

FNM Scope for FNM 21M10 DB108
(Production 10/6/2021)

Revision History – Final Scope Due by 7/29/2021

Effective Date	Version	Description
7/29/2021	1.0	Final scope by due date. The scope is considered finalized without any addendum attached.
10/4/2021	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	SLATE_2_SLASR5	Slate 5	20GEN13739	26	Mustang Switching Station 230kV Bus	New Solar resource
2	PGAE	SLATE_2_SLASR4	Slate 4	20GEN13740	63	Mustang Switching Station 230kV Bus	New Solar resource
3	PGAE	JANCRK_6_RCABT1	Redwood Coast Airport Microgrid	20NGR11075	1.77	Janes Creek 60kV Bus	New Non-Generation resource
4	PGAE	PUTHCR_1_PCNSB1	Putah Creek Solar Farm North	21GEN18527	3	Putah Creek 115kV Bus	New Solar and Battery resource
5	SCE	BGSKYN_2_ASSR1B	Antelope Solar 1B	21GEN17890	17	Antelope 230kV Bus	New Solar resource
6	SCE	EDWARD_2_E23SB1	EdSan 2 Edwards 3	21GEN18001	24	Windhub 230kV Bus	New Solar and Battery resource
7	SCE	RDWAY_1_SCKSR1	Sheep Creek	21GEN18646	3	Roadway 115kV Bus	New Solar resource
8	SCE	JAWBNE_2_SRWND	Sky River Wind Repower A Pmax increase	21GEN19132	30		Wind/Wind Repower resource, EMS pmax increase from 29 MW to 30 MW
9	SCE	JAWBNE_2_SRWWD2	Sky River Wind Repower B Pmax increase	21GEN19133	30.2		New Wind/Wind Repower resource, EMS pmax increase from 29.5 MW to 30.2 MW
10	SCE	SANBRN_2_ES1BT3	EdSan 1 Sanborn 1	21NGR18707	40	Windhub 230kV Bus	New Storage resource
11	SDGE	CLAP_ESJWD2_LOAD	Energia Sierra Juarez Wind 2 CLAP	21CLAP18968	3		New Custom LAP resource
12	SDGE	ENERSJ_5_ESJWD2	Energia Sierra Juarez Wind 2	21GEN16608	105	East County 230kV Bus	New Wind/Wind Repower resource
13	SDGE	GRNITE_6_ESCBT1	EnerSmart El Cajon	21NGR18729	3	Granite 69kV Bus	New Non-Generation resource
14			GARNET_1_SOLAR	21RIG14791	4		RIG Reconfiguration
15			BUCKWD_1_NPALM1	21RIG14792	2.5		RIG Reconfiguration
16			GARNET SOLAR PRIMARY	21RIG14793	6.5		RIG Reconfiguration
17			Hatchet Ridge Wind, LLC	21RIG17926	101.2		RIG Reconfiguration
18			Clearwater CORONS	21RIG18133	28		RIG Reconfiguration
19			BUCKBL_2_PLIX3	21RIG18214	0		RIG Reconfiguration
20			AES Huntington Beach Energy, RIG Reconfiguration, RIG ID IRG417	21RIG18249	689		RIG Reconfiguration
21			La Rosita (LAROA2)	21RIG18254	320		RIG Reconfiguration
22			AES Alamitos Energy, RIG Configuration, RIG ID 427.	21RIG18261	689		RIG Reconfiguration
23			SCHLTE	21RIG18316	337		RIG Reconfiguration
24			Diamond Valley Hydroelectric Recovery Plant [IDG121]	21RIG18427	39.6		RIG Reconfiguration

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No	PTO	Resource ID	Project Name	Project Key	Capacity (MW)	POD	Additional Information
25			Etiwanda Hydroelectric Recovery Plant [IDG136]	21RIG18428	27.6		RIG Reconfiguration
26			Desert Start Energy Center	21RIG18515	115		RIG Reconfiguration
27			AES Alamitos RIG Reconfiguration RIG ID ISRG0011	21RIG18553	1135.83		RIG Reconfiguration
28			AES Huntington RIG Reconfiguration RIG ID ISRG0274B	21RIG18580	226.84		RIG Reconfiguration
29			Agua Caliente (IRG075)	21RIG18652	290		RIG Reconfiguration
30			California Valley Solar Ranch (IRG047)	21RIG18682	250		RIG Reconfiguration
31			Sutter Energy Center RIG Reconfiguration - BAL-003 Project 2021	21RIG18726	0		RIG Reconfiguration
32			NRG Sunrise Power Company (SUNRISE)	21RIG18735	565		RIG Reconfiguration
33			Redondo Generating Station; Unit 8 Point Configuration	21RIG18757	833.87		RIG Reconfiguration
34			RERC (IRG006A)	21RIG18795	49		RIG Reconfiguration
35			Springs (IDG072A)	21RIG18796	36		RIG Reconfiguration
36		PGST_2_PDRP28	PGST_2_PDRP28	21RIG18963	2.5		RIG Reconfiguration

