

FNM Scope for FNM 21M7 DB106
(Production 7/21/2021)

Revision History – Final Scope Due by 5/6/2021

Effective Date	Version	Description
5/6/2021	1.0	Final scope by due date. The scope is considered finalized without any addendum attached.
7/16/2021	2.0	Add additional information

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I. NRI Projects

No	PTO	Resource ID	Project Name	Project Key	Capacity (MW)	POD	Additional Information
1	PGAE	AQUAWS_2_AQWSR1	Aquamarine Westside	15AS883826	250	GATES 230 KV BUS	New Solar resource
2	PGAE	ULTPCH_1_UCSBT1	Ultrapower Chinese Station BESS	15AS884695	10	CURTIS 115 KV BUS	New Non-Generation resource
3	PGAE	TRNQLT_2_RETBT1	RE Tranquillity BESS	21NGR15486	72	TRANQUILITY SW STA 230 KV BUS	New Non-Generation resource
4	SCE	VALTNE_2_TRSBT1	Tropico Solar	16AS0088	70	WHIRLWIND 230 KV BUS	New Storage resource
5	SCE	EDWARD_2_ES2BT3	EdSan 2	17AS1824	151	WINDHUB 230 KV BUS	New Storage resource
6	SCE	VALTNE_2_TBBBT1	Tropico Solar Big Beau	21GEN14878	58	WHIRLWIND 230 KV BUS	New Storage resource
7	SCE	ESTWND_2_OPPWD1	Oasis Power Plant Eastwind	21GEN15141	57.14	VINCENT 230 KV BUS	New Wind/Wind Repower resource
8	SCE	INDIGO_1_UNIT 2	INDIGO PEAKER UNIT 2 PMAX INCREASE	21GEN16258	45.3		Existing resource, EMS Pmax increase from 45 MW to 45.3 MW
9	SCE	INDIGO_1_UNIT 3	INDIGO PEAKER UNIT 3 PMAX INCREASE	21GEN16259	45.3		Existing resource, EMS Pmax increase from 45 MW to 45.3 MW
10	SCE	INDIGO_1_UNIT 1	INDIGO PEAKER UNIT 1 INCREASE PMAX	21GEN16261	45.3		Existing resource, EMS Pmax increase from 45 MW to 45.3 MW
11	SDGE	LARKSP_6_UNIT 1	LARKSPUR PEAKER UNIT 1 PMAX INCREASE	21GEN16521	49		Existing resource, EMS Pmax increase from 45 MW to 49 MW
12	SDGE	LARKSP_6_UNIT 2	LARKSPUR PEAKER UNIT 2 PMAX INCREASE	21GEN16522	49		Existing resource, EMS Pmax increase from 45 MW to 49 MW
13			Forbestown Wise to SFWPA RIG	19RIG9480	39		RIG Reconfiguration
14			Kelly Ridge Wise to SFWPA RIG	19RIG9482	11		RIG Reconfiguration
15			Sly Creek Wise to SFWPA RIG	19RIG9483	13		RIG Reconfiguration
16			WoodLeaf Wise to SFWPA RIG	19RIG9484	60		RIG Reconfiguration
17			Palomar Energy Center RIG replacement	21RIG16100	585		RIG Reconfiguration
18			LAPLMA_2_UNIT 1	21RIG16162	267		RIG Reconfiguration

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II. Transmission Projects

No	PTO	RIMS ID	Project Name	Project Key
1	PGAE	17TRANS6523	Cottonwood-Red Bluff 60 kV Line Upgrade	ET3383
2	PGAE	17TRANS6528	Cascade Substation Upgrade	ET3929
3	PGAE	17TRANS6528	Cascade Substation Upgrade	ET3931
4	PGAE	18TRANS6566	Caltrain Intrconnection Site 3 FMC Substation	ET4641
5	PGAE	19TRANS8516	Replace Pit PH #1 REPL 230KV Banks 1 & 2	ET4640
6	PGAE	21TRANS16210	Colusa Sub 60 kV Shoofly	ET4625
7	SCE	14TRANS650011	Colorado River 220kV Expansion	ET4639
8	SCE	20TRANS14106	SCE Centralized Remedial Action Scheme (CRAS)	ET4678
9	SCE	20TRANS14483	Redbluff 525/230 kV - Add new 1AA Transformer	ET4512
10	SCE	20TRANS14483	Redbluff 525/230 kV - Add new 1AA Transformer	ET4638
11	SCE	21TRANS16775	McGen ICCP Removal	ET4633
12	SCE	21TRANS16776	Santa Clara Various ICCP Removal	ET4634
13	SDGE	15TRANS874029	Artesian 230kV Expansion With 69kV Upgrades	ET3323
14	SDGE	15TRANS874029	Artesian 230kV Expansion With 69kV Upgrades	ET3324
15	SDGE	21TRANS18139	Q1191 Valley Center Energy Storage	ET4646

