PGE Constraint Summary Reference Slides

PG&E North of Greater Bay Interconnection Area

Malin - Round Mt #1 500 kV line Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		1384	1384	1604	1604
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		225	286	279	88
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		1158	1097	1325	1516
Mitigation Options	RAS	RAS not feasible due to potential interaction with PACE RAS			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		capacity upgrade may be explored			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

California ISO Public

Malin - Round Mt #2 500 kV line Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		1384	1384	1604	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	N/A
Unaccounted for TPD allocations behind the constraint		0	0	0	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		0	0	0	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		1384	1384	1604	N/A
Mitigation Options	RAS	RAS not feasible due to potential interaction with PACE RAS			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		capacity upgrade may be explored			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Round Mt - Fernroad #1 500 kV line Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		1799	1799	2134	2133
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		7	7	7	7
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		416	416	1212	644
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		2829	2829	2367	2975
Mitigation Options	RAS	RAS not feasible due to potential interaction with PACE RAS			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		capacity upgrade may be explored			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

California ISO Public

Round Mt - Fernroad #2 500 kV line Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		1799	1799	2134	2133
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		7	7	7	7
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		0	0	595	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		3375	3358	2984	3619
Mitigation Options	RAS	RAS not feasible due to potential interaction with PACE RAS			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		capacity upgrade may be explored			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Table Mt-Vaca 500 kV Ckt 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	3361	1855
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	2054	1709
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	3416	2255
Mitigation Options	RAS	2041 overload only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	Summit
MIC expansion request MW behind constraint	18
Deliverable MIC expansion request MW	0

Pit5 - Pit 4 230 kV Ckt 2 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		131	131	131	131
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		69	64	65	65
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		61	67	65	66
Mitigation Options	RAS	No due to normal overload			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

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Vaca - Parkway 230 kV Constraint Summary

Affected transmission zones		N/A			
		2036 Base	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		0	N/A	70	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		317	N/A	317	N/A
Unaccounted for TPD allocations behind the constraint		111	N/A	111	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		0	N/A	0	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		871	N/A	580	N/A
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade or RAS			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Vaca-Dixon F - Bahia 230 kV Ckt 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	70	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	317	N/A
Unaccounted for TPD allocations behind the constraint		N/A	N/A	0	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	1527	N/A
Mitigation Options	RAS	2041 overload only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Round Mt – Cottonwood 230 kV Ckt 3 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	3121	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	N/A
Unaccounted for TPD allocations behind the constraint		N/A	N/A	0	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	2404	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	788	N/A
Mitigation Options	RAS	2041 overload only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Table Mtn D - Palermo 230 kV Ckt 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	2991	1384
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	765	1102
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	2266	322
Mitigation Options	RAS	2041 overload only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Table Mtn - Rio Oso 230 kV Ckt 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	2991	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	N/A
Unaccounted for TPD allocations behind the constraint		N/A	N/A	0	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	1860	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	1170	N/A
Mitigation Options	RAS	2041 overload only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Lakeville - Ignacio 230 kV Ckt 2 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	158	158
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	158	158
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	326	309
Mitigation Options	RAS	2041 overload only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

California ISO Public

BRIDGEVILLE-COTTONWOOD 115KV Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		185	185	400	398
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		112	109	232	230
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		73	76	168	167
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Humboldt - Bridgeville 115 kV Line Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		185	185	400	398
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		95	91	209	207
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		90	94	191	191
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

California ISO Public

Humboldt-Trinity 115 kV Line Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		185	185	400	398
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		7	7	7	7
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		85	90	341	338
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		107	102	130	131
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Trinity-Cottonwood 115 kV Line Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		185	185	N/A	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		7	7	N/A	N/A
Unaccounted for TPD allocations behind the constraint		0	0	N/A	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		181	185	N/A	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		11	7	N/A	N/A
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

