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February 2, 2006

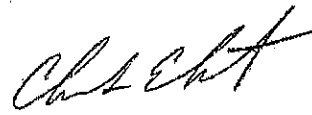
Ray Turner
Contract Manager

SUBJECT: FACILITIES STUDY
[REDACTED]
Proctor Project

[REDACTED] has submitted a Wholesale Distribution Access
Tariff (WDAT) Request and applied for the interconnection of their Proctor
Project to the ISO Grid at the 220kV Bus at Walnut Substation.

Attached is the Facilities Study Report.

If you have any questions, please contact me at PAX 28610.



Charles E. Nieto
Project Engineer

Attachment

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SOUTHERN CALIFORNIA EDISON COMPANY
FACILITIES STUDY

February 2, 2006



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Table of Contents

	Page
I. Description	3
Executive Summary	3
II. System Impact Study Results	4
III. Facilities Study Assumptions	4
IV. Facilities Study Scope	5
V-A. Facilities Study Results – Case A	6
V-B. Facilities Study Results – Case B	7
VI. Conclusions	7
VII. Exhibits	
Exhibit A	Substation Exhibits
Exhibit B	Major Equipment
Exhibit C	Cost Summary
Exhibit D	Project Schedule

I. Executive Summary

[REDACTED] applied to the California Independent System Operator (CAISO) for the interconnection of 49.9MW of generation from their generating facility in City of Industry, CA to the CAISO Grid at the existing SCE Walnut – Industry – Proctor 66kV Line under the terms of SCE's Wholesale Distribution Access Tariff (WDAT).

The Project consists of one simple-cycle GE LM6000 gas turbine generator with a net output of 49.9 MW. The [REDACTED] will connect the 49.9MW of gas turbine generation to the new SCE 66kV [REDACTED] and will interconnect to the CAISO Grid at the Walnut Substation 220kV Bus.

The [REDACTED] will be connected to the SCE 66kV Line via a new 66kV Interconnection Facility to be owned, operated and maintained by SCE. [REDACTED] will engineer, design and construct the new 66kV Interconnection Facility to SCE's standards. For the purpose of this study, the new facility will be referred to as [REDACTED].

[REDACTED] will be served by looping the 66kV Walnut – Industry – Proctor line to form the Walnut – Proctor [REDACTED] and Industry – [REDACTED] 66kV lines and will connect the lines to [REDACTED] owned 66kV Transformer.

[REDACTED] requested an interconnection date of June 1, 2007.

A Transmission System Impact Study (SIS) dated October 31, 2006, was prepared to address the impact of the new generation to the SCE Transmission System.

A Sub – Transmission SIS dated November 2, 2006, was prepared to address the impact of the new generation to the SCE Sub – Transmission System.

II. System Impact Study Results

The sub-transmission SIS concluded that the sub-transmission system is not adequate to support the new generation. The transmission SIS concluded that the transmission system is not adequate to support the new generation.

The Transmission SIS analyzed the SCE System under the following conditions:

1. Palo Verde – Devers 500 kV Line #2 was in service.
2. All four West of Devers 230 kV Lines have been upgraded.
3. The Etiwanda – San Bernardino 230 kV line #1 rating will be increased to 2480 Amps / 988 MVA after the current wave trap removal project is completed.

The Transmission SIS found the following overloaded elements:

BASE CASE:

No base case overloads.

SINGLE (N-1) CONTINGENCIES:

The [REDACTED] aggravates one pre-project overload triggered by interconnections placed ahead of the [REDACTED] in the Application Queue.

Center – Olinda 220kV T/L N – 1 Rating 2000A Loaded to 2084A (104%)
Transmission Outage: Mesa – Walnut 220kV T/L

DOUBLE (N-2) CONTINGENCIES:

No N-2 case overloads.

The Transmission System Impact Study recommended the following solutions to eliminate the overloads:

- Upgrade 220kV substation terminal equipment at Center and Olinda Substations.

The Transmission SIS identified [REDACTED] locations where the system fault duty will increase by 0.1kA or more as a result of the new generation, and recommended that the circuit breakers be investigated to determine whether replacements or upgrades are required.

The Sub-Transmission SIS found the following overloaded elements:

The Sub-Transmission SIS identified eleven locations where the system fault duty will increase by 0.1kA or more as a result of the new generation, and recommended that the circuit breakers be investigated to determine whether replacements or upgrades are required.

III. Facilities Study Assumptions

- a. All required ISO metering equipment at the generation facility will be provided by [REDACTED] and is not included in the Facilities Study.
- b. The required RTU and associated equipment to be placed at the [REDACTED] [REDACTED] will be installed by SCE and it is included in the Facilities Study.
- c. Engineering, procurement and construction of the [REDACTED] will be completed by Wellhead and is not included in the Facilities Study.

