

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

			High/ Low		Project Total (ISO & non-ISO)				ISO Portion			
PIN	Project Title	Order #	Voltage	OD	Prior	2018	2019	Total	Prior	2018	2019	Total
Incentive Transmission Projects includes only Direct Installation Expenditures												
Various Tehachapi - Segments 3B & 3C												
07183	230 kV Transmission Line Between Highwind and Windhub Substations	800062547	High	Dec-12	-	10	-	10	-	10	-	10
07183	Total Segment 3B				-	10	-	10	-	10	-	10
Total Tehachapi Segments 3B & 3C					-	10	-	10	-	10	-	10
Total Tehachapi Segments 1-3 - Incentive Qualified					-	10	-	10	-	10	-	10
Various Tehachapi - Segments 4-11												
05472	Antelope Vincent #2 500kV T/L	800217232	High	Oct-12	-	0.079	-	0	-	0	-	0
05472	Total Segment 5				-	0	-	0	-	0	-	0
05243	New Vincent-Duarte 500kV T/L	800217316	High	Aug-14	-	2,526	-	2,526	-	2,526	-	2,526
05243	Total Segment 6				-	2,526	-	2,526	-	2,526	-	2,526
06438	New Antelope-Mesa 500kV T/L	800218138	High	Feb-18	-	629	-	629	-	629	-	629
06438	Total Segment 7				-	629	-	629	-	629	-	629
06439	New 33 mile Vincent-Mira Loma 500kV T/L	800218645	High	Mar-16	-	399	-	399	-	399	-	399
06439	Total Segment 8				-	399	-	399	-	399	-	399
07553	Mira Loma-Vincent 500 kV T/L (UG): Civil & Cable Portion	900610533	High	Oct-16	-	255	-	255	-	255	-	255
07553	Mira Loma Substation	901094247	High	Dec-16	-	2	-	2	-	2	-	2
07553	Acquire Easements for TRTP Segment 8A	801025887	High	Oct-16	-	8	-	8	-	8	-	8
07553	TRTP-Segment 8A CHUG: Land/ Easements Acquisition/ Condemnation	801479004	High	Jun-18	148	877	-	1,026	148	877	-	1,026
07553	East Transition Station	901109252	High	Dec-16	-	395	-	395	-	395	-	395
07553	West Transition Station	901109253	High	Dec-16	-	395	-	395	-	395	-	395
07553	Chino Hills Related OH Line Work	901486465	High	Aug-16	-	0	-	0	-	0	-	0
07553	Total Segment 8A (TRTP 500 kV Underground)				148	1,932	-	2,081	148	1,932	-	2,081
06440	Mira Loma Sub - Equip 1 500kV LP	800218712	High	Apr-14	-	122	-	122	-	122	-	122
06440	Total Segment 9				-	122	-	122	-	122	-	122
06442	Mesa-Vincent #1 500kV T/L	800217339	High	May-15	-	833	-	833	-	833	-	833
06442	Eagle Rock-Pardee 230kV: Construct 2 miles of single-circuit T/L to terminate Eagle Rock-Pardee 230kV T/L into V	800217381	High	Feb-15	-	24	-	24	-	24	-	24
06442	Total Segment 11				-	857	-	857	-	857	-	857
Total Tehachapi Segments 4-11 - Incentive Qualified					148	6,465	-	6,613	148	6,465	-	6,613
Total Tehachapi - Segments 1-11 Incentive Qualified					148	6,475	-	6,623	148	6,475	-	6,623
07061 Colorado River Substation Expansion (CRSE)												
07061	Devers: Relays for Devers-Red Bluff 500kV N-2 Special Protection System (SPS)	900603420	High	May-15	-	3	-	3	-	3	-	3
	Total CRSE				-	3	-	3	-	3	-	3
07650 Whirlwind Substation Expansion Project (Whirlwind)												
07650	Whirlwind 3rd AA bank and SPS	901307713	High	Apr-17	-	23	-	23	-	23	-	23
	Total Whirlwind				-	23	-	23	-	23	-	23
06902 Calcite Substation (formerly Jasper; part of South of Kramer)												
06902	Jasper: LGIA Engineer and construct a new interconnection facility	900295954	High	Dec-20	3,625	200	1,595	5,420	3,625	200	1,595	5,420
	Total South of Kramer				3,625	200	1,595	5,420	3,625	200	1,595	5,420

