

PTO Owner	Project #	Description	Project Justification	Planned Operating Date	Project Status
Prior to July 1, 2001					
PG&E		Path 15 Phase 2: Remedial Action System Expansion Project	congestion reduction	05/01/01	ISO Approved
PG&E	T091	Long Term Stagg Area Voltage Support	emergency low voltage at 230 kV	06/01/01	ISO Approved
PG&E	T140	San Luis Obispo 70 kV Reinforcement Project	emergency overload and low voltage.	06/01/01	ISO Approved
PG&E	T228	Paradise Area Reinforcement Project	normal & emerg. overload, low voltage	06/01/01	ISO Approved
PG&E	T239	Newark 230/115 kV Bank Capacity Re-rate	normal x-former overload	06/01/01	Under Construction
PG&E	T490	Fulton #1 60 kV Line Reinforcement Project	normal and emergency overloads on 60 kV	06/01/01	ISO Approved
PG&E	T519	Metcalf 500 kV 350 MVAR Cap Bank	RMR Reduction	06/01/01	Under Construction
PG&E	T546	Lakewood Area Transmission Reinforcement	normal & emergency overloads	06/01/01	Under Construction
PG&E	T552	Reconductor Pittsburg-Tassajara 230 kV Circuit	normal line overload	06/01/01	ISO Approved
PG&E	T558	Install 3rd Tesla 500/230 kV Transformer Bank	normal and emergency overloads	06/01/01	Under Construction
PG&E	T575	Fulton-Fitch Mountain Jct 60 kV Circuit	future emerg. overload on 60 kV	06/01/01	ISO Approved
PG&E	T602, T605 & T608	Lockeford Area 60 kV System Upgrade	normal and emerg. O.L. of 60 kV lines and x-former	06/01/01	Under Construction
PG&E	T636	Martin 115 kV Switched Shunt Capacitors Project (150 MVARs)	inadequate reactive support with generator / 230kV underground cable outage	06/01/01	Under Construction
PG&E	T647	Metcalf-Monta Vista Nos. 3 & 4 230 kV Line Separation	Thermal overload	06/01/01	Under Construction
PG&E	T667	Grant-East Shore 115 kV Breakers	normal and emergency line overloads	06/01/01	ISO Approved
PG&E	T668	Moss Landing Circuit Breaker 570 Upgrade	Emergency Overload	06/01/01	ISO Approved
PG&E	T670	Tesla-Newark 230 kV Line	Low Voltage in Bay Area	06/01/01	Under Construction
PG&E	T498	Ravenswood-Ames Capacity Increase	Emergency Overload	06/01/01	Under Construction
PG&E	T412	Rerate Del Monte 115/60 kV Transformer	Emergency Overload	10/01/01	ISO Approved
Prior to November 1, 2001					
PG&E	T652	Bridgeville-Cottonwood Upgrade	Voltage Stability	10/01/01	ISO Approved
PG&E	T664	Janes Creek Station Automatics Modification	Low voltages and overload in northern Humboldt	10/01/01	ISO Approved
Prior to November 1, 2002					
PG&E	T010	Nortech (Kifer-Trimble) 115 kV Loop	new distribution substation	12/01/01	ISO Approved
PG&E	T362	Kerckhoff 1-Kerckhoff 2 Lines and Breakers	Emergency overload, Low voltages	12/01/01	ISO Approved
PG&E	T181	North Receiving Station - Santa Clara	new customer substation	03/01/02	ISO Approved
PG&E	T011	Northeast San Jose Reinforcement Project	normal and emerg. line and x-former O.L.	06/01/02	ISO Approved
PG&E	T081	San Mateo South Transmission Reinforcements	emergency 115 kV line overload	06/01/02	ISO Approved
PG&E	T101	Atlantic-Del Mar New 60 kV line	normal overload and low voltage	06/01/02	ISO Approved
PG&E	T157	Tri-Valley Long Term Project	insufficient 60 kV normal capacity	06/01/02	ISO Approved
