+j6.528	2.485+j11.291



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
IGUALA	IGU-115	115	2.45	2.76	6.962+j26.181	0.984+j18.028	3.00	3.24	5.122+j23.780	1.143+j19.085
INDEPENDENCIA	IPD-115	115	3.39	2.21	4.574+j19.055	10.698+j49.569	4.17	3.39	3.663+j17.131	4.705+j29.078
INDUSTRIAL	INT-115	115	18.44	12.31	0.856+j3.498	1.717+j8.823	20.93	13.68	0.786+j3.400	1.724+j8.882
INDUSTRIAL CUAUTLA DOS	ICS-115	115	6.55	4.80	2.347+j9.862	5.275+j20.608	7.19	5.23	2.285+j9.903	5.318+j20.934
INDUSTRIAL PATRONA	IPA-115	115	13.90	11.63	0.871+j4.695	1.604+j7.416	16.62	13.29	0.713+j4.335	1.625+j7.540
INFONAVIT	IFN-115	115	19.01	16.44	0.672+j3.428	0.958+j5.070	24.62	20.16	0.492+j2.926	0.937+j4.934
INFRA VILLA HERMOSA	IVH-115	115	12.31	10.92	1.028+j5.294	1.418+j7.548	14.33	12.24	0.906+j5.015	1.453+j7.732
INGENIO LA GLORIA	GLR-115	115	3.61	3.51	3.902+j17.988	1.568+j19.992	3.92	3.74	3.982+j18.200	1.772+j21.421
INGENIO SAN NICOLÁS	ISN-115	115	3.38	1.85	3.141+j19.363	16.319+j66.770	4.75	4.43	1.952+j15.265	1.726+j18.582
IQUISA	IQU-115	115	16.18	14.80	0.699+j4.042	0.581+j5.367	19.85	17.81	0.607+j3.630	0.603+j4.987
ISLA	ISL-115	115	2.67	1.59	6.690+j23.991	21.407+j72.702	2.99	1.77	6.523+j23.549	21.351+j72.264
ITUNDUJIA	ITU-115	115	0.76	0.46	23.406+j83.781	60.659+j250.462	0.84	0.51	23.240+j83.632	60.757+j250.867
IXHUATLAN DE MADERO	IXH-115	115	1.51	1.32	9.110+j43.009	24.473+j58.932	1.66	1.45	9.107+j43.072	24.494+j59.127
IXTAPA POTENCIA	ITP-115	115	5.83	4.99	1.175+j11.319	2.742+j16.826	8.89	7.07	1.076+j8.148	2.631+j14.298
IXTAPA POTENCIA	ITP-230	230	6.14	4.54	3.460+j21.345	10.933+j42.786	8.59	6.01	2.188+j16.872	9.857+j37.633
IXTEPEC	IXP-115	115	3.73	2.97	4.098+j17.326	7.164+j31.138	4.67	3.48	3.392+j15.251	7.156+j31.048
IXTEPEC POTENCIA	IPO-115	115	16.44	20.24	0.225+j4.033	0.099+j1.772	23.38	26.87	0.112+j3.122	0.107+j1.902
IXTEPEC POTENCIA	IPO-230	230	9.82	13.25	0.888+j13.493	0.191+j3.078	15.24	19.50	0.438+j9.572	0.206+j3.302
IXTEPEC POTENCIA	IPO-400	400	7.05	8.97	2.803+j32.639	0.761+j11.843	10.93	12.87	1.420+j23.193	0.831+j12.709
IXTLAN DE JUÁREZ	IXJ-115	115	2.87	1.99	5.477+j22.484	11.686+j52.770	3.20	2.19	5.306+j22.209	11.720+j53.032
IZUCAR DE MATAMOROS	IZM-115	115	2.83	1.83	7.681+j22.139	15.264+j60.321	3.14	2.00	7.576+j22.020	15.467+j60.971
IZUCAR DE MATAMOROS DOS	IZD-115	115	2.95	1.88	7.427+j21.250	15.307+j58.761	3.27	2.07	7.322+j21.128	15.485+j59.296
J. B. LOBOS	JBL-115	115	15.27	13.38	0.759+j4.280	1.286+j6.082	19.08	16.03	0.582+j3.784	1.268+j5.967
JALACINGO	JAL-115	115	9.67	11.00	1.036+j6.791	0.366+j4.379	11.90	13.25	0.772+j6.090	0.356+j4.211
JALACINGO	JAL-230	230	7.72	7.53	2.932+j16.957	2.740+j18.371	9.98	9.30	2.038+j14.493	2.660+j17.188
JALAPA DOS	JLD-115	115	4.80	3.89	2.620+j13.569	4.836+j23.129	5.46	4.32	2.378+j13.166	4.880+j23.416
JALPA	JAA-115	115	7.67	6.01	1.606+j8.512	4.390+j15.411	8.71	6.69	1.502+j8.253	4.408+j15.539
JARDÍN	JDN-115	115	22.23	26.12	0.507+j2.943	0.207+j1.666	29.04	32.85	0.342+j2.491	0.222+j1.700
JARDÍN	JDN-230	230	13.54	14.65	1.660+j9.663	1.247+j7.549	17.65	18.06	1.089+j8.206	1.322+j7.756
JIUTEPEC	JIU-115	115	9.96	8.75	1.023+j6.585	1.174+j9.372	11.04	9.54	0.918+j6.554	1.229+j9.657
JOJUTLA	JJT-115	115	6.63	4.71	2.054+j9.797	4.383+j21.845	7.40	5.20	1.919+j9.678	4.399+j22.002
JUCHITÁN DOS	JUD-115	115	7.82	10.85	1.403+j8.371	0.110+j1.655	11.32	15.07	0.778+j6.405	0.117+j1.763
JUCHITÁN DOS	JUD-230	230	4.94	6.49	4.215+j26.575	0.815+j8.181	7.91	9.64	2.042+j18.363	0.859+j8.682
JUCHITÁN UNO	JUC-115	115	6.15	6.69	2.122+j10.583	1.779+j8.394	8.48	8.59	1.426+j8.497	1.771+j8.304
JUILE	JUI-115	115	4.31	2.68	3.801+j14.915	9.780+j42.438	4.91	3.01	3.639+j14.417	9.681+j41.939
JUILE	JUI-230	230	10.57	12.46	1.054+j12.515	0.532+j6.971	13.70	15.24	0.553+j10.646	0.567+j7.427
JUILE	JUI-400	400	13.18	12.82	2.332+j17.372	3.121+j18.984	21.40	17.56	1.085+j11.822	3.271+j19.364
JUY JUY	JUY-115	115	12.41	13.00	0.810+j5.288	0.592+j4.606	15.11	15.17	0.628+j4.793	0.601+j4.714
KILOMETRO VEINTE	KLV-115	115	20.53	22.01	0.480+j3.199	0.279+j2.727	25.39	25.80	0.341+j2.856	0.290+j2.821
KILOMETRO VEINTE	KLV-230	230	12.81	13.41	1.624+j10.240	1.248+j9.356	17.24	16.70	1.029+j8.412	1.289+j9.430
KIMBERLEY CLARK	KIA-115	115	12.68	10.32	1.083+j5.124	1.622+j8.741	14.26	11.46	0.991+j5.024	1.624+j8.760
KIMBERLEY CLARK, PUÉ.	KIC-115	115	11.75	9.31	1.182+j5.525	1.904+j9.982	13.20	10.33	1.090+j5.425	1.905+j10.002



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
KIMBERLEY CLARK, VER.	KIM-115	115	12.89	11.37	0.877+j5.074	1.096+j7.160	15.56	12.98	0.694+j4.643	1.168+j7.414
KRUPP METALÚRGICA	KRU-115	115	14.14	8.99	0.794+j4.628	2.973+j12.432	15.94	10.00	0.729+j4.524	2.970+j12.417
LA BARRA	LBR-115	115	3.52	4.19	4.177+j18.398	1.470+j9.962	3.86	4.56	4.177+j18.472	1.515+j10.308
LA CHOCA	LCH-115	115	15.64	14.29	0.752+j4.178	1.139+j5.578	18.39	16.16	0.644+j3.919	1.150+j5.677
LA CIÉNEGA	CIG-115	115	5.24	5.83	3.092+j12.300	0.956+j8.813	5.89	6.41	2.901+j12.066	1.029+j9.340
LA CIÉNEGA	CIG-230	230	2.86	3.08	10.943+j45.065	4.436+j36.508	3.26	3.41	10.078+j43.728	4.763+j38.541
LA CURVA	LVA-115	115	7.69	6.48	1.148+j8.555	2.357+j13.372	9.05	7.33	0.930+j8.015	2.368+j13.612
LA GARZA	LGZ-115	115	1.90	1.13	9.655+j33.583	28.523+j102.270	2.12	1.25	9.398+j33.075	28.525+j102.239
LA GLORIA MANIOBRAS	GLM-115	115	3.70	3.48	3.864+j17.544	2.111+j21.264	4.02	3.72	3.931+j17.723	2.301+j22.578
LA GRANJA TRES	GRT-115	115	10.73	6.92	1.095+j6.088	3.541+j16.095	13.68	9.61	0.835+j5.274	2.421+j11.883
LA GUADALUPE	LGP-115	115	1.66	1.11	10.348+j38.568	30.745+j95.009	1.87	1.24	9.986+j37.794	30.405+j93.817
LA GUADALUPE	LGP-115	115	11.58	9.74	0.826+j5.671	2.153+j9.166	13.19	10.80	0.768+j5.486	2.168+j9.319
LA HACIENDA	HDA-115	115	11.85	8.16	1.094+j5.496	2.790+j13.151	13.75	9.14	0.986+j5.221	2.795+j13.221
LA MALINCHE	MLC-115	115	19.59	22.96	0.650+j3.327	0.188+j1.966	22.23	26.09	0.571+j3.236	0.149+j1.873
LA MALINCHE	MLC-230	230	12.04	12.14	2.165+j10.812	1.569+j10.845	14.12	15.08	1.799+j10.187	1.020+j8.392
LA MIRA	MRA-115	115	4.59	4.80	4.488+j13.758	2.757+j11.884	6.18	6.06	2.807+j11.481	2.797+j11.972
LA REFORMA	RFA-115	115	10.36	7.74	1.037+j6.325	2.643+j13.010	11.79	8.59	0.972+j6.118	2.655+j13.125
LA REINA	RNA-115	115	6.60	6.19	1.891+j9.887	2.077+j11.889	7.58	6.92	1.660+j9.490	2.119+j12.167
LA TINAJA	TNJ-115	115	2.27	1.25	6.467+j28.499	27.487+j97.441	2.67	1.47	5.935+j26.656	26.053+j91.029
LA TRINITARIA	TNI-115	115	1.27	0.86	15.026+j49.870	46.843+j118.428	1.44	0.96	14.298+j48.711	46.428+j116.799
LA UNIÓN	UNN-115	115	5.48	2.33	2.556+j11.835	16.515+j58.869	8.42	4.19	1.774+j8.486	9.227+j33.662
LA VENTA DOS	VED-115	115	4.79	3.79	3.052+j13.508	5.666+j24.282	5.32	4.19	3.058+j13.386	5.673+j24.246
LA VENTA DOS	LVD-230	230	4.26	5.46	4.696+j30.819	1.423+j11.062	6.68	7.92	2.379+j21.724	1.490+j11.701
LA VENTA MANIOBRAS	VMN-230	230	3.80	4.77	5.058+j34.574	1.093+j14.191	5.99	6.87	2.493+j24.259	1.204+j15.119
LA VENTA PEMEX	VEP-115	115	4.73	3.71	3.093+j13.692	5.864+j25.007	5.24	4.10	3.102+j13.575	5.871+j24.971
LACANJÁ	LCJ-115	115	0.73	0.40	25.896+j87.453	132.966+j288.992	0.81	0.44	25.197+j86.430	133.213+j289.555
LAGUNA DE TRES PALOS	LTP-115	115	4.75	5.05	4.668+j13.178	2.316+j11.017	6.39	6.36	2.972+j11.036	2.357+j11.170
LAGUNA VERDE	LAV-230	230	11.44	11.95	1.125+j11.557	0.647+j10.120	13.57	13.85	0.777+j10.739	0.599+j10.161
LAGUNA VERDE	LAV-400	400	15.00	16.79	1.868+j15.283	0.811+j10.509	22.04	25.25	0.856+j11.494	0.380+j7.215
LAMOSA	LOA-115	115	21.94	18.68	0.486+j2.988	0.779+j4.558	24.37	20.37	0.440+j2.965	0.799+j4.706
LAPSOLITE	LSL-115	115	15.99	11.67	0.683+j4.095	2.202+j8.522	17.74	12.78	0.638+j4.068	2.213+j8.669
LAS BRISAS	BRS-115	115	19.11	16.76	0.636+j3.416	0.780+j4.902	24.54	20.23	0.461+j2.940	0.785+j4.895
LAS CHOAPAS DOS	LHD-115	115	3.37	2.08	5.576+j18.894	12.403+j55.008	3.77	2.31	5.489+j18.587	12.411+j54.972
LAS JUNTAS	LJU-115	115	1.73	1.10	11.139+j36.767	25.375+j101.623	1.91	1.20	11.002+j36.640	25.539+j102.212
LAS MARGARITAS	MGS-115	115	3.85	2.43	3.089+j16.974	9.693+j46.443	4.42	2.73	2.844+j16.267	9.718+j46.148
LAS MATAS	MAS-115	115	11.83	8.03	0.922+j5.535	2.772+j13.408	15.14	10.69	0.701+j4.773	1.911+j10.776
LAS TRANCAS	TRN-115	115	6.26	5.53	2.029+j10.409	2.720+j14.570	7.17	6.17	1.803+j10.029	2.759+j14.837
LAS VIGAS DOS	VGS-115	115	4.63	3.15	2.689+j14.095	7.287+j33.813	5.58	3.60	2.215+j12.906	7.281+j33.923
LERDO	LRD-115	115	1.87	1.05	11.571+j33.619	31.053+j114.313	2.24	1.52	9.822+j31.137	19.380+j76.735
LIBERACIÓN MEXICANA	LMX-115	115	2.66	2.15	6.340+j24.099	8.351+j42.050	3.06	2.40	5.864+j23.128	8.401+j42.677
LIBRES	LIB-115	115	4.78	3.10	3.516+j13.446	8.218+j35.580	5.39	3.45	3.354+j13.124	8.258+j35.571
LOMA BONITA DOS	LBD-115	115	3.44	2.05	5.113+j18.592	17.281+j56.150	3.90	2.29	4.928+j18.077	17.278+j55.803



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			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
LOMAS COCOYOC	LOC-115	115	9.30	6.50	1.470+j6.988	3.240+j16.033	10.19	7.09	1.405+j7.028	3.250+j16.251
LOMAS DEL MAR	LMM-115	115	5.44	6.24	4.126+j11.489	1.148+j7.141	7.59	8.17	2.440+j9.305	1.186+j7.305
LÓPEZ MATEOS	LME-115	115	11.89	9.37	1.567+j5.359	1.930+j10.078	14.07	10.84	1.482+j4.973	1.944+j9.768
LOS AMATES	LAT-115	115	6.06	7.87	3.856+j10.252	0.222+j3.171	8.75	10.86	2.176+j8.056	0.260+j3.334
LOS AMATES	LAT-230	230	3.30	4.03	13.688+j37.901	1.607+j17.542	4.92	5.61	7.205+j28.812	1.854+j18.188
LOS ARCOS	AOS-115	115	14.26	15.45	0.594+j4.619	0.290+j3.586	15.66	16.70	0.519+j4.635	0.298+j3.791
LOS RÍOS	LRS-115	115	5.53	1.55	1.961+j11.842	42.105+j96.264	6.76	1.73	1.395+j10.711	42.320+j96.797
LOS RÍOS	LRS-230	230	4.52	3.74	5.279+j28.886	9.338+j47.058	6.74	5.37	2.816+j21.494	6.847+j37.896
MACTUMATZA	MAA-115	115	9.75	6.15	1.432+j6.655	2.973+j18.571	11.75	7.04	1.206+j6.100	2.969+j18.448
MACULTEPEC	MCL-115	115	5.06	3.62	3.157+j12.731	10.970+j27.012	5.69	4.01	3.037+j12.472	10.989+j27.170
MACUSPANA	MCP-115	115	5.92	5.01	2.114+j11.020	5.594+j16.549	6.85	5.62	1.889+j10.490	5.649+j16.862
MACUSPANA DOS	MCD-115	115	11.04	12.60	0.732+j5.967	0.248+j3.893	13.23	14.49	0.531+j5.496	0.259+j4.133
MACUSPANA DOS	MCD-230	230	9.74	9.47	2.175+j13.460	2.086+j15.020	13.18	11.75	1.356+j11.002	2.167+j15.166
MAGDALENA MANIOBRAS	MMA-400	400	9.87	10.28	2.638+j23.241	2.104+j20.641	12.33	12.06	1.790+j20.531	2.332+j21.880
MAGDALENA MANIOBRAS DOS	MDM-230	230	8.24	8.85	2.410+j15.931	1.521+j12.828	9.93	10.18	1.893+j14.591	1.681+j13.525
MALINALTEPEC	MLN-115	115	0.77	0.44	27.781+j81.459	74.772+j275.290	0.86	0.48	26.385+j80.523	74.821+j275.394
MALPASO	MPS-115	115	6.22	7.39	1.572+j10.553	0.298+j5.676	6.86	8.00	1.551+j10.530	0.343+j6.129
MALPASO	MPS-400	400	15.14	16.76	1.991+j15.119	1.068+j11.042	29.03	31.74	0.603+j8.729	0.423+j6.182
MALPASO DOS	MPD-230	230	12.77	14.55	0.873+j10.359	0.281+j6.755	17.85	19.60	0.369+j8.174	0.206+j5.936
MALPASO TRES	MPE-115	115	6.12	7.14	1.616+j10.732	0.425+j6.261	6.75	7.73	1.595+j10.709	0.470+j6.714
MANDINGA	MDG-115	115	10.92	4.13	1.007+j5.995	13.796+j33.593	13.46	4.78	0.792+j5.367	13.602+j32.664
MANIOBRAS PRO MDF	MPR-115	115	6.78	5.99	2.247+j9.535	3.344+j13.411	7.63	6.58	2.169+j9.321	3.523+j13.826
MANIOBRAS SOLAR XOXCOTLA	SMX-115	115	9.40	9.21	1.147+j6.971	0.935+j7.453	10.69	10.20	0.998+j6.756	0.966+j7.772
MANLIO FABIO ALTAMIRANO	MFA-230	230	17.18	19.97	1.279+j7.622	0.515+j4.522	22.98	25.43	0.767+j6.310	0.520+j4.593
MANLIO FABIO ALTAMIRANO	MFA-400	400	13.15	13.94	2.777+j17.336	2.027+j14.615	18.89	18.68	1.415+j13.372	1.917+j13.994
MANUEL MORENO TORRES	MMT-115	115	13.99	16.94	0.642+j4.704	0.069+j2.294	17.21	20.06	0.465+j4.219	0.079+j2.415
MANUEL MORENO TORRES	MMT-400	400	14.42	17.17	2.181+j15.864	0.563+j8.503	31.52	36.69	0.498+j8.045	0.240+j4.342
MAPASTEPEC	MAP-115	115	3.76	2.62	4.803+j16.997	11.493+j39.041	4.49	3.11	4.100+j15.756	10.505+j36.289
MARTÍNEZ DE LA TORRE DOS	MDD-115	115	3.82	3.10	4.147+j16.865	8.781+j28.278	4.42	3.57	3.798+j16.079	8.446+j27.093
MARTÍNEZ DE LA TORRE TRES	MTT-115	115	3.74	2.86	4.024+j17.303	9.354+j32.756	4.29	3.27	3.714+j16.611	9.070+j31.750
MATAPIONCHE	MPH-115	115	2.44	1.39	6.170+j26.483	24.752+j85.669	2.89	1.65	5.644+j24.636	23.321+j79.263
MATÍAS ROMERO	MRO-115	115	6.48	5.37	2.139+j10.020	3.345+j16.385	8.08	6.27	1.759+j8.864	3.369+j16.594
MATÍAS ROMERO POTENCIA	MSP-115	115	9.02	9.63	1.103+j7.278	0.832+j6.016	11.53	11.53	0.785+j6.287	0.865+j6.305
MATÍAS ROMERO POTENCIA	MSP-230	230	5.70	5.97	3.480+j23.052	4.089+j20.139	7.92	7.58	2.169+j18.318	4.233+j20.677
MAZATAN	MAZ-115	115	4.17	3.64	3.760+j15.476	6.471+j21.902	4.97	4.18	3.091+j14.352	6.604+j21.992
MAZATEPEC	MZT-230	230	6.91	5.22	2.751+j19.017	8.776+j37.011	10.95	10.49	1.288+j13.272	1.262+j13.368
MEDIA LUNA	MLU-115	115	3.12	2.42	6.727+j20.186	13.788+j37.120	3.97	2.96	4.961+j17.729	13.137+j34.706
METALOIDES	MET-115	115	19.94	14.41	0.751+j3.244	1.357+j7.057	22.84	16.16	0.679+j3.125	1.354+j7.050
METEPEC	MEC-115	115	7.00	4.24	2.285+j9.200	7.213+j27.130	7.87	4.70	2.172+j9.026	7.218+j27.148
METLATONOC	MTL-115	115	0.94	0.59	19.540+j67.509	44.469+j192.277	1.08	0.66	17.604+j65.161	44.510+j192.187
MEZCALA	MZL-115	115	6.74	6.79	2.710+j9.464	1.524+j9.445	10.62	10.46	1.040+j6.799	0.890+j7.053
MEZCALA	MZL-230	230	4.48	4.41	9.138+j28.181	6.147+j30.029	8.96	8.52	2.820+j16.055	3.491+j18.127



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MEZCALAPA	MEZ-115	115	6.25	4.94	2.336+j10.364	6.202+j18.234	7.01	5.45	2.262+j10.169	6.228+j18.429
MEZCALAPA SWITCHEO	MZW-230	230	8.00	6.43	2.245+j16.451	5.429+j28.713	10.49	8.26	1.565+j13.833	4.579+j24.933
MIAHUATLAN	MHT-115	115	1.90	1.23	9.992+j33.471	22.224+j88.593	2.11	1.36	9.727+j33.219	22.279+j88.947
MIAHUATLÁN DOS	MUD-115	115	2.01	1.34	9.260+j31.696	19.874+j80.591	2.23	1.47	9.007+j31.451	19.932+j80.967
MINAS	MIS-69	69	1.53	1.06	5.505+j25.398	14.941+j59.252	2.30	2.44	2.810+j18.880	0.974+j15.729
MINATITLÁN DOS	MID-115	115	27.58	30.76	0.315+j2.387	0.093+j1.754	36.55	38.20	0.209+j1.987	0.107+j1.780
MINATITLÁN DOS	MID-400	400	12.27	13.41	2.500+j18.659	1.435+j14.782	19.09	18.41	1.409+j13.233	1.561+j14.917
MINATITLÁN UNO	MIU-115	115	9.21	5.80	1.213+j7.103	4.321+j19.628	11.00	6.60	1.047+j6.554	4.316+j19.533
MINERA AUTLÁN, PUÉ.	MAU-115	115	7.45	8.02	1.591+j8.763	0.963+j7.017	9.40	9.92	1.222+j7.673	1.004+j6.463
MINERA CAPELA	MCA-115	115	1.54	1.01	14.141+j40.702	31.142+j107.538	1.81	1.15	12.286+j38.456	30.477+j105.100
MINERA CUZCATLAN	MCN-115	115	2.70	2.04	6.294+j23.814	10.109+j47.038	3.00	2.25	6.089+j23.585	10.182+j47.542
MINERA FILOS-BERMEJAL	MFB-115	115	4.76	3.91	3.774+j13.425	4.449+j22.479	6.65	5.15	2.092+j10.785	3.815+j20.086
MISANTLA DOS	MSD-115	115	2.10	1.62	8.432+j30.520	20.868+j55.575	2.37	1.83	8.070+j29.745	20.529+j54.385
MITLA	MTX-115	115	1.81	1.25	9.413+j35.456	19.621+j84.530	2.01	1.37	9.218+j35.217	19.655+j84.902
MOCAMBO	MCB-115	115	16.26	10.48	0.790+j4.006	1.529+j10.773	21.10	12.99	0.577+j3.413	1.378+j9.963
MOCAMBO	MCB-115B	115	16.26	10.48	0.790+j4.006	1.529+j10.773	21.10	12.99	0.577+j3.413	1.378+j9.963
MOTOZINTLA	MTO-115	115	1.60	1.03	12.875+j39.330	36.062+j103.410	1.83	1.16	11.989+j38.096	35.788+j102.240
MOZIMBA	MOZ-115	115	5.11	5.85	4.071+j12.333	1.923+j7.564	7.08	7.64	2.400+j10.028	1.958+j7.655
MUNDO IMPERIAL	MIP-115	115	4.61	4.54	4.806+j13.570	3.086+j14.527	6.17	5.64	3.110+j11.428	3.127+j14.681
NANCHITAL DOS	NND-115	115	9.93	6.80	1.515+j6.510	3.352+j15.683	11.64	7.67	1.407+j6.113	3.366+j15.708
NAONILCO	NAO-115	115	4.21	3.38	3.448+j15.402	5.469+j26.858	4.77	3.75	3.205+j14.974	5.517+j27.160
NISSAN	NSN-115	115	10.37	9.89	1.138+j6.299	0.968+j7.281	11.47	10.78	1.013+j6.288	1.001+j7.517
NOCHIXTLAN	NCH-115	115	1.86	1.27	10.306+j34.247	25.756+j81.364	2.05	1.40	10.141+j34.078	25.819+j81.720
NOGALES	NGL-115	115	9.36	6.70	1.877+j6.839	3.584+j15.141	11.13	7.71	1.672+j6.347	3.535+j14.894
NORTE	NOR-115	115	33.64	27.49	0.405+j1.932	0.565+j3.271	39.72	31.56	0.333+j1.808	0.559+j3.235
NUEVO MORELOS	NMO-115	115	3.72	2.28	4.583+j17.254	11.642+j50.519	4.24	2.55	4.386+j16.675	11.602+j50.342
NUEVO PEMEX	NPX-115	115	4.58	3.46	3.075+j14.175	10.905+j27.040	5.10	3.81	3.028+j14.011	10.926+j27.237
OAXACA	OAX-115	115	3.91	3.72	4.442+j16.369	4.366+j19.147	4.38	4.10	4.244+j16.124	4.403+j19.545
OAXACA DOS	OXD-115	115	4.80	4.66	3.496+j13.386	3.124+j14.836	5.39	5.14	3.307+j13.140	3.157+j15.206
OAXACA PONIENTE	OAP-115	115	4.16	4.43	4.191+j15.402	2.513+j12.791	4.66	4.89	3.995+j15.162	2.550+j13.200
OAXACA POTENCIA	OXP-115	115	5.35	6.59	3.089+j12.017	0.291+j5.496	6.01	7.27	2.905+j11.791	0.330+j5.923
OAXACA POTENCIA	OXP-230	230	2.93	3.25	10.684+j44.122	2.492+j31.998	3.33	3.59	9.824+j42.793	2.813+j34.173
OAXACA UNO	OAU-230	230	3.44	4.19	6.140+j38.165	2.107+j18.299	5.06	5.70	3.685+j28.619	2.249+j19.215
OCOZINGO	OCO-115	115	1.13	0.74	17.994+j55.805	57.736+j141.086	1.26	0.82	17.600+j55.214	57.681+j140.413
OCOZOCUAUTLA	OCZ-115	115	6.52	4.46	2.297+j9.918	4.900+j23.868	7.60	5.03	2.072+j9.385	4.903+j23.837
OJO DE AGUA POTENCIA	OJP-115	115	20.84	21.82	0.491+j3.148	0.247+j2.768	26.06	25.91	0.337+j2.782	0.267+j2.851
OJO DE AGUA POTENCIA	OJP-400	400	12.22	12.96	3.072+j18.644	1.562+j15.795	18.74	17.48	1.867+j13.424	1.688+j16.502
OLINALA	OLN-115	115	1.29	0.88	14.617+j49.449	34.701+j117.066	1.50	1.00	12.727+j47.061	34.742+j116.977
OMEALCA	OME-115	115	3.69	1.83	2.813+j17.787	16.528+j70.955	4.80	3.32	2.044+j15.071	6.557+j34.976
OMETEPEC	OMT-115	115	1.23	0.70	21.658+j49.326	52.809+j169.610	1.39	0.78	20.373+j48.496	52.855+j169.712
ORIENTE	ORT-115	115	20.80	15.33	0.691+j3.117	1.373+j6.474	23.71	17.06	0.621+j3.017	1.381+j6.546
ORIZABA	ORI-115	115	15.18	13.96	0.855+j4.290	0.979+j5.447	19.21	17.33	0.622+j3.751	0.866+j4.978



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
OXCHUC	OXC-115	115	1.58	1.03	12.610+j40.066	39.895+j100.934	1.77	1.15	12.234+j39.453	39.840+j100.263
PACHAMAMA II MANIOBRAS	MPA-400	400	11.97	12.85	2.461+j19.141	1.816+j15.292	15.55	15.79	1.488+j16.269	1.935+j15.918
PAGÉS	PAG-115	115	18.51	13.53	0.706+j3.517	1.107+j7.495	24.10	16.66	0.511+j2.988	1.045+j7.109
PAGÉS	PAG-115B	115	18.51	13.53	0.706+j3.517	1.107+j7.495	24.10	16.66	0.511+j2.988	1.045+j7.109
PAJARITOS DOS	PJD-115	115	16.69	15.33	0.669+j3.922	0.554+j5.144	20.56	18.61	0.575+j3.505	0.565+j4.721
PAKAL	PKN-115	115	2.65	1.06	5.557+j24.440	55.813+j126.969	3.06	1.18	4.971+j23.333	56.030+j127.503
PALENQUE	PLQ-115	115	2.13	0.92	7.258+j30.248	62.066+j141.122	2.44	1.03	6.665+j29.149	62.283+j141.656
PALMAR DE BRAVO	PLB-115	115	4.57	3.23	4.832+j13.715	7.935+j31.708	5.08	3.55	4.736+j13.583	8.009+j32.087
PALMAS	PMM-115	115	12.34	9.27	0.640+j5.343	2.091+j10.564	13.42	10.09	0.632+j5.404	2.095+j10.663
PANOTLA	PNA-115	115	12.08	8.01	1.540+j5.275	3.899+j13.362	13.51	8.86	1.477+j5.200	3.904+j13.390
PANTEPEC	PPC-115	115	8.94	10.38	1.245+j7.325	0.286+j4.422	9.73	11.13	1.244+j7.405	0.321+j4.744
PANTEPEC	PPC-230	230	5.63	5.50	3.788+j23.266	2.281+j25.409	6.26	5.96	3.668+j23.036	2.549+j26.907
PAPAGAYO	PPG-115	115	4.01	2.87	5.526+j15.592	14.457+j33.004	5.18	3.41	3.843+j13.555	14.506+j33.112
PAPALOTLA	PPL-115	115	19.69	13.13	0.614+j3.315	1.897+j8.234	22.54	14.75	0.543+j3.194	1.890+j8.186
PAPANOA	PPN-115	115	1.27	1.17	11.779+j51.124	39.108+j55.504	2.40	1.99	7.635+j29.463	25.505+j43.231
PAPANTLA DISTRIBUCIÓN	PPD-115	115	10.30	7.40	0.952+j6.377	3.093+j13.715	11.32	8.11	0.931+j6.386	3.096+j13.796
PAPANTLA POTENCIA	PPT-115	115	20.45	19.28	0.247+j3.237	0.524+j3.808	22.35	20.78	0.223+j3.260	0.556+j3.968
PAPANTLA POTENCIA	PPT-400	400	15.67	13.46	1.401+j14.674	4.136+j21.619	19.57	15.83	0.990+j12.944	4.360+j21.716
PAPELERA TUXTEPEC	PTU-230	230	5.08	3.65	3.718+j25.883	12.538+j55.439	5.97	4.17	3.188+j24.250	12.532+j54.717
PARÁISO	PSO-115	115	6.90	5.87	1.756+j9.461	3.516+j14.459	7.79	6.49	1.647+j9.224	3.577+j14.709
PAREDÓN PEMEX	PPX-115	115	2.60	1.84	6.490+j24.674	21.509+j52.947	2.89	2.03	6.411+j24.484	21.536+j53.142
PARQUE INDUSTRIAL	PRQ-115	115	5.55	3.76	2.053+j11.780	6.544+j28.580	6.26	4.16	1.945+j11.505	6.557+j28.676
PARQUE INDUSTRIAL DE ENERGÍA RENOVABLE, S.A. DE C.V.	PIE-230	230	4.95	5.41	2.500+j26.690	1.557+j19.993	5.42	5.81	2.392+j26.850	1.673+j21.418
PARRILLA	PLL-115	115	16.29	14.52	0.629+j4.026	0.936+j5.651	19.64	16.66	0.490+j3.686	0.946+j5.740
PASO DEL TORO	PDT-115	115	14.21	10.38	0.839+j4.596	1.931+j9.676	18.08	12.93	0.628+j3.990	1.753+j8.805
PE INGENIO	EIN-230	230	3.49	4.19	5.543+j37.672	2.378+j19.439	5.36	5.85	2.922+j27.113	2.489+j20.367
PEÑITAS	PEA-115	115	4.21	3.40	3.361+j15.402	9.659+j25.596	4.68	3.73	3.304+j15.265	9.681+j25.864
PEÑITAS	PEA-230	230	10.25	8.90	1.585+j12.853	3.321+j18.884	16.31	17.22	0.688+j8.927	0.509+j7.496
PEÑITAS DOS	PED-115	115	4.21	3.40	3.357+j15.425	9.629+j25.533	4.67	3.74	3.301+j15.289	9.652+j25.804
PEROTE DOS	PEE-115	115	4.86	5.12	2.517+j13.426	2.644+j11.324	6.11	6.14	1.916+j11.791	2.607+j11.485
PETATLÁN	PTT-115	115	1.96	1.77	7.124+j33.139	23.385+j39.879	3.06	2.60	5.574+j23.174	18.009+j32.549
PETROQUÍMICA ESCOLIN	PQS-115	115	15.11	13.65	0.654+j4.346	1.854+j5.566	16.38	14.77	0.646+j4.413	1.859+j5.668
PICHUALCO	PCO-115	115	2.25	1.54	7.984+j28.468	27.700+j64.594	2.50	1.71	7.818+j28.148	27.711+j64.690
PIE DE LA CUESTA	PIC-115	115	6.10	7.92	3.524+j10.290	0.244+j3.159	8.91	11.05	1.908+j7.968	0.287+j3.304
PIE DE LA CUESTA	PIC-230	230	3.53	4.33	12.543+j35.422	1.641+j16.133	5.31	6.06	6.478+j26.738	1.875+j16.713
PIEDRAS NEGRAS	PNS-115	115	5.37	3.09	2.397+j12.132	8.881+j38.707	7.00	4.06	1.900+j10.263	7.478+j32.346
PIER II QUECHOLAC FELIPE ÁNGELES S.A. DE C.V.	PDQ-115	115	5.96	5.76	2.790+j10.793	1.369+j12.290	6.65	6.25	2.693+j10.656	1.518+j13.068
PINOTEPA NACIONAL	PIN-115	115	1.05	0.58	26.000+j57.687	61.864+j205.224	1.17	0.65	25.027+j57.183	61.905+j205.336
PLAYA DIAMANTE	PDI-115	115	4.88	5.14	4.551+j12.824	2.289+j10.987	6.61	6.50	2.854+j10.682	2.330+j11.141
PLAYA NORTE	PYN-115	115	19.39	15.34	0.654+j3.361	0.911+j6.096	25.25	18.80	0.469+j2.854	0.881+j5.892
PLAYA VICENTE	PVC-115	115	1.85	1.06	9.347+j34.674	35.939+j111.440	2.06	1.17	9.157+j34.163	35.935+j111.091
PLAYAS	PYS-115	115	4.63	4.90	4.499+j13.616	2.587+j11.340	6.25	6.20	2.812+j11.343	2.627+j11.428



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			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
POCHUTLA	POC-115	115	1.59	0.92	14.036+j39.360	33.265+j128.432	1.77	1.01	13.621+j39.004	33.303+j128.630
POLIDESA	PLS-115	115	11.83	8.64	1.261+j5.469	2.842+j11.550	13.30	9.64	1.176+j5.362	2.812+j11.453
POLIFIL	POF-115	115	18.48	14.78	0.664+j3.530	1.200+j6.192	20.51	16.15	0.619+j3.507	1.219+j6.340
POMOCA	PMC-115	115	15.90	17.00	0.678+j4.121	0.442+j3.554	18.73	19.25	0.564+j3.858	0.460+j3.709
PONIENTE	PON-115	115	23.72	16.63	0.651+j2.722	1.301+j6.267	27.37	18.73	0.577+j2.605	1.296+j6.247
PORCEL	POR-115	115	19.84	13.14	0.645+j3.283	1.873+j8.285	22.69	14.73	0.574+j3.167	1.869+j8.253
POTRERO DOS	PTD-115	115	6.44	4.69	3.054+j9.846	6.325+j21.005	7.36	5.23	2.895+j9.489	6.352+j21.159
POZA RICA	PRI-69	69	23.39	30.77	0.062+j1.702	0.026+j0.488	23.95	31.40	0.064+j1.828	0.028+j0.536
POZA RICA	PRI-115	115	24.34	29.79	0.191+j2.721	0.046+j1.247	26.06	31.51	0.185+j2.796	0.052+j1.351
POZA RICA	PRI-230	230	16.09	17.17	0.644+j8.227	0.616+j6.692	18.44	19.11	0.530+j7.902	0.663+j6.972
POZA RICA DOS	PRD-230	230	17.36	19.05	0.546+j7.631	0.373+j5.617	20.11	21.42	0.417+j7.251	0.396+j5.815
POZA RICA DOS	PRD-400	400	23.14	20.56	0.909+j9.939	2.120+j13.493	31.37	25.87	0.531+j8.081	2.203+j12.938
POZA RICA TRES	PRT-69	69	12.32	9.84	0.343+j3.215	1.099+j5.606	13.05	10.57	0.346+j3.341	1.101+j5.654
POZO RANEY	PZR-115	115	4.09	2.82	5.252+j15.348	27.253+j28.741	5.36	3.36	3.560+j13.140	27.300+j28.836
POZOS HUAZUNTLAN	POZ-115	115	5.40	3.49	4.247+j11.534	8.607+j31.575	6.17	3.90	4.123+j11.102	8.595+j31.455
PROCTER & GAMBLE MANUFACTURAS S DE R.L. DE C.V.	PGC-115	115	9.17	7.93	1.294+j7.127	1.378+j10.983	10.12	8.57	1.254+j7.104	1.498+j11.427
PROENERMEX SANTA GERTRUDIS	PSG-115	115	12.83	10.33	0.940+j5.089	1.873+j8.747	15.78	12.66	0.727+j4.572	1.556+j7.904
PUEBLA DOS	PBD-115	115	40.63	40.05	0.294+j1.607	0.138+j1.720	47.78	45.14	0.227+j1.512	0.149+j1.804
PUEBLA DOS	PBD-115B	115	40.63	40.05	0.294+j1.607	0.138+j1.720	47.78	45.14	0.227+j1.512	0.149+j1.804
PUEBLA DOS	PBD-230	230	17.33	18.80	1.030+j7.594	0.401+j5.912	19.84	20.88	0.771+j7.321	0.446+j6.273
PUEBLA DOS	PBD-400	400	21.38	22.82	2.106+j10.596	1.079+j8.871	28.80	28.54	1.247+j8.733	1.124+j9.098
PUEBLA DOS MIL	PDM-115	115	32.99	28.97	0.399+j1.973	0.545+j2.811	38.37	32.53	0.331+j1.874	0.554+j2.888
PUEBLA UNO SF6	PSF-115	115	19.22	12.72	0.845+j3.350	1.567+j8.630	21.90	14.18	0.773+j3.244	1.569+j8.660
PUENTE DE IXTLA	PTI-85	85	3.10	1.63	2.715+j15.584	10.223+j57.659	3.34	1.77	2.705+j15.919	10.214+j58.081
PUERTO CHIAPAS	PUC-115	115	2.89	2.26	6.624+j21.960	13.466+j39.904	3.37	2.55	5.935+j20.868	13.600+j39.994
PUERTO ESCONDIDO	PUE-115	115	1.15	0.65	21.578+j53.411	51.100+j185.290	1.28	0.71	21.041+j53.103	51.140+j185.450
PUERTO FRANCO	PFR-115	115	11.70	9.58	1.465+j5.484	1.743+j9.455	13.84	11.11	1.378+j5.093	1.756+j9.122
PUERTO MADERO	PTM-115	115	3.09	2.44	6.260+j20.573	12.013+j36.601	3.60	2.76	5.571+j19.480	12.147+j36.691
PUERTO MARQUEZ	PUM-115	115	5.55	6.48	4.034+j11.266	0.948+j6.481	7.79	8.54	2.351+j9.076	0.987+j6.644
PUNTA IXTAPA, GRO.	PUI-115	115	4.28	3.24	2.197+j15.344	6.246+j29.755	6.02	4.26	2.031+j11.966	6.067+j26.451
PUNTA LIMÓN	PLI-115	115	1.97	1.41	8.544+j32.594	14.317+j72.920	2.16	1.53	8.612+j32.771	14.509+j74.239
QUEMADO	QMD-69	69	8.10	10.78	1.330+j4.737	0.018+j1.162	11.22	14.52	0.696+j3.843	0.077+j1.187
QUEMADO	QMD-115	115	6.42	8.62	3.680+j9.661	0.110+j2.203	9.58	12.39	1.989+j7.357	0.158+j2.297
QUEMADO	QMD-230	230	3.38	4.27	13.518+j36.880	0.890+j13.998	5.10	6.06	7.030+j27.747	1.136+j14.591
REAL DEL BOSQUE	RDB-115	115	9.55	6.99	1.374+j6.813	2.687+j14.350	11.50	8.06	1.149+j6.248	2.678+j14.203
REFINERÍA LÁZARO CÁRDENAS RECONFIGURACIÓN	RLC-115	115	10.61	6.94	1.034+j6.170	3.503+j15.905	13.65	11.53	0.771+j5.293	0.920+j8.302
REFINERÍA MINATITLÁN	RMN-115	115	9.12	5.78	1.200+j7.179	4.358+j19.568	11.27	6.66	0.961+j6.407	4.361+j19.518
REFINERÍA PEMEX	RFP-115	115	10.83	7.10	0.999+j6.051	3.404+j15.542	13.92	11.67	0.745+j5.195	0.956+j8.281
REFINERÍA SALINA CRUZ	RSC-115	115	3.05	3.08	4.998+j21.166	5.254+j21.356	4.14	3.85	3.488+j17.307	5.279+j21.356
RENACIMIENTO	REN-115	115	5.91	7.50	3.961+j10.514	0.377+j3.845	8.53	10.31	2.268+j8.254	0.417+j3.971
RESURRECCIÓN	RSN-115	115	14.83	9.85	0.954+j4.374	2.358+j11.035	16.77	10.95	0.883+j4.265	2.360+j11.058
REYES MANTECÓN	RMC-115	115	4.39	4.16	3.651+j14.686	3.463+j17.246	4.92	4.59	3.457+j14.441	3.522+j17.711



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RÍO BLANCO	RBO-115	115	9.09	6.47	1.571+j7.137	3.557+j15.799	10.73	7.38	1.372+j6.669	3.537+j15.682
RÍO COATAN	RCT-69	69	1.99	2.36	2.105+j19.871	0.500+j10.544	2.93	3.67	0.987+j14.936	0.158+j5.873
RÍO COATAN	RCT-115	115	3.61	3.12	5.088+j17.679	4.483+j26.694	4.56	3.89	3.785+j15.563	3.634+j23.913
RÍO GRANDE (NEJAPA)	RGD-115	115	1.03	0.58	24.826+j59.171	61.043+j203.096	1.15	0.64	24.155+j58.831	61.081+j203.237
RÍO GRANDE (NEJAPA)	RGD-115B	115	0.86	0.50	28.689+j71.860	74.768+j233.966	0.95	0.55	28.017+j71.523	74.806+j234.107
RÍO MEDIO	RME-115	115	16.63	13.04	0.802+j3.912	1.183+j7.221	20.88	15.38	0.627+j3.441	1.191+j7.235
RODRÍGUEZ CLARA	RDC-115	115	2.66	1.63	6.626+j24.026	19.018+j69.911	2.98	1.81	6.466+j23.607	18.927+j69.389
SACRIFICIOS	SCF-115	115	16.37	10.24	0.794+j3.978	1.542+j11.263	21.20	12.60	0.584+j3.396	1.408+j10.517
SALINA CRUZ	SAC-115	115	3.35	3.32	4.440+j19.346	5.315+j20.428	4.53	4.19	3.086+j15.813	5.192+j19.896
SALOYA	SYA-115	115	15.01	13.24	0.830+j4.345	1.233+j6.317	17.60	14.94	0.722+j4.086	1.245+j6.425
SAMARIA	SMI-115	115	9.48	6.63	1.177+j6.906	3.400+j15.982	10.81	7.37	1.086+j6.666	3.406+j16.073
SAMARIA	SMI-115B	115	9.48	6.63	1.177+j6.906	3.400+j15.982	10.81	7.37	1.086+j6.666	3.406+j16.073
SAN CRISTÓBAL ORIENTE	SCO-115	115	2.73	1.80	7.098+j23.236	20.845+j58.443	3.10	2.02	6.747+j22.596	20.794+j57.778
SAN FELIPE OAXACA	SFO-115	115	3.87	3.62	4.374+j16.576	4.754+j20.242	4.33	3.99	4.179+j16.323	4.793+j20.639
SAN JACINTO TLACOTEPEC	JTL-115	115	1.10	0.70	11.575+j59.033	33.855+j161.739	1.22	0.77	11.353+j58.799	33.928+j162.215
SAN JERÓNIMO	JRN-115	115	1.75	1.37	11.313+j36.291	21.482+j65.505	2.80	2.14	6.790+j25.181	16.310+j47.661
SAN JOSÉ CHIAPA	JOC-230	230	5.04	3.52	4.412+j25.949	15.244+j58.975	5.89	4.06	3.798+j24.510	14.611+j56.325
SAN LORENZO	LRZ-115	115	39.61	35.55	0.285+j1.652	0.273+j2.260	47.39	41.59	0.215+j1.526	0.262+j2.196
SAN LUIS	SNL-115	115	2.64	1.50	5.676+j24.486	22.751+j79.732	3.15	1.79	5.151+j22.637	21.322+j73.329
SAN LUIS ACATLÁN	SLU-115	115	1.05	0.59	23.906+j58.589	59.998+j201.208	1.18	0.66	22.517+j57.646	60.047+j201.311
SAN LUIS MORELIA	SSM-115	115	1.13	0.70	17.649+j55.888	37.861+j164.212	1.25	0.76	17.539+j55.786	38.167+j165.292
SAN LUIS SAN PEDRO	SLS-115	115	1.05	0.72	18.346+j60.317	39.596+j143.789	2.29	1.73	8.275+j30.811	23.830+j58.252
SAN MARTIN	MAR-115	115	24.74	21.25	0.424+j2.650	0.629+j3.974	27.63	23.22	0.377+j2.616	0.647+j4.111
SAN MARTIN POTENCIA	MPT-115	115	27.80	25.58	0.359+j2.361	0.369+j3.005	30.93	27.78	0.314+j2.340	0.389+j3.155
SAN MARTIN POTENCIA	MPT-400	400	16.63	14.44	2.223+j13.704	3.145+j20.138	20.42	16.69	1.459+j12.356	3.263+j20.625
SAN MIGUEL	SMG-115	115	12.83	8.79	0.847+j5.105	4.286+j11.667	14.23	9.55	0.802+j5.070	4.504+j11.984
SAN MIGUEL SANTA FLOR	SMF-115	115	1.13	0.78	15.370+j56.545	45.484+j131.513	1.25	0.86	15.193+j56.352	45.522+j131.883
SAN PABLO HUIXTEPEC	HTP-115	115	3.80	3.85	4.095+j16.982	2.342+j16.639	4.25	4.24	3.897+j16.750	2.416+j17.161
SAN RAFAEL DOS	RFD-115	115	2.28	1.61	7.704+j28.124	23.374+j61.247	2.58	1.81	7.344+j27.349	23.035+j60.057
SÁNCHEZ TABOADA	SNT-115	115	1.61	0.94	11.174+j39.810	30.265+j125.779	1.79	1.04	10.970+j39.235	30.224+j125.600
SANTA ANITA	STN-115	115	16.11	14.46	0.907+j4.019	1.529+j5.468	18.14	16.11	0.840+j3.938	1.535+j5.453
SANTA FE	SNF-115	115	9.99	7.62	1.124+j6.551	3.062+j12.517	11.60	8.63	0.991+j6.219	3.068+j12.511
SANTA ROSA	RSO-115	115	1.02	0.57	25.723+j59.932	62.893+j207.168	1.13	0.63	24.982+j59.565	62.930+j207.302
SANTA SOFÍA	SNS-115	115	4.09	2.76	2.903+j15.990	9.091+j38.572	4.59	3.08	2.758+j15.683	9.004+j38.259
SANTO DOMINGO	STD-115	115	3.42	2.47	4.741+j18.853	9.452+j40.773	4.11	2.83	4.191+j17.251	9.461+j40.904
SANTO DOMINGO	SND-115	115	8.32	5.53	1.725+j7.788	7.417+j18.969	9.49	6.15	1.607+j7.527	7.436+j19.128
SARABIA	SRB-115	115	5.19	4.70	2.808+j12.488	3.354+j16.548	6.13	5.35	2.532+j11.643	3.382+j16.795
SCHPOINA	SCH-115	115	2.59	1.86	6.541+j24.832	20.620+j52.023	3.00	2.13	5.890+j23.588	20.214+j50.405
SIMOJOVEL	SMJ-115	115	1.14	0.73	15.099+j56.004	49.477+j149.117	1.27	0.80	14.930+j55.683	49.489+j149.214
SÍNTESIS ORGÁNICAS, TLAXCALA	SIA-115	115	10.82	7.90	1.379+j5.978	3.073+j12.639	12.15	8.80	1.294+j5.871	3.044+j12.542
SIVESA	SIV-115	115	12.07	10.84	1.180+j5.374	1.574+j7.214	14.94	13.04	0.925+j4.800	1.539+j6.868
SN. LORENZO POTENCIA	LRP-115	115	47.55	48.56	0.242+j1.375	0.094+j1.336	57.98	58.23	0.171+j1.248	0.082+j1.268



Subestación eléctrica	Acronimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
SN. LORENZO POTENCIA	LRP-115B	115	47.55	48.56	0.242+j1.375	0.094+j1.336	57.98	58.23	0.171+j1.248	0.082+j1.268
SN. LORENZO POTENCIA	LRP-400	400	21.21	22.16	2.069+j10.689	1.087+j9.632	27.99	27.35	1.235+j8.991	1.091+j9.766
SOLEDAD DE DOBLADO	SOD-115	115	4.08	2.37	3.768+j15.815	12.070+j49.989	4.62	2.64	3.608+j15.402	12.073+j49.937
SOYALÓ	SOY-115	115	5.28	3.59	2.921+j12.221	6.824+j29.587	6.10	4.04	2.684+j11.664	6.829+j29.514
SWITCHEO VILLACOMALTITLAN	SWV-115	115	2.91	2.11	6.412+j21.868	16.266+j46.051	3.42	2.43	5.616+j20.605	15.845+j44.514
TABACHINES	TBH-85	85	6.23	5.12	1.141+j7.789	1.581+j12.907	6.58	5.43	1.119+j8.130	1.570+j13.324
TABASCO POTENCIA	TSP-230	230	14.02	15.98	1.342+j9.379	0.560+j6.298	19.19	20.23	0.753+j7.575	0.617+j6.554
TABASCO POTENCIA	TSP-400	400	9.14	9.27	3.538+j25.009	2.444+j24.790	13.01	11.79	1.818+j19.442	2.708+j25.628
TABASQUILLO	TBQ-115	115	1.78	1.42	9.739+j36.093	26.161+j61.234	1.97	1.56	9.610+j35.838	26.181+j61.394
TACOTALPA	TCT-115	115	2.52	1.75	7.015+j25.407	24.167+j56.363	2.81	1.94	6.851+j25.084	24.179+j56.459
TAJÍN	TAJ-115	115	15.16	15.29	0.574+j4.341	1.233+j4.137	16.68	16.71	0.550+j4.345	1.237+j4.216
TALLERES Y ACEROS S.A. (TYASA)	TYS-115	115	12.35	9.18	0.531+j5.352	0.078+j10.981	13.72	9.67	0.446+j5.304	0.085+j12.035
TALLERES Y ACEROS S.A. (TYASA)	TYS-400	400	11.78	12.46	3.139+j19.357	1.520+j16.526	17.80	16.63	1.931+j14.140	1.659+j17.311
TAMARINDO DOS	TDD-115	115	5.59	4.17	2.261+j11.667	4.572+j23.558	6.21	4.58	2.186+j11.561	4.609+j23.947
TAMAZULAPAN DOS	TAD-115	115	1.66	1.06	11.521+j38.208	27.570+j104.678	1.84	1.16	11.373+j38.067	27.692+j105.137
TAMSA DOS	TSD-230	230	12.30	10.92	1.812+j10.647	3.023+j14.632	15.48	12.98	1.287+j9.349	3.028+j14.703
TAMSA DOS	TSD-230B	230	12.30	10.92	1.812+j10.647	3.023+j14.632	15.48	12.98	1.287+j9.349	3.028+j14.703
TAMULTE	TAT-115	115	14.76	12.56	0.779+j4.431	1.658+j6.980	17.18	14.11	0.693+j4.194	1.665+j7.072
TAMULTE MANIOBRAS	TMM-115	115	13.94	11.68	0.753+j4.704	1.558+j7.718	16.09	13.05	0.678+j4.487	1.568+j7.828
TAPACHULA	TCH-115	115	4.20	3.45	3.977+j15.308	4.614+j25.585	5.20	4.14	3.042+j13.723	4.399+j24.324
TAPACHULA AEROPUERTO	TAE-115	115	5.88	5.57	2.759+j10.945	1.721+j13.030	7.38	6.69	2.012+j9.689	1.784+j12.707
TAPACHULA NORTE	TNE-115	115	4.32	3.72	3.872+j14.891	3.748+j22.351	5.43	4.57	2.860+j13.152	3.374+j20.675
TAPACHULA ORIENTE	TOE-115	115	4.42	3.62	3.678+j14.570	4.288+j24.496	5.44	4.29	2.818+j13.138	4.202+j23.670
TAPACHULA POTENCIA	THP-115	115	6.65	7.03	2.267+j9.724	0.499+j8.328	8.36	8.43	1.603+j8.592	0.632+j8.418
TAPACHULA POTENCIA	THP-400	400	2.46	2.71	22.021+j91.370	5.102+j67.227	3.25	3.39	14.802+j76.826	6.453+j66.993
TAPANATEPEC	TNP-115	115	2.23	1.74	8.071+j28.719	11.351+j53.373	2.57	1.95	7.486+j27.442	11.408+j54.086
TAPIJULAPA	TPJ-115	115	1.86	1.28	9.364+j34.381	33.601+j77.464	2.07	1.42	9.198+j34.058	33.613+j77.561
TAXCO	TXO-115	115	2.31	1.99	7.196+j27.776	7.446+j41.871	2.82	2.31	5.364+j25.352	7.484+j42.172
TEAPA, TABASCO.	TTB-115	115	3.40	2.41	5.144+j18.812	17.130+j40.632	3.81	2.66	4.984+j18.488	17.142+j40.727
TEAPA, VERACRUZ	TEA-115	115	19.52	15.31	0.468+j3.369	1.072+j6.265	23.58	18.78	0.389+j3.073	0.887+j5.496
TECALI	TCL-115	115	26.22	26.47	0.401+j2.500	0.138+j2.475	29.69	28.93	0.338+j2.436	0.157+j2.661
TECALI	TCL-230	230	16.43	18.21	0.923+j8.031	0.388+j5.735	18.73	20.17	0.673+j7.769	0.427+j6.140
TECALI	TCL-400	400	19.74	20.30	2.093+j11.508	1.439+j10.797	27.55	25.64	1.227+j9.140	1.555+j11.257
TECAMACHALCO	TML-115	115	7.50	4.86	2.136+j8.595	4.867+j22.787	8.34	5.35	2.061+j8.516	4.883+j22.933
TECAMACHALCO II	TLD-115	115	7.17	4.65	2.127+j9.010	5.011+j23.752	7.97	5.12	2.055+j8.936	5.027+j23.907
TECNOLÓGICO	TNL-115	115	3.43	3.09	3.942+j18.944	5.995+j25.768	4.54	3.78	2.800+j15.851	5.918+j25.440
TECOMAXTLAHUACA	TCX-115	115	0.80	0.48	22.001+j80.028	55.658+j243.687	0.88	0.53	21.888+j79.925	55.968+j244.774
TECPAN	TCA-115	115	1.27	0.90	15.394+j49.934	31.984+j111.533	2.39	1.76	8.009+j29.446	21.300+j59.854
TEHUACÁN	THN-115	115	5.19	3.25	3.583+j12.279	8.147+j34.655	5.79	3.59	3.462+j12.131	8.174+j34.835
TEHUANTEPEC	THT-115	115	3.39	2.92	4.646+j19.034	8.352+j28.613	4.51	4.03	3.401+j15.846	5.461+j21.874
TEJALPA	TJA-115	115	10.67	10.15	1.045+j6.134	0.923+j7.144	11.80	11.05	0.920+j6.123	0.956+j7.380
TELMAC	TLM-115	115	15.79	13.94	0.863+j4.116	1.138+j5.828	17.89	15.57	0.770+j4.008	1.134+j5.824



