

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

				High/ Low		Project Total (ISO & non-ISO)				ISO Portion			
PIN	Project Title	C-WBS	Order #	Voltage	OD	Prior	2019	2020	Total	Prior	2019	2020	Total
Non-Incentive Transmission Projects includes Direct Installation and Removal Expenditures, but excludes any C-WBS or Order # with 0% ISO.													
Other Transmission													
07059	Red Bluff Substation (NU): Install a Breaker-and-a-Half Configuration to terminate the Ali	CET-ET-TP-RN-705900	900346247	High	Aug-20	1,047	194	400	1,641	1,047	194	400	1,641
07227	Inyo Substation: Replace Inyo phase shifter and new hybrid circuit breaker.	CET-ET-CR-WC-722702	902379073	Low	Aug-20	53	599	4,762	5,414	53	599	4,762	5,414
07227	Control: Install two (2) N60 relays	CET-ET-TP-RN-722700	902448105	Low	Jun-20	-	23	70	93	-	23	70	93
07227	Total Casa Diablo IV Interconnection Project					53	621	4,832	5,507	53	621	4,832	5,507
07756	Whirlwind Sub (POS): Equip one (1) 220 kV position to terminate the Rattlesnake-Whirlw	CET-ET-TP-RN-775602	901458993	High	Nov-18	-	42	-	42	-	42	-	42
07775	Whirlwind Substation (NU): Equip one (1) 220 kV position to terminate the Desert Flower-	CET-ET-TP-RN-777500	901515853	High	Jul-18	72	5	-	77	72	5	-	77
07903	Lugo Substation: Expand High Desert Power Plant (HDPP) SPS □1. Eight (8) G.E. N60 logic pr	CET-ET-CR-WC-790301	902236314	High	Jun-20	-	10	262	273	-	10	262	273
07903	Victor Substation: Expand High Desert Power Plant (HDPP) SPS □1. Eight (8) G.E. N60 logic pr	CET-ET-CR-WC-790301	902236315	High	Jun-20	-	10	262	273	-	10	262	273
07903	Total Ord Mountain Project (TOT438/Q552) Project					-	21	524	545	-	21	524	545
08078	Antelope (RNU): Install (2) N60 relays	CET-ET-CR-WC-807802	902220556	High	Nov-19	13	22	24	58	13	22	24	58
08078	Antelope Sub (RNU) - Power System Control. □ Expand existing RTU at SCE Antelope Substat	CET-ET-CR-WC-807802	902220557	High	Sep-19	8	24	24	55	8	24	24	55
08078	Total Antelope 500/230 kV (T) Install Interconnection Facilities Project					21	45	47	114	21	45	47	114
08081	Colorado River Sub (RNU): Install one (1) 220kV line position which includes the following equi	CET-ET-TP-RN-808100	902286854	High	May-20	26	951	909	1,887	26	951	909	1,887
08081	Colorado River Sub (RNU) - Install two (2) GE N60 logic processing relays or equivalent succe	CET-ET-TP-RN-808101	902286855	High	Dec-20	0	28	114	143	0	28	114	143
08081	Colorado River (RNU) - ground grid study for interconnection	CET-ET-TP-RN-808102	902286856	High	Dec-20	-	-	41	41	-	-	41	41
08081	Total Arlington Solar Project (TOT781/Q1196) Project					26	980	1,065	2,071	26	980	1,065	2,071
08088	Eldorado: Install facil. for switchrack	CET-ET-LG-AF-808800	902245555	High	May-20	294	2,500	11,884	14,678	294	2,500	11,884	14,678
08088	Eldorado-Harry Allen (Cust):Install 1 span	CET-ET-AF-CF-808800	902245556	High	May-20	99	75	115	289	99	75	115	289
08088	Total Harry Allen - Eldorado 500kV Transmission Line Project					393	2,575	11,999	14,967	393	2,575	11,999	14,967
08090	Bob Switch - Eldorado T/L: Install one transmission structure with two (2) spans from the SCE c	CET-ET-AF-CF-809000	902249126	High	Jul-19	240	1,832	-	2,072	240	1,832	-	2,072
08090	Eldorado Substation (NU): install the following equipment on a dedicated 220kV double breake	CET-ET-LG-AF-809000	902249125	High	Jun-19	528	5,385	-	5,913	528	5,385	-	5,913
08090	Bob Switch to Eldorado 220 kV Interconnection					768	7,217	-	7,985	768	7,217	-	7,985
08107	Kramer Substation (RNU): a. Engineer and construct one (1) 220 kV line position, which	CET-ET-CR-WC-810701	902342409	High	Aug-20	12	0	670	683	12	0	670	683
08139	Colorado River Sub (RNU):1. Engineer and construct one (1) 220kV line position	CET-ET-TP-RN-813901	902409112	High	Jun-20	61	25	66	152	61	25	66	152
08139	Colorado River Sub (RNU) - Install two (2) GE N60 logic processing relays or equ	CET-ET-TP-RN-813902	902409115	High	Jun-20	0	1	68	69	0	1	68	69
08139	Total Quartz 3 Solar Project (TOT670/Q970) Project					62	26	134	222	62	26	134	222
Total Other Transmission						2,454	11,727	19,672	33,853	2,454	11,727	19,672	33,853

**TSP Projects**

05383	Chino 220/66kV - Add a 4th 280MVA, 220/66kV Transformer Bank and Split the Chino 66k	CET-ET-LG-TS-538303	901191112	High		Oct-19	3,513	2,439	563	6,515	1,230	854	197	2,280
06824	La Fresa Sub (Phase 2): Install new MEER and cut over existing protection and upgrade	CET-ET-LG-TS-682400	900522611	High		Nov-19	27,041	3,055	-	30,097	10,005	1,131	-	11,136
CTs on existing banks. Upgrade SAS from 5.5 to 6X.														
