

Full Network Model Scope for FNM DB20M12 DB101

(Production 12/9/2020)

Revision History

Effective Date	Version	Description
10/2/2020	1.0	Final scope by due date. The scope is considered finalized without any addendum attached.
10/26/2020	2.0	Update EIM/RC Projects section
12/9/2020	3.0	Add additional information

Full Network Model Scope for FNM DB20M12 DB101

(Production 12/9/2020)

I. NRI Projects

No	PTO	Resource ID	Project Name / Description	Project Key	Capacity (MW)	POD	Additional Information
1	PGAE	BLKDIA_2_BDEBT1	Black Diamond Energy Storage	15AS881596	200	Pittsburg 230 kV Bus	New resource
2	PGAE	COLPIN_6_COLLNS	Collins Pine Powerhouse	20GEN11164	3.3	Hamilton Branch-Chester 60kV Line at Pole 2/6	Existing resource, EMS Pmax decrease from 13.8 MW to 3.3. MW
3	PGAE	ELKHRN_1_EESX3	Elkhorn Energy Storage	17AS1770	182.5	Moss Landing 115 kV Bus	New aggregate resource; Child Resource IDs: ELKHRN_1_EESBT1, ELKHRN_1_EESBT2, ELKHRN_1_EESBT3
4	SCE	DRACKR_2_DSUBT1	Dracker Solar Unit 1 BESS	20NGR13774	63	Colorado River 230kV Bus	New resource
5	SCE	SNCLRA_2_SILBT1	Silverstrand BESS	20NGR13167	11	Santa Clara 230 kV Bus	New resource
6	SCE	SNCLRA_2_VESBT1	Ventura Energy Storage	20NGR13160	100	Santa Clara 230 kV Bus	New resource
7	SCE	VESTAL_6_QF	Isabella Hydro Dam 1	19GEN10545	11.95	Vestal 230 kV Bus	Existing resource, EMS Pmax decrease from 20 MW to 11.95 MW

Full Network Model Scope for FNM DB20M12 DB101

(Production 12/9/2020)

II. Transmission Projects

No	PTO	RIMS ID	Project Name	Project Key
1	PGAE	17TRANS6527	Pease Substation: Replace 115/60kV Transformer Bank 2	ET3388
2	PGAE	18TRANS6554	Black Diamond Energy Storage Generation Interconnection Project	ET3425
3	PGAE	18TRANS6554	Black Diamond Energy Storage Generation Interconnection Project	ET4250
4	PGAE	19TRANS10564	Midway-Kern 230 kV Lines Project - Phase 2	ET4283
5	PGAE	19TRANS10564	Midway-Kern 230 kV Lines Project - Phase 2	ET4284
6	PGAE	19TRANS10564	Midway-Kern 230 kV Lines Project - Phase 2	ET4285
7	PGAE	19TRANS8789	Santa Teresa Substation	ET4018
8	PGAE	19TRANS8789	Santa Teresa Substation	ET4019
9	PGAE	19TRANS8789	Santa Teresa Substation	ET4073
10	PGAE	20TRANS14395	NCPA SW 1221	ET4491
11	SCE	17TRANS6471	West of Devers	ET4444
12	SCE	17TRANS6471	West of Devers	ET4445
13	SCE	17TRANS6471	West of Devers	ET4446
14	SCE	17TRANS6471	West of Devers	ET4447
15	SCE	17TRANS6471	West of Devers	ET4448
16	SCE	17TRANS6471	West of Devers	ET4449
17	SCE	17TRANS6471	West of Devers	ET4450
18	SCE	17TRANS6471	West of Devers	ET4451
19	SCE	20TRANS13184	Athos Generating Plant 220 kV Sub - 450 M of solar connected to Red Bluff Substation	ET4426
20	SCE	20TRANS13275	Mesa & HB 220 kV ICCP Clean Up	ET4432
21	SCE	20TRANS13276	Chino 220 KV Obsolete ICCP	ET4433
22	SCE	20TRANS13875	Chino Sub Obsolete ICCP Removal	ET4465
23	SCE	20TRANS14369	Big Creek/San Joaquin Valley RAS Modification	ET4487
24	SCE	20TRANS14369	Big Creek/San Joaquin Valley RAS Modification	ET4488
25	SDGE	14TRANS5897	South Orange County Reliability Upgrade	ET3344
26	SDGE	14TRANS5897	South Orange County Reliability Upgrade	ET3345
27	SDGE	18TRANS8060	Mission 230 Bus Expansion	ET3840
28	SDGE	20TRANS13767	Model correction Bay Boulevard 2nd breaker for the capacitor.	ET4462
29	SDGE	20TRANS13983	Encinal Generator Decommissioning	ET4468
30	SDGE	20TRANS13984	Pq Tap adjustment	ET4469