California ISO Public

CASCADE-COTTONWOOD 115KV Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		100	100	N/A	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	N/A	N/A
Unaccounted for TPD allocations behind the constraint		0	0	N/A	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		40	35	N/A	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		60	65	N/A	N/A
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

EAGLE ROCK 115/60 KV BANK NO.1 Constraint Summary

Affected transmission zones		N/A			
		2036 Base	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		108	N/A	108	108
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	N/A	0	0
Unaccounted for TPD allocations behind the constraint		0	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		58	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		50	N/A	146	147
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Eagle Rock- Fulton- Silverado 115 kv Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		349	399	349	349
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	38	38
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		187	295	215	211
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		162	105	484	488
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Eagle Rock- Redbud 115 kV Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		241	241	241	241
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		117	110	113	113
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		124	131	128	128
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Eagle Rock - Cortina 115 kV Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		349	349	399	399
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		165	123	198	198
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		184	226	272	272
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

HOPLAND BANK 115/60.00 BANK NO.2 Constraint Summary

Affected transmission zones		N/A			
		2036 Base	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		349	349	349	349
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		0	0	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		760	379	400	399
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Geyser #3 - Eagle Rock 115 kv Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		108	108	108	108
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		58	54	62	61
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		50	54	46	47
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Ukiah-Hopland-Cloverdale 115 kV Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		108	108	108	108
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		58	53	60	60
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		50	55	48	48
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

MENDOCINO - REDBUD 115 KV Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		241	241	241	241
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		107	103	105	105
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		134	138	136	136
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Chicago Pk - Higgins 115 kV Ckt 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	220	220
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	179	202
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	45	21
Mitigation Options	RAS	2041 overload only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	Summit
MIC expansion request MW behind constraint	18
Deliverable MIC expansion request MW	0

Palermo – East Marysville 115 kV Ckt 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	20	20
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	391	254
Mitigation Options	RAS	2041 overload only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Clear Lake - Eagle Rock 60 kV Constraint Summary

Affected transmission zones		N/A			
		2036 Base	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		108	N/A	108	108
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	N/A	0	0
Unaccounted for TPD allocations behind the constraint		0	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		89	N/A	36	36
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		19	N/A	72	72
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Fulton - Hopland 60 kV Constraint Summary

Affected transmission zones		N/A			
		2036 Base	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		349	349	349	349
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		229	185	265	261
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		120	164	95	100
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Gysrjct1 - Ftchmtnp 60 kV Ckt 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	349	349
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	265	261
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	95	99
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

MENDOCINO-PHILO JCT-HOPLAND 60KV Constraint Summary

Affected transmission zones		N/A			
		2036 Base	2036 SSN	2041 Base	2041 Low Wind
Portfolio resources behind the constraint (Installed FCDS capacity)		241	349	349	349
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		0	0	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		173	314	244	236
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		68	35	105	113
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade, RAS or Local constraint evaluation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

PG&E Greater Bay Interconnection Area

Tesla 500/230 kV Ckt 2 Constraint Summary

Affected transmission zones		GBA			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	5,607	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	900	900
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	6,589	146
Mitigation Options	RAS	2041 overload only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Bellota - Lockford 230 kV Ckt 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		400	N/A	400	410
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		30	N/A	0	0
Unaccounted for TPD allocations behind the constraint		944	N/A	154	154
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		7	N/A	79	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		1,295	N/A	331	424
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade or RAS			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Bellota - Lockford 230 kV Ckt 2 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		400	N/A	400	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		30	N/A	0	N/A
Unaccounted for TPD allocations behind the constraint		944	N/A	154	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		0	N/A	0	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		1,658	N/A	1,285	N/A
Mitigation Options	RAS	TBD			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	TBD			
Recommended Mitigation		Capacity upgrade or RAS			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Eastshore-San Mateo #1 230kV Line Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		303	N/A	375	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		134	N/A	134	N/A
Unaccounted for TPD allocations behind the constraint		1,000	N/A	1,000	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		335	N/A	0	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		1,626	N/A	1,425	N/A
Mitigation Options	RAS	Review existing project			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Eastshore-San Mateo #2 230kV Line Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		303	N/A	375	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		134	N/A	134	N/A
Unaccounted for TPD allocations behind the constraint		1,000	N/A	1,000	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		335	N/A	0	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		1,626	N/A	1,425	N/A
Mitigation Options	RAS	Review existing project			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Pittsburg-D – San Ramon 230 kV Ckt 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	1,000	1,000
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	456	383
Mitigation Options	RAS	primarily driven by UTPD			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