07113	El Nido: Install 230 kV (63 kA) double breakers on No. 1 A bank at position 3 and No. 3A	CET-ET-LG-TS-711300	901241164	High		Jun-18	-	10	-	10	-	10	-	10
07834	Bailey Sub: Install a 28.8 MVAR Cap	CET-ET-LG-TS-783400	901618623	Low		Jun-18	-	0	-	0	-	0	-	0
<b>Total TSP Projects</b>							30,555	5,505	563	36,622	11,235	1,995	197	13,427

**Transmission Project Reliability**

07112	Devers: Equip the 230 KV A-Bank positions (3 & 4) with circuit breakers	CET-ET-TP-RL-711200	900305114	High		Dec-18	-	12	-	12	-	12	-	12
07518	Springville Sub: Redesign high side feed from bank on bus to double CB at 220kV positio	CET-ET-TP-RL-751800	901007168	High		Aug-19	7,523	1,902	-	9,424	6,018	1,521	-	7,539
07119	Walnut: Convert the Mesa 220 kV Line Position and 3A & 4A Bank High Side Positions	CET-ET-TP-RL-711900	900772538	High		May-19	10,802	1,278	-	12,080	4,429	524	-	4,953
07790	Eagle Mountain Substation: Install a 45 MVAR tertiary reactor (effective 34 MVAR @ 12 k	CET-ET-TP-RL-779000	901552346	High		Dec-18	-	24	-	24	-	24	-	24
07547	Eldorado: Engineer, remove and install equipment for changing the 500kV line pos for the	CET-ET-TP-RL-754700	901107340	High		Jun-18	-	26	-	26	-	26	-	26
Eldorado-Mohave & Eldorado-Moenkopi lines.														
07547	Eldorado-Mohave 500kV: Remove two (2) existing transmission structures. Install three (3) ne	CET-ET-TP-RL-754701	901107560	High		Jun-18	7,169	37	-	7,206	7,169	37	-	7,206
07547	Eldorado-Moenkopi 500 kV: Remove one (1) existing transmission structure. Install one (1) nev	CET-ET-TP-RL-754702	901107562	High		Jun-18	4,223	37	-	4,260	4,223	37	-	4,260
<b>Total Eldorado-Mohave and Eldorado-Moenkopi 500kV Line Position Swap</b>							11,391	100	-	11,491	11,391	100	-	11,491
07727	Inyokern Substation: Expand existing MEER at Inyokern Substation.	CET-ET-TP-RL-772700	901394462	Low		Aug-20	5	1,103	1,665	2,773	2	408	616	1,026
07727	Control Substation: Install 12 (12) N60 relays, one (1) satellite clock, and two (2) ethernet switc	CET-ET-TP-RL-772701	901394533	Low		Oct-20	40	358	930	1,328	34	308	800	1,142

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

PIN	Project Title	C-WBS	Order #	High/ Low		Project Total (ISO & non-ISO)				ISO Portion			
				Voltage	OD	Prior	2019	2020	Total	Prior	2019	2020	Total
07727	Kramer Substation Install six (6) N60 relays and one (1) satellite clock. Add points to existing RTU. Program and test RAS.	CET-ET-TP-RL-772704	901394536	High	Dec-20	8	89	351	447	6	69	274	349
<b>07727</b>	<b>Total Digial 395 Project: North-of-Kramer Area Telecom Network and RAS Upgrades</b>					<b>53</b>	<b>1,550</b>	<b>2,946</b>	<b>4,548</b>	<b>42</b>	<b>785</b>	<b>1,690</b>	<b>2,517</b>
07763	Lugo 500/220 kV: Install two N60 relays Install one ethernet switch Install one satellite switch PSC- RTU Point additions at Lugo PSC-Modify Lugo-Victorville SPS program and test	CET-ET-TP-RN-776301	901484303	High	Aug-16	-	1	-	1	-	0.5	-	1
07763	Eldorado-Lugo 500 kV line: CA side - Install 85 miles of new OPGW between CA/NV border and	CET-ET-TP-RN-776304	901665563	High	Oct-19	4,206	181	6,600	10,987	4,206	181	6,600	10,987
07763	Eldorado-Lugo 500 kV line: NV Side -Install 2 miles of new OPGW between CA/NV border and	CET-ET-TP-RN-776305	901665564	High	Dec-19	454	13	40	507	454	13	40	507
07763	Pisgah Sub: Install new telecommunication room.	CET-ET-TP-RL-776300	901671834	High	Dec-18	25	1	-	26	25	1	-	26
