
Addendum to Appendix A – WDT780



Queue Cluster 4 Phase I Report

March 27, 2012

This study has been completed in coordination with CAISO per CAISO Tariff Appendix Y Generator Interconnection Procedures (GIP) for Interconnection Requests in a Queue Cluster Window

1. Executive Summary

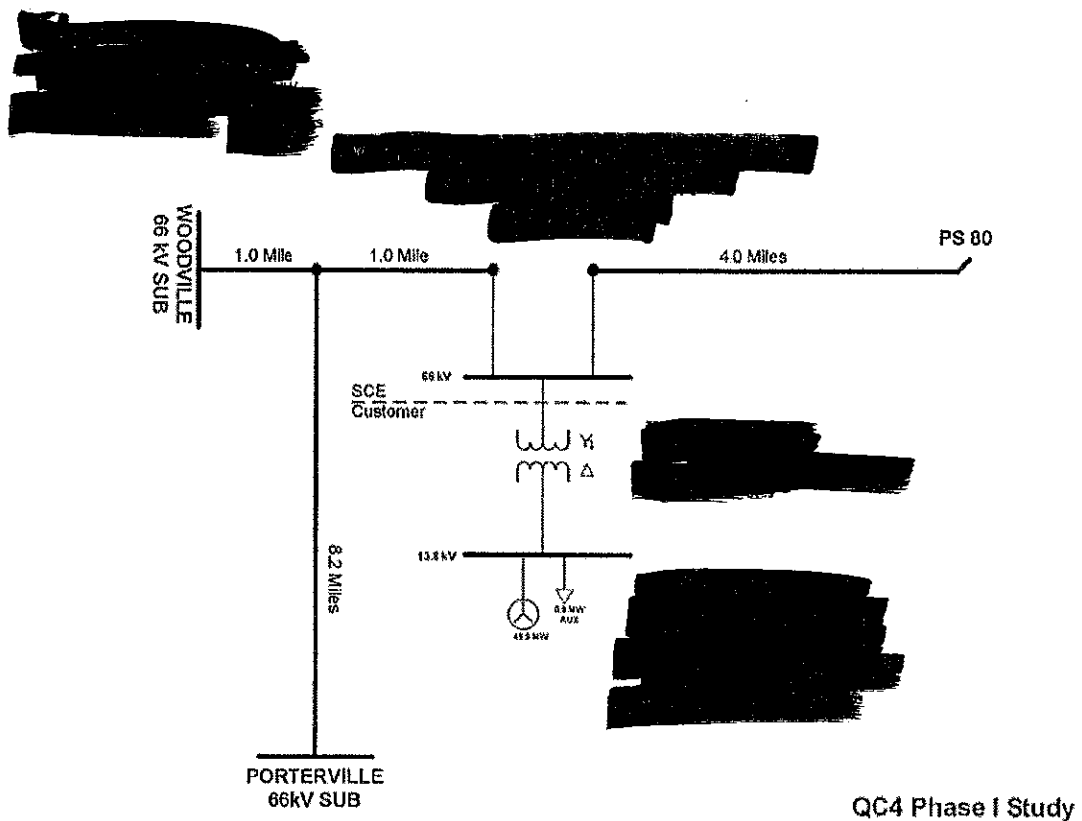
[REDACTED] an Interconnection Customer (IC), received a Queue Cluster 4 Phase I (Phase I) study report dated [REDACTED] for their Interconnection Request (IR) to the Southern California Edison Company (SCE) for their proposed [REDACTED] (Project), WDT780.

During the Results Meeting with the IC on [REDACTED], the IC requested that the report be revised to reflect the interconnection substation as a looped-in substation as opposed to a tapped substation, assumed in the original Phase I Appendix A Report.

Summary of changes:

1. Revise Figure 2-2, Proposed Single Line Diagram (page 5) in Section 2, plus revise selected text in Sections 3 and 10, (pages 6, 12 and 13), in the original Phase I Appendix A report, to reflect a looped-in interconnection substation.
- **Section 2. Project and Interconnection Information**, Figure 2-2, Proposed Single Line Diagram (page 5), replace the proposed Single Line Diagram with the following Diagram:

Figure 2-2, Proposed Single Line Diagram (Revised)



- **Section 3. Study Assumptions**, paragraph C, (page 6), revise the Phase I study report as follows:
Replace all “tapped substation” terms in the original Appendix A Report with the term “looped-in substation.”