PG&E	T505	Re-rate Monta Vista 230/115kV Transformer Banks	normal 230/115 kV x-former overload	06/01/02	Conditionally ISO Approved
PG&E	T538	Lockeford 230/60 kV Bank Rerate	normal 230/60 kV x-former overload	06/01/02	Conditionally ISO Approved
PG&E	T572	Fulton - St. Helena Jct. 60 kV Line SCADA Project	Low voltages, emergency overload	06/01/02	ISO Approved
PG&E	T590	Metcalf Third 500/230 kV Bank	Emergency x-formers' overload	Jun 02 or Jun 03	ISO Approved
PG&E	T598	Alto Bus Re-conductoring	Thermal overload	06/01/02	ISO Approved
PG&E	T635	San Mateo-Martin 115 kV line capacity increase.	Increase import capability to San Francisco, Daly City and the Peninsula Corridor	06/01/02	ISO Approved
PG&E	T639	Table Mountain-Rio Oso 230 kV Circuit Reinforcement	emergency overload for double outage	06/01/02	Conditionally ISO Approved
PG&E	T694	Metcalf - El Patio 115 kV Circuits Reinforcement	normal and emergency 115 kV line overloads	06/01/02	Conditionally ISO Approved
PG&E	T699	Green Valley 115/60 kV Bank Rerate	normal and emergency 115 kV line overloads	06/01/02	Conditionally ISO Approved
PG&E	T673	Cortina #3 60 kV Circuit Reconductoring	Emergency Overload	06/01/02	ISO Approved
Beyond November 1, 2002					
PG&E	T141	Lone Tree Substation	New distribution substation	06/01/03	ISO Approved
PG&E	T242	Goldhill 230/115 kV Transformer Bank	Thermal overload	06/01/03	ISO Approved
PG&E	T249	Bay Meadows 4/0 Cu Reconductor	Emergency overload	06/01/03	ISO Approved
PG&E	T254	Sonoma/Mendocino Coast Voltage Support	Low voltages	06/01/03	ISO Approved
PG&E	T340	Metcalf Fourth 230/115 kV bank	Emergency x-formers' overload	06/01/03	ISO Approved
PG&E	T521	FMC Loop	increase service reliability	06/01/03	ISO Approved
PG&E	T685	Atlantic 230/60 kV Bank Rerate	normal and emergency 115 kV line overloads	06/01/03	Conditionally ISO Approved
PG&E	T691	Rerate Rio Oso-Atlantic and Rio Oso-Gold Hill 230 kV Lines	normal and emergency 115 kV line overloads	06/01/03	Conditionally ISO Approved
PG&E	T756	Oakhurst Area Reconductoring		06/01/03	ISO Approved
PG&E	T103	Rio Oso 230/115 kV Bank Rerate	normal and emergency 115 kV line overloads	06/01/04	Conditionally ISO Approved
PG&E	T177	W.Sacramento-Davis Reinforcement	Thermal overload, low voltages	06/01/04	ISO Approved
PG&E	T197	Ignacio Reinforcement (Combined T199 and T448)	Emergency overload	06/01/04	ISO Approved
PG&E	T314	Colgate 230/60 kV Capacity Increase	Thermal overload	06/01/04	ISO Approved
PG&E	T346	Cortina Substation Capacity Increase	Thermal overload	06/01/04	ISO Approved
PG&E	T449	Brighton 230/115 kV Capacity Rerate	Normal overload	06/01/04	In Service
PG&E	T458	Rerate the Moss Landing-Salinas-Soledad #1 & 2 115kV line	normal and emergency 115 kV line overloads	06/01/04	Conditionally ISO Approved
PG&E	T655	Jefferson Bank Capacity	Emergency overload, Low voltages	06/01/04	ISO Approved
PG&E	T656	Ravenswood 230/115 kV Bank Capacity Increase	Emergency overload	06/01/04	ISO Approved
PG&E	T693	Montague-Trimble 115 kV line rerate	emergency line overload	06/01/04	Conditionally ISO Approved