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
TEMASCAL DOS	TMD-230	230	14.68	17.00	1.080+j8.978	0.279+j5.409	19.85	22.51	0.567+j7.335	0.274+j4.690
TEMASCAL DOS	TMD-400	400	17.77	19.52	2.242+j12.801	1.175+j9.642	29.01	28.21	1.050+j8.695	1.161+j9.480
TEMASCAL UNO	TMU-115	115	14.29	7.43	0.628+j4.605	3.497+j17.236	20.48	18.45	0.344+j3.549	0.305+j4.619
TEMASCAL UNO	TMU-230	230	11.91	11.77	1.462+j11.056	1.828+j11.452	16.25	17.42	0.825+j8.948	0.704+j7.040
TEMAXCALAC	TXB-115	115	19.63	15.54	0.523+j3.343	1.235+j5.949	21.78	16.97	0.478+j3.319	1.253+j6.094
TEMIXCO	TMX-85	85	6.46	4.96	1.172+j7.504	1.809+j14.362	6.81	5.27	1.149+j7.845	1.799+j14.779
TENOSIQUE	TNQ-115	115	1.51	0.71	12.054+j42.192	80.057+j175.454	1.71	0.79	11.396+j41.141	80.292+j176.006
TEPALCINGO	TPPL-115	115	4.44	2.79	3.102+j14.636	8.275+j40.632	4.87	3.06	3.037+j14.678	8.285+j40.853
TEPEACA	TPE-115	115	7.49	5.06	1.403+j8.759	4.825+j21.072	8.30	5.56	1.340+j8.695	4.844+j21.258
TEPEJI	TPI-115	115	3.78	2.42	4.591+j16.975	9.872+j46.051	4.18	2.66	4.508+j16.891	9.948+j46.394
TEPEYAC, VERACRUZ	TPY-115	115	10.81	7.58	0.893+j6.077	2.970+j13.712	11.83	8.29	0.879+j6.113	2.974+j13.804
TEREFTALATOS	TRT-115	115	6.71	4.25	2.925+j9.445	6.519+j26.495	7.74	4.77	2.800+j9.014	6.508+j26.376
TERNIUM MÉXICO - LARGOS PUEBLA	TRP-230	230	6.82	5.09	2.984+j19.253	8.332+j38.351	7.61	5.62	2.721+j18.990	8.378+j38.713
TEZIUTLAN	TZT-69	69	3.57	3.83	0.536+j11.136	0.123+j8.898	4.30	4.56	0.401+j10.183	0.303+j8.459
TEZIUTLAN	TZT-115	115	7.78	8.59	1.481+j8.407	0.585+j6.157	9.87	10.72	1.113+j7.316	0.625+j5.604
TEZIUTLAN DOS	TZD-115	115	6.17	4.43	1.905+j10.594	4.384+j23.046	7.52	5.16	1.564+j9.591	4.417+j22.585
TEZOYUCA	TEZ-115	115	10.58	9.25	1.172+j6.167	1.474+j8.880	11.74	10.13	1.046+j6.134	1.502+j9.064
TIERRA BLANCA	TBL-115	115	4.28	2.47	3.810+j15.022	11.389+j48.492	4.98	2.93	3.538+j14.222	10.266+j44.275
TIERRA COLORADA	TIE-115	115	2.97	2.21	6.596+j21.324	9.534+j44.119	3.74	2.60	4.844+j18.922	9.563+j44.070
TIHUATLAN DOS	THD-115	115	8.43	5.80	1.410+j7.753	6.061+j17.730	9.19	6.32	1.409+j7.821	6.080+j17.923
TILAPA	TIL-69	69	1.00	0.81	14.555+j37.254	24.576+j63.491	1.07	0.87	14.594+j38.462	24.580+j64.817
TIXTLA	TIT-115	115	4.30	4.36	4.172+j14.880	2.828+j14.284	5.79	5.50	2.415+j12.384	2.868+j14.199
TLACOACHISTLAHUACA	THU-115	115	1.00	0.57	25.071+j61.520	62.088+j210.407	1.12	0.63	23.784+j60.702	62.134+j210.509
TLACOLULA	TLL-115	115	2.20	1.57	7.742+j29.156	14.934+j64.702	2.44	1.73	7.548+j28.915	14.968+j65.074
TLACOTALPAN	TTA-115	115	2.42	1.42	8.238+j26.219	25.224+j82.247	2.78	1.71	7.606+j25.172	21.748+j72.745
TLACOTEPEC	TTP-115	115	2.14	1.41	14.899+j27.276	29.556+j73.378	2.36	1.55	14.820+j27.199	29.571+j73.524
TLACOTEPEC	TCE-115	115	1.33	0.86	14.754+j47.844	36.407+j127.020	1.54	0.98	12.936+j45.473	35.738+j124.576
TLALTIZAPAN	TLZ-85	85	3.86	2.47	2.015+j12.545	5.556+j33.671	4.14	2.67	2.000+j12.883	5.546+j34.091
TLAPA NUEVA	TAN-115	115	1.43	0.93	13.624+j44.445	27.351+j117.046	1.67	1.05	11.701+j42.094	27.391+j116.956
TLAPACOYAN	TLY-115	115	4.82	6.18	3.162+j13.405	0.510+j4.698	5.75	7.32	2.716+j12.405	0.480+j4.492
TLATLAUQUITEPEC	TUQ-115	115	1.83	1.27	10.330+j34.727	19.150+j81.885	2.19	1.45	8.447+j32.334	19.191+j81.796
TLAXIACO	TXI-115	115	1.02	0.63	19.170+j62.506	46.502+j179.018	1.12	0.69	19.005+j62.357	46.600+j179.421
TONALÁ	TNA-115	115	1.61	1.44	11.397+j39.565	16.822+j53.321	1.84	1.60	10.677+j38.221	16.919+j54.552
TONANTZINTLA	TNZ-115	115	15.30	9.78	0.850+j4.255	2.697+j11.390	17.40	10.91	0.769+j4.128	2.695+j11.382
TRANSISTMICA (MANIOBRAS SEDENA)	TST-115	115	4.11	4.12	3.647+j15.745	4.688+j16.342	5.46	5.25	2.683+j13.102	4.189+j15.015
TRES ESTRELLAS	TTE-400	400	20.38	20.42	0.758+j11.304	0.738+j10.885	30.47	31.67	0.359+j8.329	0.331+j6.882
TRES VALLES	TVS-115	115	8.24	7.03	1.634+j7.894	1.662+j12.167	10.36	8.44	1.295+j6.930	1.825+j11.872
TROY	TOY-115	115	7.45	4.59	1.518+j8.780	4.966+j25.231	8.93	7.80	1.294+j8.074	1.052+j11.804
TULIPÁN	TLN-115	115	7.05	6.10	2.207+j9.153	4.072+j13.380	7.95	6.73	2.135+j8.932	4.223+j13.679
TUXPAN DOS	TUD-115	115	3.57	2.88	4.555+j18.047	10.407+j30.507	3.91	3.15	4.554+j18.116	10.442+j30.782
TUXPAN MANIOBRAS	TXM-400	400	16.75	18.83	1.018+j13.750	0.535+j9.230	27.75	31.78	0.392+j9.146	0.350+j5.542
TUXPAN VAPOR	TUV-400	400	16.59	17.51	1.052+j13.884	1.235+j11.681	28.74	33.56	0.363+j8.830	0.203+j4.901



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
TUXPANGO	TPG-115	115	10.00	8.03	1.278+j6.515	2.112+j11.345	12.41	10.04	0.984+j5.804	1.663+j9.931
TUXTEPEC DOS	TXD-115	115	6.05	4.28	1.952+j10.803	4.374+j24.477	6.90	4.75	1.836+j10.420	4.488+j24.834
TUXTEPEC TRES	TPS-115	115	8.34	6.05	1.399+j7.838	3.551+j16.789	9.82	6.86	1.243+j7.332	3.636+j16.802
TUXTLA GUTIÉRREZ	TGU-115	115	10.77	8.18	1.236+j6.039	2.215+j11.837	13.10	9.49	1.010+j5.484	2.211+j11.713
TUXTLA GUTIÉRREZ DOS	TGD-115	115	9.45	6.75	1.544+j6.856	3.050+j15.172	11.41	7.80	1.296+j6.268	3.025+j14.945
TUXTLA NORTE	TXN-115	115	10.85	8.19	1.202+j5.998	2.191+j11.898	13.23	9.52	0.971+j5.436	2.183+j11.748
TUXTLA SUR	TXS-115	115	12.74	10.46	0.843+j5.142	1.343+j8.540	15.77	12.30	0.630+j4.588	1.342+j8.431
UNILIVER	UNL-115	115	3.97	4.81	3.606+j16.327	1.095+j7.924	4.38	5.27	3.480+j16.317	1.128+j8.160
UNIÓN CARBIDE TEAPA	UCT-115	115	13.82	9.51	0.859+j4.728	2.198+j11.265	16.23	11.18	0.780+j4.433	2.013+j10.495
UXPANAPA DOS	UXD-115	115	6.06	3.89	2.537+j10.651	6.279+j28.814	6.87	4.33	2.455+j10.340	6.286+j28.777
UXPANAPA UNO	UXU-115	115	3.16	1.85	5.251+j20.376	14.508+j63.979	3.52	2.05	5.169+j20.066	14.515+j63.943
VALLE NACIONAL	VAN-115	115	3.09	2.01	4.667+j20.994	11.693+j55.042	3.45	2.22	4.536+j20.672	11.783+j55.369
VALSEQUILLO	VSE-115	115	7.95	4.85	1.484+j8.216	5.261+j23.768	8.87	5.36	1.411+j8.116	5.274+j23.851
VEGA DE ALATORRE	VDA-115	115	1.38	0.98	15.815+j45.379	31.180+j102.719	1.55	1.09	15.449+j44.609	30.839+j101.527
VENTA	VEN-69	69	2.44	2.88	6.084+j15.127	10.103+j4.695	3.96	4.75	2.792+j10.711	2.597+j5.041
VERACRUZ DOS	VRD-115	115	23.79	35.75	0.457+j2.753	0.098-j0.007	31.01	47.60	0.304+j2.336	0.101-j0.059
VERACRUZ DOS	VRD-230	230	14.71	15.36	1.526+j8.899	1.245+j7.845	19.42	19.19	0.968+j7.458	1.275+j7.836
VERACRUZ UNO	VRU-115	115	18.49	14.36	0.686+j3.526	1.102+j6.620	24.34	18.30	0.482+j2.962	0.996+j5.988
VETROTEX	VET-115	115	14.69	12.73	0.910+j4.426	1.127+j6.566	16.59	14.17	0.818+j4.325	1.129+j6.585
VIDRIERA DE TIERRA BLANCA	VTB-115	115	5.56	3.21	2.091+j11.760	9.114+j37.196	6.59	3.85	1.818+j10.938	8.260+j33.821
VILLA FLORES DOS	VFD-115	115	1.54	0.91	12.089+j41.476	36.356+j128.433	1.71	1.00	11.826+j40.975	36.358+j128.402
VILLAHERMOSA CENTRO	VHC-115	115	13.28	9.54	1.045+j4.888	2.417+j10.895	15.42	10.69	0.950+j4.641	2.423+j10.974
VILLAHERMOSA DOS	VID-115	115	13.37	10.93	0.870+j4.891	1.576+j8.356	15.77	12.37	0.735+j4.574	1.587+j8.444
VILLAHERMOSA NORTE	VHN-115	115	16.71	19.07	0.638+j3.921	0.242+j2.710	19.77	21.66	0.523+j3.658	0.260+j2.868
VILLAHERMOSA NORTE	VHN-230	230	10.50	10.55	1.899+j12.498	1.688+j12.961	13.13	12.36	1.400+j11.037	1.796+j13.412
VILLAHERMOSA PONIENTE	VIP-115	115	13.78	11.42	0.877+j4.739	1.901+j7.831	16.06	12.86	0.774+j4.481	1.907+j7.918
VILLAHERMOSA UNO	VIU-115	115	9.83	7.39	1.202+j6.646	2.641+j13.422	11.32	8.26	1.075+j6.361	2.654+j13.540
VISTAMAR	VIS-115	115	10.88	8.19	1.449+j5.927	2.490+j12.075	12.76	9.36	1.364+j5.558	2.507+j11.844
VOLKSWAGEN	VWG-115	115	41.94	38.88	0.274+j1.559	0.244+j1.968	50.49	45.82	0.203+j1.432	0.233+j1.900
XALAPA DE DÍAZ	JDD-230	230	4.87	3.68	3.314+j27.047	14.967+j52.135	5.72	4.20	2.796+j25.402	14.961+j51.413
XICOTENCATL	XIT-115	115	17.68	16.81	0.707+j3.689	0.622+j4.352	20.06	18.78	0.616+j3.588	0.624+j4.368
XOCHICALCO	XCH-85	85	3.02	1.44	2.849+j16.023	13.206+j68.494	3.25	1.57	2.839+j16.358	13.196+j68.917
XOXTLA	XOX-115	115	16.84	10.99	0.702+j3.879	2.333+j9.992	19.20	12.31	0.628+j3.752	2.325+j9.944
SWITCHEO ARRAIGA	SWA-115	115	2.34	2.48	7.594+j27.365	3.539+j23.172	2.72	2.79	6.900+j25.993	3.636+j24.401
YAUTEPEC POTENCIA	YTP-115	115	20.06	20.90	0.342+j3.291	0.152+j2.926	21.85	22.31	0.276+j3.331	0.161+j3.137
YAUTEPEC POTENCIA	YTP-230	230	19.03	21.62	1.102+j6.889	0.351+j4.524	22.34	24.89	0.730+j6.498	0.356+j4.531
YAUTEPEC POTENCIA	YTP-400	400	22.57	23.11	1.946+j10.046	1.321+j9.616	29.04	27.84	1.152+j8.673	1.348+j9.863
YECAPIXTLA	YCP-230	230	10.61	8.04	1.803+j12.390	5.129+j24.029	12.07	10.51	1.452+j12.015	2.574+j17.303
YOLOMECATL	YOL-115	115	1.39	0.88	14.030+j45.603	34.173+j125.265	1.54	0.97	13.870+j45.452	34.268+j125.663
YUCUDAA	YUC-115	115	1.70	1.10	11.521+j37.404	27.994+j98.435	1.88	1.21	11.364+j37.251	28.088+j98.830
ZACAPOAXTLA	ZXP-115	115	2.68	2.02	5.427+j24.190	16.875+j46.656	3.05	2.26	5.177+j23.402	16.931+j46.223
ZACATEPEC	ZTP-115	115	2.02	1.24	7.405+j31.980	21.892+j92.257	2.25	1.37	7.236+j31.665	21.933+j92.248



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
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			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
ZANATEPEC	ZNT-115	115	2.41	1.68	7.262+j26.527	14.203+j62.046	2.80	1.89	6.735+j25.185	14.229+j62.369
ZAPATA	ZAP-85	85	8.44	8.36	0.669+j5.776	0.196+j6.006	8.77	8.65	0.642+j6.120	0.186+j6.423
ZAPATA	ZAP-115	115	15.85	18.25	0.608+j4.145	0.166+j2.550	17.56	19.94	0.482+j4.132	0.161+j2.669
ZAPATA	ZAP-230	230	14.54	14.36	1.848+j8.941	1.435+j9.423	17.82	17.18	1.227+j8.102	1.357+j9.016
ZAPATA DOS	ZPD-115	115	5.49	1.55	1.983+j11.919	42.195+j96.468	6.71	1.73	1.417+j10.788	42.410+j97.000
ZAPATA ORIENTE	ZPO-115	115	4.01	2.08	3.473+j16.175	24.044+j58.424	4.68	2.32	3.070+j15.289	24.243+j58.942
ZAPATA PONIENTE	EZA-115	115	2.33	0.96	6.992+j27.679	61.640+j137.192	2.67	1.07	6.374+j26.594	61.867+j137.736
ZIHUATANEJO	ZIH-115	115	3.88	2.84	2.677+j16.901	7.572+j34.972	5.38	3.71	2.465+j13.344	7.322+j30.975
ZIHUATANEJO DOS	ZHD-115	115	3.93	2.88	2.643+j16.697	7.143+j34.626	5.69	3.98	2.357+j12.619	6.717+j28.627
ZINACATEPEC	ZIP-69	69	1.86	2.13	2.787+j21.287	0.000+j13.164	1.93	2.19	2.792+j22.530	0.000+j14.482
ZINACATEPEC	ZIP-115	115	2.78	1.64	6.693+j22.939	18.206+j71.350	3.08	1.81	6.556+j22.779	18.228+j71.502
ZOCAC	ZOC-115	115	18.42	18.18	0.677+j3.540	0.492+j3.770	20.94	20.34	0.585+j3.439	0.494+j3.790
ZOCAC	ZOC-230	230	13.07	12.66	2.025+j9.952	2.134+j11.120	15.87	15.01	1.582+j9.065	2.124+j10.602
ZONGOLICA	ZGL-115	115	4.27	2.44	2.604+j15.342	12.560+j49.147	5.57	4.97	1.855+j12.980	2.560+j17.726

Gerencia de Control Regional Occidental



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Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
3M	P3M-115	115	15.86	15.16	0.934+j4.081	0.886+j4.701	18.74	17.46	0.734+j3.827	0.886+j4.700
ABASOLO	ABS-115	115	8.97	8.94	1.659+j7.211	1.545+j7.339	11.67	10.96	1.404+j6.098	1.637+j7.296
ABASOLO DOS	ABA-115	115	9.86	10.72	1.412+j6.587	0.528+j5.129	13.21	13.56	1.154+j5.407	0.624+j5.082
ABASOLO DOS	ABA-230	230	6.18	5.66	4.287+j21.066	3.547+j27.271	7.58	6.59	3.385+j18.962	3.903+j27.695
ABASTOS	ABT-115	115	8.43	6.90	2.005+j7.621	3.060+j12.907	9.33	7.56	1.923+j7.585	3.082+j13.082
ACÁMBARO	AQM-110	115	5.61	3.41	3.054+j11.432	9.925+j33.577	6.33	3.78	2.850+j11.189	9.942+j33.681
ACAPONETA	ACP-115	115	1.23	0.83	21.146+j49.844	52.850+j122.078	1.38	0.92	20.465+j48.949	52.825+j121.811
ACATLÁN	ATN-69	69	24.72	28.00	0.259+j1.591	0.050+j1.050	28.15	30.86	0.184+j1.546	0.055+j1.142
ACATLÁN	ATN-115	115	13.11	15.90	0.684+j5.018	0.096+j2.409	14.84	17.54	0.457+j4.899	0.107+j2.631
ACATLÁN	ATN-230	230	17.72	21.17	1.799+j7.274	0.376+j3.855	24.63	27.35	0.902+j5.862	0.411+j4.072
ACATLÁN	ATN-400	400	14.08	15.47	4.045+j15.901	1.574+j11.941	22.27	21.53	1.578+j11.298	1.702+j12.243
ACERLAN SA	ACR-69	69	12.36	10.73	0.768+j3.130	1.038+j4.582	14.72	12.29	0.674+j2.900	1.044+j4.626
ACERLAN SA	ACR-115	115	13.18	13.28	1.080+j4.922	0.831+j4.804	14.57	14.53	1.034+j4.905	0.858+j4.943
ACERO SAN LUIS	ACE-115	115	14.48	13.54	1.098+j4.451	1.204+j5.430	16.97	15.46	0.901+j4.209	1.208+j5.459
ACUEDUCTO	ACU-69	69	13.87	7.94	0.724+j2.780	2.134+j9.065	15.82	8.81	0.639+j2.696	2.144+j9.123
ACUEDUCTO II	AUD-115	115	2.92	2.56	4.385+j22.290	5.394+j31.844	3.63	3.08	3.168+j19.879	5.019+j30.167
AEROSPACIAL	ARL-115	115	8.10	5.09	2.328+j7.863	5.038+j22.122	8.93	5.60	2.290+j7.850	5.039+j22.167
AEROPUERTO	AER-115	115	5.43	4.00	3.168+j11.807	7.893+j24.338	5.97	4.39	3.126+j11.824	7.907+j24.477
AEROPUERTO ZACATECAS	AEZ-115	115	6.48	5.58	2.500+j9.940	3.149+j14.862	7.57	6.33	2.202+j9.389	3.163+j15.000
AEROTECH	AET-115	115	8.08	5.12	2.299+j7.885	4.928+j21.823	8.92	5.64	2.261+j7.872	4.930+j21.868
AGAVE	AVE-115	115	3.73	3.45	5.393+j16.948	5.554+j21.440	4.26	3.87	5.074+j16.391	5.594+j21.645
AGOSTADERITO	AGO-115	115	13.71	10.62	0.981+j4.742	0.767+j9.088	15.75	11.84	0.824+j4.562	0.778+j9.228
AGROGEN, S.A. DE C.V.	AGR-115	115	11.54	9.05	1.599+j5.529	1.745+j10.411	12.73	9.84	1.563+j5.522	1.808+j10.697
AGROINDUSTRIAL	AIL-115	115	6.28	3.97	2.828+j10.181	9.198+j27.528	7.24	4.45	2.666+j9.727	9.247+j27.547
AGUA AZUL	AGZ-230	230	9.85	8.72	2.867+j13.174	4.323+j18.222	12.11	10.11	1.991+j11.901	4.443+j18.671
AGUAMILPA	AGM-115	115	2.32	1.71	7.403+j27.598	23.207+j55.183	2.97	2.86	5.534+j23.977	7.518+j26.256
AGUAMILPA	AGM-400	400	5.81	5.30	7.918+j38.951	8.845+j50.587	14.48	16.31	1.268+j17.497	0.649+j10.802
AGUAPRIETA	APR-230	230	9.88	8.94	2.915+j13.115	3.259+j17.430	14.09	13.26	1.510+j10.256	1.714+j12.022
AGUAPRIETA	APR-230B	230	9.88	8.94	2.915+j13.115	3.259+j17.430	14.09	13.27	1.509+j10.255	1.708+j12.005
AGUASCALIENTES NORTE	AGN-115	115	18.05	13.18	0.849+j3.579	0.649+j7.788	20.99	14.75	0.697+j3.408	0.660+j7.901
AGUASCALIENTES ORIENTE	AGS-115	115	23.10	25.29	0.610+j2.809	0.196+j2.143	27.21	28.65	0.461+j2.644	0.208+j2.285
AGUASCALIENTES ORIENTE	AGS-230	230	17.25	18.31	1.749+j7.495	1.140+j6.312	21.96	21.99	1.122+j6.558	1.181+j6.535
AGUASCALIENTES PONIENTE	AGP-115	115	13.41	10.46	1.002+j4.851	0.604+j9.173	15.34	11.64	0.848+j4.685	0.617+j9.322
AGUASCALIENTES POTENCIA	APT-115	115	22.19	22.70	0.571+j2.938	0.202+j2.809	26.29	25.60	0.415+j2.747	0.219+j3.006
AGUASCALIENTES POTENCIA	APT-230	230	19.59	22.75	1.540+j6.600	0.468+j3.987	25.15	27.64	0.944+j5.732	0.504+j4.226
AGUASCALIENTES POTENCIA	APT-400	400	15.87	17.71	3.436+j14.136	1.339+j10.102	21.73	22.41	1.776+j11.553	1.420+j10.565
AGUASCALIENTES SUR	ASS-115	115	13.54	9.91	1.032+j4.793	1.611+j10.194	15.58	11.06	0.872+j4.606	1.620+j10.316
AGUASCALIENTES UNO	AGT-115	115	16.99	16.21	0.744+j3.836	0.495+j4.471	19.46	17.94	0.598+j3.705	0.510+j4.695
AGUASCALIENTES UNO	AGT-230	230	12.90	11.71	2.169+j10.059	2.619+j13.233	15.72	13.53	1.543+j9.164	2.696+j13.547
AGYDSA	AGY-69	69	22.21	19.01	0.450+j1.736	0.440+j2.670	25.78	21.17	0.368+j1.659	0.458+j2.770
AHRETTY	ART-115	115	6.96	6.40	2.581+j9.178	3.084+j11.660	8.40	7.40	2.273+j8.387	3.111+j11.824
AHUACATLÁN	AHN-110	115	1.28	1.13	13.118+j50.233	21.423+j69.318	1.39	1.22	13.405+j50.952	21.747+j71.473



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ALAMEDA	ALA-69	69	9.36	7.54	1.088+j4.116	1.958+j7.076	10.67	8.46	0.979+j3.987	1.947+j7.054
ALAMOS	ALS-69	69	11.19	12.95	0.624+j3.506	0.135+j2.117	12.70	14.31	0.559+j3.404	0.148+j2.282
ALAMOS	ALS-230	230	9.98	8.87	2.843+j12.995	3.622+j17.953	12.30	10.29	1.962+j11.712	3.766+j18.411
ALFA NISSAN	ALF-115	115	13.65	11.88	0.968+j4.767	0.964+j6.987	15.71	13.25	0.810+j4.578	0.980+j7.172
ALFA NISSAN MANIOBRAS	AIS-115	115	15.62	14.80	0.854+j4.165	0.522+j4.953	18.09	16.56	0.696+j3.976	0.538+j5.138
ALKANOVA	ALK-69	69	6.33	4.79	1.227+j6.175	2.498+j12.109	7.09	5.28	1.160+j6.068	2.511+j12.270
ALMERIA	ALM-69	69	3.32	2.09	5.012+j10.902	11.988+j30.913	3.73	2.32	4.785+j10.739	11.994+j31.005
ALUPRINT	ALU-115	115	14.25	9.04	1.082+j4.531	2.864+j12.404	16.42	10.11	0.912+j4.354	2.873+j12.472
ALZA	ALZ-115	115	6.09	5.64	3.548+j10.318	3.922+j12.955	7.28	6.49	3.237+j9.501	3.949+j13.123
ALZADA	AZA-115	115	3.34	2.36	5.756+j19.041	12.206+j42.806	3.87	2.83	5.260+j18.139	10.494+j38.305
AMATITÁN	AMT-69	69	2.48	1.65	5.788+j14.996	10.011+j39.110	3.92	2.95	3.479+j10.627	6.360+j20.747
AMECA	AMK-115	115	2.23	1.42	6.721+j29.071	20.689+j77.598	2.50	1.58	6.214+j28.541	20.701+j77.824
AMERI AXLE& MANUF DE MEX S.A. DE C.V.	AXL-115	115	7.16	6.48	2.414+j8.957	4.585+j11.394	8.01	7.17	2.295+j8.826	4.594+j11.497
AMISTAD BAJÍO	AMB-115	115	18.60	9.89	0.610+j3.516	3.069+j12.672	20.54	10.82	0.555+j3.512	3.082+j12.791
ANDARES	ADS-69	69	14.39	9.36	0.684+j2.682	1.494+j7.079	16.43	10.39	0.600+j2.599	1.507+j7.151
ANGAMACUTIRO DOS	ARD-115	115	3.18	2.20	7.092+j19.638	15.108+j46.407	3.74	2.78	6.552+j18.397	11.341+j38.027
ANTEA	NTA-115	115	14.94	12.84	1.339+j4.237	0.302+j6.780	16.67	14.17	1.289+j4.188	0.310+j6.847
ANTÚNEZ	ANN-69	69	2.91	3.95	3.265+j13.306	0.139+j2.944	4.47	5.83	2.124+j9.581	0.162+j2.765
ANTÚNEZ	ANN-115	115	2.80	3.08	6.944+j22.662	1.756+j17.478	3.94	3.99	4.335+j18.038	1.972+j17.382
APA	APA-115	115	15.99	16.31	0.786+j4.077	0.529+j3.890	18.31	18.16	0.638+j3.937	0.550+j4.069
APASCO	APP-115	115	5.57	4.10	3.378+j11.439	8.830+j23.092	6.51	4.64	3.081+j10.786	8.837+j23.114
APASEO	APS-110	115	18.68	14.92	0.656+j3.494	1.240+j6.138	20.58	16.21	0.603+j3.497	1.264+j6.303
APASEO ORIENTE	APO-115	115	10.20	6.86	2.199+j6.126	4.673+j15.370	11.21	7.51	2.165+j6.146	4.682+j15.488
APATZINGÁN	APZ-115	115	3.68	4.03	5.128+j17.316	1.663+j13.404	5.32	5.52	2.938+j13.399	1.566+j11.833
APATZINGÁN	APZ-161	161	2.59	2.57	9.310+j34.655	4.492+j36.689	3.66	3.42	5.549+j27.414	4.248+j32.574
ARANCIA	ARN-115	115	14.53	14.83	0.820+j4.495	0.598+j4.206	16.07	16.19	0.773+j4.480	0.627+j4.356
ARANDAS	ARS-115	115	3.25	2.74	6.255+j19.465	8.987+j30.391	3.69	3.06	5.930+j18.900	9.022+j30.568
ARBOLEDAS	ABL-115	115	6.88	5.85	2.344+j9.360	4.677+j14.029	8.45	6.85	2.121+j8.378	4.759+j13.914
ARELLANO	ARE-115	115	12.58	9.41	1.083+j5.165	1.654+j10.510	14.43	10.49	0.925+j4.977	1.664+j10.642
ARIO DE ROSALES	ADR-69	69	1.40	0.81	10.641+j26.423	26.156+j86.610	2.23	1.35	6.515+j18.560	15.498+j55.497
ARMERÍA	AIA-115	115	5.17	3.58	3.029+j12.482	9.686+j28.345	6.02	4.04	2.739+j11.809	9.690+j28.359
ARRAYANAL	AYL-115	115	6.04	4.40	2.731+j10.654	7.279+j22.099	7.11	4.99	2.446+j9.980	7.284+j22.144
ARTEVA SPECIAL TES S.R.L. C.V.	ATV-115	115	15.65	14.28	0.962+j4.132	1.046+j5.392	17.38	15.71	0.920+j4.100	1.053+j5.468
ASMOLES	ASM-115	115	5.71	4.50	3.317+j11.147	7.920+j19.496	6.67	5.09	3.021+j10.519	7.931+j19.571
ASUNCIÓN	ASU-115	115	17.69	14.57	0.788+j3.670	0.939+j6.117	20.55	16.35	0.640+j3.495	0.949+j6.236
ATEQUIZA	ATQ-69	69	18.35	24.09	0.450+j2.124	0.028+j0.627	22.77	29.09	0.357+j1.891	0.033+j0.671
ATEQUIZA	ATQ-230	230	17.37	20.39	1.798+j7.429	0.441+j4.276	22.84	25.17	1.031+j6.312	0.478+j4.545
ATEQUIZA	ATQ-400	400	15.19	16.45	3.473+j14.806	1.638+j11.652	22.21	21.60	1.495+j11.341	1.735+j12.126
ATOTONILCO	ATO-115	115	5.04	6.47	3.828+j12.612	0.498+j4.462	5.82	7.35	3.517+j12.057	0.541+j4.691
AUTLÁN	AUT-115	115	1.22	0.82	16.920+j51.919	34.418+j128.137	1.35	0.91	16.564+j51.306	34.439+j128.247
ALUMINICASTE	AUT-115	115	7.88	6.06	2.100+j8.156	3.297+j15.737	9.07	7.26	1.897+j7.825	2.786+j13.848
AVENTEC	AVN-115	115	15.68	14.92	0.946+j4.127	0.906+j4.819	18.51	17.16	0.747+j3.874	0.906+j4.820



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
AYALA	AYA-115	115	12.03	8.65	1.214+j5.384	2.681+j11.696	13.48	9.55	1.098+j5.307	2.692+j11.802
AYOTLAN	AYN-115	115	3.74	3.23	5.158+j16.993	7.818+j24.888	4.28	3.63	4.831+j16.385	7.829+j25.001
AYUNTAMIENTO	AYU-115	115	12.80	9.13	1.076+j5.074	1.801+j11.332	14.69	10.17	0.917+j4.886	1.810+j11.457
AZUFRES SWITCHEO	AZS-115	115	11.28	13.55	0.986+j5.802	0.443+j3.445	12.13	14.39	1.006+j5.935	0.464+j3.677
AZUFRES SWITCHEO SUR	ASR-115	115	9.99	12.35	1.086+j6.557	0.357+j3.477	10.70	13.07	1.123+j6.730	0.385+j3.743
BANDERAS	BAN-115	115	4.25	4.11	5.137+j14.762	5.249+j16.350	5.05	4.73	4.342+j13.792	5.268+j16.550
BAÑÓN	BON-110	115	2.63	1.80	10.138+j23.109	20.289+j56.735	3.05	2.03	9.317+j22.042	20.306+j56.859
BARRACUDA	BCD-115	115	12.05	8.24	1.253+j5.367	2.697+j12.876	13.96	9.28	1.062+j5.123	2.704+j12.893
BELTICOS S.A. DE C.V.	BEL-69	69	18.44	13.93	0.523+j2.097	0.960+j4.149	22.46	16.92	0.410+j1.907	0.849+j3.770
BICENTENARIO	BCT-115	115	7.95	7.91	1.865+j8.142	1.656+j8.314	9.42	9.04	1.584+j7.588	1.686+j8.499
BMW	BMW-230	230	9.26	7.46	3.245+j13.971	5.838+j24.102	11.84	9.39	2.302+j12.121	5.261+j21.526
BOCAS	BOC-115	115	4.43	3.63	3.381+j14.604	8.125+j23.611	4.99	4.04	3.159+j14.280	8.140+j23.749
BOLAÑOS	BLA-110	115	0.92	0.58	34.406+j63.735	61.400+j192.425	1.01	0.63	34.242+j63.634	61.421+j192.667
BONLAN	BNL-115	115	15.30	13.75	0.974+j4.228	1.107+j5.721	18.02	15.75	0.775+j3.977	1.108+j5.727
BOQUILLA	BOQ-115	115	2.14	1.12	9.395+j29.551	32.529+j110.760	2.36	1.23	9.345+j29.532	32.529+j110.796
BOTELLO	BOT-115	115	4.10	2.93	4.633+j15.538	9.546+j34.339	5.00	4.41	3.956+j14.052	3.338+j20.254
BUENA VISTA NORTE	BVN-115	115	11.09	8.43	1.686+j5.744	3.064+j11.299	12.42	9.32	1.615+j5.656	3.074+j11.380
BUENAVISTA	BNA-115	115	11.77	8.34	1.643+j5.396	3.113+j12.267	13.16	9.21	1.576+j5.319	3.123+j12.344
BUGAMBILIAS	BUG-69	69	10.90	7.02	0.933+j3.534	2.093+j9.488	12.27	7.77	0.855+j3.468	2.096+j9.533
BURNER S	BRN-115	115	7.14	5.86	3.257+j8.707	4.848+j14.662	7.88	6.42	3.198+j8.695	4.869+j14.818
C. H. SANTA ROSA	SRO-69	69	2.81	1.78	5.135+j13.203	10.377+j37.467	5.66	6.05	1.600+j7.577	0.343+j5.651
C.H. LA YESCA	LYE-400	400	5.09	3.49	6.288+j44.927	24.030+j105.350	10.42	11.29	1.447+j24.337	0.955+j17.758
CABLESA	CAB-115	115	14.43	14.30	1.162+j4.454	0.740+j4.706	16.08	15.77	1.107+j4.406	0.748+j4.782
CALERA	CAL-115	115	10.07	13.01	1.696+j6.372	0.180+j2.153	12.13	15.28	1.407+j5.856	0.196+j2.314
CALERA	CAL-230	230	6.19	7.30	5.561+j20.722	1.379+j11.744	7.55	8.56	4.466+j18.830	1.488+j12.455
CALERA INDUSTRIAL	CAI-115	115	6.85	7.43	2.349+j9.405	1.078+j7.383	8.26	8.61	1.948+j8.621	1.143+j7.719
CALVILLO	CVO-115	115	4.16	2.55	3.569+j15.567	7.469+j45.674	4.62	2.81	3.417+j15.447	7.486+j45.905
CAMPESTRE	CPE-115	115	8.51	7.49	1.971+j7.551	2.374+j10.837	9.45	8.21	1.870+j7.496	2.403+j11.056
CAMPOS	CMP-115	115	11.97	9.73	0.902+j5.474	1.744+j9.195	15.17	11.48	0.650+j4.772	1.747+j9.215
CAÑADA	KDA-115	115	19.18	19.62	0.591+j3.411	0.259+j3.239	22.59	22.08	0.472+j3.198	0.284+j3.456
CAÑADA	KDA-230	230	18.11	21.90	1.507+j7.177	0.368+j3.561	22.91	26.48	0.917+j6.309	0.397+j3.796
CAÑADA	KDA-400	400	14.38	15.76	3.592+j15.656	1.583+j11.885	19.22	19.55	1.961+j13.071	1.689+j12.474
CAPILLA DE GUADALUPE	CIA-115	115	2.24	1.37	8.884+j28.273	23.434+j82.885	2.64	1.55	8.087+j26.494	23.239+j82.463
CARAPAN DISTRIBUCIÓN	CRD-115	115	9.22	5.95	1.582+j7.025	4.094+j18.632	10.39	6.60	1.460+j6.878	4.103+j18.711
CARAPAN POTENCIA	CRP-115	115	13.95	16.88	0.867+j4.678	0.135+j2.304	18.65	21.57	0.667+j3.859	0.188+j2.304
CARAPAN POTENCIA	CRP-230	230	13.63	16.44	1.955+j9.545	0.413+j4.791	17.27	19.87	1.227+j8.369	0.456+j5.066
CARAPAN POTENCIA	CRP-400	400	10.24	10.22	4.220+j22.159	2.482+j22.618	13.18	12.18	2.434+j19.123	2.735+j23.748
CARTONES PODEROSA S.A. DE	PON-115	115	14.41	14.43	0.922+j4.514	0.735+j4.492	15.94	15.77	0.875+j4.496	0.762+j4.631
CASTILLO	CST-69	69	17.23	16.33	0.600+j2.233	0.716+j2.597	20.11	18.56	0.526+j2.115	0.718+j2.626
CASTRO DEL RIO	CDR-115	115	11.10	7.41	1.338+j5.828	3.189+j14.619	12.57	8.22	1.215+j5.681	3.198+j14.698
CATARINA	CTA-69	69	4.45	2.87	3.638+j8.180	8.238+j22.327	5.03	3.18	3.411+j8.015	8.244+j22.420
CD. HIDALGO	CDH-115	115	5.66	4.16	3.040+j11.325	8.714+j23.105	6.22	4.57	3.019+j11.339	8.720+j23.219



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
CELANESE (CARAPAN)	CME-115	115	5.15	4.13	3.972+j12.265	5.975+j21.706	6.16	5.10	3.612+j11.299	4.994+j18.613
CELAYA AEROPUERTO	CAE-110	115	14.16	11.99	1.068+j4.567	1.679+j7.061	15.63	13.07	1.005+j4.564	1.700+j7.235
CELAYA DOS	CYA-115	115	22.66	24.11	0.553+j2.877	0.260+j2.414	25.13	26.14	0.494+j2.864	0.282+j2.570
CELAYA DOS	CYA-230	230	16.14	14.37	1.639+j8.064	1.657+j11.253	18.79	16.02	1.351+j7.656	1.769+j11.732
CELAYA I	CLY-115	115	16.55	13.37	0.934+j3.902	1.698+j6.678	18.34	14.64	0.871+j3.887	1.711+j6.804
CELAYA III	CEY-115	115	18.14	19.26	0.717+j3.589	0.332+j3.034	20.00	20.79	0.655+j3.593	0.357+j3.234
CELAYA III	CEY-230	230	16.27	14.56	1.764+j7.969	1.892+j10.985	19.48	16.55	1.400+j7.367	1.990+j11.375
CELAYA INDUSTRIAL	CYI-110	115	17.33	14.26	0.872+j3.731	1.489+j6.145	19.20	15.59	0.813+j3.716	1.505+j6.286
CELAYA PONIENTE	CLP-115	115	12.30	10.01	1.307+j5.237	2.245+j8.854	13.64	10.95	1.240+j5.209	2.292+j9.032
CELAYA SUR	CYS-115	115	11.96	8.39	1.349+j5.386	3.514+j12.169	13.23	9.21	1.287+j5.368	3.527+j12.286
CEMENTOS MOCTEZUMA (MATEHUALA)	CMZ-115	115	1.25	0.92	23.343+j47.744	33.782+j106.338	1.43	1.03	21.437+j46.248	33.874+j106.943
CEMEX MÉXICO S.A. DE C.V. (C.D GUZMÁN)	CMX-115	115	3.95	3.17	4.204+j16.253	6.680+j28.564	4.40	3.48	3.978+j16.107	6.733+j28.967
CEMEX MÉXICO S.A. DE C.V. (GUADALAJARA)	CMX-69	69	6.01	4.32	1.576+j6.444	3.269+j14.056	6.72	4.75	1.513+j6.346	3.282+j14.221
CEMEX MÉXICO S.A. DE C.V. (HUICHAPAN)	CMX-230	230	5.38	4.41	4.978+j24.161	8.489+j40.075	6.73	5.24	3.826+j21.350	8.537+j39.158
CENTRO	CTR-115	115	4.31	4.17	4.861+j14.615	3.986+j16.512	5.16	4.81	3.976+j13.589	4.005+j16.717
CENTRO LOGÍSTICO JALISCO	CLJ-115	115	6.45	5.31	2.380+j10.010	6.058+j15.927	7.25	5.88	2.147+j9.847	6.065+j16.107
CEPAMISA	CMS-115	115	7.72	7.10	2.095+j8.344	2.198+j10.727	8.59	7.78	1.975+j8.272	2.235+j10.999
CERRO BLANCO	CBL-400	400	7.89	7.38	6.318+j28.582	7.149+j34.603	17.82	17.09	1.231+j14.199	2.750+j15.362
CERRO GORDO	GOC-115	115	15.46	12.81	1.012+j4.172	1.489+j6.824	17.40	14.14	0.897+j4.102	1.502+j6.947
CERRO HUECO	CHC-69	69	0.92	0.54	19.479+j38.690	43.658+j126.306	1.24	0.75	15.451+j31.834	34.275+j98.328
CERVECERÍA MODELO DE GUADALAJARA	MOD-69	69	11.65	7.81	0.926+j3.293	2.092+j8.210	13.17	8.65	0.845+j3.217	2.100+j8.279
CH ZIMAPAN	ZMN-115	115	4.17	5.06	2.616+j15.704	0.583+j7.539	5.49	6.69	1.449+j13.222	0.208+j5.862
CH ZIMAPAN	ZMN-230	230	3.64	3.55	7.249+j35.713	5.351+j39.153	6.41	6.96	2.862+j22.592	1.076+j16.051
CHAMELA	CML-115	115	1.45	1.14	12.356+j44.078	32.101+j77.415	1.62	1.26	12.045+j43.425	32.123+j77.523
CHAPALA	CHA-69	69	4.69	2.84	2.395+j8.149	6.304+j24.349	5.30	3.15	2.307+j7.943	6.315+j24.410
CHAPALILLA	CPI-115	115	1.74	1.76	8.288+j37.207	6.823+j36.563	1.88	1.87	8.566+j37.941	7.133+j38.696
CHARAPAN	CHN-115	115	4.24	3.00	4.587+j14.980	12.502+j32.736	4.87	3.37	4.239+j14.392	12.514+j32.771
CHARAPAN	CHN-230	230	6.28	6.63	3.360+j20.884	2.323+j17.639	7.44	7.56	2.726+j19.452	2.491+j18.592
CHARCAS	CAK-110	115	6.08	6.86	2.353+j10.669	1.724+j7.006	6.72	7.49	2.273+j10.628	1.756+j7.316
CHARCAS POTENCIA	CHK-115	115	6.93	8.57	1.843+j9.398	0.282+j4.125	7.67	9.34	1.763+j9.356	0.314+j4.435
CHARCAS POTENCIA	CHK-230	230	3.74	4.11	6.660+j34.854	2.128+j26.014	4.18	4.49	6.228+j34.344	2.385+j27.893
CHILATÁN	CHL-115	115	1.67	1.24	12.234+j37.929	21.737+j78.044	2.50	2.33	6.722+j28.427	5.183+j35.001
CHIPILO	CHI-115	115	7.77	6.80	2.112+j8.281	3.149+j11.845	8.97	7.97	1.895+j7.915	2.989+j10.864
CICLO COMBINADO TIERRA MOJADA S. DE R.L. DE C.V.	TIM-400	400	15.35	17.31	3.222+j14.699	1.025+j9.944	21.86	22.44	1.407+j11.534	1.134+j10.523
CIENEGUILLAS	CGS-115	115	5.21	4.31	3.317+j12.303	5.597+j20.025	6.06	4.87	3.002+j11.678	5.612+j20.148
CIENEGUILLAS	CGS-115.0	115	4.07	4.83	5.673+j15.311	1.045+j8.741	6.09	6.70	3.841+j11.363	1.131+j8.771
CIFUNSA DEL BAJÍO S.A. DE C.V.	CIF-115	115	23.20	23.53	0.622+j2.794	0.442+j2.737	27.20	26.59	0.506+j2.637	0.454+j2.852
CIHUATLAN	CHT-115	115	3.26	2.80	5.170+j19.730	11.012+j28.313	3.71	3.14	4.879+j19.065	11.028+j28.413
CIMATARIO	CIM-115	115	12.04	10.30	1.340+j5.348	0.238+j8.458	13.35	11.33	1.296+j5.316	0.243+j8.520
CIUDAD GUZMÁN	CGM-115	115	7.01	8.14	2.029+j9.254	0.503+j5.522	7.87	8.94	1.803+j9.103	0.556+j5.925
CIUDAD GUZMÁN	CGM-230	230	4.96	4.86	5.949+j26.084	3.662+j28.231	5.89	5.49	4.894+j24.324	4.030+j29.797
CNH DE MÉXICO S.A. DE C.V.	HOL-115	115	16.47	15.00	0.885+j3.933	0.975+j5.158	18.30	16.50	0.844+j3.900	0.981+j5.234



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
COAHUAYANA	CHY-115	115	1.96	1.29	10.254+j32.235	30.005+j80.973	2.20	1.44	9.927+j31.617	30.011+j81.004
COALCOMÁN	CMN-115	115	1.27	0.83	19.807+j48.560	48.871+j127.027	1.47	1.08	17.986+j46.207	31.273+j98.768
COBANO	CBN-69	69	2.36	1.45	5.313+j16.002	13.295+j46.681	6.36	5.69	1.187+j6.793	0.828+j8.873
COBANO	CBN-161	161	3.24	3.03	6.468+j27.940	6.239+j34.103	5.24	5.28	3.085+j19.285	2.164+j17.687
COBRECEL	COB-115	115	8.54	7.23	1.625+j7.604	2.943+j11.673	9.41	7.91	1.562+j7.601	2.960+j11.827
COCULA	CLA-115	115	4.97	3.95	3.302+j12.936	8.590+j22.150	5.75	4.45	2.804+j12.392	8.602+j22.375
COLIMA DOS	CMD-115	115	9.77	11.62	1.389+j6.653	0.335+j3.541	11.79	13.53	1.110+j6.096	0.364+j3.727
COLIMA DOS	CMD-230	230	6.91	7.00	3.813+j18.829	2.649+j18.308	8.94	8.40	2.716+j16.119	2.860+j18.997
COLIMA NORTE	CNO-115	115	6.67	6.07	2.389+j9.667	3.039+j12.525	7.80	6.88	2.105+j9.118	3.069+j12.710
COLIMILLA	CLL-69	69	10.85	7.33	0.951+j3.547	2.264+j8.680	13.31	12.92	0.742+j3.208	0.465+j3.540
COLINAS	COI-115	115	10.62	7.99	1.359+j6.102	2.237+j12.260	12.26	9.00	1.157+j5.845	2.239+j12.249
COLINAS DE LEÓN DOS MANIOBRAS	CCL-115	115	16.51	14.34	0.897+j3.920	1.137+j5.752	18.64	15.86	0.782+j3.839	1.151+j5.878
COLINAS DEL RINCÓN PARQUE INDUSTRIAL	RPI-115	115	13.63	10.39	0.974+j4.773	1.882+j9.258	15.23	11.42	0.865+j4.717	1.904+j9.421
COLOMO	COL-115	115	16.21	19.43	0.633+j4.046	0.155+j2.046	21.65	24.44	0.381+j3.352	0.166+j2.134
COLOMO	COL-230	230	11.04	12.80	1.683+j11.913	0.971+j6.932	16.68	17.75	0.746+j8.727	0.995+j6.778
COLOMO DISTRIBUCIÓN	CDI-115	115	16.00	19.06	0.654+j4.097	0.184+j2.134	21.32	23.92	0.402+j3.403	0.195+j2.222
COLON	CLN-230	230	12.83	11.70	2.608+j10.020	2.755+j13.078	16.33	13.86	1.728+j8.777	2.810+j13.370
COMALA	COM-115	115	5.86	5.06	2.707+j10.996	4.477+j16.134	6.84	5.75	2.403+j10.405	4.419+j16.070
COMPOSTELA	CMP-110	115	3.32	2.36	7.571+j18.542	15.464+j41.490	3.87	2.67	6.919+j17.577	15.453+j41.389
CONTICÓN	CON-115	115	8.82	7.34	1.553+j7.370	2.883+j11.754	9.72	8.03	1.490+j7.368	2.901+j11.917
CONDEMBARO	CON-115	115	1.98	1.62	9.888+j32.095	16.710+j53.307	2.54	2.00	7.328+j27.795	15.891+j49.407
CONDUCTORES MONTERREY	CDM-115	115	15.58	14.75	0.955+j4.152	0.784+j4.942	18.34	16.89	0.757+j3.909	0.790+j4.974
CONIN	CNI-115	115	18.26	21.39	0.621+j3.583	0.113+j2.075	20.07	23.17	0.580+j3.593	0.120+j2.209
CONIN	CNI-230	230	15.69	15.61	1.578+j8.317	0.995+j8.661	18.53	17.91	1.318+j7.773	1.039+j8.748
CORONEO	COO-110	115	2.60	2.07	10.019+j23.510	13.206+j43.495	2.85	2.25	10.064+j23.586	13.430+j44.401
CORPORACIÓN DE OCCIDENTE	COC-69	69	13.28	12.16	0.716+j2.913	0.843+j3.736	15.92	14.01	0.621+j2.682	0.849+j3.780
CORTÁZAR	CZR-115	115	7.33	6.80	1.968+j8.844	2.765+j10.861	8.08	7.45	1.904+j8.836	2.779+j10.995
COTIJA	CTJ-115	115	5.10	3.34	3.465+j12.552	8.794+j32.490	5.80	3.72	3.269+j12.165	8.813+j32.554
CRUCERO	CCR-115	115	2.02	1.54	10.195+j31.309	14.691+j62.085	2.93	2.57	5.972+j24.160	6.526+j34.575
CRUZ AZUL	CZA-230	230	5.80	4.21	4.622+j22.407	12.744+j47.267	6.72	4.73	3.894+j21.388	12.783+j47.497
CRYOINFRA	CRI-115	115	9.28	9.65	1.832+j6.917	1.398+j6.204	10.75	11.04	1.673+j6.588	1.419+j6.104
CRYOINFRA	CRY-115	115	21.29	23.64	0.761+j3.024	0.409+j2.182	23.73	26.01	0.719+j2.992	0.415+j2.258
CUAUHTÉMOC	SCC-115	115	3.54	2.55	5.167+j18.048	11.037+j39.038	4.07	2.94	4.768+j17.316	10.307+j37.158
CUERÁMARO	CUE-110	115	7.28	5.12	2.004+j8.899	6.903+j19.534	8.56	5.80	1.855+j8.326	6.927+j19.590
CUITZEO MORELIA	CTZ-115	115	5.08	3.43	3.637+j12.555	10.774+j30.255	5.63	3.77	3.547+j12.481	10.786+j30.365
CUITZEO OCOTLAN	CZO-115	115	8.48	7.29	2.204+j7.509	2.668+j11.382	10.74	8.56	1.742+j6.575	2.750+j11.683
CUITZILLOS	CZS-115	115	6.31	4.80	2.729+j10.168	6.237+j19.692	6.95	5.26	2.673+j10.164	6.252+j19.837
CUMBRES	CUB-115	115	17.69	18.05	0.784+j3.669	0.437+j3.525	20.54	20.31	0.633+j3.500	0.448+j3.661
CUMMINS FILTRACIÓN	CSF-115	115	12.71	7.93	1.190+j5.086	2.869+j14.400	14.81	8.93	0.995+j4.831	2.876+j14.408
CUPATITZIO	CPT-161	161	3.73	3.84	4.910+j24.466	3.028+j22.574	5.97	6.37	2.184+j16.981	1.194+j12.626
CUPRO	CPO-115	115	16.48	17.20	0.961+j3.912	0.634+j3.488	19.48	19.82	0.763+j3.671	0.641+j3.528
CUQUIO	CUQ-115	115	1.99	1.34	9.390+j31.952	29.952+j77.108	2.32	1.51	8.658+j30.208	29.756+j76.685



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			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
DAIDO METAL	DAI-69	69	6.21	3.82	1.581+j6.213	4.055+j18.014	6.92	4.22	1.500+j6.149	4.057+j18.060
DAL-TILE MÉXICO S. DE R.L. DE C.V	DLT-115	115	17.81	17.02	0.718+j3.658	0.810+j4.195	20.75	19.34	0.602+j3.467	0.834+j4.225
DANISCO MEXICANA	DAM-115	115	5.56	4.11	3.425+j11.442	8.941+j22.893	6.50	4.65	3.123+j10.796	8.947+j22.923
DANONE DE MÉXICO S.A. DE C.V.	DNN-115	115	10.62	7.55	1.447+j6.085	4.498+j13.168	12.01	8.39	1.333+j5.935	4.506+j13.261
DAÑU	DAN-230	230	8.44	8.73	3.154+j15.420	1.901+j14.091	11.47	11.23	2.037+j12.569	1.949+j13.175
DE ACERO MORELIA	DEO-115	115	8.66	7.05	1.937+j7.414	3.187+j12.694	9.58	7.73	1.865+j7.389	3.205+j12.851
DE ACERO CELAYA	DEA-230	230	13.38	10.88	2.065+j9.710	3.326+j16.519	15.75	12.27	1.697+j9.115	3.424+j16.909
DELCO REMY	DLC-115	115	16.86	16.41	0.891+j3.835	0.713+j4.225	20.05	19.01	0.692+j3.576	0.713+j4.212
DENSO	DEN-115	115	6.87	5.29	2.449+j9.353	4.235+j17.848	7.63	5.82	2.332+j9.285	4.252+j17.990
DESCANSADERO	DSC-69	69	0.69	0.63	23.545+j52.539	24.883+j69.780	1.73	1.38	10.850+j22.875	14.322+j42.198
DESTILADERAS	DST-115	115	3.83	3.42	5.370+j16.490	5.167+j23.078	4.51	3.90	4.551+j15.529	5.185+j23.269
DICUMSA	DIC-115	115	15.56	14.71	0.956+j4.158	0.790+j4.973	18.32	16.84	0.758+j3.914	0.795+j5.006
DISTEX	DTX-115	115	16.95	15.73	1.048+j3.774	0.923+j4.783	18.85	17.30	1.006+j3.741	0.930+j4.859
DOLORES HIDALGO	DHD-115	115	6.95	4.77	2.776+j9.145	5.621+j22.008	7.68	5.25	2.729+j9.108	5.625+j22.080
DOMINICA	DMN-115	115	4.06	5.32	1.606+j16.261	0.122+j4.765	4.39	5.70	1.606+j16.548	0.134+j5.197
DOMO SAN PEDRO	DSP-115	115	1.69	1.84	7.838+j38.422	2.970+j30.089	1.81	1.94	8.217+j39.411	3.350+j32.546
DON VASCO	VCO-115	115	2.71	1.87	7.916+j23.146	20.254+j54.241	3.05	2.07	7.558+j22.690	20.276+j54.377
EATON	EAT-115	115	14.66	12.96	1.057+j4.403	1.129+j6.237	17.24	14.83	0.856+j4.149	1.129+j6.227
EDOSA	EDO-69	69	7.17	4.82	1.514+j5.348	3.365+j13.279	9.85	5.80	1.061+j4.322	3.371+j13.323
EFFEM (LA CIÉNEGA)	EFF-115	115	3.89	2.60	4.166+j16.532	9.764+j41.380	5.17	3.08	3.078+j13.797	9.847+j41.682
EFFEM (SAN JUAN DEL RÍO)	EFF-115	115	8.58	5.76	2.165+j7.433	4.502+j18.469	9.47	6.34	2.126+j7.416	4.504+j18.510
EL ARBOLITO	ABO-115	115	4.03	2.77	6.128+j15.293	13.555+j36.532	4.52	3.09	5.913+j15.029	13.484+j36.324
EL CAJÓN	CJN-400	400	6.90	5.99	6.653+j32.806	10.626+j47.652	15.49	16.01	1.251+j16.355	1.328+j14.110
EL CAMPANARIO	CAM-115	115	9.72	10.87	2.155+j6.480	4.798+j2.956	10.78	11.99	2.110+j6.435	4.796+j3.027
EL GRANJENO	EGJ-115	115	18.14	15.97	1.002+j3.521	1.326+j5.000	20.64	17.76	0.883+j3.427	1.336+j5.099
EL GRULLO	GRU-110	115	0.82	0.52	27.627+j75.649	60.070+j215.241	0.91	0.57	27.258+j75.049	60.092+j215.351
EL MARQUÉS	MRQ-115	115	13.62	12.21	1.051+j4.761	1.225+j6.481	14.97	13.31	1.011+j4.771	1.232+j6.615
EL MARQUÉS ORIENTE	MQO-115	115	12.81	11.21	0.971+j5.092	1.281+j7.316	14.08	12.23	0.931+j5.102	1.288+j7.450
EL MIRADOR	MRR-115	115	5.44	4.74	3.482+j11.689	3.582+j17.294	6.87	5.60	2.590+j10.317	3.600+j17.355
EL MONTEON	MTN-115	115	2.83	2.25	8.940+j21.716	17.032+j38.120	3.27	2.53	8.178+j20.758	17.039+j38.231
EL PALMAR	EPM-115	115	3.60	1.80	5.765+j17.493	21.482+j70.748	3.97	1.98	5.715+j17.474	21.481+j70.785
EL PARDILLO	PRL-110	115	3.52	2.55	5.105+j18.160	11.450+j38.895	3.99	2.84	4.812+j17.649	11.465+j39.056
EL POTOSÍ	EPS-115	115	19.83	20.98	0.579+j3.297	0.233+j2.811	22.59	23.16	0.459+j3.200	0.256+j3.001
EL POTOSÍ	EPS-230	230	15.29	17.95	1.769+j8.502	0.500+j4.875	18.91	21.35	1.214+j6.628	0.558+j5.125
EL POTOSÍ	EPS-400	400	11.30	11.72	3.844+j20.070	2.205+j18.297	13.98	13.73	2.487+j17.994	2.412+j19.179
EL REALITO	ELR-115	115	2.50	1.46	5.007+j26.060	16.075+j82.186	2.75	1.60	4.970+j26.065	16.091+j82.314
EL REFUJIO	RFJ-115	115	3.28	2.07	6.018+j19.312	15.517+j53.433	4.00	2.39	5.240+j17.509	15.322+j53.011
EL SALTO	ESJ-69	69	14.35	15.13	0.738+j2.677	0.487+j2.297	18.50	19.14	0.576+j2.298	0.463+j2.076
EL SAUCITO	MSU-115	115	6.95	6.61	2.657+j9.176	1.622+j10.999	8.04	7.46	2.383+j8.765	1.640+j11.152
EL SAUZ	SAU-115	115	20.76	23.73	0.459+j3.164	0.108+j1.856	22.72	25.76	0.429+j3.186	0.108+j1.941
EL SAUZ	SAU-230	230	14.63	14.44	1.493+j8.951	0.954+j9.483	18.32	18.38	1.111+j7.895	0.687+j7.986
EL SOL	SOL-69	69	17.42	12.75	0.578+j2.213	1.089+j4.679	22.22	16.52	0.433+j1.924	0.875+j3.910



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EL SOL	SOL-69B	69	17.84	13.19	0.561+j2.161	1.037+j4.482	22.58	16.89	0.424+j1.894	0.846+j3.802
EL SOL (CARAPAN)	ESO-115	115	4.75	3.38	4.066+j13.383	10.389+j29.239	6.52	4.47	3.234+j10.719	8.853+j25.118
EL TARAY	TAY-115	115	4.47	2.83	3.731+j14.383	2.238+j41.020	4.97	3.11	3.581+j14.260	2.255+j41.249
EL TORO	TOO-115	115	11.21	5.78	1.256+j5.791	5.835+j21.847	12.46	6.35	1.150+j5.748	5.862+j22.051
EL ZAPOTE	EZE-69	69	13.27	10.31	0.694+j2.922	1.029+j5.500	14.87	11.35	0.627+j2.879	1.035+j5.588
EL ZAPOTILLO	EZP-115	115	3.04	2.07	5.292+j21.175	15.393+j50.403	3.82	2.53	4.400+j18.625	13.181+j46.693
EMMAN TABLEROS S.A. DE C.V.	EMM-115	115	6.13	4.57	2.795+j10.464	4.883+j21.376	7.75	5.33	2.201+j9.167	4.966+j21.677
EMPAQUES MODERNOS	EMP-69	69	7.47	5.55	1.963+j4.957	3.766+j10.198	9.02	6.50	1.777+j4.524	3.718+j9.807
ENCARNACIÓN DE DÍAZ	ENC-110	115	5.06	3.38	3.156+j12.725	9.775+j31.317	5.66	3.73	2.990+j12.548	9.782+j31.426
ENVASES INNOVATIVOS	ENV-69	69	12.38	8.89	0.859+j3.102	1.707+j6.802	14.09	9.91	0.788+j3.008	1.716+j6.826
ENVASES UNIVERSALES	EVS-69	69	13.01	11.71	0.735+j2.973	0.908+j3.984	15.56	13.46	0.641+j2.742	0.914+j4.028
ENVASES Y TAPAS	EYT-115	115	6.64	7.02	2.434+j9.700	1.360+j8.305	7.99	8.10	2.033+j8.916	1.425+j8.641
EÓLICA CERRITOS (MESA MORENOS) MANIOBRAS	ECM-230	230	5.65	5.65	4.474+j23.086	3.663+j23.308	6.80	6.48	3.571+j21.196	3.895+j24.324
HUMEDADES	HUM-115	115	1.40	0.98	15.930+j44.755	28.476+j105.585	1.63	1.11	14.654+j42.445	28.091+j103.887
EÓLICA HUIMILPAN (SAN PEDRO) MANIOBRAS HUIMILPAN	HUM-115	115	4.23	4.19	5.498+j14.688	2.678+j16.150	4.63	4.51	5.544+j14.766	2.901+j17.056
EÓLICA SANTIAGO MANIOBRAS	ESM-230	230	7.30	6.65	3.129+j17.931	4.456+j23.101	9.01	7.96	2.320+j16.050	4.383+j22.344
ESTADIO CORREGIDORA	ECO-115	115	12.83	9.24	0.928+j5.093	1.047+j11.201	14.15	10.14	0.887+j5.083	1.053+j11.275
ESTANCIA DE ANIMAS	EDA-115	115	3.41	2.70	6.866+j18.242	12.680+j32.549	4.22	3.18	5.895+j16.263	12.521+j31.935
ESTANCITA	ETA-115	115	0.79	0.49	27.163+j79.233	59.094+j234.226	1.07	0.76	16.723+j66.412	30.642+j146.237
EXPERIENCIA	EXP-69	69	8.19	5.38	1.051+j4.748	3.195+j12.086	9.30	6.00	0.945+j4.619	3.188+j12.074
EZEQUIEL MONTES	EZM-110	115	5.87	3.46	3.226+j10.846	10.396+j33.260	6.47	3.81	3.178+j10.826	10.395+j33.296
FERTIMEX	FER-69	69	5.08	3.48	1.985+j7.593	4.454+j18.095	5.66	3.84	1.922+j7.495	4.467+j18.260
FIBERWEB DE MÉXICO S.A. DE C.V.	VTC-115	115	6.70	5.33	2.584+j9.575	4.554+j17.029	7.72	6.51	2.350+j9.168	3.935+j14.273
FLAMINGOS	FLA-115	115	5.24	5.96	3.870+j12.072	1.591+j7.935	6.33	6.97	3.078+j11.115	1.619+j8.172
FLEXTRONICS PLANTA SUR	SLT-69	69	9.90	6.23	1.049+j3.886	2.454+j10.865	11.12	6.89	0.971+j3.820	2.457+j10.910
FLUVIAL	FLU-115	115	4.78	5.01	4.272+j13.205	2.504+j11.816	5.76	5.81	3.431+j12.218	2.523+j12.021
FORJAS	FRJ-115	115	17.38	16.65	0.842+j3.727	0.815+j4.272	19.36	18.37	0.796+j3.688	0.819+j4.331
FRESNILLO INDUSTRIAL	FRI-110	115	6.87	6.77	2.826+j9.241	2.514+j9.774	7.94	7.65	2.560+j8.836	2.531+j9.940
FRESNILLO NORTE	FRN-115	115	7.87	9.57	2.213+j8.136	0.557+j3.933	9.12	10.86	1.959+j7.764	0.579+j4.142
FRESNILLO POTENCIA	FSO-115	115	8.15	10.51	2.115+j7.868	0.194+j2.707	9.45	11.94	1.863+j7.500	0.216+j2.922
FRESNILLO POTENCIA	FSO-230	230	4.49	5.35	7.540+j28.620	1.343+j15.423	5.27	6.10	6.486+j26.925	1.498+j16.546
FRESNILLO SUR	FNO-115	115	7.46	7.27	2.549+j8.527	1.968+j9.425	8.68	8.25	2.273+j8.098	1.982+j9.565
FRESNO	FRE-69	69	13.31	9.27	0.790+j2.886	1.694+j6.693	15.12	10.29	0.709+j2.811	1.702+j6.760
GENERADORA ELÉCTRICA SAN RAFAEL, S.A.P.I. DE C.V.	SRA-115	115	2.78	2.09	6.092+j23.055	18.438+j44.366	3.68	4.01	4.198+j19.377	2.378+j14.775
GENERAL MOTORS DE MÉXICO	GMC-115	115					8.49	6.16	2.074+j8.351	5.054+j17.642
GUARAPO	GRP-115	115	6.36	4.13	2.498+j10.135	7.939+j26.172	7.09	4.56	2.400+j10.014	7.973+j26.322
GKN	GKN-115	115	9.10	7.73	1.508+j7.138	2.702+j10.874	10.03	8.46	1.446+j7.136	2.720+j11.037
GÓMEZ PORTUGAL	GOP-115	115	9.20	6.26	1.469+j7.062	3.811+j16.976	10.44	6.96	1.324+j6.870	3.822+j17.088
GRAHAM PACKAGING PLASTIC	GRH-115	115	10.50	7.51	1.483+j6.144	4.510+j13.199	11.88	8.33	1.368+j5.995	4.518+j13.293
GRÁN JARDÍN	GJA-115	115	10.83	8.34	1.353+j5.982	2.237+j11.431	12.07	9.17	1.240+j5.921	2.255+j11.578
GUADALAJARA DOS	GUD-69	69	24.62	27.79	0.301+j1.590	0.088+j1.067	28.95	31.81	0.232+j1.496	0.102+j1.099
GUADALAJARA DOS	GUD-161	161	6.15	8.40	1.475+j15.048	0.111+j2.978	6.55	8.89	1.127+j15.562	0.120+j3.258