LOS ESTEROS-METCALF 230KV Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	0	106
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	1,850	1,850
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	1,012	1,650
Mitigation Options	RAS	primarily driven by UTPD			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Melones - Cottle 230 kV Ckt 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	1,395	250
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	493	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	410	410
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	405	64
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	1,952	601
Mitigation Options	RAS	2041 overload only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Cayetano - Ndublin 230 kV Ckt 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	360	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	N/A
Unaccounted for TPD allocations behind the constraint		N/A	N/A	211	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	100	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	464	N/A
Mitigation Options	RAS	2041 overload only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Tesla D - Sandhlwjct 230 kV Ckt 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	285
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	13
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	16
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	352
Mitigation Options	RAS	Sensitivity only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Metcalf 230/115 kV Ckt 2 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	137
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	383
Mitigation Options	RAS	Sensitivity only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Metcalf 230/115 kV Ckt 3 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	137
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	363
Mitigation Options	RAS	Sensitivity only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Moss landing - Metcalf 230 kV Ckt 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	1,708
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	13
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	1,810
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	1,548
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	411
Mitigation Options	RAS	Sensitivity only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Moss landing - Metcalf 230 kV Ckt 2 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	1,708
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	13
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	1,810
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	1,548
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	411
Mitigation Options	RAS	Sensitivity only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Martinez-Oleum 115kV Line Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		0	N/A	0	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	N/A	0	0
Unaccounted for TPD allocations behind the constraint		1,000	N/A	1,000	1,000
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		0	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		281	N/A	1,398	1,388
Mitigation Options	RAS	Review existing project			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Clayton - Lakewood-C 115 kV Ckt 2 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	325	325
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	779	758
Mitigation Options	RAS	primarily driven by UTPD			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

MARTNZ D-NRTH TWR 115KV Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	325	325
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	114	103
Mitigation Options	RAS	Review existing project			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

TESLA-SALADO-Q1103 115KV Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	100
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	67
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	33
Mitigation Options	RAS	Sensitivity only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

MossInsw - Greenvalley 115 kV Ckt 2 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	364
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	110
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	637
Mitigation Options	RAS	Sensitivity only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Lakewood Bus Tie 115 kV Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		0	N/A	0	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	N/A	0	0
Unaccounted for TPD allocations behind the constraint		1,000	N/A	1,000	1,000
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		0	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		40	N/A	1,029	1,010
Mitigation Options	RAS	primarily driven by UTPD			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

HELLYERSWTST-METCALFE #1 115KV 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	295	295
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	50	170
Mitigation Options	RAS	primarily driven by UTPD			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

HELLYERSWTST-METCALFE #2 115KV Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	295	295
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	50	170
Mitigation Options	RAS	primarily driven by UTPD			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

DE ANZA SS-NORTECH 115KV Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	0	80
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	203	203
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	384	448
Mitigation Options	RAS				
	Reduce generic battery storage (MW)	primarily driven by UTPD			
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

LOS ESTEROS-TRIMBLE 115KV Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	203	203
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	129	54
Mitigation Options	RAS	primarily driven by UTPD			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Moss landing – Green valley 115 kV Ckt 1 Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	0	364
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	110	110
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	244
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	293	120
Mitigation Options	RAS	primarily driven by UTPD			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