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II. Transmission Projects

No	PTO	RIMS ID	Project Name	Project Key
1	PGAE	20TRANS14446	California Flats Solar BESS (Q877) Project	ET4497
2	PGAE	21TRANS17862	Caltrain East Grand - RAS SPS	ET4636
3	PGAE	21TRANS18019	RE Tranquility Project and SPC Tranquility Solar Storage Interconnection Project (Q643X)	ET4642
4	PGAE	21TRANS18641	Vaca-Bahia, Bahia-Moraga & Parkway-Moraga 230kV line clearances (SHIELD Wire Project & Tag Work)	ET4685
5	PGAE	21TRANS18973	RECONDUCTOR FITCH MTN #2 TAP	ET4703
6	SCE	21TRANS18539	San Joaquin RAS Obsolete ICCP Objects	ET4679
7	SCE	21TRANS18753	Inyo Substation Rebuild	ET4689
8	SCE	21TRANS18987	Mohave Sub ICCP Replacement	ET4706
9	SCE	21TRANS18987	Mohave Sub ICCP Replacement	ET4707

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III. EIM/ RC Projects

No	Entity	Project Name	Project Key
1	AESO_RC	Create tap substation between HAY_LAKE and PICT_BUT	21EMS19286
2	APS	PV - Palm Valley	21EMS19485
3	AVA_BA	Implement the detailed Avista/AVA EIM CIM xml model in Production, includes equipment RDFID changes	21EMS17945
4	AVA_BA	Substation\Load - Spreadsheet of Pnode location coordinates as requested as part of EIM Track 3.	21EMS18606
5	AVA_BA	Contingency Definition - AVA Contingency Definition changes moving from RC MRIDs in DB105 to AVA MRIDs in DB106	21EMS18698
6	AVA_BA	- ICCP mapping to AVA CIM model	21EMS18876
7	AVA_BA	- AVA CIM XML model	21EMS18877
8	AVA_BA	- ICCP mapping to AVA CIM model	21EMS19405
9	AVA_BA	- AVA CIM XML model	21EMS19406
10	AVA_TOP	Substation\Load - Beacon substation now has 13kV modeled in order to include connection to Upriver	21EMS15724
11	AVA_TOP	Substation\Load - oneline diagram of Upriver substation for generator addition to SGIT	21EMS15725
12	AVA_TOP	Substation\Load - DOWER substation is a KEC substation between POST_FLS and FIGHTCRK	21EMS15726
13	AVA_TOP	Substation\Load - POST_FLS (AVA's POSTFALLS) oneline now has connection to DOWER	21EMS15727
14	AVA_TOP	Substation\Load - oneline diagram of FIGHTCRK substation for generator addition to SGIT	21EMS15728
15	AVA_TOP	Substation\Load - LIN__SOLR oneline	21EMS15730
16	AVA_TOP	Generator - Added AVA's MIDCDOPD resource at DOPD's Wells facility	21EMS16006
17	AVRN_BA	Generator - XFMR MVA = 165	21EMS18699
18	AVRN_BA	Generator - RC Data Gathering Template for Lund Hill	21EMS18700
19	AVRN_BA	Generator - Investigating if WECC or BPA can provide to us.	21EMS18701
20	AVRN_BA	Generator - ICCP objects for Lund Hill	21EMS18702
21	AVRN_BA	Generator - Lund Hill Single Line	21EMS18703
22	AVRN_BA	Generator - Add Lund Hill Solar	21EMS18704
23	AVRN_BA	Generator - Add Lund Hill Solar	21EMS18705
24	BANC_BA	Substation\Load - Updated low and high Voltage Limits	21EMS18907