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
GUADALAJARA DOS	GUD-230	230	15.02	16.68	2.102+j8.590	0.867+j6.179	19.41	20.29	1.298+j7.411	0.915+j6.428
GUADALAJARA INDUSTRIAL	GUI-69	69	21.79	25.09	0.438+j1.775	0.077+j1.118	24.74	27.69	0.371+j1.732	0.084+j1.206
GUADALAJARA INDUSTRIAL	GUI-230	230	12.03	11.95	2.626+j10.720	1.723+j11.163	15.08	14.06	1.753+j9.528	1.818+j11.602
GUADALAJARA NORTE	GUN-69	69	20.76	24.12	0.366+j1.884	0.089+j1.125	24.85	28.37	0.256+j1.745	0.073+j1.099
GUADALAJARA NORTE	GUN-230	230	11.08	10.68	2.698+j11.676	2.074+j13.219	16.03	15.77	1.350+j9.012	1.141+j9.343
GUADALAJARA ORIENTE	GDO-69	69	23.49	25.97	0.292+j1.670	0.089+j1.214	27.57	29.59	0.206+j1.576	0.095+j1.252
GUADALAJARA ORIENTE	GDO-230	230	14.06	14.89	2.147+j9.197	1.182+j7.806	18.93	18.67	1.196+j7.625	1.224+j7.854
GUADALAJARA UNO	GDU-69	69	29.22	31.70	0.319+j1.325	0.097+j1.048	34.29	35.69	0.243+j1.255	0.105+j1.121
GUADALAJARA UNO	GDU-230	230	13.83	14.46	2.402+j9.300	1.281+j8.279	17.84	17.41	1.512+j8.049	1.358+j8.629
GUADALCAZAR	GDL-115	115	1.42	1.10	20.640+j42.108	27.055+j83.047	1.64	1.24	18.745+j40.507	27.147+j83.650
GUADALUPE	GPE-110	115	6.68	6.47	3.310+j9.366	3.097+j10.501	8.07	7.50	3.002+j8.543	3.125+j10.675
GUANAJUATO	GTO-115	115	8.35	5.37	1.758+j7.758	5.315+j20.565	9.37	5.92	1.635+j7.625	5.343+j20.749
GUANAJUATO SUR	GSU-115	115	9.69	6.44	1.521+j6.683	4.139+j16.726	10.90	7.13	1.398+j6.550	4.156+j16.855
GUARDIÁN INDUSTRIE VP	GDI-115	115	6.74	4.85	2.868+j9.419	5.942+j20.478	7.45	5.34	2.825+j9.382	5.943+j20.513
GUASCARO	GSO-115	115	5.58	3.76	3.219+j11.451	7.907+j28.084	6.41	4.21	3.004+j10.998	7.926+j28.120
GUAYABITOS	GYS-115	115	2.75	2.12	9.321+j22.270	18.490+j41.718	3.18	2.39	8.566+j21.316	18.493+j41.806
GUEVARA	GVA-115	115	0.88	0.55	24.899+j70.893	52.452+j203.938	1.22	0.91	14.541+j57.914	24.052+j116.037
HACIENDA	HDA-115	115	12.77	10.49	1.318+j5.032	2.067+j8.349	14.16	11.47	1.250+j5.002	2.123+j8.544
HACIENDA NUEVA	HNV-115	115	4.53	4.23	4.191+j14.041	5.527+j16.936	5.29	4.80	3.854+j13.253	5.554+j17.141
HENKEL CAPITAL S.A. DE C.V.	RSS-115	115	14.88	14.26	0.985+j4.351	1.014+j4.974	17.79	16.63	0.827+j4.022	1.035+j4.874
HERDEZ	HER-115	115	15.12	12.91	0.987+j4.279	1.086+j6.576	17.76	14.71	0.789+j4.036	1.092+j6.609
HIGUERILLAS	HIG-69	69	15.59	9.49	0.934+j2.379	1.430+j7.404	17.66	10.40	0.862+j2.326	1.474+j7.571
HILASAL MEXICANA S.A.B. DE C.V.	HYL-69	69	6.38	4.71	2.255+j5.823	4.791+j11.969	16.36	14.73	0.686+j2.590	0.926+j3.440
HIROTEC MÉXICO S.A. DE C.V.	AVT-115	115	7.39	7.16	2.337+j8.675	3.819+j9.176	8.27	7.93	2.218+j8.544	3.828+j9.279
HITCHINER	HIT-115	115	13.91	12.10	1.125+j4.639	1.377+j6.799	16.30	13.81	0.924+j4.385	1.376+j6.789
HITACHI	HIT-115	115	9.59	6.96	1.863+j6.668	3.728+j14.357	10.71	7.68	1.792+j6.581	3.738+j14.438
HONDA DE MÉXICO S.A. DE C.V. EL SALTO	HON-69	69	13.07	12.64	0.827+j2.934	0.745+j3.280	17.04	16.19	0.645+j2.489	0.697+j2.889
HORUS	HRS-230	230	8.41	7.97	3.083+j15.484	4.018+j17.993	10.07	9.11	2.369+j14.305	4.265+j18.665
HUACANA	HUC-69	69	1.25	0.79	14.063+j28.462	28.752+j82.974	1.82	1.17	10.733+j21.526	21.734+j59.904
HUANACAXTLE	HUA-115	115	4.06	3.79	5.135+j15.509	4.401+j19.440	4.81	4.34	4.326+j14.548	4.422+j19.643
HUANIMARO	HNM-115	115	3.76	2.90	4.659+j17.056	12.003+j31.101	4.41	3.30	4.386+j15.958	12.096+j31.057
HUENTITÁN	HUN-69	69	10.42	7.07	1.014+j3.687	2.438+j8.925	12.41	10.24	0.860+j3.423	1.555+j5.547
HUICHAPAN	HCH-115	115	1.56	0.83	13.379+j40.413	46.054+j148.207	1.72	0.91	13.324+j40.395	46.054+j148.244
HUNTSMAN INTERNATIONAL DE MÉXICO	HMA-115	115	3.55	2.34	4.621+j18.116	11.236+j46.293	4.89	2.81	3.270+j14.583	11.319+j46.595
IBÍDEM	IBD-115	115	10.49	8.22	1.706+j6.098	3.401+j11.075	12.14	9.35	1.500+j5.827	3.370+j10.930
IBM DE MÉXICO S.A. DE C.V.	IBM-69	69	21.92	22.13	0.343+j1.784	0.275+j1.746	25.59	25.13	0.274+j1.691	0.289+j1.778
IBM-ALKA	IBA-69	69	23.10	24.42	0.324+j1.694	0.189+j1.435	27.05	27.82	0.255+j1.600	0.203+j1.467
IMMSA	IMM-115	115	4.89	4.91	3.348+j13.167	4.552+j12.657	5.40	5.38	3.268+j13.126	4.584+j12.968
IND MINERA MÉXICO	MNR-230	230	9.84	8.39	2.817+j13.203	4.797+j20.001	11.93	9.77	2.124+j12.064	4.832+j19.909
INDEPENDENCIA	INE-115	115	8.14	7.28	2.027+j7.901	2.333+j10.913	9.05	7.98	1.918+j7.839	2.366+j11.154
INDUSTRIAL SAN FRANCISCO	ISF-115	115	10.99	8.03	1.216+j5.916	2.168+j12.542	12.56	8.94	1.082+j5.713	2.187+j12.701
INGUARAN	ING-69	69	0.84	0.54	23.582+j40.976	45.321+j117.732	1.11	0.73	20.234+j34.097	38.276+j94.632



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
INNOPACK	INN-115	115	10.39	7.44	1.544+j6.201	3.644+j13.545	11.62	8.19	1.429+j6.121	3.671+j13.695
INVISTA	INV-115	115	17.95	19.97	0.977+j3.568	0.489+j2.563	19.97	21.97	0.935+j3.536	0.496+j2.639
IRAPUATO II	IRA-115	115	25.99	29.25	0.517+j2.502	0.175+j1.728	30.71	33.26	0.401+j2.344	0.187+j1.843
IRAPUATO II	IRA-230	230	19.49	20.10	1.481+j6.650	1.086+j6.230	25.25	24.29	0.973+j5.703	1.137+j6.456
IRAPUATO INDUSTRIAL	IRI-115	115	12.84	9.84	1.214+j5.026	3.102+j9.439	14.61	10.96	1.100+j4.875	3.111+j9.533
IRAPUATO PONIENTE	IPP-115	115	15.23	11.09	0.903+j4.266	1.849+j9.076	17.39	12.35	0.790+j4.124	1.862+j9.176
IRAPUATO UNO	IRP-110	115	21.25	17.93	0.687+j3.048	1.004+j4.781	24.75	20.19	0.570+j2.896	1.014+j4.861
IRAPUATO VILLAS	IRV-115	115	16.77	12.64	0.837+j3.869	1.596+j7.697	19.27	14.12	0.721+j3.721	1.607+j7.784
ITALAISE	ITA-115	115	8.73	7.62	2.040+j7.323	1.839+j10.881	9.91	8.47	1.897+j7.121	1.874+j11.028
IXTLAHUACAN	ITC-400	400	9.46	7.42	4.702+j23.966	8.670+j43.685	15.91	12.33	1.551+j15.895	5.911+j29.041
IXTLAN	ITL-115	115	6.24	4.74	2.869+j10.246	7.221+j19.443	7.32	5.39	2.649+j9.626	7.254+j19.417
JABIL CIRCUIT DE MÉXICO	JBL-69	69	12.01	7.00	0.789+j3.222	2.500+j10.126	13.66	7.78	0.703+j3.131	2.508+j10.173
JACONA	JCN-115	115	9.04	7.52	1.648+j7.157	2.704+j11.496	11.19	8.82	1.454+j6.361	2.767+j11.436
JAGUAR	CBO-69	69	15.79	10.94	0.592+j2.453	1.254+j5.743	18.11	12.18	0.510+j2.365	1.272+j5.815
JALOSTOTITLAN	JLT-115	115	7.06	5.65	2.157+j9.158	4.367+j15.856	7.95	6.32	1.985+j8.972	4.333+j15.743
JALPA	JAP-115	115	2.28	1.36	9.291+j27.605	9.633+j88.449	2.52	1.50	9.132+j27.494	9.651+j88.686
JARAL DEL PROGRESO	JDP-115	115	4.82	3.00	3.568+j13.304	11.368+j37.137	5.36	3.31	3.470+j13.184	11.402+j37.287
JARRETADERAS	JDA-115	115	4.99	5.30	4.067+j12.667	2.590+j10.666	6.01	6.17	3.267+j11.701	2.612+j10.866
JATCO	JAT-115	115	11.31	8.18	1.251+j5.735	2.029+j12.472	12.92	9.10	1.092+j5.547	2.039+j12.605
JATCO II	JTC-115	115	12.14	9.93	1.082+j5.361	1.405+j9.022	13.90	11.05	0.924+j5.173	1.421+j9.208
JEREZ	JRZ-115	115	2.09	1.47	10.845+j29.862	22.894+j67.958	2.35	1.64	10.516+j29.253	22.910+j68.083
JESÚS DEL MONTE	JEM-110	115	11.25	8.49	1.323+j5.753	2.823+j11.336	12.57	9.33	1.211+j5.684	2.859+j11.515
JESÚS MARÍA	JMA-115	115	3.20	2.69	6.237+j19.773	10.229+j30.816	3.64	3.01	5.910+j19.186	10.251+j30.958
JIQUILPAN	JIQ-115	115	7.78	5.42	2.024+j8.294	4.836+j19.054	8.90	6.05	1.857+j7.993	4.858+j19.174
JOCOTEPEC	JCT-69	69	3.82	2.24	3.074+j9.962	9.052+j31.215	4.23	2.47	2.998+j9.920	9.058+j31.307
JOYUELAS	JYU-110	115	5.44	3.72	3.314+j11.741	8.727+j27.888	6.05	4.10	3.219+j11.638	8.751+j27.997
JUAN JOSÉ ARREOLA	JUJ-115	115	6.05	5.75	2.593+j10.672	2.405+j12.471	6.78	6.33	2.363+j10.509	2.456+j12.828
JUAN RULFO	JRU-115	115	2.13	1.33	9.377+j29.767	25.056+j84.118	2.36	1.46	9.133+j29.577	25.096+j84.332
JULIÁN CARRILLO	JCR-115	115	4.90	3.28	4.136+j12.912	10.085+j32.034	5.44	3.62	4.009+j12.802	10.107+j32.208
JURICA	JUR-110	115	11.83	8.74	1.770+j5.324	0.696+j11.779	13.20	9.65	1.712+j5.261	0.704+j11.839
KELLOGG'S DE MÉXICO S.R.L. DE C.V.	KEL-115	115	13.40	12.45	1.305+j4.781	1.128+j6.024	14.94	13.73	1.247+j4.728	1.139+j6.107
KIMBERLY CLARK DE MÉXICO	KIM-115	115	15.33	14.22	0.800+j4.256	0.840+j5.218	16.87	15.44	0.766+j4.261	0.884+j5.401
KITAGAWA	KIT-115	115	8.10	5.39	1.769+j8.003	4.617+j20.058	9.15	5.97	1.608+j7.815	4.633+j20.203
KODAK DE MÉXICO S.A. DE C.V.	KDK-69	69	12.31	8.01	0.864+j3.119	2.015+j8.209	14.89	9.64	0.727+j2.853	1.824+j7.529
KRUPP	KRP-115	115	16.34	16.70	0.903+j3.962	0.593+j3.778	19.31	19.24	0.704+j3.716	0.598+j3.803
LA BARCA	BRC-115	115	8.01	6.69	2.464+j7.916	4.015+j12.579	9.41	7.57	2.207+j7.438	4.058+j12.810
LA BUFA MANIOBRAS	BFM-230	230	5.28	5.38	5.331+j24.556	3.984+j23.469	6.18	6.08	4.506+j23.209	4.173+j24.467
LA CALIFORNIA	CLF-115	115	11.63	8.56	1.311+j5.556	2.670+j11.627	12.84	9.39	1.271+j5.545	2.681+j11.729
LA CUEVA	CUV-115	115	5.67	4.24	3.042+j11.304	7.850+j22.319	6.34	4.68	2.881+j11.154	7.858+j22.457
LA ESPERANZA	LAE-115	115	6.01	5.41	3.309+j10.536	3.215+j14.397	7.70	6.45	2.420+j9.166	3.265+j14.529
LA ESTRELLA	ELA-115	115	3.54	2.53	5.142+j18.019	10.754+j39.773	4.15	3.14	4.565+j16.999	8.117+j33.585
LA FRAGUA	FRA-115	115	9.67	9.58	1.831+j6.615	1.069+j7.064	10.99	10.69	1.696+j6.426	1.095+j7.183



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			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
LA GRIEGA	GRI-115	115	6.46	4.75	3.107+j9.799	6.454+j20.342	7.14	5.24	3.062+j9.753	6.455+j20.377
LA HUERTA	LHT-115	115	2.12	1.70	8.720+j30.121	14.024+j52.943	2.38	1.88	8.398+j29.480	14.045+j53.052
LA JOYA	LJY-115	115	16.50	15.45	0.927+j3.915	0.932+j4.780	18.60	17.06	0.811+j3.842	0.946+j4.909
LA LOMA	LLM-115	115	12.17	9.24	1.291+j5.301	1.574+j10.591	13.47	10.13	1.250+j5.276	1.605+j10.717
LA MANGA	MAN-230	230	7.74	5.52	2.734+j16.935	8.457+j37.029	8.97	6.32	2.424+j16.106	8.295+j35.902
LA MANSIÓN	MNS-115	115	12.86	10.08	0.888+j5.087	1.843+j9.157	14.20	11.09	0.845+j5.073	1.845+j9.202
LA PIEDAD	LPI-115	115	5.68	4.21	3.349+j11.192	8.199+j22.487	7.84	5.59	2.645+j8.931	7.003+j19.363
LA PIEDAD PONIENTE	LPP-115	115	4.55	3.25	4.249+j13.949	11.052+j30.247	6.30	4.33	3.361+j11.097	9.345+j25.796
LA PILA	SPI-115	115	18.99	20.34	0.805+j3.402	0.360+j2.805	22.83	23.86	0.606+j3.142	0.362+j2.794
LA PILA	SPI-230	230	11.90	12.58	2.429+j10.893	1.469+j9.311	15.44	15.90	1.592+j9.324	1.435+j8.659
LA PRIMAVERA (BAJÍO)	PRI-230	230	9.67	8.38	2.881+j13.426	4.555+j19.591	12.35	9.98	1.808+j11.690	4.599+j19.681
LA RESOLANA	LRE-115	115	8.91	8.58	1.392+j7.319	2.531+j7.952	10.07	9.52	1.143+j7.160	2.542+j8.175
LA SOLEDAD	SDD-115	115	9.64	7.95	1.590+j6.705	3.873+j10.725	10.80	8.88	1.502+j6.594	3.852+j10.568
LA VEGA	LVG-69	69	1.89	1.37	6.996+j19.910	10.193+j44.269	2.53	1.64	4.917+j16.592	10.322+j44.206
LA VENTA	LVT-69	69	4.88	2.95	2.395+j7.800	6.026+j23.402	6.38	3.92	1.720+j6.647	4.719+j19.064
LA VENTILLA	VLT-115	115	5.08	4.11	3.487+j12.607	5.913+j21.520	5.65	4.57	3.311+j12.487	5.794+j21.359
LA VIRGEN	LVR-115	115	4.87	3.06	3.228+j13.253	7.983+j37.023	5.39	3.36	3.112+j13.198	8.001+j37.172
LABORATORIOS PISA	LBP-69	69	6.80	4.25	1.468+j5.676	3.613+j15.979	7.58	4.70	1.387+j5.612	3.615+j16.026
LAGOS DE MORENO	LGS-110	115	5.11	3.23	3.085+j12.611	7.427+j34.903	5.66	3.56	2.969+j12.556	7.445+j35.052
LAGOS GALERA	LGG-115	115	5.04	3.19	3.036+j12.808	7.533+j35.366	5.58	3.51	2.920+j12.753	7.551+j35.515
LAGUNA LARGA	LGL-115	115	2.01	1.17	10.516+j31.320	31.160+j99.666	4.16	2.66	5.444+j16.676	16.125+j44.336
LAGUNA SAN VICENTE	LSV-230	230	9.42	7.83	3.111+j13.746	5.096+j22.167	11.86	9.60	2.220+j12.111	4.815+j20.586
LAGUNA SECA	LAS-110	115	4.70	3.64	4.724+j13.327	8.372+j25.064	5.51	4.13	4.277+j12.549	8.388+j25.186
LAGUNILLAS	LAG-115	115	3.80	2.82	4.977+j16.754	13.066+j33.271	4.28	3.13	4.683+j16.397	13.086+j33.433
LALA DERIVADOS LÁCTEOS S.A. DE C.V.	LAL-115	115	10.79	7.79	1.409+j5.992	4.287+j12.606	12.21	8.65	1.295+j5.842	4.296+j12.699
LAMOSA	LAM-115	115	14.32	12.57	1.087+j4.506	1.238+j6.483	16.81	14.37	0.886+j4.253	1.237+j6.473
LAMPOTAL	LPL-115	115	5.14	3.99	3.478+j12.447	6.142+j23.229	6.06	4.54	3.109+j11.647	6.167+j23.367
LAPEM	LPM-115	115	10.54	7.95	1.664+j6.073	3.937+j11.858	11.93	8.83	1.550+j5.923	3.946+j11.952
LAS BRISAS	BRI-115	115	7.75	6.75	1.943+j8.342	2.613+j12.121	9.80	8.08	1.360+j7.328	2.595+j11.884
LAS COLINAS	LCN-115	115	9.01	6.91	1.956+j7.108	3.430+j13.670	10.05	7.62	1.839+j7.032	3.452+j13.817
LAS DELICIAS	LDE-230	230	22.03	25.83	0.831+j5.969	0.310+j3.782	25.21	28.72	0.702+j5.751	0.341+j4.021
LAS FAJAS	FAJ-110	115	0.97	0.61	27.762+j62.375	69.395+j177.912	1.08	0.67	27.467+j62.058	69.424+j178.134
LAS FRESAS	LFR-115	115	24.13	23.18	0.509+j2.704	0.376+j3.092	27.92	25.74	0.407+j2.584	0.402+j3.267
LAS FRESAS	LFR-400	400	15.04	14.80	3.253+j15.012	2.753+j16.065	19.22	17.64	1.939+j13.072	2.856+j16.613
LAS PINTAS	LPS-69	69	15.69	10.79	0.720+j2.435	1.118+j5.910	17.67	11.89	0.653+j2.392	1.124+j5.998
LAS TORRES	LTL-115	115	11.92	8.90	1.226+j5.433	3.096+j10.839	13.34	9.82	1.113+j5.359	3.118+j10.957
LAS VARAS	VRS-115	115	2.67	1.94	9.790+j22.834	20.073+j49.121	3.08	2.18	9.072+j21.874	20.070+j49.130
LEAR CORP (SELVA)	LCO-115	115	14.24	12.48	1.094+j4.531	1.263+j6.540	16.71	14.26	0.893+j4.278	1.262+j6.530
LECHERA GUADALAJARA S.A. DE C.V.	LEC-69	69	7.37	5.98	1.019+j5.305	1.655+j9.017	8.29	6.60	0.953+j5.198	1.667+j9.179
LECHERA MANIOBRAS	LEM-69	69	10.96	9.51	0.903+j3.520	1.109+j5.190	12.93	10.77	0.810+j3.292	1.138+j5.297
LEÓN ALFARO	LNA-115	115	11.54	8.92	1.398+j5.580	2.370+j10.593	12.94	9.85	1.281+j5.499	2.382+j10.699
LEÓN CUATRO	LNC-115	115	19.18	20.73	0.799+j3.368	0.357+j2.692	21.69	22.84	0.686+j3.296	0.381+j2.852



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
LEÓN CUATRO	LNC-230	230	12.92	12.55	2.377+j10.000	1.949+j11.093	15.22	14.20	1.868+j9.414	2.047+j11.529
LEÓN MALECÓN	LNLM-115	115	11.88	9.66	1.499+j5.383	2.032+j9.251	13.32	10.67	1.381+j5.305	2.043+j9.361
LEÓN NORTE	LNN-115	115	13.35	10.97	1.114+j4.849	2.119+j7.949	14.97	12.11	0.998+j4.776	2.137+j8.072
LEÓN ORIENTE	LNO-110	115	17.91	15.95	1.000+j3.570	1.190+j4.953	20.38	17.74	0.881+j3.474	1.205+j5.055
LEÓN PONIENTE	LNP-110	115	13.66	10.42	1.098+j4.734	2.085+j9.177	15.33	11.51	0.983+j4.661	2.097+j9.291
LEÓN TRES	LNT-115	115	19.40	22.10	0.796+j3.329	0.225+j2.189	21.91	24.35	0.682+j3.264	0.243+j2.336
LEÓN TRES	LNT-230	230	12.14	12.10	2.450+j10.660	1.657+j11.018	14.14	13.57	1.948+j10.144	1.765+j11.545
LEÓN UNO	LNU-115	115	22.50	25.04	0.680+j2.871	0.220+j2.073	25.64	27.73	0.566+j2.791	0.236+j2.209
LEÓN UNO	LNU-230	230	15.07	15.74	2.033+j8.576	1.182+j7.690	17.94	17.98	1.539+j7.997	1.239+j8.037
LINDAVISTA	LVA-115	115	7.24	6.62	2.075+j8.928	3.466+j11.245	9.13	7.93	1.852+j7.778	3.567+j11.089
LOGISTIK	LOG-115	115	10.71	8.47	1.681+j5.969	3.307+j10.641	12.41	9.64	1.475+j5.698	3.276+j10.496
LOMBARDÍA	LMB-69	69	2.28	1.43	5.662+j16.557	13.266+j46.799	5.62	4.79	1.723+j7.602	1.749+j11.318
LORETO	LOR-115	115	4.61	3.06	4.617+j13.646	10.010+j34.954	5.18	3.39	4.377+j13.410	10.010+j35.067
LOS HERNÁNDEZ	HDZ-110	115	1.41	0.96	18.798+j43.169	44.263+j104.368	1.59	1.07	17.958+j42.139	44.280+j104.492
LOS REYES	RYS-115	115	4.10	2.70	4.641+j15.535	12.470+j39.443	4.64	3.01	4.382+j15.104	12.480+j39.486
LOS SAUCES	LSA-115	115	10.12	6.81	1.949+j6.265	4.435+j15.535	11.38	7.54	1.824+j6.154	4.447+j15.617
LUIS MOYA	LMY-110	115	2.54	2.17	11.963+j23.234	3.078+j41.156	6.03	4.78	4.371+j11.301	3.762+j21.463
MABE LEISER (SLP)	MBL-115	115	15.95	15.48	0.927+j4.057	0.829+j4.486	18.85	17.83	0.727+j3.806	0.831+j4.491
MABE MÉXICO S. DE R.L. DE C.V. (MABE SANYO SLP)	MAB-115	115	14.20	12.25	1.057+j4.555	1.115+j6.842	16.61	13.93	0.859+j4.312	1.121+j6.875
MABE MÉXICO S. DE R.L. DE C.V. (CELAYA)	MAB-115	115	10.44	7.13	1.459+j6.190	4.340+j14.628	11.55	7.83	1.398+j6.166	4.354+j14.740
MABE MÉXICO S. DE R.L. DE C.V. (QUERETARO)	MBE-115	115	15.01	14.24	1.108+j4.283	0.939+j5.085	16.71	15.70	1.059+j4.240	0.946+j5.153
MAHLE	MAH-115	115	11.36	9.43	1.425+j5.666	3.181+j8.928	12.93	10.50	1.275+j5.501	3.193+j9.070
MALPASO	MPO-115	115	3.15	2.30	7.598+j19.661	11.794+j42.939	3.58	2.57	7.277+j19.045	11.809+j43.063
MANIOBRAS AISIN TAKAOKA	MTK-115	115	9.54	6.18	1.531+j6.792	3.903+j17.906	10.75	6.85	1.408+j6.646	3.912+j17.985
MANIOBRAS BMW	MBM-230	230	9.28	7.48	3.240+j13.938	5.812+j24.002	11.87	9.42	2.297+j12.089	5.235+j21.425
MANIOBRAS GENERAL MOTORS	MGM-230	230	10.44	8.47	2.669+j12.440	4.795+j21.151	12.30	9.59	2.149+j11.679	4.872+j21.494
MANIOBRAS GETRAG	MGT-115	115	7.74	5.03	1.806+j8.382	4.604+j21.981	8.67	5.52	1.689+j8.250	4.728+j22.364
MANIOBRAS GKN	MGK-115	115	9.22	7.85	1.492+j7.045	2.645+j10.659	10.16	8.59	1.430+j7.043	2.663+j10.822
MANIOBRAS HONDA	MHN-115	115	14.22	10.40	0.883+j4.586	2.268+j9.565	15.70	11.38	0.824+j4.578	2.284+j9.700
MANIOBRAS IBERDROLA	MIB-115	115	15.08	14.02	0.820+j4.327	0.828+j5.272	16.57	15.20	0.788+j4.336	0.879+j5.470
MANIOBRAS KASAI	MKI-115	115	20.43	20.75	0.768+j3.158	0.602+j3.061	23.26	23.03	0.653+j3.072	0.615+j3.184
MANIOBRAS MEXSOLAR	MMX-115	115	7.28	7.17	2.119+j8.868	1.436+j9.534	8.53	8.46	1.843+j8.358	1.458+j8.736
MANIOBRAS PLANTA FLOTACIÓN DE MINERAL	MPM-115	115	4.72	4.04	4.233+j13.411	5.933+j20.308	5.35	4.50	3.975+j13.052	5.955+j20.524
MANIOBRAS SOLEM	MSL-230	230	8.37	9.23	3.160+j15.553	1.551+j11.398	10.41	10.91	2.303+j13.836	1.647+j12.009
MANIOBRAS TOYOTA	TOM-230	230	12.16	9.02	1.824+j10.764	3.758+j22.083	13.75	10.00	1.611+j10.499	3.788+j22.299
MANIOBRAS WORLD TRADE CENTER DOS	MWD-230	230	8.73	7.01	3.185+j14.870	6.246+j25.762	11.10	8.81	2.231+j12.973	5.594+j22.938
MANUFACTURAS KALTEX S.A. DE C.V.	KAL-115	115	11.66	7.43	1.295+j5.547	3.948+j14.796	12.83	8.15	1.261+j5.553	3.959+j14.882
MANUFACTURAS VITROMEX I	VTM-115	115	6.57	5.05	2.807+j9.714	4.950+j18.622	7.56	6.11	2.574+j9.311	4.386+j15.982
MANUFACTURAS VITROMEX II	VT2-115	115	6.71	5.71	2.672+j9.531	4.092+j14.603	7.73	7.00	2.439+j9.128	3.529+j11.963
MANZANILLO	MNZ-230	230	10.51	12.58	1.652+j12.532	0.476+j6.314	15.57	17.34	0.741+j9.351	0.479+j6.161
MANZANILLO	MNZ-400	400	10.61	12.91	3.132+j21.548	0.558+j9.887	24.96	29.46	0.597+j10.160	0.159+j4.452
MARABIS CONNONFORT	MRC-115	115	8.37	6.03	2.095+j7.646	6.009+j16.167	9.27	6.63	2.040+j7.607	6.016+j16.252



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
MARAVATIO	MAV-115	115	2.25	1.44	8.126+j28.347	27.904+j74.303	2.50	1.59	7.919+j28.108	27.921+j74.408
MARGARITAS	MRS-115	115	14.77	11.00	0.926+j4.398	1.537+j9.015	17.05	12.30	0.781+j4.211	1.546+j9.124
MATEHUALA SUBESTACIÓN	MHS-110	115	2.42	1.99	8.934+j25.922	10.021+j44.475	2.65	2.15	8.969+j26.037	10.497+j45.939
MATEHUALA SUR	MHR-115	115	2.39	1.89	8.720+j26.334	11.922+j48.684	2.62	2.05	8.735+j26.424	12.300+j49.898
MATEHUALA SUR	MHR-230	230	8.50	8.11	3.046+j15.315	3.384+j17.634	10.19	9.27	2.336+j14.144	3.541+j18.298
MAZAMITLA	MTA-400	400	10.39	8.24	3.882+j21.885	8.390+j38.694	14.03	10.04	2.017+j17.997	8.536+j38.673
MAZDA MANIOBRAS	MMZ-115	115	13.64	9.75	0.929+j4.777	2.385+j10.449	15.77	10.94	0.808+j4.562	2.415+j10.501
MEADWEST VACO (SAINT GO BAIN)	MEA-115	115	13.27	11.37	1.192+j4.860	1.621+j7.353	15.50	12.95	0.991+j4.607	1.621+j7.343
MELAQUE	MLQ-115	115	3.66	4.21	4.307+j17.616	2.602+j10.742	4.19	4.75	4.006+j16.956	2.623+j10.849
METAL FOARMING	SMF-115	115	8.94	6.60	1.916+j7.176	4.200+j14.748	10.27	7.46	1.710+j6.906	4.169+j14.603
METALSA	MTL-115	115	14.38	13.02	1.049+j4.495	1.157+j5.981	16.87	14.88	0.849+j4.244	1.158+j5.988
MINA LAS TORRES	MTL-115	115	6.73	4.29	2.582+j9.515	7.318+j25.771	7.53	4.73	2.459+j9.382	7.346+j25.955
MEXICHEM DERIVADOS	MCH-69	69	11.40	10.40	1.038+j3.335	1.429+j4.270	16.31	14.90	0.725+j2.586	1.079+j3.274
MEXICHEM DERIVADOS	MCH-115	115	9.03	7.61	2.161+j7.029	3.387+j11.024	10.15	8.43	2.062+j6.897	3.400+j11.115
MÉXICO	MXJ-69	69	13.48	8.80	0.844+j2.832	1.592+j7.518	15.32	9.73	0.761+j2.758	1.611+j7.617
MEXTICACAN	MXT-115	115	3.17	2.14	5.264+j20.243	14.612+j48.983	3.72	2.47	4.798+j19.049	13.828+j47.456
MEZQUITÁN	MZI-110	115	1.13	0.78	17.408+j55.943	55.370+j127.066	1.38	0.90	13.782+j50.904	55.384+j127.296
MICHELIN	MIC-115	115	18.40	16.23	0.731+j3.533	0.927+j5.002	20.47	17.85	0.689+j3.501	0.934+j5.078
MICHELÍN MANIOBRAS	MMH-115	115	10.28	6.95	1.834+j6.194	4.090+j15.224	11.56	7.70	1.709+j6.082	4.102+j15.303
MICROPARQUE	MPQ-115	115	19.93	19.94	0.838+j3.224	0.741+j3.274	22.21	21.94	0.796+j3.191	0.747+j3.351
MIGUEL AUZA	MGU-115	115	0.81	0.51	34.039+j74.194	84.021+j215.451	0.90	0.56	33.740+j73.882	84.050+j215.674
MINA FRESNILLO	CMF-115	115	6.28	5.68	3.072+j10.109	2.679+j13.753	7.23	6.38	2.798+j9.701	2.697+j13.906
MINA LA PAZ	MLP-115	115	2.18	1.83	10.071+j28.688	9.775+j47.343	2.39	1.97	10.142+j28.843	10.424+j49.206
MINA PEÑÓLES	PNO-115	115	3.65	2.77	4.895+j17.529	11.016+j33.876	4.17	3.10	4.577+j16.928	11.031+j33.999
MINA SAN JAVIER	MSJ-115	115	6.95	5.00	2.292+j9.280	5.503+j20.012	7.78	5.52	2.144+j9.141	5.523+j20.191
MINA SAUCITO	SUM-115	115	4.96	3.97	3.881+j12.816	5.266+j22.888	5.65	4.43	3.603+j12.415	5.284+j23.042
MINATITLÁN	MTC-115	115	6.56	4.67	2.498+j9.810	6.077+j21.510	7.76	5.31	2.206+j9.145	6.081+j21.542
MINERA PEÑASQUITO	PNQ-400	400	4.47	3.06	7.858+j51.024	28.973+j120.096	5.18	3.44	6.731+j48.593	28.981+j120.459
MINERA REAL DE ÁNGELES SA DE CV	MRA-115	115	2.95	2.09	7.846+j21.100	16.268+j47.467	3.48	2.39	7.074+j19.766	16.168+j47.096
LA MORA	MRA-115	115	10.24	7.36	1.430+j6.327	3.613+j13.647	11.42	8.11	1.317+j6.257	3.628+j13.769
MINERALES Y MINAS MEXICANAS BOLAÑOS	BOL-115	115	0.91	0.58	34.592+j63.798	61.590+j192.497	1.01	0.63	34.429+j63.697	61.610+j192.738
MINSA, S.A. DE C.V.	MIN-69	69	9.93	6.01	1.578+j3.689	3.207+j11.473	11.13	6.60	1.506+j3.636	3.251+j11.640
MIRAMAR	MRM-115	115	8.99	7.50	1.640+j7.200	3.980+j11.113	10.97	8.68	1.375+j6.517	3.992+j11.203
MIRAVALLE	MIL-69	69	16.33	8.97	0.862+j2.282	1.815+j8.277	18.52	9.93	0.789+j2.231	1.820+j8.332
MISIÓN HILLS	MHI-115	115	8.46	8.85	1.985+j7.597	0.677+j6.893	9.56	9.77	1.851+j7.411	0.751+j7.194
MOCTEZUMA	MZM-115	115	5.76	5.00	2.812+j11.188	4.501+j16.194	6.68	5.65	2.453+j10.651	4.511+j16.344
MOJONERA	MOJ-69	69	16.53	11.68	0.558+j2.345	1.136+j5.294	19.01	13.01	0.476+j2.256	1.154+j5.366
MONARCA	MNC-115	115	6.13	4.06	3.187+j10.360	8.037+j26.204	6.83	4.49	3.106+j10.238	8.051+j26.232
MORALETE	MTE-115	115	6.70	6.15	2.439+j9.611	3.300+j12.101	7.84	6.97	2.154+j9.063	3.330+j12.286
MORELIA	MEL-115	115	9.72	10.01	1.721+j6.609	1.302+j6.193	10.84	10.97	1.610+j6.543	1.333+j6.444
MORELIA DOS	MRD-115	115	8.54	7.94	1.941+j7.527	1.917+j9.464	9.51	8.70	1.828+j7.462	1.951+j9.714
MORELIA INDUSTRIAL	MOI-115	115	9.09	7.48	1.835+j7.070	2.796+j11.846	10.06	8.20	1.762+j7.043	2.815+j12.004



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
MORELIA NORTE	MOR-115	115	9.03	7.58	1.871+j7.114	2.577+j11.406	10.02	8.32	1.782+j7.069	2.601+j11.583
MORELIA POTENCIA	MRP-115	115	10.54	12.22	1.456+j6.127	0.343+j3.804	11.78	13.35	1.337+j6.055	0.381+j4.076
MORELIA POTENCIA	MRP-230	230	5.99	5.96	4.506+j21.696	2.559+j22.626	6.86	6.58	3.853+j20.943	2.827+j23.995
MORELOS	MRE-115	115	14.00	10.66	1.004+j4.636	1.447+j9.098	16.10	11.91	0.848+j4.456	1.455+j9.211
MORELOS (LEÓN)	MRL-115	115	14.44	12.33	1.058+j4.475	1.351+j6.851	16.24	13.61	0.944+j4.398	1.370+j6.983
MOROLEÓN	MLO-110	115	5.04	3.10	3.647+j12.663	11.832+j36.116	5.59	3.41	3.553+j12.567	11.848+j36.209
MUELLE	MLE-115	115	4.39	4.53	4.772+j14.355	4.387+j13.012	5.25	5.24	3.913+j13.350	4.405+j13.217
NAL DE CONDOC ELEC S.A DE C.V	CDT-115	115	15.57	16.35	0.755+j4.196	0.509+j3.576	17.24	17.89	0.706+j4.176	0.530+j3.698
NESTLÉ (LA CIÉNEGA)	NES-115	115	3.62	2.58	5.242+j17.582	14.398+j37.836	4.20	2.91	4.808+j16.698	14.401+j37.913
NESTLÉ (LEÓN)	NES-115	115	4.92	3.10	3.219+j13.097	7.843+j36.469	5.45	3.41	3.103+j13.042	7.861+j36.618
NESTLÉ MÉXICO S.A. DE C.V.	NST-115	115	15.01	10.65	1.108+j4.283	2.151+j9.651	16.71	11.73	1.059+j4.240	2.157+j9.719
NIÑOS HÉROES	NHE-230	230	9.25	7.92	3.037+j14.030	4.688+j21.107	11.68	9.34	1.962+j12.354	4.766+j21.293
NISSAN	NIS-115	115	11.42	8.49	1.213+j5.684	1.893+j11.713	13.04	9.46	1.055+j5.500	1.901+j11.829
NISSAN MANIOBRAS	NSS-115	115	11.70	8.62	1.185+j5.547	1.877+j11.624	13.38	9.61	1.027+j5.363	1.885+j11.740
NITROPISO	NTP-115	115	12.71	8.69	1.190+j5.086	2.462+j12.260	14.81	9.80	0.995+j4.831	2.468+j12.268
NOGALES	NGA-115	115	8.53	6.85	1.921+j7.540	2.746+j13.298	9.86	8.30	1.717+j7.209	2.236+j11.409
NOGALITO	NGT-115	115	4.05	3.79	5.196+j15.564	5.009+j19.143	4.84	4.36	4.266+j14.484	5.028+j19.348
NUCOR MANIOBRAS	NUM-115	115	7.68	7.48	2.250+j8.343	3.653+j8.696	8.61	8.29	2.131+j8.211	3.663+j8.799
NUEVA ITALIA	NVI-69	69	2.49	1.90	4.775+j15.283	7.358+j29.990	5.04	4.22	2.376+j8.370	3.178+j13.129
NUEVA JAUJA	JAU-115	115	6.72	5.65	2.437+j9.571	4.232+j14.936	8.30	6.65	1.861+j8.603	4.213+j14.732
NUEVA PEDREGAL	NPD-115	115	7.67	5.19	2.144+j8.392	3.362+j20.868	8.49	5.71	2.093+j8.343	3.370+j20.935
NUEVO VALLARTA POTENCIA	NVT-115	115	5.86	7.58	3.427+j10.806	0.356+j3.656	7.16	9.01	2.642+j9.846	0.386+j3.905
NUEVO VALLARTA POTENCIA	NVT-230	230	3.29	4.00	11.758+j38.657	2.276+j18.864	4.13	4.82	8.616+j34.336	2.454+j19.952
NYPRO KANAAK SA CV	NKA-69	69	13.16	9.75	0.696+j2.947	1.607+j5.996	15.23	11.00	0.591+j2.817	1.601+j5.985
OBLATOS	OBL-69	69	11.65	7.88	0.805+j3.324	1.930+j8.102	14.06	12.13	0.646+j3.050	0.893+j4.490
OCOTLÁN	OCN-115	115	12.98	14.09	1.290+j4.950	0.466+j3.915	15.92	16.42	1.035+j4.468	0.509+j4.147
OCOTLÁN	OCN-230	230	7.37	6.74	3.807+j17.616	3.264+j22.862	8.74	7.60	2.943+j16.456	3.552+j23.966
OJO CALIENTE	OCL-110	115	4.92	5.25	4.714+j12.643	2.518+j10.716	7.67	7.57	3.116+j8.997	2.172+j9.688
OJO SECO	OJO-110	115	10.54	7.22	1.439+j6.133	4.273+j14.413	11.66	7.93	1.377+j6.108	4.286+j14.524
OJUELOS	OJU-115	115	1.76	1.06	13.828+j35.213	25.529+j109.604	1.94	1.17	13.659+j35.039	25.537+j109.727
OJUELOS DOS	OJD-115	115	5.19	3.37	3.946+j12.178	8.221+j32.550	5.81	3.73	3.785+j11.995	8.229+j32.672
OMEGA	OMG-115	115	8.17	5.42	1.737+j7.934	4.472+j20.003	9.24	6.01	1.575+j7.745	4.487+j20.148
OMYA MÉXICO S.A. DE C.V.	OMY-115	115	13.61	6.70	0.961+j4.784	9.006+j18.033	15.09	7.38	0.909+j4.755	9.006+j18.086
P. H. TROJES	TJS-115	115	1.82	1.22	12.825+j34.087	30.812+j85.584	2.18	1.74	11.010+j31.720	13.297+j57.382
PABELLÓN	PAB-115	115	6.67	5.23	2.117+j9.732	3.055+j17.954	8.30	6.15	1.956+j8.582	3.059+j17.779
PACHAMAMA MANIOBRAS	MPM-400	400	12.63	13.07	3.618+j17.919	2.359+j16.422	16.55	15.92	1.962+j15.221	2.479+j17.034
PALO ALTO	PAO-115	115	5.36	3.45	4.040+j11.711	7.568+j32.180	6.00	3.81	3.881+j11.532	7.576+j32.292
PÁNFILO NATERA	PFN-115	115	2.63	2.05	6.236+j24.493	22.187+j42.029	3.42	2.48	4.601+j20.867	21.836+j40.997
PAPEL POTOSÍ	PAP-115	115	16.55	16.79	0.892+j3.912	0.587+j3.818	19.56	19.33	0.695+j3.669	0.593+j3.850
PARQUE PIEL	PAP-115	115	11.73	8.97	1.304+j5.508	2.780+j10.539	13.14	9.91	1.189+j5.428	2.792+j10.653
PARACHO II	POD-115	115	6.42	4.99	3.137+j9.852	6.723+j18.082	7.72	5.72	2.729+j9.064	6.742+j18.102
PARQUE DE TECNOLOGÍA	PTE-69	69	11.21	7.54	0.900+j3.439	1.810+j8.555	12.69	8.31	0.821+j3.355	1.860+j8.705



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			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
PARQUE INDUSTRIAL	PQI-69	69	16.05	13.03	0.640+j2.399	0.996+j4.091	18.46	14.63	0.569+j2.304	1.004+j4.115
PARQUE INDUSTRIAL COLINAS DE APASEO	API-115	115	6.30	4.15	3.257+j10.016	8.490+j25.627	6.93	4.55	3.224+j10.036	8.498+j25.745
PARQUE INDUSTRIAL COLINAS DE LEÓN	ICL-115	115	14.45	11.05	1.034+j4.478	1.772+j8.668	16.27	12.23	0.917+j4.395	1.782+j8.768
PARQUE INDUSTRIAL FINSA QUERETARO	PFQ-115	115	11.49	6.16	1.801+j5.492	4.895+j20.275	12.82	6.79	1.742+j5.425	4.901+j20.332
PARQUE INDUSTRIAL GUANAJUATO CENTRAL	IGC-115	115	13.14	10.22	1.193+j4.911	2.984+j8.946	14.96	11.38	1.079+j4.760	2.992+j9.040
PARQUE INNOVACIÓN	PQN-115	115	12.37	10.57	1.051+j5.266	1.467+j7.997	13.60	11.54	1.010+j5.276	1.474+j8.131
PARQUE SOLAR SANTIAGO MANIOBRAS	MSG-230	230	5.92	6.09	4.406+j21.998	3.286+j20.349	7.27	7.12	3.380+j19.796	3.428+j21.155
PARQUE VIDANTA VALLARTA MANIOBRAS	MPV-115	115	5.11	5.71	4.000+j12.370	2.281+j8.577	6.18	6.68	3.194+j11.388	2.305+j8.789
PÁTZCUARO NORTE	PTN-115	115	3.34	2.38	5.859+j18.991	15.222+j41.238	3.82	2.66	5.375+j18.330	15.248+j41.347
PÁTZCUARO SUR	PCS-115	115	3.36	2.39	5.803+j18.879	15.040+j41.376	3.83	2.66	5.377+j18.313	15.064+j41.493
PEDREGAL	PDG-115	115	7.06	6.40	2.414+j9.088	3.923+j11.751	7.90	7.06	2.265+j8.965	3.955+j11.995
PELETIZADORA ALZADA	PAL-115	115	3.33	2.35	5.774+j19.109	12.269+j43.014	3.85	2.80	5.291+j18.232	10.717+j38.811
PEMSA	PEM-115	115	10.67	7.95	1.975+j5.904	3.737+j12.055	11.79	8.71	1.911+j5.890	3.755+j12.206
PENAL	PNL-69	69	9.40	6.23	0.951+j4.131	2.587+j10.400	10.62	6.92	0.863+j4.035	2.592+j10.433
PÉNJAMO	PNJ-115	115	3.89	2.73	5.183+j16.269	10.624+j37.368	6.53	4.53	3.241+j10.696	7.651+j24.814
PEÑA COLORADA	PEC-115	115	6.28	4.43	2.654+j10.236	6.464+j22.955	7.41	5.02	2.361+j9.573	6.469+j22.988
PEÑASCO	PNS-115	115	10.11	7.28	1.395+j6.416	2.782+j13.988	11.37	8.04	1.267+j6.299	2.799+j14.137
PEÑITAS	PEN-115	115	3.23	2.19	6.633+j19.466	14.819+j47.400	3.76	2.48	5.993+j18.500	14.797+j47.137
PEÑUELAS	PEN-115	115	6.84	4.44	2.121+j9.466	5.898+j24.759	7.70	4.92	1.957+j9.279	5.912+j24.889
PERFORMANCE FIBERS MÉXICO	PER-115	115	14.26	17.05	1.183+j4.503	0.447+j2.362	15.83	18.76	1.141+j4.470	0.454+j2.438
PERIBAN	PBN-115	115	3.86	2.58	4.982+j16.480	13.946+j40.422	4.37	2.87	4.699+j16.028	13.955+j40.465
PETROQUÍMICA	INP-69	69	9.26	7.67	1.398+j4.071	2.421+j6.542	15.08	12.98	0.825+j2.787	1.421+j4.075
PINAR	PNR-69	69	16.39	11.27	0.525+j2.373	1.399+j5.570	18.91	12.61	0.440+j2.275	1.405+j5.615
PINZÁNDARO	PIZ-115	115	2.04	1.57	10.172+j30.961	14.421+j59.737	2.78	2.22	6.868+j25.350	11.197+j44.279
PIRELLI NEUMÁTICOS S.A. DE C.V.	PIR-115	115	6.52	4.94	2.647+j9.829	4.856+j19.358	7.24	5.44	2.530+j9.762	4.873+j19.501
PITILLAL	PTL-115	115	5.05	5.55	3.929+j12.542	1.762+j9.507	6.10	6.48	3.106+j11.558	1.781+j9.712
PM CIGATAM PS S. DE R.L. DE C.V.	CIG-69	69	12.27	7.97	0.877+j3.127	2.029+j8.262	14.83	9.58	0.739+j2.862	1.838+j7.581
PONCITLAN	PNC-115	115	4.47	3.07	4.193+j14.245	8.981+j33.985	5.77	3.60	3.292+j12.229	9.064+j34.286
PORCELANITE SJI	POR-115	115	14.47	14.09	1.165+j4.438	0.880+j4.913	16.12	15.55	1.112+j4.392	0.887+j4.982
POTOSÍ SOLAR MANIOBRAS	MFP-400	400	6.26	5.99	4.652+j36.595	7.070+j41.448	7.85	7.04	3.028+j32.215	7.311+j42.952
POTRERILLOS	POS-115	115	21.64	21.35	0.574+j3.014	0.334+j3.200	24.30	23.25	0.469+j2.969	0.361+j3.404
POTRERILLOS	POS-230	230	14.90	16.72	1.867+j8.713	0.625+j6.065	17.53	18.95	1.393+j8.217	0.672+j6.464
POTRERILLOS	POS-400	400	13.56	13.94	3.677+j16.624	2.314+j15.693	17.21	16.56	2.227+j14.590	2.451+j16.401
POTRERO SOLAR MANIOBRAS	PTM-400	400	9.71	9.84	4.136+j23.432	2.969+j22.756	12.17	11.57	2.511+j20.721	3.225+j23.941
PPG	PPG-115	115	14.49	13.43	0.870+j4.497	1.187+j5.497	16.05	14.74	0.820+j4.476	1.200+j5.590
PRADERA	PAD-115	115	2.92	2.69	6.727+j21.681	5.682+j28.273	4.09	3.60	4.188+j17.343	4.866+j24.377
PRAXAIR MÉXICO S.A. DE C.V. (GUADALAJARA)	PRA-69	69	10.85	7.42	1.145+j3.488	2.280+j8.467	12.26	8.22	1.064+j3.413	2.288+j8.534
PRIMERO DE MAYO	PMY-400	400	8.12	8.80	3.714+j28.212	2.598+j21.728	10.56	10.71	2.306+j23.944	2.735+j22.939
PROCTER & GAMBLE MANIOBRAS (IRAPUATO)	PGM-115	115	11.76	4.98	1.400+j5.470	7.631+j27.704	13.40	5.52	1.289+j5.296	7.669+j27.777
PROCTER & GAMBLE QUERETARO	P&G-115	115	5.78	3.78	3.444+j10.967	9.081+j28.351	6.35	4.14	3.411+j10.987	9.090+j28.469
PROD FARMACÉUTICOS COLLINS	CNS-69	69	16.31	11.88	0.644+j2.357	1.148+j5.052	18.60	13.19	0.568+j2.286	1.156+j5.124
PROD MET MEX DE POSTES SA CV	AMX-69	69	12.94	8.09	1.091+j2.879	1.586+j8.531	14.57	8.83	1.022+j2.830	1.653+j8.761



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			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
PRODUCTORA NACIONAL DE PAPEL	PRO-115	115	5.61	5.04	3.239+j11.393	3.368+j15.499	6.23	5.57	3.090+j11.300	3.418+j15.625
PROTEINOL	PRO-115	115	8.16	5.57	2.771+j7.648	6.279+j18.483	9.01	6.11	2.713+j7.635	6.300+j18.639
PRODUCTOS GATORADE	GAT-69	69	4.93	2.97	2.218+j7.763	6.006+j23.382	5.58	3.29	2.135+j7.560	6.021+j23.453
PROTEINOL	POT-115	115	7.40	4.96	3.116+j8.410	7.228+j21.017	8.17	5.45	3.057+j8.397	7.249+j21.173
PUEBLO NUEVO	PNV-115	115	6.14	4.27	2.886+j10.425	8.411+j23.633	7.16	4.82	2.700+j9.832	8.471+j23.632
PUENTE GRANDE	PGN-69	69	6.65	6.40	1.417+j5.820	0.874+j6.657	8.93	8.24	1.129+j4.774	0.764+j6.112
PUENTE GRANDE DOS	PTD-69	69	6.69	6.45	1.406+j5.782	0.858+j6.608	9.00	8.30	1.120+j4.739	0.754+j6.075
PUENTE GRANDE DOS	PTD-115	115	1.36	0.00	4.722+j48.674	0.000+j0.13E+09	2.72	1.07	6.945+j25.951	50.265+j142.382
PUERTA GRANDE	PGE-115	115	7.36	5.88	2.239+j8.739	4.479+j15.207	8.93	6.81	2.026+j7.926	4.543+j15.136
PUERTO INTERIOR	PTI-115	115	7.13	5.44	2.395+j8.995	4.182+j17.515	7.93	5.99	2.278+j8.927	4.199+j17.658
PUERTO INTERIOR (FONDEPORT)	FDP-115	115	9.84	8.12	1.473+j6.586	3.735+j10.421	12.12	9.43	1.210+j5.902	3.746+j10.510
PUNTA DE MITA	PMI-115	115	3.56	2.88	5.638+j17.795	6.244+j31.255	4.17	3.27	4.817+j16.835	6.262+j31.445
PURÉPECHA POTENCIA	PRH-115	115	17.11	17.16	0.620+j3.830	0.409+j3.829	19.95	19.20	0.477+j3.630	0.441+j4.053
PURÉPECHA POTENCIA	PRH-400	400	9.08	8.06	4.446+j25.044	5.409+j34.686	11.66	9.53	2.593+j21.625	5.757+j35.787
PURUANDIRO	PUR-115	115	2.98	2.02	7.088+j21.094	15.806+j51.844	3.52	2.62	6.460+j19.748	10.652+j40.834
PURUARÁN	PUU-69	69	1.25	0.74	13.609+j28.902	30.692+j92.768	1.84	1.13	9.694+j21.717	21.341+j64.829
QUERÉTARO I	QRO-115	115	27.32	33.69	0.510+j2.376	0.077+j1.090	30.56	37.03	0.469+j2.344	0.083+j1.166
QUERÉTARO I	QRO-230	230	18.35	19.59	1.422+j7.094	0.675+j5.979	21.31	22.05	1.212+j6.747	0.728+j6.248
QUERÉTARO INDUSTRIAL	QRI-110	115	14.69	14.51	1.098+j4.383	0.724+j4.674	16.33	15.97	1.051+j4.348	0.732+j4.751
QUERÉTARO MANIOBRAS	QMR-110	115	15.35	16.04	0.964+j4.218	0.482+j3.771	17.00	17.60	0.923+j4.195	0.489+j3.858
QUERÉTARO NORTE	QRN-115	115	14.64	14.09	1.306+j4.342	0.154+j5.205	16.31	15.55	1.258+j4.297	0.159+j5.266
QUERÉTARO ORIENTE	QRE-115	115	11.81	10.27	1.556+j5.402	0.233+j8.324	13.11	11.32	1.508+j5.361	0.238+j8.383
QUERÉTARO PONIENTE	QPE-115	115	12.18	10.44	1.489+j5.243	1.137+j8.162	13.44	11.36	1.453+j5.236	1.183+j8.406
QUERÉTARO POTENCIA	QRP-115	115	29.14	33.17	0.341+j2.253	0.084+j1.474	31.85	35.57	0.307+j2.272	0.092+j1.591
QUERÉTARO POTENCIA	QRP-230	230	24.33	26.73	0.905+j5.383	0.393+j4.058	27.92	29.76	0.720+j5.181	0.424+j4.304
QUERÉTARO POTENCIA	QRP-400	400	18.68	16.66	1.860+j12.223	2.152+j16.817	22.27	18.85	1.232+j11.343	2.306+j17.509
QUERÉTARO POTENCIA MANIOBRAS	QPM-400	400	19.91	16.05	1.644+j11.483	3.643+j19.708	23.73	18.30	1.076+j10.651	3.705+j19.931
QUERÉTARO SUR	QRS-115	115	18.07	15.23	0.883+j3.566	0.955+j5.684	19.88	16.59	0.848+j3.575	0.966+j5.803
QUINCEO	QNC-115	115	9.10	8.28	1.815+j7.070	2.009+j9.359	10.12	9.08	1.713+j7.012	2.037+j9.576
RANCHO GRANDE	RAG-115	115	2.59	1.81	8.044+j24.304	17.338+j56.468	2.90	2.00	7.774+j23.953	17.363+j56.683
REXAM BEVERAGE CAN AM S.A.	RXM-115	115	15.85	14.88	1.010+j4.065	0.944+j4.957	17.66	16.40	0.963+j4.023	0.949+j5.021
REXEL	RES-115	115	6.67	4.44	2.749+j9.566	7.313+j23.940	7.43	4.91	2.676+j9.456	7.326+j23.971
REYMA	RYM-115	115	15.22	12.13	1.030+j4.241	1.838+j7.487	17.15	13.40	0.915+j4.160	1.858+j7.623
RÍO GRANDE	RGR-110	115	1.41	0.91	17.197+j43.718	44.920+j116.405	1.57	1.00	16.912+j43.388	44.948+j116.625
RIO GRANDE II	RIG-115	115	1.49	0.96	15.449+j41.743	41.631+j109.928	1.66	1.06	15.165+j41.410	41.658+j110.147
ROMITA	RTA-115	115	9.00	7.52	1.828+j7.147	3.627+j11.182	10.03	8.29	1.715+j7.074	3.643+j11.326
S.I.A.P.A. (TOLUQUILLA)	SPB-69	69	16.94	11.78	0.647+j2.260	1.235+j5.306	19.38	13.10	0.571+j2.188	1.241+j5.364
S.I.A.P.A. PLANTA 2	STO-69	69	4.88	3.48	1.971+j7.915	4.728+j17.397	5.44	3.83	1.910+j7.818	4.741+j17.562
S.I.A.P.A. PTA BOMBEO STA CRUZ	SCH-69	69	2.88	1.54	3.688+j13.349	12.603+j48.489	3.21	1.70	3.629+j13.178	12.618+j48.560
SAHUAYO	SHY-115	115	7.52	5.23	1.963+j8.605	4.519+j19.952	8.62	5.84	1.779+j8.281	4.539+j20.095
SALAHUA	SLH-115	115	9.51	7.37	1.551+j6.809	4.354+j12.332	11.67	8.52	1.287+j6.126	4.366+j12.421
SALAMANCA	SLM-115	115	23.39	27.03	0.485+j2.797	0.099+j1.730	29.35	33.24	0.326+j2.467	0.120+j1.630