BAIR-REDWOOD-CLY LNDG 60KV Constraint Summary

Affected transmission zones		N/A			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	65
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	65
Mitigation Options	RAS	primarily driven by UTPD			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Fresno

Moss Landing - Metcalf 500 kV line Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		0	N/A	0	1,708
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	N/A	0	0
Unaccounted for TPD allocations behind the constraint		1,610	N/A	1,610	1,610
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		0	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		1,169	N/A	1,234	2,433
Mitigation Options	RAS	Primarily driven by UTPD			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Manning - Metcalf 500 kV Ckt 1 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		2,556	N/A	2,556	3,559
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		526	N/A	526	1,046
Unaccounted for TPD allocations behind the constraint		782	N/A	782	111
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		1,884	N/A	603	2,605
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		788	N/A	2,478	2,000
Mitigation Options	RAS	Windhub-Tesla 500kV to be tested alongside reviewing UTPD and Generic Portfolio storage reduction/relocation			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Los Banos 500/230kV Transformer Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		2,922	N/A	3,857	3,334
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		1,187	N/A	1,187	2,858
Unaccounted for TPD allocations behind the constraint		638	N/A	585	226
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		2,845	N/A	2,760	3,502
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		3,887	N/A	4,634	4,093
Mitigation Options	RAS	Windhub-Tesla 500kV to be tested alongside reviewing UTPD and Generic Portfolio storage reduction/relocation			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Harlan - Manning 500 kV line Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		2,726	2,726	2,726	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		621	621	621	N/A
Unaccounted for TPD allocations behind the constraint		582	582	582	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		957	1,100	1,102	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		2,972	2,828	2,245	N/A
Mitigation Options	RAS	Windhub-Tesla 500kV to be tested alongside reviewing UTPD and Generic Portfolio storage reduction/relocation			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Warnerville - Wilson 230KV Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		345	345	2,025	1,536
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		693	693	693	1,092
Unaccounted for TPD allocations behind the constraint		570	570	570	570
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		142	0	48	2,269
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		2,709	2,710	4,196	1,940
Mitigation Options	RAS	Windhub-Tesla 500kV to be tested alongside reviewing UTPD and Generic Portfolio storage reduction/relocation			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Tesla - Westley 230 kV Line Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		2,052	N/A	2,572	2,920
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		831	N/A	831	3,758
Unaccounted for TPD allocations behind the constraint		519	N/A	466	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		1,250	N/A	0	182
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		3,139	N/A	5,475	7,886
Mitigation Options	RAS	Windhub-Tesla 500kV to be tested alongside reviewing UTPD and Generic Portfolio storage reduction/relocation			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Fink SwSta - Westley #1 230KV Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		5,841	2,376	6,466	6,393
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		1,187	831	1,187	3,214
Unaccounted for TPD allocations behind the constraint		638	451	260	1,451
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		2,307	1,726	1,163	3,400
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		6,588	2,502	9,676	8,332
Mitigation Options	RAS	Windhub-Tesla 500kV to be tested alongside reviewing UTPD and Generic Portfolio storage reduction/relocation			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Quinto SS-Fink SwSta #1 230KV Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		5,471	N/A	6,086	984
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		1,187	N/A	1,187	1,800
Unaccounted for TPD allocations behind the constraint		530	N/A	1,407	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		4,989	N/A	4,307	1,769
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		3,543	N/A	5,933	1,015
Mitigation Options	RAS	Windhub-Tesla 500kV to be tested alongside reviewing UTPD and Generic Portfolio storage reduction/relocation			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Quinto SS – Los Banos 230 kV Ckt 1 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	1,379
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	1,800
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	2,081
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	1,098
Mitigation Options	RAS	Sensitivity Only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Los Banos - Panoche 230 kV Ckt 2 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	2,920
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	2,858
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	5,235
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	996
Mitigation Options	RAS	Sensitivity Only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Padreflat SS - Panoche 230 kV Ckt 1 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	2,920
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	2,858
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	5,408
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	823
Mitigation Options	RAS	Sensitivity Only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Poleline – Los Banos 230 kV Ckt 1 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		389	N/A	389	818
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		260	N/A	260	758
Unaccounted for TPD allocations behind the constraint		0	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		636	N/A	634	1,002