07763	Mohave: Instal(2)Relays and (2) Switches	CET-ET-TP-RN-776302	901484315	High	Oct-19	109	20	130	259	109	20	130	259
07763	Lugo Sub: Install new control cables	CET-ET-TP-RN-776307	902249120	High	Dec-19	17	30	60	107	17	30	60	107
07763	Eldorado Sub: Install N60 relays; ethernet switch; and satellite switch	CET-ET-TP-RN-776300	901483656	High	Dec-19	-	1	-	1	-	1	-	1
07763	Eldorado: Install necessary equipment to support N-2 monitoring of Eldorado-Lugo 500 kV and	CET-ET-TP-RN-776308	902249121	High	Dec-19	15	-	12	27	15	-	12	27
<b>07763</b>	<b>Total Lugo-Victorville 500 kV SPS</b>					<b>4,826</b>	<b>246</b>	<b>6,842</b>	<b>11,914</b>	<b>4,826</b>	<b>246</b>	<b>6,842</b>	<b>11,914</b>
<b>07645</b>	<b>Loop Kramer-Lugo 230 kV #1 &amp; #2 lines into Victor substation</b>	CET-ET-TP-RL-764500	901254013	High	Nov-17	-	4	-	4	-	4	-	4
<b>07806</b>	<b>Kramer Substation: Install two (2) tertiary bank reactors, 45MVAR each (1A and 2A banks)</b>	CET-ET-TP-RL-780600	901580758	High	Dec-17	-	3	-	3	-	3	-	3
07120	Chino Sub: equip the No.1A 220kV A-Bank positions with circuit breakers	CET-ET-TP-RL-712000	900713964	High	Dec-20	33,938	1,524	3,547	39,009	22,060	991	2,305	25,356
07120	Mira Loma Sub: Upgrade 220 kV line protection for compatibility with associated SAS protection upgrades at Chino Substation	CET-ET-TP-RL-712002	901573514	High	Feb-19	203	146	-	349	203	146	-	349
07120	Serrano Sub: Upgrade 220 kV line protection for compatibility with associated SAS protection upgrades at Chino Substation	CET-ET-TP-RL-712003	901192472	High	Aug-19	232	61	-	293	232	61	-	293
<b>07120</b>	<b>Total Chino 220/66 kV Bank on Circuit Breaker Project</b>					<b>34,373</b>	<b>1,732</b>	<b>3,547</b>	<b>39,651</b>	<b>22,495</b>	<b>1,198</b>	<b>2,305</b>	<b>25,998</b>
07884	Tap the remaing Lighthipe 220kV line to Harborgen substation	CET-ET-TP-RL-788402	901822249	High	Nov-19	507	35	32	574	507	35	32	574
07884	Harbogen-Lng Bch 220kV: Remove 1 mile of line (REMOVAL ONLY)	CET-ET-TP-RL-788400	901822245	High	Jan-19	1,968	878	300	3,146	1,968	878	300	3,146
07884	Lighthipe-Lng Bch 220kV: Remove 1 mile of line (REMOVAL ONLY)	CET-ET-TP-RL-788401	901822246	High	Jan-19	2,422	3,043	13,345	18,810	2,422	3,043	13,345	18,810
07884	Long Beach Sub: Remove 220kV switchyard	CET-ET-TP-RL-788403	901822250	High	Sep-19	2,108	283	201	2,592	2,108	283	201	2,592
<b>07884</b>	<b>Total Cerritos Channel Relocation Project</b>					<b>7,005</b>	<b>4,239</b>	<b>13,878</b>	<b>25,122</b>	<b>7,005</b>	<b>4,239</b>	<b>13,878</b>	<b>25,122</b>
08019	CONTROL-SILVER PEAK "A" 55KV Install 11 sets of Remote Fault Indicators (RFIs), including	CET-ET-TP-RL-801900	TD1269146	Low	Oct-18	196	151	-	347	196	151	-	347
08019	CONTROL-SILVER PEAK "C" 55KV Install 11 sets of Remote Fault Indicators (RFIs), including	CET-ET-TP-RL-801902	TD1269499	Low	Oct-18	122	1	-	122	122	1	-	122
<b>08019</b>	<b>Total Control-Silver Peak "A" Transmission Project</b>					<b>318</b>	<b>152</b>	<b>-</b>	<b>469</b>	<b>318</b>	<b>152</b>	<b>-</b>	<b>469</b>
<b>06791</b>	<b>Lugo 500 kV Substation breaker installation for No. 1AA &amp; No. 2AA banks</b>	CET-ET-TP-RL-679100	800308934	High	Jul-19	5,256	50	100	5,406	5,256	50	100	5,406
<b>07115</b>	<b>Johanna:Install double breakers on 3A+4A</b>	CET-ET-TP-RL-711500	902067053	High	May-20	2,230	243	1,571	4,043	1,828	199	1,288	3,315
<b>07116</b>	<b>Villa Park: Equip the existing No. 2A bank currently connected to 220 kV position 4 South bus with double breaker configuration</b>	CET-ET-TP-RL-711600	900645440	High	May-16	-	4	-	4	-	4	-	4