IV. Facilities Study Scope

The Facilities Study shows the scope of work and the cost estimate for the following work required for the interconnection:

Pursuant to FERC's orders 2006-A (Small Generators) and 2003-A (Large Generators) all Facilities Studies are required to provide the customer with its "maximum possible funding exposure, which shall include the costs of upgrades that are reasonably allocable to the Interconnection Customer at the time the estimate is made, and the costs of any upgrades not yet constructed that were assumed in the interconnection studies for the Interconnection Customer but are, at the time of the estimate, an obligation of an entity other than the Interconnection Customer."

To comply with the FERC orders, the Facilities Study will include:

CASE A: All facilities required exclusively by the [REDACTED]

And

CASE B: All additional facilities that may be required by the [REDACTED]

The facilities included on Case B are those additional facilities required to remedy situations caused by earlier Projects, placed ahead of the [REDACTED] in the Application Queue, and are expected to be implemented by them.

However, in the event that any of these earlier Projects withdraws their Application, the

[REDACTED]

[REDACTED]

FACILITIES STUDY

[REDACTED] may become responsible for any or all of these additional facilities. The [REDACTED] potential "maximum costs exposure" is identified by all the elements listed under both Case A and Case B combined.

CASE A:

- Install [REDACTED] interconnection facility with [REDACTED] 66kV CB Positions arranged in a modified Ring-Bus Configuration equipped with [REDACTED] 66kV Lines. For the purpose of this facility study, the new interconnection facility will be named Wellhead Substation.
- Install new RTU at Wellhead Substation to transmit generation information to the Mira Loma Regional Control Center (RCC).
- Evaluate circuit breakers short circuit capability at [REDACTED] 220kV stations. The evaluation determined that circuit breaker replacements and/or upgrades are required for [REDACTED] different conditions.
- This case identifies only the circuit breaker replacements and upgrades triggered by the [REDACTED] the evaluation concluded that 8 66kV circuit breaker replacements are needed at Bassett and Walnut Substations and the installation of 4 sets of TRV's to upgrade 3 circuit breakers are required at Barre Substation.

CASE B:

- This case identifies all the circuit breaker replacements and upgrades required, including those triggered by Applicants placed ahead of the Project in the Application Queue. Under this case a total of 26 220kV circuit breaker replacements and the installation of 14 sets of TRV's to upgrade 20 circuit breakers are required at Etiwanda and Mesa Substations.

V - A: Facilities Study Results - CASE A

The following Interconnection Facilities are required:

A. Sub-Transmission:

1. Walnut - Industry - Proctor 66kV Line:
Loop the Walnut - Industry - Proctor 66kV Line to form the Walnut - Proctor - [REDACTED] and Industry - [REDACTED] 66kV Lines.

This work requires the installation of 2-80' LWTS poles and 2-35' guy poles.

B. Substation:

- 1A. [REDACTED] - Scope of Work b [REDACTED]
[REDACTED] Engineer and construct a 66kV interconnection facility, with three 66kV CB's to provide two-line service to serve one generator owned transformer bank. Also install a Mechanical-Electrical Equipment Room (MEER).

All work to be performed according to SCE Engineering, Design, Materials and Construction Standards.

[REDACTED]
[REDACTED]
FACILITIES STUDY

1B [REDACTED] Scope of Work by SCE
Review the complete engineering and design drawings, and bills of material submitted by [REDACTED] to verify their compliance with the SCE Engineering and design Standards.

Inspect the site during construction to verify compliance with SCE Materials and Construction Standards.

Test the substation prior to energization by SCE.

[REDACTED] will deed [REDACTED] to Edison including a 10' easement around each side of the new substation.

2. Bassett Substation
Replace 66kV circuit breaker

3. Barre Substation
Upgrade 220kV circuit breakers by installing sets of TRV's.

4. Walnut Substation
Replace 66kV circuit breakers.

C. Telecommunications:

Install [REDACTED] taps on an existing SCE fiber optic cable and approximately 3000 ft. of fiber cable to provide diverse entrances to the new [REDACTED] [REDACTED] Install approximately 3000 ft. of 5" PVC conduit. Install one new SONET OC-12 optical multiplexor at [REDACTED] [REDACTED] Install channel equipment at [REDACTED].

D. Power System Controls:

Install a new smart multi-ported Remote Terminal Unit (RTU) at Wellhead Substation and a second RTU installed at the customer site to provide generation data to the SCE Grid Control Center.