Full Network Model Scope for FNM DB20M12 DB101

(Production 12/9/2020)

III. EIM/ RC Projects

No	Entity	Project Name	Project Key
1	AVA_TOP	Substation\Load - Initial submission of default load data, Pfixed and Qfixed for all AVA loads, as requested by RC West.	20EMS13943
2	AVA_TOP	Fix NEILSN topology (added in DB99)	20EMS14014
3	AVRN_BA	El Cabo Wind Resource Pseudo-Tie	20EMS14457
4	AZPS_BA	Add two resources in the model to model pseudo-tie resources from PNM to APS	20EMS14451
5	BANC_BA	Substation\Load - Split WES station into two Geographical areas (MID and TID) per ISO Request	20EMS13905
6	BANC_BA	Transformer - Updated Transformer Ratings	20EMS13906
7	BANC_BA	Transmission Line - Updated AC Line Ratings	20EMS13907
8	BANC_BA	Breaker(s)\ Disconnect(s) - Removed disconnects in the FOL substation because they are no longer in service	20EMS13908
9	BANC_BA	Substation\Load - Changed the Base Voltages to 6.9 for KES substion generating buses. Includes updated impedance	20EMS13909
10	BANC_BA	Breaker(s)\ Disconnect(s) - Changed the normal status for breakers and disconnects to the correct status.	20EMS13910
11	BANC_BA	Transmission Line - Change the impedance of the DPG-DPEDRO AC Line.	20EMS13911
12	BANC_BA	Generator - Gave all CurveData in the CIM model a specific name per ISO Request.	20EMS13912
13	BANC_BA	Transformer -Included the Transformer Type in CIM Model per ISO Request	20EMS13913
14	BANC_BA	Transformer - Fixed The Transfomer terminal sequence number per ISO request.	20EMS13914
15	BANC_BA	Update default switch status for STF CB 903 and 904	20EMS13997
16	BANC_BA	Generator - Initial P changes to Generating Units	20EMS14347
17	BANC_BA	Generator - MVAR Capability Curve Changes	20EMS14348
18	BANC_BA	Generator - Removed two pseudo units per ISO request.	20EMS14349
19	BANC_BA	Shunt Cap\Reactor\ SVDÂ¿s - Updated nomQ value to -190 per ISO request.	20EMS14350
20	BANC_BA	Transformer - Updated Reactance Values to match WECC pslf per ISO Request	20EMS14351
21	BANC_BA	Generator - Updated Pfixed and Qfixed values	20EMS14352
22	BANC_BA	Breaker(s)\ Disconnect(s) - Changed normal status.	20EMS14353
23	BANC_BA	Substation\Load - Added analog measurements to all MID loads.	20EMS14354
24	BANC_BA	Transmission Line - Rating and Impedance updates.	20EMS14355
25	BCHA_RC	Updated ICCP and applied new format as requested by CAISO	20EMS13792
26	BCHA_RC	Submitted BC GIS substation data	20EMS13793
27	BCHA_RC	BCHA CIM	20EMS13941
28	BCHA_RC	Updated ICCP	20EMS13942
29	BCHA_RC	GeneratingUnit - Added CRS G1	20EMS14279
30	BCHA_RC	Transmission Line - Added Line 1L363	20EMS14280
31	BCHA_RC	N/A - Updated ICCP	20EMS14281
32	BPA	BPA L20 ICCP point for RTCA RAS modeling	20EMS14273