<b>07241</b>	<b>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</b>	CET-ET-TP-RL-724100	900713966	High	Jun-16	-	4	-	4	-	4	-	4
<b>07248</b>	<b>New 500/230 kV AA-Bank at Eldorado Connected to the New 220 kV SCE Owned Switchy</b>	CET-ET-TP-RN-724800	900692364	High	Oct-15	-	25	-	25	-	25	-	25
<b>07511</b>	<b>Antelope-Pardee 500kV: Install Marker Balls and Lighting per FAA requirements</b>	CET-PD-OT-LM-751101	900719387	High	Dec-19	3,244	(0)	-	3,243	3,244	(0)	-	3,243
06420	Devers Sub: Remove 220 kV CBs and Disconnect Switches	CET-ET-TP-RN-642007	901455361	High	Jan-20	94	-	30	124	94	-	30	124
06420	Vista Sub: Remove 220 kV Disconnect Switches	CET-ET-TP-RN-642011	901455365	High	Dec-19	49	30	30	109	49	30	30	109
06420	Westof Devers 220 kV Trans Line Removals	CET-ET-TP-RN-642018	901460766	High	Dec-19	1,806	6,500	4,000	12,306	1,806	6,500	4,000	12,306
<b>06420</b>	<b>Total West of Devers Upgrade Project (WODUP)</b>					<b>1,949</b>	<b>6,530</b>	<b>4,060</b>	<b>12,539</b>	<b>1,949</b>	<b>6,530</b>	<b>4,060</b>	<b>12,539</b>
<b>06957</b>	<b>Coolwater 220/115 kV:A. 220 kV Switchrack, -1 L90, -1 SLE311C, -2 Racks (Bus)</b>	CET-ET-TP-RN-695703		High	Dec-20	-	-	4,183	4,183	-	-	4,183	4,183
<b>08091</b>	<b>Big Creek 4: Install two new N60 relays</b>	CET-ET-TP-RL-809100	902260821	High	Dec-19	101	314	-	416	101	314	-	416
07555	Mira Loma-Vincent 500 kV new dbl circuit	CET-ET-TP-RL-755507	901192484	High	Dec-20	1,163	29	909	2,101	1,163	29	909	2,101
07555	Eagle Rock-Mesa 220kV: Remove 2100 ckt ft of conductor	CET-ET-TP-RL-755537	902124237	High	Dec-20	212	3	-	215	212	3	-	215
07555	Lighthipe-Mesa: Remove 8 strct+cncl	CET-ET-TP-RL-755546	902124391	High	Dec-20	857	645	-	1,501	857	645	-	1,501
07555	Mesa-Rio Hondo 220kV: Remove 4structures and 2700 ckt ft of conductor.	CET-ET-TP-RL-755547	902124392	High	Dec-20	942	334	-	1,277	942	334	-	1,277
07555	Mesa-Rio Hondo 220kV: Remove 4structures and 2700 ckt ft of conductor.	CET-ET-TP-RL-755548	902124393	High	Dec-20	0	(0)	617	617	0	(0)	617	617
07555	Mesa-Vincent #1 220kV: Remove 3structures, 2 shoofly ESPs, 800 ckt ft ofshoofly conductor, a	CET-ET-TP-RL-755552	902124397	High	Dec-20	315	285	-	600	315	285	-	600
07555	Mesa-Vincent #2 220kV: Remove 3structures and 2000 ckt ft of conductor	CET-ET-TP-RL-755554	902124579	High	Dec-20	721	23	-	745	721	23	-	745
07555	Redondo-Vincent 220kV: Remove 1500 ckt ft ofshoofly conductor. Shoofly will stay in place >12	CET-ET-TP-RL-755558	902124583	High	Dec-20	172	3	-	175	172	3	-	175
07555	Center-Mesa 220kV: Remove 4 structuresand 2800 ckt ft of conductor	CET-ET-TP-RL-755535	902132962	High	Dec-20	-	-	600	600	-	-	600	600
07555	Goodrich-Laguna Bell 220kV: Remove 2structures, remove 1500 ckt ft of shooflyconductor, and	CET-ET-TP-RL-755538	902132963	High	Dec-20	790	38	-	828	790	38	-	828
07555	Laguna Bell-Rio Hondo 220kV: Remove 2structures, remove 1 shoofly ESP and 500ck ft of sh	CET-ET-TP-RL-755543	902132966	High	Dec-20	171	3	-	174	171	3	-	174
<b>07555</b>	<b>Total Mesa Substation Project</b>					<b>5,344</b>	<b>1,363</b>	<b>2,125</b>	<b>8,832</b>	<b>5,344</b>	<b>1,363</b>	<b>2,125</b>	<b>8,832</b>
07866	Magunden Substation: Upgrade (6) 1200amp disconnects to match rating of the upgraded line	CET-ET-TP-RN-786601	902175272	High	Jul-19	39	1,049	-	1,088	39	1,049	-	1,088

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

