



Welcome to Queue Cluster 12

Thursday, March 28, 2019

Purpose of this Meeting

- SCE offers this Workshop to help you understand our Generator Interconnection Procedures, specifically how to properly submit an Interconnection Request.
- Should there be discrepancies between this workshop and SCE's tariffs, SCE's tariffs and interconnection documents prevail.
- We will not discuss specific details about your individual project (e.g., recommended project size, POI, expected costs, etc.)

Queue Cluster 12 Workshop Ground Rules

- Please mute your phone, and please do not place your phone on hold
- Please note: members of SCE's Energy Marketing Team may be in the audience
- For Questions:
 - Please submit them via Skype text (located at bottom left corner of your screen). We will try to answer them throughout the Workshop.
 - Questions that are not answered during the meeting will be answered via email after the Workshop.
 - If you have more questions after the Workshop, please submit them to:
InterconnectionQA@sce.com

Your SCE Workshop Hosts

Organizations

Grid Interconnection & Contract Development

Customer Interconnection / Method of Service

Distribution & Substation Engineering

Transmission Planning

And other technical experts

Agenda – “WDAT” QC12

- Completing the Interconnection Request (IR) 15 min
- Demonstrating Site Exclusivity 15 min
- Submitting Technical Documents 15 min
- Wholesale Distribution Service Request 5 min
- Required Deposits 10 min
- Generating Facility Charging Demand Study 5 min
- Application Checklist and Quick Tips 5 min
- Important Dates 5 min
- Q&A 20 min
- Workshop ends 11:30 am

WDAT IA vs. DSA vs. PPA

- Wholesale Distribution Access Tariff (WDAT) Interconnection Agreement (IA)
 - Allows Developers to **interconnect** their project to SCE's distribution system
 - Wholesale Distribution Service Agreement (DSA)
 - Allows Developers to **transmit** electrons through SCE's distribution system
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- Power Procurement Agreement (PPA)
 - **Selling** your power to a buyer (SCE, PG&E, SDG&E, etc.)
 - Not part of today's focus

WDAT Interconnection Request Checklist

- ☑ Completed Interconnection Request, with all requested technical data
 - ☑ Single-Line Electrical Diagram (33 kV and below must be stamped by a Professional Electrical Engineer)
 - ☑ Site/Plot Plan Diagram
 - ☑ Proof of Site Exclusivity, or In-Lieu Deposit (\$100,000 \leq 20 MW or \$250,000 > 20 MW)
 - ☑ Diagrams, manufacturer's data, and written descriptions of the generating facilities
- ☑ Study Deposit: \$50,000 plus \$1,000/MW, up to \$250,000 maximum
 - Submit your Study Deposits separately by following the payment instructions
- ☑ Completed Wholesale Distribution Service Request Form
 - Request for Distribution Service is a separate application for WDAT requests (see Section 15.2 of WDAT)
- ☑ Submit your Battery Energy Storage System (BESS) form (if applicable)

Where to Submit Your Interconnection Request

Send the completed IR and technical documents to SCE via one of the following:

☑ **Email:** grid.interconnections@sce.com

(Preferred)

☑ **Snail Mail:** Southern California Edison Company
Director of Grid Contracts Origination & Operations
P.O. Box 800
Rosemead, CA 91770

☑ **Overnight:** Southern California Edison Company
Attn: GICD - IP&C - GO-1, Q4C
2244 Walnut Grove Ave
Rosemead, CA 91770
626-302-3688

(This is not
for payments)

Failure to include the "Attn:" line may result in your package being returned to you

Send Study Deposits to SCE per payment instructions.

More information about how to receive payment instructions will be explained later in the presentation

Guidelines for Sizing Your Generating Facility

- Typical Generation Design Limits for WDAT Cluster Projects:

SCE Line Voltage	*Maximum Aggregate Generation
12 kV	10 MW
16 kV	13 MW
25 kV	19 MW
33 kV	27 MW

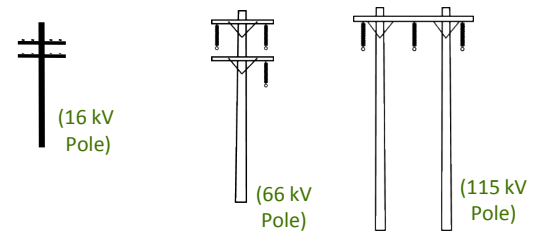
*Maximum generation is subject to change based on queued generation and reliability constraints