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25	BANC_BA	Transformer - Updated transformer impedances and ratedS at these 3 substations.	21EMS18908
26	BANC_BA	Breaker(s)\ Disconnect(s) - Added UCONs for all units in Folsom and Shasta substation.	21EMS18909
27	BANC_BA	Contingency Definition - This is new RDNG Contingency Definition file. It is replacement of the previous uploaded RDNG contingency definition files. Please ignore previous two RDNG contingency definition uploaded.	21EMS18998
28	BPA	Add the pseudo switches at BPA MAUPIN: PCB A-847 for Outage 10628366	21EMS19621
29	BPAT_BA	RAS - RAS logic diagrams for Ran Zhu.	21EMS18601
30	BPAT_BA	Breaker(s)\ Disconnect(s) - Added DSC 1870 and 1650	21EMS18887
31	BPAT_BA	Breaker(s)\ Disconnect(s) - Removed DSC 2171 and added DSC 2079	21EMS18888
32	BPAT_BA	Breaker(s)\ Disconnect(s) - Added LSD 20, 21 and PCB 22H	21EMS18889
33	BPAT_BA	Substation\Load - New tap station.	21EMS18890
34	BPAT_BA	Substation\Load - New tap station.	21EMS18891
35	BPAT_BA	Generator - BPA Dynamic generator model mapping	21EMS18892
36	BPAT_BA	Contingency Definition - BPA Contingency List	21EMS18893
37	BPAT_BA	Add shoofly to WESTMORE substation in BPA: EWEB	21EMS19510
38	BPAT_TOP	Transmission Line - Updating Request Number 6.23	21EMS18667
39	CEN_BA	- Mapping file	21EMS18205
40	CEN_BA	- Sav file	21EMS18206
41	CEN_BA	- Update Pmax of some Generating Units	21EMS18555
42	CHPD_BA	Clean up double modeling OHME substation	21EMS18983
43	HHWP_TOP	Breaker(s)\ Disconnect(s) - Update ICCP_ID W118_CAL_52P Nom_KV	21EMS18784
44	HHWP_TOP	Substation\Load - Addition of ICCP_ID W118_CAL_MVAR	21EMS18785
45	HHWP_TOP	Substation\Load - Addition of ICCP_ID W118_CAL_MW	21EMS18786
46	HHWP_TOP	Breaker(s)\ Disconnect(s) - Update ICCP_ID W118_CAL_POLESWITCH (Nom_KV_Level)	21EMS18991
47	HHWP_TOP	Breaker(s)\ Disconnect(s) - Update ICCP_ID W118_CAL_CALSUBDISCONNECT (Nom_KV_Level)	21EMS18992
48	HHWP_TOP	Breaker(s)\ Disconnect(s) - Add ICCP_ID W118_CAL_821	21EMS18993
49	HHWP_TOP	Breaker(s)\ Disconnect(s) - Remove ICCP_ID W118_CAL_812	21EMS18994
50	HHWP_TOP	Breaker(s)\ Disconnect(s) - Update ICCP_ID W118_CAL_811 (Nom_KV_Level)	21EMS18995
51	HHWP_TOP	Breaker(s)\ Disconnect(s) - Update ICCP_ID W118_CAL_52C2 (Device_Type and Nom_KV_Level)	21EMS18996
52	HHWP_TOP	Breaker(s)\ Disconnect(s) - Update ICCP_ID W118_CAL_52C1 (Device_Type and Nom_KV_Level)	21EMS18997

