

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

				High/ Low Voltage	OD	Project Total (ISO & non-ISO)				ISO Portion			
PIN	Project Title	Order #				Prior	2019	2020	Total	Prior	2019	2020	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		-	4	-	4	-	4	-	4
07183	Total Segment 3B					-	4	-	4	-	4	-	4
	Total Tehachapi Segments 3B & 3C					-	4	-	4	-	4	-	4
	Total Tehachapi Segments 1-3 - Incentive Qualified					-	4	-	4	-	4	-	4
Various	Tehachapi - Segments 4-11												
05243	New Vincent-Duarte 500kV T/L	800217316	High	Nov-14		-	2,817	-	2,817	-	2,817	-	2,817
05243	Total Segment 6					-	2,817	-	2,817	-	2,817	-	2,817
06438	New Antelope-Mesa 500kV T/L	800218138	High	Feb-18		-	20	-	20	-	20	-	20
06438	Total Segment 7					-	20	-	20	-	20	-	20
06439	New 33 mile Vincent-Mira Loma 500kV T/L	800218645	High	Mar-16		-	(12)	-	(12)	-	(12)	-	(12)
06439	Total Segment 8					-	(12)	-	(12)	-	(12)	-	(12)
07553	Mira Loma-Vincent 500 kV T/L (UG): Civil & Cable Portion	900610533	High	Oct-16		-	40	-	40	-	40	-	40
07553	TRTP-Segment 8A CHUG: Land/ Easements Acquisition/ Condemnation	801479004	High	Sep-19		-	72	-	72	-	72	-	72
07553	East Transition Station	901109252	High	Dec-16		-	271	-	271	-	271	-	271
07553	West Transition Station	901109253	High	Dec-16		-	(26)	-	(26)	-	(26)	-	(26)
07553	Total Segment 8A (TRTP 500 kV Underground)					-	357	-	357	-	357	-	357
06442	Mesa-Vincent #1 500kV T/L	800217339	High	May-15		-	461	-	461	-	461	-	461
06442	Total Segment 11					-	461	-	461	-	461	-	461
	Total Tehachapi Segments 4-11 - Incentive Qualified					-	3,643	-	3,643	-	3,643	-	3,643
	Total Tehachapi - Segments 1-11 Incentive Qualified					-	3,647	-	3,647	-	3,647	-	3,647
08169	Colorado River Substation Expansion (CRSE)												
08169	Install 2nd AA Bank and expansion of the Colorado River Corridor RAS including N-1 of AA Bank	902519003	High	Dec-21		-	400	15,916	16,316	-	400	15,916	16,316
	Total CRSE					-	400	15,916	16,316	-	400	15,916	16,316
07650/0769: Whirlwind Substation Expansion Project (Whirlwind)													
07650	Whirlwind 3rd AA bank and SPS	901307713	High	Apr-17		-	2	-	2	-	2	-	2
07695	Install N60 relays to add generation to Whirlwind AA Bank Special Protection Systems (SPS)	901368041	High	Oct-17		-	5	-	5	-	5	-	5
	Total Whirlwind					-	7	-	7	-	7	-	7
06902	Calcite Substation (formerly Jasper; part of South of Kramer)												
06902	Jasper: LGIA Engineer and construct a new interconnection facility	900295954	High	Jul-21		3,826	300	2,605	6,731	3,826	300	2,605	6,731
	Total South of Kramer					3,826	300	2,605	6,731	3,826	300	2,605	6,731

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06420	West of Devers											
06420	West of Devers Upgrade Project: Preliminary Engineering & Licensinc	800062511	High	May-21	52,933	0	-	52,933	52,933	0	-	52,933
06420	Devers Sub: Install 220kV circuit breakers & disconnect switchess	901453922	High	Oct-21	2,881	52	849	3,782	2,881	52	849	3,782
06420	El Casco Sub: Install 220kV Terminal Equipment	901453923	High	Dec-19	-	550	550	1,100	-	550	550	1,100
06420	Etiwanda Sub: Install 220kV Relay Equipment	901453924	High	Aug-19	151	0	-	151	151	0	-	151
06420	San Bernardino Sub: Install Disconnects	901453925	High	Aug-21	4,297	895	750	5,942	4,297	895	750	5,942
06420	Rebuild Devers-El Casco & El Casco-San Bernardino 220 kV lines with 2B-1590 aluminium conductor steel-reinforced cable (ACSR) on double circuit towers	901460764	High	May-21	137,653	163,823	147,574	449,050	137,653	163,823	147,574	449,050