- **Section 10. Upgrades, Cost Estimates and Construction schedule estimates**, sub-section DISTRIBUTION UPGRADES, (page 12), revise the Phase I study report as follows:

Replace paragraphs 1 and 4, (pages 12 and 13), in the original Appendix A Report with the following revised paragraphs.

1. Sub-Transmission:

WDT780 Loop In Lines

Install 400 circuit feet of 954 SAC and two engineered bolted footing steel poles and remove one existing wood pole.

4. Real Properties, Corporate Environmental Health & Safety Organization

Obtain easements and / or acquire land, obtain licensing and permits and perform all required environmental activities for the installation of the following project elements if applicable:

- Loop In Line
- Telecommunication requirements

It is assumed that all SCE facilities will be included within the Generator’s Environmental Licensing and Permits. There may be a need to include additional Edison Facilities within the permitting process, once Edison starts the design.

2. Revise cost estimates in Sections 1 and 10, (pages 3, 14 and 15) in the original Phase I Appendix A report.

- **Section 1. Executive Summary**, (page 3), replace the non-binding SCE cost estimates^{1,2} to interconnect the Project with the following revised non-binding SCE cost estimates^{1,2}. (Please refer to the original Phase I report for explanation notes.):

Interconnection Facilities ³	\$ 3.390 M
Distribution Upgrades	\$ 54.890 M

- **Section 10. Upgrades, Estimated Costs, and Estimated Time to Construct**, Table 10.1 below details the revised costs and estimated time to construct.

Table 10.1: Upgrades, Estimated Costs, and Estimated Time to Construct Summary (Revised)

Each Upgrade category may contain multiple scope durations. The longest duration is shown under the Estimated Time to Construct. (Please refer to the original Phase I report for explanation notes.)

Type of Upgrade	Upgrade (May include the following)	Description	Estimated Cost x 1,000 Constant Dollar (2011) <i>(Note 4)</i>	Estimated Cost x 1,000 Constant Dollar (OD Year) <i>(Note 4)</i>	Estimated Time to Construct
PTO's Interconnection Facilities <i>(Note 1, 3, 5)</i>	See Section 10 – PTO's Interconnection Facilities	Non-network facilities needed to enable interconnection	\$3,390	\$3,706	18 Months
Plan of Service Reliability Network Upgrades <i>(Note 6)</i>	See Section 10 – Plan of Service Reliability Network Upgrades	Direct Assigned Network Upgrades needed to enable interconnection.	\$0	\$0	n/a
Reliability Network Upgrades <i>(Note 6)</i>	See Section 11.2 – Reliability Network Upgrades in the Group Report	Allocated Network Upgrades needed to maintain system Reliability	\$0	\$0	n/a
Reliability Network Upgrades <i>(Note 6)</i>	See Section 11.2 - Reliability Network Upgrades for SCD in the Group Report	SCD Mitigation Allocated to maintain system Reliability	\$54	\$61	24 Months
Delivery Network Upgrades <i>(Note 6)</i>	See Section 11.3 - Delivery Network Upgrades in the Group Report	Network Upgrades needed to support Full Delivery, if requested		\$36,348.69	84 Months
Distribution Upgrades <i>(Note 2, 5, 6)</i>	See Section 10 – Distribution Upgrades	Non-CAISO SCE Distribution Facilities	\$54,885	\$60,008	18 Months
Distribution Upgrades <i>(Note 2, 5, 6)</i>	See Section 10 – Distribution Upgrade for SCD Mitigation	SCD Mitigation Allocated to maintain system Reliability	\$5	\$6	24 Months
Total Cost				\$100,129.69	84 Months

Cost Estimate Summary- REVISED (2011 Dollars)

Scope: Interconnect 49 MW on the Porterville - Woodville 66 kV line via new looped-in substation