PIN	Project Title	C-WBS	Order #	High/ Low		OD	Project Total (ISO & non-ISO)				ISO Portion			
				Voltage			Prior	2019	2020	Total	Prior	2019	2020	Total
07866	Vestal Substation: Upgrade (6) 1200amp disconnects to match rating of the upgraded line. (4h	CET-ET-TP-RN-786602	902175273	High		Apr-19	377	1,649	-	2,027	377	1,649	-	2,027
<b>07866</b>	<b>Total Big Creek Corridor Rating Increase Project</b>						<b>417</b>	<b>2,698</b>	<b>-</b>	<b>3,114</b>	<b>417</b>	<b>2,698</b>	<b>-</b>	<b>3,114</b>
08029	Lugo Substation: Replace (3) 500kV CBs (CB#762, 862, 962), (6) 500kV disconnects (#761, 76	CET-ET-TP-RL-802900	902148910	High		May-20	20	100	2,995	3,115	20	100	2,995	3,115
08029	Lugo-Victorville 500kV Transmission Line (SCE-owned): Eix the appropriate number of spans to	CET-ET-TP-RL-802901	902148911	High		Dec-19	170	1,500	-	1,670	170	1,500	-	1,670
<b>08029</b>	<b>Total Lugo - Victorville 500kV Transmission Line Thermal Overloads Project</b>						<b>189</b>	<b>1,600</b>	<b>2,995</b>	<b>4,784</b>	<b>189</b>	<b>1,600</b>	<b>2,995</b>	<b>4,784</b>
08104	Moorpark 220 kV Switchrack: Relocate the Ormond Beach No. 3 & 4 lines into positions 10N &	CET-ET-TP-RL-810400	902315805	High		Nov-20	4	2,533	676	3,213	1	583	155	739
08104	Pardee 230 kV: Equip vacant Position 16E with two (2) CBs rated at 4000A/63kA and four (4)	CET-ET-TP-RL-810401	902315808	High		Dec-20	0	1,960	299	2,260	0	1,960	299	2,260
08104	New Moorpark-Pardee #4 230 kV line: String roughly 25.5 mile section on vacant side of existi	CET-ET-TP-RL-810402	902315828	High		Dec-20	174	8,200	12,294	20,668	174	8,200	12,294	20,668
08104	Moorpark-Santa Clara #2: String 2B-1590 one mile section on vacant side of existing structure:	CET-ET-TP-RL-810403	902315960	High		Dec-20	2	403	551	956	2	403	551	956
08104	Relocate Moorpark-Ormond Beach No. 3 230 kV transmission line to position 10N at Moorpark	CET-ET-TP-RL-810404	902578084	High		Oct-19	-	196	-	196	-	196	-	196
08104	Relocate Moorpark-Ormond Beach No. 4 230 kV transmission line to position 11N at Moorpark	CET-ET-TP-RL-810405	902578085	High		Apr-20	-	196	-	196	-	196	-	196
08104	Relocate Moorpark-Santa Clara No. 1 230 kV transmission line to position 12N at Moorpark	CET-ET-TP-RL-810403	902578086	High		Dec-20	-	-	201	201	-	-	201	201
08104	Relocate Moorpark-Pardee No. 1 230 kV transmission line to position 16E at Pardee	CET-ET-TP-RL-810404	902578087	High		Oct-19	-	293	57	350	-	293	57	350
08104	Santa Clara: Replace Line Relays for Moorpark No.1 230 kV line with one GE 190 relay and on	CET-ET-TP-RL-810405	902578088	High		Apr-20	-	101	216	317	-	101	216	317
08104	Environmental for Moorpark-Pardee	CET-ET-TP-RL-810402	916718	High		Dec-20	-	349	329	677	-	349	329	677
<b>08104</b>	<b>Total Moorpark-Pardee 230 kV No. 4 Circuit Project</b>						<b>179</b>	<b>14,230</b>	<b>14,623</b>	<b>29,032</b>	<b>176</b>	<b>12,279</b>	<b>14,103</b>	<b>26,558</b>
	<b>Total Transmission Project Reliability</b>						<b>87,019</b>	<b>11,567</b>	<b>28,884</b>	<b>127,470</b>	<b>66,851</b>	<b>9,091</b>	<b>26,103</b>	<b>102,045</b>
<b>Infrastructure Replacement</b>														
<b>04211</b>	Replace Bulk Power Circuit Breakers	CET-ET-IR-CB-421100		High		Blanket	-	353	5,581	5,934	-	353	5,581	5,934
<b>04329</b>	Non-Bulk Circuit Breaker Replacement Program (115kV and Below)	CET-ET-IR-CB-432900		Low		Blanket	-	402	938	1,340	-	402	938	1,340