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		13	N/A	14	574
Mitigation Options	RAS	Sensitivity Only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Poleline - Panoche 230 kV Ckt 1 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	818
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	758
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	1,338
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	238
Mitigation Options	RAS	Sensitivity Only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Storeyjct1 - Wilsonpgae 230 kV Ckt 1 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		230	230	1,910	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		693	693	693	N/A
Unaccounted for TPD allocations behind the constraint		210	210	210	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		522	728	863	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		1,277	867	2,707	N/A
Mitigation Options	RAS	Windhub-Tesla 500kV to be tested alongside reviewing UTPD and Generic Portfolio storage reduction/relocation			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Borden - Storeyjct2 230 kV Ckt 2 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		230	230	1,910	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		693	693	693	N/A
Unaccounted for TPD allocations behind the constraint		210	210	210	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		243	252	600	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		1,521	1,284	2,969	N/A
Mitigation Options	RAS	Windhub-Tesla 500kV to be tested alongside reviewing UTPD and Generic Portfolio storage reduction/relocation			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Henrietta 230/115 kV Transformer 3 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	550	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	513	N/A
Unaccounted for TPD allocations behind the constraint		N/A	N/A	0	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	1,025	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	38	N/A
Mitigation Options	RAS	Review Henrietta RAS			
	Reduce generic battery storage (MW)	Reduction/Relocation option is feasible			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	N/A			
Recommended Mitigation		Reviewing Henrietta RAS or reducing/relocating generic battery storage			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Melones - Wilsonpgae 230 kV Ckt 1 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		0	N/A	0	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	N/A	0	0
Unaccounted for TPD allocations behind the constraint		54	N/A	54	54
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		0	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		5	N/A	3	3
Mitigation Options	RAS	Primarily driven by UTPD			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Ds Amigo - Poleline 230 kV Ckt 1 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		202	N/A	202	642
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		260	N/A	260	758
Unaccounted for TPD allocations behind the constraint		0	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		393	N/A	400	771
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		69	N/A	62	629
Mitigation Options	RAS	To be evaluated if necessary			
	Reduce generic battery storage (MW)	Generic Portfolio storage reduction/relocation			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	N/A			
Recommended Mitigation		Generic Portfolio storage reduction/relocation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Ds Amigo - Poleline 230 kV Ckt 2 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		202	N/A	202	642
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		260	N/A	260	758
Unaccounted for TPD allocations behind the constraint		0	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		393	N/A	400	771
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		69	N/A	62	629
Mitigation Options	RAS	To be evaluated if necessary			
	Reduce generic battery storage (MW)	Generic Portfolio storage reduction/relocation			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	N/A			
Recommended Mitigation		Generic Portfolio storage reduction/relocation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Le Grand-Chowchilla 115 kV Line Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		5	N/A	5	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	N/A	0	0
Unaccounted for TPD allocations behind the constraint		360	N/A	360	360
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		0	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		419	N/A	452	433
Mitigation Options	RAS	Primarily driven by UTPD			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Newhall - Dairyland 115 kV Ckt 1 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	100	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	160	160
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	155	35
Mitigation Options	RAS	Primarily driven by UTPD			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Sanger - Airwaysjct1 115 kV Ckt 1 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	1,020	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	493	N/A
Unaccounted for TPD allocations behind the constraint		N/A	N/A	210	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	361	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	1,240	N/A
Mitigation Options	RAS	2041 overload only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Sanger - Airwaysjct2 115 kV Ckt 1 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	1,020	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	493	N/A
Unaccounted for TPD allocations behind the constraint		N/A	N/A	210	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	1,622	N/A
Mitigation Options	RAS	2041 overload only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Mc Call - Sanger 115 kV Ckt 2 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	778	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	10	10
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	932	70
Mitigation Options	RAS	Under Review			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	Under Review			
	Transmission upgrade including cost	Under Review			
Recommended Mitigation		Under Review			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