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III. EIM/ RC Projects

No	Entity	Project Name	Project Key
1	AVA_BA	Update market-only resource COLSTRIP34_5_AVASHARE's EMS pmax to 232 MW from 226.5 MW	21EMS18196
2	AVA_TOP	Contingency Definition - Contingency additions	21EMS15110
3	AVA_TOP	Substation\Load - English / long names per request	21EMS16005
4	AVRN_BA	Substation\Load - Update of OMS_LongName	21EMS16026
5	BANC_BA	Breaker(s)\ Disconnect(s) - Removed pseudo disconnects for substation STE.	21EMS16906
6	BANC_BA	Shunt Cap\Reactor\ SVDÂ¿s - Series Compensator Name change	21EMS16907
7	BANC_BA	Breaker(s)\ Disconnect(s) - Updated Normal Statuses	21EMS16908
8	BANC_BA	Breaker(s)\ Disconnect(s) - Added breaker and disconnect to FIY substation.	21EMS16909
9	BANC_BA	Transformer - Added transformer to FIY substation and updated impedances.	21EMS16910
10	BANC_BA	Transmission Line - Added analog and ICCP mappings.	21EMS16911
11	BANC_BA	Breaker(s)\ Disconnect(s) - Updated normal status and changed name of a couple disconnects	21EMS18409
12	BANC_BA	Transmission Line - Transmission Line ratings updated	21EMS18410
13	BANC_BA	Generator - MVAR Capability CurveData updated	21EMS18411
14	BANC_BA	Transmission Line - Removed Lines CAN-SUC, ORG-SUC. Remove Line terminals. Removed Analog Measurements on lines. Added Lines CAN-SUJ, ORG-SUJ, SUC-SUJ Added OperationalLimitSet for each added line	21EMS18412
15	BANC_BA	Substation\Load - New substation Added to model correct connectivity in RDNG. Added BusbarSection. Added ConnectivityNodes and Disconnectors	21EMS18413
16	BANC_BA	Generator - Unit Pmax updated. MVAR capability CurveData for units updated	21EMS18414
17	BANC_BA	Substation\Load - New SubLoadArea RDNG. Renamed SMUD SubLoadArea to SMUD1	21EMS18415
18	BANC_BA	Substation\Load - New SubgeographicalRegion RDNG (Redding Electric Utility). Redding Stations formerly under WAPA moved to newly formed RDNG SubGeographicalRegion	21EMS18416
19	BANC_BA	Standiford (STF) Line Topology Update	21EMS18731
20	BCHA_RC	Transmission Line - added	21EMS17805
21	BCHA_RC	Transmission Line - added	21EMS17806
22	BCHA_RC	Substation\Load - added	21EMS17807
23	BCHA_RC	Substation\Load - added	21EMS17808
24	BCHA_RC	Generator - deleted	21EMS17809

