

## Summary of ISO Capital Expenditures - Non-Incentive Projects

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					Project Total (ISO & non-ISO)				ISO Portion			
PIN	Project Title	Order #	High/Low Voltage	OD	Prior	2013	2014	Total	Prior	2013	2014	Total
Non-Incentive Transmission Projects includes Direct Installation and Removal Expenditures												
Other Transmission												
06489	El Segundo Gen. Station 220 kV Switchyard: Install all relays required for the RAS		High	May-13	4,738	1,900	-	6,638	4,738	1,900	-	6,638
06694	Devers-Coachella 220kV T/L: Relocate the line termination from Pos. 2N to 1S at Devers		High	Jul-13	1	200	-	201	1	200	-	201
06694	Devers-Mirage 220kV T/L: Relocate the line termination from Pos. 3S to 2N at Devers		High	Jul-13	0	200	-	200	0	200	-	200
06694	Devers: Upgrade the Devers RTU to incl monitoring & control of the Devers-Sentinel 220kV T/L		High	Jul-13	7,240	200	-	7,440	7,240	200	-	7,440
06694	El Casco Sub: Install one SEL-2407 satellite synchronized clock and two N60 relays		High	Jul-13	73	200	-	273	73	200	-	273
06694	Etwianda Sub: Install one SEL-2407 satellite synchronized clock and two N60 relays		High	Jul-13	118	100	-	218	118	100	-	218
06694	Mirage Sub: Upgrade line protection at the Devers 220kV T/L position. (LGIA - NU)		High	Jul-13	1	300	-	301	1	300	-	301
06694	San Bernardino Substation 220kV Switchyard: Install one SEL-2407 satellite synch		High	Jul-13	125	300	-	425	125	300	-	425
06694	Valley Sub: Install one SEL-2407 satellite synchronized clock and two N60 relays		High	Jul-13	102	300	-	402	102	300	-	402
06694	Vista Sub: Upgrade line protection at the Devers #1 220kV T/L position		High	Jul-13	121	400	-	521	121	400	-	521
06694	Total CPV Sentinel Project - Sentinel-Devers 220kV				7,780	2,200	-	9,980	7,780	2,200	-	9,980
06960	Victor: Install SPS relays on the existing Kramer-Victor and Kramer-Roadway-Victor 115kV lines		High	Apr-13	323	252	-	575	323	252	-	575
06960	Roadway (NU): Install conduit & manhole inside Roadway Sub in support of Water Valley SPS		High	Apr-13	120	461	-	581	120	461	-	581
06960	Lugo(NU): Install new SPS relays and corresponding current transformers (CT), as required		High	Apr-13	501	1,583	-	2,085	501	1,583	-	2,085
06960	Kramer (NU): Network Upgrades for Water Valley		High	Apr-13	51	12	-	63	51	12	-	63
06960	Total Harper Lake (Abengoa Mohave Solar Project)				995	2,308	-	3,302	995	2,308	-	3,302
07081	Neenach Substation (POS Reliability NU): Install new Neenach transfer bus for positions 1-6		High	Dec-13	379	750	-	1,129	379	750	-	1,129
07230	Antelope(NU):Add line current diff relay		High	Apr-13	60	200	-	260	60	200	-	260
07230	Del Sur(NU): Add line current diff relay		High	Apr-13	110	200	-	310	110	200	-	310
07230	Total Antelope Power Plant				169	400	-	569	169	400	-	569
07390	Antelope-Plainview ---- Antelope(NU):Equip 66kV position for gen-tie		High	Aug-14	11	400	400	811	11	400	400	811
07420	Antelope Sub (NU): 2 ---- Antelope Sub (NU): 2 66kV CBs for gen-tie		High	Jun-14	14	800	1,000	1,814	14	800	1,000	1,814
Total Other Transmission					14,086	8,758	1,400	24,243	14,086	8,758	1,400	24,243
TSP Projects												
06221	Ellis Sub: Phase II: Install No.3A transformer bank to C-section.		High	Jul-13	7,785	952	-	8,737	1,635	200	-	1,835
06263	Vestal: Equip 230kV A-Bank positions (no.1 and 2) with circuit breakers		High	Dec-13	2,597	1,204	-	3,800	2,415	1,119	-	3,534
