



A  Sempra Energy utility

Interconnection Processes: WDAT - Rule 21

February 12, 2013

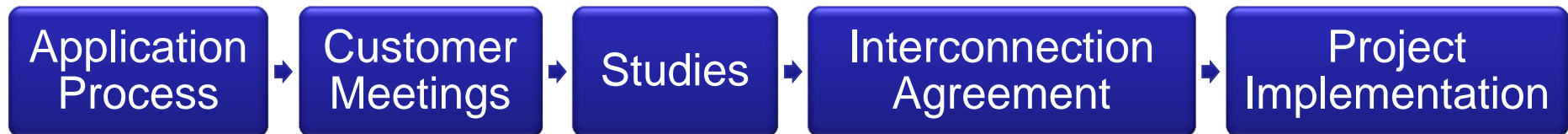


Distribution System Interconnection Processes



- **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 a 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 ≤ 20 MW
- Follow Section 3 Study Process
- \$1,000 study deposit fee + additional study fees
- Small Generator Interconnection Agreement (SGIA)

Interconnection Process – WDAT



Study Deposits

Study	Timing	Study Procedures	Study Deposit
Feasibility Study	50 BD	<ul style="list-style-type: none"> • Steady State Analyses • Initial Interconnection Cost estimates 	\$10,000
System Impact Study	90 BD	<ul style="list-style-type: none"> • Dynamic Analyses • Updated Interconnection Cost estimates 	\$25,000
Facilities Study	80 BD	<ul style="list-style-type: none"> • Electrical switching configuration • Cost of equipment, engineering, procurement and construction work • Time required to complete construction and interconnect • Final Interconnection Cost estimates 	\$25,000



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 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

Interconnection Process – WDAT



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.

Interconnection Process – Rule 21

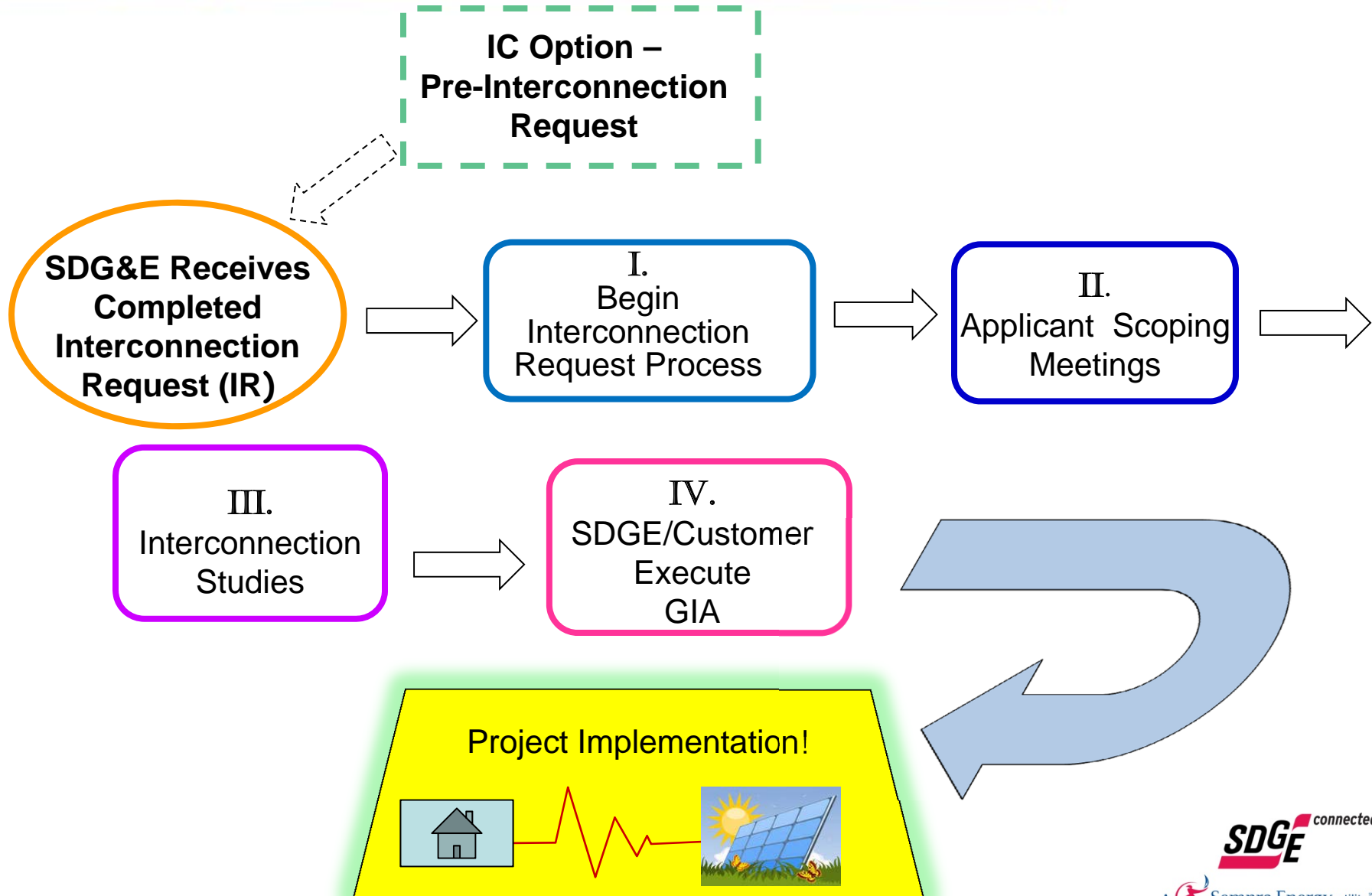
“Modeled after WDAT”



What is (electric) Rule 21?

