APPENDIX E: Project Need and Description

Intentionally left blank

Name	Tulucay-Napa #2 60 kV Line Capacity Increase
Brief Description	Remove limiting elements on Tulucay-Napa #2 60 kV line to match the conductor rating of 1126 AMPS
Туре	Reliability
Objectives	Mitigate P0 contingency driven overload
Project Need Date	2021
Expected Inservice Date	2023
Interim Solution	Operational action plan
Project Cost	\$5-10 Million
Alternatives Considered but Rejected	 Closing the normally open switch between Tulucay and Basalt Substation Relieves the identified P0 overloads, but for P1 contingency results in overload. Second Tulucay-Napa 60kV (new) line, estimated cost \$21.00 million

Name	East Shore 230 kV Bus Terminals Reconfiguration
Brief	Reconfigure East Shore 230 kV bus
Description	
Туре	Reliability
Objectives	Mitigate P2 contingency driven overload
Project Need	2021
Date	
Expected In-	2024
service Date	
Interim Solution	Operational action plan
Project Cost	\$2-4 Million
Alternatives	None
Considered but	
Rejected	

Name	Newark 230/115 kV Transformer Bank #7 Circuit Breaker Addition
Brief Description	Add second high-side circuit breaker to Newark 230/115 kV transformer bank #7
Туре	Reliability
Objectives	Mitigate P2 contingency driven overload
Project Need Date	2021
Expected Inservice Date	2024
Interim Solution	Operational action plan
Project Cost	\$3-6 Million
Alternatives Considered but Rejected	Install a 230/115 kV transformer bank connecting to Newark 230 kV bus section E

Name	Moraga 230 kV Bus Upgrade
Brief	Add sectionalizing breakers and a bus tie breaker to Moraga 230 kV bus
Description	
Туре	Reliability
Objectives	Mitigate P2 contingency driven overload
Project Need	2021
Date	
Expected In-	2024
service Date	
Interim Solution	Operational action plan
Project Cost	\$17 Million
Alternatives	None
Considered but	
Rejected	

Name	Wilson-Oro Loma 115kV Line Reconductoring
Brief Description	Reconductor ~9 circuit miles between Wilson and El Nido Substations
Туре	Reliability
Objectives	Mitigate P2 contingency driven overload
Project Need Date	2021
Expected Inservice Date	2026
Interim Solution	Operational action plan
Project Cost	\$11.3-22.7 Million
Alternatives Considered but Rejected	Re-rate Energy Storage (20MW*4h)

Name	Borden 230/70kV TB #1 Capacity Increase
Brief Description	Upgrade Bank Breaker CB 52 and associated switches Upgrade Borden 70 kV Bus Section "D"
Туре	Reliability
Objectives	Mitigate P3, P6 contingency driven overload
Project Need Date	2021
Expected Inservice Date	2025
Interim Solution	Operational action plan
Project Cost	\$11.5-23 Million
Alternatives Considered but Rejected	Re-rate Energy Storage (15MW*4h)

Name	Salinas-Firestone #1 and #2 60 kV Lines
Brief Description	Reconductoring of two 60 kV lines
Туре	Reliability
Objectives	Mitigate P1, P3 contingency driven overload
Project Need Date	2021
Expected Inservice Date	2024
Interim Solution	Operational action plan
Project Cost	\$19-38 Million
Alternatives Considered but Rejected	Transmission reconfiguration

Name	Pardee-Sylmar No. 1 and No. 2 230 kV Line Rating Increase Project
Brief	The project involves replacing circuit breakers and other terminal equipment at
Description	SCE's Pardee Substation and LADWP's Sylmar Substation to increase the rating
	of the lines to match the rating of the line conductors.
Туре	Reliability (with economic benefits)
Objectives	The project is proposed to mitigate overload under P1, P3 and P6 contingency
	conditions. The project has a benefit-to-cost ratio (BCR) of 10.3–13.6.
Project Need	May 2023
Date	
Expected In-	May 2023
service Date	
Interim Solution	Not applicable
Project Cost	\$15.36 million
Alternatives	- Pacific Transmission Expansion (PTE) Project
Considered but	- Maintaining sufficient local capacity
Rejected	

Name	Gamebird 230/138 kV Transformer Upgrade Project
Brief Description	Upgrading VEA's existing 138 kV Gamebird substation by adding a new 230/138 kV transformer and looping GLW's Pahrump – Sloan Canyon 230 kV line into the
Description	upgraded Gamebird substation
Туре	Reliability
Objectives	The proposed project would mitigate the Amargosa bank overloads, 138 kV low voltage issues and Pahrump 230/138 kV bank overloads described in Appendix B.
Project Need	Summer 2021
Date	
Expected In-	May 01, 2021
service Date	
Interim Solution	N/A
Project Cost	\$4.9 million
Alternatives	A new Charleston – Vista 138 kV line
Considered but Rejected	Amargosa 230/138 transformer upgrade
	Carpenter Canyon – Charleston 230 kV project
	Energy storage at Sandy 138 kV substation