03138	LADWP DC electrode replacement (LAND Segment)	CET-OT-OT-ME-313802	900250937	High		Nov-18	-	134	-	134	-	134	-	134
03138	LADWP DC electrode replacement (OCEAN Segment)	CET-OT-OT-ME-313802	901653468	High		Dec-19	23,015	9,291	-	32,306	23,015	9,291	-	32,306
<b>03138</b>	<b>Total LADWP DC Electrode Replacements</b>						<b>23,015</b>	<b>9,425</b>	<b>-</b>	<b>32,441</b>	<b>23,015</b>	<b>9,425</b>	<b>-</b>	<b>32,441</b>
<b>03138</b>	<b>LADWP AC/DC Filter Replacement</b>	CET-OT-OT-ME-313803	900713761			Dec-20	<b>56,409</b>	<b>19,346</b>	<b>13,883</b>	<b>89,637</b>	<b>56,409</b>	<b>19,346</b>	<b>13,883</b>	<b>89,637</b>
<b>03138</b>	<b>LADWP/Sylmar: Misc Capital</b>	CET-OT-OT-ME-313800		High		Blanket	-	1,488	1,832	3,320	-	1,488	1,832	3,320
<b>04651</b>	<b>Palo Verde 500 kV Switch Yard Disconnect Switch Repl</b>	CET-OT-OT-ME-465100		High		Blanket	-	355	325	680	-	355	325	680
<b>04343</b>	<b>Non-Bulk Relay Replacement Program ("SRRP")</b>	CET-ET-IR-RP-434301		Low		Blanket	-	649	590	1,239	-	649	590	1,239
<b>05089</b>	<b>Bulk Power 500kV &amp; 220kV Line Relay Replacement</b>	CET-ET-IR-RP-508900		High		Blanket	-	5,129	9,202	14,331	-	5,129	9,202	14,331
<b>04756</b>	<b>Substation Miscellaneous Equipment Additions &amp; Betterment</b>	CET-ET-IR-ME-475600		High		Blanket	-	20,355	21,197	41,551	-	20,355	21,197	41,551
<b>05210</b>	<b>Substation Transformer Bank Replacement Program (AA-Bank &amp; A-Bank)</b>	CET-ET-IR-TB-521001		High		Blanket	-	19,848	5,943	25,791	-	19,848	5,943	25,791
<b>07957</b>	<b>Devers: Substation Maintenance and Test Building Improvements program</b>	COS-00-RE-AD-SR0004	801432305	High		Jul-19	357	3,824	-	4,180	300	3,210	-	3,509
<b>07959</b>	<b>Rector: Substation Maintenance and Test Building Improvements program</b>	COS-00-RE-AD-SR0006	801432582	High		Jun-19	644	8,861	1,000	10,505	344	4,734	534	5,612
	<b>Total Substation Maintenance and Test Building Improvements Program</b>						<b>1,001</b>	<b>12,684</b>	<b>1,000</b>	<b>14,686</b>	<b>644</b>	<b>7,944</b>	<b>534</b>	<b>9,122</b>
<b>07637</b>	<b>Substation Facility Capital Maintenance</b>	COS-00-RE-MA-NE7637		High		Blanket	-	15,920	16,209	32,129	-	5,340	5,437	10,777
07392	Seismic Program - Trans Subs (FERC)	COS-00-SP-TD-000000		High		Blanket	-	1,940	2,000	3,940	-	1,238	1,277	2,515
07392	Seismic Program - Trans Lines	COS-00-SP-TD-000002		High		Blanket	-	3,940	3,333	7,273	-	3,940	3,333	7,273
<b>07392</b>	<b>Seismic Assessment and Mitigation Program for Transmission Assets</b>						<b>-</b>	<b>5,880</b>	<b>5,333</b>	<b>11,213</b>	<b>-</b>	<b>5,178</b>	<b>4,610</b>	<b>9,788</b>
<b>07454</b>	<b>Physical Security Systems - Electric Facilities</b>	COS-00-CS-CS-745400		High		Blanket	-	9,341	9,886	19,227	-	5,418	5,734	11,153
<b>07573</b>	<b>Substation Fence/Gate (Cu Theft) (FERC)</b>	CET-ET-IR-ME-757301		High		Blanket	-	-	109	109	-	-	109	109
07820	NERC CIP-14 Physical Security Enhancements	COS-00-CS-CS-782000		High		Blanket	-	6,290	3,807	10,097	-	4,954	2,999	7,953
07820	Mira Loma: NERC CIP-14 Physical Security Enhancements	CET-ET-IR-ME-782001	901656354	High		Dec-18	-	732	466	1,198	-	624	396	1,020
07820	Pardee: NERC CIP-14 Physical Security Enhancements	CET-ET-IR-ME-782002	901656355	High		Dec-18	-	139	466	605	-	121	405	527
07820	Vincent: NERC CIP-14 Physical Security Enhancements	CET-ET-IR-ME-782005	901656358	High		Jan-20	4,009	13,595	2,642	20,247	4,009	13,595	2,642	20,247
