



WDAT 691 ISP

***WDAT
Facility Study***

May 1, 2012



**SOUTHERN CALIFORNIA
EDISON**
An EDISON INTERNATIONALSM Company

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SOUTHERN CALIFORNIA EDISON COMPANY

EXECUTIVE SUMMARY

[REDACTED] applied to Southern California Edison ("SCE") for interconnection and wholesale distribution service for its proposed Fuel Cell Project pursuant to SCE's Wholesale Distribution Access Tariff ("WDAT") Small Generator Interconnection Procedures. SCE performed a Facility Study as requested by [REDACTED] for a 480V interconnection and distribution service from an existing 12kV distribution line ("Calstate 12kV"). The interconnection is to be located approximately 1.8 miles from the [REDACTED] on the Calstate 12kV circuit out of SCE's [REDACTED]. The request is for a WDAT Fuel Cell generation facility with a total capacity of 1.4 MW. The initial request is for service to commence by [REDACTED].

The new generation, consisting of fuel cell generator, [REDACTED] inverter, would receive interconnection service from SCE's existing 12 kV circuitry on Calstate 12 kV out of [REDACTED] via an underground line extension to the interconnection facility. The generated power would be delivered to the California Independent System Operator ("CAISO") grid at the 220 kV bus of SCE's [REDACTED].

The purpose of this Facility Study is to determine:

- The estimated cost for the Distribution Upgrades and Interconnection Facilities which were identified in the Independent System Impact Study¹.
- The estimated time required to complete the design and construction of the Distribution Upgrades and Interconnection Facilities which were identified in the Independent System Impact Study.

Non-binding order of magnitude cost estimates for the required interconnection facilities and 12 kV system upgrades are as follows:

<u>Interconnection Facilities</u>	\$ 247K
<ul style="list-style-type: none"> • 1500kVA 12kV-277/480V Transformer • 3-Way Pad-Mounted Gas Switch • PME-4 Switch • 1750' 1/0 CLP UG Line Extension • Metering 	
Telemetry Requirements²	\$ 116 K

¹ Copy of the Independent System Impact Study is provided as attachment A.

² Cost and scope of telemetry may be reduced. Details will be provided once the new telemetry system methods are completed.

- Remote Terminal Unit
- Telecommunication System for RTU

EH&S Cost Estimate

\$ 27.0 K

- EH&S Cost Estimate for Line Extension only

Total non-binding order of magnitude cost estimate

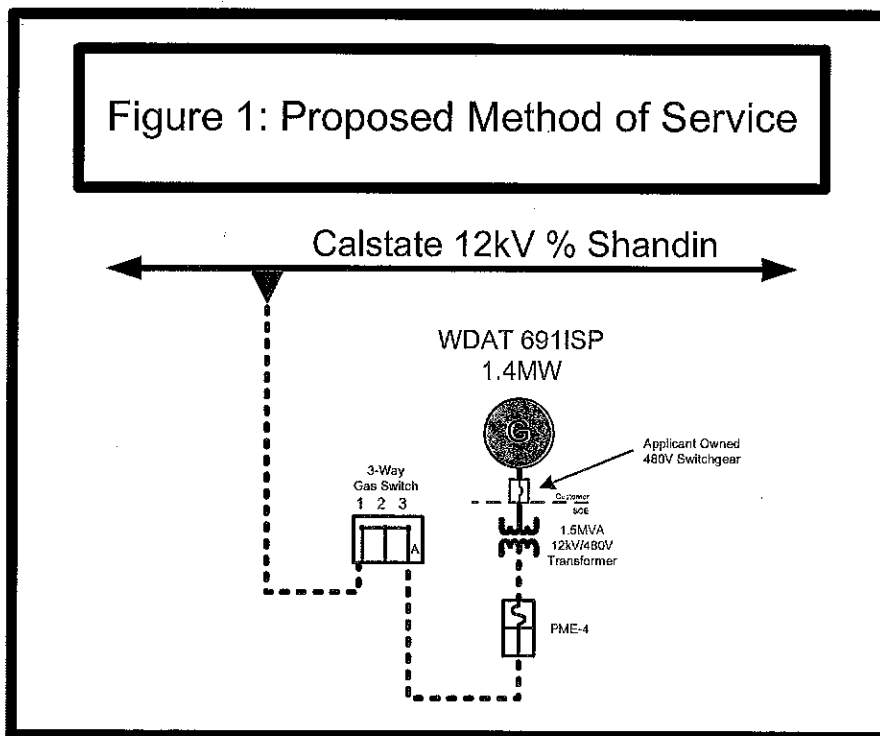
\$ 390.0 K

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I. INTRODUCTION

[REDACTED] applied to Southern California Edison ("SCE") for interconnection and wholesale distribution service for its proposed Fuel Cell Project pursuant to SCE's Wholesale Distribution Access Tariff ("WDAT") Small Generator Interconnection Procedures. SCE performed a Facility Study as requested by SCE GS&P for a 480V interconnection and distribution service from an existing 12kV distribution line ("Calstate 12kV"). The interconnection is to be located approximately 1.8 miles from the [REDACTED] on the Calstate 12kV circuit out of SCE's [REDACTED]. The request is for a WDAT Fuel Cell generation facility with a total capacity of 1.4 MW. The initial request is for service to commence by [REDACTED]



The new generation, consisting of fuel cell generator, [REDACTED] inverter, would receive interconnection service from SCE's existing 12 kV circuitry on Calstate 12 kV out of [REDACTED] via an underground line extension to the interconnection facility. The generated power would be delivered to the California Independent System Operator ("CAISO") grid at the 220 kV bus of SCE's [REDACTED]

The purpose of this Facility Study is to determine:

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- The estimated time required to complete the design and construction of the Distribution Upgrades and Interconnection Facilities which were identified in the Independent System Impact Study.

VI. SUMMARY

1. Distribution Upgrades are not required to interconnect this project.
2. Interconnection facilities include an underground line extension to the Calstate 12kV line for approximately 1750' of 1/0 CLP, the installation of a 1500kVA 12kV-277/480V Transformer, an automated Pad-Mounted 3-Way Gas Switch, PME-4 Switch, metering CT's and PT's, meters, and associated wiring.
3. Real time telemetry will be required. It will be required to install an RTU and Telecom systems as required to provide Watts and VARS flow from the generation facility to the SCE distribution system.
4. Non-binding order of magnitude cost estimates for the required interconnection facilities and system upgrades are as follows, these do not include cost any civil construction required by the interconnection.

<u>Interconnection Facilities</u>	\$ 247.0K
<u>Telemetry Requirements</u> ³	\$ 116.0 K
<u>EH&S</u>	\$ 27.0 K
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Total non-binding order of magnitude cost estimate	<u>\$ 390.0 K</u>

5. The design of the Interconnection Facilities will take be approximately 60 business days from the execution of the Small Generator Interconnection Agreement (SGIA) and from the time the applicant has provided the following to SCE:
 - *Approved panel drawings which shall comply with SCE ESR. These requirements can be downloaded at :*
<http://www.sce.com/AboutSCE/Regulatory/distributionmanuals/esr.htm>
 - *Customer information sheet.*
 - *Street improvement plans (if available)*
 - *Unique address for point of interconnection*
 - *Public Right away (Street) base maps as required by the interconnection.*
 - *Site plot plan on a 30:1 Scale or Digital file*
 - *Easements/Lease agreement*
 - *Grading plans*
 - *Sewer and storm plot plans*

³ Cost and scope of telemetry may be reduced. Details will be provided once the new telemetry system methods are completed.

- *Landscape, Sprinkler, Pedestal Locations*
- *Underground civil construction is released by SCE inspectors.*

6. The construction of the Interconnection Facilities will take be approximately 60 business days from the completion of the design and from released of SCE underground inspector of the applicant built ducts and structures needed for the interconnection electrical facilities.
7. Applicant is responsible for the construction of underground facilities needed for the interconnection facilities. The construction of the underground facilities must be based on SCE design drawings.
8. Current distribution standards are being updated to address generation interconnection systems. The proposed method of service on this report may change according on final design to comply with the updated distribution design standards.
9. The Environmental, Health and Safety (EH&S) Cost Estimate includes the biological resources task as well as cultural resource and paleontological tasks associated with the WDAT 691ISP's 1700' underground line extension. The biological resource tasks include the anticipated surveys, documentation, permitting for species and waters, and monitoring construction activities. The costs identified do not include site restoration or post-construction mitigation and monitoring. The cultural and paleontological resources tasks include preparation of the anticipated surveys, documentation, consultations with government agencies, and monitoring construction activities.

Attachment A – Independent System Impact Study