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No	Entity	Project Name	Project Key
25	BCHA_RC	Generator - deleted	21EMS17810
26	BCHA_RC	Generator - deleted	21EMS17811
27	BCHA_RC	Equipment Type - Updated ICCP	21EMS17812
28	BPAT_BA	Shunt Cap\Reactor\ SVDÂ¿s - Two new shunt reactors added for future energization date.	21EMS16744
29	BPAT_BA	Breaker(s)\ Disconnect(s) - New model changes were add for future energization date.	21EMS16745
30	BPAT_BA	Breaker(s)\ Disconnect(s) - Couple PCBs and DSC were corrected/fixed.	21EMS16746
31	BPAT_BA	Generator - No changes to dyd file between 1162 and 1164 but there wre corrections to the data pointed out by RC West so we inluded the full dyd mapping file with corrections "BPA_dyd_Mapping_1164.xlsx".	21EMS16747
32	BPAT_BA	Contingency Definition - BPA Contingency List. Also included full contingency list "BPA_Contingency_For_CAISO_1164.xlsx" since all contingency names got changed to comply with new requironments from RC West.	21EMS16749
33	BPAT_TOP	Transmission Line - Updating Request Number 6.23	21EMS15510
34	BPAT_TOP	Transmission Line - Updating Request Number 6.23	21EMS15758
35	BPAT_TOP	Generator - Updating Request Number 6.8.1	21EMS16142
36	BPAT_TOP	Transmission Line - Updating Request Numbers 6.17, 6.23	21EMS16812
37	CEN_BA	- Substations English Names	21EMS16752
38	CHPD_BA	Substation\Load - RC requested CHPD to review English sub names and provide updates	21EMS16007
39	EPEC	ARROYOWC Station 345kV CB 3018B default status	21EMS18582
40	GCPD_TOP	Substation\Load -	21EMS15917
41	GCPD_TOP	Substation\Load -	21EMS15918
42	IID	NILAN_CALPTP_CALPSS 92 KV line has Emer rating 145 MVA,	21EMS16751
43	IID_BA	Generator - Additional information requested by RC West for our Battery Storage, like State of Charge, dischrahge indication, and remaining MWH.	21EMS15761
44	IID_TOP	Breaker(s)\ Disconnect(s) -	21EMS16001
45	IID_TOP	Substation\Load - Requested substation "English Names" for WEBOMS	21EMS16143
46	IPCO_BA	Substation\Load - updates to English names as requested	21EMS16004
47	IPCO_BA	Transmission Line - Updated Limits, Resistance, Reactance and Capacitance. No topology changes	21EMS16511
48	IPCO_BA	Transmission Line - Updated Limits, Resistance, Reactance and Capacitance. No topology changes	21EMS16512
49	IPCO_BA	Transmission Line - Updated Limits, Resistance, Reactance and Capacitance. No topology changes	21EMS16513
50	IPCO_BA	Breaker(s)\ Disconnect(s) - Add GOWN 102X Switch	21EMS16796

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No	Entity	Project Name	Project Key
51	IPCO_BA	Breaker(s)\ Disconnect(s) - Add CDWL 066C Switch	21EMS16797
52	IPCO_BA	Breaker(s)\ Disconnect(s) - Add NBTP 115T5 Switch	21EMS16798
53	IPCO_BA	- All ICCP Object IDs for IPCO_BA FNM.	21EMS16799
54	IPCO_BA	- CIM export of IPCO_BA FNM.	21EMS16800
55	IPCO_TOP	IPCO MPSN impedance update	21EMS18665
56	LDWP_BA	Transmission Line - Update VIC-LA TCOR default limits Update TCOR default status	21EMS16671
57	LDWP_BA	Substation\Load - Added ICCP mapping for APEX Auxiliary Load	21EMS16818
58	LDWP_BA	Substation\Load - Update Substation English names	21EMS16819
59	LDWP_BA	Transformer - Relocate "CAN BK A" from substation "CAN_SUB" to "CAN"	21EMS16820
60	LDWP_BA	Transmission Line - Update Transmission ratings of FAR-OLY A, FAR-OLY B, FAR-AIR 2, TAR-OLY 1	21EMS16821
61	NEVP_TOP	Substation\Load - Making long name changes for OMS as requested by Rachel Lucas as seen in the .msg file submitted to RIMS	21EMS16025
62	NEVP_TOP	Generator - Added generation substation with 200 MW PV (Resource ID = DODGEFLT_3_PV_UNIT) and 200 MW BATTERY (Resource ID = DODGEFLT_3_BESS_UNIT)	21EMS16814
63	NEVP_TOP	Generator - Added generation substation with 100 MW PV (Resource ID = FSHSPRNG_3_PV_UNIT) and 25 MW BATTERY (Resource ID = FSHSPRNG_3_BESS_UNIT)	21EMS16815
64	NEVP_TOP	Shunt Cap\Reactor\ SVDÂ¿s - Added a 12 and 36 Mvar cap bank to BELL CRK	21EMS16816
65	NEVP_TOP	Shunt Cap\Reactor\ SVDÂ¿s - Added 20 Mvar cap bank to BANNOCK	21EMS16817
66	NWMT	MYSTLINE_50A and MYSTLINE_50B connecting MYSTIC and LINE_CRK substations are incorrectly connected. MYSTLINE_50A line should be connected to 19L and 115L, and the MYSTLINE_50B line should be connected to 18L and 116L.	21EMS18137
67	NWMT_TOP	Transmission Line - Corrected line limits and other equipment	21EMS16813
68	PACE	PACE RAS ICCP Point Mapping	21EMS15666
69	PAC_TOP	Breakers/Disconnects - Delete SB-1	21EMS16875
70	PAC_TOP	Substation\Load - Add new substation	21EMS16876
71	PAC_TOP	Breakers/Disconnects - Update existing two MO's type to Breaker, add two MOABs and JUMPER	21EMS16877
72	PAC_TOP	Breakers/Disconnects - Add two devices	21EMS16878
73	PAC_TOP	Breakers/Disconnects - Update all names from HERMISTO to HERMISTD and add BUS DISCONNECT	21EMS16879
74	PAC_TOP	Breakers/Disconnects - Add MO 3M42	21EMS16880
75	PAC_TOP	Breakers/Disconnects - Update 3W38's Normal status to OPEN	21EMS16881
76	PAC_TOP	Transmission Lines - Update DALLAS_SALEM_115's RDFID	21EMS16882