- Effective September 20, 2012
- Interconnection rule for customer owned generators planning 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



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.

Interconnection
Request
(Application)



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

Interconnection Process – Rule 21



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

Fast Track

Interconnection Process – Rule 21



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*

Detailed Study:

1) Independent

2) Distribution Group

3) Transmission Cluster

Interconnection Process – Rule 21



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

Interconnection Process – Rule 21



Project Implementation (same as WDAT!)

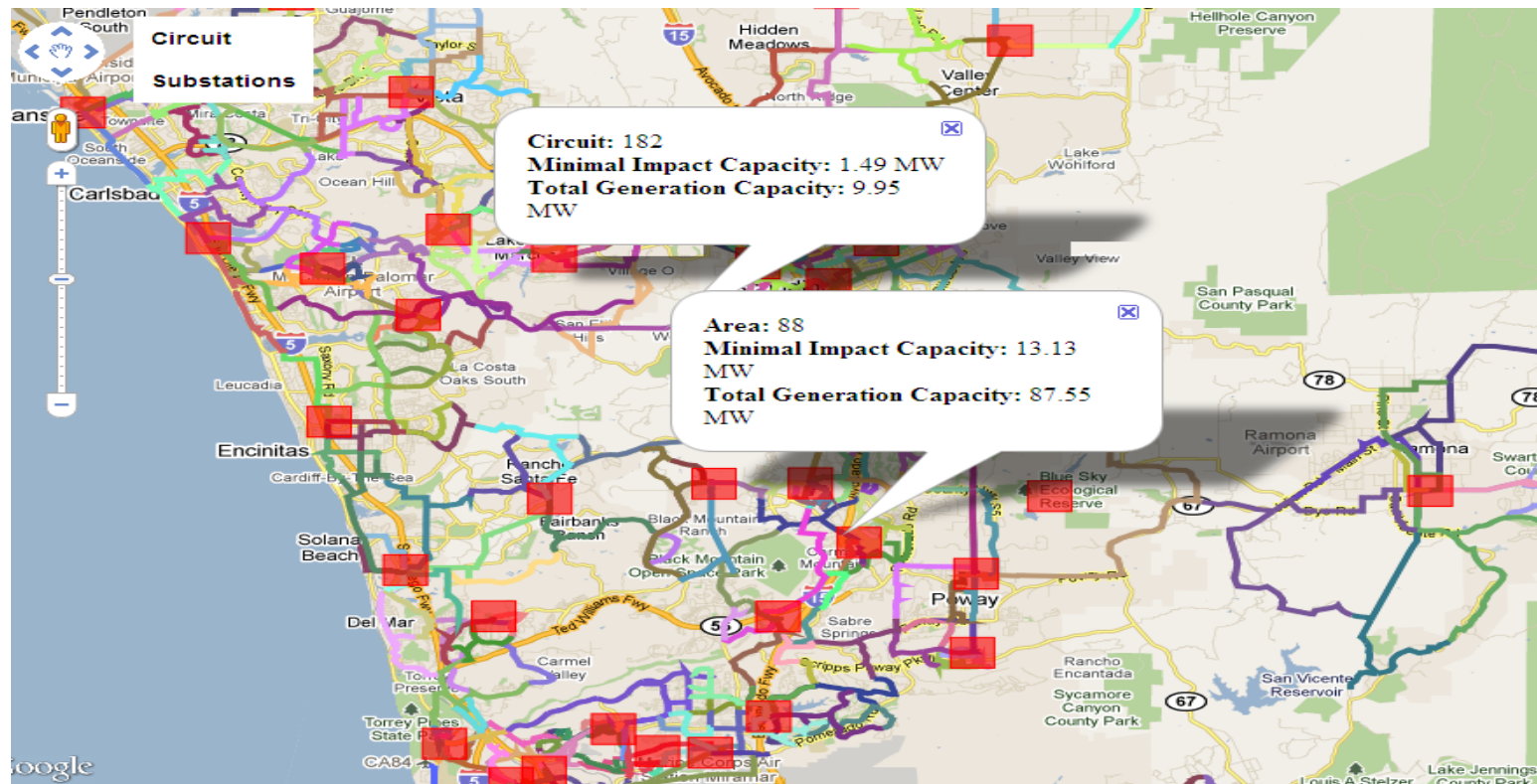
- After execution of GIA, SDG&E and IC begin Engineering, Design, Procurement, and Construction of the interconnection facilities.
 - IC is responsible for Cost of Ownership charges (Rule 2)
 - