Interconnection Processes: WDAT - Rule 21

February 12, 2013
Distribution System Interconnection Processes

- Wholesale Distribution Open Access Tariff (WDAT) - Governed by FERC
- Rule 21 - Governed by CPUC
**Interconnection Process – WDAT**

Distribution Interconnections

- WDAT is managed by SDG&E’s Customer Generation group under the Transmission & Distribution Engineering Department
- SDG&E’s distribution voltage is defined as facilities operating at 12.47 kV or below
- All applications must be submitted to SDG&E’s Customer Generation group
- Pursuant to SDG&E’s WDAT Attachment D – Small Generator Interconnection Procedures (SGIP)
Complete Interconnection Request (IR)

Applicant submits:

- Completed IR for each point of interconnection (POI); assigned a “queue position”
- A 1-line electrical diagram
- A site plan diagram
- IR Fee (separately invoiced)
- Proof of Site Control
Interconnection Process – WDAT

Customer Options Meeting – Fast Track
• Review the project limitations (Screens)
• Discuss alternative options

Scoping Meeting – Study
• Allows Face to Face Interactions with IC and SDG&E
• Review the Project
  ◦ IC provides high level project overview
  ◦ SDG&E Distribution Planning provides feedback, system information, suggests any alternatives
• Determine Point of Interconnection (POI) and generator size
• Review CAISO Metering & Telemetering requirements
• Determine Next Steps
  ◦ Feasibility Study
  ◦ System Impact Study
  ◦ Interconnection Facilities Study
  ◦ Small Generator Interconnection Agreement (SGIA)
Interconnection Process – WDAT
Fast Track & Study Processes

**Fast Track – approximately 6 months**
- Generator Project does not exceed 2MW
- Must Pass Fast Track Screens under Section 2
- $500 non-refundable processing fee + supplemental fees
- Small Generator Interconnection Agreement (SGIA)

**Study Process – approximately 18 months**
- Generator Project; Failed Fast Track or ≤ 20MW
- Follow Section 3 Study Process
- $1,000 study deposit fee + additional study fees
- Small Generator Interconnection Agreement (SGIA)
## Study Deposits

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<td>50 BD</td>
<td>• Steady State Analyses&lt;br&gt;• Initial Interconnection Cost estimates</td>
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<td>• Dynamic Analyses&lt;br&gt;• Updated Interconnection Cost estimates</td>
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<td>Facilities Study</td>
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<td>• Electrical switching configuration&lt;br&gt;• Cost of equipment, engineering, procurement and construction work&lt;br&gt;• Time required to complete construction and interconnect&lt;br&gt;• Final Interconnection Cost estimates</td>
<td>$25,000</td>
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Small Generator Interconnection Agreement (SGIA)

- SGIA preparation begins following completion of studies or successful Fast Track

- An SGIA sets forth the requirements for interconnection, including the following terms:
  • Estimated cost and milestone schedule
  • Insurance Requirements
  • Identifies the network upgrades, distribution upgrades, and interconnection facilities to be constructed
  • Identifies major milestones
  • Identifies the POI
  • Specifies the required financial obligations
  • IC responsible for interconnection facilities and upgrade costs
Project Implementation

- After execution of SGIA, SDG&E and IC begin Engineering, Design, Procurement, and Construction of the interconnection facilities.
  - IC is responsible for Cost of Ownership charges
  - Any facilities that will be constructed by IC and deeded to SDG&E will have to be built to SDG&E specifications.

- After the completion of construction, SDG&E and the IC will coordinate a pre-parallel inspection, commissioning and final parallel operation.
What is (electric) Rule 21?