E1. Estimated cost

\$ 3,975,300

See Exhibit C for cost breakdown

V - B. Facilities Study Results - Case B

The following additional System Upgrades are required to support the new interconnection under Case B:

A. Substation:

1. Center Substation:
Replace [REDACTED] 220kV, 1200A disconnect switches with 220kV, 2000A disconnect switches and [REDACTED] 220kV, 2000A wave trap with [REDACTED] 220kV, 3000A wave trap on Pos. 7.
3. Etiwanda Substation:
Replace [REDACTED] 220kV circuit breakers and upgrade [REDACTED] 220kV circuit breakers by installing [REDACTED] sets of TRV's. Upgrade the switchyard to 83kA.
4. Mesa Substation:

[REDACTED]
[REDACTED]
FACILITIES STUDY

- Replace 23 220kV circuit breakers. Upgrade the switchyard to 80kA.
5. Olinda Substation:
Replace [REDACTED] 220kV, 1200A disconnect switches with 220kV, 2000A disconnect switches and [REDACTED] 220kV, 2000A wave trap with [REDACTED] 220kV, 3000A wave trap on Pos. 2.

\$49,062,000

Additional Estimated costs:

See Exhibit C for cost breakdown

VI. Conclusions

- a. The estimated cost for the Interconnection is approximately \$3,975,300 for Case A with the potential additional cost of \$49,062,000 for a total project "maximum exposure" of \$53,037,300.
- b. Generally, the completion of the proposed project option 1 requires approximately 18 months, which includes engineering review, material procurement, and construction. Four weeks of acceptance testing and pre-operations validation are necessary before releasing the substation to grid operations and the CASIO.
- c. The costs indicated in the attached tables are 2008 dollars and are not firm, these are preliminary estimates only. These cost estimates are based on conceptual engineering and system unit costs, and are subject to change based on the final design and actual material costs. This Facilities Study and cost estimates as presented are valid for a period of 90 days.
- d. The estimated Project Cost will be reconciled to actual costs upon closure of the subject work orders. The necessary billing adjustments will be made at that time.

EXHIBIT A
SUBSTATION

PAGES OMITTED FOR
CEII REGULATIONS

EXHIBIT B
MAJOR EQUIPMENT

[REDACTED]

MAJOR EQUIPMENT AND RELAYS - CASE A

NEW [REDACTED] SUB - TO BE DESIGNED AND CONSTRUCTED BY [REDACTED]

- 1 66kV Ring Bus Rack
- 3 66kV Circuit Breakers
- 24 66kV Group Operated - Vertically Mounted Disconnect Switches
- 4 66kV Potential Transformers
- 1 66kV Dead End Rack
- 1 HCB with PMA
- 1 HCB with PM-2
- 1 Schweitzer SEL-2030 Communications Processor Relays
- 3 Schweitzer SEL-311C relays
- 1 Remote Terminal Unit (RTU)

TRANSMISSION:

- 2 LWTSP
- 2 35' Guy Poles

POWER SYSTEM CONTROL

SCE equipment at [REDACTED]

- 1 Remote Terminal Unit (RTU)

BASSETT SUB

- 1 66kV Circuit Breakers

BARRE SUB

- 4 220kV TRV Line to Ground Capacitors with individual steel pedestals

WALNUT SUB

- 7 66kV Circuit Breakers

ADDITIONAL MAJOR EQUIPMENT FOR CASE B

- 26 220kV Circuit Breakers
- 14 220kV TRV Line to Ground Capacitors with individual steel pedestals
- 7 220kV 2000A Disconnect Switches
- 2 220kV 3000A Wave Traps

EXHIBIT C
COST SUMMARY

- Case A

Cost Estimate Summary (2008 Dollars)

Interconnect 49.9MW of generation to the Walnut Substation 66kV Bus.
 The interconnection requires the installation of a new 66kV Switching Station.
 [REDACTED] will design and construct the Substation. Edison will review the design, inspect construction and test equipment.
 It also requires telecommunication facilities for the line protection, upgrade CB's at Barre and Replace CB's at Bassett and Walnut

Scope:

ELEMENT	INTERCONNECTION FACILITIES		DISTRIBUTION UPGRADES		RELIABILITY UPGRADES		Income Tax Component of Contribution *	ONE TIME PAYMENT
	Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M		
Sub. - SCE Scope of Work								
Transmission Line								
Telecommunications (Line Protection)								
Power Systems Control - RTU								
Power Systems Control - Upgrades								
PMA Relay Installed at Proctor								
Bassett Sub. - Replace 66kV CB								
Barre Substation - install TRV's to upgrade 3 CB's								
Walnut Substation - Replace 66kV CB's								
TOTAL	\$ 999,000	\$ 1,519,000	\$ 576,000	\$ 881,300	\$ 3,975,300			

Additional Elements for Case B
 Cost Estimate Summary (2008 Dollars)

Scope: Replace 1200A disconnect switches and wave trap at Center Substation,
 Replace 220kV CB's, upgrade TRV's and upgrade switchyard to 83kA at Etiwanda Sub.,
 Replace 220kV CB's at Mesa Sub., Replace 1200A disconnect switches and wave trap at Olinde Sub.,
 Replace 66kV CB's at Walnut Sub.