06420	Vista Sub: Install Disconnects	901453926	High	Dec-19	2,421	670	670	3,761	2,421	670	670	3,761
06420	Acquire Easements for West of Devers	801275175	High	Feb-19	6,272	2,391	380	9,043	6,272	2,391	380	9,043
06420	Total West of Devers				206,609	168,382	150,773	525,763	206,609	168,382	150,773	525,763
06092	Alberhill System											
06092	Licensing Phase - Site Selection, PEA/Application Preparation, Environmental Surveys and CPUC Licensinq Review.	800063633	High	Dec-25	21,506	1,499	1,498	24,503	11,269	785	785	12,840
06092	Valley: Replace existing LFCB relay with SEL-311L relay on Valley 500kV position 7XS. Replace existing SFI -311C/RFI 9745 relay with SFI -311L relay on Valley 115kV position 3S	800374409	High	Dec-25	7	-	-	7	5	-	-	5
06092	Replace existing LFCB relay with SEL-311L relay on Serrano 500kV position 3E	800374410	High	Dec-25	3	-	-	3	3	-	-	3
06092	Alberhill Real Properties Acquisition	800796373	High	Dec-25	83	-	-	83	41	-	-	41
06092	Alberhill-Serrano 500kV: Form the Alberhill-Serrano 500 kV line by looping the existing Serrano-Valley 500 kV line into Alberhill Substation	900502072	High	Dec-25	200	-	-	200	200	-	-	200
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	Dec-25	38	-	-	38	38	-	-	38
06092	Total Alberhill				21,837	1,499	1,498	24,834	11,556	785	785	13,126
07546	Eldoradoado-Lugo-Mohave Upgrade											
07546	ELMSC Real Properties Acquisition	801648460	High	Dec-21	30	226	1,737	1,993	30	226	1,737	1,993
07546	Eldoradoado Sub: Upgrade Terminal Equipment	901056467	High	Dec-21	9,313	4,577	6,624	20,515	9,313	4,577	6,624	20,515
07546	Lugo Sub: Upgrade Terminal Equipment and	901056468	High	Dec-21	14,026	5,491	8,710	28,227	14,026	5,491	8,710	28,227
07546	Mohave Sub: Install circuit breakers, disconnect switches & series capacitors	901490550	High	Dec-21	9,086	6,526	8,126	23,737	9,086	6,526	8,126	23,737
07546	Mid-Line Cap:Inst cap on Eldorado Lugo T/L	901624163	High	Dec-21	9,632	5,168	9,366	24,166	9,632	5,168	9,366	24,166
07546	Inst Eldo-Lug-Mhve Series Caps at Ludlow	901826564	High	Dec-21	10,224	5,150	9,321	24,694	10,224	5,150	9,321	24,694
07546	Eldoradoado-Mohave T/L: Instal Optical Ground Wire (OPGW), splice	901904770	High	Dec-21	1,286	2,577	2,388	6,251	1,286	2,577	2,388	6,251
07546	Lugo-Mohave T/L(CA): Instal Optical Ground Wire (OPGW), splice	901904772	High	Dec-21	3,298	7,103	6,192	16,593	3,298	7,103	6,192	16,593
07546	Lugo-Mohave T/L(NV): Instal Optical Ground Wire (OPGW), splice	901904773	High	Dec-21	249	451	531	1,231	249	451	531	1,231
07546	Eldoradoado-Lugo T/L(CA): Clear CPUC General Order (GO)-95 infractions	901904774	High	Dec-21	1,228	1,169	2,172	4,569	1,228	1,169	2,172	4,569
07546	LADWP McCullough Substation: replace five 525kV 50kA power circuit breakers (PCB) with five new 525kV 63kA PCBs	902618358	High	Dec-21	-	-	10,477	10,477	-	-	10,477	10,477
07546	Total Eldoradoado-Lugo-Mohave				58,371	38,439	65,644	162,453	58,371	38,439	65,644	162,453
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	181,077	64,054	16,245	261,375	91,878	32,501	8,242	132,622
07555	Laguna Bell: Replace (4) 230 kV circuit breakers	901192480	High	Dec-19	1,940	370	-	2,311	1,940	370	-	2,311
07555	Lighthipe:Replace (2) 230kV circuit breakers & disconnect switches	901192481	High	Jun-19	594	594	6	1,195	594	594	6	1,195