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

PIN	Project Title	Order #	High/ Low	OD	Project Total (ISO & non-ISO)				ISO Portion			
			Voltage		Prior	2018	2019	Total	Prior	2018	2019	Total
06420	West of Devers											
06420	West of Devers Upgrade Project: Preliminary Engineering & Licensing	800062511	High	May-21	52,908	2	-	52,910	52,908	2	-	52,910
06420	Devers Sub: Install 220kV CBs & DSs	901453922	High	Dec-18	2,032	428	1,000	3,459	2,032	428	1,000	3,459
06420	El Casco Sub: Install 220kV Terminal Equipment	901453923	High	Jun-18	1,900	551	1,000	3,451	1,900	551	1,000	3,451
06420	Etiwanda Sub: Install 220kV Relay Equipment	901453924	High	Jun-18	147	1	-	148	147	1	-	148
06420	San Bernardino Sub: Install Disconnects	901453925	High	Oct-19	2,977	492	1,900	5,369	2,977	492	1,900	5,369
06420	Rebuild Devers-El Casco & El Casco-San Bernardino 220 kV lines with 2B-1590 ACSR on double circuit towers	901460764	High	May-21	18,378	93,069	147,764	259,210	18,378	93,069	147,764	259,210
06420	Vista Sub: Install Disconnects	901453926	High	Dec-18	2,149	419	1,000	3,568	2,149	419	1,000	3,568
06420	Acquire Easements for West of Devers	801275175	High	Dec-18	3,938	9,067	475	13,480	3,938	9,067	475	13,480
06420	Total West of Devers				84,429	104,028	153,139	341,596	84,429	104,028	153,139	341,596
06092	Alberhill System											
06092	Licensing Phase - Site Selection, PEA/Application Preparation, Environmental Surveys and CPUC Licensing Review.	800063633	High	Jul-24	20,166	2,524	11,513	34,202	10,486	1,312	5,987	17,785
06092	Valley: Replace existing LFCB relay with SEL-311L relay on Valley 500kV position 7XS. Replace existing SEL-311C/RFL9745 relay with SEL-311L relay on Valley 115kV position 3S.	800374409	High	Jun-21	7	-	63	70	5	-	44	48
06092	Replace existing LFCB relay with SEL-311L relay on Serrano 500kV position 3E	800374410	High	Jun-21	3	-	90	93	3	-	90	93
06092	Alberhill Real Properties Acquisition	800796373	High	Jun-18	83	0	1,304	1,387	40	0	639	680
06092	Alberhill-Serrano 500kV: Form the Alberhill-Serrano 500 kV line by looping the existing Serrano-Valley 500 kV line into Alberhill Sub.	900502072	High	Jun-21	200	-	898	1,098	200	-	898	1,098
06092	Alberhill-Valley 500kV: Form the Alberhill-Valley 500 kV line by looping the existing Serrano-Valley 500 kV line into Alberhill Substation	900502073	High	Jun-21	38	-	1,003	1,042	38	-	1,003	1,042
06092	Total Alberhill				20,496	2,524	14,871	37,892	10,773	1,313	8,660	20,745
07546	Eldorado-Lugo-Mohave Upgrade											
07546	ELMSC Real Properties Acquisition	801648460	High	Dec-18	16	22	197	235	15	21	183	219
07546	Eldorado Sub: Upgrade Terminal Equipment	901056467	High	Oct-19	4,887	3,410	3,910	12,208	4,887	3,410	3,910	12,208
07546	Lugo Sub: Upgrade Terminal Equipment and	901056468	High	Aug-19	7,441	3,798	3,370	14,609	7,441	3,798	3,370	14,609
07546	Mohave Sub:Install CBs, Disc.&series cap	901490550	High	Nov-19	5,422	3,557	6,692	15,671	5,422	3,557	6,692	15,671
07546	Mid-Line Cap:Inst cap on Eldor Lugo T/L	901624163	High	Jan-20	5,512	3,702	9,708	18,922	5,512	3,702	9,708	18,922
07546	Inst Eldo-Lug-Mhve Series Caps at Ludlow	901826564	High	Jan-20	6,085	3,700	9,691	19,476	6,085	3,700	9,691	19,476
07546	Eldorado-Mohave T/L: Instal OPGW, splice	901904770	High	Jun-20	268	354	2,934	3,556	268	354	2,934	3,556
07546	Lugo-Mohave T/L(CA): Instal OPGW, splice	901904772	High	Jun-20	794	626	7,557	8,976	794	626	7,557	8,976
07546	Lugo-Mohave T/L(NV): Instal OPGW, splice	901904773	High	Jun-20	75	82	394	551	75	82	394	551