McCall-Sanger #3 115 kV Line Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		0	0	778	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		10	10	10	10
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		0	0	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		215	12	1,131	263
Mitigation Options	RAS	Under Review			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	Under Review			
	Transmission upgrade including cost	Under Review			
Recommended Mitigation		Under Review			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Kingsburg – McCall #1 115 kV Line Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		90	N/A	630	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		513	N/A	513	N/A
Unaccounted for TPD allocations behind the constraint		10	N/A	10	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		562	N/A	1,029	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		53	N/A	140	N/A
Mitigation Options	RAS	To be evaluated if necessary			
	Reduce generic battery storage (MW)	Generic Portfolio storage reduction/relocation			
	Grid Enhancing Technology	To be evaluated if necessary			
	Transmission upgrade including cost	N/A			
Recommended Mitigation		Generic Portfolio storage reduction/relocation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Herndon - Woodward 115 kV Ckt 1 Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		140	N/A	260	140
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	N/A	0	0
Unaccounted for TPD allocations behind the constraint		0	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		0	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		484	N/A	461	622
Mitigation Options	RAS	Under Review			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	Under Review			
	Transmission upgrade including cost	Under Review			
Recommended Mitigation		Under Review			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Kingsburg- McCall #2 115KV Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		90	N/A	630	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		513	N/A	513	N/A
Unaccounted for TPD allocations behind the constraint		10	N/A	10	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		578	N/A	1,030	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		37	N/A	139	N/A
Mitigation Options	RAS	To be evaluated if necessary			
	Reduce generic battery storage (MW)	Generic Portfolio storage reduction/relocation			
	Grid Enhancing Technology	To be evaluated if necessary			
	Transmission upgrade including cost	N/A			
Recommended Mitigation		Generic Portfolio storage reduction/relocation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

GWF-Kingsburg 115 kV Line Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		90	N/A	630	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		513	N/A	513	N/A
Unaccounted for TPD allocations behind the constraint		0	N/A	0	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		473	N/A	946	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		130	N/A	197	N/A
Mitigation Options	RAS	To be evaluated if necessary			
	Reduce generic battery storage (MW)	Generic Portfolio storage reduction/relocation feasible			
	Grid Enhancing Technology	To be evaluated if necessary			
	Transmission upgrade including cost	Review GWF-Kingsburg line reconductoring project			
Recommended Mitigation		Review GWF-Kingsburg line reconductoring project			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Henrietta – Leprino Jct SS 115 kV Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		90	N/A	630	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		513	N/A	513	N/A
Unaccounted for TPD allocations behind the constraint		0	N/A	0	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		343	N/A	823	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		260	N/A	320	N/A
Mitigation Options	RAS	To be evaluated if necessary			
	Reduce generic battery storage (MW)	Generic Portfolio storage reduction/relocation feasible			
	Grid Enhancing Technology	To be evaluated if necessary			
	Transmission upgrade including cost	N/A			
Recommended Mitigation		Generic Portfolio storage reduction/relocation or RAS			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Leprino Jct SS – GWF Hanford SS 115 kV Constraint Summa

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		90	N/A	630	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		513	N/A	513	N/A
Unaccounted for TPD allocations behind the constraint		0	N/A	0	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		361	N/A	839	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		242	N/A	304	N/A
Mitigation Options	RAS	To be evaluated if necessary			
	Reduce generic battery storage (MW)	Generic Portfolio storage reduction/relocation feasible			
	Grid Enhancing Technology	To be evaluated if necessary			
	Transmission upgrade including cost	N/A			
Recommended Mitigation		Generic Portfolio storage reduction/relocation or RAS			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Crescent SS-Schindler #1 70KV Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		40	40	40	35
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		34	34	34	34
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		40	21	17	17
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		21	53	24	19
Mitigation Options	RAS	To be evaluated if necessary			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	To be evaluated if necessary			
	Transmission upgrade including cost	Review Helm-Crescent reconductoring Project			
Recommended Mitigation		Review Helm-Crescent reconductoring Project			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