Subestación eléctrica	Acronimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
SALAMANCA	SLM-230	230	24.98	31.38	1.033+j5.214	0.146+j2.226	35.69	41.96	0.524+j4.059	0.160+j2.369
SALAMANCA	SLM-400	400	17.87	18.71	2.588+j12.658	1.300+j11.355	23.31	22.60	1.418+j10.807	1.407+j11.940
SALAMANCA COGENERACIÓN	SCG-230	230	25.08	30.96	1.037+j5.191	0.215+j2.439	35.52	40.95	0.538+j4.077	0.230+j2.581
SALAMANCA DOS	SMD-115	115	20.79	20.87	0.512+j3.153	0.330+j3.167	23.91	23.18	0.416+j3.026	0.369+j3.334
SALAMANCA DOS	SMD-230	230	11.86	9.43	2.116+j10.993	4.890+j19.403	14.63	10.96	1.592+j9.858	4.913+j19.527
SALAMANCA DOS	SMD-400	400	17.67	18.24	2.712+j12.784	1.650+j11.953	23.11	22.11	1.491+j10.892	1.741+j12.458
SALAMANCA NORTE	SLN-115	115	15.51	10.53	0.961+j4.171	2.723+j10.015	18.39	11.98	0.822+j3.886	2.748+j9.991
SALAMANCA PONIENTE	SPO-115	115	17.23	14.79	0.649+j3.798	1.054+j5.686	19.79	16.49	0.547+j3.649	1.089+j5.824
SALAMANCA SUR	SSU-110	115	17.95	20.80	0.737+j3.624	0.146+j2.218	21.32	24.44	0.602+j3.373	0.164+j2.129
SALERO	SLR-400	400	6.53	4.69	5.020+j35.030	17.198+j75.341	7.75	5.33	3.969+j32.529	17.205+j75.703
SALINAS	SNA-115	115	1.49	0.95	11.668+j42.886	61.999+j105.311	1.80	1.09	10.013+j39.277	61.644+j104.276
SALITRE	STE-115	115	3.68	2.23	4.296+j17.509	7.081+j53.155	4.09	2.45	4.141+j17.392	7.098+j53.389
SALVATIERRA	SVT-110	115	5.59	3.65	3.144+j11.447	10.331+j29.220	6.22	4.02	3.042+j11.350	10.340+j29.311
SAMSUNG	SAM-115	115	8.20	6.80	2.345+j7.746	3.628+j12.643	9.13	7.50	2.279+j7.670	3.637+j12.720
SAN AGUSTÍN	SAG-69	69	11.93	7.73	0.911+j3.211	2.021+j8.545	13.48	8.58	0.831+j3.144	2.024+j8.587
SAN ANDRÉS	ADE-115	115	9.15	7.84	1.908+j7.001	2.249+j10.678	11.33	9.11	1.543+j6.256	2.306+j10.919
SAN ANTONIO	SAN-115	115	6.14	6.30	2.618+j10.485	1.261+j9.981	8.85	8.50	2.127+j7.974	1.220+j9.256
SAN CARLOS	SCA-115	115	12.52	9.14	1.384+j5.120	2.627+j10.886	14.13	10.14	1.263+j5.013	2.640+j10.972
SAN CLEMENTE	SCM-69	69	1.09	0.55	6.425+j36.071	40.242+j136.669	1.31	0.62	4.726+j33.205	40.327+j139.736
SAN CLEMENTE	SCM-115	115	1.57	1.09	12.810+j40.374	38.804+j89.746	2.00	1.29	9.202+j35.320	38.818+j89.976
SAN DIEGO PEÑUELAS	SDP-115	115	4.67	2.92	3.594+j13.767	10.121+j38.456	5.13	3.21	3.557+j13.772	10.137+j38.583
SAN FELIPE	SFL-115	115	1.88	1.26	10.484+j33.699	32.099+j81.851	2.07	1.38	10.432+j33.663	32.103+j81.924
SAN FRANCISCO	SFR-115	115	10.46	7.49	1.294+j6.217	2.446+j13.688	11.92	8.33	1.159+j6.015	2.464+j13.839
SAN FRANCISCO DEL RINCÓN	SFQ-110	115	10.01	6.99	1.406+j6.483	3.223+j14.882	11.12	7.67	1.299+j6.441	3.250+j15.086
SAN GASPAR	GPR-69	69	22.28	23.20	0.321+j1.759	0.182+j1.567	26.06	26.35	0.235+j1.665	0.188+j1.605
SAN ILDEFONSO	SFS-115	115	11.60	8.31	1.623+j5.487	2.602+j12.158	12.80	9.13	1.585+j5.482	2.604+j12.209
SAN JERÓNIMO	SJE-115	115	2.50	1.76	8.775+j25.048	18.139+j57.123	2.80	1.95	8.511+j24.697	18.162+j57.340
SAN JORGE	SAJ-69	69	7.68	5.25	1.437+j4.986	3.016+j12.015	10.74	6.38	0.984+j3.960	3.022+j12.058
SAN JORGE	SAJ-115	115	3.28	2.17	5.339+j19.516	12.915+j49.552	5.14	2.74	3.063+j13.889	12.998+j49.854
SAN JOSÉ DE GRACIA	JOG-115	115	3.10	1.99	7.697+j20.020	18.426+j54.326	3.46	2.20	7.527+j19.725	18.448+j54.446
SAN JOSÉ ITURBIDE	SJI-115	115	9.11	7.81	1.765+j7.073	2.282+j10.751	10.72	10.45	1.522+j6.644	1.312+j7.277
SAN JUAN ZITÁCUARO	SJZ-115	115	6.03	3.97	3.278+j10.504	8.146+j26.989	6.73	4.39	3.192+j10.374	8.161+j27.016
SAN JUAN DE LOS LAGOS	JDL-115	115	6.90	5.55	2.403+j9.324	5.216+j15.801	7.72	6.14	2.246+j9.187	5.228+j15.957
SAN JUAN DE LOS LAGOS II	SJD-115	115	10.74	11.93	1.125+j6.077	0.416+j4.344	12.11	13.12	0.984+j5.949	0.456+j4.633
SAN JUAN DE LOS LAGOS II	SJD-230	230	7.52	7.10	3.418+j17.320	2.692+j20.661	8.78	7.95	2.770+j16.396	2.929+j21.694
SAN JUAN DEL RÍO	SJR-110	115	15.70	14.75	0.767+j4.160	0.785+j4.921	17.29	16.07	0.730+j4.160	0.807+j5.061
SAN JUAN DEL RÍO MANIOBRAS	SJM-110	115	15.34	14.28	0.767+j4.260	1.032+j5.130	17.00	15.71	0.717+j4.235	1.045+j5.200
SAN JUAN DEL RIO ORIENTE	SJO-115	115	12.58	10.28	1.129+j5.155	2.268+j8.445	13.84	11.21	1.096+j5.160	2.306+j8.617
SAN JUAN POTENCIA	SJP-115	115	18.41	23.36	0.606+j3.556	0.101+j1.267	20.46	25.71	0.552+j3.526	0.109+j1.338
SAN JUAN POTENCIA	SJP-230	230	10.94	10.58	2.087+j11.959	1.530+j13.265	13.03	12.12	1.713+j11.081	1.671+j13.587
SAN LUIS DE LA PAZ	SAP-110	115	17.64	17.10	0.639+j3.709	0.658+j4.156	19.50	18.67	0.595+j3.697	0.671+j4.267
SAN LUIS DE LA PAZ II	SPA-115	115	22.72	25.05	0.386+j2.896	0.187+j2.194	24.99	27.06	0.350+j2.901	0.203+j2.321



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
SAN LUIS DE LA PAZ II	SPA-230	230	20.22	22.58	0.972+j6.496	0.576+j4.866	23.41	25.42	0.808+j6.186	0.606+j5.060
SAN LUIS DOS	SLD-115	115	17.28	18.80	0.728+j3.773	0.265+j2.922	19.85	20.97	0.581+j3.632	0.285+j3.100
SAN LUIS DOS	SLD-230	230	12.85	13.41	2.210+j10.091	1.508+j9.000	15.99	15.95	1.549+j9.001	1.595+j9.152
SAN LUIS I	SLP-115B	115	15.08	9.51	0.994+j4.289	2.765+j11.829	17.38	10.64	0.827+j4.119	2.773+j11.904
SAN LUIS I	SLP-115	115	18.10	20.59	0.807+j3.578	0.240+j2.359	21.53	23.90	0.610+j3.337	0.248+j2.404
SAN LUIS I	SLP-230	230	12.67	12.58	2.624+j10.149	1.695+j10.665	16.30	15.52	1.810+j8.778	1.724+j10.271
SAN LUIS INDUSTRIAL	SLI-110	115	14.97	13.75	1.034+j4.314	0.878+j5.578	17.61	15.74	0.833+j4.063	0.881+j5.587
SAN LUIS NORTE	SNE-115	115	8.27	6.12	1.690+j7.849	3.335+j16.137	9.27	6.74	1.555+j7.727	3.396+j16.403
SAN LUIS ORIENTE	SLO-110	115	12.50	9.18	1.191+j5.175	2.673+j10.776	14.30	10.24	1.027+j5.004	2.683+j10.880
SAN LUIS PONIENTE	SLW-110	115	10.05	7.55	1.560+j6.421	2.567+j12.935	11.36	8.34	1.411+j6.272	2.616+j13.180
SAN LUIS PROGRESO	SPR-110	115	10.54	7.83	1.481+j6.122	3.285+j12.421	11.97	8.71	1.320+j5.956	3.295+j12.540
SAN MARTIN	SMR-230	230	10.33	9.32	2.714+j12.561	3.348+j16.729	12.82	10.86	1.832+j11.248	3.470+j17.137
SAN MIGUEL	MIG-115	115	3.45	2.31	4.949+j18.625	12.447+j45.971	3.83	2.56	4.775+j18.443	12.413+j45.858
SAN MIGUEL ALLENDE SUR	SMS-115	115	9.04	6.24	1.981+j7.075	4.869+j16.561	10.02	6.87	1.927+j7.026	4.878+j16.631
SAN MIGUEL DE ALLENDE	MAL-115	115	10.92	8.05	1.469+j5.898	2.751+j12.335	12.14	8.86	1.416+j5.849	2.762+j12.415
SAN NICOLÁS	SNS-69	69	4.82	2.98	2.256+j7.951	5.906+j22.894	5.45	3.31	2.167+j7.739	5.915+j22.949
SAN PEDRO	PDR-115	115	12.01	9.47	1.124+j5.413	2.228+j9.741	13.67	10.54	0.967+j5.254	2.243+j9.882
SAN RAFAEL MANIOBRAS	SRM-115	115	2.81	2.11	6.031+j22.839	18.213+j43.855	3.71	4.02	4.165+j19.215	2.538+j14.939
SAN ROQUE	SRQ-115	115	12.05	8.81	1.129+j5.392	2.250+j11.397	13.41	9.65	1.023+j5.349	2.277+j11.602
SAN VICENTE	SVI-115	115	5.52	6.65	3.661+j11.453	0.995+j5.859	6.71	7.83	2.872+j10.495	1.024+j6.102
SANMINA-SCI SYSTEMS DE MEXICO	SCI-69	69	10.37	6.90	0.995+j3.709	2.267+j9.369	11.74	7.67	0.926+j3.617	2.281+j9.401
SANMINA-SCISYSTEMS MÉXICO	SCR-69	69	13.94	10.50	0.753+j2.757	1.366+j5.501	15.94	11.74	0.682+j2.663	1.375+j5.526
SANMINA-SCISYSTEMS MÉXICO	SCR-115	115	11.01	8.61	1.403+j5.864	2.570+j10.776	12.32	9.46	1.289+j5.787	2.633+j10.998
SANTA CRUZ	SCU-69	69	14.73	10.82	0.720+j2.607	1.331+j5.484	16.72	12.02	0.640+j2.541	1.333+j5.530
SANTA CRUZ	SCZ-115	115	6.05	4.04	3.574+j10.383	8.416+j26.026	6.67	4.44	3.515+j10.371	8.438+j26.182
SANTA FE	STF-115	115	16.51	19.56	0.817+j3.938	0.193+j2.195	18.38	21.36	0.765+j3.900	0.211+j2.349
SANTA FE	STF-230	230	10.90	10.45	2.238+j11.976	1.862+j13.861	12.31	11.46	2.018+j11.693	2.025+j14.569
SANTA FE II	SFD-115	115	7.22	5.67	2.361+j8.890	3.895+j16.283	8.02	6.25	2.244+j8.823	3.912+j16.426
SANTA FE TRES	SFT-115	115	7.15	5.36	2.368+j8.978	4.279+j18.104	7.95	5.90	2.250+j8.908	4.297+j18.247
SANTA MARÍA	STM-115	115	25.49	23.84	0.415+j2.571	0.392+j3.143	28.03	25.63	0.363+j2.580	0.417+j3.322
SANTA MARÍA	SNM-115	115	8.16	7.13	2.058+j7.875	2.524+j11.499	9.06	7.82	1.953+j7.817	2.555+j11.727
SANTA MARÍA	STM-400	400	17.97	16.15	2.111+j12.674	2.870+j17.094	21.89	18.57	1.332+j11.529	2.989+j17.646
SANTIAGO	SNG-115	115	8.18	6.88	1.807+j7.911	1.982+j12.600	9.19	7.52	1.664+j7.772	2.106+j13.100
SANTIAGO IXCUINTLA	SNI-115	115	4.01	2.87	5.315+j15.677	11.305+j34.573	4.73	3.27	4.685+j14.698	11.284+j34.312
SANTIAGO UNDAMEO	SUN-115	115	5.48	4.51	3.251+j11.668	7.025+j18.769	6.14	4.99	3.068+j11.489	7.053+j18.988
SANTIAGUITO	STG-115	115	9.35	7.74	1.797+j6.871	2.641+j11.369	10.37	8.49	1.716+j6.832	2.661+j11.530
SAPAL PROC AGUAS RESID	SPL-115	115	10.21	7.56	1.514+j6.324	3.706+j12.833	11.41	8.35	1.399+j6.247	3.717+j12.947
SATÉLITE	SEI-115	115	10.65	8.01	1.352+j6.084	2.190+j12.246	12.30	9.02	1.151+j5.827	2.192+j12.235
SATÉLITE	SAT-115	115	14.16	10.83	1.023+j4.575	1.567+j8.918	15.72	11.90	0.980+j4.542	1.582+j9.007
SAYULA	SYL-115	115	4.34	3.17	4.301+j14.670	9.080+j30.937	4.86	3.50	4.061+j14.473	9.119+j31.150
SENDERO	SEN-115	115	11.12	9.53	1.300+j5.830	2.322+j8.678	12.61	10.59	1.146+j5.678	2.338+j8.833
SERVICIOS AGUAMILPA	SEA-110	115	2.18	1.60	7.963+j29.439	25.064+j58.893	2.75	2.60	6.093+j25.819	9.374+j29.965



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
SERVICIOS EL CAJÓN	SCJ-115	115	2.48	1.90	6.560+j25.943	14.105+j49.315	2.77	2.09	6.310+j25.585	14.102+j49.945
SERVICIOS LA YESCA	SLY-115	115	0.79	0.62	22.571+j81.477	54.908+j144.338	0.86	0.67	22.864+j82.195	55.246+j146.515
SHULMANN	SHU-115	115	16.24	15.52	0.916+j3.985	0.847+j4.603	19.24	17.91	0.716+j3.728	0.846+j4.593
SIBASA	SIB-230	230	13.32	11.69	1.995+j9.765	2.781+j13.963	15.69	13.21	1.631+j9.163	2.878+j14.353
SIDERÚRGICA GUADALAJARA	SGG-161	161	3.20	2.62	6.418+j28.313	12.082+j47.002	3.47	2.85	6.086+j28.827	12.091+j47.282
SIEMENS	SIE-69	69	9.81	6.16	1.059+j3.921	2.493+j11.013	11.02	6.81	0.981+j3.855	2.496+j11.057
SILAO	SIL-115	115	14.60	14.74	1.170+j4.396	1.131+j4.292	16.45	16.29	1.053+j4.312	1.157+j4.442
SILAO POTENCIA	SIP-115	115	17.98	21.36	0.837+j3.597	0.189+j1.966	20.30	23.58	0.724+j3.523	0.205+j2.110
SILAO POTENCIA	SIP-230	230	13.60	13.51	2.306+j9.491	1.549+j9.941	16.30	15.44	1.785+j8.781	1.658+j10.397
SIPOSA (GASA)	GAS-115	115	11.83	7.49	1.308+j5.457	3.276+j15.041	13.57	8.36	1.133+j5.263	3.285+j15.096
SISTEMAS JUÁREZ	SIS-69	69	20.25	15.77	0.525+j1.896	0.778+j3.564	23.33	17.59	0.448+j1.824	0.785+j3.629
SOLEDAD DE GRACIANO SÁNCHEZ	SGS-110	115	11.18	8.64	1.149+j5.829	1.752+j11.056	12.64	9.58	1.008+j5.690	1.765+j11.185
URUAPAN	STI-115	115	3.83	2.86	5.109+j16.588	11.893+j32.904	4.51	3.24	4.427+j15.587	11.926+j33.010
SUBESTACIÓN PIQ	SPQ-115	115	11.46	8.09	1.651+j5.556	3.168+j12.680	12.80	8.94	1.586+j5.480	3.177+j12.759
TABACALERA	TBK-110	115	7.11	5.98	2.272+j9.053	3.549+j14.234	8.86	7.07	1.693+j8.070	3.528+j14.014
TACUBAYA	TYA-115	115	2.29	1.47	9.372+j27.461	22.190+j74.298	6.25	4.35	3.347+j11.189	9.331+j25.316
TALA	TLA-69	69	3.47	3.77	3.894+j10.790	0.904+j8.911	5.75	5.44	1.857+j7.386	1.032+j8.848
TALPA	TPA-69	69	0.51	0.64	27.351+j73.908	0.762+j30.407	0.70	0.84	17.225+j59.902	0.839+j33.454
TAMARINDOS	TMI-115	115	5.94	7.93	3.411+j10.637	0.302+j2.810	7.31	9.51	2.606+j9.651	0.320+j3.014
TAMAZULA	TAZ-115	115	2.88	2.08	6.030+j22.248	11.941+j48.145	3.20	2.29	5.802+j22.103	11.994+j48.548
TANGAMANGA	TMG-115	115	10.02	7.17	1.599+j6.427	3.121+j14.211	11.35	7.94	1.447+j6.272	3.159+j14.409
TANGANCÍCUARO	TGR-115	115	3.80	2.89	4.461+j16.890	13.051+j31.616	9.72	8.95	1.836+j7.288	2.896+j8.993
TANQUE TENORIO (DEGREMONT)	TQT-115	115	14.80	13.22	1.010+j4.372	0.976+j6.037	17.35	15.07	0.812+j4.129	0.982+j6.069
TAPALPA	TLP-115	115	2.87	2.03	6.526+j22.230	17.057+j49.051	3.19	2.24	6.285+j22.034	17.096+j49.264
TAPEIXTLES	TAP-69	69	4.34	5.79	0.807+j9.145	0.082+j2.288	4.53	6.01	0.772+j9.640	0.088+j2.504
TAPEIXTLES	TAP-115	115	13.57	14.17	0.897+j4.809	0.712+j4.201	17.52	17.13	0.640+j4.119	0.734+j4.312
TAPEIXTLES POTENCIA	TPX-115	115	17.85	20.33	0.527+j3.682	0.182+j2.341	24.43	26.02	0.282+j2.976	0.188+j2.354
TAPEIXTLES POTENCIA	TPX-230	230	12.02	15.13	1.529+j10.945	0.279+j4.168	18.71	21.97	0.604+j7.785	0.291+j4.001
TAPEIXTLES POTENCIA	TPX-400	400	10.13	12.06	3.359+j22.558	0.953+j11.612	21.92	23.54	0.788+j11.560	0.945+j8.128
TARANDACUAO	TDC-115	115	2.87	1.82	6.290+j22.232	21.415+j59.580	3.20	2.02	6.084+j21.992	21.432+j59.685
TARETAN	TAR-69	69	1.72	0.71	6.869+j22.126	36.310+j117.579	2.30	1.49	5.737+j18.210	12.235+j48.531
TARIMBARO	TRB-115	115	6.89	5.22	2.596+j9.286	5.728+j18.138	7.63	5.74	2.512+j9.235	5.745+j18.281
TECHNICOLOR MEXICANA S. DE R.L. DE C.V.	TNI-69	69	12.58	8.22	0.852+j3.051	1.953+j7.972	15.24	9.92	0.714+j2.785	1.762+j7.291
TECNOLÓGICO	TAG-115	115	15.10	11.97	0.932+j4.297	1.212+j7.774	17.42	13.39	0.777+j4.121	1.221+j7.891
TECOLAPA	TOA-115	115	5.98	4.47	3.203+j10.632	8.080+j20.845	7.02	5.07	2.901+j9.986	8.086+j20.876
TECOTLAN	TCT-115	115	2.45	1.77	7.677+j25.944	22.819+j54.035	2.96	2.03	6.125+j23.859	22.832+j54.263
TECOMÁN	TEC-115	115	5.12	3.67	3.646+j12.441	10.209+j26.538	5.96	4.14	3.346+j11.786	10.214+j26.560
TECOMATES	TCS-115	115	1.71	1.26	11.399+j37.236	20.718+j77.571	1.91	1.40	11.064+j36.606	20.740+j77.680
TECOZAUTLA	TCZ-115	115	2.08	1.15	10.091+j30.276	35.747+j102.784	2.29	1.27	10.038+j30.258	35.747+j102.821
TECUALA	TEL-115	115	1.08	0.72	24.600+j56.273	61.320+j141.556	1.21	0.80	23.914+j55.388	61.296+j141.290
TECUAN	TCN-115	115	6.64	4.30	2.755+j9.619	5.224+j25.879	7.47	4.76	2.595+j9.431	5.238+j26.022
TEJEDA	TJD-115	115	14.59	17.80	0.964+j4.448	0.362+j2.079	16.14	19.47	0.925+j4.430	0.368+j2.189



Subestación eléctrica	Acronimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
TEOCALTICHE	TEO-115	115	4.52	3.09	3.776+j14.202	9.248+j33.934	5.02	3.40	3.634+j14.075	9.288+j34.223
TEPALCATEPEC DOS	TPD-115	115	1.48	1.09	13.696+j42.644	26.741+j89.403	2.14	1.89	8.160+j33.184	10.178+j46.351
TEPATITLÁN	TPT-115	115	5.15	3.46	3.756+j12.332	9.308+j30.401	6.63	4.11	3.031+j10.587	9.114+j29.979
TEPETONGO	TGO-115	115	1.31	0.94	15.335+j48.320	38.832+j103.982	1.46	1.04	15.002+j47.714	38.848+j104.107
TEPEYAC	TPY-115	115	8.86	5.99	2.097+j7.196	4.323+j17.632	9.78	6.60	2.058+j7.179	4.325+j17.673
TEPIC DOS	TED-115	115	11.50	13.67	1.110+j5.668	0.188+j3.031	15.72	18.09	0.527+j4.616	0.169+j2.776
TEPIC DOS	TED-230	230	8.19	10.07	3.470+j15.830	0.673+j7.145	13.21	15.77	1.221+j10.990	0.442+j5.478
TEPIC DOS	TED-400	400	6.96	7.25	7.395+j32.357	3.835+j28.956	16.33	16.62	1.438+j15.493	2.106+j13.995
TEPIC INDUSTRIAL	TID-110	115	7.81	6.80	2.057+j8.250	2.829+j11.971	9.82	8.11	1.483+j7.286	2.810+j11.775
TECOMÁN SUR	TES-115	115	4.17	2.95	4.477+j15.278	13.196+j33.325	4.80	3.31	4.176+j14.625	13.201+j33.347
TEPIC UNO	TES-115	115	8.90	8.33	1.699+j7.268	1.821+j8.793	11.46	10.17	1.123+j6.271	1.801+j8.565
TEQUILA	TQA-69	69	1.98	1.15	7.550+j18.655	16.825+j61.546	3.16	2.25	3.876+j13.312	6.626+j29.469
TEQUILA	TQA-115	115	0.95	0.60	22.897+j65.838	47.579+j186.092	1.35	1.04	12.602+j52.726	19.268+j98.330
TEQUISQUIAPAN	TEQ-115	115	7.26	4.15	2.276+j8.861	11.771+j27.339	8.02	4.57	2.226+j8.834	11.769+j27.381
TERMINAL DE GAS MANZANILLO	TGM-115	115	11.97	9.73	0.902+j5.474	1.744+j9.195	15.17	11.48	0.650+j4.772	1.747+j9.215
TERMOENWASES EXPANDIBLES	TER-115	115	17.01	15.25	0.949+j3.786	1.191+j5.136	19.23	16.87	0.834+j3.705	1.207+j5.267
TERRAPLENA	TRP-115	115	6.79	7.87	1.655+j9.644	1.100+j5.635	8.05	9.10	1.386+j8.962	1.121+j5.746
TESISTAN	TSN-69B	69	20.98	23.68	0.237+j1.884	0.055+j1.253	25.60	27.51	0.128+j1.707	0.062+j1.339
TESISTAN	TSN-69	69	31.62	31.91	0.224+j1.240	0.098+j1.227	38.29	36.78	0.136+j1.136	0.103+j1.276
TESISTAN	TSN-230	230	16.12	19.22	1.964+j7.999	0.407+j4.280	23.38	25.92	0.902+j6.181	0.431+j4.302
TESISTAN	TSN-400	400	13.22	14.21	4.426+j16.905	1.933+j13.782	23.33	22.08	1.429+j10.793	1.945+j12.348
TETRAPAK	TTK-115	115	14.71	10.41	1.113+j4.375	6.312+j8.394	16.18	11.39	1.078+j4.384	6.323+j8.513
TISAMATIC	TIS-115	115	13.85	8.82	1.118+j4.662	2.896+j12.688	15.95	9.86	0.947+j4.480	2.905+j12.752
TLAJOMULCO POTENCIA	TLJ-230	230	15.44	17.52	1.986+j8.367	0.606+j5.546	19.97	21.30	1.179+j7.217	0.650+j5.862
TLAJOMULCO POTENCIA	TLJ-400	400	13.69	14.16	3.900+j16.413	2.268+j15.089	20.19	18.56	1.676+j12.467	2.382+j15.542
TLALTENANGO	TLO-110	115	1.89	1.12	9.872+j33.791	19.594+j105.832	2.08	1.23	9.711+j33.683	19.614+j106.072
TOLIMAN	TLI-115	115	1.77	1.08	10.634+j36.014	29.705+j105.450	1.96	1.19	10.390+j35.824	29.744+j105.664
TOTOTLAN	TTO-115	115	4.93	3.61	3.871+j12.899	9.468+j26.636	5.85	4.11	3.438+j12.013	9.471+j26.712
TREJO	TRJ-115	115	8.38	6.92	2.163+j7.618	5.067+j11.994	9.43	7.69	2.040+j7.471	5.072+j12.066
TREMEC	TRE-115	115	17.88	15.82	0.770+j3.633	0.962+j5.101	19.88	17.40	0.728+j3.601	0.968+j5.177
TRES MARÍAS	TSM-115	115	7.52	5.63	2.046+j8.591	3.909+j17.472	8.31	6.17	1.975+j8.566	3.926+j17.620
TRES NACIONES	TEN-115	115	15.25	13.64	1.009+j4.237	0.956+j5.840	17.97	15.64	0.808+j3.983	0.955+j5.830
TRIARA	TTR-115	115	12.66	11.40	1.525+j5.018	0.202+j7.163	14.08	12.57	1.476+j4.972	0.207+j7.219
TRIGUILLOS	TGS-115	115	2.82	1.89	8.319+j22.048	19.830+j54.964	3.10	2.08	8.263+j22.044	19.846+j55.109
TURBORREACTORES S.A. DE C.V.	REA-115	115	18.19	19.77	0.953+j3.524	0.524+j2.761	20.24	21.75	0.911+j3.491	0.530+j2.837
TUXPAN	TUX-115	115	3.41	2.70	6.549+j18.332	11.124+j33.117	3.79	2.97	6.320+j18.186	11.176+j33.521
TUXPAN	TXP-115	115	5.73	3.88	3.144+j11.146	9.076+j26.746	6.35	4.28	3.091+j11.080	9.082+j26.805
TUZANIA	TUZ-230	230	13.70	14.12	2.250+j9.429	1.481+j8.740	19.35	18.51	1.132+j7.462	1.434+j8.361
UNIVERSIDAD AUTÓNOMA DE GUADALAJARA	UAG-69	69	17.75	12.88	0.554+j2.175	0.908+j4.709	20.41	14.32	0.471+j2.094	0.925+j4.796
UNIVERSIDAD DEL VALLE DE MÉXICO	UVM-69	69	20.25	15.77	0.525+j1.896	0.778+j3.564	23.34	17.59	0.448+j1.824	0.785+j3.629
UNIVEX	UVX-115	115	4.44	3.32	4.941+j14.114	8.958+j28.699	5.00	3.70	4.777+j13.794	8.979+j28.599
URIANGATO	URG-115	115	5.08	3.38	3.619+j12.550	10.219+j31.158	5.64	3.73	3.524+j12.453	10.239+j31.260



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
URUAPAN ORIENTE	UOT-115	115	6.38	5.86	3.104+j9.930	2.921+j12.874	8.24	7.04	2.236+j8.578	2.949+j12.948
URUAPAN POTENCIA	UPP-115	115	7.34	8.62	2.516+j8.692	0.490+j5.071	9.80	10.89	1.626+j7.269	0.492+j5.083
URUAPAN POTENCIA	UPP-161	161	3.99	4.40	4.225+j22.939	1.300+j16.826	6.13	6.57	2.024+j16.552	1.080+j12.198
URUAPAN POTENCIA	UPP-230	230	4.20	4.37	6.948+j30.879	2.846+j27.826	5.86	5.83	3.818+j24.616	2.500+j24.431
URUAPAN TRES	UPT-69	69	2.73	0.93	2.886+j14.295	27.649+j95.323	4.10	2.73	1.919+j10.504	3.603+j26.309
URUAPAN TRES	UPT-115	115	7.42	7.50	2.642+j8.549	1.842+j8.512	9.84	9.24	1.795+j7.204	1.852+j8.538
USI	USI-69	69	7.65	4.82	1.422+j5.012	3.740+j13.884	8.92	6.34	1.267+j4.748	2.856+j10.506
USM	USM-115	115	7.16	6.74	2.413+j8.958	4.188+j10.246	8.01	7.47	2.293+j8.828	4.197+j10.349
VALLARTA POTENCIA	VTP-115	115	6.01	8.12	3.372+j10.525	0.161+j2.505	7.39	9.75	2.568+j9.539	0.180+j2.710
VALLARTA POTENCIA	VTP-230	230	3.30	4.20	11.884+j38.395	1.153+j14.802	4.16	5.08	8.705+j34.059	1.289+j15.900
VALLARTA UNO	VRT-115	115	4.83	5.10	4.307+j13.050	2.472+j11.347	5.82	5.93	3.458+j12.057	2.491+j11.552
VALLE DE AGUASCALIENTES	VAG-115	115	14.64	11.42	0.869+j4.453	1.447+j8.259	16.94	12.78	0.736+j4.247	1.461+j8.407
VALLE DE GUADALUPE	VGP-115	115	6.25	4.81	2.703+j10.274	6.420+j19.150	7.70	6.01	2.228+j9.223	5.532+j16.617
VALLE DE LAS DELICIAS	VDL-115	115	2.92	2.34	6.026+j21.886	13.344+j37.359	3.62	2.77	5.509+j19.392	13.301+j36.631
VALLE DE SANTIAGO	VAS-115	115	12.02	9.05	1.256+j5.381	3.064+j10.560	13.56	10.01	1.159+j5.260	3.098+j10.710
VALEO TÉRMICO	VAT-115	115	16.01	15.51	0.923+j4.042	0.841+j4.488	18.93	17.87	0.723+j3.790	0.841+j4.490
VALLE DE TECOMAN	VAT-115	115	2.82	1.86	6.986+j22.522	19.306+j56.776	3.19	2.07	6.670+j21.893	19.312+j56.808
VILLA DE ARRIAGA MANIOBRAS	VDM-230	230	6.41	6.82	3.373+j20.432	2.251+j16.916	7.78	7.92	2.607+j18.597	2.423+j17.694
VALLE VERDE	VAV-115	115	3.20	3.13	6.039+j19.836	3.957+j21.928	4.50	4.17	3.731+j15.780	3.700+j19.495
VALPARAISO	VPS-110	115	1.26	0.82	18.631+j49.157	43.937+j131.988	1.40	0.90	18.361+j48.810	43.961+j132.208
VAQUERÍAS MANIOBRAS	VQM-230	230	6.98	7.72	3.038+j18.774	1.493+j13.560	8.37	8.88	2.382+j17.290	1.628+j14.399
VELCON	VEL-115	115	12.64	10.18	1.224+j5.109	2.225+j8.811	13.95	11.11	1.161+j5.106	2.246+j8.984
VENUSTIANO CARRANZA	VNC-115	115	5.46	3.64	3.005+j11.782	7.233+j29.531	6.21	4.05	2.807+j11.429	7.254+j29.679
VESTA PARK MANIOBRAS	VPM-115	115	8.38	5.44	2.153+j7.625	4.493+j20.173	9.24	5.99	2.115+j7.615	4.495+j20.220
VIDRIERA	VRA-115	115	14.80	13.50	1.047+j4.361	0.910+j5.742	17.40	15.45	0.846+j4.110	0.912+j5.751
VIDRIERA GUADALAJARA	VID-69	69	21.33	17.84	0.465+j1.809	0.510+j2.926	24.71	19.85	0.384+j1.732	0.529+j3.025
VIDRIERA QUERÉTARO	VRR-115	115	15.29	14.58	1.079+j4.207	0.892+j4.928	17.02	16.08	1.030+j4.164	0.898+j4.996
VILLA DE ÁLVAREZ	VDA-115	115	7.80	7.64	1.934+j8.293	1.811+j8.842	9.23	8.73	1.652+j7.741	1.841+j9.028
VILLA DE ARISTA	VAR-115	115	2.68	3.20	9.888+j22.671	2.879+j12.607	3.28	3.78	8.025+j20.767	2.968+j13.205
VILLA DE REYES	VDR-115	115	9.06	9.89	1.305+j7.210	0.553+j5.488	10.20	11.24	1.118+j7.073	0.372+j5.215
VILLA DE REYES	VDR-230	230	13.35	12.46	2.210+j9.700	2.484+j11.910	20.39	23.21	1.096+j7.080	0.430+j4.739
VILLA HIDALGO	VHO-115	115	3.30	2.29	7.058+j18.865	14.557+j44.267	3.83	2.59	6.426+j17.932	14.501+j44.021
VILLA JIMÉNEZ	VIJ-115	115	5.29	4.06	3.543+j12.043	6.415+j23.111	6.46	5.50	3.077+j10.883	3.640+j16.819
VILLA JUÁREZ	VJU-115	115	8.81	6.34	1.537+j7.375	2.791+j16.129	9.95	7.01	1.394+j7.208	2.815+j16.331
VILLAGRÁN	VIG-110	115	8.06	6.90	1.846+j8.024	3.093+j12.045	8.89	7.56	1.783+j8.019	3.109+j12.192
VINITECK S.A. DE C.V.	VIN-69	69	6.33	4.79	1.226+j6.175	2.498+j12.109	7.09	5.28	1.160+j6.068	2.511+j12.270
VISTA HERMOSA	VIH-115	115	8.35	6.34	2.272+j7.622	4.925+j14.713	9.83	7.21	2.043+j7.143	4.924+j14.721
VIZARRÓN	VIZ-110	115	2.36	1.16	9.042+j26.622	32.508+j110.726	2.60	1.28	8.991+j26.603	32.508+j110.762
VOLCANES	VCS-69	69	0.68	0.63	17.472+j55.649	19.855+j70.521	0.89	0.75	12.342+j47.931	19.938+j73.581
VOLKSWAGEN	VWS-115	115	6.99	5.43	2.444+j9.176	4.183+j17.206	7.77	5.98	2.327+j9.108	4.200+j17.348
VYNMSA	VYN-115	115	7.67	5.09	1.858+j8.453	4.489+j21.399	8.59	5.56	1.738+j8.319	4.685+j21.955
XALISCO	XLS-115	115	7.08	5.84	2.120+j9.139	3.255+j15.015	8.81	6.90	1.539+j8.150	3.237+j14.795



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
INGENIO TALA	ELT-69	69	3.35	3.77	3.975+j11.210	0.578+j8.154	5.60	5.48	1.849+j7.604	0.729+j8.273
YERBABUENA	YER-115	115	4.69	3.05	3.305+j13.753	8.424+j36.119	5.56	3.46	2.876+j12.825	8.386+j36.101
YURÉCUARO	YUR-115	115	6.22	4.86	3.089+j10.222	5.666+j18.796	7.44	5.63	2.745+j9.429	5.516+j18.491
ZACAPU	ZCP-110	115	5.22	4.12	4.070+j12.047	6.660+j21.978	6.23	4.99	3.733+j11.116	5.847+j19.640
ZACATECAS	ZCT-115	115	6.41	5.46	2.865+j9.956	4.298+j15.183	7.60	6.24	2.558+j9.263	4.314+j15.311
ZACATECAS II	ZCD-115	115	9.21	11.08	1.774+j6.988	0.426+j3.565	11.57	13.36	1.475+j6.139	0.463+j3.768
ZACATECAS II	ZCD-230	230	6.53	6.98	5.055+j19.686	2.562+j16.310	8.03	8.18	3.973+j17.749	2.719+j17.011
ZACATECAS SUR	ZCS-115	115	6.51	5.62	2.854+j9.788	4.065+j14.507	7.75	6.44	2.548+j9.070	4.084+j14.642
ZALATITAN	ZLT-69	69	12.72	9.22	0.685+j3.055	1.399+j6.560	14.55	10.29	0.599+j2.952	1.404+j6.596
ZAMORA	ZMA-110	115	7.47	6.10	2.237+j8.598	4.525+j14.179	9.09	7.09	2.019+j7.777	4.589+j14.105
ZAMORA POTENCIA	ZRP-115	115	9.18	10.25	1.363+j7.103	0.508+j4.967	12.49	13.28	1.142+j5.734	0.633+j4.761
ZAMORA POTENCIA	ZRP-230	230	7.77	6.94	3.329+j16.764	4.117+j22.894	9.36	8.00	2.510+j15.407	4.294+j23.110
ZAPOPAN	ZPA-69	69	23.16	20.34	0.435+j1.664	0.369+j2.415	26.95	22.67	0.353+j1.587	0.388+j2.515
ZAPOPAN	ZPA-230	230	9.50	8.31	2.973+j13.652	4.173+j19.573	12.03	9.82	1.901+j11.995	4.268+j19.812
ZAPOTILTIC	ZTI-115	115	5.02	4.61	3.468+j12.762	4.807+j16.028	5.61	5.07	3.242+j12.613	4.859+j16.431
ZAPOTLANEJO	ZPO-230	230	15.29	17.18	1.942+j8.464	0.687+j5.816	20.44	21.42	1.065+j7.067	0.740+j6.045
ZAPOTLANEJO	ZPO-400	400	12.60	12.64	3.925+j17.909	2.966+j17.963	18.06	16.24	1.712+j13.961	3.115+j18.369
ZAPOTLANEJO DISTRIBUCIÓN	ZAD-115	115	1.79	1.14	14.700+j33.986	33.137+j95.541	3.04	1.47	7.807+j22.692	32.977+j95.163
ZARAGOZA	ZAG-115	115	5.25	3.45	2.531+j12.403	8.206+j31.472	5.91	3.83	2.330+j12.145	8.208+j31.461
ZIMAPAN	ZIM-115	115	2.31	1.81	7.045+j27.879	10.478+j51.335	2.79	2.12	5.803+j25.501	10.097+j49.643
ZINÁPARO	ZID-115	115	6.80	5.41	2.606+j9.403	6.115+j16.250	10.50	7.99	1.871+j6.703	4.651+j12.692
ZINAPÉCUARO	ZIN-115	115	8.55	7.06	1.475+j7.623	2.608+j12.821	9.32	7.68	1.465+j7.695	2.623+j12.984
ZITÁCUARO	ZIT-115	115	6.76	4.48	2.709+j9.447	7.262+j23.776	7.53	4.95	2.636+j9.337	7.274+j23.807
ZITÁCUARO DOS	ZTD-115	115	6.46	4.20	2.728+j9.910	7.451+j25.833	7.21	4.65	2.647+j9.783	7.467+j25.855
ZOLTECH	CYD-69	69	15.75	16.90	0.565+j2.465	0.383+j1.981	19.20	19.83	0.471+j2.233	0.389+j2.025
ZOQUIPAN	ZQP-69	69	14.27	10.73	0.636+j2.718	1.336+j5.393	16.59	12.14	0.530+j2.587	1.329+j5.380
ZUMPIMITO	ZMP-69	69	2.67	0.95	3.185+j14.604	26.768+j92.201	4.13	2.94	1.985+j10.428	2.727+j23.193

Gerencia de Control Regional Noroeste



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 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
ACUÍCOLA	ACU-115	115	2.05	1.41	8.509+j31.187	26.302+j72.247	2.35	1.57	8.009+j30.021	26.374+j72.572
AGRÍCOLA SONOYTA	AGS-115	115	0.61	0.41	31.957+j103.757	69.397+j255.576	0.72	0.47	27.455+j97.467	69.626+j257.008
AGUA PRIETA	AGI-115	115	4.76	3.19	2.675+j13.698	5.962+j34.148	5.55	3.54	2.281+j12.959	6.030+j34.954
AGUA PRIETA DOS	AGD-230	230	8.24	8.71	2.311+j15.950	2.330+j13.902	15.68	17.10	0.694+j9.290	0.505+j6.231
AHOME	AHO-115	115	4.82	3.43	2.979+j13.445	8.688+j29.195	5.49	3.84	2.850+j12.982	8.709+j29.154
ALAMOS	AAM-115	115	1.79	1.19	17.610+j32.567	33.611+j87.290	2.09	1.46	16.385+j30.780	27.070+j76.308
ALTAR	ALT-115	115	2.53	1.86	7.600+j25.108	14.735+j52.554	3.43	2.30	5.180+j20.668	14.347+j50.643
ANGOSTURA	ANG-115	115	4.74	3.40	4.027+j13.404	8.094+j29.380	5.75	3.96	3.580+j12.188	8.128+j28.360
ANTIMONIO	ANT-115	115	2.49	2.15	7.693+j25.562	9.994+j37.814	3.82	2.82	4.227+j18.653	10.027+j38.076
ARROYO SECO	ASE-115	115	1.77	1.30	10.532+j35.990	25.947+j74.075	2.39	1.63	7.314+j29.727	24.909+j69.131
BACHIGUALATO	BCH-115	115	4.50	2.39	2.953+j14.470	15.805+j51.489	5.22	2.67	2.638+j13.737	15.860+j51.582
BACUM	BAC-115	115	18.00	17.70	0.475+j3.657	0.326+j3.847	22.17	20.38	0.352+j3.276	0.366+j4.096
BACUM	BAC-230	230	12.33	13.35	1.392+j10.675	0.622+j8.216	15.84	15.99	0.936+j9.174	0.696+j8.784
BACUM	BAC-400	400	8.65	8.88	3.043+j26.536	2.817+j24.202	10.82	10.44	1.945+j23.389	3.056+j25.565
BACURATO	BRT-115	115	3.44	2.23	3.545+j18.960	10.192+j49.521	6.14	6.55	1.348+j11.816	0.327+j7.183
BAGOTES	BGT-115	115	11.74	11.24	1.757+j5.377	2.870+j5.790	16.61	14.66	1.308+j4.199	2.904+j5.502
BAMOA	BMO-115	115	2.77	1.81	8.505+j22.366	19.632+j59.092	3.19	2.04	8.126+j21.375	19.670+j58.428
BANDERAS	BND-115	115	13.20	11.33	0.886+j4.952	1.275+j7.384	16.29	13.14	0.711+j4.426	1.306+j7.525
BIZANI	BZI-115	115	3.43	3.32	5.683+j18.513	5.763+j20.519	6.04	4.92	2.344+j11.862	5.507+j19.591
BUENA VISTA	BNV-230	230	7.44	6.85	5.129+j17.086	4.125+j22.554	10.62	8.61	3.002+j13.427	4.366+j22.799
CABORCA	CBA-115	115	3.77	3.28	4.868+j16.920	4.391+j25.257	6.80	5.20	1.713+j10.608	3.368+j20.334
CAJEME	CAJ-115	115	13.42	12.40	0.793+j4.885	0.895+j6.082	16.42	14.31	0.635+j4.401	0.931+j6.292
CARDONAL	CRD-115	115	2.06	1.46	8.472+j31.054	26.303+j67.776	2.36	1.63	7.972+j29.888	26.374+j68.101
CARRIZO	CRZ-115	115	3.97	3.80	5.257+j15.895	5.777+j17.983	5.03	4.71	4.362+j13.844	5.210+j16.570
CENTENARIO	CNT-115	115	13.07	10.70	1.063+j4.966	1.650+j8.121	16.04	12.57	0.920+j4.458	1.661+j8.032
CENTINELA	CLA-115	115	7.89	6.13	1.881+j8.204	3.577+j15.276	9.04	6.82	1.768+j7.881	3.613+j15.595
CERRO CAÑEDO	CCA-115	115	3.35	2.80	5.538+j19.029	6.683+j30.953	5.52	4.08	2.470+j13.010	5.778+j26.573
CHINITOS	CHI-115	115	2.20	1.48	8.913+j28.826	25.010+j69.870	2.50	1.65	8.563+j27.980	25.041+j69.623
CHOACAHUI	CHO-230	230	20.04	17.01	0.521+j6.606	0.726+j9.331	25.20	25.59	0.330+j5.787	0.364+j4.885
CHOACAHUI	CHO-400	400	12.70	14.95	1.466+j18.129	0.520+j8.931	15.40	17.65	0.891+j16.475	0.522+j9.355
CIUDAD OBREGÓN CUATRO	COC-115	115	15.57	14.29	0.700+j4.207	0.749+j5.336	19.45	16.61	0.540+j3.716	0.801+j5.561
CIUDAD OBREGÓN CUATRO	COC-230	230	10.18	10.30	1.954+j12.903	1.749+j12.358	13.64	12.71	1.293+j10.634	1.848+j12.695
CIUDAD OBREGÓN DOS	COD-115	115	16.33	15.73	0.622+j4.019	0.638+j4.465	20.36	18.38	0.473+j3.555	0.663+j4.640
CIUDAD OBREGÓN TRES	COT-115	115	15.94	15.25	0.632+j4.117	0.530+j4.682	20.12	18.07	0.465+j3.601	0.560+j4.759
CIUDAD OBREGÓN TRES	COT-230	230	8.81	8.82	2.276+j14.896	1.870+j14.858	11.50	10.65	1.588+j12.604	2.009+j15.364
CIUDAD OBREGÓN UNO	OBU-115	115	14.46	12.80	0.853+j4.513	1.164+j6.247	18.07	14.92	0.675+j3.985	1.202+j6.424
COCORIT	CCI-115	115	11.54	8.25	0.926+j5.677	2.598+j12.356	13.94	9.41	0.766+j5.185	2.623+j12.473
COMEDERO	CMR-115	115	3.52	1.64	3.819+j18.492	20.743+j81.097	5.94	6.62	1.625+j12.192	0.300+j7.445
COMPUERTAS	CMP-115	115	11.00	8.52	1.069+j5.938	2.023+j10.943	13.25	9.87	0.920+j5.433	2.035+j10.861
COSTA RICA	CSA-115	115	6.24	4.80	2.415+j10.370	4.666+j19.602	7.55	5.53	2.014+j9.466	4.686+j19.628
CRUZ DE PIEDRA	CDP-115	115	6.33	6.29	2.462+j10.190	1.941+j10.564	7.54	7.15	2.151+j9.449	2.017+j11.103
CULIACÁN CENTRO	CCC-115	115	11.07	10.17	1.261+j5.866	1.690+j7.330	15.26	12.97	0.807+j4.718	1.681+j6.954



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			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
CULIACÁN CINCO	CUI-115	115	11.84	10.78	1.143+j5.490	1.670+j7.013	16.27	13.47	0.718+j4.430	1.702+j6.946
CULIACÁN CUATRO	CUC-115	115	12.45	12.15	1.098+j5.219	1.233+j5.543	16.99	15.18	0.694+j4.243	1.260+j5.566
CULIACÁN DOS	CUD-115	115	11.99	11.95	1.159+j5.414	1.184+j5.415	16.80	15.49	0.713+j4.289	1.191+j5.157
CULIACÁN LIBRAMIENTO	CLI-115	115	10.46	9.75	1.324+j6.205	1.945+j7.433	14.09	12.14	0.886+j5.108	1.966+j7.274
CULIACÁN MILENIUM	CMI-115	115	10.55	11.42	1.318+j6.151	1.552+j4.570	14.07	15.04	0.892+j5.112	1.425+j3.846
CULIACÁN NORTE	CUN-115	115	11.23	11.09	1.244+j5.779	1.325+j5.930	15.46	14.52	0.796+j4.656	1.241+j5.342
CULIACÁN ORIENTE	CUO-115	115	11.45	11.81	1.249+j5.660	1.226+j5.076	15.94	15.46	0.796+j4.511	1.223+j4.686
CULIACÁN PONIENTE	CPO-115	115	14.33	12.99	0.792+j4.565	0.834+j5.961	18.95	15.73	0.485+j3.824	0.888+j6.054
CULIACÁN PONIENTE	CPO-400	400	6.26	6.65	6.471+j36.305	3.518+j29.531	8.90	8.55	3.245+j28.356	3.741+j30.953
CULIACÁN SUR	CUS-115	115	10.78	9.80	1.242+j6.035	1.746+j7.764	14.31	11.98	0.831+j5.034	1.773+j7.756
CULIACÁN TRES	CUT-115	115	13.19	14.04	1.012+j4.930	0.587+j4.030	19.21	19.37	0.554+j3.761	0.540+j3.484
CULIACÁN TRES	CUT-230	230	8.07	9.24	3.289+j16.125	1.315+j9.916	11.76	12.34	1.737+j12.304	1.356+j10.075
CULIACÁN UNO	CUU-115	115	12.85	13.78	1.075+j5.052	0.703+j4.014	18.16	19.14	0.638+j3.972	0.482+j3.227
DEL MAR	DMA-115	115	11.41	9.89	1.240+j5.683	1.437+j8.373	17.21	13.13	0.658+j4.193	1.396+j8.056
DERIVACIÓN	DER-115	115	8.63	6.82	1.844+j7.465	3.805+j13.299	11.37	8.22	1.352+j6.278	3.841+j13.294
DESEO	DSE-115	115	2.24	1.89	8.994+j28.187	16.965+j42.876	3.28	2.45	5.633+j21.561	16.709+j41.948
DYNATECH	DYN-115	115	12.10	12.81	1.738+j5.205	2.092+j4.128	17.98	18.04	1.173+j3.890	1.881+j3.630
EL FUERTE PENAL	FPE-115	115	3.81	2.64	5.337+j16.603	11.375+j38.721	5.74	5.24	3.051+j12.347	3.329+j16.051
EL DORADO	EDR-115	115	1.75	1.15	10.741+j36.325	18.526+j95.630	1.98	1.28	10.309+j35.452	18.547+j95.656
EL FRESNAL	EFR-115	115	7.65	6.09	0.955+j8.625	0.739+j15.512	9.20	6.72	0.610+j7.918	0.825+j16.621
EL FRESNAL	EFR-230	230	9.26	11.11	2.217+j14.173	0.481+j7.813	15.68	17.44	0.843+j9.275	0.523+j6.075
EL FUERTE	EFU-115	115	3.12	2.09	6.744+j20.220	15.111+j50.393	5.02	5.31	3.294+j14.158	1.211+j12.232
EL HABAL	HBL-115	115	11.31	9.77	1.117+j5.762	1.393+j8.526	17.17	12.99	0.535+j4.220	1.384+j8.222
EL HABAL	HBL-230	230	7.14	7.14	3.448+j18.273	2.180+j18.436	13.06	12.41	1.188+j11.121	1.988+j12.725
EL LLANO	LNO-115	115	3.67	2.68	6.125+j17.020	11.028+j36.719	4.69	3.13	4.813+j14.820	11.089+j37.183
EL MAYO	EMY-115	115	9.35	10.43	1.301+j6.978	0.545+j4.816	12.74	13.21	0.854+j5.667	0.580+j4.992
EL MAYO	EMY-230	230	5.92	6.08	4.143+j22.030	2.368+j20.342	8.47	7.84	2.544+j17.063	2.604+j20.776
EMPALME	EPM-115	115	9.65	8.77	1.355+j6.743	1.436+j8.874	11.50	9.97	1.164+j6.243	1.466+j9.187
EMPALME CICLO COMBINADO	ECC-230	230	13.12	15.51	1.054+j10.062	0.259+j5.683	15.57	17.70	0.830+j9.343	0.293+j6.157
EMPALME CICLO COMBINADO	ECC-400	400	9.06	10.36	2.452+j25.366	1.064+j15.838	11.07	12.07	1.448+j22.908	1.176+j17.075
ESCUINAPA	EPA-115	115	1.95	1.18	8.274+j33.004	31.221+j95.750	2.25	1.33	7.630+j31.602	31.161+j95.420
ESPERANZA	ESP-115	115	9.55	9.05	1.502+j6.789	1.078+j8.063	12.79	11.03	1.012+j5.619	1.148+j8.386
ESPERANZA	ESP-230	230	5.57	5.51	4.765+j23.377	3.416+j24.492	7.91	7.14	2.743+j18.271	3.490+j24.239
ESTACIÓN TORRES	ETO-115	115	3.65	2.34	5.872+j17.215	14.771+j46.411	4.30	2.69	5.442+j16.079	14.485+j45.146
ÉVORA	EVO-115	115	8.74	7.51	1.402+j7.468	1.448+j11.146	11.59	9.46	0.959+j6.229	1.486+j10.075
FÁTIMA	FMA-115	115	10.12	9.40	1.225+j6.446	1.237+j8.027	11.80	10.53	1.107+j6.088	1.286+j8.361
FUNDICIÓN	FUC-115	115	5.74	4.48	3.920+j10.874	4.883+j20.843	6.92	5.09	3.488+j9.959	5.127+j21.345
GRUPO MÉXICO (SE MINA)	SMI-230	230	5.34	4.02	6.847+j23.920	11.433+j48.285	6.88	4.74	4.665+j20.701	11.674+j48.530
GUAMÚCHIL	GML-115	115	7.85	6.35	1.608+j8.299	2.252+j14.199	10.18	7.80	1.164+j7.080	2.285+j13.179
GUAMÚCHIL DOS	GMD-115	115	9.28	8.33	1.280+j7.038	0.964+j9.471	12.51	10.70	0.837+j5.778	1.008+j8.357
GUAMÚCHIL DOS	GMD-230	230	6.46	6.17	3.888+j20.180	3.485+j22.850	8.68	7.62	2.523+j16.640	3.582+j22.782
GUASAVE	GSV-115	115	6.12	4.42	2.434+j10.571	6.729+j22.239	7.32	5.09	2.136+j9.745	6.778+j21.868



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
GUAYMAS CERESO	GYC-115	115	15.67	14.88	0.559+j4.200	0.427+j4.941	18.62	16.70	0.456+j3.895	0.465+j5.282
GUAYMAS CERESO	GYC-230	230	10.50	10.73	1.691+j12.534	1.397+j11.932	12.91	12.47	1.282+j11.246	1.507+j12.525
HERMOSILLO AEROPUERTO	HAE-230	230	9.24	9.72	3.037+j14.054	2.734+j11.978	16.81	17.82	1.036+j8.627	1.006+j7.173
HERMOSILLO CERESO	HCE-115	115	12.35	12.44	1.547+j5.148	1.788+j4.968	18.46	17.34	0.996+j3.830	1.613+j4.476
HERMOSILLO CINCO	HLI-115	115	15.84	16.49	0.922+j4.089	0.585+j3.672	27.88	31.60	0.357+j2.595	0.147+j1.725
HERMOSILLO CINCO	HLI-230	230	11.32	12.56	2.353+j11.493	1.397+j8.211	18.71	18.54	0.904+j7.753	1.340+j7.959
HERMOSILLO CUATRO	HLC-115	115	17.08	18.92	0.860+j3.791	0.408+j2.748	27.63	28.19	0.413+j2.611	0.442+j2.460
HERMOSILLO CUATRO	HLC-230	230	10.03	11.43	2.725+j12.962	1.251+j8.358	17.04	17.54	1.064+j8.508	1.227+j7.783
HERMOSILLO DOS	HLD-115	115	12.93	11.32	1.116+j5.014	1.332+j7.225	18.69	14.53	0.646+j3.853	1.362+j7.152
HERMOSILLO LA MANGA	HMA-115	115	8.95	7.95	2.183+j7.088	3.730+j9.542	11.91	9.80	1.715+j5.889	3.785+j9.388
HERMOSILLO LOMAS	HLM-115	115	14.04	14.50	0.960+j4.629	0.617+j4.261	20.64	19.31	0.501+j3.503	0.668+j4.227
HERMOSILLO LOMAS	HLM-230	230	9.37	10.23	3.005+j13.842	1.807+j10.540	16.01	15.73	1.154+j9.050	1.718+j9.506
HERMOSILLO MANIOBRAS	HMB-115	115	8.81	8.60	1.745+j7.329	0.969+j8.087	12.65	11.37	1.105+j5.666	1.019+j7.692
HERMOSILLO MISIÓN	HMI-115	115	11.42	11.28	1.328+j5.660	1.536+j5.853	15.94	14.58	0.865+j4.499	1.576+j5.678
HERMOSILLO NUEVE	HLN-115	115	15.63	17.19	1.249+j4.060	0.803+j3.008	24.92	25.59	0.734+j2.837	0.723+j2.622
HERMOSILLO OCHO	HLO-115	115	13.10	12.43	1.164+j4.932	1.353+j5.751	20.29	17.95	0.614+j3.547	1.165+j4.906
HERMOSILLO SEIS	HLS-115	115	12.56	12.11	1.176+j5.152	1.384+j5.728	18.06	15.89	0.717+j3.981	1.416+j5.543
HERMOSILLO SIETE	HLE-115	115	11.97	9.28	1.137+j5.431	2.035+j10.180	16.98	11.61	0.659+j4.252	2.068+j10.080
HERMOSILLO TRES	HLT-115	115	14.39	12.49	0.915+j4.523	0.849+j6.698	21.66	16.27	0.442+j3.342	0.908+j6.683
HERMOSILLO TRES	HLT-230	230	10.08	11.03	2.819+j12.869	1.655+j9.701	16.99	16.51	1.094+j8.528	1.653+j9.241
HERMOSILLO UNO	HLU-115	115	15.52	17.13	1.156+j4.119	0.770+j2.991	24.94	25.73	0.634+j2.859	0.675+j2.594
HERNANDO DE VILLAFañE	HVF-115	115	5.44	3.76	2.606+j11.913	7.710+j27.357	6.48	4.32	2.289+j11.044	7.763+j26.913
HIERRO DE SONORA	HDS-115	115	9.32	5.43	2.157+j6.788	6.208+j21.535	11.27	6.14	1.941+j6.184	6.276+j21.750
HORNILLOS	HRS-115	115	2.65	1.74	8.163+j23.724	18.677+j61.265	4.11	3.86	4.405+j17.218	4.207+j20.855
HUATABAMPO	HPO-115	115	6.15	4.51	2.286+j10.553	6.491+j21.585	7.73	5.27	1.824+j9.270	6.506+j21.643
HUITES	HTS-230	230	3.01	1.61	6.733+j43.540	38.445+j155.055	7.78	8.38	1.264+j18.725	0.426+j11.762
HUMAYA	HYA-115	115	5.51	2.91	2.228+j11.844	10.691+j43.056	8.50	8.74	1.112+j8.519	0.396+j7.083
IMURIS	IMR-115	115	3.36	2.84	5.929+j18.834	10.194+j29.083	4.32	3.37	4.273+j16.345	10.229+j29.533
INDUSTRIAL CABORCA	ICA-115	115	4.02	3.86	4.562+j15.877	2.327+j18.628	7.67	6.77	1.393+j9.419	1.232+j13.250
INDUSTRIAL CABORCA	ICA-230	230	2.46	2.67	15.757+j51.584	6.331+j41.482	5.01	4.34	4.508+j28.832	6.294+j41.982
INDUSTRIAL SAN CARLOS	ISC-115	115	3.85	3.63	4.938+j16.524	4.117+j20.051	5.01	4.36	3.562+j14.126	4.186+j20.741
ISLA MUSALA	ISM-115	115	12.85	14.09	1.099+j5.047	0.551+j3.718	18.57	19.39	0.643+j3.881	0.520+j3.213
JAIME SEVILLA POYASTRO	JSP-115	115	11.14	12.07	1.250+j5.830	1.241+j4.353	15.07	16.14	0.819+j4.776	1.078+j3.605
JOSÉ ÁNGEL ESPINOZA	JAE-115	115	1.69	1.05	12.316+j37.393	32.721+j105.790	2.51	2.11	7.060+j28.195	11.842+j44.075
JUAN JOSÉ RÍOS	JJR-115	115	7.43	5.53	1.541+j8.805	4.465+j17.444	8.77	6.31	1.354+j8.220	4.504+j17.405
LA CARIDAD	LCD-230	230	7.56	5.88	2.962+j17.310	8.425+j31.670	9.21	6.78	2.263+j15.696	8.460+j31.754
LA CARIDAD FUNDICIÓN	LCF-230	230	10.11	9.98	1.611+j13.041	2.107+j13.575	12.08	11.36	1.161+j12.033	2.187+j14.141
LA CARIDAD GENERACIÓN	LCG-230	230	11.96	13.42	1.343+j11.025	0.478+j7.544	14.53	15.46	0.896+j10.013	0.557+j8.109
LA CHOYA	LCH-115	115	1.88	1.93	10.388+j33.771	6.628+j31.929	2.60	2.42	6.290+j27.368	7.259+j33.671
LA CRUZ	LCZ-115	115	1.07	0.66	19.239+j59.100	55.324+j166.855	1.21	0.74	18.516+j57.675	55.310+j166.537
LA HIGUERA	HGA-115	115	14.85	18.86	0.854+j4.387	0.086+j1.582	20.71	24.95	0.486+j3.493	0.101+j1.611
LA HIGUERA	HGA-230	230	8.90	10.87	2.846+j14.646	0.451+j6.622	12.92	14.63	1.457+j11.211	0.508+j6.911



