

Summary of ISO Capital Expenditure Forecast - Non-Incentive Projects
(\$000)

					Project Total (ISO & non-ISO)				ISO Portion			
PIN	Project Title	Order #	High/Low Voltage	OD	Prior	2014	2015	Total	Prior	2014	2015	Total
Non-Incentive Transmission Projects includes Direct Installation and Removal Expenditures												
Other Transmission												
07390	Antelope-Plainview ---- Antelope(NU):Equip 66kV pos for gen-tie.		Low	Aug-14	649	600	-	1,249	649	600	-	1,249
07420	Antelope Sub (NU): 2 ---- Antelope Sub (NU): 2 66kV CBs for GenTie		Low	Jun-14	418	600	-	1,018	418	600	-	1,018
07439	Julian Hinds: Install (3) 220kV VTs		High	Jun-14	78	100	-	178	78	100	-	178
07559	Colorado Riv(NU) install 220kV CBs & Remote Terminal Unit (RTU)		High	May-15	2	1,000	1,000	2,002	2	1,000	1,000	2,002
06694	Devers: Upgrade the Devers RTU		High	Sep-14	8,824	-	-	8,824	8,824	-	-	8,824
06694	Vista Sub: Upgrade line protection at the Devers #1 220kV T/L position.		High	Sep-14	551	100	-	651	551	100	-	651
06694	El Casco Sub: Install one SEL-2407 satellite synchronized clock and two N60 relays		High	Sep-14	172	150	-	322	172	150	-	322
06694	Etiwanda Sub: Install one SEL-2407 satellite synchronized clock and two N60 relays		High	Sep-14	307	150	-	457	307	150	-	457
06694	Valley Sub: Install one SEL-2407 satellite synchronized clock and two N60 relays		High	Sep-14	199	200	-	399	199	200	-	399
06694	San Bernardino Sub: Install one SEL-2407 satellite synchronized clock and four N60 relays		High	Sep-14	324	150	-	474	324	150	-	474
06694	Total CPV Sentinel Project - Sentinel-Devers 220kV				10,375	750	-	11,125	10,375	750	-	11,125
Total Other Transmission					11,523	3,050	1,000	15,573	11,523	3,050	1,000	15,573
TSP Projects												
06107	Pardee Sub: Install new double breaker 220 kV CB's in position 11 to terminate bank leads		High	Dec-15	1,333	1,071	161	2,566	1,333	1,071	161	2,566
06263	Vestal: Equip 230kV A-Bank positions (no.1 and 2) with circuit breakers		High	Jun-15	3,849	2,000	500	6,349	3,580	1,860	465	5,905
06284	La Cienega: Phase 2- Upgrade remaining SCADA and protection systems to SA-2 standard		High	Jun-14	2,742	1,022	-	3,764	494	184	-	678
06824	La Fresa Sub (Phase 2): Install new MEER building and cut over existing protection and upgrade CTs on existing banks.		High	Dec-15	8,321	5,249	2,598	16,168	2,496	1,575	779	4,851
06824	La Fresa Sub (Phase 1 Scope): Add a 280MVA TRANSFORMER BANK 220/66kV		High	Aug-13	23,731	1,000	500	25,231	6,882	290	145	7,317
06824	Total La Fresa 'A' 220/66 - Increase Transformer Capacity				32,052	6,249	3,098	41,399	9,378	1,865	924	12,167
Total TSP Projects					39,976	10,342	3,759	54,078	14,785	4,980	1,551	21,316
Transmission Project Reliability												
04928	TRTP Seg 1 Vegetation Remediation		High	Jul-14	1,942	-	-	1,942	1,942	-	-	1,942
05453	TRTP Seg 2 Vegetation Remediation		High	Jul-14	584	-	-	584	584	-	-	584
06434	TRTP Seg 3A Vegetation Remediation		High	Jul-14	543	672	-	1,215	543	672	-	1,215
Total TRTP Seg 1-3A					3,069	672	-	3,741	3,069	672	-	3,741
07511	TRTP Seg 1 Antelope-Pardee 500kV T/L: Install Marker Balls and Lighting		High	Dec-14	37	1,700	-	1,737	37	1,700	-	1,737
07511	TRTP Seg 2 Antelope-Vincent #1 500kV T/L: Install Marker Balls		High	Dec-14	129	400	-	529	129	400	-	529
07511 TRTP 1&2 FAA Costs					166	2,100	-	2,266	166	2,100	-	2,266
04956	Big Creek #3-Springville 220-kV: Construct approx. 23 miles of new double-circuit 230kV T/L		High	Sep-14	47,155	48,487	10,000	105,643	47,155	48,487	10,000	105,643