(New)Mercy Spring-Oro Loma 70 kV Line Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		76	N/A	76	76
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		260	N/A	260	758
Unaccounted for TPD allocations behind the constraint		0	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		306	N/A	43	25
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		30	N/A	293	810
Mitigation Options	RAS	RAS option to be evaluated			
	Reduce generic battery storage (MW)	Generic Portfolio storage reduction/relocation feasible			
	Grid Enhancing Technology	To be evaluated			
	Transmission upgrade including cost	N/A			
Recommended Mitigation		Generic Portfolio storage reduction/relocation or RAS options			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Poleline – Mercyspring SS 70 kV Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	642
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	758
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	1,081
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	319
Mitigation Options	RAS	Sensitivity Only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Mercyspring SS - Mrcysprs 70 kV Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	717
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	758
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	1,172
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	303
Mitigation Options	RAS	Sensitivity Only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Mendota – Tomatek 70kV Constraint Summary

Affected transmission zones		Fresno			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		0	5	0	0
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		160	160	160	160
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		0	5	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		32	30	78	18
Mitigation Options	RAS	Primarily driven by UTPD and review 70kV summer setup			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Kern

Whlr Rj2 – Wind Gap J2 230 kV Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	1900
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	1632
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	268
Mitigation Options	RAS	Sensitivity Only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Wind Gap J2-Wheeler 230KV Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		885	N/A	891	1900
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		50	N/A	50	0
Unaccounted for TPD allocations behind the constraint		0	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		735	N/A	632	907
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		200	N/A	310	993
Mitigation Options	RAS	Constraints in the same pocket are also seen in the TPP reliability study hence common mitigation addressing these constraints will be developed			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Buena Vista J2-Midway 230kV Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		986	1030	986	2400
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		323	323	323	93
Unaccounted for TPD allocations behind the constraint		0	4	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		529	1261	481	1506
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		780	91	828	986
Mitigation Options	RAS	Constraints in the same pocket are also seen in the TPP reliability study hence common mitigation addressing these constraints will be developed			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Bitter water SS – Buena Vista J2 230 kV Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		980	N/A	980	2400
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		323	N/A	323	93
Unaccounted for TPD allocations behind the constraint		0	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		811	N/A	842	1868
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		492	N/A	462	625
Mitigation Options	RAS	Constraints in the same pocket are also seen in the TPP reliability study hence common mitigation addressing these constraints will be developed			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Q1593SWSTA – Gates 230 kV line Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		889	3835	889	1900
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		440	763	440	240
Unaccounted for TPD allocations behind the constraint		0	192	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		873	2116	866	865
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		457	4036	463	1275
Mitigation Options	RAS	Constraints in the same pocket are also seen in the TPP reliability study hence common mitigation addressing these constraints will be developed			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Mesa – Callendar Sw Sta 115 kV Line Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		1225	1225	1225	1774
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		110	110	110	110
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		925	1153	1058	1618
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		299	172	267	256
Mitigation Options	RAS	Constraints also seen in the TPP reliability study hence common mitigation addressing CCLP area constraints will be developed			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Santa Maria – San Luis Obispo 115 kV Line Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		1225	N/A	1225	1774
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	N/A	0	0
Unaccounted for TPD allocations behind the constraint		110	N/A	110	110
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		1043	N/A	1191	1743
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		181	N/A	134	131
Mitigation Options	RAS	Constraints also seen in the TPP reliability study hence common mitigation addressing CCLP area constraints will be developed			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Santa Maria Tap – Santa Maria 115 kV Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		1225	N/A	1225	1774
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	N/A	0	0
Unaccounted for TPD allocations behind the constraint		110	N/A	110	110
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		1012	N/A	1132	1688
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		212	N/A	193	186
Mitigation Options	RAS	Constraints also seen in the TPP reliability study hence common mitigation addressing CCLP area constraints will be developed			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Callender Sw. Sta – Oceano 115 kV Line Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		1225	1225	1225	1774
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		110	110	110	110
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		922	1150	1055	1615
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		302	175	270	259
Mitigation Options	RAS	Constraints also seen in the TPP reliability study hence common mitigation addressing CCLP area constraints will be developed			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Mesa-Santa Maria Tap 115 kV Line Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		1225	1225	1225	1774
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	0
Unaccounted for TPD allocations behind the constraint		100	100	100	100
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		940	1171	1046	1606
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		284	153	279	268
Mitigation Options	RAS	Constraints also seen in the TPP reliability study hence common mitigation addressing CCLP area constraints will be developed			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Morrobay – Templeton 230 kV Ckt 1 Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	2274
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	N/A	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	N/A	110
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	N/A	2267
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	N/A	161
Mitigation Options	RAS	Sensitivity Only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Morrobay 230/115 kV Transformer Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	1225	2274
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	0
Unaccounted for TPD allocations behind the constraint		N/A	N/A	110	110
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	0	0
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	1260	2403
Mitigation Options	RAS	Constraints also seen in the TPP reliability study hence common mitigation addressing CCLP area constraints will be developed			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Columbus-Magunden 115 kV Line Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		250	250	250	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		0	0	0	N/A
Unaccounted for TPD allocations behind the constraint		0	0	0	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		239	235	244	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		11	14	53	N/A
Mitigation Options	RAS	RAS options to be explored			
	Reduce generic battery storage (MW)	N/A			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	N/A			
Recommended Mitigation		RAS options to be explored			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Witco Jct – Discovery Tap 115 kV Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		N/A	N/A	616	N/A
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		N/A	N/A	0	N/A
Unaccounted for TPD allocations behind the constraint		N/A	N/A	0	N/A
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		N/A	N/A	473	N/A
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		N/A	N/A	143	N/A
Mitigation Options	RAS	2041 overload only			
	Reduce generic battery storage (MW)				
	Grid Enhancing Technology				
	Transmission upgrade including cost				
Recommended Mitigation					