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			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
LA HIGUERA	HGA-400	400	6.18	6.83	6.806+j36.775	2.292+j26.002	8.97	8.95	3.276+j28.127	2.540+j27.574
LA MISA	LMA-115	115	3.55	2.99	5.473+j17.880	10.331+j27.320	4.08	3.35	5.156+j17.146	10.407+j27.859
LA PINTA	LPN-115	115	1.85	1.65	11.217+j34.155	12.469+j47.159	2.55	2.04	7.146+j27.762	12.638+j48.140
LADRILLERAS	LAD-115	115	12.26	10.89	1.114+j5.298	1.527+j7.317	17.37	13.86	0.646+j4.154	1.567+j7.256
LEYVA SOLANO	LVS-115	115	4.71	3.47	2.801+j13.807	8.752+j27.810	5.47	3.93	2.548+j13.099	8.795+j27.620
LLANO BLANCO	LLB-115	115	2.60	1.83	7.339+j24.411	15.479+j55.710	3.65	2.30	4.694+j19.457	14.946+j53.121
LOS MOCHIS COLINAS	LMC-115	115	14.19	10.83	0.791+j4.610	1.604+j8.721	17.77	12.80	0.628+j4.061	1.617+j8.624
LOS MOCHIS DOS	LMD-115	115	10.42	7.62	0.998+j6.292	1.479+j13.177	12.82	8.96	0.807+j5.640	1.592+j12.858
LOS MOCHIS DOS	LMD-230	230	9.94	8.71	2.073+j13.193	3.205+j18.211	13.50	10.96	1.348+j10.737	3.321+j17.593
LOS MOCHIS INDUSTRIAL	LMI-115	115	15.59	12.84	0.624+j4.214	0.839+j6.779	19.82	15.29	0.457+j3.657	0.875+j6.775
LOS MOCHIS INDUSTRIAL	LMI-230	230	10.20	9.36	1.796+j12.890	2.222+j15.728	14.39	12.87	1.100+j10.091	2.099+j13.091
LOS MOCHIS TRES	LMT-115	115	13.55	10.90	0.898+j4.817	1.625+j8.150	16.74	12.83	0.743+j4.298	1.635+j8.060
LOS MOCHIS UNO	LMU-115	115	14.48	11.60	0.760+j4.522	1.418+j7.711	18.12	13.76	0.601+j3.985	1.430+j7.609
LOUISIANA	LOU-115	115	18.39	17.54	0.434+j3.585	0.257+j3.957	23.30	21.22	0.308+j3.119	0.278+j3.917
LOUISIANA	LOU-230	230	13.13	12.88	1.229+j10.041	0.919+j9.919	18.21	17.99	0.749+j7.985	0.994+j7.720
LUIS DONALDO COLOSIO	LDO-115	115	4.08	3.23	4.900+j15.538	8.195+j27.900	5.43	3.88	3.313+j13.031	8.245+j28.339
MANIOBRA FRESNILLO	MFN-115	115	2.06	1.73	10.860+j30.326	13.527+j49.208	2.93	2.16	6.891+j23.999	13.566+j49.711
MANIOBRA MINA COBRE DEL MAYO	MCM-115	115	3.10	2.07	9.005+j19.455	17.491+j50.674	3.79	2.75	7.785+j17.648	10.971+j39.707
MANIOBRAS APASCO	MAP-115	115	6.64	4.49	2.066+j9.788	5.846+j23.709	9.08	6.01	1.364+j7.930	4.880+j19.785
MANIOBRAS AT SOLAR V	MNV-230	230	2.98	3.97	12.275+j42.763	0.889+j11.688	12.27	13.92	0.926+j11.866	0.712+j7.331
MANIOBRAS BLUMEX	MBL-115	115	7.04	7.37	2.070+j9.200	0.759+j8.202	8.45	8.43	1.760+j8.457	0.835+j8.740
MANIOBRAS CERVECERA OBREGON	MCO-115	115	13.78	11.80	0.856+j4.743	1.291+j7.106	16.98	13.60	0.694+j4.245	1.340+j7.323
MANIOBRAS DON DIEGO	MDD-230	230	3.83	4.35	8.652+j33.602	2.284+j22.365	5.97	6.02	3.910+j24.170	2.542+j23.676
MANIOBRAS MI RANCHITO	MMR-115	115	6.40	7.61	3.186+j9.869	0.717+j5.474	8.15	9.22	2.639+j8.565	0.820+j5.839
MANIOBRAS MINA PANGEA	MAN-PSP	115	3.81	2.51	3.196+j17.131	8.587+j43.554	5.58	4.23	1.872+j12.959	4.407+j23.770
MANIOBRAS MUNISOL	MMU-115	115	5.78	5.31	3.608+j10.912	3.767+j14.063	7.23	6.23	3.061+j9.630	4.010+j14.435
MANIOBRAS OREJANA	MAO-230	230	3.60	4.19	7.006+j36.169	2.363+j21.412	5.75	5.97	2.947+j25.243	2.641+j22.341
MANIOBRAS TASTIOTA	MTA_115	115	3.31	3.80	5.004+j19.419	3.070+j11.999	4.32	4.70	3.653+j16.508	3.074+j12.392
MARINA	MRN-115	115	9.15	7.81	1.697+j7.053	2.066+j10.778	12.94	9.97	1.103+j5.535	2.034+j10.464
MAZATLÁN AEROPUERTO	MAE-115	115	8.80	9.27	1.651+j7.358	1.739+j6.149	12.10	12.06	1.102+j5.936	1.694+j5.849
MAZATLÁN CENTRO	MAC-115	115	11.33	9.75	1.218+j5.734	1.636+j8.532	16.98	12.90	0.642+j4.254	1.590+j8.214
MAZATLÁN DOS	MZD-115	115	14.65	13.98	0.817+j4.457	0.297+j5.193	24.00	19.92	0.285+j3.030	0.253+j4.892
MAZATLÁN DOS	MZD-230	230	7.87	8.40	3.024+j16.608	0.897+j13.646	16.30	18.80	0.722+j8.933	0.199+j5.318
MAZATLÁN DOS	MZD-400	400	6.22	6.45	7.277+j36.406	3.660+j32.828	10.88	9.75	2.202+j23.238	3.425+j31.008
MAZATLÁN EL CID	CID-115	115	9.58	8.29	1.656+j6.728	1.803+j10.001	13.72	10.68	1.064+j5.217	1.769+j9.687
MAZATLÁN NORTE	MZN-115	115	11.88	10.19	1.186+j5.463	1.257+j8.260	18.21	13.63	0.602+j3.964	1.219+j7.945
MAZATLÁN ORIENTE	MZO-115	115	10.45	8.17	1.431+j6.192	2.281+j11.421	15.23	10.47	0.859+j4.717	2.235+j11.092
MAZATLÁN TECNOLÓGICO	MTE-115	115	10.17	8.26	1.570+j6.337	2.122+j10.848	14.70	10.60	1.005+j4.867	2.075+j10.516
MAZATLÁN UNO	MZU-115	115	12.81	10.94	0.971+j5.093	1.117+j7.743	19.88	14.75	0.424+j3.650	1.067+j7.417
MOCHIS CENTRO	MCE-115	115	12.24	10.44	0.962+j5.340	1.693+j7.888	14.96	12.27	0.808+j4.816	1.705+j7.786
MOCHIS LAS VILLAS	MLV-115	115	12.81	9.88	0.796+j5.120	1.578+j9.488	15.67	11.55	0.651+j4.614	1.589+j9.388
MOCUZARI	MRI-115	115	2.12	1.41	13.814+j28.164	27.461+j74.150	2.60	2.04	11.577+j25.570	12.138+j50.537



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MORELOS-LA ATRAVESADA	MLA-115	115	4.22	3.70	4.394+j15.091	7.312+j21.290	4.89	4.15	4.079+j14.356	7.387+j21.828
NACOZARI	NRI-230	230	12.53	11.93	1.630+j10.470	2.466+j12.079	16.46	14.48	0.959+j8.824	2.501+j12.162
NAINARI	NNR-115	115	14.08	12.40	0.727+j4.660	1.075+j6.527	17.38	14.41	0.567+j4.165	1.100+j6.642
NAVOJOA	NVJ-115	115	9.59	7.41	1.382+j6.787	2.571+j12.739	12.91	9.04	0.937+j5.579	2.559+j12.570
NAVOJOA INDUSTRIAL	NVI-115	115	6.16	4.98	2.478+j10.495	4.445+j17.832	7.76	5.84	2.022+j9.193	4.483+j18.012
NAVOJOA NORTE	NVN-115	115	8.35	6.35	1.749+j7.760	3.292+j15.057	10.88	7.61	1.297+j6.589	3.290+j14.914
NAVOJOA ORIENTE	NVO-115	115	8.94	6.27	1.416+j7.293	2.836+j16.606	11.82	7.55	0.978+j6.102	2.815+j16.320
NAVOLATO	NTO-115	115	4.33	3.01	3.539+j14.906	9.569+j34.188	5.06	3.40	3.168+j14.069	9.584+j34.190
NOGALES	NGS-115	115	3.84	3.63	5.045+j16.517	4.117+j20.053	5.01	4.35	3.589+j14.141	4.186+j20.743
NOGALES AEROPUERTO	NGA-115	115	5.04	5.74	3.979+j12.559	0.679+j8.521	7.03	7.31	2.282+j10.136	0.748+j9.192
NOGALES AEROPUERTO	NGA-230	230	2.76	3.28	14.312+j45.892	2.500+j25.979	4.02	4.36	7.646+j35.487	2.784+j27.784
NOGALES NORTE	NGN-115	115	3.91	3.98	5.095+j16.178	2.653+j16.017	5.12	4.82	3.483+j13.821	2.735+j16.748
NOVILLO	NVL-115	115	2.01	0.86	6.847+j32.345	46.372+j160.370	4.42	5.33	1.741+j16.448	0.403+j6.776
NUEVO NOGALES	NNG-115	115	3.82	3.93	5.437+j16.489	2.257+j16.077	4.99	4.73	3.714+j14.143	2.394+j16.973
NUEVO PROGRESO	NPO-115	115	4.53	3.09	3.308+j14.267	6.690+j34.581	5.28	3.43	2.914+j13.529	6.758+j35.388
OASIS	OAS-115	115	2.52	1.54	9.481+j24.582	23.893+j72.703	2.96	1.74	8.702+j23.125	23.921+j72.840
OBSERVATORIO	OBS-230	230	5.84	5.04	6.044+j21.920	6.822+j33.305	8.13	6.22	3.545+j17.603	7.045+j33.613
OCUCA	OCU-115	115	3.21	2.39	5.913+j19.827	10.748+j40.694	4.29	2.88	4.047+j16.547	10.738+j40.579
ORIENTE	ORI-115	115	1.91	1.70	10.526+j33.159	11.121+j46.205	2.66	2.11	6.404+j26.749	11.335+j47.605
OVIACHIC	OVI-115	115	2.26	1.58	13.923+j25.884	24.596+j62.704	2.90	2.63	10.448+j22.893	5.778+j31.227
PARQUE INDUSTRIAL HERMOSILLO NORTE	PIH-115	115	12.58	11.94	1.067+j5.168	1.195+j6.027	17.88	15.36	0.606+j4.039	1.243+j5.986
PARTICULAR MINA ALAMO DORADO	PAD-115	115	1.59	1.01	15.635+j38.709	36.515+j107.274	2.10	1.54	12.171+j32.638	22.476+j68.951
PARTICULAR MINA PIEDRAS VERDES	PVD-115	115	2.28	1.37	12.636+j26.201	29.398+j82.643	2.71	1.74	11.406+j24.428	21.180+j68.700
PARTICULAR SAUZAL	PSZ-115	115	0.86	0.51	23.064+j73.339	69.284+j222.423	1.43	1.91	10.340+j50.133	0.484+j12.834
PIAXTLA	PXT-115	115	1.63	0.99	12.108+j38.963	32.668+j115.938	1.86	1.10	11.421+j37.501	32.655+j115.622
PLANTA GUAYMAS DOS	PGD-115	115	13.23	11.58	0.726+j4.965	0.959+j7.148	15.61	12.96	0.617+j4.637	1.016+j7.510
PLANTA GUAYMAS DOS	PGD-230	230	10.95	10.83	1.610+j12.024	1.805+j12.571	13.48	12.62	1.207+j10.768	1.890+j13.057
PLAYA ENCANTO	PYE-115	115	1.89	1.74	10.803+j33.348	11.077+j42.979	2.63	2.17	6.718+j26.941	11.260+j44.089
PORTALES	PTS-115	115	13.50	12.22	1.058+j4.801	1.178+j6.377	19.88	16.11	0.600+j3.625	1.205+j6.153
PROGRESO	PRG-115	115	5.46	3.84	2.786+j11.839	7.756+j26.416	6.21	4.27	2.661+j11.459	7.795+j26.666
PROVIDENCIA	PRO-115	115	15.70	14.76	0.593+j4.186	0.766+j4.967	19.19	16.97	0.462+j3.778	0.801+j5.187
PUEBLITOS	PUE-115	115	12.45	11.51	1.082+j5.223	1.325+j6.525	17.65	14.72	0.620+j4.091	1.373+j6.483
PUEBLO NUEVO	PNO-115	115	10.53	7.71	1.135+j6.205	1.936+j13.026	14.45	9.51	0.702+j5.004	1.911+j12.678
PUEBLO NUEVO	PNO-230	230	7.48	7.34	3.251+j17.456	2.892+j18.321	12.11	10.56	1.617+j11.951	2.763+j16.648
PUERTO LIBERTAD	PLD-230	230	2.99	3.95	12.275+j42.616	1.198+j12.522	13.30	16.01	0.744+j10.954	0.245+j5.071
PUERTO PEÑASCO	PPA-115	115	2.01	2.03	9.995+j31.497	7.710+j31.069	2.84	2.58	5.895+j25.075	7.922+j32.463
QUILA	QLA-115	115	2.58	1.68	7.159+j24.745	6.148+j67.541	2.95	1.87	6.734+j23.864	6.169+j67.567
QUIROGA	QRG-115	115	7.95	6.17	2.264+j8.043	4.828+j14.805	10.28	7.43	1.812+j6.867	4.862+j14.517
RÍO SONORA	RIS-115	115	13.49	15.49	1.112+j4.793	0.726+j2.948	20.09	22.00	0.634+j3.580	0.713+j2.617
ROCA FUERTE	RFT-115	115	12.87	9.62	0.788+j5.097	1.916+j10.264	15.12	10.75	0.679+j4.782	1.949+j10.583
ROLANDO GARCÍA URREA	RGU-115	115	13.30	14.44	1.553+j4.745	1.452+j3.552	20.27	20.79	1.011+j3.458	1.304+j3.105
ROSARIO	ROS-115	115	2.28	1.44	6.496+j28.365	26.454+j76.179	2.65	1.62	5.862+j26.962	26.396+j75.855



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
RUIZ CORINEZ	RUC-115	115	5.38	3.72	2.323+j12.131	7.673+j27.700	6.27	4.21	2.098+j11.467	7.712+j27.561
SAHUARO	SHO-115	115	2.19	1.84	10.028+j28.634	11.766+j46.317	3.17	2.32	6.137+j22.206	11.791+j46.756
SALVADOR ALVARADO	SAA-115	115	7.25	5.84	1.976+j8.948	3.258+j15.332	9.24	7.09	1.544+j7.756	3.297+j14.334
SAN CARLOS	SCR-115	115	5.75	3.64	2.579+j11.255	7.962+j30.640	6.52	4.03	2.465+j10.933	7.997+j30.959
SAN NICOLÁS	SNC-115	115	1.80	1.39	14.099+j34.187	25.475+j64.366	2.04	1.55	13.599+j33.027	25.542+j64.660
SAN RAFAEL	SRF-115	115	6.59	4.92	2.251+j9.819	5.396+j19.535	8.10	5.78	1.881+j8.813	5.434+j18.872
SAN RAFAEL AMPLIACIÓN	SRA-115	115	6.59	4.92	2.251+j9.819	5.396+j19.535	8.10	5.78	1.881+j8.813	5.434+j18.872
SANALONA	SLA-115	115	2.55	1.86	11.885+j23.157	17.911+j52.213	3.11	3.00	10.275+j21.159	4.446+j26.073
SANTA ANA	STA-115	115	7.12	7.37	2.584+j8.955	0.756+j8.505	11.22	9.88	1.078+j6.419	0.833+j9.103
SANTA ANA	STA-230	230	4.61	5.46	9.107+j27.308	2.271+j15.597	8.79	8.82	3.212+j16.310	2.419+j16.181
SANTA FE	STF-115	115	9.72	8.02	1.289+j6.708	2.301+j10.890	12.49	9.68	0.910+j5.778	2.246+j10.579
SANTA MARÍA	STM-115	115	5.74	4.04	2.529+j11.284	7.202+j25.001	6.84	4.64	2.223+j10.439	7.253+j24.599
SEIS DE ABRIL	SSA-115	115	4.26	5.55	4.588+j14.878	0.526+j4.881	9.13	10.33	1.167+j7.917	0.560+j5.142
SEIS DE ABRIL	SSA-230	230	2.49	3.09	16.186+j50.911	2.129+j22.737	6.08	6.07	3.641+j23.746	2.368+j23.787
SELECTA	SEL-115	115	1.83	1.19	11.099+j34.519	30.394+j90.490	2.09	1.32	10.553+j33.325	30.466+j90.815
SERI	SER-230	230	11.44	13.74	2.086+j11.422	0.641+j5.794	18.33	20.03	0.833+j7.923	0.699+j5.925
SERI	SER-400	400	6.72	7.13	4.793+j34.014	2.682+j28.385	9.22	8.92	2.155+j27.463	2.912+j30.175
SIEMPRE VIVA	SVV-115	115	3.19	3.18	6.148+j19.910	6.745+j19.811	5.44	4.61	2.765+j13.137	6.672+j19.581
SONOYTA	SNY-115	115	0.80	0.56	24.827+j79.347	49.404+j183.167	0.96	0.64	20.360+j73.060	49.631+j184.597
SUBESTACIÓN BAHÍA DE KINO	SBK-115	115	1.78	1.39	16.288+j33.461	25.475+j64.366	2.03	1.55	15.788+j32.303	25.542+j64.660
SUBESTACIÓN CANANEA	SCN-115	115	7.24	6.27	1.563+j9.042	0.835+j13.505	8.50	6.89	1.058+j8.522	0.920+j14.582
SUBESTACIÓN CANANEA	SCN-230	230	7.33	6.95	5.135+j17.363	3.615+j21.250	10.57	8.81	2.931+j13.507	3.876+j21.578
SUBESTACIÓN CANANEA SUR	CNS-230	230	6.59	5.35	6.038+j19.218	7.634+j33.656	8.89	6.46	3.882+j15.957	7.875+j33.901
SUBESTACIÓN CENTRO	SCE-230	230	5.89	4.58	6.520+j21.598	9.574+j41.119	7.74	5.45	4.341+j18.374	9.816+j41.364
SUBESTACIÓN CINCO	SBI-115	115	3.30	2.52	4.633+j19.578	15.124+j36.049	3.87	2.85	4.135+j18.411	15.194+j36.373
SUBESTACIÓN COLINAS	SCL-115	115	11.31	9.14	1.247+j5.738	2.006+j9.877	15.74	11.38	0.774+j4.574	2.033+j9.788
SUBESTACIÓN CONCENTRADORA	SCO-230	230	5.85	4.60	6.701+j21.702	9.545+j40.440	7.61	5.45	4.560+j18.644	9.786+j40.685
SUBESTACIÓN CUATRO	SBC-115	115	3.08	2.07	7.078+j20.370	14.789+j50.853	3.60	2.34	6.533+j19.178	14.861+j51.178
SUBESTACIÓN CULIACÁN POTENCIA	SCP-115	115	13.49	14.44	0.944+j4.831	0.388+j3.889	19.34	18.87	0.519+j3.740	0.439+j3.881
SUBESTACIÓN CULIACÁN POTENCIA	SCP-230	230	8.15	9.62	3.279+j15.962	0.988+j8.573	11.98	13.01	1.708+j12.070	1.049+j8.771
SUBESTACIÓN DIEZ	SBZ-115	115	2.99	1.94	6.515+j21.228	14.927+j56.575	3.49	2.17	6.020+j20.069	15.011+j56.960
SUBESTACIÓN DOS	SBD-115	115	6.09	4.75	3.000+j10.478	4.770+j19.612	7.61	5.52	2.469+j9.270	4.840+j19.936
SUBESTACIÓN ESDE	SES-230	230	6.22	4.93	6.238+j20.418	8.618+j37.445	8.28	5.91	4.076+j17.166	8.859+j37.690
SUBESTACION GUAYMAS CENTRO	SGC-115	115	9.48	7.06	1.395+j6.865	3.097+j13.926	10.96	7.86	1.282+j6.541	3.132+j14.246
SUBESTACIÓN GUAYMAS UNO	SGU-115	115	11.57	8.16	0.952+j5.660	2.654+j12.708	13.52	9.10	0.840+j5.337	2.690+j13.027
SUBESTACIÓN NUEVE	SBN-115	115	1.79	1.14	12.958+j34.653	29.761+j96.244	2.05	1.27	12.404+j33.477	29.833+j96.570
SUBESTACIÓN OCHO	SBO-115	115	1.76	1.19	12.982+j35.434	26.824+j88.260	2.00	1.32	12.477+j34.284	26.890+j88.553
SUBESTACIÓN PERICOS	SPE-115	115	4.32	2.88	4.255+j14.785	10.810+j36.760	5.03	3.25	3.927+j13.980	10.845+j36.629
SUBESTACIÓN PONIENTE	SPO-230	230	5.84	4.59	6.706+j21.723	9.566+j40.514	7.60	5.44	4.566+j18.665	9.807+j40.759
SUBESTACIÓN PUNTO P	SPP-115	115	9.36	8.69	1.600+j6.908	1.383+j8.669	12.49	10.55	1.112+j5.742	1.448+j8.961
SUBESTACIÓN SANTA INÉS	STI-115	115	3.76	2.80	5.530+j16.752	9.644+j34.523	4.46	3.18	5.033+j15.594	9.710+j34.815
SUBESTACIÓN SEIS	SBS-115	115	2.57	1.84	6.758+j24.972	20.157+j52.700	2.97	2.07	6.258+j23.806	20.228+j53.024



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
SUBESTACIÓN SIETE	SBE-115	115	4.48	3.09	4.459+j14.125	8.462+j33.867	5.39	3.51	3.966+j12.965	8.545+j34.252
SUBESTACIÓN TRES	SBT-115	115	4.61	3.33	4.306+j13.753	8.198+j29.966	5.55	3.80	3.812+j12.590	8.264+j30.259
SUBESTACIÓN UNO	SBU-115	115	2.40	1.70	9.270+j26.090	17.512+j59.114	2.76	1.91	8.768+j24.937	17.578+j59.407
SUBESTACIÓN VILLA UNIÓN	SVU-115	115	8.60	7.46	1.682+j7.534	2.510+j10.959	11.75	9.37	1.127+j6.113	2.464+j10.656
TAMAZULA	TZU-115	115	6.11	3.17	2.469+j10.579	13.867+j38.775	7.45	3.63	2.099+j9.574	13.905+j38.112
TASTIOTA	TST-115	115	2.13	1.42	9.707+j29.629	23.980+j73.924	2.44	1.59	9.161+j28.435	24.052+j74.249
TASTIOTA	TST-115	115	2.76	3.70	6.085+j23.237	0.244+j5.902	3.69	4.76	4.226+j19.362	0.278+j6.435
TEACAPAN	TEA-115	115	1.60	0.98	9.728+j40.222	35.610+j114.997	1.83	1.10	9.079+j38.819	35.549+j114.665
TECNOLÓGICO HERMOSILLO	TCG-115	115	10.50	8.27	1.291+j6.192	2.443+j11.193	14.31	10.16	0.819+j5.038	2.478+j11.110
TERRAMARA	TER-115	115	2.96	1.81	7.941+j20.996	20.114+j62.127	3.48	2.04	7.284+j19.676	20.140+j62.195
TETABIATE	TTB-115	115	12.49	11.02	0.936+j5.232	1.544+j7.262	15.32	12.76	0.761+j4.707	1.576+j7.411
TOBARITO	TBR-115	115	6.56	4.53	2.380+j9.844	6.265+j22.833	7.60	5.07	2.216+j9.356	6.317+j23.058
TOPOLOBAMPO	TPO-115	115	6.79	3.54	2.220+j9.522	9.031+j35.336	7.92	3.99	2.058+j8.987	9.043+j35.233
TOPOLOBAMPO	TPO-230	230	7.71	6.49	2.257+j17.065	4.268+j25.904	12.88	13.08	0.977+j11.301	0.848+j10.330
TOPOLOBAMPO DOS	TPD-400	400	12.67	15.02	1.457+j18.165	0.429+j8.664	15.34	17.70	0.890+j16.538	0.443+j9.125
TRES RÍOS	TSR-115	115	12.48	12.58	1.095+j5.207	0.902+j5.053	17.45	16.86	0.662+j4.133	0.752+j4.415
UNIÓN ENERGÉTICA DEL NOROESTE	UEN-230	230	7.77	8.25	2.447+j16.923	2.460+j14.448	14.15	15.51	0.840+j10.291	0.657+j6.828
URES	URE-115	115	1.95	1.18	9.389+j32.755	27.594+j97.111	2.23	1.32	8.890+j31.594	27.654+j97.095
VALLE DEL MAYO	VMY-115	115	4.54	3.08	3.339+j14.234	10.269+j33.877	5.49	3.53	2.876+j12.985	10.271+j33.839
VALLE DEL YAQUI	VDY-115	115	5.18	3.69	3.954+j12.192	7.791+j27.196	5.88	4.10	3.828+j11.813	7.831+j27.437
VALLE DEL YAQUI DOS	VYD-115	115	3.87	2.38	4.362+j16.609	14.329+j47.221	4.38	2.64	4.197+j16.123	14.382+j47.446
VENADILLO	VND-115	115	9.31	7.54	1.517+j6.966	2.028+j11.967	13.24	9.58	0.926+j5.438	2.002+j11.657
VICAM	VCM-115	115	4.18	2.84	3.496+j15.484	9.622+j37.247	4.73	3.15	3.345+j15.059	9.651+j37.437
VILLA GUADALUPE	VGU-115	115	3.20	2.27	5.175+j20.063	17.583+j43.004	3.59	2.51	5.051+j19.681	17.622+j43.255
VILLA JUÁREZ	VIJ-115	115	2.79	1.76	6.517+j22.927	18.323+j62.677	3.22	1.98	6.060+j21.846	18.363+j62.688
VILLAS DEL CEDRO	VCD-115	115	10.88	11.96	1.251+j5.971	0.718+j4.349	14.60	15.67	0.829+j4.932	0.578+j3.805
VILLAS DEL PITIC	VPI-115	115	13.92	15.22	1.420+j4.553	1.209+j3.354	21.54	22.20	0.884+j3.274	1.076+j2.926
VIÑEDOS	VNO-115	115	4.83	3.09	4.452+j13.018	10.719+j35.386	5.87	3.54	3.911+j11.804	10.748+j35.399

Gerencia de Control Regional Norte



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Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
ABASTOS	ABA-115	115	20.65	19.56	0.718+j3.134	0.900+j3.651	27.33	24.34	0.520+j2.622	0.896+j3.572
ABRAHAM GONZÁLEZ	ABG-115	115	4.42	3.71	3.228+j14.671	5.703+j23.056	6.66	5.49	2.221+j10.742	4.629+j17.378
AEROPUERTO	AEP-115	115	12.47	11.36	1.340+j5.154	2.420+j6.476	17.12	14.23	0.956+j4.159	2.431+j6.462
AGNICO EAGLE	AGE-115	115	2.05	2.29	7.777+j31.469	5.812+j21.391	2.28	2.52	7.395+j31.180	5.874+j22.167
ALAMOS	AMS-115	115	12.67	9.08	1.033+j5.138	2.697+j11.138	15.76	10.68	0.817+j4.561	2.677+j10.955
ALCALDES	ADS-115	115	2.60	2.04	6.321+j24.755	18.186+j43.259	2.96	2.28	5.841+j23.935	18.221+j43.456
ALDAMA	AMA-115	115	4.12	3.09	4.270+j15.552	12.343+j29.968	4.81	3.49	3.835+j14.702	12.357+j30.070
ALLENDE	ALL-115	115	16.39	12.43	0.919+j3.945	2.391+j7.567	20.82	14.78	0.714+j3.435	2.388+j7.480
ALTARES	ATR-115	115	0.74	0.50	39.351+j80.095	101.835+j198.070	0.82	0.55	38.870+j79.687	101.960+j198.601
ALTAVISTA	ALV-115	115	2.15	2.04	11.087+j28.892	9.172+j34.984	2.48	2.29	9.969+j27.727	9.288+j35.884
ÁLVARO OBREGÓN	AVO-115	115	4.26	3.61	4.308+j14.965	8.237+j22.622	4.95	4.08	3.856+j14.227	8.256+j22.826
AMADO NERVO	AMN-115	115	1.70	1.25	14.487+j36.161	28.033+j75.983	2.92	2.10	9.330+j23.243	19.655+j50.306
AMÉRICAS	AMR-115	115	10.55	9.20	1.502+j6.114	2.381+j8.811	13.34	10.90	1.092+j5.365	2.396+j8.867
ANAPRA	APR-115	115	7.15	5.93	1.735+j9.127	5.419+j14.123	8.96	7.03	1.320+j8.044	5.416+j14.000
ANDALUCÍA	AND-115	115	14.35	15.55	0.909+j4.537	0.423+j3.550	18.06	18.89	0.672+j3.988	0.402+j3.524
ANDALUCÍA	AND-230	230	10.85	11.33	2.185+j12.037	1.720+j10.576	15.62	15.86	1.222+j9.272	1.406+j8.984
ARCADIO	ADI-115	115	6.53	5.30	2.925+j9.739	6.728+j15.962	7.59	6.01	2.712+j9.236	6.710+j15.959
ARENALES	ARE-115	115	8.15	9.94	1.873+j7.931	0.524+j3.792	9.94	11.71	1.448+j7.201	0.545+j4.015
ARMENDÁRIZ	ARM-115	115	2.98	2.07	6.002+j21.492	17.156+j48.624	3.57	2.41	5.198+j19.765	16.824+j47.161
ASCENSIÓN	AON-115	115	4.68	4.80	2.464+j13.962	2.409+j12.981	5.34	5.36	2.239+j13.500	2.443+j13.288
ASCENSIÓN DOS	AOD-115	115	4.98	6.35	2.112+j13.159	0.267+j4.769	5.68	7.10	1.892+j12.726	0.303+j5.156
ASCENSIÓN DOS	AOD-230	230	2.88	3.26	7.162+j45.598	2.235+j30.014	3.35	3.67	6.181+j43.199	2.529+j32.189
AUMA	AUM-115	115	11.03	9.91	1.236+j5.893	1.881+j7.913	14.32	11.90	0.808+j5.035	1.901+j8.029
AUTOMOTIVE LIGHTING	ALI-115	115	13.46	12.83	1.162+j4.792	1.481+j5.474	21.52	20.28	0.661+j3.329	1.053+j3.887
AVALOS	AVL-115	115	16.08	18.86	0.886+j4.033	0.275+j2.369	22.77	24.67	0.469+j3.173	0.293+j2.476
AVALOS	AVL-230	230	10.38	12.25	2.888+j12.458	1.133+j7.163	16.89	17.91	1.268+j8.555	1.196+j7.168
AZTECAS	AZT-115	115	12.63	11.58	1.273+j5.102	2.382+j6.279	17.47	14.61	0.880+j4.087	2.388+j6.239
BABISAS	BBS-115	115	2.87	2.22	6.253+j22.304	15.053+j40.747	5.19	4.65	3.815+j13.545	4.382+j18.485
BACIS	BAC-115	115	0.55	0.35	55.007+j107.987	139.618+j291.658	0.61	0.39	54.506+j107.598	139.748+j292.195
BASASEACHIC	BAS-115	115	2.35	2.85	6.705+j27.437	2.486+j13.259	2.62	3.14	6.314+j27.105	2.544+j13.987
BATOPILAS	BAT-115	115	4.52	3.08	5.361+j13.685	8.162+j34.601	5.41	4.27	4.706+j12.645	5.008+j24.034
BENITO JUÁREZ	BJZ-115	115	5.63	4.49	2.688+j11.474	7.844+j19.428	6.60	5.15	2.400+j10.800	7.805+j19.067
BERMEJILLO	BER-115	115	4.03	2.37	3.396+j16.105	12.713+j49.668	5.14	3.02	3.088+j13.860	11.454+j42.802
BIOPAPEL	BIO-115	115	4.42	4.20	3.398+j14.647	4.189+j16.829	6.37	5.84	2.769+j11.119	4.008+j14.028
BISMARCK	BSM-115	115	1.65	1.22	12.980+j38.140	30.328+j77.353	1.83	1.34	12.744+j37.734	30.366+j77.746
BOLÍVAR	BLV-115	115	1.63	1.45	12.892+j38.744	19.002+j52.789	1.86	1.61	11.749+j37.573	19.127+j53.704
BOQUILLA	BOQ-115	115	2.78	2.14	6.555+j22.994	15.949+j42.528	5.24	4.84	3.843+j13.389	3.296+j17.156
BUENA VISTA	BUV-115	115	2.50	2.06	5.906+j25.851	14.875+j41.284	2.81	2.28	5.680+j25.390	14.909+j41.592
BÚFALO	BUF-115	115	2.46	1.82	8.179+j25.774	19.767+j52.008	3.75	2.81	6.156+j18.451	12.502+j36.934
CAHUISORI POTENCIA	CPO-115	115	2.44	3.14	6.358+j26.454	0.473+j9.254	2.72	3.45	5.977+j26.162	0.534+j10.030
CAHUISORI POTENCIA	CPO-230	230	1.39	1.65	21.604+j92.779	2.275+j52.294	1.58	1.83	19.643+j90.076	2.539+j56.198
CALIFORNIA	CFN-115	115	19.70	16.86	0.769+j3.282	1.373+j4.892	25.85	20.67	0.568+j2.767	1.372+j4.789



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
CAMARGO DOS	CGD-115	115	7.55	9.30	1.728+j8.627	0.234+j3.896	11.73	13.96	0.942+j6.157	0.272+j3.251
CAMARGO DOS	CGD-230	230	5.53	6.04	6.000+j23.254	2.119+j18.113	8.96	9.05	2.813+j16.051	2.096+j15.762
CAMARGO UNO	CGU-115	115	4.93	4.24	2.681+j13.188	3.931+j19.675	7.38	6.13	1.790+j9.737	3.521+j15.545
CANATLAN DOS	CND-115	115	4.75	5.45	2.650+j13.733	2.263+j8.319	5.47	6.13	2.361+j13.142	2.332+j8.776
CANATLAN DOS POTENCIA	CAP-115	115	4.99	5.98	2.318+j13.091	0.718+j6.682	5.76	6.72	2.036+j12.525	0.800+j7.173
CANATLAN DOS POTENCIA	CAP-230	230	3.35	3.53	6.635+j39.080	5.212+j33.292	4.07	4.08	5.321+j35.467	5.725+j35.136
CARICHIC	CRC-115	115	1.71	1.27	9.446+j37.610	31.303+j72.964	1.93	1.42	8.965+j36.789	31.338+j73.161
CAROLINAS	CAS-115	115	10.79	10.04	1.511+j5.964	2.199+j7.282	13.65	11.93	1.103+j5.236	2.217+j7.372
CARTAGENA	CAR-115	115	11.66	10.65	1.425+j5.513	2.352+j6.945	17.09	14.32	0.929+j4.171	2.196+j6.410
CASAS GRANDES	CGR-115	115	7.36	6.83	1.535+j8.887	2.355+j10.920	8.60	7.74	1.308+j8.394	2.384+j11.088
CATEDRAL	CAT-115	115	0.80	0.59	29.990+j76.989	68.181+j159.587	0.90	0.65	28.769+j76.031	68.337+j160.549
CATERPILLAR	CTP-115	115	11.42	10.17	1.336+j5.657	2.229+j7.645	13.97	11.99	1.115+j5.107	2.282+j7.510
CEBALLOS	CEB-115	115	1.04	0.62	25.191+j58.783	58.618+j184.155	2.12	1.32	13.178+j31.768	31.379+j92.177
CEMENTOS	CEM-115	115	9.42	7.57	1.726+j6.834	3.922+j11.578	11.35	8.81	1.487+j6.260	3.908+j11.399
CEMENTOS SAMALAYUCA	CMS-115	115	4.80	3.82	3.400+j13.398	9.365+j22.712	5.82	4.42	2.926+j12.214	9.387+j22.774
CERESO	CER-115	115	7.43	6.65	2.130+j8.683	4.347+j11.316	9.52	7.98	1.660+j7.494	4.369+j11.378
CERESO JUÁREZ	CEJ-115	115	6.83	5.95	2.329+j9.435	5.143+j13.125	8.64	7.07	1.858+j8.246	5.166+j13.187
CHALCHIHUITES	CHL-115	115	1.03	0.67	24.038+j59.945	71.008+j153.308	1.72	1.19	14.489+j39.884	39.141+j91.997
CHAMIZAL	CZL-115	115	13.87	13.48	1.129+j4.652	1.348+j5.033	21.21	19.70	0.663+j3.379	1.047+j4.113
CHARCOS	CHA-115	115	0.71	0.47	31.319+j88.205	99.593+j215.516	1.03	0.71	21.981+j67.457	67.013+j153.638
CHAVEÑA	CVA-115	115	12.47	11.74	1.276+j5.168	1.895+j6.038	18.08	15.64	0.823+j3.954	1.814+j5.674
CHÁVEZ UNO	CZU-115	115	10.03	8.95	1.521+j6.444	1.824+j8.829	12.87	10.97	1.085+j5.568	1.763+j8.483
CHIHUAHUA NORTE	CUN-115	115	13.04	14.37	1.182+j4.951	0.615+j3.708	16.98	17.60	0.782+j4.229	0.640+j3.820
CHIHUAHUA NORTE	CUN-230	230	9.10	8.70	3.302+j14.219	3.602+j16.449	13.29	11.33	1.792+j10.842	3.694+j16.394
CHIHUAHUA PLANTA	CUP-115	115	12.49	11.71	1.292+j5.154	1.796+j6.197	16.36	14.23	0.869+j4.378	1.806+j6.250
CHIHUAHUA PONIENTE	CPN-115	115	10.21	8.90	1.630+j6.294	3.022+j8.967	12.88	10.53	1.228+j5.536	3.033+j9.012
CHUVISCAR	CHU-115	115	14.89	17.78	0.979+j4.349	0.204+j2.367	20.67	22.91	0.555+j3.490	0.231+j2.514
CHUVISCAR	CHU-230	230	9.41	11.80	3.030+j13.790	0.533+j5.844	14.95	17.12	1.357+j9.673	0.613+j6.124
CIENÉGA	CIE-115	115	0.57	0.36	55.475+j101.707	137.623+j286.974	0.63	0.40	54.947+j101.355	137.752+j287.510
CIÉNEGA DOS	CID-115	115	0.58	0.37	54.618+j100.461	135.740+j282.094	0.64	0.41	54.092+j100.107	135.869+j282.631
CLID	CLI-115	115	6.67	5.54	2.345+j9.674	7.228+j14.562	8.53	8.95	1.799+j8.375	1.616+j7.185
COLEGIO	CLG-115	115	11.56	10.37	1.471+j5.554	2.595+j7.288	18.92	15.33	0.836+j3.768	2.188+j6.230
COMPLEJO DE SEGURIDAD	CSG-115	115	9.47	8.25	1.646+j6.812	3.185+j9.714	12.02	9.77	1.217+j5.954	3.201+j9.819
COMPLEJO INDUSTRIAL	CIN-115	115	10.71	10.01	1.585+j5.992	2.273+j7.216	13.57	11.93	1.167+j5.253	2.289+j7.295
COMPLEJO LALA	CLA-115	115	13.76	10.15	1.117+j4.696	3.221+j9.456	17.03	11.89	0.914+j4.189	3.219+j9.368
COMPONENTES	COM-115	115	11.48	11.38	1.443+j5.598	1.557+j5.800	14.66	13.66	1.035+j4.873	1.578+j5.900
CONCHEÑO	CON-115	115	1.91	2.04	8.770+j33.649	8.225+j26.764	2.11	2.24	8.460+j33.498	8.379+j27.664
CONCORDIA	CCD-115	115	13.45	14.04	1.070+j4.818	0.864+j4.299	18.21	17.53	0.644+j3.958	0.884+j4.416
CONEJOS MÉDANOS	CJM-115	115	2.54	2.78	6.605+j25.331	3.827+j18.926	3.20	3.32	5.162+j22.233	4.054+j19.873
CORONEL	CRN-115	115	8.72	5.95	1.474+j7.472	4.502+j17.685	10.45	6.83	1.212+j6.880	4.488+j17.570
CREEL	CRL-115	115	1.23	0.96	16.544+j51.553	39.497+j92.505	1.36	1.05	16.050+j51.049	39.572+j93.016
CUADRO DE MANIOBRAS BISMARCK	CMB-115	115	2.41	2.03	6.654+j26.748	15.894+j39.979	2.70	2.25	6.421+j26.328	15.932+j40.371



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
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			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
CUADRO DE MANIOBRAS CEMENTOS	CMC-115	115	5.08	4.09	3.206+j12.679	8.599+j20.970	6.18	4.74	2.732+j11.494	8.621+j21.032
CERRO DEL MERCADO	CME-115	115	8.39	8.27	1.667+j7.736	2.740+j7.856	10.19	9.73	1.374+j7.034	2.774+j7.755
CUADRO DE MANIOBRAS ELECTROLUX	CME-115	115	14.85	16.20	0.979+j4.364	0.606+j3.303	21.49	21.55	0.576+j3.350	0.620+j3.317
CUADRO DE MANIOBRAS FOX	CMF-115	115	11.67	10.36	1.353+j5.526	2.829+j7.360	15.78	12.84	0.966+j4.526	2.839+j7.339
CUADRO DE MANIOBRAS SAN FRANCISCO	CMF-115	115	2.63	3.00	8.048+j23.893	2.543+j15.939	3.08	3.41	6.943+j22.677	2.657+j16.835
CUADRO DE MANIOBRAS INTERNACIONAL WIRE	CMI-115	115	7.91	7.60	1.841+j8.187	3.420+j8.850	10.28	10.37	1.341+j6.978	1.939+j6.658
CUADRO DE MANIOBRAS LA PARRILLA	CMP-115	115	1.45	1.04	17.582+j42.340	34.883+j93.424	2.79	2.00	9.743+j24.283	21.187+j53.149
CUADRO DE MANIOBRAS NAICA	NAC-115	115	1.58	1.02	18.166+j37.909	37.330+j105.639	3.46	2.44	9.462+j18.901	17.146+j44.345
CUADRO DE MANIOBRAS NAICA	CMN-115B	115	1.58	1.02	18.166+j37.909	37.330+j105.639	3.46	2.44	9.462+j18.901	17.146+j44.345
CUADRO DE MANIOBRAS VITROMEJ	VIM-115	115	13.17	13.54	1.137+j4.911	1.153+j4.554	17.76	16.86	0.711+j4.050	1.168+j4.656
CUATRO SIGLOS	CSS-115	115	10.13	8.56	1.776+j6.307	3.551+j9.548	14.00	10.85	1.271+j5.061	3.406+j9.185
CUAUHTÉMOC	CHC-115	115	7.15	7.90	2.380+j8.976	1.799+j6.475	8.72	9.26	1.908+j8.154	1.842+j6.697
CUAUHTÉMOC DOS	CHD-115	115	8.50	10.83	1.781+j7.606	0.204+j2.872	10.42	12.84	1.357+j6.875	0.225+j3.096
CUAUHTÉMOC DOS	CHD-230	230	5.18	6.11	6.024+j24.939	1.389+j14.228	6.66	7.45	4.297+j21.513	1.537+j15.060
CUESTA	CUE-115	115	13.32	12.24	1.302+j4.810	2.069+j5.971	19.28	16.25	0.848+j3.693	1.926+j5.607
DELICIAS	DEL-115	115	7.71	7.26	2.174+j8.333	2.725+j9.909	11.20	9.88	1.215+j6.406	2.472+j8.822
DELICIAS DOS	DLD-115	115	2.55	2.75	7.119+j25.003	2.293+j20.451	11.20	9.92	1.210+j6.405	3.178+j8.570
DELPHI	DPH-115	115	13.20	10.92	1.194+j4.885	2.758+j7.727	16.36	12.97	0.985+j4.354	2.743+j7.538
DELPHI	DLP-115	115	13.40	12.66	1.161+j4.817	1.498+j5.633	21.66	20.58	0.658+j3.307	1.034+j3.771
DIAGONAL	DGN-115	115	11.02	8.75	1.285+j5.884	3.252+j10.241	13.49	10.25	1.050+j5.311	3.262+j10.092
DINAMITA	DIN-115	115	4.59	2.93	3.255+j14.102	11.273+j37.366	5.40	3.40	3.013+j13.188	11.085+j35.763
DIVISADERO	DIV-115	115	0.92	0.68	23.814+j68.347	59.969+j136.856	1.02	0.75	23.306+j67.870	60.050+j137.374
DIVISIÓN DEL NORTE	DDN-115	115	13.98	15.50	1.095+j4.622	0.564+j3.378	18.58	19.32	0.698+j3.868	0.583+j3.454
DIVISIÓN DEL NORTE	DDN-230	230	9.20	8.97	3.127+j14.095	3.261+j15.497	13.59	11.83	1.633+j10.624	3.324+j15.285
DUNAS	DUN-115	115	3.86	2.88	4.427+j16.613	13.578+j32.282	4.59	3.28	3.952+j15.429	13.601+j32.345
DURANGO DOS	DGD-115	115	11.18	13.76	1.054+j5.843	0.271+j2.601	14.20	17.19	0.756+j5.089	0.314+j2.445
DURANGO DOS	DGD-230	230	7.73	8.66	2.820+j16.955	1.706+j11.530	10.30	11.02	1.847+j14.065	1.786+j11.287
DURANGO UNO	DGU-115	115	9.65	10.04	1.331+j6.748	1.995+j5.796	11.81	11.89	1.073+j6.090	2.014+j5.772
DURAPLAY	DUR-115	115	2.13	2.01	11.157+j29.126	9.421+j35.550	2.46	2.26	10.039+j27.961	9.536+j36.450
EL CAPULIN	ECU-115	115	3.78	3.00	3.984+j17.113	10.962+j29.362	4.29	3.35	3.752+j16.599	10.982+j29.518
EL PILAR	ELP-115	115	2.95	1.96	7.685+j21.122	16.701+j53.977	3.53	3.13	6.656+j19.585	5.091+j28.401
EL SALTO	ESL-115	115	1.26	0.80	18.664+j49.423	64.330+j129.004	1.38	0.88	18.630+j49.448	64.363+j129.027
EL SAUCITO	SAU-115	115	9.77	7.87	1.694+j6.580	3.093+j11.375	12.23	9.22	1.282+j5.834	3.107+j11.424
EL SAUZ	ESZ-115	115	3.20	2.47	8.174+j19.084	14.874+j36.079	3.66	2.77	7.767+j18.378	14.898+j36.191
EL TRÉBOL	TRE-115	115	1.54	1.27	10.384+j41.855	13.991+j68.868	2.06	1.70	7.959+j34.544	10.717+j56.656
EL VERGEL	ELV-115	115	8.55	5.42	1.521+j7.619	4.703+j20.709	10.32	6.28	1.295+j6.955	4.651+j20.251
EMILIANO ZAPATA	EZT-115	115	3.90	3.01	5.332+j16.167	13.253+j29.290	4.40	3.36	5.174+j15.757	13.248+j29.376
ENCINO	ENO-230	230	13.44	17.27	2.075+j9.658	0.276+j3.626	24.23	29.80	0.705+j5.987	0.176+j2.750
ENCINO	ENO-400	400	6.47	7.28	5.994+j35.212	1.070+j24.653	9.65	10.12	2.297+j26.217	0.737+j22.966
ENCINO DOS	END-230	230	13.44	17.19	2.075+j9.663	0.313+j3.724	23.99	28.90	0.713+j6.048	0.276+j3.084
ESCALÓN	ESC-115	115	1.08	0.71	22.335+j57.439	58.182+j148.244	2.17	1.37	12.699+j31.217	31.042+j86.923
ESCUADRÓN 201	EDU-115	115	6.69	4.61	2.463+j9.612	8.154+j21.969	7.79	5.21	2.254+j9.106	8.152+j21.881



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			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
FLEXTRONICS	FLE-115	115	13.00	12.52	1.060+j4.997	1.749+j5.440	18.09	15.91	0.663+j3.983	1.762+j5.457
FORD	FRD-115	115	11.42	11.39	1.431+j5.636	1.551+j5.721	14.56	13.66	1.024+j4.911	1.572+j5.821
FORD MANIOBRAS	FOM-115	115	11.81	11.99	1.376+j5.453	1.352+j5.268	15.13	14.45	0.969+j4.728	1.373+j5.368
FOXCONN DOS	FXD-115	115	4.61	2.22	2.640+j14.158	24.037+j56.315	5.51	2.51	2.220+j13.079	24.034+j56.190
FRANCISCO VILLA	FVL-115	115	10.81	11.63	1.316+j6.000	0.527+j4.889	17.08	18.32	0.539+j4.241	0.198+j3.432
FRANCISCO VILLA	FVL-230	230	7.17	7.57	4.681+j17.907	2.660+j15.651	13.79	15.09	1.559+j10.479	0.795+j7.876
FRANCISCO ZARCO	FZA-115	115	7.80	4.86	1.708+j8.342	5.144+j23.445	9.65	5.84	1.470+j7.424	4.957+j21.843
FRANCKE	FRC-115	115	26.80	30.95	0.454+j2.436	0.190+j1.479	37.53	41.43	0.265+j1.928	0.183+j1.411
FUENTES	FTS-115	115	10.31	8.79	1.732+j6.204	3.429+j9.174	14.83	11.57	1.181+j4.781	3.194+j8.551
FUENTES MARES	FMR-115	115	13.97	13.86	1.031+j4.638	0.930+j4.857	19.04	17.28	0.612+j3.786	0.947+j4.945
FUNDILAG	FDL-115	115	10.36	8.90	1.503+j6.230	2.919+j9.117	12.54	10.41	1.281+j5.680	2.963+j8.969
GALEANA	GNA-115	115	3.17	2.34	5.102+j20.346	16.379+j40.313	3.59	2.61	4.847+j19.781	16.391+j40.319
GAMMON LAKE	GML-115	115	1.84	1.94	8.555+j35.079	9.336+j29.395	2.04	2.13	8.174+j34.789	9.398+j30.171
GASASEACHIC	GAS-115	115	1.93	2.08	8.663+j33.272	7.818+j25.838	2.14	2.28	8.353+j33.120	7.972+j26.738
GAVILÁN	GAV-115	115	1.43	1.00	12.451+j44.655	42.407+j97.704	1.60	1.11	12.144+j43.930	42.326+j97.093
GÉMINIS	GEM-115	115	12.45	11.34	1.357+j5.158	2.447+j6.481	17.13	14.23	0.972+j4.152	2.456+j6.458
GENERAL TRÍAS	GTR-115	115	4.66	3.61	3.303+j13.851	10.370+j24.846	5.46	4.09	2.873+j13.072	10.384+j24.909
GÓMEZ PALACIO	GPL-115	115	27.50	34.15	0.434+j2.375	0.071+j1.016	38.78	46.74	0.245+j1.867	0.064+j0.948
GÓMEZ PALACIO	GPL-230	230	11.95	13.30	1.930+j10.945	0.707+j7.765	18.98	20.88	0.869+j7.645	0.507+j5.746
GRANJERO	GJO-115	115	12.30	11.50	1.326+j5.233	2.719+j6.010	17.02	14.57	0.900+j4.196	2.702+j5.954
GRUPO ESSEX MÉXICO	GEX-115	115	9.58	8.25	1.684+j6.720	3.234+j9.778	11.55	9.68	1.452+j6.155	3.203+j9.517
GUACHOCHI	GCH-115	115	0.66	0.49	30.114+j95.935	82.072+j190.663	0.74	0.54	28.905+j94.823	82.227+j191.622
GUADALUPE VICTORIA	GVR-115	115	1.91	1.43	11.297+j32.958	8.419+j70.218	2.18	1.70	10.708+j31.714	2.772+j62.798
GUADIANA	GDN-115	115	7.00	6.15	2.231+j9.221	4.914+j12.575	8.31	7.06	1.952+j8.575	4.947+j12.599
GUENACEVÍ DURANGO	GVD-115	115	0.57	0.40	39.379+j109.524	105.567+j239.190	0.64	0.45	38.095+j108.519	105.736+j240.172
HACIENDAS	HDS-115	115	9.29	7.65	1.792+j6.915	3.351+j11.352	11.56	8.95	1.387+j6.162	3.363+j11.398
HÉRCULES	HCL-230	230	1.03	0.90	33.894+j124.440	42.001+j182.497	1.36	1.09	25.399+j104.588	42.674+j182.307
HÉRCULES POTENCIA	HCP-400	400	3.14	2.04	7.902+j73.151	49.809+j187.095	3.86	2.39	5.333+j65.556	49.108+j182.691
IBERDROLA	IEL-115	115	27.50	33.97	0.423+j2.377	0.069+j1.049	38.41	45.64	0.241+j1.886	0.072+j1.023
INDUSTRIAL JUÁREZ	INJ-115	115	14.29	13.86	1.176+j4.493	1.653+j4.815	20.81	18.90	0.755+j3.428	1.362+j4.381
INDUSTRIAS SUPERIOR	ISP-115	115	11.39	11.35	1.431+j5.649	1.566+j5.755	14.52	13.61	1.024+j4.925	1.588+j5.855
INSURGENTES	IGS-115	115	14.97	16.70	0.999+j4.321	0.526+j3.017	22.22	23.04	0.589+j3.234	0.524+j2.893
INTERCERAMIC	ITC-115	115	10.55	9.79	1.612+j6.083	2.377+j7.454	13.34	11.64	1.194+j5.345	2.393+j7.533
INTERMEX ORIENTE	INO-115	115	11.90	12.44	1.285+j5.427	3.589+j3.934	16.30	15.90	0.866+j4.397	3.572+j3.927
INTERMEX SUR	INS-115	115	12.35	12.14	1.209+j5.240	1.551+j5.452	16.98	15.35	0.806+j4.226	1.566+j5.466
INTERNATIONAL WIRE	INW-115	115	7.78	7.51	1.881+j8.319	3.445+j8.907	10.08	10.21	1.381+j7.110	1.964+j6.715
JABIL	JAB-115	115	10.46	9.68	1.626+j6.136	2.427+j7.567	13.20	11.50	1.207+j5.398	2.443+j7.645
JANOS	JOS-115	115	4.56	3.96	2.735+j14.310	5.526+j20.483	5.21	4.43	2.508+j13.802	5.546+j20.691
JARDÍN	JAR-115	115	15.23	12.95	0.977+j4.247	1.831+j6.414	19.54	15.94	0.744+j3.663	1.733+j6.065
JERÓNIMO ORTIZ MARTÍNEZ	JOM-115	115	11.66	14.77	0.842+j5.633	0.177+j2.101	14.41	17.75	0.648+j5.028	0.202+j2.205
JERÓNIMO ORTIZ MARTÍNEZ	JOM-230	230	9.07	10.72	2.136+j14.488	0.837+j7.864	12.03	13.64	1.348+j12.066	0.936+j7.811
JERÓNIMO ORTIZ MARTÍNEZ	JOM-400	400	5.29	4.96	5.452+j43.325	5.431+j52.100	6.72	5.87	3.108+j37.669	5.927+j53.979