Full Network Model Scope for FNM DB20M12 DB101

(Production 12/9/2020)

No	Entity	Project Name	Project Key
33	BPAT_BA	Contingency Definition - Changes reflecting NETWORK Model updates.	20EMS13593
34	BPAT_BA	Contingency Definition - Changes reflecting NETWORK Model updates.	20EMS13728
35	BPAT_BA	RAS - BPA DC RAS Level 1 added Malin less than 525kV input.	20EMS13763
36	BPAT_BA	Substation\Load-Updated BLUERDGE generation station.	20EMS13847
37	BPAT_BA	Generator-Split the generator in two two gens Z21 and Z22.	20EMS13848
38	BPAT_BA	Transformer-Added two collector transformers T21 and T22	20EMS13849
39	BPAT_BA	Transmission Line-Added BLRG_BLRG_2_34 collector line.	20EMS13850
40	BPAT_BA	Substation\Load-Updated WRW1 generation station.	20EMS13851
41	BPAT_BA	Generator-Split the generator in two two gens Z11 and Z12.	20EMS13852
42	BPAT_BA	Transformer-Added two collector transformers T11 and T12	20EMS13853
43	BPAT_BA	Transmission Line-Updated WRW1_BLRG_1_34 collector line from ZBR to line section with impedance.	20EMS13854
44	BPAT_BA	Breaker(s)\ Disconnect(s)-Fixed multiple normally open switch/PCB statuses.	20EMS13855
45	BPAT_BA	Breaker(s)\ Disconnect(s)-Renamed PCB from PCB_C_C1-X to PCB_C_1-X.	20EMS13856
46	BPAT_BA	Breaker(s)\ Disconnect(s)-Renamed PCB from PCB_C_C2-X to PCB_C_2-X.	20EMS13857
47	BPAT_BA	Contingency Definition - Changes reflecting NETWORK Model updates.	20EMS13859
48	BPAT_BA	Generator - DYD Mapping file.	20EMS14029
49	BPAT_BA	Generator - Dynamic Model for Transient Stability Analysis in GE PSLF format.	20EMS14030
50	BPAT_BA	RAS - Added shunt cap trip @ Morrow Flat and gent drop for Blueridge gen.	20EMS14092
51	BPAT_BA	RAS - Added shunt cap trip @ Morrow Flat and gent drop for Blueridge gen.	20EMS14093
52	BPAT_TOP	Update 6.22, 6.23	20EMS13764
53	BPAT_TOP	Bridge 138kV station currently modeled under IPCO which should be BPAT_TOP	20EMS13807
54	BPAT_TOP	Updating Request Number 6.23 - Update	20EMS13958
55	CISO_RC	Update ratings for MA-RM 1 and 2 500kV lines based on TR	20EMS14167
56	DCRT	Mosslann 500kV BAAH double modelling cleanup	20EMS14023
57	GCPD_BA	Shunt Cap\Reactor\ SVDAs - Correct measurements that are not mapped to Grants ICCP Points appropriately	20EMS14419
58	GCPD_BA	Breaker(s)\ Disconnect(s) - Correct measurements that are not mapped to Grants ICCP Points appropriately	20EMS14420
59	GCPD_BA	Transformer - Correct measurements that are not mapped to Grants ICCP Points appropriately	20EMS14421
60	GCPD_BA	Transmission Line - Correct measurements that are not mapped to Grants ICCP Points appropriately	20EMS14422
61	IID	IID 92kV System Updates Part 2	20EMS13723
62	IID	Correct the load 98671_OASISIID_92.0_LD1	20EMS14020
63	IID_BA	Revising all generation resource names	20EMS13163
64	IID_BA	Updates provided to all Pmax/Pmin vlaues & Resource Type	20EMS13164
65	IID_BA	Substation\Load - IRO-010-6.13: Unable to open CIM model to provide w/ CIM_ABBR_NAME	20EMS14006
66	IID_BA	Substation\Load - IRO-010-6.13: Added Owner, Long Name, Lat/Long, Voltage	20EMS14007