07820	Eldorado: NERC CIP-14 Physical Security Enhancements	CET-ET-IR-ME-782008	901657121	High		Jan-20	524	11,463	5,778	17,766	524	11,463	5,778	17,766
07820	Lugo: PHY-Physical Security Project	CET-ET-IR-ME-782009	902072001	High		Apr-18	-	570	152	722	-	570	152	722
<b>07820</b>	<b>Total Substation Physical Security Enhancements Project</b>						<b>4,534</b>	<b>32,790</b>	<b>13,311</b>	<b>50,634</b>	<b>4,534</b>	<b>31,327</b>	<b>12,373</b>	<b>48,234</b>
08042	Serrano 500/220 (T) Perimeter Security Upgrade	CET-ET-IR-ME-804207	902158683	High		Apr-20	-	149	356	505	-	149	356	505
08042	Devers Physical Security Tier 2	CET-ET-IR-ME-804200	902210275	High		Jun-20	77	243	940	1,260	64	204	790	1,058
08042	Antelope Physical Security Tier 2	CET-ET-IR-ME-804201	902210276	High		Apr-20	25	147	4,613	4,785	25	147	4,613	4,785
08042	Rancho Vista Physical Security Tier 2	CET-ET-IR-ME-804202	902210277	High		Jun-20	8	143	3,733	3,884	8	143	3,733	3,884
08042	Whirlwind Physical Security Tier 2	CET-ET-IR-ME-804203	902210452	High		Jun-20	13	143	3,895	4,051	13	143	3,895	4,051
08042	Windhub Physical Security Tier 2	CET-ET-IR-ME-804204	902210453	High		Apr-20	11	143	3,907	4,061	10	127	3,473	3,611
08042	Vista Physical Security Tier 3	CET-ET-IR-ME-804205	902210454	High		Jul-19	70	1	-	71	15	0	-	15
08042	Moorpark Physical Security Tier 3	CET-ET-IR-ME-804206	902210455	High		Dec-19	0	0	-	0	0	0	-	0

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

PIN	Project Title	C-WBS	Order #	High/ Low		Project Total (ISO & non-ISO)				ISO Portion			
				Voltage	OD	Prior	2019	2020	Total	Prior	2019	2020	Total
<b>08042</b>	<b>Total Substation Physical Security Enhancements Project (Tiers 2-4)</b>					<b>204</b>	<b>968</b>	<b>17,445</b>	<b>18,617</b>	<b>135</b>	<b>913</b>	<b>16,861</b>	<b>17,908</b>
	<b>Total Infrastructure Replacement</b>					<b>85,162</b>	<b>154,934</b>	<b>122,783</b>	<b>362,880</b>	<b>84,736</b>	<b>133,472</b>	<b>105,149</b>	<b>323,356</b>
<b>Grid Applications</b>													
06446	Devers: install necessary phasor measurement	CET-ET-GA-EM-644603		High	Blanket Specifics	-	1,215	801	2,016	-	1,215	801	2,016
06446	Vestal: install necessary phasor measurement	CET-ET-GA-EM-644610		High	Blanket Specifics	-	397	2,669	3,066	-	318	2,135	2,453
<b>06446</b>	<b>Total Phasor Measurement Unit (PMU)</b>					<b>-</b>	<b>1,613</b>	<b>3,470</b>	<b>5,082</b>	<b>-</b>	<b>1,533</b>	<b>2,936</b>	<b>4,469</b>
07666	Colorado River Sub: C-RAS Project Phase 1	CET-ET-GA-CR-766600	901292691	High	May-19	1,941	706	-	2,647	1,941	706	-	2,647
07666	Devers Sub: C-RAS Project Phase 1	CET-ET-GA-CR-766601	901292692	High	May-19	1,052	221	-	1,273	1,052	221	-	1,273
07666	Red Bluff Sub: C-RAS Project Phase 1	CET-ET-GA-CR-766602	901292693	High	May-19	1,802	140	-	1,942	1,802	140	-	1,942
<b>07666</b>	<b>Total C-RAS Program Phase 1: Colorado River Corridor RAS</b>					<b>4,794</b>	<b>1,068</b>	<b>-</b>	<b>5,862</b>	<b>4,794</b>	<b>1,068</b>	<b>-</b>	<b>5,862</b>
08009	Antelope -Install relays, CRAS, SEL-2407 satellite synchronized clock	CET-ET-GA-CR-800900	902129654	High	Aug-19	531	1,100	-	1,631	531	1,100	-	1,631
08009	Vincent-Install relays, CRAS, SEL-2407 satellite synchronized clock	CET-ET-GA-CR-800901	902129742	High	Jun-19	371	426	-	797	371	426	-	797
08009	Whirlwind-Install relays, CRAS, SEL-2407 satellite synchronized clock	CET-ET-GA-CR-800902	902129743	High	Nov-19	953	2,320	343	3,615	953	2,320	343	3,615