*Sizes may differ based on adding energy storage

Grid Voltages – WDAT vs. TOT

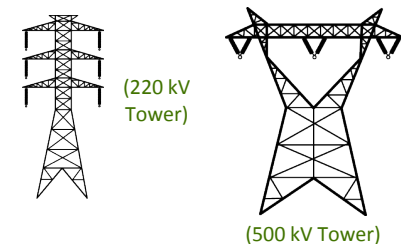
- SCE's distribution system = SCE controlled = WDAT

- 4 kV – 16 kV: residential circuits
- 16 kV – 33 kV: city/industrial circuits
- 55 kV – **115 kV**: sub-transmission



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- SCE's transmission system = CAISO and SCE controlled = CAISO Tariff

- **Some (minimal) 66 kV, some 115 kV**: sub-transmission
- 220 kV – 500 kV: bulk electric system/transmission



Interconnection Request (IR) Forms

WDAT Distribution Interconnections

- WDAT IR form, Payment Instructions, and request for Distribution Service can be found on the SCE portal:
 - www.SCE.com > Your Business > Generating Your Own Power > Grid Interconnections > Wholesale Distribution Access Tariff (WDAT) > Initiating a Request for Interconnection Under The GIP > Appendix 1 – Interconnection Request for a Generating Facility
 - Shortcut: [Appendix 1 & Attachment A to GIP](#)

CAISO Transmission Interconnections

(Note: SCE does not accept CAISO Interconnection Requests)

- CAISO Interconnection Request details:
 - <http://www.caiso.com/planning/Pages/GeneratorInterconnection/InterconnectionRequest/Default.aspx>

Uncertain as to which Tariff to apply to? Send your proposed Point of Interconnection information to InterconnectionQA@sce.com

Sample Completed IR

- sample application

CAISO/WDAT Deliverability Options

Deliverability

Defined as the annual Net Qualifying Capacity of a Generating Facility, as verified through a Deliverability Assessment and measured in MW, which specifies the amount of resource adequacy capacity the Generating Facility is eligible to provide.

You must select one:

- Energy Only Deliverability Status
 - Avoids cost of delivery network upgrades
 - Cannot qualify as a Resource Adequacy resource in PPA
- Full Capacity Deliverability Status
 - Allocated delivery network upgrades in interconnection studies
 - Can qualify as a Resource Adequacy resource in PPA
- Partial Capacity Deliverability Status
 - Allocated delivery network upgrades in interconnection studies
 - Can qualify as a Resource Adequacy resource in PPA

All options/selections/choices are subject to curtailment

Annual Deliverability Assessment Option

- During a Cluster Window, SCE also accept requests for Annual Full Capacity Deliverability. A Generating Facility previously studied as Energy-Only Deliverability Status (and has an executed Interconnection Agreement) will have an option to determine whether it can be designated for Full Capacity Deliverability Status or Partial Capacity Deliverability Status. (See GIP Section 4.7.)
 - Includes: an Option (A) Generating Facility not allocated TP Deliverability Status, has a GIA in good standing, and desires to seek additional Deliverability with respect to the Energy-Only Deliverability Status portion of the Generating Facility; and (iii) an Option (B) Generating Facility which chose Partial Capacity Deliverability Status and has a GIA in good standing, and desires to seek additional Deliverability with respect to the Energy-Only Deliverability Status portion of the Generating Facility.
 - Requires: (i) a completed Interconnection Request, including requested Deliverability status, preferred Point of Interconnection and voltage level, and all other technical data, and (ii) a non-refundable \$10,000 study fee.
- CAISO performs this study

Demonstrating Site Exclusivity

- Read and follow SCE's Guidelines for Demonstration of Site Exclusivity: [Site Exclusivity Guidelines](#)
- Reminders:
 - Please include Assessor's Parcel Number (APN) along with your project's GPS coordinates on your IR form
 - In lieu of providing proof of Site Exclusivity, you may submit a Site Exclusivity Deposit of \$100,000 for a Small Generating Facility (≤ 20 MW) or \$250,000 for a Large Generating Facility (> 20 MW)
 - If your site exclusivity documentation is not ready, we encourage you to send in a Site Exclusivity Deposit; we pay interest from date of receipt and you don't risk missing the cluster deadlines

APN Needs to Appear on Both Documents

Sample Site Exclusivity Document

Recording Requested by:
Jane Doe

And when recorded, mail the instrument and tax statements to:
Jane Doe
123 Street
Edisonville, CA

Deed/Lease/Option Document label

APN: 123-456-78910

For a valuable consideration, receipt of which is hereby acknowledged,
Jane Doe, a single woman
Hereby (grants/leases/provides option to lease or purchase) to: Jane Doe and John Doe
As joint tenants
The following real property in the City of Edisonville, County of Los Angeles, California:
Lot 00 of XYZ Addition to the City of Edisonville, as delineated on the map of said addition, recorded
01/01/2001, in Book 62, Page 013065