No.	ELEMENT	INTERCONNECTION FACILITIES (Subject to ITCC)	ITCC ** (35%)	TOTAL	TOTAL CONSTANT \$ (ESTIMATED YEAR O.D.)***
	Sub - Transmission				2014
1	Loop line	\$ -	\$ -	\$ -	
	Substations				
1	Oversight (customer building substation)	\$ -	\$ -	\$ -	
	Telecomm				
1	Install FO cable, lightwave, channel, & associated equipment supporting Diversa Protection & SCADA	\$ 856,000	\$ 314,000	\$ 1,210,000	
2	Install FO cable, lightwave, channel, & associated equipment supporting Diversa Protection and SCADA	\$ -	\$ -	\$ -	
	Environmental Health and Safety				
1	CEH & S - Primary Telecom: Install OPGW (206 ft.) on gen-tie to WDT780 Substation, and extend from POCO into the Communications Room.	\$ 30,000	\$ 13,000	\$ 61,000	
2	CEH & S - Secondary (Diversa) Telecom: Install fiber optic cable (500 ft.) to WDT780 Substation, and extend from POCO into the Communications Room.	\$ 154,000	\$ 54,000	\$ 208,000	
3	CEH & S - Install a new loop in line to support tapping the existing Porterville - Woodville 66-kV line	\$ -	\$ -	\$ -	
4	CEH & S - The customer would construct the new 66 kV looped interconnection substation, referred to as the WDT780 Substation. SCE would provide oversight	\$ -	\$ -	\$ -	
5	CEH & S - POS Telecom 1: Install fiber optic cable (9 mi.) from WDT780 Substation to Porterville Substation.	\$ -	\$ -	\$ -	
6	CEH & S - POS Telecom 2: Install fiber optic cable (2 mi.) from WDT780 Substation to Woodville Substation	\$ -	\$ -	\$ -	
7	CEH & S - POS Telecom 3: Install fiber optic cable (7 mi.) from Bliss Substation to Woodville Substation.	\$ -	\$ -	\$ -	
	Real Properties				
1	RP - activities to support project, telecom, gen tie, loop in acquisition, access easement	\$ 1,301,000	\$ 455,000	\$ 1,756,000	
2	RP - activities to support project, substation acquisition, FO cable, access easement	\$ -	\$ -	\$ -	
	Transmission Project Licensing				
1	TPL - N/A	\$ -	\$ -	\$ -	
	Metering				
1	Retail Meter at the Generation Facility	\$ 29,000	\$ 10,000	\$ 39,000	
	Power System Control				
1	RTU at the generation facility	\$ 93,000	\$ 33,000	\$ 126,000	
2	RTU at the new loop substation	\$ -	\$ -	\$ -	
3	RTU Pts. Names relabeling at Porterville S/S and Woodville S/S	\$ -	\$ -	\$ -	
	Totals	\$ 2,511,000	\$ 879,000	\$ 3,390,000	\$ 3,706,000

* Pursuant to FERC Order 2003A, ITCC is not collected on Reliability Upgrades and One Time Costs.

** ITCC cost may be satisfied with a letter of credit in accordance with the tax provisions of the LGIA.

*** The ITCC included in this cost estimate was computed using a 35% rate. Because of recent enactment of H.R. 4653, the Tax Relief, Unemployment Insurance Reauthorization and Job Creation Act of 2010, and upon formal acceptance by the CPUC of SCE's advice letter (filed on December 27, 2010), this rate may change for electric CIAG recorded or recalled after September 8, 2010 through December 31, 2011. Cost estimate is based on 2011 constant dollars and actual cost is subject to change depending on project construction date, and inflation.

**** SCE's Phase I cost estimating is done in constant dollars 2011 and then escalated to the estimated O.D. year. For the QC4 Phase I study, the estimated O.D. is derived by assuming the duration of the work element will begin in January 2013, which is the CAISO tariff scheduled completion date of the QC4 Phase II study plus 90 days for the CIA signing period. For instance, if a work element is estimated to take a total of 24 months (permitting, design, procurement, and construction), then the estimated O.D. would be January 2015. If an IC's requested O.D. is beyond the estimated O.D. of a work element, the IC's requested O.D. is used.

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The remainder of the Phase I study report remains unchanged.