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
JIMÉNEZ	JEZ-115	115	3.10	2.47	5.998+j20.582	13.969+j35.372	4.76	3.84	4.368+j14.699	8.753+j24.864
JOHN DEREÉ	JND-115	115	10.05	8.88	1.596+j6.412	2.854+j8.791	12.17	10.46	1.364+j5.847	2.823+j8.531
KILOMETRO OCHENTA Y OCHO	KOO-115	115	5.01	3.70	3.619+j12.760	7.380+j26.431	6.42	4.50	2.826+j11.021	7.049+j24.970
LA FLOR	LAF-115	115	1.60	1.16	9.494+j40.370	35.706+j82.274	1.79	1.28	9.295+j39.764	35.732+j82.379
LA LAGUNA	LGA-115	115	23.86	22.88	0.558+j2.726	0.676+j3.075	33.38	31.68	0.339+j2.161	0.473+j2.523
LA PARILLA	LPA-115	115	1.38	0.98	18.170+j44.477	37.568+j100.394	2.57	1.80	10.316+j26.443	23.870+j60.117
LA PERLA	LPL-115	115	1.03	0.76	20.286+j60.985	59.895+j120.903	3.56	3.69	5.156+j19.851	6.397+j17.363
LA ROSITA	LRT-115	115	7.95	6.30	3.127+j7.746	5.445+j13.878	9.46	7.23	2.884+j7.162	5.469+j13.828
LA SALADA	LSA-115	115	1.79	1.41	9.136+j35.925	25.683+j62.181	2.00	1.56	8.902+j35.507	25.722+j62.574
LA TRINIDAD	LTR-230	230	9.30	11.05	1.781+j14.166	0.635+j7.517	12.91	15.56	1.025+j11.270	0.362+j5.569
LA UNIÓN	LAU-115	115	18.36	13.69	0.762+j3.535	1.827+j7.096	23.74	16.39	0.561+j3.024	1.823+j7.018
LAGOS	LAG-115	115	12.79	11.71	1.375+j5.007	2.287+j6.245	18.07	15.08	0.933+j3.934	2.257+j6.071
LAGUNA DEL REY	LRE-115	115	1.06	1.23	19.378+j59.543	2.745+j37.876	1.15	1.32	19.820+j60.155	3.312+j40.427
LAGUNA DOS	LGD-115	115	23.68	22.55	0.567+j2.745	0.696+j3.156	33.06	31.06	0.348+j2.181	0.498+j2.617
LAGUNA ENCINILLAS	LEN-230	230	3.70	2.54	5.693+j35.475	22.166+j82.741	4.45	2.92	4.460+j32.509	22.053+j81.963
LAGUNA SECA	LSC-115	115	9.63	8.76	1.924+j6.620	2.564+j8.578	11.70	10.23	1.675+j6.012	2.660+j8.558
LAJAT	LJT-115	115	14.18	11.86	0.985+j4.579	2.459+j7.049	17.43	14.03	0.911+j4.091	2.445+j6.859
LALA	LAL-115	115	19.60	17.33	0.718+j3.310	1.309+j4.548	26.16	22.57	0.499+j2.746	1.110+j4.008
LAS CUATAS	CUA-115	115	2.19	1.56	4.624+j29.924	26.697+j62.502	2.48	1.75	4.332+j29.184	26.579+j61.826
LÁZARO CÁRDENAS	LCS-115	115	3.81	3.34	5.098+j16.666	5.724+j24.146	7.29	5.23	1.980+j9.822	5.761+j21.099
LEBARON	LEB-115	115	1.77	1.25	9.816+j36.205	33.183+j78.327	1.98	1.38	9.556+j35.643	33.195+j78.333
LEÓN GUZMÁN	LGM-115	115	5.63	3.55	2.190+j11.591	9.960+j31.020	6.54	4.01	1.922+j11.003	9.945+j30.877
LEONI CABLE	LEO-115	115	7.99	9.01	1.915+j8.082	1.241+j5.420	9.74	10.56	1.490+j7.352	1.262+j5.643
LERDO	LED-230	230	11.09	11.03	2.188+j11.767	2.235+j12.002	17.80	18.94	0.999+j8.146	0.933+j6.968
LEXMARK	LEX-115	115	9.94	8.29	1.616+j6.479	3.922+j9.974	13.02	10.02	1.210+j5.478	3.932+j9.967
LEXMARK DOS	LXD-115	115	9.93	8.75	1.254+j6.568	3.271+j8.901	12.99	10.62	0.854+j5.556	3.285+j8.918
LIBERTAD	LTD-115	115	12.59	11.06	1.413+j5.083	2.424+j7.068	17.73	14.30	0.972+j4.002	2.260+j6.737
LÓPEZ MATEOS	LZM-115	115	3.49	3.35	4.773+j18.406	7.427+j20.173	4.01	3.77	4.301+j17.713	7.460+j20.467
MANIOBRA BORDER SOLAR	MBS-230	230	10.78	11.78	2.032+j12.154	1.811+j9.019	17.76	20.02	0.908+j8.172	0.822+j5.394
MANIOBRAS CENTAURO	MAC-115	115	4.48	4.26	3.304+j14.444	4.255+j16.604	6.51	5.98	2.668+j10.901	4.002+j13.665
MANIOBRAS CERRO DEL MERCADO	MCM-115	115	7.91	7.17	1.817+j8.194	3.899+j10.339	9.54	8.35	1.527+j7.506	3.930+j10.276
MANIOBRAS CIENTO OCHO	MCO-115	115	4.58	3.77	3.948+j13.956	7.068+j22.885	5.34	4.26	3.500+j13.210	7.087+j23.089
MANIOBRAS HUERTRO SOLAR DURANGO	MHS-230	230	4.29	4.67	4.992+j30.530	3.548+j23.178	5.41	5.57	3.716+j26.767	3.882+j24.304
MANIOBRAS MARÍA SOLAR	MMS-230	230	4.02	4.77	5.173+j32.642	1.159+j17.469	5.12	5.79	3.738+j28.266	1.334+j18.693
MANIOBRAS MIELERAS	MMI-115	115	13.16	12.01	1.120+j4.918	1.770+j6.261	16.39	14.40	0.898+j4.365	1.791+j6.077
MANIOBRAS MINA MULATOS	MMT-115	115	1.17	1.01	15.667+j54.644	31.201+j77.740	1.41	1.25	13.552+j49.907	25.985+j66.737
MANIOBRAS MNP	MNP-230	230	4.63	5.25	5.195+j28.205	2.043+j18.586	6.15	6.51	3.382+j23.493	2.293+j19.752
MANIOBRAS MVC	MVC-115	115	8.72	10.25	1.430+j7.479	0.753+j4.143	10.63	12.06	1.170+j6.772	0.819+j4.352
MANIOBRAS PARQUE EÓLICO	MPE-115	115	1.42	1.71	13.169+j44.980	1.519+j23.055	1.53	1.82	13.753+j45.801	1.751+j25.018
MANIOBRAS PEÑÓLES	MPL-230	230	9.71	8.87	2.552+j13.437	3.682+j17.181	14.33	12.79	1.400+j10.096	2.949+j13.854
MANIOBRAS SABINAS	MAS-115	115	1.02	0.64	27.757+j58.701	73.190+j164.957	1.69	1.11	18.263+j39.144	41.367+j103.648
MANIOBRAS SANTA ROSA	MSR-115	115	3.95	3.06	4.172+j16.286	12.435+j29.296	4.59	3.45	3.717+j15.488	12.455+j29.390



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			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
MANIOBRAS TREINTA Y CUATRO	MTC-115	115	5.40	5.12	3.188+j11.871	5.032+j13.515	6.42	5.88	2.710+j11.052	5.066+j13.711
MANIOBRAS VILLANUEVA	MVI-400	400	6.40	7.34	5.007+j35.758	2.573+j22.100	9.01	9.99	2.586+j28.073	2.114+j19.995
MANITOBA	MBA-115	115	5.65	4.67	2.666+j11.449	4.319+j18.716	6.68	5.31	2.231+j10.710	4.337+j18.917
MAPIMI	MPI-115	115	2.41	1.38	5.591+j26.967	20.785+j86.699	2.89	1.65	5.264+j24.731	19.521+j79.821
MASISA	MSS-115	115	6.48	5.79	2.235+j10.001	5.028+j13.058	7.69	6.68	1.941+j9.301	5.063+j12.957
MATAMOROS	MAT-115	115	11.05	10.13	1.354+j5.855	2.222+j7.332	13.47	11.90	1.115+j5.307	2.203+j7.294
MAYRAN	MAY-115	115	4.06	2.84	4.194+j15.800	12.470+j35.482	4.69	3.20	3.816+j15.091	12.425+j35.322
MÉDANOS	MED-115	115	10.53	8.60	1.421+j6.141	3.390+j10.024	14.02	10.50	0.990+j5.113	3.389+j9.950
MENONITAS	MEN-115	115	2.82	2.33	6.239+j22.719	14.090+j36.072	3.21	2.60	5.787+j22.008	14.131+j36.437
MEOQUI	MOQ-115	115	3.07	2.92	6.163+j20.757	4.963+j24.647	8.01	5.91	1.716+j8.951	5.617+j18.065
MESTEÑAS	MES-115	115	2.72	3.62	5.723+j23.764	0.193+j6.327	4.22	5.40	3.866+j16.880	0.339+j6.059
MESTEÑAS	MES-115B	115	2.71	3.60	5.738+j23.838	0.283+j6.506	4.21	5.36	3.877+j16.919	0.428+j6.221
MESTEÑAS	MES-230	230	1.62	1.97	21.026+j79.226	1.910+j38.772	2.43	2.77	13.741+j58.456	2.565+j38.593
MILENIO	MIL-115	115	7.86	7.61	1.635+j8.288	3.281+j8.759	9.36	8.80	1.411+j7.673	3.299+j8.803
MINA CERRO DEL MERCADO	CDM-115	115	7.78	6.50	1.870+j8.327	5.077+j12.694	9.36	7.53	1.579+j7.638	5.108+j12.631
MINERA AUTLÁN	MAU-115	115	14.32	10.14	0.940+j4.541	2.111+j10.166	17.89	11.88	0.729+j4.016	2.106+j10.088
MINERA AUTLÁN TAP	MAX-115	115	14.82	10.58	0.885+j4.392	2.002+j9.665	18.61	12.44	0.673+j3.867	1.997+j9.586
MINERA DEL TORO	MDT-115	115	1.01	0.66	24.289+j60.837	71.955+j155.456	1.68	1.16	14.733+j40.787	40.088+j94.145
MINERA DOLORES	MDO-115	115	0.80	0.63	23.309+j79.741	58.225+j138.330	1.24	1.06	15.597+j56.826	33.406+j83.190
MINERA ROBLE	MRO-115	115	1.54	0.91	18.298+j39.041	46.891+j124.854	1.72	1.00	17.990+j38.541	46.874+j124.709
MINERA SAN JUAN	SAJ-115	115	0.68	0.48	36.518+j90.878	86.064+j199.604	0.76	0.53	35.289+j89.983	86.221+j200.569
MIRAVALLE	MIR-115	115	16.63	13.46	0.729+j3.925	1.443+j6.669	21.25	16.15	0.530+j3.395	1.433+j6.570
MOCTEZUMA	MCZ-115	115	13.00	15.83	0.664+j5.064	0.146+j2.393	16.81	20.92	0.377+j4.329	0.071+j1.791
MOCTEZUMA	MCZ-230	230	10.70	11.74	2.152+j12.220	1.011+j9.166	15.90	17.36	1.081+j9.124	0.587+j6.876
MOCTEZUMA	MCZ-400	400	5.47	1.97	6.507+j41.745	60.384+j260.386	7.61	2.30	3.299+j33.220	60.120+j258.847
MONTE VERDE	MTV-115	115	2.00	1.52	7.890+j32.322	5.737+j64.513	2.23	1.68	7.661+j31.815	5.757+j64.722
NAICA	NAI-115	115	1.59	1.03	18.058+j37.538	36.695+j104.346	3.46	2.44	9.449+j18.898	17.198+j44.535
NAMIQUIPA	NQA-115	115	2.51	2.03	6.623+j25.594	14.257+j43.022	2.84	2.25	6.183+j24.957	14.327+j43.634
NAZAS	NAZ-115	115	20.29	22.87	0.630+j3.211	0.246+j2.165	27.79	30.20	0.385+j2.599	0.232+j2.024
NAZAS	NAZ-230	230	11.00	11.38	2.170+j11.875	1.515+j10.808	16.85	16.85	1.079+j8.601	1.354+j8.803
NICOLÁS BRAVO	NCB-115	115	1.21	0.88	15.422+j52.722	43.787+j109.490	1.35	0.97	14.966+j52.101	43.859+j110.106
NOMBRE DE DIOS	NDD-115	115	10.91	10.12	1.531+j5.891	2.286+j7.229	13.89	12.08	1.115+j5.139	2.301+j7.302
NORTE CERESO	NCE-230	230	14.64	18.54	1.503+j8.947	0.188+j3.371	28.14	33.39	0.490+j5.168	0.249+j2.745
NUEVA HOLANDA	NHO-115	115	1.49	1.19	10.815+j43.207	15.885+j77.323	1.96	1.48	8.451+j36.196	14.706+j72.094
NUEVO CASAS GRANDES	NCG-115	115	9.24	11.26	1.010+j7.112	0.224+j3.347	10.91	12.91	0.792+j6.647	0.247+j3.584
NUEVO CASAS GRANDES	NCG-230	230	6.11	6.61	3.278+j21.476	2.093+j16.806	7.63	7.83	2.367+j18.998	2.274+j17.542
NUEVO IDEAL	NID-115	115	1.53	1.15	16.840+j39.869	38.660+j76.976	1.71	1.27	16.478+j39.360	38.754+j77.467
OASIS	OAS-115	115	1.46	1.15	11.516+j44.090	16.582+j80.087	1.92	1.47	9.021+j36.994	14.396+j71.505
OCAMPO	OCP-115	115	9.95	8.58	1.656+j6.468	3.267+j9.397	12.60	10.17	1.241+j5.664	3.276+j9.445
OJINAGA	OJI-115	115	0.84	0.61	26.487+j74.831	56.584+j158.913	1.01	0.72	23.625+j68.172	54.319+j150.241
ORIENTE VEINTIUNO	OTV-115	115	11.53	9.95	1.282+j5.616	2.792+j8.067	15.62	12.31	0.862+j4.596	2.795+j8.033
PAILA	PLA-115	115	0.99	0.92	20.487+j63.718	27.264+j77.096	1.07	1.00	21.199+j64.745	27.502+j79.070



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
PALMAREJO	PAL-115	115	0.65	0.46	36.432+j95.293	94.796+j213.712	0.72	0.50	35.914+j94.860	94.880+j214.236
PALOMAR	PMR-115	115	8.62	6.89	1.855+j7.472	3.536+j13.101	10.62	8.01	1.447+j6.722	3.549+j13.157
PALOMAS	PMS-115	115	1.53	1.17	11.098+j42.038	32.138+j76.738	1.70	1.30	10.864+j41.620	32.177+j77.131
PAPELERA CHIHUAHUA	PCH-115	115	10.57	9.58	1.426+j6.119	2.408+j7.949	13.64	11.49	0.997+j5.262	2.425+j8.055
PARQUE	PQE-115	115	15.68	17.15	1.032+j4.106	0.755+j3.058	24.34	25.32	0.569+j2.946	0.577+j2.596
PARRAL	PAR-115	115	2.02	1.84	11.825+j30.725	11.155+j41.382	2.32	2.06	10.703+j29.567	11.271+j42.283
PARRAS	PRA-115	115	1.26	1.30	14.972+j50.401	11.802+j46.291	1.36	1.39	15.681+j51.436	12.038+j48.261
PASO DEL AGULIA	PSA-115	115	10.38	7.38	1.531+j6.209	4.683+j13.429	12.48	8.50	1.324+j5.702	4.680+j13.341
PASO DEL NORTE	PNR-115	115	15.82	18.93	0.955+j4.086	0.268+j2.129	24.00	27.02	0.545+j2.994	0.266+j2.010
PASO DEL NORTE	PNR-230	230	8.76	10.37	2.842+j14.893	1.490+j7.969	13.62	15.49	1.422+j10.631	1.286+j6.732
PATRIA	PAT-115	115	11.14	9.31	1.406+j5.793	3.344+j8.910	15.01	11.44	0.983+j4.765	3.336+j8.868
PEDRICEÑA	PDA-115	115	1.65	0.97	17.277+j36.214	43.643+j117.483	1.85	1.07	16.970+j35.710	43.627+j117.338
PEÑOLES	PEL-230	230	9.38	8.40	2.644+j13.914	4.083+j18.724	13.67	11.90	1.486+j10.581	3.350+j15.397
PHILIPS	PHS-115	115	22.99	19.80	0.564+j2.833	0.779+j4.222	31.07	24.63	0.368+j2.321	0.773+j4.149
PONDERCEL	POE-115	115	5.61	6.01	2.863+j11.490	2.226+j9.285	6.59	6.83	2.472+j10.800	2.352+j9.695
POPULAR	PPR-115	115	5.15	3.72	4.382+j12.133	8.583+j26.377	6.12	4.28	3.940+j11.271	8.523+j26.031
PORVENIR	PRR-115	115	1.71	1.20	10.494+j37.455	34.558+j82.179	1.93	1.33	10.057+j36.470	34.725+j82.426
PUENTE DE NEGROS	PDN-115	115	2.43	1.72	8.395+j25.948	25.039+j55.790	5.75	4.94	3.510+j12.198	6.341+j17.879
PUERTO JUSTO	PTJ-115	115	1.78	1.63	12.290+j35.248	15.753+j45.106	2.04	1.82	11.140+j34.090	15.886+j46.031
QUEVEDO	QVD-115	115	5.19	5.92	2.604+j12.530	0.567+j8.166	6.05	6.66	2.178+j11.878	0.633+j8.771
QUEVEDO	QVD-230	230	3.02	3.22	9.330+j42.975	3.752+j36.037	3.62	3.69	7.537+j39.643	4.151+j38.143
QUINCE DE OCTUBRE	QDO-115	115	7.30	7.05	1.986+j8.870	3.374+j9.528	8.71	8.13	1.715+j8.205	3.422+j9.662
RANCHO LUCERO	RLO-115	115	12.06	8.34	1.108+j5.392	2.920+j12.558	14.78	9.67	0.891+j4.860	2.915+j12.477
REFORMA	REA-115	115	18.07	22.61	0.773+j3.593	0.143+j1.464	27.88	32.66	0.404+j2.588	0.158+j1.466
REFORMA	REA-230	230	11.86	13.91	2.132+j10.992	0.838+j6.209	20.67	21.80	0.903+j7.009	0.935+j5.905
REGIO MÁRMOL	REM-115	115	4.26	2.73	3.531+j15.163	12.398+j39.921	4.99	3.16	3.289+j14.250	12.210+j38.318
REVOLUCIÓN	REV-115	115	7.85	6.01	2.149+j8.182	5.901+j15.152	9.27	6.88	1.915+j7.639	5.890+j15.079
RIO FLORIDO	RIF-115	115	3.03	2.44	5.771+j21.113	14.030+j35.268	4.28	4.02	4.281+j16.535	4.724+j19.777
RIVEREÑA	RVA-115	115	13.81	13.71	1.155+j4.668	1.385+j4.724	22.17	21.36	0.645+j3.231	0.996+j3.544
ROBERT BOSH	ROB-115	115	11.74	10.64	1.477+j5.462	2.561+j6.970	16.27	13.57	1.029+j4.370	2.515+j6.742
ROBINSON	RNN-115	115	11.85	11.28	1.235+j5.464	1.688+j6.309	15.62	13.73	0.807+j4.606	1.704+j6.415
RUIZ CORTINES	RCS-115	115	3.98	3.68	3.640+j16.302	4.228+j20.392	4.57	4.11	3.208+j15.655	4.295+j20.999
SABINAS	SAB-115	115	1.01	0.63	28.256+j59.638	74.359+j167.994	1.65	1.08	18.755+j40.104	42.536+j106.685
SACRAMENTO	SCT-115	115	19.95	18.98	0.666+j3.261	1.073+j3.702	26.43	24.04	0.459+j2.725	0.989+j3.486
SALVARCAR	SVC-115	115	12.00	10.68	1.268+j5.384	2.679+j7.147	16.36	13.28	0.864+j4.380	2.688+j7.139
SAMALAYACA SUR	SYS-230	230	12.39	12.97	1.870+j10.554	1.829+j9.132	27.42	29.69	0.473+j5.306	0.582+j4.085
SAMALAYUCA	SYC-230	230	12.60	13.43	1.832+j10.375	1.648+j8.466	29.39	34.18	0.406+j4.953	0.229+j2.894
SAN ANTONIO DE BELÉN	ABE-115	115	1.08	0.68	25.875+j55.742	69.062+j154.292	1.85	1.22	16.450+j35.992	37.257+j92.999
SAN BUENAVENTURA	SBV-115	115	3.16	2.29	5.398+j20.302	17.305+j41.552	3.59	2.56	5.118+j19.713	17.301+j41.440
SAN FRANCISCO DE BORJA	SFB-115	115	1.52	0.98	11.398+j42.279	36.218+j110.265	1.70	1.09	10.915+j41.499	36.238+j110.362
SAN FRANCISCO DEL ORO	SFO-115	115	2.40	2.53	9.029+j26.184	5.177+j22.784	2.79	2.86	7.925+j24.970	5.291+j23.680
SAN IGNACIO	SIG-115	115	2.32	1.65	7.647+j27.625	24.198+j58.712	2.65	1.85	7.213+j26.638	24.365+j58.959



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
SAN ISIDRO	SID-115	115	7.00	5.81	2.190+j9.230	4.664+j14.607	8.68	6.76	1.773+j8.230	4.829+j14.853
SAN JERÓNIMO	SJE-115	115	4.99	2.34	2.452+j13.081	23.091+j54.166	6.00	2.65	2.032+j12.002	23.088+j54.042
SAN MARTIN	MRT-115	115	1.01	0.64	28.015+j59.154	73.773+j166.475	1.67	1.09	18.515+j39.614	41.950+j105.166
SAN PEDRO	SPD-115	115	6.32	4.58	2.452+j10.216	6.344+j21.566	7.51	5.25	2.080+j9.500	6.299+j21.406
SAN PEDRO POTENCIA	SPP-115	115	3.87	4.87	3.949+j16.701	0.512+j6.737	4.42	5.45	3.501+j16.131	0.572+j7.224
SAN PEDRO POTENCIA	SPP-230	230	2.28	2.59	13.337+j56.698	3.304+j37.965	2.67	2.93	11.373+j53.559	3.646+j40.219
SANTA BÁRBARA	BBA-115	115	2.50	2.72	8.936+j24.978	3.968+j20.137	2.92	3.07	7.839+j23.765	4.080+j21.029
SANTA MARÍA DEL ORO	SMO-115	115	0.79	0.58	28.293+j79.137	68.602+j158.567	0.88	0.65	27.046+j78.076	68.762+j159.535
SANTIAGO DOS	SGD-115	115	2.84	3.43	7.437+j22.177	0.629+j11.615	3.34	3.91	6.340+j20.951	0.741+j12.506
SANTIAGO DOS	SGD-230	230	1.62	1.84	25.901+j77.940	3.702+j53.664	1.95	2.12	21.390+j71.739	4.353+j57.386
SANTIAGO PAPASQUIARO	SGP-115	115	1.11	0.79	25.815+j53.933	61.617+j118.191	1.23	0.87	25.409+j53.470	61.724+j118.698
SANTIAGO UNO	SGU-115	115	2.78	3.31	7.693+j22.646	1.107+j12.701	3.26	3.76	6.596+j21.423	1.218+j13.592
SANTOS SOLAR MANIOBRAS	SSM-115	115	11.70	13.30	0.752+j5.624	0.674+j3.592	14.89	17.16	0.463+j4.884	0.559+j2.919
SAUZAL	SAZ-115	115	10.38	8.53	1.517+j6.213	3.592+j9.978	13.85	10.45	1.076+j5.163	3.575+j9.844
SETENTA Y TRES	SAT-115	115	1.78	1.35	10.286+j35.841	28.101+j67.815	2.00	1.50	9.829+j35.138	28.142+j68.180
SOMBRETE	SOM-115	115	0.97	0.61	29.164+j61.813	76.671+j173.947	1.57	1.02	19.675+j42.201	44.833+j112.625
TABALAOA	TBL-115	115	12.06	12.05	1.363+j5.336	1.684+j5.326	15.97	14.81	0.938+j4.476	1.698+j5.429
TACUBAYA	TBA-115	115	1.04	0.76	20.110+j60.487	59.372+j119.717	3.66	3.84	4.985+j19.347	5.874+j16.177
TAKATA	TAK-115	115	14.36	12.79	1.037+j4.506	1.944+j6.038	18.04	15.49	0.824+j3.964	1.915+j5.782
TECNOLÓGICO	TEC-115	115	11.25	10.15	1.565+j5.689	2.681+j7.370	15.39	12.77	1.119+j4.610	2.652+j7.235
TERRANOVA	TER-115	115	16.27	19.50	0.878+j3.986	0.257+j2.048	24.27	27.06	0.482+j2.971	0.271+j2.065
TERRANOVA	TER-230	230	11.43	12.70	2.184+j11.414	1.207+j8.060	20.60	20.28	0.842+j7.042	1.251+j7.338
TORREÓN	TRR-115	115	12.20	9.51	1.055+j5.340	2.677+j9.712	15.15	11.22	0.813+j4.751	2.677+j9.575
TORREÓN ORIENTE	TOT-115	115	15.95	13.93	0.957+j4.051	1.863+j5.692	20.29	16.91	0.747+j3.520	1.848+j5.502
TORREÓN SUR	TRS-115	115	18.73	20.18	0.687+j3.478	0.334+j2.773	24.66	26.24	0.471+j2.924	0.285+j2.435
TORREÓN SUR	TRS-230	230	11.41	13.24	2.003+j11.467	0.557+j6.836	16.70	18.53	1.050+j8.681	0.608+j6.314
TORREÓN SUR	TRS-400	400	6.98	7.91	5.070+j32.718	2.257+j21.333	9.81	10.60	2.607+j25.751	2.123+j20.263
TORREONCITOS SOLAR	TOS-115	115	2.96	2.39	6.002+j21.576	14.279+j35.834	4.16	3.95	4.488+j16.970	4.662+j19.906
TORRES	TOR-115	115	13.93	13.68	1.102+j4.639	1.687+j4.757	19.74	17.67	0.703+j3.632	1.696+j4.742
TRECE SOLAR MANIOBRAS	TSM-115	115	1.97	1.87	7.693+j32.759	7.302+j38.818	2.84	3.00	5.397+j25.150	2.470+j21.421
TRES HERMANOS	THS-115	115	1.64	1.60	11.593+j38.905	16.988+j39.754	2.18	2.00	9.670+j32.009	17.133+j39.467
TRES MANANTIALES	TMA-115	115	1.66	1.36	12.815+j37.840	21.245+j63.205	1.86	1.55	12.494+j37.333	20.333+j59.346
VADO SANTA MARÍA	VSM-115	115	1.75	1.44	9.563+j36.744	3.853+j62.821	1.95	1.59	9.329+j36.294	3.876+j63.060
VALLE DE JUÁREZ	VJZ-115	115	16.65	19.82	0.918+j3.880	0.253+j2.076	26.18	29.40	0.483+j2.747	0.246+j1.864
VALLE DE JUÁREZ	VJZ-230	230	10.17	11.06	2.505+j12.812	1.439+j9.843	17.19	16.65	1.070+j8.432	1.453+j9.226
VALLE ESPERANZA	VEZ-115	115	2.26	1.42	4.680+j28.943	21.761+j79.006	2.56	1.59	4.382+j28.215	21.684+j78.399
VALLE VERDE	VAE-115	115	16.80	14.31	0.915+j3.845	1.862+j5.738	21.50	17.32	0.709+j3.323	1.856+j5.596
VERDE INDEPENDENCIA UNO	VIU-115	115	8.60	7.07	1.394+j7.589	4.635+j12.000	10.98	8.42	0.993+j6.579	4.649+j12.017
VICENTE GUERRERO	VGR-115	115	1.38	0.90	18.259+j44.658	52.516+j112.552	2.85	2.05	9.293+j23.900	21.097+j51.602
VIDRIERA CHIHUAHUA MANIOBRAS	VCM-115	115	3.40	3.08	5.654+j18.721	5.483+j25.036	7.48	5.38	1.881+j9.582	5.785+j20.437
VILLA AHUMADA	VAH-115	115	2.29	1.65	7.536+j28.049	24.792+j57.938	2.58	1.85	7.233+j27.322	24.712+j57.328
VIÑEDOS	VDS-115	115	13.05	9.65	1.151+j4.957	3.289+j9.967	16.09	11.27	0.942+j4.441	3.286+j9.879



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
WERNER	WER-115	115	11.95	10.71	1.421+j5.370	2.685+j7.023	16.28	13.33	1.036+j4.364	2.694+j7.000
WRANGLER	WRA-115	115	7.93	6.65	2.006+j8.130	7.656+j11.386	11.58	9.93	1.196+j6.193	4.205+j8.669
YERMO	YMO-115	115	1.33	0.79	18.818+j46.272	49.779+j143.956	2.29	1.40	11.974+j29.577	29.989+j87.608
ZARAGOZA	ZZA-115	115	14.27	14.22	1.180+j4.500	1.467+j4.483	20.96	19.16	0.733+j3.407	1.421+j4.254

Gerencia de Control Regional Noreste



Regresar a mapa del SEN



**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 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
ACERO	AEO-115	115	9.72	8.89	1.043+j6.754	1.552+j8.599	11.33	10.07	0.876+j6.384	1.559+j8.736
ACEROS PLANOS	APM-115	115	21.83	13.72	0.626+j2.976	1.716+j8.264	28.35	17.61	0.500+j2.527	1.480+j7.141
ACUÑA	AUA-138	138	5.34	5.79	2.814+j14.646	1.548+j11.333	6.90	7.35	2.168+j12.524	1.492+j10.201
ACUÑA DOS	ACD-138	138	5.45	5.89	2.449+j14.406	1.477+j11.238	7.37	7.93	1.643+j11.784	1.271+j9.221
AEROPUERTO	AER-138	138	21.25	25.31	0.581+j3.703	0.170+j2.007	26.04	29.97	0.455+j3.335	0.184+j2.086
AEROPUERTO	AER-230	230	20.19	24.71	0.934+j6.512	0.271+j3.129	26.40	31.10	0.596+j5.501	0.286+j3.102
AEROPUERTO	AER-400	400	14.68	16.77	2.070+j15.593	1.253+j10.430	19.99	21.37	1.204+j12.650	1.326+j10.411
AEROPUERTO NORTE	ANE-115	115	12.85	6.91	1.049+j5.061	4.091+j18.041	17.99	9.75	0.740+j3.991	3.149+j14.016
AEROPUERTO OMA MONTERREY	OMA-115	115	20.49	14.16	0.537+j3.196	1.633+j7.408	24.05	16.14	0.468+j3.001	1.627+j7.341
AFI STEEL FOUNDRY	ASF-115	115	17.10	13.30	0.518+j3.849	1.542+j7.071	20.23	15.43	0.417+j3.586	1.505+j6.846
AGUA NUEVA	AGN-115	115	7.74	8.12	1.041+j8.515	0.703+j7.344	12.32	11.89	1.001+j5.843	0.821+j6.528
AGUAS TRATADAS	ATM-115	115	12.75	9.20	0.817+j5.144	2.393+j11.018	15.61	11.35	0.669+j4.632	1.989+j9.773
ALAMO	ALM-115	115	11.46	9.08	1.097+j5.688	2.422+j10.065	13.01	10.17	1.015+j5.520	2.417+j10.057
ÁLCALI MANIOBRAS	ACM-115	115	23.85	24.66	0.345+j2.763	0.212+j2.480	26.36	26.71	0.328+j2.751	0.233+j2.633
ALCOA PRIVADA	APV-115	115	13.24	7.12	1.015+j4.910	3.966+j17.487	18.71	10.14	0.708+j3.840	3.024+j13.462
ALEN DEL NORTE	ADN-115	115	11.24	7.49	1.050+j5.813	2.921+j14.477	12.62	8.28	0.992+j5.700	2.931+j14.590
ALIANZA	ALZ-115	115	24.69	17.07	0.434+j2.654	1.231+j6.171	28.24	19.05	0.385+j2.558	1.237+j6.211
ALLENDE	ALN-115	115	3.84	2.24	3.570+j16.906	12.501+j52.965	4.27	2.48	3.497+j16.733	12.488+j52.849
ALLENDE DOS	AED-138	138	5.47	4.34	2.584+j14.331	4.725+j25.586	6.97	5.17	1.970+j12.427	4.725+j25.213
ALMACENTRO DEFINITIVO	ALE-115	115	23.19	16.88	0.464+j2.825	1.200+j5.954	27.03	19.12	0.404+j2.672	1.203+j5.943
ALPES	ALP-115	115	14.45	11.78	0.658+j4.548	1.512+j7.582	16.81	13.55	0.557+j4.309	1.469+j7.348
ALTAMIRA	ALT-115	115	27.97	30.39	0.306+j2.354	0.170+j1.830	32.32	34.23	0.284+j2.242	0.173+j1.899
ALTAMIRA	ALT-230	230	21.20	24.97	0.531+j6.241	0.355+j3.521	26.62	31.27	0.383+j5.473	0.239+j3.104
ALTAMIRA	ALT-400	400	21.73	21.17	0.935+j10.586	1.931+j11.488	32.77	33.47	0.491+j7.736	0.913+j7.391
ALTAMIRA DE AGUA Y DRENAJE DE MONTERREY	AAD-115	115	19.81	12.63	0.625+j3.293	1.945+j8.864	32.43	22.61	0.393+j2.217	0.984+j5.096
ALTAMIRA III Y IV	ATC-400	400	22.57	25.30	0.776+j10.203	0.704+j7.040	36.21	42.64	0.359+j7.007	0.380+j4.517
ALTAMIRA V	ATV-400	400	22.53	25.29	0.779+j10.218	0.701+j7.028	36.13	42.60	0.362+j7.022	0.378+j4.509
ALTAMIRANO	ATR-115	115	7.58	5.83	1.428+j8.642	3.346+j16.311	8.75	6.54	1.250+j8.250	3.358+j16.483
ALTOS HORNOS DE MÉXICO	AHM-400	400	8.56	8.72	3.930+j26.690	2.731+j25.428	11.48	10.78	2.370+j21.997	3.064+j26.398
AMERICAN INDUSTRIES	AIN-138	138	16.57	16.90	0.913+j4.722	0.862+j4.507	19.97	19.70	0.771+j4.319	0.870+j4.545
AMERICAN INDUSTRIES DULCES NOMBRES	AID-115	115	23.17	17.54	0.429+j2.833	1.105+j5.519	27.98	20.48	0.352+j2.586	1.090+j5.386
AMÉRICAS	AME-115	115	18.71	12.36	0.523+j3.510	1.825+j8.844	22.59	14.55	0.462+j3.199	1.740+j8.418
AMISTAD	AMI-138	138	3.13	2.74	5.462+j24.867	7.997+j35.441	4.60	5.17	3.123+j18.806	1.133+j12.680
AMPAD	AMP-138	138	9.29	10.22	1.628+j8.417	0.957+j6.379	10.46	11.28	1.528+j8.237	0.989+j6.644
ANÁHUAC	ANH-138	138	2.19	1.38	7.600+j35.654	20.184+j97.931	2.52	1.55	6.913+j34.036	20.271+j98.350
ANÁHUAC POTENCIA	ANP-115	115	19.60	25.99	0.428+j3.360	0.274+j0.893	21.31	28.06	0.428+j3.400	0.318+j0.954
ANÁHUAC POTENCIA	ANP-400	400	16.39	25.91	1.308+j14.027	1.943-j1.262	20.21	32.35	0.968+j12.533	2.178-j1.401
ANÁHUAC TAM.POTENCIA	ATP-230	230	15.66	20.83	1.045+j8.415	0.139+j2.843	18.61	24.12	0.823+j7.806	0.143+j2.975
ANÁHUAC TAM.POTENCIA	ATP-400	400	11.69	14.00	1.978+j19.650	0.748+j11.498	16.69	20.11	1.030+j15.188	0.434+j8.245
ANGOSTURA	ANG-115	115	10.45	8.07	0.927+j6.287	2.569+j11.721	11.78	8.97	0.854+j6.140	2.577+j11.773
ANILLO PERIFÉRICO	APF-115	115	13.75	10.16	0.785+j4.765	1.885+j9.771	15.46	11.16	0.739+j4.665	1.964+j9.997
ANZALDUAS	ANZ-138	138	15.43	13.38	0.955+j5.075	1.461+j7.452	18.28	15.36	0.820+j4.724	1.454+j7.432



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
ANZALDUAS RODÉ	ANR-138	138	12.53	9.71	1.304+j6.223	2.576+j11.672	14.77	11.20	1.152+j5.822	2.487+j11.368
APASCO	APC-230	230	10.14	8.47	2.071+j12.930	4.616+j20.374	11.59	9.47	1.814+j12.475	4.655+j20.582
APODACA	APO-115	115	11.25	7.14	1.072+j5.804	3.284+j15.737	19.36	12.65	0.682+j3.711	1.965+j9.579
ARCO VIAL	ARV-115	115	23.55	21.38	0.415+j2.789	0.622+j3.612	26.16	23.41	0.391+j2.764	0.629+j3.713
ARROYO DEL COYOTE	ADC-138	138	8.58	11.30	1.924+j9.080	0.144+j2.621	11.26	14.35	1.315+j7.669	0.167+j2.780
ARROYO DEL COYOTE	ADC-230	230	4.49	5.10	5.578+j29.068	1.383+j19.041	5.79	6.19	3.910+j24.923	1.570+j20.263
ARROYO DEL COYOTE	ADC-400	400	3.28	3.49	11.328+j69.489	4.303+j58.046	4.52	4.41	6.515+j55.802	5.113+j60.287
ARTEAGA	ATG-115	115	4.41	4.43	4.138+j14.487	3.401+j14.473	5.35	5.13	3.442+j13.218	3.613+j14.936
ARTES GRAFICAS	AGR-115	115	10.55	7.90	1.091+j6.197	2.220+j12.421	20.48	14.34	0.624+j3.510	1.540+j8.003
ARVIN MERITOR	AVM-115	115	12.09	6.50	1.111+j5.376	4.351+j19.181	16.67	9.02	0.803+j4.307	3.408+j15.157
ATLAPEXCO	APX-115	115	2.13	2.03	8.480+j29.922	11.948+j34.236	2.35	2.22	8.480+j29.962	11.970+j34.491
AXTLA	AXA-115	115	1.12	0.61	22.161+j55.185	51.262+j199.597	1.23	0.68	22.138+j55.205	51.314+j199.643
AZTECAS	AZT-115	115	1.17	0.74	18.270+j53.901	49.636+j147.789	3.29	2.01	6.302+j21.312	20.015+j61.231
AZTLÁN	AZN-138	138	16.61	14.45	0.912+j4.708	1.475+j6.851	19.98	16.83	0.773+j4.318	1.442+j6.737
BAJÍO	BAO-115	115	2.21	1.62	6.889+j29.234	14.841+j61.292	2.60	1.83	6.329+j27.420	14.856+j61.667
BALL METAL BEVERAGE	BMB-115	115	20.01	13.19	0.601+j3.263	1.782+j8.280	23.65	15.12	0.529+j3.043	1.764+j8.135
BARRETAL	BET-115	115	3.43	2.29	7.167+j17.987	16.606+j45.290	3.74	2.51	7.165+j18.145	16.620+j45.488
BARRY CALLEBAUT	BAC-115	115	21.63	11.16	0.527+j3.024	2.446+j11.454	24.62	12.36	0.477+j2.928	2.464+j11.533
BASF	BSF-115	115	15.36	10.84	0.804+j4.247	2.094+j9.541	18.49	13.27	0.710+j3.885	1.818+j8.458
BASF	BSF-115B	115	15.25	10.72	0.816+j4.277	2.209+j9.656	18.70	14.31	0.692+j3.845	1.442+j7.393
BERLÍN	BRN-115	115	27.23	19.46	0.472+j2.392	1.573+j5.137	31.78	21.99	0.415+j2.260	1.576+j5.147
BICENTENARIO	BIC-115	115	9.24	8.44	1.188+j7.086	2.255+j8.982	9.94	9.06	1.190+j7.249	2.299+j9.250
BIOFILM	BFL-115	115	17.14	12.49	0.690+j3.812	1.781+j8.027	20.11	14.86	0.635+j3.577	1.592+j7.348
BLACK & DECKER	BAD-138	138	16.95	14.37	0.778+j4.635	1.255+j7.177	20.80	17.05	0.629+j4.167	1.199+j6.925
BOMBEO LOMA LARGA	BLL-115	115	27.30	18.67	0.495+j2.381	1.111+j5.700	32.08	21.27	0.434+j2.235	1.111+j5.639
BOMBEO NUEVA CASTILLA III	BNC-115	115	11.25	6.06	1.036+j5.811	4.027+j20.659	12.60	6.64	0.982+j5.711	4.127+j21.007
BOMBEO PORVENIR	POR-115	115	3.17	2.27	6.343+j19.960	18.479+j42.210	3.49	2.50	6.328+j19.921	18.502+j42.259
BRAVO	BRA-115	115	2.02	1.27	9.259+j31.554	29.425+j85.733	2.22	1.40	9.247+j31.572	29.476+j85.772
CADEREYTA	CYN-115	115	15.39	11.59	0.622+j4.270	1.621+j8.407	18.06	13.37	0.547+j4.007	1.568+j8.153
CADEREYTA II	CDT-115B2	115	2.50	1.94	4.117+j26.272	16.282+j47.123	2.72	2.11	4.057+j26.566	16.348+j47.609
CADEREYTA II	CDT-115B1	115	2.56	2.32	4.038+j25.597	8.326+j33.033	2.79	2.50	3.991+j25.916	8.715+j34.165
CAMARGO	CAM-138	138	3.90	2.22	5.463+j19.707	17.229+j64.461	6.87	4.47	3.171+j12.366	7.457+j32.495
CAMPESTRE	CPR-138	138	7.03	7.21	2.320+j11.098	1.717+j10.345	8.93	8.69	1.693+j9.664	1.740+j10.499
CAMPO TAMAULIPAS	CTS-115	115	11.46	7.81	1.297+j5.648	3.337+j13.525	12.89	8.67	1.270+j5.521	3.338+j13.566
CAPELLANIA	CAP-115	115	11.80	9.36	0.817+j5.565	1.979+j9.844	13.54	10.49	0.723+j5.344	2.028+j9.924
CARBÓN DOS	CBD-400	400	8.27	8.21	4.503+j27.572	3.714+j28.300	23.07	27.35	0.628+j10.994	0.347+j6.261
CARPLASTIC	CIS-115	115	19.79	13.56	0.558+j3.308	1.714+j7.795	23.01	15.35	0.493+j3.135	1.713+j7.756
CASA BLANCA	CBL-138	138	9.79	7.93	1.592+j7.981	2.595+j13.830	11.11	8.82	1.484+j7.749	2.607+j13.943
CASTECH	CAS-115	115	16.96	13.21	0.524+j3.879	1.569+j7.103	20.03	15.27	0.424+j3.621	1.540+j6.919
CATERPILA JAGUAR	CJR-115	115	11.51	6.18	1.164+j5.649	4.573+j20.163	15.68	8.47	0.855+j4.580	3.631+j16.138
CEDROS	CED-115	115	26.01	29.17	0.431+j2.516	0.190+j1.724	31.37	34.11	0.342+j2.303	0.205+j1.764
CEDROS	CED-230	230	12.43	12.77	1.713+j10.549	1.295+j9.767	14.46	14.42	1.409+j10.002	1.375+j10.132



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
CEJA	CJA-115	115	2.52	2.30	4.035+j26.054	9.949+j32.586	2.74	2.48	3.996+j26.401	10.347+j33.636
CELULOSA	CEL-115	115	30.62	21.13	0.422+j2.127	0.999+j4.992	36.20	24.27	0.361+j1.985	0.976+j4.895
CEMENTOS ANÁHUAC	CAN-115	115	13.53	12.71	0.854+j4.831	1.328+j5.744	14.77	13.85	0.855+j4.870	1.373+j5.805
CEMENTOS HIDALGO	CEH-115	115	7.11	4.67	2.534+j8.993	8.747+j22.355	7.91	5.16	2.484+j8.896	8.753+j22.397
CEMENTOS MEXICANOS	CEM-115	115	31.97	21.89	0.421+j2.034	0.980+j4.850	44.20	30.12	0.307+j1.624	0.783+j3.891
CEMEX (VALLES)	CMX-115	115	7.12	5.30	2.343+j9.024	4.381+j18.461	7.81	5.81	2.340+j9.049	4.429+j18.505
CENTEC	CNE-115	115	10.22	7.10	1.466+j6.331	3.540+j14.632	11.79	8.04	1.371+j6.041	3.507+j14.456
CENTRAL	CEN-138	138	12.21	11.55	1.338+j6.389	1.295+j7.733	13.96	12.90	1.225+j6.157	1.312+j7.868
CENTRAL ANÁHUAC	CAH-230	230	15.62	20.80	1.041+j8.435	0.132+j2.835	18.55	24.06	0.820+j7.831	0.139+j2.976
CENTRAL DULCES NOMBRES	CDU-115	115	17.72	19.90	0.116+j3.746	0.050+j2.513	18.19	20.30	0.097+j4.014	0.055+j2.765
CENTRAL DULCES NOMBRES	CDU-400	400	29.78	32.48	1.299+j7.647	0.514+j5.818	41.53	44.29	0.727+j6.074	0.403+j4.942
CENTRAL DULCES NOMBRES II	DNO-115	115	38.87	41.22	0.243+j1.691	0.156+j1.405	48.67	50.13	0.182+j1.490	0.166+j1.368
CENTRAL IBERDROLA COGENERACIÓN RAMOS	ICR-115	115	15.33	13.13	0.503+j4.303	0.941+j6.480	18.11	15.32	0.405+j4.012	0.939+j6.204
CERRALVO	CER-115	115	3.07	2.22	5.803+j20.833	16.193+j43.817	3.52	2.50	5.519+j19.996	15.813+j43.548
CERRO PRIETO	CEP-115	115	4.63	4.04	2.339+j14.153	5.716+j19.920	4.99	4.38	2.323+j14.443	5.721+j20.074
CHAIREL	CHR-115	115	18.09	14.99	0.640+j3.615	1.787+j5.719	20.61	16.75	0.611+j3.490	1.791+j5.765
CHAMPAYAN	CPY-400	400	25.91	28.00	0.746+j8.882	0.888+j6.995	39.47	44.07	0.377+j6.425	0.594+j4.800
CHAPACAO	CHW-115	115	4.33	3.06	3.994+j14.790	13.754+j31.686	4.79	3.38	3.974+j14.722	13.769+j31.736
CHRYSLER CAMIONES PLANTA MOTORES SUR	CPS-115	115	11.46	9.20	0.972+j5.710	2.348+j9.815	14.16	11.85	0.840+j5.088	1.825+j7.989
CHRYSLER DE MÉXICO	CYM-115	115	12.20	8.51	0.983+j5.354	2.550+j12.272	22.90	18.74	0.570+j3.138	1.169+j5.192
CHRYSLER PLANTA CAMIONES	CYC-115	115	11.70	9.52	0.932+j5.598	2.231+j9.331	14.56	12.43	0.795+j4.952	1.692+j7.421
CIBIOSA (FERSINSA)	CIB-115	115	11.93	8.64	0.849+j5.500	2.148+j11.753	13.66	9.61	0.759+j5.291	2.223+j11.910
CIFUNSA	CIF-115	115	17.62	14.69	0.708+j3.701	1.188+j5.916	20.98	17.06	0.616+j3.426	1.169+j5.775
CIMA	CIM-138	138	11.73	12.59	1.320+j6.663	0.690+j5.574	13.31	13.93	1.217+j6.473	0.722+j5.824
CITROFRUT	CIT-115	115	7.07	3.02	2.463+j9.056	11.991+j45.740	7.92	3.37	2.398+j8.907	11.740+j45.132
CIUDAD INDUSTRIAL	CID-138	138	6.80	7.68	2.529+j11.443	0.962+j7.660	8.78	9.36	1.870+j9.804	1.039+j8.058
CIUDAD INDUSTRIAL	CID-230	230	4.37	4.72	6.057+j29.801	2.962+j23.488	5.68	5.75	4.359+j25.356	3.174+j24.583
CLOSURES INTERIORES	CLI-138	138	10.29	8.58	1.768+j7.537	2.644+j12.251	11.86	9.69	1.626+j7.206	2.637+j12.213
CODEFRONT	CFT-138	138	2.78	2.04	4.735+j28.292	10.527+j58.839	3.25	2.30	4.066+j26.659	10.606+j59.238
COMPAÑÍA CERVECERA DE COAHUILA	CVC-138	138	5.89	4.45	2.786+j13.248	6.213+j25.880	8.85	7.37	1.796+j9.734	3.536+j15.434
CONCEPCIÓN DEL ORO	CDO-115	115	1.35	0.81	14.195+j47.278	36.830+j142.334	1.56	0.91	13.977+j44.691	36.944+j141.490
CONDUCTORES MONTERREY	CDY-115	115	22.76	16.71	0.510+j2.872	1.422+j5.923	28.99	20.04	0.435+j2.481	1.436+j5.724
CONEK	CNK-115	115	22.85	20.29	0.430+j2.874	0.693+j3.929	25.38	22.22	0.407+j2.849	0.701+j4.031
CONEK II	COK-115	115	22.83	20.29	0.431+j2.876	0.693+j3.929	25.36	22.22	0.407+j2.851	0.701+j4.031
CONTEC MEXICANA	CON-115	115	30.69	26.88	0.298+j2.143	0.543+j3.036	38.26	32.46	0.221+j1.896	0.528+j2.902
CONTROLADORA DE TERMINALES	COT-115	115	20.15	9.69	0.570+j3.246	2.833+j13.675	22.88	10.69	0.519+j3.150	2.870+j13.812
CONTRY	CNY-115	115	24.56	15.71	0.485+j2.659	1.403+j7.136	29.20	18.12	0.415+j2.467	1.380+j6.959
CORONA	CRO-138	138	6.97	4.88	2.330+j11.184	6.131+j25.436	11.55	8.59	1.249+j7.487	3.454+j14.990
CORPORATE PROPERTIES OF AMÉRICA	CPA-115	115	10.05	5.40	1.317+j6.471	5.240+j23.106	13.29	7.17	1.009+j5.401	4.297+j19.081
COSMOPOLIS	CPL-115	115	22.88	15.02	0.534+j2.852	1.519+j7.302	26.30	16.82	0.483+j2.734	1.524+j7.316
CRUZ DE ATAQUE	CRQ-115	115	0.86	0.66	20.632+j74.045	60.096+j138.671	0.95	0.72	20.617+j74.101	60.118+j138.869
CRYOINFRA	CRY-115	115					18.48	15.19	0.796+j3.872	1.153+j6.437



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			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
CRYOINFRA SCMS	COF-115	115	37.72	32.38	0.291+j1.736	0.362+j2.607	52.06	41.58	0.222+j1.385	0.374+j2.436
CUADRO DE MANIOBRAS EL MEZQUITE	CMM-230	230	7.10	6.59	2.729+j18.512	4.470+j22.632	7.94	7.26	2.572+j18.207	4.512+j23.211
CUADRO DE MANIOBRAS EÓLICA DE COAHUILA	MEH-230	230	5.73	7.38	3.101+j22.984	0.877+j7.693	6.40	8.16	2.916+j22.638	0.933+j8.102
CUADRO DE MANIOBRAS PROMAX	MPX-115	115	32.70	13.82	0.401+j1.991	2.094+j10.141	39.51	17.12	0.333+j1.818	1.856+j8.914
CUADRO MANIOBRAS DE ABSORMEX	MBX-115	115	19.31	14.93	0.625+j3.381	1.401+j6.355	25.13	21.08	0.476+j2.867	0.852+j4.539
CUADRO MANIOBRAS EÓLICO SANTA CATARINA	MEO-230	230	14.95	12.14	1.264+j8.793	3.601+j14.654	17.08	13.55	1.073+j8.485	3.641+j14.865
CUATRO CIÉNEGAS	CCE-115	115	1.65	1.08	16.144+j36.777	37.028+j97.512	1.83	1.19	15.984+j36.473	37.040+j97.699
CUMBRES FRONTERA	CUF-138	138	21.39	24.33	0.587+j3.678	0.243+j2.414	26.04	28.59	0.464+j3.333	0.257+j2.488
CUMBRES FRONTERA	CUF-230	230	15.57	16.11	1.066+j8.464	0.934+j7.703	18.91	18.70	0.778+j7.686	0.987+j7.971
CUMBRES ORIENTE	CBO-115	115	14.15	10.07	0.648+j4.649	2.249+j10.154	17.29	12.06	0.561+j4.186	2.110+j9.499
CUMBRES PONIENTE	CMN-115	115	16.23	12.25	0.562+j4.052	1.700+j7.898	20.82	15.49	0.464+j3.477	1.505+j6.976
DE ACERO	DEA-230	230	10.22	9.30	2.008+j12.839	3.009+j16.587	11.77	10.43	1.703+j12.292	3.089+j16.951
DE ACERO CLAVOS MONTERREY	DCM-115	115	31.69	21.42	0.409+j2.055	1.032+j5.005	40.50	26.72	0.322+j1.774	0.926+j4.502
DE ACERO POTENCIA	DEP-400	400	19.73	11.83	1.691+j11.580	4.884+j34.842	24.98	15.83	1.072+j10.112	3.177+j27.704
DECOFINMEX	DFX-138	138	11.13	9.31	1.464+j7.004	2.151+j11.345	12.76	10.44	1.345+j6.737	2.158+j11.395
DENSO	DSO-115	115	10.28	6.44	1.173+j6.351	3.730+j17.649	20.58	13.90	0.640+j3.491	1.707+j8.502
DENSO GUADALUPE	DGP-115	115	14.42	8.47	0.812+j4.533	3.142+j13.951	19.82	11.65	0.588+j3.637	2.454+j11.174
DERRAMADERO	DMD-115	115	20.38	20.68	0.429+j3.229	0.357+j3.103	23.17	23.07	0.365+j3.131	0.364+j3.179
DERRAMADERO	DMD-400	400	10.62	9.10	2.813+j21.571	5.051+j32.298	12.69	10.42	2.073+j19.913	5.182+j32.803
DÍAZ ORDAZ	DOR-138	138	4.80	2.91	4.251+j16.029	12.413+j47.383	7.40	4.75	2.888+j11.482	7.627+j30.764
DINASTÍA	DNA-115	115	27.53	17.65	0.457+j2.368	1.225+j6.348	32.25	19.89	0.394+j2.230	1.235+j6.371
DIRONA	DIR-115	115	19.22	9.47	0.586+j3.404	2.753+j13.854	21.82	10.42	0.533+j3.305	2.809+j14.053
DIRONA Y FORJA	DFO-115	115	19.21	9.45	0.586+j3.406	2.782+j13.903	21.81	10.40	0.533+j3.306	2.835+j14.092
DOFASCO DE MÉXICO	DAO-115	115	19.82	9.54	0.580+j3.299	2.838+j13.898	22.51	10.51	0.529+j3.202	2.882+j14.058
DULCES NOMBRES AYD	RDN-115	115	7.79	4.83	1.611+j8.364	5.754+j23.539	8.76	5.37	1.541+j8.189	5.752+j23.491
DYNASOL	DYN-115	115	16.94	12.95	0.773+j3.843	1.723+j7.372	19.25	14.44	0.748+j3.719	1.724+j7.418
EARTH TECH	ETH-115	115	8.13	3.32	1.392+j8.045	9.361+j42.698	9.87	4.05	1.160+j7.311	7.872+j38.440
ÉBANO	EBN-115	115	4.43	3.13	4.150+j14.410	13.357+j30.944	4.90	3.45	4.128+j14.332	13.369+j30.996
EL ABRA	ABR-115	115	2.00	1.38	11.393+j31.098	19.194+j76.236	2.76	1.95	8.186+j25.124	13.669+j57.916
EL CANADÁ	ECN-115	115	21.51	11.20	0.473+j3.051	2.039+j11.423	24.54	12.30	0.419+j2.946	2.114+j11.677
EL COCO	COC-115	115	19.26	25.09	0.447+j3.418	0.338+j1.038	20.95	27.11	0.448+j3.458	0.383+j1.099
EL CUCHILLO	CCL-115	115	6.09	7.15	1.078+j10.844	0.577+j6.038	6.53	7.59	1.013+j11.134	0.620+j6.490
EL CUCHILLO	CCL-230	230	6.04	5.56	3.461+j21.724	4.058+j27.420	7.03	6.20	3.077+j20.562	4.389+j28.679
EL FRAILE	FAI-400	400	26.15	28.01	1.032+j8.770	0.533+j7.102	31.52	32.13	0.694+j8.029	0.590+j7.611
EL GUERREÑO	GRR-138	138	20.00	24.16	0.602+j3.938	0.116+j2.001	24.37	28.44	0.467+j3.566	0.131+j2.106
EL GUERREÑO	GRR-400	400	12.40	12.92	2.270+j18.479	2.492+j17.014	16.55	16.05	1.361+j15.290	2.621+j16.940
EL HIGO DOS	HGD-115	115	2.43	1.56	6.248+j26.608	20.550+j70.326	2.66	1.71	6.305+j26.736	20.563+j70.414
EL MIRADOR	MIO-115	115	27.12	18.31	0.459+j2.405	1.321+j5.840	36.44	25.24	0.343+j1.975	0.969+j4.571
EL PORVENIR	EPR-138	138	8.01	7.37	2.049+j9.729	1.777+j12.491	9.13	8.13	1.942+j9.398	1.925+j13.058
EL REGIOMONTANO	RGM-115	115	29.12	28.74	0.265+j2.264	0.268+j2.357	34.77	33.19	0.220+j2.089	0.281+j2.386
EL REGIOMONTANO	RGM-400	400	19.99	17.44	1.608+j11.438	3.061+j16.367	25.19	20.81	1.089+j10.027	3.102+j16.183
ELECTRICIDAD ÁGUILA ALTAMIRA	EAA-400	400	22.38	24.64	0.796+j10.289	0.868+j7.584	35.97	41.93	0.368+j7.053	0.452+j4.784



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
ELENA	ELN-115	115	15.55	16.07	0.705+j4.211	0.613+j3.835	18.35	18.93	0.629+j3.930	0.561+j3.600
EMERSON	EMR-138	138	11.01	8.29	1.518+j7.073	2.997+j14.114	13.54	9.96	1.237+j6.356	2.816+j13.275
EMERSON DOS	EMD-138	138	9.39	5.99	1.935+j8.263	5.686+j22.260	17.24	11.82	0.970+j4.990	2.794+j11.799
EMPALME	EML-138	138	7.20	4.97	2.749+j10.713	6.123+j25.390	8.40	5.70	2.519+j10.130	5.980+j24.689
ENERGÍA MK KF	KAF-115	115	19.45	15.14	0.608+j3.359	1.275+j6.234	24.65	20.18	0.492+j2.922	0.930+j4.883
ENERTEK	ETK-115	115	22.92	21.53	0.427+j2.865	0.515+j3.472	26.68	25.18	0.395+j2.709	0.466+j3.244
EÓLICA CIUDAD VICTORIA	ECV-115	115	13.72	14.01	0.608+j4.802	0.905+j4.464	14.61	14.85	0.604+j4.963	0.934+j4.686
EÓLICA GUADALUPE MANIOBRAS	EGM-400	400	8.91	8.81	2.543+j25.784	3.359+j26.696	10.22	9.80	2.204+j24.757	3.554+j27.895
EÓLICA LA MESA	ELM-115	115	7.37	7.22	1.637+j8.862	1.790+j9.414	7.96	7.71	1.642+j9.029	1.904+j9.896
EÓLICA TRES MESAS	EMS-115	115	5.47	3.59	0.195+j12.144	8.052+j30.496	5.60	3.75	0.171+j13.039	8.080+j31.784
EÓLICA TRES MESAS	EMS-115B	115	3.81	4.18	2.395+j17.283	0.257+j12.811	3.99	4.32	2.374+j18.173	0.282+j14.095
EÓLICA TRES MESAS FASE CUATRO	EMC-115	115	4.29	4.11	1.007+j15.461	0.987+j17.443	4.37	4.20	1.068+j16.678	1.000+j18.723
EÓLICA TRES MESAS FASE CUATRO	EMC-115A	115	3.44	3.88	2.131+j19.193	0.129+j12.791	3.56	3.98	2.196+j20.398	0.142+j14.071
ESCOBEDO	ESC-115	115	53.24	54.96	0.194+j1.232	0.104+j1.127	63.87	63.31	0.146+j1.134	0.111+j1.169
ESCOBEDO	ESC-230	230	21.22	19.87	0.875+j6.196	1.059+j7.469	24.74	22.30	0.688+j5.864	1.130+j7.770
ESCOBEDO	ESC-400	400	27.36	27.89	1.535+j8.299	1.175+j7.835	36.51	34.73	0.965+j6.891	1.212+j7.897
ESPERANZAS	ESP-115	115	2.20	1.63	7.331+j29.247	14.319+j60.231	2.58	1.84	6.763+j27.531	14.334+j60.605
ESTANZUELA	ETZ-115	115	17.74	13.56	0.538+j3.704	1.346+j7.081	20.53	15.43	0.470+j3.527	1.334+j6.966
ESTANZUELA	ETZ-115B	115	22.10	15.18	0.565+j2.951	1.391+j6.976	25.91	17.34	0.497+j2.774	1.379+j6.861
ESTRELLA	ELL-115	115	7.18	5.09	1.517+j9.119	4.430+j20.185	7.77	5.53	1.516+j9.279	4.445+j20.387
FALCÓN MEXICANO	FAM-138	138	5.14	3.01	4.066+j14.972	12.507+j46.639	6.34	5.25	3.283+j13.438	2.951+j22.296
FARO	FAR-115	115	20.14	12.89	0.619+j3.237	1.743+j8.686	23.36	14.63	0.555+j3.077	1.733+j8.547
FÉLIX U. GÓMEZ	FUG-115	115	31.39	21.90	0.407+j2.076	0.920+j4.779	39.53	26.86	0.326+j1.819	0.854+j4.379
FINSA	FIT-115	115	12.18	8.91	0.868+j5.382	2.316+j11.217	16.47	11.27	0.712+j4.378	2.252+j10.344
FINSA	FIS-115	115	16.08	13.83	0.593+j4.087	1.326+j6.020	18.66	15.64	0.506+j3.880	1.337+j6.056
FINSA GUADALUPE	FIG-115	115	23.12	15.85	0.517+j2.825	1.418+j6.676	27.63	18.31	0.446+j2.606	1.401+j6.537
FINSA LAREDO	FIL-138	138	6.96	7.19	2.687+j11.128	2.318+j10.116	8.87	8.68	2.043+j9.672	2.340+j10.274
FIRESTONE	FRS-115	115	13.83	8.23	0.963+j4.704	3.202+j14.243	19.95	12.38	0.652+j3.602	2.243+j10.139
FLEX AMÉRICAS	FME-115	115	16.59	12.70	0.484+j3.972	1.603+j7.548	19.22	14.52	0.439+j3.775	1.554+j7.377
FOMERREY	FOM-115	115	11.21	7.47	1.056+j5.827	2.933+j14.536	12.58	8.25	0.999+j5.721	2.944+j14.649
FREIGHTLINER	FRI-115	115	10.29	7.80	1.132+j6.355	3.063+j12.276	12.16	9.40	1.005+j5.919	2.655+j10.998
FRISA	FSA-115	115	19.90	17.33	0.406+j3.311	0.796+j4.738	22.21	19.05	0.384+j3.265	0.810+j4.841
FRONTERA	FRO-115	115	12.19	15.24	0.681+j5.402	0.123+j2.190	14.28	17.39	0.532+j5.086	0.133+j2.375
FRONTERA	FRO-230	230	10.97	13.17	1.654+j11.992	0.423+j6.067	13.59	15.67	1.121+j10.687	0.465+j6.475
FRONTERA	FRO-400	400	9.51	9.83	3.596+j24.023	2.215+j21.853	13.16	12.47	2.013+j19.199	2.495+j22.486
FUENTES	FTE-138	138	8.22	8.13	1.746+j9.531	1.791+j9.865	11.94	10.88	1.073+j7.259	1.689+j9.273
FUNDICIÓN	FDC-115	115	19.05	15.30	0.464+j3.453	1.219+j5.942	22.94	18.20	0.360+j3.163	1.155+j5.577
FUNDIDORA	FUN-115	115	28.67	20.27	0.438+j2.274	0.981+j5.101	36.48	26.14	0.344+j1.972	0.785+j4.307
G. E. PLASTIC	GEP-115	115	9.15	5.73	1.339+j7.130	4.395+j19.835	10.68	6.70	1.232+j6.728	4.082+j18.606
GALVASID	GLS-115	115	19.31	13.78	0.550+j3.394	1.482+j7.440	28.66	19.94	0.406+j2.516	1.169+j5.780
GARCIA	GAC-115	115	9.91	8.04	0.778+j6.656	2.176+j11.156	10.93	8.82	0.758+j6.637	2.188+j11.273
GENERACIÓN ELÉCTRICA HUINALA	GEH-115	115	7.64	7.99	0.742+j8.657	0.609+j7.522	8.51	8.71	0.739+j8.547	0.697+j7.966