ELEMENT	INTERCONNECTION FACILITIES		DISTRIBUTION UPGRADES		RELIABILITY UPGRADES		Income Tax Component of Contribution *	ONE TIME PAYMENT
	Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M		
Center Sub. - Replace disconnect switches and wave trap								
Etiwanda Sub. - Replace CB's, install TRV's								
Mesa Sub. - Replace CB's								
Olinde Sub. - Replace disconnect switches and wave trap								
TOTAL	\$ -	\$ -	\$ 49,062,000	\$ -	\$ 49,062,000	\$ -	\$ 49,062,000	\$ -

This document includes confidential trade secrets and proprietary information of Southern California Edison, to be used only by [REDACTED] in connection with its evaluation of this Facility Study Proposal. Southern California Edison retains all rights to maintain the confidentiality of this information and requests that [REDACTED] preserve its confidentiality.

* ITCC tax (calculated at 35%) is collected via Letter of Credit.
 * Pursuant to FERC Order 2003A, there will be no ITCC collected on Reliability Upgrades.

EXHIBIT D
PROJECT SCHEDULE

PROJECT SCHEDULE

CASE A

ELEMENT	Month 1 Month 2 Month 3 Month 4 Month 5 Month 6 Month 7 Month 8 Month 9 Month 10 Month 11 Month 12 Month 13 Month 14 Month 15 Month 16 Month 17 Month 18																	
	START	END																
PROJECT APPROVAL																		
SUB. DESIGNED & INSTALLED BY WELLHEAD Design Review Site Inspection during Wellhead Construction Testing	Initiate Work Orders																	
	New Switching Station																	
	Start of Mo.2	Start of Mo.5																
BARRE SUB. Engineering & Design Major Equipment Procure & Deliver Construction Testing	Start of Mo.4	Start of Mo.7																
	Start of Mo.7	End of Mo.7																
	Upgrade 3 220kV CB's																	
BASSET SUB. Engineering & Design Major Equipment Procure & Deliver Construction Testing	Start of Mo.2	Start of Mo.7																
	Start of Mo.6	Start of Mo.15																
	Start of Mo.18	Start of Mo.18																
WALNUT SUB. Engineering & Design Major Equipment Procure & Deliver Construction Testing	Start of Mo.16	End of Mo.18																
	Repl. 1 66kV CB																	
	Start of Mo.5	Start of Mo.9																
WALNUT SUB. Engineering & Design Major Equipment Procure & Deliver Construction Testing	Start of Mo.7	Start of Mo.15																
	Start of Mo.13	Start of Mo.18																
	Start of Mo.16	End of Mo.18																
WALNUT SUB. Engineering & Design Major Equipment Procure & Deliver Construction Testing	Replace 7 66kV CB's																	
	Start of Mo.2	Start of Mo.6																
	Start of Mo.4	Start of Mo.12																

ADDITIONAL ELEMENTS FOR CASE B

ELEMENT	Month 1 Month 2 Month 3 Month 4 Month 5 Month 6 Month 7 Month 8 Month 9 Month 10 Month 11 Month 12 Month 13 Month 14 Month 15 Month 16 Month 17 Month 18																	
	START	END																
CENTER SUB. Engineering & Design Major Equipment Procure & Deliver Construction Testing	Start of Mo.2	Start of Mo.6																
	Start of Mo.4	Start of Mo.12																
	Start of Mo.10	Start of Mo.18																
ETWANDA SUB. Engineering & Design Major Equipment Procure & Deliver Construction Testing	Start of Mo.16	End of Mo.18																
	Replace 3 CB's, install 14 TRV's																	
	Start of Mo.2	Start of Mo.6																
MESA SUB. Engineering & Design Major Equipment Procure & Deliver Construction Testing	Start of Mo.4	Start of Mo.12																
	Start of Mo.10	Start of Mo.18																
	Start of Mo.16	End of Mo.18																
CLINDA SUB. Engineering & Design Major Equipment Procure & Deliver Construction Testing	Replace 4 dis. sw. & 1 wave trap																	
	Start of Mo.2	Start of Mo.6																
	Start of Mo.4	Start of Mo.12																
WALNUT SUB. Engineering & Design Major Equipment Procure & Deliver Construction Testing	Start of Mo.10	Start of Mo.18																
	Start of Mo.16	End of Mo.18																
	Replace 7 66kV CB's																	
WALNUT SUB. Engineering & Design Major Equipment Procure & Deliver Construction Testing	Start of Mo.2	Start of Mo.6																
	Start of Mo.4	Start of Mo.12																
	Start of Mo.10	Start of Mo.18																

The Start Date of Case B will depend on the System Conditions at the time of the Project which will determine when the additional upgrades will be required.