Total TSP Projects					10,381	2,156	-	12,537	4,050	1,319	-	5,369
Transmission Project Reliability												
04928	TRTP Seg 1 Vegetation Remediation		High	Dec-13	1,926	164	-	2,090	1,926	164	-	2,090
05453	TRTP Seg 2 Vegetation Remediation		High	Dec-13	584	771	-	1,355	584	771	-	1,355
06434	TRTP Seg 3A Vegetation Remediation		High	Dec-13	543	2,488	-	3,031	543	2,488	-	3,031
Total TRTP Seg 1-3A					3,053	3,423	-	6,476	3,053	3,423	-	6,476
07511	TRTP Seg 1 Antelope-Pardee 500kV T/L: Install Marker Balls and Lighting		High	Dec-14	4	673	673	1,350	4	673	673	1,350
07511	TRTP Seg 2 Antelope-Vincent #1 500kV T/L: Install Marker Balls		High	Dec-14	105	373	373	850	105	373	373	850
TRTP 1&2 FAA Costs					109	1,046	1,046	2,200	109	1,046	1,046	2,200
04956	Big Creek #3: Install necessary protective relays on the new BC3-Rector No. 2 220kV T/L		High	Mar-14	153	1,760	1,636	3,549	153	1,760	1,636	3,549
04956	Big Creek #3-Springville 220 kV Line: Loop 23.4 miles		High	Mar-14	15,534	63,194	27,682	106,410	15,534	63,194	27,682	106,410
04956	Big Creek #3-Springville 220kV: Construct 18.5 miles of new double-circuit T/L		High	Mar-14	6,798	-	-	6,798	6,798	-	-	6,798
04956	Rector: Equip Two Line Positions that will be made available to Breaker-and-Half Scheme		High	Mar-14	3,470	6,224	8,186	17,880	3,470	6,224	8,186	17,880
04956	INSTALL NECESSARY PROTECTIVE RELAYS ON THE NEW 'RECTOR-SPRINGVILLE 220-KV T/L		High	Mar-14	494	1,760	1,636	3,890	494	1,760	1,636	3,890
04956	Vestal Sub: Install necessary protective relays on the Rector-Vestal No. 1 & 2 lines		High	Mar-14	280	1,762	1,636	3,677	280	1,762	1,636	3,677
04956	BC1-Rector & BC3-Rector 220-kV: Construct approx. 12 miles of new double-circuit		High	Mar-14	19,308	10,788	-	30,096	19,308	10,788	-	30,096
04956	San Joaquin Cross Valley Loop Land Acquisition		High	Mar-14	5,560	899	923	7,381	5,560	899	923	7,381
Total SJXVL					51,596	86,387	41,697	179,680	51,596	86,387	41,697	179,680

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PIN	Project Title	Order #	High/Low Voltage	OD	Project Total (ISO & non-ISO)				ISO Portion			
					Prior	2013	2014	Total	Prior	2013	2014	Total
06477	3rd A-Bank & Rebuild of the 115 kV Switchrack at Victor Substation.		Low	Jun-12	-	2,100	-	2,100	-	1,743	-	1,743
07464	Victor Sub: Install relays to trip Victor-Kramer 115 kV lines & modify RAS		Low	Jul-13	-	250	-	250	-	250	-	250
06154	Install a 2nd set of BCT's on 220kV CB #1 on position 1 for the Magunden - Vesta		High	Dec-13	372	826	-	1,198	372	826	-	1,198
06154	RECTOR: INSTALL BUSHING CURRENT TRANSFORMERS. (PHASE 2)		High	Dec-13	223	142	-	365	223	142	-	365
06154	VESTAL: INSTALL BUSHING CURRENT TRANSFORMERS		High	Dec-13	528	165	-	693	528	165	-	693
	<b>Total North of Magunden Redundant Bushing Current Transformer (BCT) Upgrades</b>				<b>1,123</b>	<b>1,133</b>	<b>-</b>	<b>2,256</b>	<b>1,123</b>	<b>1,133</b>	<b>-</b>	<b>2,256</b>
07235	South of SONGS Monitoring Addition		High	May-13	19	50	-	69	19	50	-	69
06714	Rio Hondo: Equip the 230kV A-Banks at positions 2, 3, 9 & 10 with double breaker		High	Oct-13	13,265	725	-	13,990	5,306	290	-	5,596
06714	Vincent: Replace/upgrade L90 relays on Rio Hondo #1 and #2 220kV lines		High	Jun-13	26	301	-	327	26	301	-	327
	<b>Total Rio Hondo Sub: 230kV Double Breakers for A Banks</b>				<b>13,291</b>	<b>1,026</b>	<b>-</b>	<b>14,317</b>	<b>5,332</b>	<b>591</b>	<b>-</b>	<b>5,923</b>
06468	Victor Sub: Upgrade Protection		High	Jun-14	426	236	300	962	426	236	300	962