Full Network Model Scope for FNM DB20M12 DB101

(Production 12/9/2020)

No	Entity	Project Name	Project Key
67	IID_BA	Generator - Note: Reference CIDI Ticket 00226059	20EMS14008
68	IID_BA	Generator - Note: Addition of several generation resource not yet on line	20EMS14009
69	IID_BA	Generator - Note: Using PSLF model names	20EMS14010
70	IID_BA	Generator - Updates provided to all Pmax/Pmin vlaues & Resource Type	20EMS14011
71	IID_BA	Generator - Revising all generation resource names	20EMS14012
72	IID_BA	Substation\Load - DYD file for New Generator coming into service, had to change the extension to ".txt"	20EMS14168
73	IID_BA	Substation\Load - RAS logic for New Generator coming into service	20EMS14171
74	IID_TOP	Heavy Summer Pload and Qload values. Look at Loads Tab	20EMS13863
75	IID_TOP	Generator - request 6.25 from RC West	20EMS13969
76	IID_TOP	Generator - request 6.25 from RC West	20EMS13970
77	IID_TOP	Substation\Load - Zoom in of surrounding area of Generator interconnection. There was some confusion on a couple of switches that Chuch(RC West) said were modeled as breakers, so here is the topology.	20EMS14396
78	IID_TOP	Substation\Load - Zoom in of surrounding area of Generator interconnection. There was some confusion on a couple of switches that Chuch(RC West) said were modeled as breakers, so here is the topology.	20EMS14397
79	IID_TOP	Substation\Load - Zoom in of Area where Generator is interconnecting. This had already been uploaded initially back in 10/14/2020 it was in the RAS logic diagram, but I guess modeling engineers did not see it, so I have zoomed it in, and posted in on here.	20EMS14398
80	IPCO_BA	Shapefile of list of IPCO substations	20EMS13746
81	IPCO_BA	Transformer - Addition of clearance point to 230kV side of T231 where it connects between 208C and 209C maintenance switches to isolate T231 from 230kV bus during construction.	20EMS13833
82	IPCO_BA	Breaker(s)\ Disconnect(s) - Add analogs to BOMT 063A and 061A	20EMS13931
83	IPCO_BA	Breaker(s)\ Disconnect(s) - Update name MPSN CPT4	20EMS13932
84	IPCO_BA	Breaker(s)\ Disconnect(s) - Remove SAMN 061D, EMET 065D	20EMS13933
85	IPCO_BA	Breaker(s)\ Disconnect(s) - Add MPSN 103A, 103B, 103C	20EMS13934
86	IPCO_BA	20M12 ICCP Update	20EMS13935
87	IPCO_BA	20M12 CIM Update	20EMS13936
88	IPCO_TOP	ICCP points in EMS and RTCA	20EMS14173
89	LDWP_BA	- Transient/Dynamic Model Mapping Provided	20EMS13956
90	LDWP_BA	Generator - Resource Modeling information for CAISO Market Model	20EMS13971
91	NEVP_TOP	Network model to dyd mapping file	20EMS13721
92	NEVP_TOP	Breaker(s)\ Disconnect(s) - Updated RTU - New CIM Measurement Names	20EMS13890
93	NEVP_TOP	Breaker(s)\ Disconnect(s) - Added Disconnect Switch 1001 at Eagle	20EMS13891
94	NVE	Add new ICCP point for North Tahoe Load(MW)	20EMS14018
95	NWMT_TOP	Remove decommissioned SILV_BOW substation.	20EMS14187
96	PAC_TOP	Wyodak 230 kV substation RC boundary model	20EMS14125

Full Network Model Scope for FNM DB20M12 DB101

(Production 12/9/2020)