04956	Big Creek 3-Springville 220kV: Licensing Phase - Site Selection, PEA /Application Preparation, Environmental Surveys and CPUC Licensing Review		High	Sep-14	7,051	17	-	7,068	7,051	17	-	7,068
04956	BIG CREEK #3: INSTALL NECESSARY PROTECTIVE RELAYS ON THE NEW BIG CREEK #3		High	Sep-14	600	191	-	791	600	191	-	791
04956	Rector: Equip Positions 1 & 2 220kV switchrack to terminate the new Rector-Springville T/L		High	Sep-14	9,483	985	-	10,468	9,483	985	-	10,468
04956	Springville: Install necessary protective relays on the new Rector-Springville 220kV T/L		High	Sep-14	1,240	350	-	1,590	1,240	350	-	1,590
04956	Vestal: Install necessary protective relays on Rector-Vestal No. 1 and Rector-Vestal No.2 Line		High	Sep-14	2,098	723	-	2,821	2,098	723	-	2,821
04956	Big Creek #3-Springville 220kV: Construct 18.5 miles of new double-circuit 220-kV with 1B-1033 ACSR conductor per circuit in order to loop the existing Big Creek 3-Springville 220-kV transmission line into Rector Substation		High	Sep-14	142	10	-	152	142	10	-	152
04956	BC1-Rector & BC3-Rector 220-kV: Construct approx. 12 miles of new double-circuit 220kV T/L		High	Jun-13	25,069	26	-	25,095	25,069	26	-	25,095
04956	SJXVL ---- ACQ / FERC San Joaquin Cross Valley Land Acquisition		High	Sep-14	5,787	1,700	-	7,487	5,787	1,700	-	7,487
04956	Total SJXVL				98,626	52,488	10,000	161,114	98,626	52,488	10,000	161,114

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					Prior	2014	2015	Total	Prior	2014	2015	Total
05146	Various Substations: Fire Mitigation		High	Blanket Specifics		903	730	1,633	-	903	730	1,633
06154	N of Magunden : Install a 2nd set of Bushing Current Transformer's on 220kV CB #1 on position 1		High	Dec-15	392	-	250	642	392	-	250	642
06154	RECTOR: INSTALL BUSHING CURRENT TRANSFORMERS. (PHASE 2)		High	Dec-15	298	50	-	348	298	50	-	348
06154	Vestal - Install a second set of BCT's on 220kV CB's #1 and 2 on position 1		High	Dec-15	538	50	250	838	538	50	250	838
06154	Total North of Magunden Redundant Bushing Current Transformer (BCT) Upgrades				1,229	100	500	1,829	1,229	100	500	1,829
06415	Devers Sub: PHASE 2 - Disconnect upgrades for Mirage No. 1 terminating at position 2N		High	Dec-14	606	325	-	931	606	325	-	931
06415	Mirage Sub: PHASE 2 - Replace two (2) 2000A 220kV CB's at positions 2S and 3S		High	Dec-14	2,119	1,104	-	3,223	2,119	1,104	-	3,223
06415	Devers-Mirage #1 230kV T/L: Build 15 mil (Path 42) Double Circuit 220kV T/L		High	Dec-14	8,975	16,967	-	25,942	8,975	16,967	-	25,942
06415	Devers Sub: PHASE 1 - Install relays, meters and logic controllers as necessary for IID's new SPS		High	Dec-14	148	197	-	345	148	197	-	345
06415	Mirage Sub: PHASE 1 - Install relays, meters and logic controllers as necessary for IID's new SPS		High	Dec-14	220	69	-	289	220	69	-	289
06415	Coachella Valley-Mirage 220kV: PHASE 2 -Reconductor SCE-owned portion of the Coachella Valley-Mirage 220kV T/L (from Towers 19-2, 19-3 and 19-4 into Mirage Substation)		High	Dec-14	253	1,000	-	1,253	253	1,000	-	1,253
06415	Total Path 42 and Devers-Mirage 230kV Upgrades				12,320	19,662	-	31,982	12,320	19,662	-	31,982
06477	Victor: Reconstruct 115KV switchrack and terminate existing 115KV lines to new rack positions		Low	Dec-13	20,752	354	-	21,106	18,884	322	-	19,206
06714	Rio Hondo: Equip the 230kV A-Banks at positions 2, 3, 9 & 10 with double breaker configuration		High	Apr-14	15,153	248	-	15,401	6,061	99	-	6,160