PG&E	T696	Moss Landing 230/115 kV Bank 2 Rerate	emergency line overload	06/01/04	Conditionally ISO Approved
PG&E	T698	Salinas 115/60kV Transformer Capacity Increase	Emergency overload	06/01/04	ISO Approved

PTO Owner	Project #	Description	Project Justification	Planned Operating Date	Project Status
PG&E	T734	Rerate Solar Tannenhill Jct-Moco Jct 70 kV	normal and emergency 115 kV line overloads	06/01/04	Conditionally ISO Approved
PG&E	T744	Potrero-Hunters Point Circuit (part of T082)	Install additional transmission to SF	06/01/04	ISO Approved
PG&E	T746	Convert San Mateo-Martin 60kV to 115 kV and reconductor	Increase import capability to San Francisco, Daly City and the Peninsula Corridor	06/01/04	ISO Approved
PG&E	T758	Brighton 230/115 kV Bank		06/01/04	ISO Approved
PG&E	T658	Humboldt-Arcata	Low voltages and overload in northern Humboldt	10/01/04	ISO Approved
PG&E	T491	Rerate Vaca Dixon-Suisun Nos. 1 and 2 115 kV	normal and emergency 115 kV line overloads	06/01/05	Conditionally ISO Approved
PG&E	T689	Evergreen 115/60 kV transformer re-rate	emergency transformer overload	06/01/05	Conditionally ISO Approved
PG&E	T710	Los Banos 230/70 kV bank	Normal overload	06/01/05	ISO Approved
PG&E	T723	Corcoran 115/70 kV Bank Rerate	normal and emergency 115 kV line overloads	06/01/05	Conditionally ISO Approved
PG&E	T724	Rerate Sanger-California Ave #2 115 kV	normal and emergency 115 kV line overloads	06/01/05	Conditionally ISO Approved
PG&E	T725	McCall 230/115 kV Bank #1 Rerate	normal and emergency 115 kV line overloads	06/01/05	Conditionally ISO Approved
PG&E	T751	Rerate Cascade-Loomis 60 kV	normal and emergency 115 kV line overloads	06/01/05	Conditionally ISO Approved
PG&E	T082	San Francisco 230 kV Transmission Power Supply	transmission deficiency under contingency condition	09/01/05	ISO Approved
PG&E	T609	Tri-Valley: Install Tesla 230 kV Extension	Emergency Overload	06/01/09	ISO Approved

Prior to July 1, 2001					
SCE		Alamitos WaveTrap replacement projects	Emergency Overload	06/01/01	ISO Approved
SCE		Path 26 Wave Trap Upgrade Project	Emergency Overload	06/01/01	ISO Approved
SCE		Expand South of Lugo RAS (LVLS) to include N-2 outages	Emergency Overload	06/01/01	ISO Approved
SCE		North of Lugo RAS Modifications	Stability	06/01/01	ISO Approved
SCE		Devers 115 kV system Shunt Capacitors	Power factor Correction	06/01/01	ISO Approved
Prior to November 1, 2001					
SCE	None	None	Not Applicable	N/A	N/A
Prior to November 1, 2002					
SCE		RMR Elimination Phase III Project: 230 kV Shunt Capacitors, Reconductoring Barre-Lewis, Barre-Vill Park 230 kV Lines, and misc terminal equipment	Emergency Overload & Low Voltage	01/01/02	ISO Approved
Beyond November 1, 2002					
SCE	None	None	Not Applicable	N/A	N/A

Prior to July 1, 2001					
SDG&E	98187	Reconductor TL610C & TL616A to RSF Sub.	Radial feed to RSF Sub. - Reliability Problem	06/01/01	ISO Approved
SDG&E	99117	New 230/69 transformer at Escondido Sub.	Accommodate load growth and increased import capacity	06/01/01	ISO Approved
Prior to November 1, 2001					
SDG&E	None	None	Not Applicable	N/A	N/A
Prior to November 1, 2002					