No	Entity	Project Name	Project Key
97	PGE_BA	Substation\Load - Remove the entire Linneman Substation	20EMS13735
98	PGE_BA	Model Updates for DB100: CIMxml model file	20EMS13897
99	PGE_BA	Model Difference reoport	20EMS13898
100	PGE_BA	List of ICCP points mapping	20EMS13899
101	PGE_BA	Transmission line re-configuration	20EMS13900
102	PNM_BA	SynchronousMachine dyd models	20EMS13842
103	PNM_BA	LA JOYA wind generations dyamic model from WECC model	20EMS13843
104	PNM_BA	Transformer - Person 115/46 kV Transformer Replacement	20EMS13861
105	PNM_BA	Transformer - Person 115/46 kV Transformer Replacement	20EMS13903
106	SMUD_TOP	RAS - Response to RC0120A_Draft_V2 section 6.26	20EMS13860
107	SNPD_TOP	Spring Line and Transformer Ratings	20EMS12565
108	SNPD_TOP	Spring Line and Transformer Ratings	20EMS12652
109	SNPD_TOP	Swamp Creek Project Phase 1 Effective date: 09/28/2020	20EMS13820
110	SNPD_TOP	Swamp Creek Project Phase 2 Effective date: 11/27/2020	20EMS13821
111	SNPD_TOP	Before Swamp Creek Project	20EMS13822
112	SNPD_TOP	Transmission Line - Update of transmission line spring ratings	20EMS13965
113	SNPD_TOP	Transmission Line - Update of transmission line winter ratings	20EMS13966
114	SNPD_TOP	Transmission Line - Update of transmission line fall ratings	20EMS13967
115	SNPD_TOP	Transmission Line - Update of transmission line summer ratings	20EMS13968
116	SRP_BA	Transmission Line - Updated Randolph, Vah KI, Pinal Central line impedances	20EMS13945
117	SRP_BA	Transformer - Updated transformer type from fixed to NLTC	20EMS13946
118	SRP_BA	Generator - Updated generator measurements	20EMS13947
119	SRP_BA	Substation\Load - Added Aux loads for units 1 & 2	20EMS13948
120	SRP_BA	Breaker(s)\ Disconnect(s) - Added breakers	20EMS13949
121	SRP_BA	Transformer - Added distribution transformer on Bay 2	20EMS13950
122	SRP_BA	Breaker(s)\ Disconnect(s) - Added bus divider breaker and disconnectors	20EMS13951
123	SRP_BA	Transformer - Updated high side transformer taps	20EMS13952
124	SRP_BA	Shunt Cap\Reactor\ SVDÂ¿s - Updated cap bank size	20EMS13953
125	SRP_BA	Breaker(s)\ Disconnect(s) - Added temporary switch on 230kV shunt capacitor bank	20EMS13954
126	SRP_BA	Generator - Updated generator high limit to match MVAR curve	20EMS13955
127	SRP_BA	Transmission Line - Added Barcelona-Bolster 69kV line	20EMS14327
128	SRP_BA	Transmission Line - Added Agua Fria-Bolster 69kV line	20EMS14328
129	SRP_BA	Transmission Line - Removed Agua Fria-Barcelona 69kV line	20EMS14329
130	SRP_BA	Transmission Line - Added Knox-20.5E5S 69kV line	20EMS14330

Full Network Model Scope for FNM DB20M12 DB101

(Production 12/9/2020)