06714	Vincent: Replace/upgrade L90 relays on Rio Hondo #1 and #2 220kV lines		High	Mar-14	33	30	-	63	33	30	-	63
06714	Total Rio Hondo Sub: 230kV Double Breakers for A Banks				15,186	278	-	15,464	6,094	129	-	6,223
06791	Lugo 500kV Sub breaker installation for No. 1AA & No. 2AA banks		High	Dec-15	6,467	200	200	6,867	6,467	200	200	6,867
06791	Lugo-Rancho Vista 500kV Line: Relocate Rancho Vista 500kV line from Pos 5 E to Pos 4 W Bus		High	Dec-15	-	200	1,500	1,700	-	200	1,500	1,700
06791	Total Lugo 500kV Substation Breaker Installation				6,467	400	1,700	8,567	6,467	400	1,700	8,567
07248	Eldorado: Install (1) 500 kV Switchyard Operating Bus extension, (8) bus dead-end structures, (48) bus dead-end insulator assemblies.		High	Dec-15	2,878	43,034	45,503	91,415	2,878	43,034	45,503	91,415
07241	Eldorado: Install (2) 500 kV CBs, (3) 500 kV gang operated disconnects and other associated equipment to terminate the 3 AA bank to the number 3 position on the Eldorado 500 kV bus		High	Dec-15	240	5,420	5,859	11,519	240	5,420	5,859	11,519
	Total Eldorado AA Bank				3,118	48,454	51,362	102,934	3,118	48,454	51,362	102,934
07376	Eldorado-Install Fire Mitigation 3AA		High	Dec-15	2	1,089	1,180	2,271	2	1,089	1,180	2,271
07426	Primm (POS NU): New 220kV Sub		High	Oct-15	1,300	12,273	4,466	18,039	1,300	12,273	4,466	18,039
07426	Eldorado-Ivanpah #1(NU): Loop into Primm		High	Oct-15	0	3,359	1,282	4,641	0	3,359	1,282	4,641
07426	Total New 220kV Primm Substation - Network Upgrade				1,301	15,632	5,748	22,681	1,301	15,632	5,748	22,681
07111	La Cienega: Equip the 230 KV A-Bank positions (no.3 & 4) with circuit breakers		High	Dec-14	3,552	2,217	-	5,769	3,197	1,996	-	5,192
07116	Villa Park: Equip the 230 KV A-Bank positions (no. 1 & 2) with circuit breakers		High	Dec-15	2,140	4,280	200	6,620	2,055	4,109	192	6,355
07117	Kramer Sub: Equip 1A & 2A with CBs ---- Kramer: Equip 1A & 2A with CBs		High	Dec-14	1,676	1,003	-	2,679	1,676	1,003	-	2,679
07121	Padua: Equip 2A & 3A with CBs		High	Dec-14	1,631	2,095	-	3,726	979	1,257	-	2,236
07237	Tortilla: Install two (2) 115 kV 14.4 M		Low	Dec-13	2,790	50	-	2,840	2,790	50	-	2,840
06792	Rector 220/66kV Sub: Install 2X79.2 MVAR switching shunt cap		High	Oct-14	8,995	1,155	-	10,150	8,995	1,155	-	10,150
07252	Antelope 220 Sub: Replace/Upgrade 10 CBs		High	Jun-13	3,103	100	-	3,203	3,103	100	-	3,203
07374	Serrano: 1AA, 2AA & 3AA Fire Mitigation		High	May-14	303	2,000	-	2,303	303	2,000	-	2,303
07375	Vincent 3AA Transformer Bank Fire Mitigation Project		High	Dec-14	283	1,500	-	1,783	283	1,500	-	1,783
07406	Viejo Sub:Install one 79.2 MVAR Cap Bank		High	Jul-13	3,157	50	-	3,207	3,157	50	-	3,207
07407	Santiago: Install one 79.2 MVAR Cap Bank (SONGS Mitigation)		High	Jun-13	2,510	100	-	2,610	2,510	100	-	2,610
07410	Ellis Sub:Extend 220kV buses 2 positions (Barre-Ellis Loop-in)		High	Aug-13	5,712	200	-	5,912	5,712	200	-	5,912
Total Transmission Project Reliability					198,088	156,881	71,420	426,390	186,035	155,470	71,412	412,917

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PIN	Project Title	Order #	High/Low Voltage	OD	Project Total (ISO & non-ISO)				ISO Portion			
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Infrastructure Replacement												
04211	Replace Bulk Power Circuit Breakers		High	Blanket Specifics	-	1,655	328	1,983	-	1,655	328	1,983
04329	Non-Bulk Circuit Breaker Replacement		Low	Blanket Specifics	-	50,749	25,010	75,759	-	165	-	165
03138	Sylmar Converter Station & HVDC T/L: Capital Additions & Betterment		High	Blanket Specifics	-	563	-	563	-	563	-	563