06767	Santiago 230kV Substation - Banks on Breakers & SONGS Line Isolation		High	Feb-13	10,379	835	-	11,215	10,275	827	-	11,102
06414	Mirage: Equip 230kV switchrack position No.5 as a breaker-and-a-half config.		High	May-13	4,609	150	-	4,759	4,609	150	-	4,759
06414	MIRAGE-JULIAN HINDS 220KV: MOVE FROM POSITION #2N TO POSITION #5.		High	May-13	487	150	-	637	487	150	-	637
06414	DEVERS-MIRAGE #1 220KV: MOVE FROM POSITION #3N TO POSITION #2N		High	May-13	2,121	800	-	2,921	2,121	800	-	2,921
06414	MIRAGE-COACHELLA-RAMON #1 220KV: MOVE FROM #3S TO POSITION #6N		High	May-13	642	250	-	892	642	250	-	892
06414	DEVERS-MIRAGE #2 220KV: TERMINATES IN POSITION #3N		High	May-13	845	250	-	1,095	845	250	-	1,095
06414	MIRAGE-COACHELLA #2 220KV: TERMINATE IN POSITION #4N		High	May-13	227	150	-	377	227	150	-	377
06414	Devers 220kV Sub: 220kV Position No. 3S: Change the line name from the Mirage		High	May-13	72	150	-	222	72	150	-	222
	<b>Total Coachella Valley-Devers 220kV Loop-In Project</b>				<b>9,003</b>	<b>1,900</b>	<b>-</b>	<b>10,903</b>	<b>9,003</b>	<b>1,900</b>	<b>-</b>	<b>10,903</b>
07410	Ellis Sub: Extend the 220 kV buses at Ellis substation two positions		High	Jun-13	740	4,667	-	5,407	740	4,667	-	5,407
07410	Barre Sub: Equip (2) 220 kV positions		High	May-13	581	2,769	-	3,349	581	2,769	-	3,349
07410	Barre-Ellis220kV TLs: Create 4 Individual TLs		High	Aug-13	41	2,041	-	2,082	41	2,041	-	2,082
	<b>Total Barre-Ellis 220kV line - SONGS Mitigation</b>				<b>1,362</b>	<b>9,477</b>	<b>-</b>	<b>10,839</b>	<b>1,362</b>	<b>9,477</b>	<b>-</b>	<b>10,839</b>
07406	Viejo 220 kV Capacitor Banks		High	Apr-13	312	2,832	-	3,144	312	2,832	-	3,144
07407	Johanna Sub: Install one 79.2 MVAR capacitor bank		High	Apr-13	205	2,291	-	2,496	205	2,291	-	2,496
07407	Santiago Sub: Install one 79.2 MVAR capacitor bank		High	Apr-13	680	1,988	-	2,667	680	1,988	-	2,667
	<b>Total Johanna &amp; Santiago Capacitor Banks - SONGS Mitigation</b>				<b>885</b>	<b>4,278</b>	<b>-</b>	<b>5,163</b>	<b>885</b>	<b>4,278</b>	<b>-</b>	<b>5,163</b>
07252	Antelope 220 Substation - Ten (10) 220 KV CB Upgrade		High	Jun-13	1,489	2,760	-	4,249	1,489	2,760	-	4,249
06415	Reconductor Coachella Valley-Mirage 220kV T/L		High	Apr-14	3	261	969	1,234	3	261	969	1,234
06415	Devers Sub: PHASE 2 - Replace six 220kV 2000A disconnects		High	Apr-14	459	108	386	953	459	108	386	953
06415	Devers-Mirage #1&#2 Build 15-mile Double Circuit 230kV T/L		High	Apr-14	1,289	9,825	27,077	38,191	1,289	9,825	27,077	38,191
06415	Mirage Sub: PHASE 2 - Replace two (2) 2000A 220kV CB's		High	Apr-14	167	2,810	6,033	9,011	167	2,810	6,033	9,011
	<b>Total Path 42 Upgrade</b>				<b>1,918</b>	<b>13,004</b>	<b>34,466</b>	<b>49,388</b>	<b>1,918</b>	<b>13,004</b>	<b>34,466</b>	<b>49,388</b>
06685	Windhub Sub: Install 2-280/336 MVA transformer banks		Low	Jun-14	3,544	10,417	3,933	17,894	425	1,250	472	2,147
07237	Tortilla Sub: Install two 115kV 14.4 MVAR switched shunt capacitors		Low	Jun-13	576	2,578	-	3,154	576	2,578	-	3,154
06765	Mira Loma Substation Fire Mitigation Plan		High	Blanket Specifics	-	1,200	1,600	2,800	-	1,200	1,600	2,800
07111	La Cienega: Equip the 230kV A-Bank positions (no.'s 3 & 4) with circuit breakers		High		2,432	820	595	3,847	2,310	779	566	3,655
07112	Devers: Equip the 230 KV A-Bank positions (3 & 4) with circuit breakers		High	Jul-14	330	111	2,667	3,108	297	100	2,400	2,797