No	Entity	Project Name	Project Key
131	SRP_BA	Transmission Line - Added Gila-20.5E5S 69kV line	20EMS14331
132	SRP_BA	Transmission Line - Removed Gila-Knox 69kV line	20EMS14332
133	SRP_BA	Transformer - Added Mobile 9 transformer and terminate on tap 20.5E5S between Gila and Knox 69kV substations	20EMS14333
134	SRP_BA	Transmission Line - Updated termination of Knox-Henshaw 230kv lines 1 & 2	20EMS14334
135	SRP_BA	Substation\Load - Removed station service load	20EMS14335
136	SRP_BA	Breaker(s)\ Disconnect(s) - Added breakers 392 and 395, disconnects 393 and 394 and temporary switches for future bus split and bay reterminations	20EMS14336
137	SRP_BA	Substation\Load - Added a new substation on the Browning - Casey 69 kV line	20EMS14337
138	SRP_BA	Substation\Load - Added status and analog measurements	20EMS14338
139	SRP_BA	Substation\Load - Added a new substation and generation asset BOR_7_BATTERY	20EMS14339
140	SRP_BA	Shunt Cap\Reactor\ SVDÂ¿s - Updated shunt reactor step size	20EMS14340
141	SRP_BA	Generator - Updated normal states of auxiliary load disconnect switches from open to close	20EMS14341
142	SRP_BA	Transmission Line - Updated impedance on Corbell-Santan 230kV line	20EMS14342
143	SRP_BA	Transformer - Updated 69/12 kV transformers to have tap changers on only one winding	20EMS14343
144	SRP_BA	Transformer - Updated 115/69 and 69/22 bank impedances	20EMS14344
145	SRP_BA	Transmission Line - Updated Impedance on the Kyrene - Jojoba 500 kV line	20EMS14345
146	SRP_BA	Transmission Line - Updated Impedance on the Duke Â¿ Pinal West 500 kV line	20EMS14346
147	TIDC_BA	Generator - Update ICCP mapping for generator units.	20EMS13836
148	TIDC_BA	Generator - Update ICCP mapping for generator units.	20EMS13837
149	TIDC_BA	Generator - Update ICCP mapping for generator units.	20EMS13838
150	TIDC_BA	Generator - Update ICCP mapping for generator units.	20EMS13839
151	TSGT_TOP	Generator - Tri-State's response to RC West Dynamic Model Data-Mapping request	20EMS13940
152	WASN_TOP	Transmission Line - Fiddymment - Elverta 230 kV line rating change	20EMS13889
153	WASN_TOP	Generator - Update CARR_7_UNIT 2 Pmax to 85.6 MW	20EMS14031
154	WASN_TOP	Generator - Update CARR_7_UNIT 1 Pmax to 85.6 MW	20EMS14032
155	WASN_TOP	Generator - Update FOLSOM_7_UNIT 3 Pmax to 71.7 MW	20EMS14033
156	WASN_TOP	Generator - Update FOLSOM_7_UNIT 2 Pmax to 71.7 MW	20EMS14034
157	WASN_TOP	Generator - Update FOLSOM_7_UNIT 1 Pmax to 71.7 MW	20EMS14035
158	WASN_TOP	Generator - Update KESWIK_7_UNIT 3 Pmax to 39 MW	20EMS14036
159	WASN_TOP	Generator - Update KESWIK_7_UNIT 2 Pmax to 39 MW	20EMS14037
160	WASN_TOP	Generator - Update KESWIK_7_UNIT 1 Pmax to 39 MW	20EMS14038
161	WASN_TOP	Generator - Update MELONP_7_UNIT 2 Pmax to 191.7 MW	20EMS14039
162	WASN_TOP	Generator - Update MELONP_7_UNIT 1 Pmax to 191.7 MW	20EMS14040
163	WASN_TOP	Generator - Update NIMBUS_1_UNIT 2 Pmax to 8.6 MW	20EMS14041

Full Network Model Scope for FNM DB20M12 DB101
(Production 12/9/2020)

No	Entity	Project Name	Project Key
164	WASN_TOP	Generator - Update NIMBUS_1_UNIT 1 Pmax to 8.6 MW	20EMS14042
165	WASN_TOP	Generator - Update SPRGCK_7_UNIT 2 Pmax to 95 MW	20EMS14043
166	WASN_TOP	Generator - Update SPRGCK_7_UNIT 1 Pmax to 95 MW	20EMS14044
167	WASN_TOP	Generator - Update TRINPP_7_UNIT 1 Pmax to 70 MW	20EMS14045