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			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
GENERAL MOTOR	GMO-115	115	12.20	9.42	0.980+j5.354	2.227+j10.020	13.97	10.56	0.892+j5.152	2.239+j10.060
GIRASOLES	GRS-115	115	25.91	18.35	0.445+j2.524	1.127+j5.615	29.81	20.57	0.392+j2.419	1.131+j5.640
GOLDEN DRAGÓN	GOD-115F	115	6.57	4.45	1.710+j9.957	5.178+j23.999	7.51	4.97	1.542+j9.599	5.184+j24.130
GOLLEK	GOK-115	115	4.55	3.44	2.029+j14.450	6.141+j28.016	5.09	4.18	1.860+j14.222	4.154+j23.359
GP BIENES INMUEBLES	GPI-115	115	9.15	6.50	1.288+j7.141	2.998+j15.855	18.31	12.17	0.714+j3.925	1.986+j9.832
GRANJAS	GRA-115	115	8.08	5.95	1.353+j8.107	3.512+j16.703	9.33	6.67	1.183+j7.738	3.519+j16.839
GUADALUPE	GDL-115	115	23.24	15.52	0.556+j2.802	1.421+j6.975	27.83	18.11	0.480+j2.580	1.373+j6.709
GÜEMEZ	GUE-115	115	17.04	18.60	0.351+j3.881	0.284+j2.909	18.01	19.53	0.346+j4.041	0.298+j3.106
GÜEMEZ	GUE-400	400	13.77	12.21	1.779+j16.679	3.769+j22.947	16.35	13.93	1.453+j15.472	3.951+j23.507
GUILLFORD MILLS	GUI-115	115	15.46	11.12	0.683+j4.241	1.824+j9.175	17.56	12.46	0.655+j4.107	1.805+j9.120
H.C. INDUSTRIAS	HCI-115	115	12.94	9.58	1.087+j5.013	2.391+j10.259	15.13	10.96	0.992+j4.723	2.357+j10.082
HIDALGO	HID-115	115	7.86	5.29	2.236+j8.151	8.067+j19.224	8.75	5.84	2.187+j8.054	8.074+j19.266
HUASTECA	HST-115	115	1.31	0.74	19.188+j46.873	43.054+j164.514	1.44	0.81	19.170+j46.895	43.106+j164.559
HUEJUTLA II	HJD-115	115	1.82	1.80	10.808+j34.802	12.673+j35.997	2.00	1.97	10.819+j34.844	12.694+j36.247
HUERTAS	HUS-115	115	6.99	6.22	1.109+j9.434	2.868+j12.737	7.46	6.69	1.093+j9.724	2.873+j12.890
HUICHIHUAYAN	HUH-115	115	1.80	1.05	13.890+j34.110	30.032+j111.681	1.98	1.16	13.879+j34.133	30.083+j111.726
HUINALA	HUI-115	115	45.70	52.34	0.208+j1.438	0.057+j0.900	60.96	69.61	0.131+j1.191	0.043+j0.766
HUINALA	HUI-115B	115	45.70	52.34	0.208+j1.438	0.057+j0.900	60.96	69.61	0.131+j1.191	0.043+j0.766
HUINALA	HUI-230	230	25.98	29.88	0.697+j5.064	0.252+j3.106	34.21	38.61	0.422+j4.248	0.223+j2.828
HUINALA	HUI-230B	230	26.10	29.74	0.689+j5.041	0.299+j3.214	34.38	38.54	0.416+j4.228	0.253+j2.892
HUINALA	HUI-400	400	30.26	33.09	1.313+j7.517	0.500+j5.679	42.53	45.42	0.735+j5.928	0.386+j4.803
HUINALA DOS	HUO-400	400	30.14	32.93	1.309+j7.550	0.503+j5.716	42.31	45.30	0.732+j5.959	0.372+j4.788
HYLSA MANIOBRAS	HYM-400	400	25.58	24.35	1.887+j8.829	1.328+j10.324	33.97	30.25	1.308+j7.362	1.304+j10.142
HYLSA NORTE	EHN-230	230	15.07	11.52	1.368+j8.703	4.020+j16.517	17.87	13.16	1.127+j8.095	4.033+j16.529
IBERDROLA COGENERACIÓN ALTAMIRA	IBC-115	115	20.96	20.01	0.446+j3.136	0.420+j3.625	23.87	22.22	0.429+j3.030	0.449+j3.741
IMIS	IMI-115	115	9.91	7.70	1.322+j6.571	3.097+j12.085	11.24	8.61	1.232+j6.379	3.097+j12.069
IMSA	INM-115	115	10.85	11.61	0.829+j6.065	0.663+j4.872	12.64	13.14	0.672+j5.738	0.679+j5.087
IMSA PARTICULARES	IMO-115	115	17.61	10.65	0.711+j3.704	2.344+j10.920	22.02	13.04	0.605+j3.261	2.152+j9.946
INDUSTRIA VIDRIERA DE COAHUILA	IVC-138	138	6.29	4.31	2.683+j12.370	7.161+j29.261	9.93	7.10	1.597+j8.678	4.483+j18.813
INFONAVIT	INF-115	115	16.28	13.82	0.688+j4.019	2.069+j5.984	18.51	15.42	0.659+j3.890	2.076+j6.039
INFONAVIT	INV-138	138	9.84	8.31	1.559+j7.945	2.287+j12.549	11.12	9.21	1.459+j7.748	2.303+j12.715
INGENIO SAN MIGUEL EL NARANJO	MGN-115	115	2.46	2.65	8.246+j25.757	2.449+j21.248	3.07	3.36	6.586+j22.874	2.382+j17.567
INTERNACIONAL REGIOMONTANA DE ACERO	IRG-115	115	21.17	14.97	0.507+j3.094	1.454+j6.889	24.61	16.92	0.445+j2.934	1.456+j6.868
INTERPUERTO	IPR-115	115	17.22	8.07	0.529+j3.819	3.181+j16.675	19.54	9.02	0.480+j3.708	3.140+j16.536
IQUISA NORESTE	IQN-115	115	14.55	10.86	0.556+j4.528	1.916+j9.017	16.79	12.34	0.508+j4.319	1.886+j8.873
JABIL	JAB-138	138	11.15	8.48	1.500+j6.988	2.903+j13.681	13.67	10.14	1.231+j6.294	2.747+j12.939
JARACHINA	JRA-138	138	17.42	15.33	0.801+j4.502	1.182+j6.388	21.82	18.99	0.639+j3.965	1.040+j5.759
JARDÍN DOS	JAD-138	138	12.04	10.73	1.371+j6.473	1.634+j9.084	13.80	12.02	1.255+j6.226	1.645+j9.178
JERÓNIMO POTENCIA	JEP-115	115	43.03	38.00	0.288+j1.516	0.254+j2.146	52.15	43.95	0.229+j1.382	0.267+j2.170
JERÓNIMO POTENCIA	JEP-115B	115	43.12	38.64	0.286+j1.513	0.230+j2.068	52.19	44.59	0.227+j1.381	0.245+j2.102
JERÓNIMO POTENCIA	JEP-400	400	19.80	18.62	1.881+j11.513	2.076+j13.732	24.84	22.03	1.268+j10.147	2.143+j13.986
JIMÉNEZ	JIM-115	115	1.58	1.07	13.206+j39.777	41.647+j94.085	1.74	1.17	13.206+j39.927	41.666+j94.292



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
JOHNSON AND CONTROL	JCC-115	115	8.91	5.26	1.408+j7.319	5.024+j22.381	14.38	9.11	0.809+j5.013	2.989+j13.585
JOHNSON CONTROL	JHC-115	115	15.01	12.01	0.522+j4.392	1.405+j7.604	16.59	13.15	0.502+j4.374	1.417+j7.721
JOSEFA ZOZAYA	JZO-115	115	17.53	10.64	0.705+j3.721	2.346+j10.902	20.57	12.13	0.634+j3.494	2.320+j10.729
JUÁREZ	JUZ-138	138	19.30	18.55	0.723+j4.064	0.929+j4.598	23.87	22.20	0.573+j3.627	0.888+j4.460
JUÁREZ NORTE	JNO-115	115	18.67	12.44	0.608+j3.505	1.758+j8.727	23.10	15.15	0.508+j3.120	1.640+j7.995
KALOS GUADALUPE	KGP-115	115	19.52	13.43	0.467+j3.369	2.054+j7.789	22.92	15.32	0.399+j3.161	2.046+j7.706
KEMET	KMT-115	115	20.40	14.19	0.570+j3.205	1.748+j7.326	25.62	16.81	0.492+j2.807	1.761+j7.128
KEMET	KMM-138	138	8.33	6.46	1.830+j9.386	3.370+j17.775	9.37	7.14	1.731+j9.190	3.386+j17.938
KEMET VICTORIA	KWM-115	115	6.87	5.44	2.219+j9.408	5.239+j16.473	7.44	5.91	2.220+j9.567	5.262+j16.690
KIKAPU	KIK-115	115	2.03	1.45	7.586+j31.755	17.021+j69.579	2.37	1.64	7.027+j29.939	17.036+j69.954
KRAFT	KRA-115	115	32.09	21.79	0.404+j2.029	1.009+j4.901	41.11	27.25	0.317+j1.748	0.903+j4.398
KRAFT FOODS DE MÉXICO	KRF-115	115	16.47	10.25	0.704+j3.968	2.470+j11.097	20.43	12.55	0.575+j3.529	2.239+j10.070
LA FE	LAF-115	115	37.25	26.01	0.338+j1.750	0.761+j4.022	46.19	31.08	0.273+j1.558	0.724+j3.821
LA ROSITA	RSI-115	115	4.07	2.94	4.682+j15.615	14.157+j32.390	4.49	3.23	4.666+j15.576	14.179+j32.440
LA SILLA	SLL-115B	115	13.02	8.17	0.906+j5.019	3.151+j13.829	19.18	12.59	0.598+j3.762	2.109+j9.564
LA SILLA	SLL-115	115	6.34	4.13	1.372+j10.379	6.005+j26.652	19.08	12.53	0.600+j3.781	2.120+j9.616
LADRILLERA	LDA-115	115	1.65	1.15	12.228+j38.229	19.494+j90.893	1.81	1.26	12.227+j38.496	19.499+j91.048
LADRILLERA REVOLUCIÓN	LRR-115	115	23.81	17.26	0.531+j2.738	1.060+j5.871	28.51	20.14	0.455+j2.521	1.032+j5.663
LAGO	LAO-138	138	6.68	6.65	2.769+j11.609	2.588+j11.802	8.43	7.96	2.132+j10.176	2.611+j11.956
LAGUNA DEL CONEJO	LDC-115	115	24.81	22.61	0.397+j2.646	0.573+j3.456	29.14	27.14	0.361+j2.480	0.470+j3.067
LAGUNAS DE MIRALTA	LGM-115	115	17.38	13.57	0.630+j3.768	1.713+j6.861	19.81	15.14	0.601+j3.638	1.722+j6.920
LAJAS	LAJ-115	115	9.01	11.91	0.512+j7.351	0.083+j1.992	9.54	12.55	0.496+j7.640	0.088+j2.145
LAJAS	LAJ-400	400	11.81	10.68	2.185+j19.431	4.309+j25.439	13.84	12.06	1.779+j18.275	4.504+j26.196
LAMOSA	LMS-115	115	17.65	12.00	0.567+j3.720	2.411+j8.779	20.58	13.63	0.499+j3.513	2.404+j8.696
LAMOSA LAREDO	LAL-138	138	6.86	6.96	2.716+j11.291	2.509+j10.851	8.73	8.38	2.070+j9.824	2.531+j11.015
LAMPAZOS	LAM-400	400	8.79	6.28	3.381+j26.050	12.781+j56.554	12.61	8.26	1.725+j20.074	11.951+j50.971
LAREDO PONIENTE	LAP-138	138	5.93	5.54	2.965+j13.097	2.972+j16.003	7.45	6.56	2.305+j11.538	3.023+j16.267
LAS BRISAS	BRI-115	115	17.80	15.52	0.748+j3.655	0.947+j5.300	20.67	17.52	0.665+j3.470	0.961+j5.359
LAS CRUCES	CRU-115	115	1.45	1.17	14.608+j43.412	26.595+j73.418	1.80	1.53	11.772+j38.878	19.855+j58.495
LAS GLORIAS	GLO-115	115	34.12	31.96	0.263+j1.928	0.254+j2.329	42.09	37.68	0.214+j1.722	0.271+j2.329
LAS GLORIAS	GLO-400	400	21.39	17.78	1.519+j10.690	2.509+j17.226	27.09	21.23	0.999+j9.325	2.517+j16.961
LAS LOMAS	LLM-138	138	12.69	10.43	1.364+j6.130	2.189+j10.218	16.39	13.74	1.033+j5.247	1.784+j8.412
LAS NORIAS	NOI-115	115	0.96	0.59	24.190+j65.146	67.738+j188.039	1.05	0.65	24.179+j65.287	67.759+j188.251
LAS PUENTES	PTS-115B2	115	31.47	22.55	0.376+j2.076	0.872+j4.532	38.51	26.19	0.313+j1.870	0.879+j4.489
LAS PUENTES	PTS-115B1	115	31.96	22.24	0.380+j2.043	0.914+j4.712	37.75	25.24	0.322+j1.908	0.918+j4.726
LAS TORRES	LTO-138	138	10.92	10.55	1.414+j7.158	1.317+j8.162	12.37	11.69	1.311+j6.962	1.339+j8.367
LAURO VILLAR	LVI-138	138	11.99	13.55	1.259+j6.527	0.464+j4.545	13.58	14.96	1.158+j6.347	0.495+j4.810
LAURO VILLAR	LVI-230	230	8.47	9.34	2.941+j15.408	1.581+j11.770	9.74	10.45	2.631+j14.761	1.673+j12.301
LECHUGAL	LEC-115	115	15.21	10.47	0.762+j4.299	2.044+j10.076	17.18	11.62	0.699+j4.192	2.049+j10.143
LEGO REAL ESTATE	LGR-115	115	12.16	6.54	1.105+j5.346	4.325+j19.070	16.79	9.08	0.796+j4.277	3.383+j15.045
LEONA	LEO-115	115	14.80	10.14	0.817+j4.410	2.128+j10.449	17.16	11.40	0.710+j4.195	2.135+j10.491
LG	LGE-115	115	10.65	6.71	1.130+j6.132	3.550+j16.858	20.72	13.92	0.635+j3.468	1.717+j8.514



**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 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
LIBERTAD (MONTEMORELOS)	LBT-115	115	7.31	7.81	0.878+j9.046	2.306+j7.086	7.79	8.36	0.862+j9.335	2.311+j7.239
LIBERTAD (CIUDAD VICTORIA)	LBT-115	115	7.60	6.15	1.960+j8.509	4.299+j14.336	8.22	6.65	1.962+j8.668	4.322+j14.553
LIBRAMIENTO	LBR-115	115	2.10	1.34	11.028+j29.696	20.945+j82.735	3.05	2.00	7.473+j22.720	15.283+j59.842
LINARES	LSN-115	115	3.75	2.66	2.700+j17.515	8.653+j38.421	4.13	3.04	2.590+j17.478	7.633+j36.068
LINDA VISTA	LDV-115	115	5.02	3.07	2.352+j13.011	8.013+j37.600	5.56	3.38	2.335+j12.927	8.026+j37.688
LLANO GRANDE	LLG-138	138	12.81	14.77	1.186+j6.104	0.374+j3.950	14.58	16.37	1.085+j5.912	0.403+j4.189
LLANO GRANDE	LLG-230	230	9.27	10.51	2.699+j14.065	1.246+j9.786	10.72	11.80	2.393+j13.419	1.318+j10.254
LOMA LARGA	LOL-115	115	23.23	15.32	0.533+j2.808	1.549+j7.123	41.54	31.65	0.302+j1.732	0.589+j3.356
LOS NOVILLOS	LNV-138	138	6.33	6.98	1.919+j12.431	1.025+j9.021	8.49	9.19	1.276+j10.248	0.969+j7.855
LOS NOVILLOS	LNV-230	230	5.07	5.21	3.977+j25.868	3.738+j23.791	6.92	6.79	2.526+j20.944	3.519+j21.924
LUVATA	LUV-115	115	22.27	15.07	0.539+j2.933	1.514+j7.094	26.54	17.38	0.467+j2.712	1.496+j6.949
MABE	MAB-115	115	15.54	12.05	0.802+j4.196	1.815+j7.794	19.91	15.29	0.653+j3.610	1.536+j6.834
MAGNA FORMEX SALTILLO	MFS-115	115	26.87	26.28	0.373+j2.442	0.378+j2.623	34.51	34.92	0.262+j2.100	0.271+j2.035
MAGNA POWER TRAIN	MGP-115	115	24.17	24.20	0.429+j2.713	0.407+j2.721	30.78	31.81	0.316+j2.352	0.301+j2.132
MAGNÉTICOS DE MÉXICO	MME-138	138	6.89	7.11	2.661+j11.251	2.284+j10.238	8.76	8.58	2.023+j9.799	2.306+j10.392
MALE PISTONES	MPI-115	115	20.43	17.86	0.547+j3.204	0.888+j4.579	26.28	23.26	0.419+j2.748	0.727+j3.801
MANIOBRAS DE ALTAMIRA	MDA-230	230	16.23	17.27	0.770+j8.144	0.775+j6.902	18.92	19.49	0.693+j7.691	0.839+j7.172
MANIOBRAS DULCES NOMBRES II	MDU-115	115	43.15	47.37	0.232+j1.521	0.124+j1.119	55.51	59.95	0.166+j1.305	0.120+j1.027
MANIOBRAS LOS RAMONES	MLR-400	400	8.08	5.67	2.844+j28.429	14.091+j63.895	13.61	12.45	1.103+j18.632	1.633+j22.213
MANIOBRAS MESA LA PAZ	MPM-400	400	9.41	6.35	2.505+j24.421	14.312+j58.534	11.05	7.25	2.149+j22.882	14.296+j57.970
MANIOBRAS RANCHO NORTE	MRN-400	400	8.52	7.00	2.772+j26.956	7.619+j44.501	11.65	9.39	1.665+j21.744	6.255+j36.528
MANIOBRAS TRACTEBEL ENERGÍA DE PANUCO	ENP-115	115	17.44	15.24	0.753+j3.732	0.898+j5.406	19.86	16.85	0.727+j3.605	0.949+j5.590
MANNESMANN SACH	MSC-115	115	20.15	17.46	0.555+j3.248	0.924+j4.738	25.86	22.66	0.427+j2.792	0.763+j3.960
MANIOBRAS POLLUX	MAN-115	115	1.39	1.59	17.566+j44.532	4.342+j29.436	1.72	1.89	13.954+j40.051	4.808+j31.242
MANTE	MAN-115	115	2.21	1.35	10.521+j28.122	21.903+j85.456	3.44	2.14	6.661+j20.132	15.899+j57.648
MANUEL	MUL-115	115	7.00	2.99	2.497+j9.150	12.079+j46.059	7.83	3.34	2.430+j9.000	11.818+j45.425
MATAMOROS	MTM-69	69	4.84	5.18	0.467+j8.217	0.134+j6.681	4.97	5.27	0.449+j8.814	0.147+j7.349
MATAMOROS	MTM-138	138	12.67	11.25	1.332+j6.147	1.636+j8.698	14.65	12.71	1.207+j5.861	1.639+j8.715
MATAMOROS POTENCIA	MMP-138	138	13.26	15.26	1.008+j5.921	0.385+j3.842	15.04	16.88	0.922+j5.755	0.406+j4.062
MATAMOROS POTENCIA	MMP-230	230	11.58	12.41	1.788+j11.331	1.571+j9.654	13.55	14.07	1.522+j10.674	1.618+j9.913
MATRIMAR	MTR-115	115	3.18	2.24	5.581+j20.106	15.870+j44.590	3.59	2.51	5.393+j19.596	15.615+j44.012
MAXITILE	MAX-138	138	6.10	5.92	2.851+j12.741	2.455+j14.042	7.71	7.05	2.191+j11.154	2.514+j14.347
MAYTAG	MYG-138	138	11.05	8.34	1.515+j7.052	2.972+j13.992	13.56	10.01	1.238+j6.342	2.799+j13.186
MESAS	MES-400	400	21.13	22.33	0.504+j10.915	0.422+j8.300	23.06	23.99	0.438+j11.007	0.470+j8.964
METALDYNE SINTERED COMPONENTS MÉXICO S. DE R.L DE C.V.	MST-115	115	22.30	22.65	0.478+j2.939	0.436+j2.818	28.37	29.65	0.361+j2.549	0.329+j2.227
METALSA	MSA-115	115	22.77	17.15	0.450+j2.881	1.076+j5.680	32.85	23.79	0.340+j2.198	0.916+j4.678
METRO CUAUHTÉMOC	MCU-115	115	22.50	14.30	0.576+j2.894	1.647+j7.860	27.99	17.42	0.479+j2.565	1.522+j7.205
METRO LINCOLN	MLI-115	115	19.85	12.51	0.619+j3.286	1.898+j9.032	23.04	14.05	0.544+j3.123	1.904+j9.054
MEXICHEM FLUOR	MEF-138	138	9.62	7.57	1.873+j8.068	3.282+j14.814	10.99	8.48	1.749+j7.782	3.285+j14.831
MÉXICO	MEX-138	138	15.86	14.13	0.979+j4.928	1.486+j6.768	19.08	16.39	0.835+j4.518	1.486+j6.758
MEZQUITAL	MZQ-115	115	16.58	10.68	0.689+j3.945	2.266+j10.395	18.82	11.90	0.639+j3.827	2.271+j10.407
MEZQUITAL PROVISIONAL	MZP-115	115					18.57	11.47	0.646+j3.880	2.408+j10.979



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
MICARE	MCR-138	138	6.96	4.77	2.350+j11.209	6.433+j26.448	12.52	12.13	1.085+j6.914	1.385+j7.488
MICARE DOS	MDS-138	138	10.11	11.47	1.198+j7.787	0.605+j5.050	14.68	15.61	0.606+j5.938	0.560+j4.800
MIGUEL ALEMÁN	MIG-138	138	3.96	2.32	5.399+j19.395	16.314+j60.809	6.21	4.48	3.486+j13.672	5.934+j29.872
MINA TAYAHUA	MTU-115	115	1.20	0.73	16.051+j52.944	43.002+j156.325	1.38	0.82	15.821+j50.365	43.116+j155.481
MINERA	MIE-115	115	3.46	3.92	3.033+j18.930	1.747+j12.409	4.21	4.60	2.516+j17.167	1.761+j12.781
MINERA AUTLÁN	MIA-230	230	6.74	4.77	2.882+j19.488	10.644+j43.003	7.59	5.29	2.778+j19.038	10.697+j43.213
MIRAVALLE	MAV-115	115	26.14	19.73	0.453+j2.499	1.410+j4.826	30.17	22.17	0.399+j2.388	1.421+j4.853
MISIONES	MSI-115	115	10.12	6.49	1.449+j6.399	4.209+j17.073	11.46	7.25	1.380+j6.223	4.197+j16.958
MITRAS	MIT-115B2	115	20.80	15.49	0.463+j3.158	1.319+j6.342	29.46	21.19	0.355+j2.454	1.092+j5.274
MITRAS	MIT-115B1	115	19.61	14.29	0.502+j3.349	1.466+j7.019	27.21	19.11	0.395+j2.655	1.243+j5.969
MODELO	MOD-115	115	16.77	8.53	0.787+j3.879	3.205+j15.104	26.03	15.07	0.488+j2.762	1.847+j8.734
MODINE	MNE-138	138	6.91	7.09	2.718+j11.201	2.414+j10.397	8.80	8.55	2.073+j9.745	2.436+j10.556
MOLANGO	MOL-115	115	1.06	0.86	19.244+j59.505	40.038+j97.685	1.17	0.95	19.251+j59.545	40.060+j97.937
MONCLOVA	MON-115	115	12.01	14.41	0.718+j5.480	0.187+j2.772	14.09	16.41	0.560+j5.153	0.203+j2.987
MONCLOVA	MON-115F	115	11.68	13.36	0.755+j5.636	0.372+j3.524	13.72	15.22	0.591+j5.292	0.387+j3.731
MONCLOVA	MON-230	230	10.20	11.19	1.922+j12.882	1.135+j9.520	12.53	13.13	1.394+j11.572	1.212+j10.009
MONTE KRISTAL	MKL-115	115	12.71	8.12	0.875+j5.150	3.291+j13.707	15.56	10.03	0.735+j4.635	2.823+j12.141
MONTEMORELOS	MTN-115	115	1.62	1.13	12.523+j39.106	20.364+j92.872	1.77	1.23	12.523+j39.373	20.370+j93.027
MONTERREY	MTY-115	115	41.52	39.48	0.259+j1.578	0.167+j1.843	60.16	53.65	0.190+j1.199	0.180+j1.649
MONTERREY POTENCIA SF6	MTP-115	115	51.85	49.21	0.229+j1.260	0.144+j1.484	64.09	57.94	0.175+j1.126	0.151+j1.498
MONTERREY POTENCIA SF6	MTP-115B	115	42.29	41.03	0.253+j1.549	0.134+j1.714	61.89	56.46	0.183+j1.166	0.148+j1.516
MONTERREY POTENCIA SF6	MTP-400	400	28.22	28.96	1.612+j8.022	0.811+j7.528	38.52	37.29	1.031+j6.514	0.769+j7.196
MONTOI	MTI-115	115	20.70	9.98	0.554+j3.159	2.776+j13.248	23.53	11.03	0.504+j3.063	2.807+j13.364
MORELOS	MRL-115	115	11.11	8.30	0.896+j5.907	2.527+j11.808	12.71	9.36	0.800+j5.689	2.501+j11.670
MÚNICH	MUN-115	115	18.14	12.05	0.573+j3.615	1.887+j9.019	20.83	13.49	0.504+j3.470	1.893+j9.045
MUSEO	MSO-115	115	9.79	7.73	1.321+j6.649	3.211+j11.814	10.74	8.48	1.315+j6.670	3.260+j11.853
NADADORES	NAD-115F	115	4.57	3.43	4.761+j13.719	9.821+j27.309	5.15	3.81	4.608+j13.408	9.832+j27.495
NARANJOS	NRJ-115	115	3.28	2.02	5.065+j19.623	22.907+j53.671	3.61	2.22	5.054+j19.617	22.917+j53.768
NARCISO MENDOZA	NMZ-138	138	6.05	5.59	2.942+j12.841	3.269+j16.103	7.56	6.61	2.295+j11.362	3.298+j16.279
NAVA	NAV-138	138	8.92	10.17	1.474+j8.815	0.592+j5.616	12.60	13.65	0.868+j6.903	0.592+j5.244
NAVA	NAV-230	230	8.68	9.41	2.596+j15.074	1.853+j11.637	15.83	15.41	0.952+j9.179	1.706+j9.639
NAVIDAD	NVD-115	115	1.71	1.82	12.131+j36.941	6.948+j30.988	2.09	2.12	9.882+j33.517	7.283+j32.488
NAVISTAR	NAS-115	115	15.72	9.66	0.753+j4.155	2.527+j11.901	17.73	10.72	0.704+j4.058	2.534+j11.944
NEMAK	NEK-115	115	15.62	12.45	0.524+j4.219	1.474+j7.345	17.78	13.95	0.487+j4.079	1.471+j7.343
NGM CERÁMICA	NGM-115	115	12.84	7.61	1.024+j5.070	3.483+j15.431	17.50	10.68	0.746+j4.106	2.654+j11.875
NOGALAR	NOG-115	115	37.43	26.89	0.363+j1.736	0.744+j3.789	55.97	41.17	0.241+j1.282	0.508+j2.666
NOKIA	NOK-138	138	14.88	8.97	1.020+j5.256	3.652+j15.562	19.45	13.06	0.789+j4.436	2.507+j10.874
NORTE	NRE-138	138	10.51	7.29	1.663+j7.399	4.081+j17.172	12.43	8.56	1.478+j6.891	3.802+j16.215
NUEVA CASTILLA	NUC-115	115	12.65	6.66	0.918+j5.167	3.746+j19.063	14.21	7.30	0.865+j5.066	3.832+j19.365
NUEVA ESCOBEDO	NUE-115	115	29.01	20.63	0.370+j2.258	0.938+j4.990	33.41	23.09	0.321+j2.162	0.944+j5.030
NUEVA ROSITA	NUR-115	115	5.09	6.19	1.799+j12.909	0.321+j6.126	6.51	7.57	1.291+j11.137	0.335+j6.499
NUEVA ROSITA	NUR-115F	115	5.00	5.95	1.870+j13.143	0.501+j6.918	6.42	7.28	1.340+j11.303	0.516+j7.291



Subestación eléctrica	Acronimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
NUEVA ROSITA	NUR-230	230	5.39	5.76	4.656+j24.194	2.171+j19.872	7.38	7.39	3.126+j19.551	2.211+j19.459
NUEVO LAREDO	NUL-138	138	7.07	7.38	2.651+j10.950	2.226+j9.620	9.04	8.93	2.005+j9.489	2.248+j9.781
NUEVO PROGRESO	NVP-138	138	9.57	7.09	1.951+j8.096	3.911+j16.683	11.77	8.71	1.634+j7.264	3.553+j15.039
NUEVO SANTANDER	NST-115	115	8.21	7.90	1.397+j7.970	1.759+j8.862	8.85	8.44	1.401+j8.135	1.836+j9.270
NUTEC FIBRATEC S.A. DE C.V.	NUF-115	115	15.59	12.19	0.803+j4.183	1.909+j7.607	21.18	16.85	0.626+j3.391	1.464+j5.945
OBISPADO	OBI-115	115	20.57	16.36	0.602+j3.171	0.974+j5.638	23.66	18.38	0.543+j3.039	0.987+j5.663
OBRA DE TOMA	ODT-115	115	1.85	1.38	12.191+j33.763	23.622+j68.222	2.02	1.50	12.222+j33.953	24.063+j69.384
OJO CALIENTE	OJC-138	138	6.34	6.03	2.753+j12.262	2.804+j14.265	7.96	7.16	2.113+j10.804	2.829+j14.428
OLIVO	OVO-115	115	9.90	9.10	1.088+j6.618	2.296+j8.192	10.64	9.77	1.088+j6.779	2.330+j8.425
ORIENTE	OTE-138	138	12.15	12.20	1.317+j6.426	1.008+j6.592	13.84	13.59	1.209+j6.214	1.029+j6.771
ORIÓN	ORN-115	115	25.46	22.11	0.485+j2.562	0.556+j3.757	29.61	25.02	0.426+j2.430	0.569+j3.783
ORIZATLAN	ORZ-138	138	12.67	9.96	1.259+j6.161	2.323+j11.256	15.55	11.87	1.023+j5.541	2.223+j10.766
OXFORD	OXF-115	115	15.15	11.31	0.678+j4.330	1.764+j8.687	18.06	13.38	0.566+j4.005	1.665+j8.137
OZULUAMA	OZL-115	115	3.31	2.19	5.265+j19.359	20.099+j46.993	3.65	2.41	5.247+j19.299	20.107+j47.061
P. IND. COLONIAL	PIC-138	138	11.08	8.35	1.505+j7.029	2.967+j14.006	13.64	10.05	1.223+j6.308	2.783+j13.153
P. IND. PUENTE	PIP-138	138	10.09	7.44	1.834+j7.676	3.970+j15.948	12.13	8.70	1.603+j7.047	3.856+j15.384
P.I. DEL NORTE	INO1-138	138	12.18	7.28	1.353+j6.401	4.640+j19.230	17.59	11.99	0.941+j4.893	2.752+j11.679
P.I. SANTA MARÍA	PSM-115	115	21.85	19.80	0.424+j3.009	0.687+j3.939	27.02	24.81	0.313+j2.684	0.588+j3.389
PANUCO	PAN-115	115	4.66	2.50	2.489+j14.023	11.617+j50.039	5.05	2.73	2.568+j14.226	11.627+j50.113
PARQUE DE INVESTIGACIONES E INNOVACIÓN TECNOLÓGICA	IIT-115	115	11.81	8.21	0.751+j5.573	2.630+j12.749	13.60	9.29	0.674+j5.327	2.616+j12.616
PARQUE EÓLICO FENICIAS	FEN-230	230	4.57	5.02	3.524+j28.866	1.240+j21.393	5.13	5.49	3.309+j28.254	1.425+j22.911
PARQUE EÓLICO VICENTE GUERRERO	VIG-115	115	7.40	8.04	1.327+j8.871	0.730+j6.817	7.99	8.60	1.320+j9.045	0.776+j7.156
PARQUE IND. ACUÑA	PIU-138	138	5.52	5.70	2.318+j14.252	1.783+j12.972	7.37	7.47	1.573+j11.788	1.632+j11.257
PARQUE INDL. ESTRELLA	EST-115	115	14.06	8.35	0.955+j4.624	3.162+j14.057	20.23	12.52	0.648+j3.552	2.220+j10.033
PARQUE INDUSTRIAL	PAI-138	138	14.03	11.85	1.087+j5.574	1.648+j8.736	17.30	14.16	0.869+j4.991	1.587+j8.388
PARQUE INDUSTRIAL AMISTAD-AEROPUERTO	PIA-115	115	10.55	7.37	1.027+j6.210	2.990+j14.135	12.12	8.33	0.925+j5.954	2.973+j13.953
PARQUE INDUSTRIAL APODACA TECHNOLOGY PARK	PQT-115	115	12.17	8.10	0.835+j5.389	2.976+j13.372	13.76	8.99	0.786+j5.249	2.998+j13.430
PARQUE INDUSTRIAL DEL NORTE	INO2-138	138	8.92	5.66	2.059+j8.693	6.056+j23.635	17.58	11.99	0.942+j4.894	2.753+j11.681
PARQUE INDUSTRIAL ESCOBEDO	PIE-115	115	23.90	17.49	0.456+j2.740	1.145+j5.723	27.34	19.56	0.404+j2.641	1.149+j5.748
PARQUE INDUSTRIAL LA SILLA	SIA-115	115	14.50	9.55	0.741+j4.519	2.595+j11.416	16.62	10.72	0.673+j4.342	2.593+j11.369
PARQUE INDUSTRIAL LINARES	PIL-115	115	4.41	3.31	2.157+j14.898	6.512+j29.318	4.87	3.81	2.048+j14.860	5.493+j26.966
PARQUE INDUSTRIAL MONTERREY - APODACA	PMA-115	115	9.23	6.59	1.290+j7.080	2.976+j15.571	20.54	13.90	0.641+j3.498	1.700+j8.486
PARQUE INDUSTRIAL ORADEL	PIO-138	138	6.61	6.98	2.671+j11.755	1.752+j9.992	8.47	8.43	2.009+j10.149	1.824+j10.327
PARQUE INDUSTRIAL SALTILLO RAMOS ARIZPE	ISR1-115	115	20.88	19.49	0.528+j3.135	0.690+j3.811	26.74	25.29	0.404+j2.702	0.565+j3.160
PARQUE INDUSTRIAL SALTILLO RAMOS ARIZPE	ISR2-115	115	16.92	13.32	0.527+j3.889	1.556+j6.962	19.96	15.34	0.428+j3.635	1.534+j6.817
PEMEX	PEM-115	115	45.65	35.52	0.284+j1.426	0.497+j2.653	63.67	49.25	0.198+j1.130	0.385+j2.122
PEMEX CADEREYTA	PCD-230	230	9.15	7.27	2.282+j14.328	5.845+j25.149	11.35	8.47	1.787+j12.747	5.906+j25.293
PEMEX CRIOGÉNICA	PXC-138	138	5.64	3.44	2.707+j13.853	8.249+j40.418	6.81	4.91	2.290+j12.673	3.980+j27.503
PEMEX CRIOGÉNICA	PXC-138B	138	5.21	3.15	3.002+j14.992	9.068+j44.375	6.27	4.50	2.557+j13.749	4.360+j30.159
PEMEX NARANJOS	PMX-115	115	3.15	1.95	5.294+j20.434	23.752+j55.593	3.46	2.14	5.283+j20.428	23.762+j55.689
PEMEX-REFINERÍA	PRF-115	115	8.40	4.09	1.345+j7.794	8.764+j31.773	10.28	5.93	1.100+j7.021	4.305+j22.297
PEÑOLES	PÑL-115	115	15.75	12.38	0.795+j4.139	1.873+j7.448	21.46	17.18	0.618+j3.347	1.428+j5.786



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
PERFILES	PFS-115	115	22.13	16.55	0.463+j2.964	1.135+j5.927	32.05	23.08	0.349+j2.252	0.956+j4.845
PESQUERÍA	PQA-115	115	15.10	12.17	0.643+j4.349	1.412+j7.453	19.07	14.58	0.558+j3.788	1.415+j7.240
PETROCEL	GPT-115	115	15.98	12.93	0.802+j4.077	2.065+j6.848	18.51	15.43	0.748+j3.873	1.713+j6.128
PETROLERA	PER-138	138	15.06	13.38	0.954+j5.203	1.401+j7.208	17.82	15.33	0.818+j4.849	1.402+j7.229
PHEPS DODGE	PHD-115	115	11.32	6.08	1.179+j5.743	4.647+j20.494	15.36	8.30	0.871+j4.674	3.705+j16.469
PIEDRAS NEGRAS	PNE-138	138	9.30	9.31	1.476+j8.439	1.339+j8.446	13.08	12.15	0.884+j6.640	1.318+j8.065
PIEDRAS NEGRAS POTENCIA	PNG-138	138	10.11	11.33	1.279+j7.773	0.620+j5.323	14.56	15.14	0.693+j5.979	0.633+j5.223
PIEDRAS NEGRAS POTENCIA	PNG-230	230	7.81	8.23	2.743+j16.788	2.143+j14.216	13.00	12.20	1.149+j11.178	2.161+j13.073
PLANTA	PTA-138	138	11.99	10.47	1.393+j6.495	1.781+j9.566	13.78	11.76	1.273+j6.233	1.790+j9.628
PLANTA BOMBEO DOS	PBD-115	115	4.92	4.97	1.567+j13.397	3.159+j12.773	5.30	5.33	1.504+j13.692	3.231+j13.274
PLANTA BOMBEO UNO	PBU-115	115	3.82	3.69	2.298+j17.247	5.147+j18.578	4.12	3.96	2.246+j17.565	5.316+j19.249
PLANTA DE AGUAS RESIDUALES NORTE	RNO-115	115	23.71	15.17	0.420+j2.768	1.483+j7.384	27.19	16.89	0.366+j2.661	1.500+j7.454
PLANTA DE BOMBEO 0	PB0-115	115	2.37	2.13	4.332+j27.708	10.007+j36.196	2.57	2.29	4.296+j28.063	10.491+j37.475
PLANTA DE BOMBEO LA SILLA	PBS-115	115	14.67	9.88	0.794+j4.457	2.215+j10.879	17.34	11.40	0.701+j4.153	2.163+j10.580
PLANTA DE BOMBEO SAN ROQUE DE AYD	PBR-115	115	14.17	9.49	0.821+j4.615	2.341+j11.370	17.03	11.16	0.713+j4.230	2.232+j10.832
PLANTA DE BOMBEO SANTA ROSA APODACA	PBA-115	115	12.88	8.67	0.774+j5.096	2.758+j12.370	14.58	9.64	0.726+j4.956	2.780+j12.429
PLANTA DUPONT	DUT-115	115	17.26	15.08	0.760+j3.772	0.896+j5.466	19.65	16.67	0.734+j3.644	0.948+j5.656
PLANTA EL SALTO	STO-115	115	2.20	2.02	9.840+j28.459	10.424+j36.787	2.94	3.05	7.051+j23.851	3.718+j21.895
PLANTA FALCÓN	PFA-115	115	4.19	5.07	3.086+j15.561	0.257+j7.623	4.76	5.63	2.633+j15.115	0.293+j8.346
PLAZA SF6	PZA-115	115	45.44	36.32	0.280+j1.434	0.344+j2.542	56.45	43.72	0.218+j1.275	0.333+j2.402
PLAZA SF6	PZA-400	400	19.35	18.55	1.951+j11.772	1.746+j13.401	24.29	21.96	1.328+j10.374	1.819+j13.683
POLARIS	POI-115	115	21.77	16.12	0.463+j3.015	1.245+j6.137	26.13	18.73	0.386+j2.768	1.231+j6.004
POLICYD	PLC-115	115	19.45	16.16	0.610+j3.359	1.139+j5.409	22.16	18.03	0.587+j3.243	1.141+j5.469
POLVORÍN	POL-115	115	18.27	15.92	0.605+j3.583	1.041+j5.167	22.11	19.13	0.515+j3.262	0.928+j4.786
POSCO DE MÉXICO	PCO-115	115	22.51	18.75	0.399+j2.923	0.878+j4.668	26.47	22.87	0.357+j2.736	0.669+j4.045
PRAX AIR	PAX-115	115	22.00	13.92	0.586+j2.961	1.707+j8.092	37.21	24.21	0.368+j1.928	1.045+j5.019
PRIMEX	PRX-115	115	17.82	13.35	0.668+j3.665	1.595+j7.335	26.18	22.72	0.433+j2.755	0.678+j4.047
PRIMEX	PRX-115B	115	17.87	13.40	0.666+j3.655	1.587+j7.303	26.18	22.73	0.433+j2.756	0.677+j4.044
PROEZA GREDE	PGR-115	115	22.56	17.51	0.513+j2.898	1.895+j5.197	25.73	19.55	0.464+j2.801	1.901+j5.240
PROLAMSA	POM-115	115	19.47	9.53	0.570+j3.362	2.733+j13.814	22.11	10.49	0.517+j3.262	2.790+j14.018
PROLEC	PLE-115	115	23.31	17.44	0.488+j2.807	1.078+j5.625	28.26	20.29	0.433+j2.548	1.085+j5.528
PROLEC PARTICULAR	PLP-115	115	19.82	14.27	0.532+j3.307	1.411+j7.124	29.26	20.48	0.395+j2.465	1.128+j5.596
PROLOGIS	POG-138	138	11.48	8.86	1.447+j6.787	2.715+j12.896	14.07	10.58	1.188+j6.116	2.582+j12.247
PROLOGIS-APODACA	PLG-115	115	13.96	10.96	0.746+j4.699	1.533+j8.521	21.82	15.87	0.533+j3.305	1.370+j6.979
PROPARK	PPK-115	115	6.52	3.96	1.939+j9.999	6.964+j29.111	7.30	4.39	1.869+j9.824	6.962+j29.064
PROPASA	PDP-115	115	20.29	14.09	0.573+j3.222	1.762+j7.389	25.49	16.69	0.495+j2.822	1.776+j7.191
PROVIDENCIA	PRO-115	115	10.15	7.51	1.235+j6.424	3.430+j13.018	11.75	8.80	1.132+j6.110	3.105+j12.102
PTA BOMBEO CUATRO	PBC-115	115	2.24	2.05	4.699+j29.231	8.616+j37.123	2.44	2.21	4.652+j29.549	9.072+j38.482
PTA DE TRATAMIENTO DE AGUAS RESIDUALES NORESTE	RNE-115	115	11.36	7.46	0.901+j5.774	3.254+j14.656	12.82	8.28	0.853+j5.634	3.276+j14.714
PTA. BOMBEO TRES	PBT-115	115	2.85	2.70	3.499+j23.036	7.240+j26.407	3.09	2.90	3.451+j23.356	7.596+j27.423
PUENTE INTERNACIONAL	PUI-138	138	7.67	6.81	1.851+j10.217	2.741+j14.074	10.62	8.58	1.211+j8.160	2.720+j13.813
PUERTO	PUO-115	115	26.95	25.77	0.287+j2.447	0.442+j2.791	31.76	30.16	0.253+j2.286	0.405+j2.672



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
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			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
PUERTO ALTAMIRA ELÉCTRICA	PAE-115	115	28.76	29.24	0.251+j2.295	0.304+j2.197	33.99	34.36	0.218+j2.138	0.272+j2.098
PUERTO ALTAMIRA ELÉCTRICA	PAE-400	400	23.01	26.06	0.748+j10.009	0.660+j6.640	37.15	44.53	0.333+j6.830	0.327+j4.128
PUERTO CINCO NORTE	PCN-115	115	18.40	14.36	0.493+j3.576	1.255+j6.555	21.18	16.33	0.459+j3.417	1.220+j6.447
QUÍMICA FLUOR	QFL-138	138	9.62	7.57	1.873+j8.068	3.282+j14.814	10.99	8.48	1.748+j7.783	3.285+j14.831
RAMOS ARIZPE	RRA-115	115	19.29	15.98	0.596+j3.390	1.116+j5.483	25.75	22.07	0.449+j2.801	0.836+j4.183
RAMOS ARIZPE POTENCIA	RAP-115	115	28.89	30.09	0.336+j2.274	0.225+j2.024	37.44	41.12	0.225+j1.938	0.118+j1.434
RAMOS ARIZPE POTENCIA	RAP-400	400	22.47	20.19	1.588+j10.154	2.537+j13.559	28.85	24.98	0.983+j8.749	2.260+j12.788
RASSINI	RNI-138	138	7.45	5.90	2.067+j10.496	3.926+j18.713	9.93	7.21	1.473+j8.698	3.905+j18.331
RAYÓN	RAY-115	115	2.41	1.59	7.779+j26.385	24.498+j65.613	2.65	1.75	7.770+j26.404	24.548+j65.652
REAL DE PALMAS	RDP-115	115	5.99	3.56	2.039+j10.902	7.449+j32.952	18.81	12.28	0.573+j3.840	2.150+j9.858
REBOMBEO I	RBU-115	115	3.07	2.57	7.266+j20.380	8.877+j33.000	3.35	2.77	7.296+j20.571	9.312+j34.155
REBOMBEO II	RBD-115	115	4.60	3.98	4.160+j13.830	5.400+j20.457	5.00	4.29	4.173+j14.004	5.616+j21.168
REFINERÍA MADERO	RMA-115	115	13.97	10.39	0.788+j4.686	2.013+j9.493	17.52	13.27	0.623+j4.123	1.540+j8.053
RÉGIDORES	RGS-115	115	9.21	6.71	1.094+j7.125	3.118+j14.954	10.66	7.53	0.936+j6.788	3.125+j15.090
REYNOSA	REY-138	138	16.58	14.67	0.852+j4.730	1.197+j6.621	19.75	16.96	0.718+j4.378	1.180+j6.561
REYNOSA CENTRO	RYC-138	138	12.13	9.72	1.274+j6.441	2.490+j11.244	14.15	11.00	1.146+j6.089	2.498+j11.290
RHEEM	RHM-138	138	6.91	7.09	2.718+j11.201	2.414+j10.397	8.80	8.55	2.073+j9.745	2.436+j10.556
RICSA	RIS-138	138	10.74	7.98	1.696+j7.222	3.658+j14.739	12.82	9.26	1.496+j6.673	3.583+j14.353
RIEL	RIE-115	115	28.26	18.15	0.454+j2.305	1.279+j6.144	36.44	22.75	0.353+j1.973	1.143+j5.506
RIO	RIO-115	115	30.76	21.60	0.420+j2.117	0.881+j4.826	36.46	24.75	0.358+j1.971	0.881+j4.765
RIO BRAVO	RIB-138	138	16.28	15.87	0.952+j4.800	0.756+j5.316	22.63	24.73	0.587+j3.828	0.244+j3.069
RIO BRAVO	RIB-230	230	14.05	12.97	1.448+j9.337	2.278+j11.841	19.48	20.28	0.849+j7.449	0.732+j6.702
RIO BRAVO III	RBT-400	400	11.51	13.77	1.978+j19.970	0.796+j11.682	16.47	19.86	1.022+j15.386	0.446+j8.307
RIO BRAVO IV	RBC-400	400	11.59	13.91	1.965+j19.825	0.739+j11.496	16.45	19.86	1.024+j15.406	0.446+j8.307
RIO BRAVO PONIENTE	RBP-138	138	12.07	9.32	1.295+j6.474	2.263+j12.316	15.34	11.84	0.976+j5.630	1.904+j10.762
RIO ESCONDIDO	REC-138	138	10.48	12.49	1.102+j7.524	0.254+j3.938	15.40	17.37	0.512+j5.667	0.211+j3.679
RIO ESCONDIDO	REC-230	230	10.26	12.55	2.124+j12.769	0.522+j5.860	22.23	27.11	0.466+j6.554	0.118+j2.795
RIO ESCONDIDO	REC-400	400	8.21	8.30	4.552+j27.770	3.200+j27.028	22.62	26.33	0.649+j11.213	0.451+j6.784
RIO SALADO	SDO-138	138	3.59	2.46	5.716+j21.460	13.652+j50.906	4.21	3.68	5.130+j20.199	5.226+j29.432
RÍO VERDE	RVE-115	115	2.18	1.37	8.521+j29.293	26.975+j80.166	2.39	1.50	8.510+j29.311	27.025+j80.206
ROCKWELL	ROW-115	115	21.76	14.66	0.551+j3.001	1.563+j7.314	25.87	16.89	0.479+j2.782	1.546+j7.174
SABINAS	SAB-115	115	3.73	3.22	3.299+j17.482	5.431+j25.669	4.65	3.77	2.646+j15.493	5.445+j26.042
SABINAS HIDALGO	SAH-115	115	1.96	2.12	10.082+j32.283	2.452+j26.558	2.18	2.30	10.000+j31.987	2.727+j28.493
SALITRILLO	SLT-115	115	4.22	3.52	2.718+j15.485	8.283+j23.973	4.56	3.82	2.703+j15.775	8.288+j24.126
SALITRILLOS	SLT-138	138	5.87	7.28	1.623+j13.465	0.909+j5.707	6.61	8.08	1.521+j13.174	0.993+j5.987
SALTILLO	SAL-115	115	23.68	26.21	0.491+j2.761	0.200+j1.995	28.00	30.01	0.412+j2.576	0.219+j2.083
SALTILLO	SAL-230	230	12.48	13.85	1.695+j10.500	0.853+j7.475	14.48	15.62	1.411+j9.991	0.907+j7.862
SAN AGUSTÍN	AUS-115	115	29.26	20.55	0.414+j2.231	1.069+j5.044	35.94	24.65	0.342+j2.003	0.967+j4.730
SAN BARTOLO	SBT-115	115	1.11	0.89	14.319+j57.874	41.345+j96.512	1.22	0.98	14.311+j57.933	41.367+j96.709
SAN BERNABÉ	BER-115	115	15.56	10.31	0.721+j4.205	2.250+j10.549	19.16	12.29	0.639+j3.758	2.129+j9.978
SAN CARLOS POTENCIA	SCP-400	400	8.86	7.77	2.545+j25.928	5.979+j36.614	10.15	8.63	2.214+j24.939	6.267+j37.900
SAN CRISTOBAL	SCB-138	138	7.07	4.47	2.165+j11.057	6.157+j30.332	8.50	5.99	1.850+j10.146	3.765+j22.977



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
SAN FERNANDO	FDO-115	115	0.82	0.49	29.064+j75.225	78.936+j229.961	0.90	0.54	29.044+j75.361	78.957+j230.174
SAN JORGE	JOR-115	115	22.47	14.36	0.558+j2.901	1.573+j7.806	26.14	16.15	0.488+j2.751	1.581+j7.825
SAN JUAN	JAN-115	115	4.04	2.24	3.058+j16.137	11.883+j54.851	8.04	4.84	1.811+j8.906	6.842+j26.225
SAN MARCOS	MCO-115	115	6.93	4.07	1.720+j9.425	6.284+j29.076	10.09	6.05	1.320+j7.116	4.874+j21.178
SAN MARTIN	SMA-115	115	13.53	8.43	0.882+j4.828	2.829+j13.525	15.20	9.34	0.831+j4.731	2.834+j13.554
SAN NICOLÁS	NIC-115	115	57.69	55.81	0.215+j1.131	0.136+j1.263	71.24	65.23	0.161+j1.012	0.145+j1.302
SAN NICOLÁS	NIC-115B	115	57.77	56.00	0.214+j1.129	0.135+j1.254	71.41	65.51	0.160+j1.010	0.143+j1.292
SAN NICOLÁS	NIC-400	400	25.51	25.11	1.748+j8.882	1.353+j9.378	33.70	30.95	1.167+j7.447	1.390+j9.420
SAN ROBERTO	RBO-115	115	0.89	0.96	34.065+j66.711	20.063+j54.277	1.05	1.10	30.418+j62.479	20.534+j56.088
SAN ROQUE	ROQ-115B	115	18.22	12.28	0.635+j3.589	1.904+j8.724	23.49	15.71	0.496+j3.070	1.631+j7.562
SAN ROQUE	ROQ-115	115	18.08	12.17	0.640+j3.616	1.927+j8.818	23.35	15.60	0.500+j3.088	1.645+j7.622
SANDOVAL	SDV-138	138	8.19	6.94	2.363+j9.440	3.333+j14.766	9.45	7.86	2.189+j9.016	3.316+j14.675
SANTA AMALIA TAMAULIPAS	AAT-115	115	21.51	20.46	0.427+j3.057	0.419+j3.568	24.53	22.76	0.408+j2.949	0.442+j3.673
SANTA CATARINA	CAT-115	115	11.54	7.65	1.018+j5.663	2.865+j14.223	12.90	8.44	0.968+j5.578	2.876+j14.336
SANTA CRUZ	STZ-115	115	26.70	18.69	0.451+j2.445	1.173+j5.561	32.55	22.01	0.375+j2.212	1.139+j5.354
SANTANDER	SNT-138	138	9.49	6.42	1.583+j8.246	4.022+j20.064	11.45	8.16	1.349+j7.537	2.960+j16.665
SANTO DOMINGO	DON-115	115	37.46	27.39	0.335+j1.741	0.702+j3.662	55.50	40.83	0.232+j1.295	0.511+j2.688
SANTO DOMINGO VIEJO PROVISIONAL	DVP-115	115	22.70	16.28	0.510+j2.879	1.496+j6.218	28.93	19.48	0.434+j2.487	1.510+j6.019
SARAPE MANIOBRAS	ZIS-230	230	12.00	12.06	1.790+j10.919	1.896+j10.768	13.93	13.62	1.492+j10.376	1.944+j11.080
SELLO ROJO	SER-115	115	4.25	3.14	2.219+j15.451	7.091+j31.570	4.75	3.77	2.051+j15.224	5.110+j26.928
SENDERO NACIONAL	SEN-138	138	10.61	8.67	1.541+j7.348	2.387+j12.520	12.13	9.70	1.422+j7.085	2.394+j12.578
SIDERÚRGICA	SIG-138	138	11.62	9.97	1.406+j6.711	1.926+j10.268	13.34	11.19	1.287+j6.444	1.932+j10.319
SIDERÚRGICA DEL GOLFO S.A.	SGA-230	230	10.18	8.18	1.879+j12.906	4.734+j22.382	13.16	11.07	1.273+j11.024	3.188+j17.242
SIECOR	SIE-138	138	12.96	7.77	1.242+j6.019	4.311+j18.008	18.04	12.24	0.901+j4.775	2.692+j11.490
SOLIDARIDAD	SRD-115	115	15.23	10.00	0.741+j4.295	2.352+j10.948	18.29	11.68	0.667+j3.936	2.274+j10.536
SORIANA CEDIS	SOC-115	115	14.28	8.50	0.895+j4.562	3.107+j13.801	19.25	11.49	0.668+j3.736	2.506+j11.206
SOTO LA MARINA	SOT-115	115	1.08	0.77	19.993+j58.058	50.308+j127.865	1.19	0.84	20.025+j58.247	50.761+j129.039
SPARTECH	SEH-115	115	14.77	10.92	0.699+j4.440	1.853+j9.082	17.57	12.88	0.587+j4.115	1.755+j8.532
STIVA	STV-115	115	19.50	13.39	0.558+j3.358	1.800+j7.874	22.76	15.19	0.489+j3.171	1.797+j7.815
TAMALIN	TLN-115	115	3.71	2.50	4.662+j17.260	17.244+j40.784	4.10	2.75	4.644+j17.191	17.253+j40.851
TAMAULIPAS	TAM-115	115	14.93	11.49	0.811+j4.372	2.209+j8.179	17.28	13.12	0.761+j4.157	2.179+j7.988
TAMAZUNCHALE 115	TZE-115	115	0.98	0.55	25.953+j62.824	60.436+j220.328	1.07	0.60	25.925+j62.844	60.488+j220.374
TAMAZUNCHALE 400	TMH-400	400	21.02	22.45	0.506+j10.974	0.331+j7.997	22.90	24.07	0.445+j11.083	0.379+j8.676
TAMBACA	TBC-115	115	3.35	2.31	5.324+j19.082	16.646+j43.610	3.68	2.54	5.317+j19.102	16.695+j43.649
TAMOS	TMO-115	115	21.38	19.44	0.454+j3.073	0.707+j3.989	24.18	21.56	0.438+j2.988	0.720+j4.077
TAMOS	TMO-400	400	17.84	15.12	1.148+j12.894	4.004+j19.710	24.22	19.94	0.749+j10.460	3.468+j17.111
TAMPICO	TPC-115	115	27.29	29.48	0.343+j2.409	0.242+j1.904	31.75	33.28	0.315+j2.279	0.258+j1.991
TAMPICO	TPC-230	230	16.10	16.09	0.871+j8.199	1.308+j8.347	18.90	18.27	0.768+j7.691	1.366+j8.559
TAMPIQUITO	TPQ-115	115	30.85	19.53	0.386+j2.117	1.080+j5.794	36.41	22.14	0.326+j1.979	1.088+j5.785
TANCOL	TCL-115	115	17.12	14.67	0.640+j3.825	1.908+j5.569	19.50	16.39	0.611+j3.695	1.917+j5.629
TECHNOCAST	THC-115	115	14.29	10.30	0.708+j4.590	2.054+j9.861	16.99	12.14	0.594+j4.257	1.946+j9.270
TECNOLÓGICO POTENCIA SF6	TEC-115	115	43.14	40.24	0.291+j1.511	0.210+j1.865	54.01	49.10	0.224+j1.333	0.198+j1.750