07375	Vincent 3AA Transformer Bank Fire Mitigation Project		High	Dec-13	-	200	1,600	1,800	-	200	1,600	1,800
07121	Padua: Bank on Circuit Breaker project		High	Dec-14	16	703	2,727	3,447	15	668	2,591	3,274
07241	Eldorado 500kV Substation		High	Dec-14	-	325	7,649	7,973	-	308	7,266	7,574
07117	Kramer: Equip 1A & 2A with circuit breakers		High	Dec-14	-	559	5,153	5,712	-	531	4,895	5,426
	<b>Total Transmission Project Reliability</b>				<b>101,971</b>	<b>148,695</b>	<b>104,478</b>	<b>355,145</b>	<b>90,634</b>	<b>138,596</b>	<b>99,944</b>	<b>329,175</b>

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					Project Total (ISO & non-ISO)				ISO Portion			
PIN	Project Title	Order #	High/Low Voltage	OD	Prior	2013	2014	Total	Prior	2013	2014	Total
Infrastructure Replacement												
03138	Sylmar Converter Station & HVDC T/L: Capital Additions & Betterment		High	Blanket Specifics	-	206	-	206	-	206	-	206
04343	Substation Relay Replacement Program (SRRP)		High	Blanket Specifics	-	4,505	4,200	8,705	-	4,505	4,200	8,705
04211	Replace Bulk Power Circuit Breakers		High	Blanket Specifics	-	3,260	3,333	6,593	-	3,260	3,333	6,593
04331	Transformer Bank Replacement Program		High	Blanket Specifics	-	23,247	17,827	41,074	-	23,247	17,827	41,074
05210	Replace Deteriorated Single Phase & Three Phase "A" Bank Transformers		High	Blanket Specifics	-	4,028	4,119	8,147	-	4,028	4,119	8,147
04756	Substation Equipment, Additions & Betterment		High	Blanket Specifics	-	9,346	9,556	18,902	-	9,346	9,556	18,902
06197	On-Line Dissolved Gas Analysis of Bulk Power Transformer Banks		High	Blanket Specifics	-	2,219	2,347	4,567	-	2,219	2,347	4,567
Total Infrastructure Replacement					-	46,813	41,382	88,195	-	46,813	41,382	88,195
Grid Applications												
06428	Centralized Remedial Action Scheme (C-RAS) Project		High	Dec-14	4,365	3,521	-	7,886	4,365	3,521	-	7,886
PWRD Blankets												
03363	Substation Breakdown Maintenance Replacements - Northwest		High	Blanket Specifics	-	7,647	7,818	15,465	-	1,011	1,033	2,044
03363	Substation Planned Maintenance Replacements - Northwest		High	Blanket Specifics	-	10,776	11,018	21,794	-	2,006	2,051	4,057
03363	Facilities - Operational		High	Blanket Specifics	-	4,600	5,600	10,200	-	483	588	1,072
03363	Substation Equipment Additions & Replacements				-	23,023	24,436	47,459	-	3,500	3,673	7,173
03364	Transmmission Breakdown Maintenance Replacements		High	Blanket Specifics	-	4,427	4,526	8,953	-	1,538	1,572	3,110
03364	Transmission Deteriorated Pole Replacements		High	Blanket Specifics	-	30,182	30,859	61,041	-	2,412	2,466	4,878
03364	Transmission Equipment Additions & Replacements				-	34,609	35,385	69,994	-	3,950	4,038	7,988
03367	Substation Claim - Northwest		High	Blanket Specifics	-	472	483	955	-	50	51	101
03367	Transmission Claim		High	Blanket Specifics	-	2,255	2,305	4,560	-	395	404	799
03367	Transmission Storm - Eastern		High	Blanket Specifics	-	4,462	4,562	9,023	-	1,542	1,576	3,118
03367	Transmission Storm & Claims				-	7,188	7,350	14,538	-	1,987	2,031	4,018
Total PWRD Blankets					-	64,820	67,171	131,991	-	9,436	9,742	19,179
Total Non-Incentive Transmission Projects					130,803	274,762	214,432	619,997	113,134	208,444	152,468	474,046
Total Forecast Expenditures (Closing by December 2014)					130,803	274,762	214,432	619,997	113,134	208,444	152,468	474,046
Total Forecast Blanket Expenditures (Closing by December 2014)					-	112,832	110,153	222,986	-	57,449	52,724	110,174