

**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	
<b>Incentive Transmission Projects includes only Direct Installation Expenditures</b>													
<b>Various Tehachapi - Segments 3B &amp; 3C</b>													
07183	230 kV Transmission Line Between Highwind and Windhub Substations	800062547	High	Dec-12	-	10	-	10	-	10	-	10	
<b>07183</b>	<b>Total Segment 3B</b>				-	<b>10</b>	-	<b>10</b>	-	<b>10</b>	-	<b>10</b>	
	<b>Total Tehachapi Segments 3B &amp; 3C</b>				-	<b>10</b>	-	<b>10</b>	-	<b>10</b>	-	<b>10</b>	
	<b>Total Tehachapi Segments 1-3 - Incentive Qualified</b>				-	<b>10</b>	-	<b>10</b>	-	<b>10</b>	-	<b>10</b>	
<b>Various Tehachapi - Segments 4-11</b>													
05472	Antelope Vincent #2 500kV T/L	800217232	High	Oct-12	-	0.079	-	0	-	0	-	0	
<b>05472</b>	<b>Total Segment 5</b>				-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	
05243	New Vincent-Duarte 500kV T/L	800217316	High	Aug-14	-	2,526	-	2,526	-	2,526	-	2,526	
<b>05243</b>	<b>Total Segment 6</b>				-	<b>2,526</b>	-	<b>2,526</b>	-	<b>2,526</b>	-	<b>2,526</b>	
06438	New Antelope-Mesa 500kV T/L	800218138	High	Feb-18	-	629	-	629	-	629	-	629	
<b>06438</b>	<b>Total Segment 7</b>				-	<b>629</b>	-	<b>629</b>	-	<b>629</b>	-	<b>629</b>	
06439	New 33 mile Vincent-Mira Loma 500kV T/L	800218645	High	Mar-16	-	399	-	399	-	399	-	399	
<b>06439</b>	<b>Total Segment 8</b>				-	<b>399</b>	-	<b>399</b>	-	<b>399</b>	-	<b>399</b>	
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	
<b>07553</b>	<b>Total Segment 8A (TRTP 500 kV Underground)</b>				<b>148</b>	<b>1,932</b>	-	<b>2,081</b>	<b>148</b>	<b>1,932</b>	-	<b>2,081</b>	
06440	Mira Loma Sub - Equip 1 500kV LP	800218712	High	Apr-14	-	122	-	122	-	122	-	122	
<b>06440</b>	<b>Total Segment 9</b>				-	<b>122</b>	-	<b>122</b>	-	<b>122</b>	-	<b>122</b>	
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	
<b>06442</b>	<b>Total Segment 11</b>				-	<b>857</b>	-	<b>857</b>	-	<b>857</b>	-	<b>857</b>	
	<b>Total Tehachapi Segments 4-11 - Incentive Qualified</b>				<b>148</b>	<b>6,465</b>	-	<b>6,613</b>	<b>148</b>	<b>6,465</b>	-	<b>6,613</b>	
	<b>Total Tehachapi - Segments 1-11 Incentive Qualified</b>				<b>148</b>	<b>6,475</b>	-	<b>6,623</b>	<b>148</b>	<b>6,475</b>	-	<b>6,623</b>	
<b>07061 Colorado River Substation Expansion (CRSE)</b>													
07061	Devers: Relays for Devers-Red Bluff 500kV N-2.Special Protection System (SPS)	900603420	High	May-15	-	3	-	3	-	3	-	3	
	<b>Total CRSE</b>				-	<b>3</b>	-	<b>3</b>	-	<b>3</b>	-	<b>3</b>	
<b>07650 Whirlwind Substation Expansion Project (Whirlwind)</b>													
07650	Whirlwind 3rd AA bank and SPS	901307713	High	Apr-17	-	23	-	23	-	23	-	23	
	<b>Total Whirlwind</b>				-	<b>23</b>	-	<b>23</b>	-	<b>23</b>	-	<b>23</b>	
<b>06902 Calcite Substation (formerly Jasper; part of South of Kramer)</b>													
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	
	<b>Total South of Kramer</b>				<b>3,625</b>	<b>200</b>	<b>1,595</b>	<b>5,420</b>	<b>3,625</b>	<b>200</b>	<b>1,595</b>	<b>5,420</b>	

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			Voltage	OD	Prior	2018	2019	Total	Prior	2018	2019	Total	
<b>06420</b>	<b>West of Devers</b>												
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	
<b>06420</b>	<b>Total West of Devers</b>				<b>84,429</b>	<b>104,028</b>	<b>153,139</b>	<b>341,596</b>	<b>84,429</b>	<b>104,028</b>	<b>153,139</b>	<b>341,596</b>	
<b>06092</b>	<b>Alberhill System</b>												
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	
<b>06092</b>	<b>Total Alberhill</b>				<b>20,496</b>	<b>2,524</b>	<b>14,871</b>	<b>37,892</b>	<b>10,773</b>	<b>1,313</b>	<b>8,660</b>	<b>20,745</b>	
<b>07546</b>	<b>Eldorado-Lugo-Mohave Upgrade</b>												
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	
<b>07546</b>	<b>Total Eldorado-Lugo-Mohave</b>				<b>30,618</b>	<b>19,434</b>	<b>46,958</b>	<b>97,010</b>	<b>30,617</b>	<b>19,432</b>	<b>46,944</b>	<b>96,993</b>	
<b>07555</b>	<b>Mesa Substation</b>												
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	

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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
<b>07555</b>	<b>Total Mesa</b>				<b>66,275</b>	<b>124,760</b>	<b>122,107</b>	<b>313,141</b>	<b>40,195</b>	<b>69,798</b>	<b>84,750</b>	<b>194,744</b>
<b>Total Incentive Transmission Projects</b>					<b>205,592</b>	<b>257,447</b>	<b>338,669</b>	<b>801,708</b>	<b>169,787</b>	<b>201,272</b>	<b>295,088</b>	<b>666,148</b>
<b>Total Incentive Transmission Projects (Closing by Dec 2019)</b>					<b>38,831</b>	<b>31,438</b>	<b>22,001</b>	<b>92,269</b>	<b>37,251</b>	<b>30,681</b>	<b>21,322</b>	<b>89,254</b>