If Lease/Deed/Option, add terms here which should be through a specific DATE (which may include an
expiration date) such as 3/15/2020

Name of Legal Entity: Jane and John Doe

Date _____ Signature: signature
Date _____ Signature: signature

State of California
County of _____
On _____

Interconnection Request Form

4. Interconnection Customer provides the following information:

a. Address or location, including the county, of the proposed new Generating Facility site (to the extent known) or, in the case of an existing Generating Facility, the name and specific location, including the county, of the existing

Generating Facility:

Project Name: _____

Project Location: _____
Street Address: _____
City, State: _____, _____
County: _____
Zip Code: _____
GPS Coordinates: _____

Please put your APN number on the Interconnection Request form, section 4. a.

Lease/Option Date Must be Through COD

Sample Site Exclusivity Document

Recording Requested by:
Jane Doe

And when recorded, mail the instrument and tax statements to:
Jane Doe
123 Street
Edisonville, CA

Deed/Lease/Option Document label

APN: 123-456-78910

For a valuable consideration, receipt of which is hereby acknowledged,
Jane Doe, a single woman
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01/01/2001, in Book 62, Page 013065

If Lease/Deed/Option, add terms here which should be through a specific DATE (which may include an expiration date) such as 3/15/2020

Name of Legal Entity: Jane and John Doe

Date _____ Signature: signature
Date _____ Signature: signature

State of California
County of _____
On _____

Interconnection Request Form

d. Proposed In-Service Date, and Other Key Dates (Month/Day/Year) (Dates must be sequential)

Requested Back-Feed Date: ____/____/____
Proposed In-Service Date: ____/____/____
Proposed Trial Operation Date: ____/____/____
Proposed Commercial Operation Date: ____/____/____

The term of the site document should be, at a minimum, through the Commercial Operation Date

Interconnection Request Form

10. This Interconnection Request is submitted by:

Legal name of Interconnection Customer: _____

By (signature): signature

Name (type or print): _____

Title: _____

Date: _____

The legal name of the Interconnection Customer on the application should tie to the legal entity in the site exclusivity document

Required Technical Documents

- **Single Line Diagram** (33 kV and below must be stamped by a Professional Electrical Engineer) [Sample SLDs & Plot Plans](#)
- **Plot Plan** (A diagram which shows the buildings, utility runs, and equipment layout, the position of roads, and other constructions of an existing or proposed project site at a defined scale)
- **Site Drawing** (Shows generator project location and Point of Interconnection with the SCE's Distribution System, and GPS coordinates of the Customer's protective device)
- **Detailed technical data regarding your equipment chosen** (Manufacturer specifications and diagrams on inverters, power system controls, etc. plus descriptions of the generating facilities)
- **Battery Energy Storage System (BESS) Technical Data** (if applicable)
 - [Battery Storage Form](#)

For ease of administration, we prefer receiving digital application documents in lieu of hard copies at: Grid.interconnections@sce.com

Smart Inverter Requirements

- Pursuant to the CPUC resolution E-4920 and E-4898 dated April 26, 2018, new interconnection requests will require UL-1741 SA certification with **reactive power priority** for smart inverters ***effective July 25, 2018***. In addition, smart inverters must have the capability to perform Phase 3 Advanced Functions 5 & 6 ***effective February 22, 2019***. It is the responsibility of the customer/installer/contractor to purchase equipment which meets all requirements including the new requirements adopted in E-4920 and E-4898. For more information, the California Energy Commission (CEC) has a website dedicated to the [Rule 21 Smart Inverter Working Group](#) or you may send an email to InterconnectionQA@sce.com

Wholesale Distribution Service Request

- Wholesale Distribution Service Request (recommend submitting with IR)
 - “An Eligible Customer requesting service under the Tariff must submit an Application, with a deposit of \$2.00 per anticipated average monthly kilowatts of Generation or Wholesale Distribution Load, **except that the deposit shall be waived for an Eligible Customer that contemporaneously submits with its Application a valid interconnection request and associated deposit or fee for the Resource associated with such Generation,*** to the Distribution Provider as far as possible in advance of the month in which service is to commence.”
(Section 15.2 of the Wholesale Distribution Access Tariff)
 - Link: [Wholesale Distribution Service Request Form](#)
- * Tariff revision accepted by FERC effective May 30, 2018

Submitting Deposits

- Cluster Study Process Deposit
 - \$50,000 plus \$1,000 per MW of electrical output of the generating facility (or the increase in electrical output of the generating facility) rounded up to the nearest whole MW, up to a max of \$250,000.
- Site Exclusivity Deposit (optional)
 - In lieu of providing proof of Site Exclusivity, you may submit a Site Exclusivity Deposit of \$100,000 for a Small Generating Facility (≤ 20 MW) or \$250,000 for a Large Generating Facility.