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53	HHWP_TOP	Breaker(s)\ Disconnect(s) - Location for updated ICCP measurements in HANA display	21EMS19021
54	HHWP_TOP	Breaker(s)\ Disconnect(s) - Update HANA to display ICCP MVAR measurement for Warnerville breaker 640	21EMS19022
55	HHWP_TOP	Breaker(s)\ Disconnect(s) - Update HANA to display ICCP MW measurement for Warnerville breaker 640	21EMS19023
56	IID	Ling rating update	21EMS18835
57	IID_BA	- UPDATE: See notes on Rows 29 - 30 of associated document	21EMS18631
58	IID_BA	Generator - UPDATE: Revising CHILD_Res_IDs on SGIT: Aggregate Mapping tab	21EMS18632
59	IID_BA	- UPDATE: See notes on Rows 80 - 84 of associated document	21EMS18633
60	IID_BA	Generator - UPDATE: Modified modeling data attributes for several Resources	21EMS18634
61	IID_BA	Generator - UPDATE: Revising Res_IDs on SGIT: Unit Information tab	21EMS18635
62	IPCO_BA	Address modeling of non-IPCO TOP equipment in IPCO CIM model by assigning a different sub-control area.	20EMS14070
63	IPCO_BA	- Incremental dynamic data mapping update for IRO-010 Item 6.25	21EMS18670
64	LDWP_BA	Generator - 21SCME4299 - Red Cloud Wind dyd	21EMS18910
65	LDWP_BA	Substation\Load - Updated ICCP Mapping	21EMS18911
66	LDWP_BA	Generator - 21SCME4299 - Red Cloud Wind PSLF Case	21EMS18912
67	LDWP_BA	Substation\Load - Red Cloud Wind Coordinates / Long Name	21EMS18913
68	LDWP_BA	Generator - Added psuedo tied generation Red Cloud Wind (In Service Nov 2021)	21EMS18914
69	LDWP_BA	Substation\Load - Added substation Red Cloud Wind	21EMS18915
70	NEVP_TOP	Generator - Updated DYD mapping file	21EMS18674
71	NEVP_TOP	Generator - Updated DYD mapping file	21EMS18675
72	NEVP_TOP	Transformer - Rating increase on BLV XF#1 = 40 MVA and BLV XF#2 = 60 MVA	21EMS18885
73	NEVP_TOP	Substation\Load - New Substation, CMM-DOV_1101 BRANCH will be folded to accommodate.	21EMS18886
74	NEVP_TOP	Transmission Line - Increase line rating for MCD-AD 230 line to 1792 Amps (713.9 MVA) - This change is included in the last model submission as well.	21EMS18988
75	NEVP_TOP	Transmission Line - Increase line rating for MCD-AD 230 line to 1792 Amps (713.9 MVA) - This change is included in the last model submission as well.	21EMS18989
76	NEVP_TOP	Generator - Added a tab to our ICCP document for non-cim data. Added two new ICCP points for total BESS SOC and Total BESS charge/discharge as requested.	21EMS18990
77	NWMT_TOP	Substation\Load - Multiple equipment installations, removals, misc. changes	21EMS18903
78	NWMT_TOP	Transmission Line - Update contingencies at Great Falls due to bus rebuilt and breaker installation	21EMS18904
79	PAC_TOP	Breakers/Disconnects - Delete BD 3G85, LD 3G85, and BP 3G86	21EMS18607

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80	PAC_TOP	Substation\Load - CAISO please change BA to PACE	21EMS18608
81	PAC_TOP	Transmission Lines - Add measurements on CARERCR_CANYONCP_138	21EMS18609
82	PAC_TOP	Breakers/Disconnects - Delete CB 45, BP 45, and LD IFC	21EMS18610
83	PAC_TOP	Transformers - Update T1's impedance data	21EMS18611
84	PAC_TOP	Breakers/Disconnects - Remap AS 41A and 42A	21EMS18612
85	PAC_TOP	Transmission Lines - Remove GOGGIN_GROW_138 and remap measurements on GOGGIN_LEECREEK_138	21EMS18613
86	PAC_TOP	Substation\Load - CAISO please change BA to PACE	21EMS18614
87	PAC_TOP	Substation\Load - Remap all 69KV line and BUS measurements	21EMS19213
88	PAC_TOP	Breakers/Disconnects - Delete SB-1, AS 2Y42, add 2Y128, fix OUTLOOK_PUNKINCE_115	21EMS19214
89	PAC_TOP	Substation\Load - New substation	21EMS19215
90	PAC_TOP	Substation\Load - Add LD T2572 measurement	21EMS19216
91	PAC_TOP	Breakers/Disconnects - Remove JP1, JP2, 2M715, 2M13, 2M712, 2M11, 3M8, 3M10, 2M1, T1229	21EMS19217
92	PAC_TOP	Substation\Load - CAISO please change BA to PACE	21EMS19218
93	PAC_TOP	Transmission Lines - Update line impedance data for lines to CARBON and SPANISHF, remove DUMMY and SPAN_DC, and add P470	21EMS19219
94	PAC_TOP	Shunt Cap\Reactor\SVDs - Add series reactor on CARBON #1 and two jumpers	21EMS19220
95	PAC_TOP	Breakers/Disconnects - Update normal state to OPEN for CB 341	21EMS19221
96	PAC_TOP	Transmission Lines - Add measurements for FAIRCHLD_OQUIRRH_138_1 and remove measurements on OQUIRRH_WILDFLTP_138	21EMS19222
97	PAC_TOP	Breakers/Disconnects - Remove AS JP1	21EMS19223
98	PAC_TOP	Substation\Load - Add 18 devices, one branch, and one load	21EMS19224
99	PAC_TOP	Substation\Load - CAISO please change BA to PACE	21EMS19225
100	PGE_BA	RAS - RAS screenshot	21EMS18865
101	PGE_BA	- Contingency definition update	21EMS18867
102	PNM_BA	Breaker(s)\ Disconnect(s) - Added pseudo switches	21EMS18798
103	PNM_BA	Breaker(s)\ Disconnect(s) - Added pseudo switches	21EMS18799
104	PNM_BA	Breaker(s)\ Disconnect(s) - Added pseudo switches	21EMS18800
105	PNM_BA	Breaker(s)\ Disconnect(s) - Added pseudo switches	21EMS18801
106	PNM_BA	Substation - Energization of new substation	21EMS18802
107	PNM_BA	Breaker(s)\ Disconnect(s) - Added two fictitious switches to model CIBOLA station cutting in the transmission line from OLD LAGUNA to SAN FIDEL	21EMS18803