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
TECNOLÓGICO POTENCIA SF6	TEC-400	400	18.93	17.82	2.032+j12.027	1.882+j14.374	23.73	21.13	1.405+j10.611	1.930+j14.535
TEKSID	TKS-115	115	8.81	8.14	1.033+j7.465	1.768+j9.241	10.14	9.14	0.883+j7.150	1.779+j9.425
TELEFLEX	TLX-138	138	6.73	6.64	2.360+j11.609	2.076+j12.129	8.49	7.94	1.735+j10.178	2.099+j12.283
TEMPOAL II	TED-115	115	1.94	1.40	9.094+j32.972	19.742+j71.472	2.13	1.53	9.131+j33.051	19.759+j71.611
TERNIUM MANIOBRAS	TNM-400	400	12.38	9.09	1.977+j18.550	7.484+j38.325	16.42	11.91	1.198+j15.425	6.203+j32.200
TEXTILERAS	TXE-115	115	16.67	12.32	0.624+j3.934	1.596+j8.076	18.98	13.84	0.597+j3.801	1.577+j8.021
TIERRA NUEVA	TNA-115	115	6.26	4.54	3.333+j10.060	7.421+j21.441	6.80	4.94	3.330+j10.220	7.434+j21.639
TOPO CHICO	THO-115	115	28.60	21.42	0.461+j2.275	0.881+j4.572	33.28	24.19	0.405+j2.157	0.882+j4.586
TOSHIBA	TOS-115	115	11.32	6.08	1.179+j5.744	4.647+j20.494	15.36	8.30	0.870+j4.674	3.705+j16.469
TRANE	TNE-115	115	19.50	13.39	0.558+j3.358	1.800+j7.874	22.76	15.19	0.489+j3.171	1.797+j7.815
TRES MESAS MANIOBRAS	TMS-400	400	9.44	6.48	2.352+j24.354	12.582+j56.901	11.03	7.35	2.027+j22.946	12.625+j56.673
TRIARA II	TII-115	115	11.56	9.03	0.969+j5.659	1.771+j10.442	20.84	15.08	0.599+j3.453	1.367+j7.395
TRICO COMPTS.	TCO-138	138	10.94	9.10	1.477+j7.134	2.209+j11.669	12.51	10.19	1.360+j6.870	2.216+j11.728
TUBACERO MONTERREY	TBM-115	115	21.37	15.09	0.542+j3.059	1.628+j6.804	27.03	17.96	0.465+j2.662	1.642+j6.605
UCAR	UCA-230	230	15.52	12.68	1.325+j8.455	3.378+j13.921	18.58	14.69	1.071+j7.787	3.360+j13.767
UNIDAD DEPORTIVA	UDP-138	138	6.51	6.46	2.844+j11.899	3.243+j12.104	8.28	7.75	2.186+j10.360	3.283+j12.336
UNIVERSIDAD	UNI-115	115	21.57	13.98	0.564+j3.026	1.641+j7.926	25.41	15.81	0.475+j2.834	1.647+j7.946
UNIVERSIDAD SACH	UNT-115	115	16.76	13.08	0.661+j3.905	1.467+j7.182	19.76	15.13	0.592+j3.648	1.405+j6.972
VALADECES	VDL-138	138	4.34	2.59	4.799+j17.724	14.174+j53.670	7.82	5.12	2.730+j10.876	6.816+j28.123
VALLE	VLL-115	115	33.41	22.88	0.377+j1.951	0.843+j4.657	39.75	26.16	0.316+j1.810	0.846+j4.623
VALLE ALTO	VAL-115	115	11.86	10.08	0.983+j5.509	2.018+j8.361	13.01	11.05	0.977+j5.527	2.069+j8.393
VALLE DEL ROBLE	VRO-115	115	9.54	6.35	1.126+j6.871	4.028+j17.000	10.92	7.17	1.050+j6.607	3.974+j16.743
VALLE HERMOSO	VHE-138	138	3.16	2.76	7.335+j24.086	8.880+j35.306	3.57	3.11	7.077+j23.533	8.736+j34.604
VALLE ORIENTE	VOT-115	115	43.38	34.03	0.296+j1.502	0.403+j2.767	53.53	40.65	0.234+j1.344	0.393+j2.634
VALLE PONIENTE	VAP-115	115	16.17	12.15	0.743+j4.038	1.579+j8.027	18.64	13.65	0.656+j3.863	1.589+j8.063
VALLE SOLEADO DEFINITIVO	VSL-115	115	22.10	13.79	0.578+j2.949	1.731+j8.258	26.73	16.21	0.499+j2.687	1.656+j7.884
VALLE SUR	VSR-138	138	3.61	3.40	6.349+j21.107	6.410+j25.504	4.09	3.85	6.094+j20.550	6.266+j24.802
VALLES	VES-115	115	11.79	9.94	0.998+j5.543	2.032+j8.576	12.91	10.88	0.994+j5.569	2.080+j8.620
VENTIKA MANIOBRAS	VKM-230	230	6.78	5.92	3.085+j19.338	4.764+j27.792	7.60	6.48	2.915+j19.005	4.955+j28.737
VERDE CO.	VEC-138	138	10.05	7.33	1.842+j7.708	4.054+j16.353	12.11	8.64	1.603+j7.059	3.893+j15.584
VICTORIA	VRA-115	115	7.85	6.32	1.761+j8.274	3.773+j14.109	8.48	6.84	1.763+j8.433	3.802+j14.338
VIDRIERA MONTERREY	VMO-115	115	27.27	17.98	0.485+j2.386	1.251+j6.081	35.53	23.03	0.381+j2.020	1.095+j5.291
VILLA DE CASAS	VDC-115	115	2.43	1.90	9.782+j25.458	14.884+j48.397	2.66	2.05	9.812+j25.648	15.325+j49.558
VILLA DE GARCÍA	VDG-115	115	27.91	31.84	0.339+j2.354	0.099+j1.490	31.20	34.81	0.310+j2.320	0.109+j1.603
VILLA DE GARCÍA	VDG-230	230	24.88	28.85	0.687+j5.293	0.281+j3.138	28.94	32.61	0.508+j5.022	0.300+j3.342
VILLA DE GARCÍA	VDG-400	400	28.53	28.80	1.348+j7.982	1.321+j7.777	37.60	35.45	0.799+j6.708	1.365+j7.896
VILLA DE JUÁREZ DOS	VJD-115	115	12.42	7.27	0.967+j5.256	3.503+j16.326	15.84	9.37	0.803+j4.540	3.057+j13.858
VILLA DE SANTIAGO	VDS-115	115	9.06	5.70	1.589+j7.150	5.250+j19.632	10.23	6.36	1.519+j6.975	5.237+j19.516
VILLA FLORIDA	VLF-138	138	16.81	14.87	0.777+j4.677	1.115+j6.549	20.47	17.63	0.632+j4.235	1.061+j6.302
VISTEON	VIS-115	115	12.91	9.64	0.807+j5.079	2.011+j10.187	17.70	12.34	0.651+j4.074	1.948+j9.314
WHIRLPOOL	WHI-115	115	14.41	10.56	0.720+j4.550	1.943+j9.478	17.11	12.42	0.608+j4.225	1.845+j8.928
WHIRLPOOL APODACA	WHA-115	115	21.53	15.99	0.476+j3.047	1.195+j6.174	31.31	22.43	0.358+j2.305	0.995+j5.007



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
XICOTENCATL II	XID-115	115	1.43	0.89	15.496+j43.777	38.911+j123.886	1.94	1.24	11.548+j35.900	32.855+j96.007
XOCHIPILLI	XOC-115	115	9.28	7.93	1.115+j7.069	2.056+j10.630	10.83	8.95	0.938+j6.676	2.068+j10.803
YESOS INDUSTRIALES DEL NORTE	YIN-115	115	33.16	10.70	0.405+j1.961	5.579+j13.569	38.50	11.88	0.356+j1.863	5.586+j13.611
ZAPALINAME	ZPL-115	115	12.52	9.88	0.911+j5.223	1.903+j9.371	14.33	11.11	0.821+j5.031	1.903+j9.355
ZINC NACIONAL	ZNA-115	115	31.36	13.36	0.417+j2.076	2.166+j10.457	37.72	16.47	0.349+j1.904	1.928+j9.230

Gerencia de Control Regional Baja California

Sistema 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 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
ACUEDUCTO	ACU-115	115	3.50	2.69	3.077+j18.697	10.424+j34.964	4.14	3.05	2.766+j17.444	10.436+j35.103
AEROPUERTO DOS	APD-230	230	12.16	9.80	1.349+j10.832	3.419+j18.533	13.53	10.72	1.313+j10.713	3.502+j19.003
BAJA RECYCLING	B.RECYCLING	69	14.40	13.28	0.404+j2.736	0.643+j3.419	16.21	14.70	0.383+j2.677	0.650+j3.490
BAJÍO	BAJ-69	69	6.23	2.16	2.070+j6.052	10.697+j41.170	6.93	2.38	2.047+j5.985	10.707+j41.241
CACHANILLA	KCH-161	161	18.11	14.84	0.579+j5.100	1.757+j8.370	20.43	16.43	0.544+j4.975	1.772+j8.508
CAÑÓN	KON-115	115	2.57	2.03	7.007+j24.912	10.459+j45.228	2.92	2.27	6.646+j24.101	10.481+j45.614
CÁRDENAS	CNA-69	69	14.38	10.12	0.533+j2.719	1.276+j6.152	16.73	11.37	0.483+j2.574	1.283+j6.218
CARRANZA	CNZ-161	161	17.77	15.88	0.594+j5.196	1.467+j6.972	20.74	17.92	0.526+j4.901	1.487+j7.131
CEMENTOS	CEC-115	115	7.73	7.29	1.578+j8.446	5.071+j9.279	9.58	8.56	1.259+j7.516	5.097+j9.503
CENTENARIO	CNT-230	230	14.70	10.89	1.070+j8.967	4.483+j18.051	16.57	12.07	1.018+j8.758	4.501+j18.209
CENTINELA	CTA-69	69	2.63	3.06	3.728+j14.706	11.341+j4.840	2.87	3.35	3.728+j14.806	11.347+j4.889
CENTRO	CRO-161	161	22.03	21.17	0.471+j4.193	0.663+j4.695	25.04	23.42	0.434+j4.060	0.693+j4.894
CENTRO	CRO-230	230	18.71	15.73	0.796+j7.052	1.707+j11.019	21.29	17.38	0.734+j6.822	1.776+j11.382
CERRO PRIETO CUATRO	CPC-161	161	15.50	15.83	0.652+j5.961	0.707+j5.591	17.51	17.56	0.622+j5.805	0.740+j5.747
CERRO PRIETO DOS	CPD-230	230	16.36	17.26	0.918+j8.067	0.727+j6.814	18.95	19.31	0.826+j7.664	0.782+j7.248
CERRO PRIETO TRES	CPT-230	230	16.67	17.65	0.906+j7.915	0.710+j6.611	19.55	19.92	0.793+j7.429	0.764+j7.027
CERRO PRIETO UNO	CPU-161	161	15.28	13.80	0.725+j6.039	1.277+j7.949	17.26	15.75	0.695+j5.884	1.145+j7.548
CERVECERA BAJA CALIFORNIA	CBC-230	230	14.20	11.79	1.176+j9.277	3.270+j14.765	15.92	12.98	1.131+j9.103	3.334+j15.098
CESPT	CPT-69	69	13.72	8.97	0.447+j2.868	1.592+j7.369	15.70	10.01	0.414+j2.760	1.596+j7.412
CETYS	CTY-161	161	20.49	19.58	0.521+j4.506	0.845+j5.112	23.82	22.00	0.463+j4.268	0.874+j5.293
CETYS	CTY-230	230	12.84	10.62	1.253+j10.266	2.843+j16.588	14.29	11.60	1.216+j10.148	2.943+j17.106
CHAPULTEPEC	CHQ-230	230	10.70	10.40	1.712+j12.286	1.900+j13.377	12.15	11.53	1.611+j11.913	1.947+j13.824
CICLO COMBINADO MEXICALI	CCM-230	230	29.85	31.67	0.407+j4.430	0.308+j3.703	34.61	35.39	0.356+j4.205	0.342+j3.962
CIPRÉS	CIP-115	115	8.99	11.01	1.304+j7.273	0.287+j3.421	11.47	13.43	0.977+j6.290	0.315+j3.670
CIPRÉS	CIP-230	230	5.85	6.19	3.843+j22.383	2.070+j19.378	7.38	7.32	2.912+j19.577	2.261+j20.573
COLONET	COE-115	115	1.89	1.33	10.501+j33.548	19.127+j77.206	2.13	1.48	10.118+j32.759	19.151+j77.596
COMISIÓN ESTATAL DE SERVICIOS PÚBLICOS DE TIJUANA	CES-69	69	18.22	14.66	0.335+j2.160	0.711+j3.725	21.54	16.64	0.287+j2.014	0.717+j3.791
DART CONTAINER	DAR-69	69	15.35	11.11	0.450+j2.557	1.302+j5.425	17.28	12.28	0.430+j2.500	1.309+j5.497
DINAMIS PLASTICS	PLA-69	69	16.62	14.67	0.409+j2.362	0.583+j3.309	18.93	16.32	0.380+j2.283	0.591+j3.393
DURAZNO	DRA-69	69	12.57	7.97	0.533+j3.125	1.866+j8.467	14.41	8.91	0.494+j3.001	1.868+j8.498
ENCINAL	ENL-69	69	4.40	4.15	1.464+j8.928	1.573+j10.586	4.87	4.50	1.449+j8.887	1.699+j11.105
ENSENADA	EDA-115	115	7.95	8.33	1.523+j8.211	1.621+j7.142	9.84	9.82	1.219+j7.323	1.649+j7.382
FABRICAS MONTERREY	FAM-115	115	7.69	7.73	1.582+j8.488	2.030+j8.354	9.50	9.09	1.272+j7.585	2.057+j8.587
FEVISA	FEV-161	161	13.14	7.51	1.014+j7.001	5.079+j22.451	14.89	8.34	0.964+j6.798	5.080+j22.522
FLORIDO	FLO-69	69	14.12	9.37	0.518+j2.773	1.608+j6.937	15.99	10.41	0.492+j2.697	1.612+j6.982
FRANCISCO VILLA	FCO-69	69	13.59	10.24	0.493+j2.889	1.481+j5.638	15.37	11.37	0.466+j2.814	1.485+j5.695
FRONTERA	FTA-69	69	22.25	16.31	0.304+j1.765	0.794+j3.673	25.90	18.37	0.273+j1.670	0.796+j3.707
GALLO	GLL-115	115	8.03	8.32	1.521+j8.131	1.985+j7.253	9.99	9.85	1.205+j7.211	2.009+j7.477
GONZALES ORTEGA	GOR-161	161	20.12	20.68	0.509+j4.592	0.666+j4.202	24.22	23.86	0.423+j4.200	0.686+j4.371
GUERRERO	GER-69	69	18.67	13.19	0.395+j2.097	1.002+j4.699	22.07	14.96	0.347+j1.955	1.005+j4.738
HERRADURA	HRA-69	69	26.67	30.04	0.197+j1.481	0.084+j0.997	30.53	33.47	0.178+j1.424	0.091+j1.070
HERRADURA	HRA-230	230	18.61	17.25	0.872+j7.082	1.507+j8.776	24.07	20.73	0.627+j6.035	1.568+j9.025



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HIDALGO	HGO-161	161	7.67	5.99	1.899+j11.965	4.380+j21.896	8.51	6.58	1.859+j11.869	4.396+j22.182
HIPÓDROMO	HMO-69	69	27.69	21.45	0.277+j1.412	0.623+j2.635	33.63	24.75	0.233+j1.282	0.624+j2.656
HUNTER	HTR-69	69	16.71	11.39	0.417+j2.348	1.218+j5.602	19.45	12.83	0.375+j2.221	1.220+j5.631
HYUNDAI. CARGA INDUSTRIAL	HIU-69	69	27.22	18.18	0.263+j1.440	0.614+j3.604	31.81	20.34	0.235+j1.357	0.621+j3.676
INDUSTRIAL	INA-69	69	24.91	18.60	0.268+j1.577	0.663+j3.167	29.30	21.07	0.235+j1.477	0.665+j3.198
IOJOS NEGROS	ONG-69	69	1.33	1.00	10.575+j27.947	16.284+j57.911	1.44	1.08	10.702+j28.497	16.344+j58.864
JATAY	JAT-115	115	3.72	2.82	2.906+j17.607	9.807+j33.667	4.38	3.20	2.606+j16.474	9.824+j33.821
JOVITA	JOV-230	230	7.72	8.81	1.890+j17.098	0.773+j11.777	9.07	9.95	1.658+j16.025	0.874+j12.678
JOYA	JOY-115	115	8.26	9.63	0.984+j7.981	1.276+j4.523	13.20	13.79	0.584+j5.500	1.287+j4.730
KENWORTH	KEN-230	230	6.25	7.26	2.506+j21.098	2.517+j12.141	6.95	8.02	2.449+j20.883	2.545+j12.355
LA ENCANTADA	ENA-69	69	17.33	18.84	0.397+j2.264	0.278+j1.732	19.92	21.18	0.367+j2.169	0.287+j1.802
LA MESA	LMS-69	69	22.32	17.04	0.337+j1.753	0.705+j3.380	26.26	19.32	0.299+j1.642	0.708+j3.415
LA ROSITA	ROA-230	230	34.03	33.51	0.377+j3.883	0.626+j4.069	39.47	37.64	0.329+j3.686	0.642+j4.222
LAGO	LGO-69	69	15.30	11.67	0.496+j2.557	0.997+j4.938	17.47	13.02	0.462+j2.465	1.002+j5.003
LIBRAMIENTO	LIB-230	230	7.01	6.46	2.812+j18.731	3.814+j23.477	7.85	7.09	2.706+j18.418	3.975+j24.264
LOMAS	LOS-69	69	3.03	3.27	2.237+j12.944	0.456+j10.316	3.20	3.41	2.357+j13.495	0.515+j11.267
LOMAS	LOS-115	115	8.41	9.91	1.367+j7.775	0.412+j4.397	10.40	11.74	1.086+j6.941	0.449+j4.694
LOMAS	LOS-230	230	5.93	5.89	3.696+j22.070	2.940+j23.093	7.49	6.95	2.800+j19.288	3.153+j24.287
MABAMEX	MAB-69	69	13.45	8.94	0.537+j2.914	1.869+j7.223	15.25	9.94	0.509+j2.829	1.873+j7.269
MANEADERO	MND-115	115	6.95	7.63	1.810+j9.376	1.005+j7.046	8.55	9.00	1.473+j8.411	1.031+j7.290
MATRIX	MATRIX-69	69	10.95	6.47	0.842+j3.538	2.434+j10.943	12.41	7.19	0.809+j3.438	2.436+j10.975
MESA INDUSTRIAL GROUP	MGI-69	69	15.32	10.01	0.552+j2.540	1.442+j6.588	17.56	11.19	0.519+j2.441	1.444+j6.620
METROPOLIS	MEP-69	69	31.58	33.44	0.167+j1.251	0.097+j1.056	37.26	37.93	0.139+j1.168	0.104+j1.128
METROPOLIS	MEP-230	230	20.85	21.95	0.817+j6.315	0.956+j5.438	29.89	28.76	0.495+j4.862	0.979+j5.589
MEXICALI II	MXI-161	161	25.69	26.08	0.385+j3.598	0.447+j3.434	30.08	29.48	0.330+j3.383	0.465+j3.586
MEXICALI II	MXI-230	230	24.14	22.65	0.626+j5.465	1.057+j6.525	27.80	25.29	0.564+j5.225	1.089+j6.750
MEXICALI ORIENTE	MOE-161	161	15.64	14.05	0.677+j5.903	1.539+j7.833	18.06	15.72	0.614+j5.628	1.586+j8.056
MÉXICO	MXC-69	69	17.54	11.45	0.456+j2.224	1.299+j5.768	20.62	12.93	0.407+j2.086	1.301+j5.797
MINERA	MIN-115	115	0.76	0.64	28.573+j81.984	36.392+j130.675	0.85	0.71	28.369+j81.566	36.524+j132.736
MISIÓN	MSN-115	115	3.44	2.72	3.092+j19.060	10.113+j33.400	4.08	3.10	2.770+j17.671	10.122+j33.533
MONTECITO	MUE-69	69	17.40	13.22	0.420+j2.251	0.902+j4.379	20.06	14.82	0.385+j2.151	0.906+j4.429
NACOZARI	NZI-161	161	16.07	12.75	0.732+j5.739	1.862+j10.144	18.32	14.19	0.683+j5.541	1.886+j10.300
OPTICA	OPT-69	69	23.18	16.99	0.264+j1.698	0.742+j3.530	27.00	19.15	0.234+j1.606	0.744+j3.563
ORIZABA	OZA-230	230	20.52	16.67	0.743+j6.427	1.948+j10.808	23.50	18.57	0.679+j6.180	1.979+j11.018
PACIFICO	PAF-69	69	23.81	19.66	0.259+j1.653	0.466+j2.705	28.65	22.47	0.215+j1.514	0.482+j2.774
PACKARD	PKD-161	161	20.81	18.97	0.530+j4.436	1.033+j5.682	24.12	21.33	0.474+j4.213	1.050+j5.821
PANAMERICANA	PNM-115	115	6.57	5.96	1.299+j10.018	3.364+j12.920	9.61	7.65	0.885+j7.547	3.375+j13.128
PANAMERICANA POTENCIA	PAP-69	69	36.76	43.92	0.147+j1.074	0.042+j0.565	46.36	53.11	0.106+j0.939	0.045+j0.607
PANAMERICANA POTENCIA	PAP-230	230	17.07	19.12	1.083+j7.705	0.724+j5.361	25.19	25.83	0.622+j5.766	0.761+j5.585
PARQUE INDUSTRIAL	PID-161	161	8.70	8.89	1.477+j10.585	1.285+j9.930	9.57	9.61	1.442+j10.585	1.372+j10.487
PARQUE INDUSTRIAL	PID-230	230	7.31	6.63	2.688+j17.965	4.110+j23.376	8.18	7.25	2.582+j17.667	4.388+j24.392
PARQUE INDUSTRIAL LOS OLIVOS	POL-69	69	17.51	19.60	0.392+j2.241	0.229+j1.538	20.13	22.06	0.362+j2.146	0.237+j1.608



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PARQUE INDUSTRIAL PACÍFICO	PFCO	69	15.15	12.61	0.447+j2.592	0.857+j4.142	17.59	14.24	0.404+j2.459	0.860+j4.184
PLANTA DE BOMBEO UNO	PB1-69	69	13.33	7.03	0.631+j2.920	2.623+j10.728	15.43	7.85	0.583+j2.780	2.629+j10.779
POPOTLA	POP-115	115	4.94	4.48	1.878+j13.310	5.667+j16.883	6.48	5.44	1.492+j11.173	5.673+j17.052
PRESIDENTE JUÁREZ	PJZ-115	115	9.48	12.38	0.663+j6.973	0.096+j2.137	16.25	19.40	0.271+j4.486	0.106+j2.344
PRESIDENTE JUÁREZ	PJZ-230	230	19.14	25.38	0.959+j6.871	0.157+j1.989	32.84	40.89	0.398+j4.431	0.171+j2.151
PUERTO NUEVO	PNU-115	115	4.01	3.95	2.462+j16.361	5.587+j16.626	4.98	4.68	2.103+j14.525	5.593+j16.792
PUNTA CHICA	PCH-115	115	2.20	2.00	7.857+j29.131	9.465+j38.185	2.50	2.24	7.506+j28.204	9.489+j38.423
RÍO	RII-69	69	22.61	16.10	0.346+j1.728	0.872+j3.811	27.03	18.38	0.300+j1.593	0.873+j3.835
RÍO NUEVO	RIN-161	161	18.89	16.02	0.583+j4.886	1.439+j7.451	21.37	17.73	0.547+j4.754	1.460+j7.613
RSI HOME PRODUCTS	RSI-69	69	24.93	21.53	0.242+j1.579	0.459+j2.320	29.00	24.20	0.214+j1.496	0.465+j2.386
RUBÍ	RUB-69	69	28.70	30.30	0.186+j1.375	0.118+j1.177	35.45	35.49	0.138+j1.229	0.126+j1.252
RUBÍ	RUB-230	230	13.51	14.36	1.377+j9.731	1.363+j8.134	19.66	18.99	0.812+j7.385	1.424+j8.424
RUIZ CORTINEZ	RZC-161	161	9.00	7.15	1.605+j10.199	3.276+j18.045	10.02	7.87	1.564+j10.084	3.279+j18.274
RUMOROSA	RUM-69	69	10.46	13.93	0.348+j3.792	0.044+j0.968	11.21	14.88	0.347+j3.894	0.050+j1.017
RUMOROSA	RUM-230	230	9.99	8.68	1.587+j13.197	2.555+j19.164	11.33	9.58	1.481+j12.803	2.723+j19.826
SAMSUNG	SAM-230	230	18.53	18.03	0.925+j7.108	1.469+j7.733	25.69	22.84	0.602+j5.655	1.492+j7.885
SAN FELIPE	SAF-115	115	0.78	0.68	27.546+j80.643	26.425+j120.181	0.86	0.75	27.353+j80.224	26.559+j122.249
SAN LUIS REY	SRV-230	230	7.02	6.80	2.795+j18.718	2.708+j20.600	7.86	7.49	2.688+j18.389	2.775+j21.176
SAN MATÍAS	SMT-115	115	1.18	1.47	17.229+j53.573	0.716+j23.501	1.31	1.61	17.053+j53.144	0.845+j25.556
SAN QUINTÍN	SQN-115	115	1.18	0.74	19.184+j52.920	39.512+j152.060	1.32	0.82	18.756+j52.178	39.537+j152.457
SAN SIMÓN	SMN-115	115	0.96	0.58	22.374+j65.723	50.508+j198.910	1.06	0.64	21.935+j64.990	50.534+j199.308
SAN VICENTE	SVE-115	115	2.58	1.97	6.936+j24.830	11.579+j48.189	2.94	2.20	6.575+j23.986	11.600+j48.509
SÁNCHEZ TABOADA	STB-230	230	19.28	16.15	0.843+j6.834	2.197+j10.704	21.91	17.93	0.787+j6.619	2.225+j10.918
SANTA ISABEL	SIS-161	161	25.22	25.49	0.351+j3.669	0.486+j3.548	28.50	28.12	0.322+j3.573	0.503+j3.709
SANTA ISABEL	SIS-230	230	25.57	22.90	0.558+j5.164	1.256+j6.931	29.45	25.60	0.500+j4.934	1.285+j7.117
SAUZAL	SAZ-115	115	3.37	2.63	3.377+j19.431	9.929+j35.213	3.96	2.98	3.034+j18.206	9.942+j35.354
SEMINARIO	SIO-69	69	15.19	9.03	0.474+j2.580	1.722+j7.808	17.42	10.09	0.438+j2.476	1.724+j7.837
SHARP	SHA-115	115	8.61	10.05	0.788+j7.668	0.601+j4.416	14.05	14.59	0.392+j5.183	0.613+j4.627
SIDERÚRGICA	CSC-230	230	13.97	11.28	1.244+j9.425	3.176+j16.034	15.95	12.56	1.161+j9.085	3.201+j16.282
SKYWORKS	SKW-161	161	18.04	15.78	0.628+j5.113	1.234+j7.280	20.77	17.62	0.574+j4.890	1.267+j7.468
SONY	SON-69	69	11.11	6.22	0.682+j3.519	2.555+j11.782	12.56	6.89	0.648+j3.428	2.561+j11.846
TAICO	TYC-69	69	16.31	12.83	0.440+j2.402	0.871+j4.356	18.69	14.33	0.407+j2.310	0.876+j4.419
TECATE DOS	TCD-69	69	7.70	5.78	0.899+j5.094	1.915+j10.156	8.56	6.29	0.880+j5.041	2.012+j10.506
TECNOLÓGICO	TEK-230	230	17.75	15.69	0.870+j7.431	1.953+j10.265	19.98	17.29	0.824+j7.264	1.993+j10.570
TECOLOTE	TEE-69	69	16.01	10.79	0.375+j2.459	1.285+j5.977	18.78	12.19	0.327+j2.310	1.287+j6.014
TECRA	TCR-69	69	8.42	3.42	1.043+j4.613	6.446+j24.712	9.39	3.76	1.022+j4.553	6.466+j24.824
TENSHO. CARGA INDUSTRIAL	TSHO-115	115	8.86	10.68	0.750+j7.460	0.434+j3.683	14.64	15.82	0.355+j4.975	0.446+j3.893
THOMSOM	THO-230	230	16.48	12.98	1.005+j7.996	2.999+j14.296	18.64	14.39	0.949+j7.781	3.027+j14.510
TIJUANA	TJI-69	69	39.48	46.77	0.119+j1.002	0.036+j0.546	47.52	54.39	0.093+j0.918	0.039+j0.589
TIJUANA	TJI-69A	69	18.92	21.62	0.334+j2.079	0.081+j1.328	21.52	23.94	0.309+j2.013	0.092+j1.437
TIJUANA	TJI-230	230	23.48	26.74	0.711+j5.611	0.494+j3.642	33.77	35.64	0.422+j4.305	0.515+j3.793
TOYOTA	TOY-230	230	14.36	11.94	1.160+j9.176	2.751+j14.698	18.04	14.05	0.899+j8.049	2.798+j14.908



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
TRINIDAD	TRI-115	115	1.52	1.44	12.844+j41.685	10.209+j49.897	1.70	1.59	12.569+j41.065	10.271+j50.989
UNIVERSIDAD	UND-69	69	14.52	9.20	0.520+j2.694	1.670+j7.333	16.74	10.31	0.478+j2.574	1.671+j7.353
VALLE	VAL-69	69	15.78	10.05	0.486+j2.477	1.422+j6.711	18.43	11.31	0.437+j2.337	1.425+j6.743
VALLE DE GUADALUPE	VLP-69	69	2.43	1.61	5.780+j15.353	11.071+j40.227	2.63	1.75	5.825+j15.614	11.094+j40.615
VALLE DE LAS PALMAS	VPM-69	69	3.28	2.21	5.122+j11.030	7.024+j29.177	3.61	2.43	5.099+j11.005	7.025+j29.277
VALLE DE PUEBLA	VPA-230	230	15.21	12.67	1.058+j8.666	2.892+j13.728	17.02	13.91	1.020+j8.519	2.947+j14.071
VALLECITOS	VLC-69	69	2.54	1.67	6.466+j14.287	10.860+j39.038	2.78	1.83	6.461+j14.349	10.866+j39.224
VICTORIA	VIC-230	230	7.52	6.10	2.456+j17.480	6.060+j29.402	8.46	6.75	2.353+j17.107	6.107+j29.850
VIGOBITE	VIB-69	69	21.05	13.57	0.335+j1.862	1.091+j4.914	24.68	15.31	0.298+j1.751	1.092+j4.938
WISTERIA	WIS-230	230	25.35	22.94	0.592+j5.205	1.196+j6.806	29.29	25.73	0.529+j4.959	1.218+j6.979
XOCHIMILCO	XCO-230	230	22.43	19.08	0.677+j5.882	1.641+j8.911	25.76	21.30	0.614+j5.638	1.666+j9.104

Gerencia de Control Regional Baja California

Sistema 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 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
AEROPUERTO SAN JOSÉ	ASJ-115	115	2.43	2.14	8.937+j25.846	8.167+j37.610	4.27	3.04	3.641+j16.701	8.250+j36.995
AURA SOLAR	ASU-115	115	4.03	4.95	3.907+j15.986	0.958+j7.308	9.35	9.53	0.910+j7.757	1.112+j7.078
BLEDALES	BLE-115	115	3.89	4.48	4.221+j16.555	2.250+j10.093	8.76	8.43	1.128+j8.259	2.181+j8.942
BUENAVISTA	BUV-115	115	1.85	1.40	11.949+j33.864	17.018+j68.434	2.76	1.80	7.563+j25.407	16.713+j66.465
CABO BELLO	CAB-115	115	2.74	2.87	7.910+j22.887	3.981+j20.643	5.99	5.09	2.144+j12.000	3.899+j18.248
CABO FALSO	CAF-115	115	2.89	3.26	7.390+j21.785	2.176+j15.066	7.23	6.91	1.597+j9.974	1.913+j11.304
CABO REAL	CRE-115	115	2.92	3.14	7.421+j21.482	2.928+j17.910	6.18	5.31	2.096+j11.638	3.069+j17.340
CABO SAN LUCAS DOS	CAD-115	115	2.97	3.41	7.383+j21.107	1.987+j13.669	7.44	7.20	1.629+j9.678	1.791+j10.611
CABO SOL	CAS-115	115	2.73	2.79	7.839+j23.049	4.122+j22.470	5.70	4.66	2.242+j12.626	4.177+j20.873
CAMINO REAL	CAR-115	115	2.56	2.32	7.089+j24.996	11.203+j31.855	4.50	3.59	3.503+j15.846	10.113+j26.756
CENTRAL TURBOGÁS LOS CABOS	TCB-230	230	1.66	2.15	24.488+j76.313	1.921+j25.112	4.28	4.89	4.319+j33.825	1.468+j21.305
COROMUEL	COR-230	230	2.32	3.05	12.332+j55.785	1.117+j16.339	5.50	6.64	2.061+j26.494	0.706+j12.508
EL PALMAR	ELP-115	115	3.19	3.80	6.881+j19.641	1.036+j11.002	7.45	7.27	1.622+j9.666	1.180+j10.430
EL PALMAR	ELP-230	230	1.77	2.28	23.442+j71.246	2.506+j25.075	4.49	4.96	4.338+j32.206	2.524+j22.978
EL RECREO	RCO-115	115	3.93	4.61	4.125+j16.393	1.971+j9.213	8.89	8.72	1.051+j8.145	1.982+j8.321
EL TRIUNFO	ETR-115	115	2.29	1.94	8.688+j27.711	12.902+j42.820	3.73	2.75	4.785+j18.995	12.128+j38.703
GENERAL AGUSTÍN OLACHEA	GAO-115	115	1.42	1.80	12.344+j45.051	1.165+j17.526	3.29	4.18	2.620+j22.064	0.314+j7.960
INSURGENTES	INS-115	115	1.30	1.76	17.653+j47.815	2.477+j10.975	2.65	3.33	6.162+j26.900	2.208+j10.369
LA PAZ	LPZ-115	115	3.46	3.57	5.002+j18.538	4.775+j16.694	7.25	6.23	1.756+j9.913	4.275+j14.352
LAS PILAS	LAP-115	115	1.92	1.91	10.630+j33.002	10.821+j33.313	3.40	2.88	4.831+j20.948	9.938+j31.467
LORETO	LRO-115	115	0.63	0.49	36.055+j99.011	43.693+j195.427	0.89	0.60	23.452+j78.573	43.408+j194.798
MANIOBRAS EÓLICO COROMUEL	MAN-ENV	115	2.42	2.84	6.565+j26.651	2.723+j14.933	3.77	4.03	3.726+j18.987	3.063+j15.262
MONTE REAL	MOR-115	115	2.54	2.33	8.630+j24.647	6.945+j32.715	4.64	3.40	3.292+j15.403	7.044+j32.124
OLAS ALTAS	OLA-115	115	4.39	5.69	3.691+j14.680	0.542+j4.756	11.15	12.38	0.711+j6.514	0.675+j4.332
OLAS ALTAS	OLA-230	230	2.32	3.00	13.588+j55.581	2.055+j18.583	5.75	6.38	2.245+j25.326	2.185+j17.269
PALMILLA	PAA-115	115	3.35	3.28	4.961+j19.167	4.458+j20.684	6.99	5.67	1.697+j10.311	3.936+j17.183
PALMILLA	PML-115	115	2.64	2.57	8.106+j23.817	5.361+j26.770	5.06	3.93	2.719+j14.185	5.494+j26.205
PUERTO ESCONDIDO	PES-115	115	0.69	0.55	32.927+j90.312	36.547+j164.210	1.00	0.70	20.444+j69.762	36.263+j163.582
PUNTA PRIETA	PUP-115	115	4.09	4.82	3.985+j15.732	1.582+j8.771	11.59	13.89	0.621+j6.269	0.285+j3.062
PUNTA PRIETA	PUP-115B	115	4.08	4.80	3.981+j15.770	1.556+j8.823	11.50	13.69	0.632+j6.319	0.304+j3.181
REFORMAS AGRARIAS	REA-115	115	2.21	2.44	7.439+j29.157	5.566+j20.680	3.38	3.37	4.389+j21.187	5.828+j20.853
ROFOMEX	RFO-115	115	1.32	0.99	14.617+j48.187	28.690+j95.741	1.84	1.23	9.773+j38.576	28.295+j94.665
SAN JOSÉ DEL CABO	SJC-115	115	2.78	2.79	7.995+j22.501	4.658+j23.443	5.50	4.38	2.615+j13.019	4.781+j22.876
SANTIAGO	SNT-115	115	1.87	1.43	12.411+j33.329	15.876+j66.447	2.81	1.84	7.786+j24.771	15.736+j65.144
SANTO DOMINGO	DOM-115	115	1.16	1.35	19.082+j53.916	7.110+j32.220	2.15	2.19	7.457+j33.090	6.841+j31.613
TURBO GAS LOS CABOS	TCB-115	115	3.05	3.85	6.725+j20.681	0.505+j8.518	8.93	11.00	0.999+j8.116	0.127+j3.546
VILLA CONSTITUCIÓN	VIO-115	115	1.52	1.86	14.221+j41.199	4.262+j19.827	3.51	4.13	3.675+j20.457	1.553+j11.416

Gerencia de Control Regional Baja California

Sistema Mulegé



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**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 2023				NCC máximo 2023			
			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
BAHÍA ASUNCIÓN	BAS-115	115	0.36	0.46	45.216+j178.269	6.850+j55.907	0.57	0.69	34.954+j123.313	7.601+j60.277
MEZQUITAL	MEZ-115	115	0.53	0.68	17.403+j124.829	6.253+j34.762	1.19	1.36	4.950+j60.927	6.407+j36.670
SANTA ROSALÍA	SRI-115	115	0.49	0.65	20.990+j134.056	2.404+j26.330	1.18	1.42	4.976+j61.955	2.632+j28.554
TRES VÍRGENES	GLV-115	115	0.53	0.67	15.579+j123.564	6.164+j41.595	1.09	1.22	6.144+j66.680	6.608+j44.232
VIZCAÍNO	VIZ-115	115	0.53	0.64	16.579+j123.730	6.896+j45.856	1.08	1.17	6.563+j67.478	7.502+j48.906

Gerencia de Control Regional Peninsular



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Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
AH KIM PECH	AKI-115	115	4.58	4.00	4.187+j13.875	6.453+j20.052	5.88	4.92	3.267+j11.984	6.446+j19.511
AK TUNCHEN	AUC-115	115	4.38	2.95	4.332+j14.510	10.232+j35.778	5.18	3.35	3.783+j13.589	10.240+j35.901
AKUMAL II	AKD-115	115	3.81	2.56	5.173+j16.651	12.423+j41.115	4.46	2.89	4.624+j15.726	12.423+j41.205
ALOM	ALO-115	115	12.02	11.05	1.247+j5.383	1.542+j7.012	17.29	15.09	0.741+j4.159	1.318+j6.224
AVENTURA PALACE	AVP-115	115	3.90	2.89	4.361+j16.451	8.714+j33.708	4.58	3.27	3.799+j15.501	8.735+j33.946
BALAM	BLM-115	115	10.69	13.79	1.702+j5.975	0.179+j2.143	16.34	20.29	0.888+j4.381	0.181+j2.069
BALAM	BLM-230	230	5.46	6.36	6.000+j23.550	1.034+j14.541	7.93	8.65	3.099+j18.146	1.061+j14.586
BICENTERARIO	BIN-115	115	10.91	10.84	1.427+j5.917	2.023+j6.099	14.39	13.41	1.028+j4.970	2.031+j6.117
BONAMPAK	BNP-115	115	10.32	12.79	1.798+j6.179	0.425+j2.777	16.10	19.12	0.910+j4.445	0.380+j2.578
BONFIL	BNI-115	115	9.22	9.10	1.850+j6.956	1.785+j7.364	13.84	12.63	0.960+j5.187	1.609+j6.818
CALICA	CLC-115	115	5.78	4.89	2.854+j11.132	4.133+j17.313	7.00	5.64	2.294+j10.179	4.154+j17.550
CALKINI II	CKD-115	115	3.22	1.98	5.855+j19.749	18.327+j56.633	3.73	2.23	5.365+j18.807	18.314+j56.505
CANCUN	CNC-115	115	10.37	11.68	1.768+j6.155	0.822+j4.275	16.62	18.72	0.832+j4.315	0.421+j3.110
CANDELARIA II	CAS-115	115	1.81	1.24	9.094+j35.564	34.009+j80.325	2.04	1.38	8.652+j34.819	34.033+j80.653
CANEK	CEK-115	115	9.09	8.95	2.039+j7.015	1.627+j7.597	13.34	12.18	1.174+j5.348	1.487+j7.106
CAUCEL POTENCIA	CCP-115	115	13.95	17.33	1.010+j4.652	0.176+j2.195	20.22	24.03	0.568+j3.567	0.185+j2.159
CAUCEL POTENCIA	CCP-230	230	8.76	10.60	2.819+j14.899	0.951+j7.911	12.56	14.30	1.475+j11.540	0.961+j8.081
CAYAL	CYL-115	115	2.40	1.63	7.464+j26.629	18.284+j64.657	2.86	1.88	6.517+j24.737	18.275+j64.153
CD. DEL CARMEN	CRE-115	115	3.69	4.28	3.365+j17.692	1.540+j10.463	5.08	6.28	2.031+j14.232	0.732+j7.320
CEMENTOS MAYA	CMY-115	115	9.63	7.61	1.737+j6.675	3.236+j12.158	13.75	11.07	1.089+j5.199	2.213+j9.240
CENTRO	CNO-115	115	12.04	11.05	1.389+j5.339	1.640+j7.019	16.61	14.31	0.932+j4.296	1.506+j6.619
CHAAC	HAA-115	115	8.96	10.63	2.036+j7.121	0.819+j3.946	13.10	14.75	1.187+j5.449	0.802+j3.836
CHAMPOTON	CMO-115	115	3.93	2.77	4.304+j16.328	9.901+j37.043	4.76	3.21	3.580+j14.912	9.887+j36.882
CHANKANAAB	CHB-115	115	6.15	5.43	3.311+j10.278	5.298+j14.177	7.89	6.48	2.396+j8.942	5.321+j14.418
CHANKANAAB II	CHS-115	115	6.32	5.56	3.232+j10.000	5.216+j13.887	8.13	6.65	2.328+j8.679	5.238+j14.128
CHEMAX	CEX-115	115	3.09	2.10	4.924+j20.897	15.925+j49.566	3.76	2.44	4.376+j18.922	15.890+j49.046
CHETUMAL NORTE	CTE-115	115	3.07	3.04	6.441+j20.660	4.935+j21.797	4.56	4.10	3.689+j15.594	4.872+j20.960
CHICBUL	CBU-115	115	3.00	2.05	5.165+j21.490	14.777+j51.165	3.46	2.30	4.667+j20.572	14.798+j51.333
CHICHÍ SUÁREZ	CCS-115	115	15.30	19.76	0.962+j4.231	0.168+j1.594	21.26	26.34	0.606+j3.381	0.184+j1.657
CHICHÍ SUÁREZ	CCS-230	230	8.76	10.36	2.951+j14.865	0.974+j8.791	12.33	13.64	1.640+j11.733	1.044+j9.103
CHOLUL	HOL-115	115	12.58	11.82	1.280+j5.121	1.763+j6.240	16.70	14.55	0.921+j4.275	1.774+j6.292
CHUBURNA	CBR-115	115	10.97	9.85	1.452+j5.878	1.974+j8.096	14.42	12.01	1.057+j4.953	1.983+j8.124
CONCORDIA	CNR-115	115	3.34	3.42	4.015+j19.496	3.688+j18.216	4.49	4.69	2.661+j16.059	2.879+j15.072
DZITAS	DZI-115	115	3.51	2.47	4.335+j18.391	13.711+j40.785	4.26	2.87	3.880+j16.686	13.672+j40.306
DZITNUP	DZT-400	400	9.82	11.93	2.595+j23.378	0.710+j10.478	11.49	13.65	1.561+j22.047	0.762+j11.308
DZYTIA	DYT-115	115	11.62	10.66	1.114+j5.602	1.545+j7.301	15.03	12.85	0.775+j4.797	1.563+j7.389
ESCÁRCEGA	ESA-115	115	7.59	9.17	1.155+j8.672	0.172+j4.336	9.19	10.76	0.728+j7.913	0.194+j4.661
ESCÁRCEGA	ESA-230	230	6.63	7.25	3.542+j19.728	1.329+j15.153	9.37	9.45	1.877+j15.472	1.480+j15.738
ESCÁRCEGA	ESA-400	400	5.63	5.56	6.191+j40.547	3.493+j42.999	7.40	6.73	3.397+j34.171	3.811+j45.045
HECELCHACAN	HCE-115	115	3.06	1.83	6.115+j20.840	14.903+j63.951	3.57	2.07	5.540+j19.704	14.906+j63.801
HÉROES	HRO-115	115	11.09	10.71	1.431+j5.814	1.896+j6.515	14.22	12.96	1.097+j5.016	1.910+j6.571
HIDROGENADORA YUCATECA	HRA-115	115	12.19	10.87	1.328+j5.284	1.709+j7.442	18.87	18.30	0.691+j3.809	0.687+j4.523



Subestación eléctrica	Acrónimo	Tensión (kV)	Corriente de cortocircuito (kA) e impedancias de Thévenin secuencias positiva y cero (Ω)							
			NCC mínimo 2023				NCC máximo 2023			
			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
HOLPECHEN	HOP-115	115	1.23	0.79	15.219+j51.707	43.557+j139.125	1.39	0.87	14.617+j50.594	43.559+j138.973
HUNABKU	HBK-115	115	9.10	10.95	2.050+j7.004	0.722+j3.616	13.36	15.33	1.193+j5.336	0.704+j3.499
HUNUCMA	HNC-115	115	4.69	3.42	2.837+j13.865	7.654+j29.101	5.58	3.91	2.383+j12.871	7.659+j29.083
HUXECTAMAN	HUX-115	115	9.91	8.02	1.666+j6.490	2.829+j11.284	14.22	11.77	1.028+j5.032	1.843+j8.476
IBEROESTAR	IBR-115	115	8.23	7.07	1.492+j7.930	2.617+j11.761	10.06	8.22	1.052+j7.184	2.637+j11.935
INSURGENTES	INS-115	115	3.09	3.10	6.352+j20.508	4.497+j21.093	4.61	4.18	3.605+j15.438	4.434+j20.257
ISLA DE TRIS	ILT-115	115	3.71	4.15	3.297+j17.609	2.119+j12.095	5.04	5.69	2.026+j14.345	1.743+j10.551
ITZAES	IZE-115	115	10.91	9.29	1.548+j5.888	2.183+j9.237	15.36	12.72	0.999+j4.649	1.714+j7.837
ITZIMNA	IZI-115	115	11.66	12.28	1.321+j5.538	1.597+j4.774	15.24	15.17	0.964+j4.696	1.609+j4.835
IXCHEL	IXC-115	115	6.32	5.74	3.104+j10.040	6.105+j12.435	8.33	7.07	2.270+j8.465	6.107+j12.360
IZAMAL	IZL-115	115	3.17	2.19	5.618+j20.205	18.011+j45.746	3.66	2.47	5.269+j19.241	17.998+j45.665
KABAH	KAB-115	115	9.37	11.39	1.992+j6.803	0.643+j3.362	13.89	16.11	1.136+j5.134	0.624+j3.241
KALA	KAL-115	115	5.36	5.10	3.259+j11.941	3.989+j14.029	7.16	6.54	2.285+j9.947	3.980+j13.454
KAMBUL	KBL-115	115	1.92	2.24	11.044+j32.692	1.981+j20.087	2.36	2.62	9.022+j29.659	2.172+j21.629
KANASÍN POTENCIA	KNP-115	115	14.22	20.61	0.975+j4.565	0.072+j0.503	19.67	28.34	0.609+j3.664	0.075+j0.517
KANASÍN POTENCIA	KNP-230	230	9.80	11.23	2.597+j13.292	1.375+j8.851	13.96	14.88	1.389+j10.372	1.429+j9.053
KEKEN	KEK-115	115	8.73	9.66	1.949+j7.352	1.456+j5.309	12.44	12.92	1.132+j5.761	1.458+j5.236
KOHUNLICH	KHN-115	115	6.39	5.61	2.759+j10.024	3.417+j14.446	8.44	6.96	1.930+j8.439	3.288+j13.995
KOPTE	KOP-115	115	4.58	3.55	3.711+j14.006	9.759+j25.480	5.26	3.99	3.482+j13.436	9.779+j25.594
KUKULKAN	KUK-115	115	9.16	9.32	2.004+j6.969	1.330+j6.851	13.46	12.70	1.144+j5.306	1.240+j6.492
LAGUNA DE TÉRMINOS	LTE-115	115	3.36	3.43	4.005+j19.354	3.726+j18.250	4.53	4.72	2.650+j15.918	2.917+j15.106
LÁZARO CÁRDENAS	LAC-115	115	2.16	1.45	9.826+j29.120	26.964+j71.013	2.80	1.72	7.537+j25.002	26.957+j70.628
LEE	LEE-115	115	7.76	4.18	1.489+j8.428	9.814+j29.191	9.44	4.76	1.160+j7.646	9.819+j29.262
LERMA	LRA-115	115	6.90	9.03	2.312+j9.345	0.115+j3.135	9.98	13.55	1.309+j7.202	0.106+j2.506
LERMA	LRA-230	230	3.61	4.29	8.334+j35.818	0.924+j20.380	5.00	5.92	4.821+j28.841	0.857+j18.482
MAHAHUAL	MHH-115	115	1.14	0.64	18.947+j55.118	63.802+j181.660	1.36	0.73	16.611+j51.001	63.793+j181.267
MALECÓN	MAC-115	115	10.28	11.66	1.796+j6.207	0.782+j4.187	16.23	17.78	0.879+j4.412	0.566+j3.502
MANIOBRAS LA PIMIENTA	MPI-230	230	4.64	5.52	5.196+j28.153	1.353+j15.205	8.02	9.12	2.096+j18.088	1.164+j12.005
MAXCANU	MAX-115	115	4.85	2.96	3.968+j13.092	11.860+j38.220	5.70	3.35	3.568+j12.314	11.843+j38.152
MAYA KOKBA	MYK-115	115	7.79	7.01	1.733+j8.346	2.467+j11.132	9.62	8.21	1.225+j7.494	2.482+j11.308
MÉRIDA II	MDA-115	115	13.24	12.84	1.205+j4.869	1.297+j5.545	21.27	23.92	0.562+j3.387	0.274+j2.627
MÉRIDA ORIENTE	MDN-115	115	11.20	10.31	1.434+j5.752	2.286+j7.315	14.80	12.70	1.041+j4.823	2.277+j7.292
MÉRIDA POTENCIA	MDP-230	230	9.17	11.90	2.523+j14.267	0.256+j5.215	13.19	16.24	1.285+j10.997	0.293+j5.563
METROPOLITANA	MTO-115	115	11.08	9.70	1.472+j5.806	2.261+j8.456	15.73	13.51	0.924+j4.551	1.752+j7.010
MOON PALACE	MPA-115	115	7.51	6.04	1.689+j8.678	3.774+j14.839	9.59	7.20	1.097+j7.540	3.776+j14.870
NACHI COCOM	NCM-115	115	14.44	16.48	1.100+j4.463	0.742+j3.007	20.42	22.07	0.689+j3.510	0.712+j2.932
NICHUPTÉ	NCT-115	115	9.54	11.79	1.968+j6.677	0.517+j3.044	14.17	16.77	1.119+j5.032	0.503+j2.931
NICTE HA	NIH-115	115	9.05	10.36	1.916+j7.081	0.970+j4.527	13.26	14.28	1.079+j5.402	0.955+j4.431
NIZUC	NIZ-115	115	11.53	16.17	1.459+j5.570	0.104+j0.861	18.60	25.93	0.648+j3.872	0.091+j0.806
NIZUC	NIZ-230	230	6.75	7.24	4.418+j19.177	1.987+j15.766	9.63	9.79	2.169+j15.014	1.757+j14.812
NORTE	NTE-115	115	14.63	18.35	0.979+j4.433	0.224+j1.980	20.00	23.91	0.628+j3.597	0.246+j2.075
NORTE	NTE-230	230	8.45	9.88	3.030+j15.425	1.174+j9.533	11.91	13.02	1.677+j12.147	1.239+j9.831



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			3F	1F	Z _{TH(+)}	Z _{TH(0)}	3F	1F	Z _{TH(+)}	Z _{TH(0)}
OXTANKAH	OXT-115	115	2.95	2.69	6.839+j21.417	9.055+j27.623	4.33	3.54	4.084+j16.356	8.991+j26.785
PESCADORES	PSD-115	115	5.67	4.33	2.444+j11.454	4.142+j22.239	6.81	4.96	1.901+j10.553	4.161+j22.433
PHOTOMERIS SUSTENTABLE	PHS-115	115	1.88	2.23	11.209+j33.396	1.639+j19.032	2.31	2.62	9.138+j30.276	1.834+j20.615
PLAYA CAR	PLY-115	115	9.39	8.57	1.636+j6.880	1.669+j8.983	12.13	10.27	1.079+j5.923	1.689+j9.220
PLAYA DEL CARMEN	PCN-115	115	9.80	11.87	1.549+j6.596	0.214+j3.288	12.76	14.71	0.992+j5.637	0.234+j3.525
PLAYA DEL CARMEN	PCN-230	230	5.92	6.46	4.574+j21.975	1.886+j16.790	7.65	7.87	2.740+j18.906	2.036+j17.653
PLAYA MUJERES	PMU-115	115	7.38	7.07	2.437+j8.657	2.248+j10.022	10.06	8.93	1.605+j7.082	2.250+j9.948
POKTAPOK	PKP-115	115	10.00	12.42	1.876+j6.366	0.475+j2.832	15.20	18.06	1.015+j4.696	0.455+j2.704
POLYUC	PYU-115	115	1.67	1.26	12.901+j37.539	19.312+j76.011	2.02	1.45	10.963+j34.509	19.513+j76.889
PONIENTE	PTE-115	115	12.86	13.76	1.157+j5.032	0.867+j4.281	17.91	17.89	0.727+j4.013	0.872+j4.264
POPOLNAH	PPH-115	115	2.56	1.95	6.399+j25.148	12.746+j48.934	2.95	2.19	5.915+j24.077	12.710+j48.826
PUERTO JUÁREZ	PJU-115	115	10.32	12.38	1.768+j6.187	0.498+j3.300	15.65	17.82	0.939+j4.572	0.473+j3.142
PUERTO MORELOS	PMO-115	115	10.17	9.10	1.195+j6.419	1.784+j8.674	12.74	10.73	0.775+j5.678	1.813+j8.863
PUERTO PROGRESO	PPO-115	115	4.65	4.63	2.639+j14.047	2.334+j14.465	5.34	5.16	2.392+j13.472	2.460+j15.171
PUERTO REAL	PTR-115	115	4.58	6.51	2.536+j14.283	0.030+j1.678	6.12	8.82	1.564+j11.837	0.043+j1.787
PUERTO REAL	PTR-230	230	2.75	3.72	9.003+j47.511	0.272+j10.951	3.68	4.93	5.663+j39.283	0.349+j11.741
PUNTA SAM	PSA-115	115	8.76	8.34	1.985+j7.312	1.831+j8.630	12.50	10.83	1.160+j5.727	1.833+j8.556
RIVIERA MAYA	RMY-115	115	13.03	14.10	0.954+j5.005	0.316+j3.953	16.62	16.95	0.574+j4.357	0.352+j4.194
RIVIERA MAYA	RMY-230	230	7.56	9.24	3.477+j17.214	0.449+j8.104	10.03	11.71	1.891+j14.436	0.503+j8.606
RIVIERA MAYA	RMY-400	400	5.63	6.39	7.498+j40.312	1.963+j26.443	7.21	7.76	4.228+j34.974	2.169+j28.009
SABANCUY	SBY-115	115	2.61	1.76	6.254+j24.636	18.826+j59.644	3.01	1.98	5.707+j23.612	18.847+j59.713
SAMULA	SAM-115	115	5.33	5.20	3.235+j12.034	3.519+j13.285	7.15	6.73	2.229+j9.961	3.508+j12.681
SAMULA II	SAD-115	115	4.89	4.80	3.449+j13.145	3.109+j14.258	6.44	6.13	2.451+j11.077	3.099+j13.648
SAN IGNACIO	IGN-115	115	6.37	6.58	1.542+j10.314	1.506+j9.523	7.46	7.45	1.283+j9.705	1.553+j9.941
SAN PEDRO	SAE-115	115	2.15	1.37	5.130+j30.485	26.723+j79.857	2.56	1.57	4.566+j28.142	26.721+j79.160
SANTA LUCIA	SLC-230	230	5.03	5.18	4.765+j25.956	4.356+j24.015	9.09	10.25	1.702+j15.972	0.855+j11.039
SANTO DOMINGO	SDM-115	115	3.31	3.64	4.342+j19.565	2.454+j14.522	3.69	3.99	4.312+j19.290	2.616+j15.338
SIHOCHAC	SHC-115	115	2.96	1.95	5.927+j21.673	13.473+j55.765	3.53	2.24	5.112+j20.031	13.459+j55.449
SUCILA	SUC-115	115	3.34	2.83	4.627+j19.327	9.114+j29.256	3.80	3.17	4.475+j18.702	9.169+j29.567
SUR	SUR-115	115	13.22	13.13	1.222+j4.871	1.360+j5.151	18.95	18.07	0.747+j3.781	1.158+j4.534
TEKAX II	TKD-115	115	3.30	2.36	5.729+j19.315	9.064+j42.956	3.84	2.66	5.080+j18.307	9.095+j43.306
TEMAX II	TXS-115	115	3.53	3.39	4.174+j18.341	5.852+j20.342	3.94	3.75	4.121+j18.072	5.908+j20.757
TICUL I	TIU-115	115	8.75	8.46	1.782+j7.373	1.872+j8.225	10.23	9.58	1.549+j6.967	1.886+j8.477
TICUL II	TIC-115	115	11.74	14.08	0.813+j5.597	0.100+j2.910	13.99	16.23	0.581+j5.189	0.114+j3.161
TICUL II	TIC-230	230	11.21	13.47	1.945+j11.684	0.532+j6.072	14.66	16.77	1.102+j9.902	0.591+j6.468
TICUL II	TIC-400	400	7.35	7.96	4.845+j31.037	2.544+j24.344	9.40	9.59	2.725+j26.888	2.804+j25.758
TIXMEHUAC	TXM-115	115	2.07	1.36	7.707+j31.104	20.330+j79.725	2.36	1.52	7.057+j30.097	20.362+j80.076
TIZIMIN	TZM-115	115	4.08	3.51	3.625+j15.845	6.710+j23.351	4.75	3.99	3.399+j14.983	6.744+j23.512
TULUM	TUM-115	115	2.84	1.89	7.002+j22.266	15.546+j57.010	3.30	2.13	6.461+j21.201	15.516+j56.869
UCU	UCU-115	115	8.50	7.32	1.634+j7.637	2.895+j11.456	10.85	8.76	1.196+j6.625	2.900+j11.439
UMAN	UMA-115	115	6.71	4.17	2.924+j9.451	8.739+j26.715	8.26	4.86	2.469+j8.492	8.604+j26.293
VALLADOLID	VAD-115	115	8.39	10.71	1.009+j7.849	0.095+j2.826	13.62	18.20	0.430+j5.344	0.043+j1.947



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			3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$	3F	1F	$Z_{TH(+)}$	$Z_{TH(0)}$
VALLADOLID	VAD-230	230	9.14	11.40	1.483+j14.445	0.082+j5.693	12.96	16.12	0.662+j11.255	0.068+j5.206
VALLADOLID DISTRIBUCIÓN	VDD-115	115	7.02	5.98	1.525+j9.336	6.375+j13.280	10.35	8.02	0.974+j6.992	6.375+j12.588
XCALACOCO	XLC-115	115	8.39	7.19	1.458+j7.777	2.431+j11.630	10.26	8.35	1.025+j7.046	2.453+j11.812
XCUNYA	XCN-115	115	10.73	9.22	1.155+j6.082	2.104+j9.194	13.59	10.93	0.828+j5.308	2.120+j9.287
XPUJIL	XPU-115	115	1.70	1.30	6.530+j38.607	18.730+j72.222	2.02	1.50	5.067+j35.884	18.710+j71.954
XUL HA	XUL-115	115	3.94	5.29	4.656+j16.201	0.162+j4.140	6.51	8.55	2.010+j11.034	0.100+j3.309
XUL HA	XUL-230	230	2.26	2.74	15.524+j56.705	1.682+j28.861	3.42	3.91	7.219+j42.144	1.410+j26.888
YAXCHE	YXE-115	115	7.15	6.05	2.303+j8.996	3.136+j14.157	9.66	7.47	1.481+j7.413	3.138+j14.084
ZAC NICTÉ	ZNE-115	115	8.43	7.90	1.677+j7.694	1.354+j9.403	10.61	9.37	1.140+j6.786	1.373+j9.597