

Facilities Study Addendum 3



SOUTHERN CALIFORNIA
EDISON

An EDISON INTERNATIONALSM Company

October 30, 2013

Prepared by:
Brian Lau

A handwritten signature in black ink, appearing to read "Brian Lau".

Added Facilities/Interconnection Facilities

Approved by:
Lindsey A. Sayers

A handwritten signature in black ink, appearing to read "Lindsey A. Sayers".

Added Facilities/Interconnection Facilities

Southern California Edison



Table of Contents

	Description	Page
I.	Executive Summary _____	3
II.	Facilities Study Addendum 3 Scope _____	3
III.	Conclusions _____	5
IV.	Appendices	
	Appendix A	
	Cost Summary	

I. Executive Summary

[REDACTED], an Interconnection Customer (IC), has submitted a completed Interconnection Request (IR) to the Southern California Edison Company (SCE) for their proposed [REDACTED] (Project), under the terms of SCE's Wholesale Distribution Access Tariff (WDAT).

The Project is a 10 MW Solar Photovoltaic (PV) Plant that consists of [REDACTED]
[REDACTED]
[REDACTED] The Project will be interconnected to SCE's electric system through the existing 66 kV line via a SCE owned tapped substation.

This report is an addendum to Addendum 2 issued on August 5, 2013.

II. Facilities Study Addendum 3 Scope

This Facilities Study Addendum 3 shows the scope of work and the cost estimate for the following work required for the interconnection (all assumptions and scope stated in the previous Facilities Study and Addendums not related to the following remain the same):

1. Update tap substation location
2. Remove scope for Wilsona Substation fuse requirement

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 Scope of Work and Cost Estimate for all elements required for the interconnection are presented for the following two cases:

CASE A Facilities: All facilities required to be paid by the Project

And

CASE B Facilities: All additional facilities that may be required to be paid by the Project

The facilities included in Case B are those additional facilities required to support line protection requirements and are needed if queued ahead projects do not move forward within the timeframes required to interconnect this project.

CASE A:

Substation:

WDT404 Substation

Provide oversight for IC building interconnection tap substation.

Little Rock Substation

Install a pair of relays and three (3) potential transformers for line protection.

Sub-Transmission:

Install three (3) light weight steel poles, three (3) automated pole switches, and approximately 400 circuit feet of overhead conductor

Corporate Environmental, Health, & Safety:

Perform environmental studies, obtain environmental permits, and perform other environmental activities related to the tap line and two miles of overhead fiber optic cables. For deed to interconnection facilities, provide oversight of the IC's environmental activities related to the interconnection substation/facility, and/or provide support for potential licensing requirements by the California Public Utilities Commission (CPUC).

NOTE: For deed to interconnect facilities costs associated with the oversight of the IC's environmental activities and the support for potential permits and/or CPUC licensing requirements are contingent on final Engineering and Design and ultimate licensing requirements of the Project, and therefore are not available for inclusion into this addendum. These costs will be part of the true-up costs of the Project.

Real Properties:

Activities related to the approximate 8,000 feet of fiber optic cables and obtaining access easement for the RTU installed in the generation facilities.

Telecommunication:

Install lightwave, channel, and associated equipment at Little Rock, Lancaster, and WDT404 Substations along with approximately 8,000 feet of fiber optic cable from Little Rock to WDT404 Substations.

Power Systems Control:

Install a new smart real-time Remote Terminal Unit at WDT404 Substation to monitor customer's data, monitor necessary alarms, and operate the substation. Relay point additions and line name changes to the existing SAS2 database and displays at Little Rock Substation are required as well as line name changes to the existing database and displays at Wilsona Substation.

Metering Services Organization:

Install revenue metering units and associate metering materials at WDT404 Substation.

NOTE: There are no CASE B elements.