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No	Entity	Project Name	Project Key
77	PAC_TOP	Substation\Load - Add new substation	21EMS16883
78	PAC_TOP	Substation\Load - CAISO please change BA to PACE	21EMS16884
79	PAC_TOP	Breakers/Disconnects - Update two MOABs' SCADA keys	21EMS16885
80	PAC_TOP	Substation\Load - Update T3831's P=72.2, Q=23.72	21EMS16886
81	PAC_TOP	Substation\Load - Update LD 1's P=4.68, Q=0.87	21EMS16887
82	PAC_TOP	Substation\Load - Update TRANS-2's P=34, Q=11	21EMS16888
83	PAC_TOP	Substation\Load - Update HUNT-T3's P=8.1, Q=6.4	21EMS16889
84	PAC_TOP	Substation\Load - Add XFMR7 as Load	21EMS16890
85	PAC_TOP	Transmission Lines - Add line measurements on BEEFHOLL and OQUIRRH	21EMS16891
86	PAC_TOP	Breakers/Disconnects - Add 7 devices	21EMS16892
87	PAC_TOP	Substation\Load - Add new substation and new generation (80MW)	21EMS16893
88	PAC_TOP	Breakers/Disconnects - Add 9 devices and line to GRAPH SOL	21EMS16894
89	PAC_TOP	Transformers - Update T1 and T2 measurements and remove MO 212A, MO 215A, JP1	21EMS16895
90	PAC_TOP	Transformers - Add XFMR2	21EMS16896
91	PAC_TOP	Breakers/Disconnects - Remove FD FUSE-1	21EMS16897
92	PAC_TOP	Breakers/Disconnects - Update 115A's Normal status to CLOSE and 155A's Normal status to OPEN	21EMS16898
93	PAC_TOP	Substation\Load - Remove SBUS AMPS 69 2	21EMS16899
94	PAC_TOP	Transmission Lines - Add line to SNOWYRAN	21EMS16900
95	PAC_TOP	Breakers/Disconnects - Rename CB 303 to 10B18	21EMS16901
96	PAC_TOP	Breakers/Disconnects - Update NORMST to OPEN for CB HH743 and AS TT723	21EMS16902
97	PAC_TOP	Breakers/Disconnects - Add two MOABS and one JUMPER (JP1 CLOSE after DEPLOYMENT)	21EMS16903
98	PAC_TOP	Transmission Lines - Add HUNGTINGT_MCFADDEN_138 measurement	21EMS16904
99	PAC_TOP	Substation\Load - CAISO please change BA to PACE	21EMS16905
100	PGE_BA	RAS - RAS screenshot	21EMS16194
101	PGE_BA	Substation\Load - Build new substation portion around existing VHH9 and Dalreed-Boardman 230kV line	21EMS16767
102	PGE_BA	RAS - RAS screenshot	21EMS16768
103	PGE_BA	- List of ICCP points mapping	21EMS16769
104	PGE_BA	- Model Difference reoport	21EMS16770