07555	Rio Hondo Sub: Upgrade/Update Protection	901192483	High	Dec-19	226	146	-	372	226	146	-	372
07555	Mesa Area Phase2: Relocate various lines	901197441	High	Dec-20	5,082	165	874	6,121	5,082	165	874	6,121
07555	Mesa-Redondo 220kV: Install 4 structures and 2300 ckt ft of conductor.	901560422	High	Dec-20	2,039	587	1,474	4,100	2,039	587	1,474	4,100
07555	Center Sub:Replc 3 GE relays	901564026	High	Nov-19	177	106	-	284	177	106	-	284
07555	Redondo Sub: Replc 1 SEL-311L relay.	901564029	High	Dec-19	387	11	-	398	387	11	-	398
07555	Mesa: SCE 50% MWD Water Line Relocation	901777019	High	May-18	-	-	-	-	-	-	-	-
07555	Eagle Rock-Mesa: Install 1 structure and 1500 ckt ft of conductor	902124236	High	Dec-20	101	484	-	586	101	484	-	586
07555	Goodrich-Mesa: Install 1000ft conductor	902124387	High	Dec-20	5	328	-	332	5	328	-	332
07555	Laguna Bell-Mesa #1 220kV: Install 2300 ckt ft of conductor	902124388	High	Dec-20	5	414	-	419	5	414	-	419
07555	Laguna Bell-Mesa #2: Install 3 structures and 1400 ckt ft of conductor	902124389	High	Dec-20	287	1,962	-	2,250	287	1,962	-	2,250
07555	Lighthipe-Mesa: Install 3 structures & conductor	902124390	High	Dec-20	1,507	1,781	-	3,288	1,507	1,781	-	3,288
07555	Mesa-Rio Hondo #1 220kV: Install 4 structures and 3000 ckt ft of conductor	902124394	High	Dec-20	490	1,802	2,542	4,835	490	1,802	2,542	4,835
07555	Mesa-Rio Hondo2: Install 3000ft conductor	902124395	High	Dec-20	2	384	448	834	2	384	448	834
07555	Mesa-Vincent1: Install 2 structures & conductor	902124396	High	Dec-20	2,143	3,188	-	5,331	2,143	3,188	-	5,331
07555	Mesa-Vincent2: Install 2 structures & conductor	902124398	High	Dec-20	660	1,876	-	2,535	660	1,876	-	2,535
07555	Mesa-Walnut: Install 4 structures and 2900 ckt ft of conductor	902124580	High	Dec-20	268	816	2,075	3,160	268	816	2,075	3,160
07555	Redondo-Vincent: Install 1500 ckt ft of shoofly conductor.	902124582	High	Dec-20	-	9	-	9	-	9	-	9
07555	Goodrich-Laguna Bell: Install 1500ft conductor	902132965	High	Dec-20	-	9	-	9	-	9	-	9
07555	Laguna Bell-Rio Hondo: Install 1 shoofly ESP and 500 ckt ft of shoofly conductor	902132967	High	Dec-20	2,276	177	490	2,943	2,276	177	490	2,943

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07555	Mesa: Upgrade to a 500/230/66/16kV substation	902178838	High	Mar-22	1,173	35,206	97,849	134,228	1,173	35,206	97,849	134,228
07555	Acquisition of parcels in fee to support the installation of getaways, risers, and drainage culvert	801291267	High	Apr-17	-	-	-	-	-	-	-	-
07555	Mesa-Mira Loma: Install 2 new structures and 1600 ckt ft of conductor	902124234	High	Dec-20	15	27	4,076	4,118	15	27	4,076	4,118
07555	Mesa-Vincent: Install 1600 ckt ft of conductor	902124235	High	Dec-20	-	92	305	398	-	92	305	398
07555	Mira Loma 500kV T/L: Install (1) L90 relay. Install (2) SEL-411L relays. Install (2) RFL-9745 channels	902472308	High	Jun-21	0	3	-	4	0	3	-	4
07555	Vincent 500 kV T/L: Install (1) L90 relay. Install (2) SEL-411L relays. Install (2) RFL-9745 channels	902472309	High	Jun-21	0	2	-	2	0	2	-	2
07555	Total Mesa				200,455	114,595	126,384	441,435	111,257	83,043	118,382	312,681
Total Incentive Transmission Projects					491,098	327,268	362,820	1,181,187	391,618	295,002	354,105	1,040,725
Total Incentive Transmission Projects (Closing by Dec 2020)					27,049	22,596	13,891	63,535	27,049	22,596	13,891	63,535