Please don't send checks with your application documents – send us a request for payment instructions. The instructions will let you know how to send the payment to SCE's Accounts Receivable separately from the documents. [Link: Request for Payment Instructions](#)



- After submitting payment, send us an email providing wire confirmation or check tracking number to: Grid.Interconnections@sce.com

Generating Facility Charging Demand Study

- SCE will continue to provide energy storage interconnection requests with a preliminary analysis in its interconnection studies of SCE's ability to manage the BESS charging demand based on an "as available" charging capacity basis, without identifying incremental system upgrades on its Distribution System.
- SCE at a later time will offer the Customer the option to undertake a Generating Facility Charging Demand Study that would identify incremental system upgrades, if any, to SCE's Distribution System to obtain charging demand service comparable to service received by Wholesale Distribution Load. SCE intends to include the Generating Facility Charging Demand Study as part of the Generator Interconnection Procedures, subject to an amendment to SCE's Wholesale Distribution Access Tariff.
 - Generating Facility Charging Demand Study will identify:
 - Local Distribution System upgrades required to provide charging demand service comparable to the service received by Wholesale Distribution Load.
 - IC cost responsibility for their proportionate share of upgrades:
 - The "higher of" cost of new distribution system upgrades; "or"
 - A system average embedded cost rate (calculated as a demand rate).

RECAP: WDAT Interconnection Request Checklist

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- ☑ Study Deposit: \$50,000 plus \$1,000/MW, up to \$250,000 maximum
 - Submit your Study Deposits separately by following the payment instructions
- ☑ Completed Wholesale Distribution Service Request Form & Deposit
 - Request for Distribution Service is a separate application WDAT requests (see Section 15.2 of WDAT)
- ☑ Submit your Battery Energy Storage System (BESS) form (if applicable)

Where to Submit Your Interconnection Request

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☑ **Email:** grid.interconnections@sce.com

☑ **Snail Mail:** Southern California Edison Company
Director of Grid Contracts Origination & Operations
P.O. Box 800
Rosemead, CA 91770

☑ **Overnight:** Southern California Edison Company
Attn: GICD - IP&C - GO-1, Q4C
2244 Walnut Grove Ave
Rosemead, CA 91770
626-302-3688

Failure to include the "Attn:" line may result in your package being returned to you

Send Study Deposits to SCE per payment instructions.

7 MB is the limit for emails to SCE

Important Dates/Milestones

*Due Dates	Milestones
Tuesday, April 30	Last day to submit QC12 applications. PLEASE do not wait until the last day!
Wednesday, May 29	Latest/last day for the IC to <u>submit</u> corrected info (20 BDs after close of cluster window) [See GIPT Attachment I Sections 4.2.2.1 and 4.2.2.2]
June 5	SCE last day to review and determine deemed complete/deemed deficient (5 BD review)
By July 1	Hold Scoping Meetings (no later than 60 CDs after close of cluster window)
By July 31	Execute Cluster Study Process Agreement (no later than 30 CDs after Scoping Meeting)
July	Start Phase I Study
December	Publish Phase I Study Report (170 Calendar Days after start of the Phase I Study)
Jan 2020	Hold Phase I Results Meetings
March 2020	Start Phase II Study

*Note: Dates shown above could shift based on coordination with CAISO efforts.

Quick Tips

- Review our FAQ → [FAQ Link](#)
- If you receive a deficiency notice on your IR, please respond quickly, and only revise the sections as requested by SCE.
- Apply Early!
 - The sooner you apply, the sooner we can respond to you with correction requests, if necessary. **Drop dead date = Tuesday, April 30th!**

Important Links

Website

- [SCE's WDAT](#)
- [SCE's Energy Procurement](#)

Forms

- [WDAT Interconnection Request \(Appendix 1, Attachment A, & request for payment instructions\)](#)
- [Wholesale Distribution Service Request form](#)
- [Battery Storage Form](#)
- [CAISO Interconnection Request Details](#)

Guidelines / Examples / Questions

- [Site Exclusivity Guidelines](#)
- [Distribution Resources Plan External Portal \(DRPEP\)](#)
- For questions on Interconnection Issues: InterconnectionQA@sce.com
- Send completed Interconnection Requests to: Grid.interconnections@sce.com
- This presentation to be added to SCE's web site
- [CAISO Interconnection Requests \(Including Prohibited Project Names\)](#)

What Questions Do You Have?