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Magunden J – Magunden 70 kV Ckt 1 Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		980	N/A	980	2400
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		273	N/A	273	93
Unaccounted for TPD allocations behind the constraint		0	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		1238	N/A	1215	1544
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		15	N/A	39	948
Mitigation Options	RAS	N/A			
	Reduce generic battery storage (MW)	Generic Portfolio storage reduction/relocation			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	N/A			
Recommended Mitigation		Generic Portfolio storage reduction/relocation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A

Magunden – Bakersfield 70 kV Ckt 1 Constraint Summary

Affected transmission zones		Kern			
		2036 HSN	2036 SSN	2041 HSN	2041 Sens
Portfolio resources behind the constraint (Installed FCDS capacity)		980	N/A	980	2400
Generic portfolio battery storage behind the constraint (Installed FCDS capacity)		273	N/A	273	93
Unaccounted for TPD allocations behind the constraint		0	N/A	0	0
Deliverable portfolio resources w/o mitigation (Installed FCDS capacity)		1234	N/A	1215	1551
Total undeliverable baseline and portfolio resources (Installed FCDS capacity)		19	N/A	38	942
Mitigation Options	RAS	N/A			
	Reduce generic battery storage (MW)	Generic Portfolio storage reduction/relocation			
	Grid Enhancing Technology	N/A			
	Transmission upgrade including cost	N/A			
Recommended Mitigation		Generic Portfolio storage reduction/relocation			

Affected interties	N/A
MIC expansion request MW behind constraint	N/A
Deliverable MIC expansion request MW	N/A