04484	Coupling Capacitor Voltage Transformers		High	Blanket Specifics	-	839	678	1,517	-	440	-	440
04651	Palo Verde Switchrack		High	Blanket Specifics	-	2,000	2,250	4,250	-	2,000	2,250	4,250
06197	On-line Dissolved Gas Analysis of Bulk Power Transformer Banks		High	Blanket Specifics	-	3,020	5,911	8,931	-	570	2,486	3,056
04343	Substation Relay Replacement Program (SRRP)		High	Blanket Specifics	-	3,590	8,160	11,750	-	3,590	8,160	11,750
05089	Bulk Power 500kV Line Relay Replacement		High	Blanket Specifics	-	1,338	1,397	2,735	-	1,338	1,397	2,735
04756	Substation Equipment, Additions & Betterment		High	Blanket Specifics	-	24,288	19,376	43,664	-	3,153	3,549	6,702
05210	Substation Transformer Bank Replacement Program (AA-Bank & A-Bank)		High	Blanket Specifics	-	42,938	66,101	109,039	-	14,446	18,301	32,747
Total Infrastructure Replacement					-	130,980	129,211	260,191	-	27,921	36,471	64,391
Grid Applications												
06446	Phasor Measurement System Installations		High	Blanket Specifics	-	2,383	2,737	5,120	-	2,383	2,737	5,120
06428	Centralized Remedial Action Scheme (C-RAS) Project Phase		High	Dec-14	3,047	1,731	-	4,778	3,047	1,731	-	4,778
06428	Centralized Remedial Action Scheme (C-RAS) Program Phase		High	Blanket Specifics	-	-	12,933	12,933	-	-	12,933	12,933
Total Grid Apps					3,047	4,114	15,670	22,832	3,047	4,114	15,670	22,832
PWRD Blankets												
03363	Substation Breakdown Maintenance Replacements - Northwest		High	Blanket Specifics	-	13,500	11,311	24,811	-	2,513	2,106	4,619
03363	Substation Planned Maintenance Replacements - Northwest		High	Blanket Specifics	-	11,570	8,026	19,596	-	1,529	1,061	2,590
03363	Facilities - Operational		High	Blanket Specifics	-	13,600	5,749	19,349	-	1,429	604	2,033
03363	Control Room Upgrades		High	Dec-14	3,773	68,328	15,197	87,298	1,813	34,024	10,291	46,128
03363	Control Room Upgrades - Energy Management System (EMS) Control		High	Dec-15	-	-	6,000	6,000	-	-	4,058	4,058
03363 Substation Equipment Additions & Replacements					3,773	106,998	46,283	157,053	1,813	39,495	18,120	59,428
03364	Transmission Breakdown Maintenance Planned		High	Blanket Specifics	-	6,058	6,222	12,280	-	2,360	2,425	4,785
03364	Transmission Breakdown Maintenance Unplanned		High	Blanket Specifics	-	4,526	4,646	9,173	-	1,572	1,614	3,186
03364	Transmission Maintenance Planned		High	Blanket Specifics	-	1,173	800	1,973	-	1,173	800	1,973
03364 Transmission Equipment Additions & Replacements					-	11,757	11,669	23,426	-	5,105	4,839	9,944
07298	Transmission Line Rating Remediation		High	Blanket Specifics	-	12,632	33,081	45,712	-	12,632	33,081	45,712
03362	Critical Infrastructure Spare		High	Blanket Specifics	-	-	800	800	-	-	800	800
03367	Substation Claim - Northwest		High	Blanket Specifics	-	486	494	980	-	26	26	52
03367	Transmission Claim		High	Blanket Specifics	-	2,305	2,366	4,672	-	202	207	410
03367	Transmission Storm - Eastern		High	Blanket Specifics	-	4,562	4,683	9,245	-	1,576	1,618	3,194
03367 Transmission Storm & Claims					-	7,353	7,543	14,896	-	1,804	1,851	3,655
Total PWRD Blankets					3,773	138,739	99,376	241,888	1,813	59,036	58,690	119,539
Total Non-Incentive Transmission Projects					256,408	444,107	320,436	1,020,951	217,204	254,571	184,794	656,568
Total Forecast Expenditures (Closing by December 2015)					256,408	239,430	96,646	592,483	217,204	198,352	87,581	503,137
Total Forecast Blanket Expenditures (Closing by December 2015)					-	204,677	223,790	428,467	-	56,219	97,212	153,431