<b>08009</b>	<b>Total Northern Area CRAS to Tehachapi CRAS</b>					<b>1,856</b>	<b>3,845</b>	<b>343</b>	<b>6,044</b>	<b>1,856</b>	<b>3,845</b>	<b>343</b>	<b>6,044</b>
	<b>Total Grid Applications</b>					<b>6,650</b>	<b>6,525</b>	<b>3,812</b>	<b>16,988</b>	<b>6,650</b>	<b>6,446</b>	<b>3,278</b>	<b>16,375</b>
<b>PWRD Blankets</b>													
03363	Substation Unplanned Maintenance Replacements	CET-PD-BM-SU-SUBSNW		High	Blanket	-	11,353	11,644	22,997	-	1,037	1,063	2,100
03363	Substation - Storm	CET-PD-ST-SS-SUBSNW		High	Blanket	-	1,738	1,781	3,519	-	398	407	805
<b>03363</b>	<b>Substation Maintenance, Breakdown, &amp; Storm</b>					<b>-</b>	<b>13,091</b>	<b>13,425</b>	<b>26,516</b>	<b>-</b>	<b>1,434</b>	<b>1,471</b>	<b>2,905</b>
<b>07888</b>	<b>Transmission Maintenance Planned</b>	CET-PD-IR-TP-788800		High	Blanket	-	1,223	-	1,223	-	1,223	-	1,223
03364	Transmission Breakdown Maintenance Unplanned	CET-PD-BM-TU-TRSJAC		High	Blanket	-	1,364	1,398	2,762	-	534	547	1,081
03364	Transmission Grid-Based Maintenance (Tower Corrosion)	CET-PD-IR-TG-TRSJAC		High	Blanket	-	23,006	52,232	75,238	-	6,819	15,481	22,300
<b>03364</b>	<b>Transmission Maintenance &amp; Breakdown Maintenance</b>					<b>-</b>	<b>24,371</b>	<b>53,629</b>	<b>78,000</b>	<b>-</b>	<b>7,353</b>	<b>16,028</b>	<b>23,381</b>
03364	Transmission Deteriorated Pole Repl & Restoration	CET-PD-IR-TR-TRMETW		Low	Blanket	-	80,104	81,898	162,002	-	1,513	1,547	3,059
03364	Pole Loading Transmission Pole Replacements	CET-PD-IR-PT-TRMETW		Low	Blanket	-	28,774	15,019	43,794	-	543	284	827
<b>03364</b>	<b>Transmission Poles (Pole Loading &amp; Deteriorated Pole Programs)</b>					<b>-</b>	<b>108,879</b>	<b>96,917</b>	<b>205,796</b>	<b>-</b>	<b>2,056</b>	<b>1,830</b>	<b>3,886</b>
<b>04056</b>	<b>Steel Stub Remediation (Trans)</b>	CET-PD-OT-SF-TRORAN		Low	Blanket Specifics	-	76	109	186	-	1	2	4
<b>07298</b>	<b>Transmission Line Rating Remediation (TLRR)</b>	CET-PD-OT-PJ-729801		High	Blanket	-	101,709	67,228	168,937	-	101,709	67,228	168,937
<b>03362</b>	<b>Critical Infra Spare - FERC Spare Transformer Equipment Program (STEP)/Emergency</b>	CET-PD-CI-CI-CRINSP		High	Blanket	-	15,357	4,931	20,288	-	15,357	4,931	20,288
03367	Substation - Claim	CET-PD-CL-SC-SUBSNW		High	Blanket	-	110	113	223	-	9	9	18
03367	Transmission - Claim	CET-PD-CL-TC-TREAST		High	Blanket	-	864	885	1,748	-	78	80	158
03367	Transmission - Storm	CET-PD-ST-TS-TREAST		High	Blanket	-	4,308	4,413	8,721	-	1,399	1,433	2,832
<b>03367</b>	<b>Transmission Storm &amp; Claims</b>					<b>-</b>	<b>5,282</b>	<b>5,411</b>	<b>10,693</b>	<b>-</b>	<b>1,486</b>	<b>1,523</b>	<b>3,009</b>
<b>08224</b>	<b>Enhanced Overhead Inspections (EOI) &amp; Remediations - Transmission</b>	CET-PD-WM-TP-822400		High	Blanket Specifics		11,211	4,597	15,807	-	2,983	1,223	4,207
	<b>Total PWRD Blankets</b>					<b>-</b>	<b>269,989</b>	<b>241,650</b>	<b>511,639</b>	<b>-</b>	<b>130,621</b>	<b>93,013</b>	<b>223,633</b>
<b>Total Non-Incentive Transmission Projects</b>						<b>220,020</b>	<b>498,193</b>	<b>449,947</b>	<b>1,168,160</b>	<b>180,103</b>	<b>321,120</b>	<b>276,101</b>	<b>777,323</b>
<b>Total Forecast Specific Project Expenditures (Closing by December 2020)</b>						<b>220,020</b>	<b>129,371</b>	<b>119,279</b>	<b>468,669</b>	<b>180,103</b>	<b>116,511</b>	<b>114,432</b>	<b>411,047</b>
<b>Total Forecast Blanket Expenditures (Closing by December 2020)</b>						<b>-</b>	<b>368,822</b>	<b>330,668</b>	<b>699,490</b>	<b>-</b>	<b>204,608</b>	<b>161,668</b>	<b>366,277</b>