07546	Eldorado-Lugo T/L(CA): Clear infractions	901904774	High	Jun-20	118	184	2,504	2,805	118	184	2,504	2,805
07546	Total Eldorado-Lugo-Mohave				30,618	19,434	46,958	97,010	30,617	19,432	46,944	96,993
07555	Mesa Substation											
07555	Mesa Substation: Upgrade Mesa from a 230/66/16 kV substation to a 500/230/66/16 kV substation.	900959223	High	Jun-21	49,823	110,042	75,834	235,699	25,280	55,835	38,478	119,594
07555	Goodrich Sub: Upgrade/Update Protection.	901192358	High	Dec-19	109	74	43	225	109	74	43	225
07555	Laguna Bell: Replace (4) 230 kV CBs	901192480	High	Dec-19	1,172	2	812	1,986	1,172	2	812	1,986
07555	Lighthipe:Replace (2) 230kV CBs&disconct	901192481	High	Dec-19	502	237	48	787	502	237	48	787
07555	Rio Hondo Sub: Upgrade/Update Protection	901192483	High	Dec-19	157	2	162	321	157	2	162	321
07555	Mesa Area Phase2: Relocate various lines	901197441	High	Dec-20	4,223	957	481	5,661	4,223	957	481	5,661
07555	Mesa-Redondo 220kV: Install 4 structures and 2300 ckt ft of conductor.	901560422	High	Dec-20	989	227	3,040	4,257	989	227	3,040	4,257
07555	Center Sub:Replc 3 GE relays	901564026	High	Dec-19	107	3	87	196	107	3	87	196
07555	Redondo Sub: Replc 1 SEL-311L relay.	901564029	High	Dec-19	153	178	-	332	153	178	-	332
07555	Mesa: SCE 50% MWD Water Line Relocation	901777019	High	Jan-18	5,490	2,696	-	8,186	3,952	1,941	-	5,894
07555	Eagle Rock-Mesa: Install 1 structure and 1500 ckt ft of conductor	902124236	High	Dec-20	-	4	1,101	1,106	-	4	1,101	1,106
07555	Goodrich-Mesa: Install 1000ft cndctr	902124387	High	Dec-20	0	94	166	260	0	94	166	260
07555	Laguna Bell-Mesa #1 220kV: Install 2300 ckt ft of conductor	902124388	High	Dec-20	-	-	86	86	-	-	86	86
07555	Laguna Bell-Mesa #2: Install 3 structures and 1400 ckt ft of conductor	902124389	High	Dec-20	16	235	3,263	3,515	16	235	3,263	3,515
07555	Lighthipe-Mesa: Install 3 strcts+cnd	902124390	High	Dec-20	40	2,295	3,608	5,943	40	2,295	3,608	5,943
07555	Mesa-Rio Hondo #1 220kV: Install 4 structures and 3000 ckt ft of conductor	902124394	High	Dec-20	-	1,223	3,262	4,484	-	1,223	3,262	4,484
07555	Mesa-Rio Hondo2: Install 3000ft cndctr	902124395	High	Dec-20	0	93	546	640	0	93	546	640
07555	Mesa-Vincent1: Install 2 strcts+cndctr	902124396	High	Dec-20	1,326	223	2,608	4,157	1,326	223	2,608	4,157
07555	Mesa-Vincent2: Install 2 strcts+cndctr	902124398	High	Dec-20	136	257	271	665	136	257	271	665
07555	Mesa-Walnut: Install 4 structures and 2900 ckt ft of conductor	902124580	High	Dec-20	84	119	638	841	84	119	638	841
07555	Redondo-Vincent: Install 1500 ckt ft of shoofly conductor.	902124582	High	Dec-20	775	868	74	1,717	775	868	74	1,717

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

PIN	Project Title	Order #	High/ Low	OD	Project Total (ISO & non-ISO)				ISO Portion			
			Voltage		Prior	2018	2019	Total	Prior	2018	2019	Total
07555	Goodrich-Laguna Bell: Install 1500ft cnd	902132965	High	Dec-20	0	210	-	210	0	210	-	210
07555	Laguna Bell-Rio Hondo: Install 1 shoofly ESP and 500 ckt ft of shoofly conductor.	902132967	High	Dec-20	808	3,086	221	4,115	808	3,086	221	4,115
07555	Mesa: Upgrade to a 500/230/66/16kV sub	902178838	High	Jun-21	364	1,632	25,756	27,752	364	1,632	25,756	27,752
07555	Total Mesa				66,275	124,760	122,107	313,141	40,195	69,798	84,750	194,744
Total Incentive Transmission Projects					205,592	257,447	338,669	801,708	169,787	201,272	295,088	666,148
Total Incentive Transmission Projects (Closing by Dec 2019)					38,831	31,438	22,001	92,269	37,251	30,681	21,322	89,254