[REDACTED]
[REDACTED]
FACILITIES STUDY ADDENDUM 3

The total estimated cost of all elements of the interconnection as identified above in the Facilities Study Addendum 3 Scope is as follows:

CASE A:	\$ 3,635,000
CASE B:	<u>\$ 0</u>
Maximum Cost Exposure:	\$ 3,635,000

See Appendix A for cost breakdown

III. Conclusions

- A. The estimated cost to interconnect the Project is approximately \$3,635,000 for Case A with the potential additional cost of \$0 for Case B for a maximum exposure of \$3,635,000.
- B. The costs indicated in the attached tables are shown in 2013 Dollars and are not firm. These are only preliminary estimates 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 Addendum 3 and cost estimates as presented are valid for a period of 90 days.
- C. The estimated Project cost will be reconciled to actual costs upon closure of the associated work orders. The necessary billing adjustments will be made in accordance with the terms of the interconnection agreement.
- D. The time required to complete the Interconnection Facilities and Reliability Network Upgrades is estimated to be 24 months after receiving project authorization and funding.
A detailed Project Schedule will be provided during the Engineering and Design Phase of the Project.
- E. The results provided in this study are based on conceptual engineering and are not sufficient for permitting of facilities.

APPENDIX A

COST SUMMARY

WDT 404 [REDACTED] Addendum 2

Cost Estimate Summary (2013 Dollars)

Scope: Interconnect 10 MW of generation by tapping the existing Little Rock - Wilsona 66 kV line

No.	Element	Interconnection Facilities (Subject to ITCC)	IF One Time Cost (Not Subject to ITCC)	Distribution Upgrades (Subject to ITCC)	Distribution One Time Cost (Not Subject to ITCC)	ITCC** (35%)	2013 Constant Dollars Escalated
	Sub-Transmission						
	Tap into Little Rock - Wilsona 66kV line, main line rebuild for	\$	-	206,647	-	-	[REDACTED]
1	Tap into Little Rock - Wilsona 66kV line, main line rebuild for	\$	-	-	32,507	-	[REDACTED]
2	Return tap line, one time cost	\$	507,106	-	-	-	[REDACTED]
3	Construct 400 tap line from ex. main line	\$	-	-	-	-	[REDACTED]
4	Construct 400 tap line from ex. main line, one time cost	\$	17,337	-	-	-	[REDACTED]
	Subtotal						
	Substation						
1	Overhaul for IC to build tap substation	\$	451,533	-	-	-	[REDACTED]
2	Install relays at Little Rock Substation	\$	-	224,307	-	-	[REDACTED]
	Subtotal						
	Telecommunication						
1	Install cross connections between WDT404 Generation Facility and SCE WDT 404 Sub to support SCADA, ex. line protection (local fiber optic cable, fiber optic, channel, and associated equipment supporting line protection and SCADA)	\$	7,693	-	-	-	[REDACTED]
2	equipment supporting line protection and SCADA	\$	-	590,100	-	-	[REDACTED]
	Subtotal						
	Corporate Environmental Services						
1	Activities to support the tap line on customer property	\$	47,542	-	-	-	[REDACTED]
2	Activities to support the telecom distribution upgrade	\$	-	102,008	-	-	[REDACTED]
3	Activities to support the telecom distribution upgrade	\$	-	-	-	-	[REDACTED]
	Subtotal						
	Licensing						
1	Activities to support project - N/A	\$	-	-	-	-	[REDACTED]
	Subtotal						
	Real Properties						
1	Activities to support the Interconnection Facilities	\$	79,100	-	-	-	[REDACTED]
2	Activities to support the Distribution Upgrades	\$	-	9,752	-	-	[REDACTED]
	Subtotal						
	Metering Services						
1	Relay metering equipment, and relay meters at the Generation Fac	\$	32,677	-	-	-	[REDACTED]
	Subtotal						
	Power System Control						
1	FTD at generation facility	\$	96,546	-	-	-	[REDACTED]
2	Upgrade point edition at Little Rock	\$	-	-	94,674	-	[REDACTED]
3	Name changes at Wilsona	\$	-	-	3,218	-	[REDACTED]
	Subtotal						
	Total	\$	1,222,196	\$	1,292,844	\$	880,264
			17,337		70,399		3,483,040
							3,635,000

1. Pursuant to FERC Order 2002A, ITCC is not collected on Reliability Upgrades and One Time Costs.
 2. ITCC cost may be satisfied with a letter of credit in accordance with the tax provisions of the LGSA.
 3. The ITCC included in this cost estimate was computed using a 35% rate. Because of recent enactment of H.R. 4853, the Tax Relief, Unemployment Insurance Reauthorization and Job Creation Act of 2010, and upon formal acceptance by the CPUC of SCE's action letter (filed on December 27, 2010), this rate may change for electric CIAC reported or received after September 8, 2010 through December 31, 2011.
 Cost estimate is only an estimate based on 2013 constant dollars and actual cost is subject to change depending on project construction date, and inflation.