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No	Entity	Project Name	Project Key
105	PGE_BA	- Model Updates for DB106: CIMxml model file	21EMS16771
106	PNM_BA	Transmission Line - PNM Network Model	21EMS16809
107	PNM_BA	Transmission Line - Full ICCP SCADA Mapping for Network Model	21EMS16810
108	PNM_BA	Transmission Line - English names updated	21EMS16811
109	PSEI_BA	Substation\Load - GUI Name for PSE Substations	21EMS16187
110	PSEI_BA	Transmission Line - GUI Name for Transmission Lines	21EMS16552
111	PSEI_BA	- ICCP list	21EMS16742
112	PSEI_BA	- full CIM model	21EMS16743
113	PSEI_BA	Transformer - GUI Name for Power Transformers	21EMS16765
114	PSEI_BA	Substation\Load - GUI Name for Busbarsection	21EMS17892
115	SCL_BA	Transmission Line - Added English names to 5 SCL substations; ISO Resource Name: SCL EBC, SCL PEC, SCL RD Smith, SCL Shoreline, and SCL South	21EMS16140
116	SNPD_TOP	Shoofly Install\ Removal - Removal of a shoo-fly at Lake Chaplain	20EMS14762
117	SNPD_TOP	Breakers Disconnects - Addition to address missing ICCP points in DB102	21EMS15577
118	SNPD_TOP	Transmission Line - Updated ratings and line names	21EMS17898
119	SNPD_TOP	Substation\Load - Under Frequency Load Shedding model	21EMS17929
120	SPP_RC	- Removing aggregations for GRID units	21EMS16185
121	SRP_BA	Transmission Line - Updated ICCP naming for new line terminations (modeling was previously submitted)	21EMS16272
122	SRP_BA	Transmission Line - Added line rating for Rio Verde 69 kV line	21EMS16273
123	SRP_BA	Transformer - Updated all GSU transformer impedances	21EMS16274
124	SRP_BA	Substation\Load - Removed station service load	21EMS16275
125	SRP_BA	Substation\Load - Removed station service load	21EMS16276
126	SRP_BA	Substation\Load - Removed station service load	21EMS16277
127	SRP_BA	Substation\Load - Removed station service load	21EMS16278
128	SRP_BA	Generator - Updated pmax values and capability curves for block 1 - this change is already scheduled for 21M4 project ID 21EMS16071	21EMS16279
129	SRP_BA	Generator - Added new generator and associated equipment - resource ID PCL_2_CLS_SOLAR	21EMS16280
130	SRP_BA	Transmission Line - Moved tie line to 500 kV side of the transformer instead of using 500/345 transformer per CAISO request	21EMS16281
131	SRP_BA	Substation\Load - Provided missing substation common names per CAISO request	21EMS16282

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No	Entity	Project Name	Project Key
132	SRP_BA	Breaker(s)\ Disconnect(s) - Updated naming on 933 and 934 Motor operated disconnects	21EMS16283
133	SRP_BA	Transmission Line - Updated ICCP naming for new line terminations (modeling was previously submitted)	21EMS16284
134	SRP_BA	Transmission Line - Updated ICCP naming for new line terminations (modeling was previously submitted)	21EMS16285
135	SRP_BA	Transmission Line - Updated ICCP naming for new line terminations (modeling was previously submitted)	21EMS16286
136	SRP_BA	Transmission Line - Updated ICCP naming for new line terminations (modeling was previously submitted)	21EMS16287
137	SRP_BA	Transmission Line - Updated ICCP naming for new line terminations (modeling was previously submitted)	21EMS16288
138	SRP_BA	Breaker(s)\ Disconnect(s) - Removed aux switch measurements and renamed switches	21EMS16289
139	SRP_BA	Transformer - Updated Bank impedances and tap	21EMS16290
140	SRP_BA	Transformer - Updated bank impedances	21EMS16291
141	SRP_BA	Breaker(s)\ Disconnect(s) - Added 678 breaker, 667 and 676 disconnects, and open jumper	21EMS16292
142	SRP_BA	Breaker(s)\ Disconnect(s) - Added open jumper to Lassen-Marcos line	21EMS16293
143	SRP_BA	Breaker(s)\ Disconnect(s) - Removed construction TMPs 1 and 2	21EMS16294
144	SRP_BA	Transformer - Updated bank impedances and measurement locations	21EMS16295
145	SRP_BA	Transformer - Updated bank impedances	21EMS16296
146	TPWR_BA	Transmission Line -	21EMS16184
147	TPWR_BA	Contingency Definition - Most recent contingency definitions.	21EMS16186
148	TSGT	Line rating update	21EMS16564
149	WASN_TOP	OBN-ELVERTA #3 rating update -	21EMS16137