SDG&E	97167	Increase capability of TL13813 & TL13814: South Bay-Main	South Bay-Main Street 4% overload	06/01/02	ISO Approved
SDG&E	98191	Reconductor TL622: Chollas-Spring Valley	Chollas-Spring Valley 2.5% overload	06/01/02	ISO Approved
SDG&E	98192	Reconductor TL696: Escondido-Ash	Escondido-Ash 1% overload & increases transmission capacity to Ash	06/01/02	ISO Approved
SDG&E	98195	New 230/69 kV transformer at Sycamore Sub.	Increase transmission import capability	06/01/02	ISO Approved
SDG&E	99113	Reconductor TL669: Scripps-Miramar	Scripps-Miramar 4% overload	06/01/02	ISO Approved
SDG&E	99120	Expand 230 kV capability at San Luis Rey Sub.	Support increase in import capability	06/01/02	ISO Approved
SDG&E	99125	Install reactive power support	Provide reactive power support and support increase to import capability	06/01/02-06/01/03	ISO Approved
SDG&E	00147	Reconductor TL694A, Morro Hill-San Luis Rey	Load growth and import capability	06/01/02	ISO Approved
SDG&E	00148	Reconductor TL6912, Pendleton-San Luis Rey	Load growth and import capability	06/01/02	ISO Approved
SDG&E	00149	Bundle San Luis Rey-Mission #1 230 kV lines	Support load growth and import capability	06/01/02	ISO Approved
SDG&E	00154	Reconductor TL13802B, Shadowridge-Calavera Tap	Increases transmission import capability	06/01/02	ISO Approved
Beyond November 1, 2002					
SDG&E	00142	Reconductor TL664A & TL664C, Penasquitos-Miramar Tap & Eastgate-Raose Canyon	Meet load growth and reduces overloads	06/01/03	ISO Approved
SDG&E	00156	Reconductor portions of TL616B, Berbarido Tap-Escondido	Support load growth and import capability	06/01/03	ISO Approved
SDG&E	98190	Bundle SONGS-Talega #1 & #2 230 kV lines	Meet load growth and reduces overloads	06/01/04	ISO Approved
SDG&E	99123	500 kV Valley-Rainbow Interconnection Project	Support increase to import/export capability	06/01/04	ISO Approved
SDG&E	00145	Reconductor TL689 A & C, Escondido-Felicita Tap-Bernardo	Meet load growth and reduces overloads	06/01/04	ISO Approved
SDG&E	00150	Reinforce 230 kV transmission between Escondido and Orange County	Support load growth and increases transmission import capability	06/01/04	ISO Approved
SDG&E	00151	Install a new 230/138 kV transformer bank at Sycamore Canyon Substation	Increases transmission import capability	06/01/04	ISO Approved
SDG&E	00152	Install static and dynamic reactive power support	Support load growth and import capability	06/01/04-06/01/05	ISO Approved
SDG&E	00153	Reconductor TL13837, Capistrano-Laguna Niguel	Meet load growth and reduces overloads	06/01/04	ISO Approved
SDG&E	00159	Reconductor TL6925, Murray-Garfield	Meet load growth and reduces overloads	06/01/04	ISO Approved
SDG&E	95144	New 69 kV line to Genesee: Tap TL661	Penasquitos-Genesee or Penasquitos-UC Metering 1% overload	06/01/05	ISO Approved
SDG&E	00143	Reconductor TL631, El Cajon-Los Coches 69 kV line	Meets load growth and reduces overloads	06/01/05	ISO Approved

PTO Owner	Project #	Description	Project Justification	Planned Operating Date	Project Status
SDG&E	00146	Reconductor TL688, Escondido-Lilac	Meet load growth and reduces overloads	06/01/05	ISO Approved