
Appendix A – WDT1021



Queue Cluster 6 Phase II Report

November 20, 2014

This study has been completed in coordination with the California Independent System Operator Corporation (CAISO) per CAISO Tariff Appendix DD Generator Interconnection and Deliverability Allocation Procedures (GIDAP)

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Attachments:

1. Interconnection Facilities, Network Upgrades, and Distribution Upgrades
2. Escalated Cost and Time to Construct for Interconnection Facilities, Reliability Network Upgrades, Delivery Network Upgrades, and Distribution Upgrades
3. Allocation of Network Upgrades for Cost Estimates and Maximum Network Upgrade Cost Responsibility
4. Distribution Provider Interconnection Handbook
5. Short Circuit Calculation Study Results (see Appendix H of the area report)
6. Not Used

A. Introduction

[REDACTED] the Interconnection Customer (IC), has submitted a completed Interconnection Request (IR) to Southern California Edison Company (SCE) for their proposed [REDACTED] (Project). The Project plans to have a total net output of 20 MW at its Point of Interconnection (POI) which is Southern California Edison Company's (SCE) [REDACTED] with a CAISO delivery point at the Valley 500 kV Bus. The IC elected that the Project be Option A with Full Capacity Deliverability Status, and desires an In-Service Date (ISD) and Commercial Operation Date (COD) of 06/01/2015 and 08/01/2015 respectively. Such dates are specified in the Project Attachment B. Actual ISD and COD will depend on design and construction requirements to Interconnect for the Project.

In accordance with Federal Energy Regulatory Commission (FERC) approved CAISO Tariff Appendix DD Generator Interconnection and Deliverability Allocation Procedures (GIDAP) of Attachment I of SCE's Wholesale Distribution Access Tariff (WDAT), the Project was grouped with Queue Cluster 6 (QC6) Phase II projects to determine the impacts of the group as well as impacts of the Project on the CAISO Controlled Grid.

The area report has been prepared separately identifying the combined impacts of all projects in the group on the CAISO Controlled Grid. This report focuses only on the impacts or impact contributions of the Project, and it is not intended to supersede any contractual terms or conditions specified in an Interconnection Agreement.

The report provides the following:

1. Transmission and/or Subtransmission system impacts caused by the Project;
2. System reinforcements necessary to mitigate the adverse impacts caused by the Project under various system conditions;
3. A list of required facilities and a good faith estimate of the Project's cost responsibility and time to construct¹ these facilities. Such information is provided in Attachment 1 and Attachment 2 as separate documents in the Appendix A Project report package.

All the equipment and facilities comprising the Project are located in [REDACTED], as disclosed by the IC in its Interconnection Request (IR), as may have been amended during the Interconnection Study process, which consists of (i) [REDACTED]

The Project shall consist of the Generating Facility and the IC's Interconnection Facilities as illustrated below in Figure A. Similarly, the Project information is summarized in Table A.1 below, as well as, Figure

¹ It should be noted that construction is only part of the duration of months specified in the study, includes final engineering, licensing, etc, and other activities required to bring such facilities into service. These durations are from the execution of the Interconnection Agreement, receipt of all required information, funding, and written authorization to proceed from the IC as will be specified in the Interconnection Agreement to commence the work

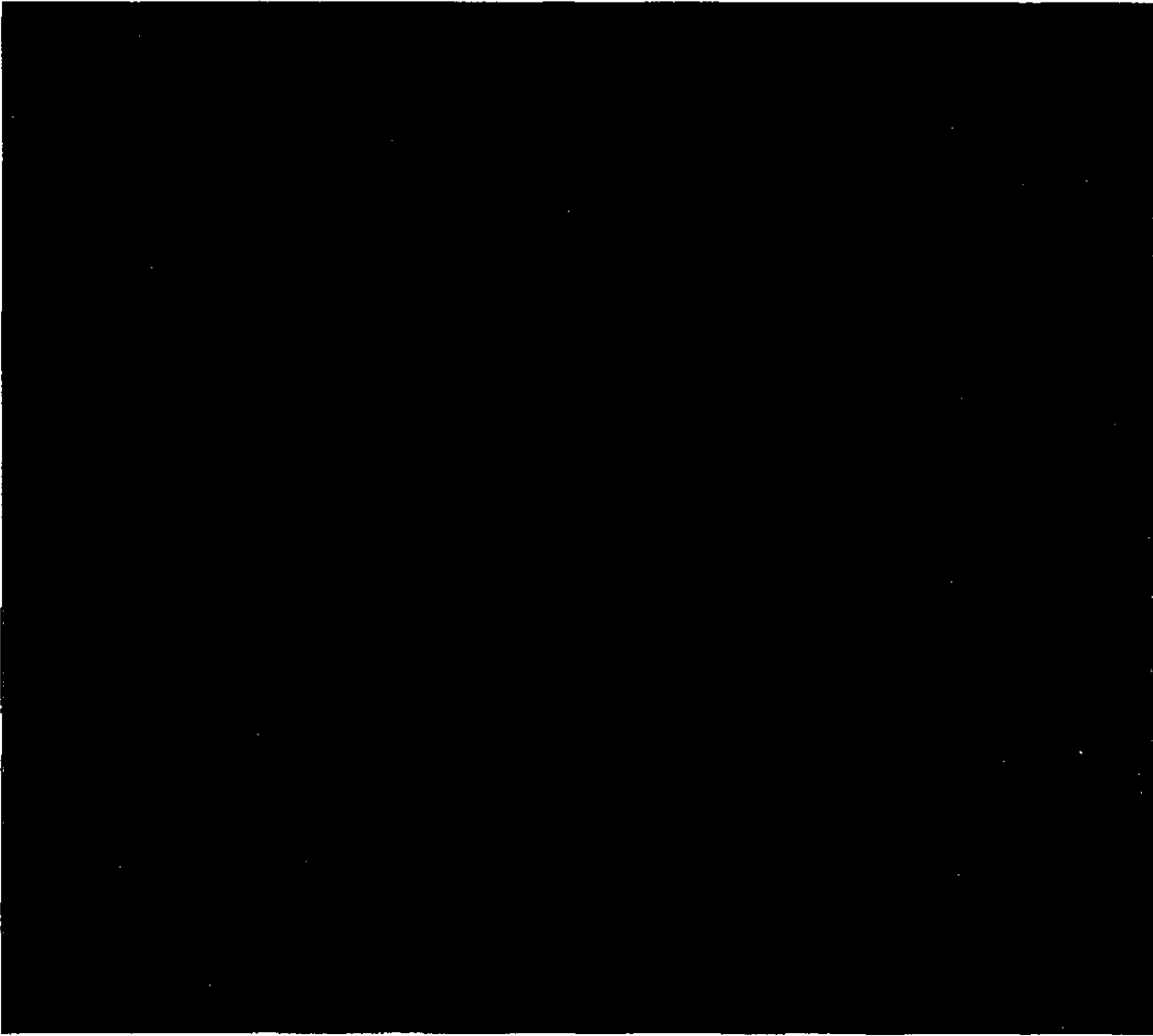
A.2 is a map that illustrates the location of the Project. The Project shall not exceed the total NET output.



Table A.1 Project General Information

Project Location	[REDACTED]
Distribution Provider's Planning Area	Eastern Area
Number and Types of Generators	[REDACTED]
Interconnection Voltage	115 kV
Maximum Generator Output	20.10 MW
Generator Auxiliary Load/ system losses	.10 MW
Maximum Net Output to Grid	20.0 MW
Power Factor Range	[REDACTED]
Step-up Transformer(s)	[REDACTED]
POI	Distribution [REDACTED] with a CAISO delivery point at the Valley 500 kV Bus
IC Requested COD	August 1, 2015

Figure A.2: Project Map



B. Study Assumptions

For detailed assumptions regarding the group cluster analysis, please refer to the QC6 Phase II area report. Below are the assumptions specific to the Project.

1. The following is the Plan of Service (POS) assumed for the Project in the Phase II Study:
The project was modeled as Interconnecting 20 MW of net generation to the [REDACTED] 115 kV Bus via one 115 kV generation tie-line (gen-tie) with a CAISO delivery point at [REDACTED] [REDACTED]
2. The following Facilities will be installed by SCE and are included in this Phase II Study:
 - The segment of 115 kV gen-tie line inside the [REDACTED] Property Line.
 - The segments of each of the two generator – owned telecommunication paths inside the [REDACTED] property line.

- The required revenue metering retail load meters.

NOTE: SCE Installation does not include metering, voltage, and current transformers. The SCE Meters will be connected to the generator – owned voltage and current transformers to be installed for their CAISO metering.

3. The following Facilities will be installed by the IC and are not included in this Phase II Study:

- The 115 kV gen-tie line from the Generating Facility to the last structure outside the [REDACTED] property line.
- The 115 kV gen-tie line Optical Ground Wire (OPGW) and an additional Fiber Optic Line to provide two diversely routed telecommunication paths required for the line protection relays.
- The required CAISO metering equipment (voltage and current transformers and CAISO meters).

NOTE: The metering voltage and current transformers installed for the CAISO metering will also be used for the SCE owned retail meters.

- The following line protection relays to be installed at the Generating Facility end of the 115 kV gen-tie line:

- [REDACTED]
- [REDACTED]

4. The following additional items were considered in the Phase II Study:

For the purposes of this study SCE assumed that the [REDACTED] [REDACTED] is already in service. The open air bus extension was triggered by a prior queued project. It is important to note that if the prior queued project that triggered the need for the [REDACTED] does not materialize before the Project requested ISD, the Project may choose to advance the costs of the [REDACTED] or wait for the triggering project to move forward. Should the prior queued project withdraw, the Project will absorb 100% of the cost to extend the [REDACTED]. The estimated costs to extend the [REDACTED] [REDACTED] are approximately \$332 K (2014 dollars).

C. Reliability Standards, Study Criteria and Methodology

This study has been completed in coordination with the California Independent System Operator Corporation (CAISO) per CAISO Tariff Appendix DD Generator Interconnection and Deliverability Allocation Procedures (GIDAP).

D. Reliability Assessment Results

I. Steady State Power Flow Analysis Results – 220 kV and above

The Project did not get allocated costs for any Network Upgrades.

II. Steady State Power Flow Analysis Results – 66 kV and 115 kV

The study indicated that the Project contributes to the following facility overloads or non-convergence problems. The details of the analysis and overload levels are provided in the area study.

1. Thermal Overloads

Category "A"

- None

Category "B"

- [REDACTED]
- [REDACTED]
- [REDACTED]

Category "C"

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

2. None Power Flow Non-Convergence

There were no non-convergence issues under certain contingencies identified with the inclusion of the Project due to the limited system capacity.

3. Voltage Performance

With the generators providing the required power factor regulation capability (0.95 lead/lag at POI), no voltage performance issues were identified.

4. Required Mitigations

2. Short Circuit Duty Study Results

All bus locations where the QC6 Phase II projects increase the short-circuit duty by 0.1 kA or more and where duty was found to be in excess of 60% of the minimum breaker nameplate rating are listed in the area report (Appendix H). These values have been used to determine if any equipment is overstressed as a result of the inclusion of QC6 Phase II interconnections and corresponding network upgrades, if any.

The responsibility to finance short circuit related Reliability Network Upgrades Identified through a Group Study shall be assigned to all Interconnection Requests in that Group Study pro rata on the basis of short circuit duty contribution of each Generating Facility.

Please refer to the QC6 Phase II area report for the QC6 Phase II breaker evaluation identified overstressed circuit breakers at the SCE buses, and Attachment 2 for the pro-rata allocation with corresponding estimated costs (if any) for the Project, based on SCD contribution at each location.

3. SCE Substations with Ground Grids Duty Concerns

The short circuit studies flagged SCE-owned substations beyond the Project POI with ground grid duty concerns that necessitate a ground grid study. However, the Project does not contribute to the duty concerns at hand, and did not get allocated costs for ground grid studies at the flagged SCE-owned substations.

4. Preliminary Protection Requirements

Protection requirements are designed and intended to protect the Distribution Provider's system only. The preliminary protection requirements were based upon the interconnection plan as shown in the one-line diagram depicted in line item #7 in Attachment 1.

The IC is responsible for the protection of its own system and equipment and must meet the requirements in the Distribution Provider Interconnection Handbook provided in Attachment 4.

F. Reactive Power Deficiency Analysis

Reactive Power Deficiency Analysis was conducted using full loop base cases to ensure that there is enough reactive support such that the system (66 kV and above) remains in operating equilibrium, as well as operating in a coordinated fashion; through abnormal operating conditions after the QC6 Phase II projects begin operation.

1. Area Study Reactive Power Deficiency Results – 220 kV and above

The study concluded that the reactive power requirements for the Eastern Bulk system is acceptable with the combination of all network upgrades identified with all generating facilities in QC6 Phase II in the Eastern Bulk required to be designed to provide 0.95 leading/lagging power factor at their POI.

2. Individual Project Power Factor Requirements

Based on the results of the Study, the Project will need to be designed to maintain a composite power delivery at continuous rated power at the POI at a power factor within the range of 0.95 leading and 0.95 lagging. Additionally, the generation system must be designed to accommodate a VAR schedule provided by SCE. SCE will determine if the VAR schedule is necessary based on future re-arrangements of SCE's Transmission system.

G. Deliverability Assessment Results

Please see Section E in the area report.

H. In-Service Date and Commercial Operation Date Assessment

The In-Service Date and Commercial Operation Date Assessment identified that the following facilities are required in order to provide for reliable interconnection for the Project:

1. IC Proposed Project Timelines

The latest information provided by the IC has indicated that the requested generator ISD is June 1, 2015 and a proposed COD of August 1, 2015.

2. System Upgrade Timelines for Reliable Interconnection

The Operational Studies identified that the following facilities are required in order to provide for reliable interconnection:

a. Distribution Provider's Interconnection Facilities

See Section 1.b of Attachment 1

b. Reliability Network Upgrades

i. Plan of Service Reliability Network Upgrades

See Section 2.b.i in Attachment 1.

ii. Special Protection System (SPS) - None

iii. Short-Circuit Duty (SCD) Mitigation

o Pre-QC6 Phase II Projects

The circuit breaker upgrades that were triggered by queued-ahead projects are identified in Section B.5 of the QC6 Phase II area report.

o Including the QC6 Phase II Projects

The In-Service Date and Commercial Operation Date Assessment undertaken with the inclusion of the QC6 Phase II projects identified the required timing for circuit

breaker upgrades and/or SCD mitigation(s) under six different scenarios. These scenarios were selected as the most appropriate operational study conditions and are discussed in Appendix G of the QC6 Phase II area report.

Additionally, the In-Service Date and Commercial Operation Date Assessment results, which discuss the timing for breaker upgrades and/or required SCD mitigation(s) at each of the substations identified, are addressed in Appendix G of the QC6 Phase II area report.

It should be noted that the timing of the need for the breaker upgrades and SCD mitigation(s) is dependent on actual timing of generation projects and corresponding upgrades materializing. The identified breaker upgrades and/or SCE mitigation(s) will not adversely impact the COD of this Project. Additional review for the identified breaker upgrades and/or SCE mitigation(s) discussed in Appendix G of the QC6 Phase II area report will be performed to evaluate timing of these breaker replacements and SCD mitigation(s) as projects execute Interconnection Agreements.

iv. Reactive Support Upgrades – None

c. Distribution Upgrades – None

3. Impact to Timelines for Reliable Interconnection

The IC should note that the [REDACTED] is needed to interconnect the Project.

4. System Upgrades Required for Full Capacity Deliverability Status

In order to provide for Full Capacity Deliverability Status, the following facilities are required in addition to the Reliability Network Upgrades in Section 2.(b):

a. Triggered Delivery Network Upgrades - None

b. Delivery Network Upgrades Triggered by Earlier Queued Projects --

West-of-Devers 220 kV Upgrades (WOD) Project

Along the west side of SCE's Devers Substation, the existing 5-220 kV T/Ls have been identified as the capacity delivery bottle-neck with limited transfer capability due to overloading problems. The WOD Project was proposed to upgrade the existing 5 – 220 kV T/Ls to 2B-1590 ACSR conductor and mitigate identified overloads. The completion date for this upgrade is December 31, 2020.

Unless the WOD Project is in-service, new generation interconnections in the east of Devers area would need to be as Energy Only status. The CAISO conducts the deliverability assessment to determine the minimum deliverable capacity each year until the WOD Project is in-service.

- c. Approved Transmission Upgrades - None
- d. Transmission Upgrades outside the CAISO Controlled Grid - None

5. Interim Operational Deliverability Assessment for Information Only

The operational deliverability assessment was performed for study years 2015 and 2018 by modeling the transmission and generation in service in the corresponding study year. For details of the transmission and generation assumption, refer to Section E of the area report.

6. Area Constraints

In areas where transmission capacity is limited, e.g. Eastern Bulk, generation resources will be in competition for available transmission capacity with other resources that are either in queue or already interconnected; and generation market bid prices will dictate which generators actually get to generate. Since the market bid prices for renewable resources is typically zero, the outcome will likely be that both Full Capacity Deliverability projects and Energy Only Deliverability projects could be subjected to curtailment if the total amount of generation that ultimately materializes is in excess of system capacity.

In other words, the "Full Capacity Deliverability" label provides resource adequacy status, but does not guarantee firm transmission rights as there is no correlation between the "Full Capacity Deliverability" label and the dispatch of these resources.

7. Conclusion

The requested IC In-Service Date of June 1, 2015 cannot be met due to the anticipated duration of 27 months for the facilities needed to enable Energy Only Interconnection for the Project. It should be noted that the specified duration of 27 months is from the day an Interconnection Agreement is executed, payments are made, and notice to proceed with Interconnection is provided. Consequently, the ability to meet the requested In-Service Date is directly tied to the Project's timely execution of the Interconnection Agreement, funding of facilities needed for Energy Only Interconnection, and issuance of notice to proceed. Therefore, in order to have a reasonable chance of meeting the requested In-Service Date, execution of the Interconnection Agreement, submittal of payments, and notice to proceed with Energy Only Interconnection need to be completed within the time frames prescribed in the applicable Tariff.

Lastly, please note that the requested Full Capacity Deliverability Status will not be achievable until the required system upgrades mentioned in Section J.4 above are placed into service.

I. Interconnection Facilities, Network Upgrades, and Distribution Upgrades

Please see Attachment 1 for the Interconnection Facilities, Reliability Network Upgrades, Delivery Network Upgrades and Distribution Upgrades allocated to the Project. Please note that SCE will not "reserve" the identified IF's for the proposed POI. The identified scope/facilities will be allocated to the project upon the successful execution of the Generation Interconnection Agreement and SCE has completed the final design and engineering of the facilities according to tariff timelines.

J. Cost and Construction Duration Estimates

To determine the cost responsibility of each generation project in QC6 Phase II, the CAISO developed cost allocation factors (Attachment 3) for Reliability Network Upgrades and Local Delivery Network Upgrades. Attachment 2 provides the 'constant' 2014 dollars and their escalation to the estimated COD year for Interconnection Facilities, Reliability Network Upgrades, Delivery Network Upgrades, and Distribution Upgrades which the Project was allocated cost.

For the QC6 Phase II Study, the estimated COD is derived by assuming the duration of the work element will begin in December 2015, which accounts for the CAISO tariff scheduled completion date of the QC6 Phase II study plus: the TP Deliverability (TPD)² allocation, Annual Reassessment effort, and the Interconnection agreement signing period and submittal of required funds by the IC.

The IC should note that 35% ITCC assessed for the IFs, DUs, and RNUs above the \$60K/MW repayment cap allocated to the Project. For your information, Attachment 2 contains a potential ITCC estimate³ based on the Phase II cost in this study. It does not represent the "maximum ITCC exposure" of the Project. Attachment 3 provides an estimated non-reimbursable RNU cost that would be subject to ITCC, taking into account the Network Upgrade maximum cost responsibility. The maximum ITCC warranted by the Project will be addressed, calculated, and included during the Interconnection Agreement development phase once the IC submits the TPD Affidavit confirming the acceptance, waiver (parking), or denial of awarded deliverability assigned to the Project.

K. SCE Technical Requirements

The IC is responsible for the protection of its own system and equipment and must meet the requirements in the Distribution Provider Interconnection Handbook provided in Attachment 4.

L. Subsynchronous Interaction Evaluations

Certain generators or inverter based generators when interconnected within electrical proximity of series capacitor banks on the transmission system are susceptible to Sub-Synchronous Interaction (SI) conditions which must be evaluated. Subsynchronous Interaction evaluations include Subsynchronous Resonance (SSR) and Subsynchronous Torsional Interactions (SSTI) for conventional generation units, and Subsynchronous Control Instability (SSCI) for inverter based generators using power electronic devices (e.g. Solar PV and Wind Turbines).

For projects interconnecting at the 220 kV voltage level and above in close electrical proximity of series capacitor banks on the transmission system a study will need to be performed to evaluate the SI between generating facilities and the transmission system.

² Transmission Plan Deliverability; Deliverability supported by the CAISO's Transmission Plan

³ The maximum ITCC exposure applies ITCC (35%) to assigned Interconnection Facilities and Distribution Upgrades facilities, Network Upgrades that are not subject to transmission credits incremental to a repayment \$/MW cap. The maximum ITCC exposure is calculated by applying the following formula: $(IF * 35\%) + ((RNU \text{ Costs} - (\text{Project MW} * \$60k/MW)) * 35\%) + (DU * 35\%)$

The IC is 100% responsible for any studies related to the SSR or SSTI. The only study that SCE will perform (at the IC's expense) is for SSCI; to ensure that the Project does not damage SCE's control systems.

The SSCI study will require that the IC provide a detailed PSCAD model of its Large Generating Facility and associated control systems, along with the manufacturer representative's contact information. The study will identify any mitigation(s) that will be required prior to initial synchronization of the Large Generating Facility. The study and the proposed mitigation(s) shall be at the expense of the IC.

It is the IC's responsibility to select, purchase, and install turbine/inverter based generators that are compatible with the series compensation in the area

M. Environmental Evaluation, Permitting, and Licensing

Please see Appendix K of the QC6 Phase II area report.

N. Affected Systems Coordination

Please see Section H of the QC6 Phase II area report.

O. Items not covered in this study

1. Conceptual Plan of Service

The results provided in this study are based on conceptual engineering and a preliminary Plan of Service and are not sufficient for permitting of facilities. The Plan of Service is subject to change as part of final engineering and design.

2. IC's Technical Data

The study accuracy and results for the QC6 Phase II Study are contingent upon the accuracy of the technical data provided by the IC. Any changes from the data provided could void the study results.

3. Study Impacts on Neighboring Utilities

Results or consequences of this QC6 Phase II Study may require additional studies, facility additions, and/or operating procedures to address impacts to neighboring utilities and/or regional forums. For example, impacts may include but are not limited to WECC Path Ratings, short circuit duties outside of the CAISO Controlled Grid, and sub-synchronous resonance (SSR). Refer to Affected Systems Coordination Section of the Area Report for additional information.

4. Use of Distribution Provider Facilities

The IC is responsible for acquiring all property rights necessary for the IC's interconnection facilities, including those required to cross Distribution Provider facilities and property. This interconnection study does not include the method or estimated cost to the IC of Distribution Provider mitigation measures that may be required to accommodate any proposed crossing of

Distribution Provider facilities. The crossing of Distribution Provider property rights shall only be permitted upon written agreement between Distribution Provider and the IC at Distribution Provider's sole determination. Any proposed crossing of Distribution Provider property rights will require a separate study and/or evaluation, at the IC's expense, to determine whether such use may be accommodated.

5. Distribution Provider's Interconnection Handbook

The IC shall be required to adhere to all applicable requirements in the Distribution Provider Interconnection Handbook. These include, but are not limited to, all applicable protection, voltage regulation, VAR correction, harmonics, switching and tagging, and metering requirements.

6. Western Electricity Coordinating Council (WECC) Policies

The IC shall be required to adhere to all applicable WECC policies including, but not limited to, the WECC Generating Unit Model Validation Policy.

7. System Protection Coordination

Adequate Protection coordination will be required between Distribution Provider-owned protection and IC-owned protection. If adequate protection coordination cannot be achieved, then modifications to the IC-owned facilities (i.e., Generation-tie or Substation modifications) may be required to allow for ample protection coordination.

8. Standby Power and Temporary Construction Power

The QC6 Phase II Study does not address any requirements for standby power or temporary construction power that the Project may require prior to the In-Service Date of the Interconnection Facilities. Should the Project require standby power or temporary construction power from Distribution Provider prior to the In-Service Date of the Interconnection Facilities, the IC is responsible to make appropriate arrangements with Distribution Provider to receive and pay for such retail service.

9. Licensing Cost and Estimated Time to Construct Estimate (Duration)

The estimated licensing cost and durations applied to this Project are based on the Project scope details presented in this study. These estimates are subject to change as Project environmental and real estate elements are further defined. Upon execution of the Interconnection Agreement, additional evaluation including but not limited to preliminary engineering, environmental surveys, and property right checks may enable licensing cost and/or duration updates to be provided.

10. Network/Non-Network Classification of Telecommunication Facilities

The cost for telecommunication facilities that were identified as part of the IC's Interconnection Facilities was based on an assumption that these facilities would be sited, licensed, and constructed by the IC. The IC will own, operate, maintain, and construct diverse telecommunication paths associated with the IC's generation tie line, excluding terminal equipment at both ends. In addition, the telecommunication requirements for SPS were

assumed based on tripping of the generator breaker as opposed to tripping the circuit breakers at the Distribution Provider substation. Due to uncertainties related to telecommunication upgrades for the numerous projects in queue ahead of QC6 Phase II, telecommunication upgrades for higher queued projects were not considered in this study. Depending on the outcome of Interconnection studies for higher queued projects, the telecommunication upgrades identified for QC6 Phase II may be reduced. Any changes in these assumptions may affect the cost and schedule for the identified telecommunication facilities.

11. Ground Grid Analysis

A detailed ground grid analysis will be required as part of the final engineering for the Project at the SCE substations whose ground grids were flagged with duty.

12. Applicability

This document has been prepared to identify the impact(s) contributions of the Project on the SCE electrical system; as well as establish the technical requirements to interconnect the Project to the POI that was evaluated in the QC6 Phase II Study for the Project. Nothing in this report is intended to supersede or establish terms/conditions specified in Interconnection agreements agreed to by SCE, CAISO and the IC.

13. Process for synchronization/trial operations and commercial operations of the Project

The IC is reminded that the CAISO has implemented a New Resource Implementation (NRI) process that ensures that a generation resource meets all requirements before synchronization/trial operations and commercial operations. The NRI uses a bucket system for deliverables from the IC that are required to be approved by the CAISO. The first step of this process is to submit an "ISO Initial Contact Information Request form" at least 7 months in advance of the planned initial synchronization. Subsequently an NRI project number will be assigned to the project for all future communications with the CAISO. The Distribution Providers have no involvement in this NRI process except to inform the IC of this process requirement. Further information on the NRI process can be obtained from the CAISO Website using the following links:

New Resource Implementation

webpage: <http://www.caiso.com/participate/Pages/NewResourceImplementation/Default.aspx>

NRI Checklist:

<http://www.caiso.com/Documents/NewResourceImplementationChecklist.xls>

NRI Guide:

<http://www.caiso.com/Documents/NewResourceImplementationGuide.doc>

14. Potential Changes in Cost Responsibility

The IC is hereby placed on notice that interconnection of its proposed generating facility may be dependent upon certain Network Upgrades which are currently the cost responsibility of projects ahead of the proposed generating facility in the interconnection application queue. Section 14.2.2 of the GIDAP provides that should Network Upgrades required for queued-ahead projects be included in an executed GIA (or unexecuted GIA filed at FERC) at the time of

withdrawal of the earlier queued generating facility, and the upgrades are determined to still be needed by later queued generating facilities, the financial responsibility for such upgrades falls to the Distribution Provider. However, if the Network Upgrades required by earlier queued generating facilities are not subject to an executed GIA (or unexecuted GIA filed at FERC) the financial responsibility for such upgrades may fall to the IC. Section 14.2.2 also discusses how Network Upgrades required by Interconnection customers selecting Option (B) might be required to be reapportioned among interconnection customers selecting Option (B) in the case of withdrawals of earlier queued generating facilities. Changes in costs allocated to the IC could also arise as the result of the CAISO's reassessment process described in Section 7.4 of the GIDAP. SCE encourages the IC to review Sections 7.4 and 14.2.2 of the GIDAP for the rules and processes under which the financial responsibility might be reapportioned to the IC. Potential changes in the IC's cost responsibility resulting from application of the provisions of these Sections of GIDAP are not included in this Phase II study, nor are the potential impacts to the IC's maximum cost responsibility outlined.

Attachment 1
Interconnection Facilities, Network Upgrades and Distribution Upgrades
Please refer to separate document

Attachment 2
Escalated Cost and Time to Construct for Interconnection Facilities, Reliability Network Upgrades, Delivery Network Upgrades, and Distribution Upgrades
Please refer to separate document

**Attachment 3
Allocation of Network Upgrades for Cost Estimates and Maximum Network
Upgrade Cost Responsibility**

Allocation of RNU and LDNU for Cost Estimates

Queue #	WDT1021	Upgrade Cost 2014 (\$1000)	Project Allocation (%)	Project Cost 2014 (\$1000)	Project Cost Escalated (\$1000)
RNU		\$1,327	0.00%	\$0	\$0
Del Amo 220KV CB upgrade		\$1,327	0.00%	\$0	\$0
Grand Total		\$1,327		\$0	\$0

Summary of Cost Estimates

	QWDT1021
Total Phase I RNU & LDNU (Escalated \$1000)	\$ 379
Total Phase II RNU (Escalated \$1000)	\$ -
Total Phase II LDNU (Escalated \$1000)	\$ -
Total Phase II RNU & LDNU (Escalated \$1000)	\$ -
Max RNU & LDNU Cost Responsibility (Escalated \$1000)	\$ -
Total RNU & LDNU Cost (Escalated \$1000)	\$ -
Deliverability Option	A
Phase II ADNU (Escalated \$1000)	\$ -
Max Net Output (MW)	20
RNU Cost Reimbursement Limit (\$1000)	\$ 1,200
RNU Cost (Escalated \$1000)	\$ -
RNU Non-Reimbursable Cost (Escalated \$1000)	\$ -

Attachment 4

Distribution Provider Interconnection Handbook

Preliminary Protection Requirements for Interconnection Facilities are outlined in the Distribution Provider Interconnection Handbook (separate document)

Attachment 5
Short Circuit Calculation Study Results
Please refer to the Appendix H of the area report

**Attachment 6
Not Used**