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108	PNM_BA	Breaker(s)\ Disconnect(s) - Added two pseudo switches	21EMS18804
109	PNM_BA	Transformer - Transformer and Transmission line ratings changes	21EMS18838
110	PNM_BA	Transmission Line - Transformer and Transmission line ratings changes	21EMS18839
111	PNM_BA	Transmission Line - Transformer and Transmission line ratings changes	21EMS18840
112	PNM_BA	Transformer - Transformer and Transmission line ratings changes	21EMS18841
113	PNM_BA	Generator - Removed obsolete generator models LoneMesa 1 and LoneMesa 2. Both of these generators are now represented as a single LoneMesa unit behind a breaker in the CIM model	21EMS18844
114	PNM_BA	- Rename switches and breaker	21EMS18905
115	PNM_BA	Breaker(s)\ Disconnect(s) - Added a new switch/disconnect	21EMS18906
116	PNM_BA	Transmission Line - Changed/Updated the PMAX for couple generators	21EMS19082
117	PNM_BA	Transmission Line - Changed/Updated the PMAX for couple generators	21EMS19083
118	SRP_BA	Breaker(s)\ Disconnect(s) - Removed temporary disconnect	21EMS18806
119	SRP_BA	Substation\Load - Added calculated KV measurements on buses	21EMS18807
120	SRP_BA	Breaker(s)\ Disconnect(s) - Updated measurements on generator breakers for units 5 and 6.	21EMS18808
121	SRP_BA	Transformer - Updated name for Bank 4	21EMS18809
122	SRP_BA	Breaker(s)\ Disconnect(s) - Added Bolster 141 breaker	21EMS18810
123	SRP_BA	Substation\Load - Added Clark Bay 3 and related devices	21EMS18811
124	SRP_BA	Substation\Load - Added Pendergast Bay 1 and related devices	21EMS18812
125	SRP_BA	Substation\Load - Removed bus 22.06E_1N 69	21EMS18813
126	SRP_BA	Transmission Line - Removed Pickrell-22.06E_IN tap 69kV line	21EMS18814
127	SRP_BA	Transmission Line - Removed Alameda-22.06E_IN tap 69kV line	21EMS18815
128	SRP_BA	Transmission Line - Removed Marcos-22.06E_IN tap 69kV line	21EMS18816
129	SRP_BA	Transmission Line - Added new Alameda-Pickrell 69kV line	21EMS18817
130	TID	TID renaming of station "WASHNGTN\$" to "WASHNGT\$"	21EMS19529
131	TIDC_BA	Substation\Load - added more iccp telemetry for model measurements	21EMS18557
132	TPWR_BA	- Updated English/Common Names for substations	21EMS16141
133	TPWR_BA	Contingency Definition - Most recent contingency definitions.	21EMS16186
134	TPWR_BA	Implement the detailed Tacoma/TPWR EIM CIM xml model in Production, includes equipment RDFID changes	21EMS17946