- Effective September 20, 2012
- Interconnection rule for customer owned generators planning to operate in parallel with SDG&E’s Electric Distribution System (12 kV)
- Outlines the General Rules, Rights and Obligations regarding interconnection including definitions
- Provides technical and non-technical criteria for connecting generation equipment to the SDG&E Distribution System
- Rule is technology and size neutral
- Designed initially for self-served applications, recently revised to include generators exporting power to SDG&E
Interconnection Process – Rule 21

I. Begin Interconnection Request Process

II. Applicant Scoping Meetings

III. Interconnection Studies

IV. SDGE/Customer Execute GIA

SDG&E Receives Completed Interconnection Request (IR)

IC Option – Pre-Interconnection Request

Project Implementation!
Interconnection Process – Rule 21

Pre – Interconnection Request (IR) Submission

- Pre-Application Report
  - Hi-Level project feasibility report using readily available data
  - Non-refundable $300 Processing Fee

I. Complete and Valid IR (10 business days if valid)

- A Completed IR form, with all requested data including desired Study Process Track (NOTE: all study fees/deposits will be invoiced separately)
- A site plan diagram
- A one-line electrical diagram
- Site exclusivity (Site Control) documentation
- $800 non-refundable IR Fee, if detailed studies are required, a study deposit
  - For Fast Track: no fee for Initial Review, $2,500 fee if Supplemental Review is required
  - For Independent Study: deposit for projects 5 MWs and less is $10,000 for a System Impact Study and $15,000 for a Facilities Study, for projects greater than 5 MW is $50,000 plus $1,000/MW up to $250,000 maximum.
II. Applicant Scoping Meeting – Purpose

- Make sure all parties have a common understanding of Applicant’s project
- Confirm understanding of interconnection procedures
- Establish Point of Interconnection (POI) and generator size (kW)
- Summarize general study process steps
- Define next steps
III. Interconnection Studies

**Fast Track Process**
- Screening process to determine if project can be interconnected without further study
- Limited to 1.5MW Gross NPR or less on distribution system
- Customer options meeting and Supplemental Review Screens if fail Initial Review screens

- Pass Screens: i) go directly to cost estimate and interconnection agreement; or ii) go to Supplemental Review ($2,500)

- Fail screens, Applicant Meeting to evaluate:
  * Changes to generation facility
  * Changes to distribution system
  * Move into Detailed Study
III. Interconnection Studies – cont.

**Detailed Study Process**

- **Independent Study Process (ISP)**
  - Detailed study of projects in serial fashion
  - No size limit
  - SDG&E (CAISO) test for electrical independence
    - Apply any time of year
    - System Impact Study (SIS) and Interconnection Facilities Study (IFS)
    - Study deposit: ≤ 5 MW $10,000 for SIS, $15,000 for IFS, > 5 MW $50,000 + $1,000/MW; Max $250,000
    - Security postings

- **Distribution Group Study Process**
  - Group study for interdependent projects on the distribution system
    - “Work in Progress”

- **Transmission Cluster Study Process**
  - Not conducted under Rule 21, Applicants apply under WDAT
IV. Generator Interconnection Agreement (GIA)

Exporting GIA – Sell to SDG&E under CPUC tariff

- GIA preparation begins following completion of studies or successful Fast Track

- A GIA sets forth the requirements for interconnection, including following terms:
  - Estimated cost and schedule
  - Insurance Requirements
  - Identifies the network upgrades, distribution upgrades, and interconnection facilities to be constructed
  - Identifies major milestones
  - Identifies the POI
  - Specifies the required financial obligations
  - IC responsible for interconnection facilities and upgrade costs
Project Implementation (same as WDAT!)

- After execution of GIA, SDG&E and IC begin Engineering, Design, Procurement, and Construction of the interconnection facilities.
  - IC is responsible for Cost of Ownership charges (Rule 2)
  - Any facilities that will be constructed by IC and deeded to SDG&E will have to be built to SDG&E specifications.

- After the completion of construction, SDG&E and the IC will coordinate a pre-parallel inspection, commissioning and final parallel operation.
Distribution Interactive Maps –
http://www.sdge.com/generation-interconnections/interconnection-information-and-map
Interconnection Application: Rule 21 & WDAT

Interconnection Application Package
- Complete Interconnection Request
- Evidence of Site Control
- Site Plan Diagram
- Single Line Diagram
- Invoice sent to Interconnection Customer

Application Location:
http://www.sdge.com/generation-interconnections/overview-generation-interconnections
Ken Parks,
Customer Generation Manager

8316 Century Park Court, CP52F
San Diego, CA  92123
Office: (858) 636-5581

KParks@semprautilities.com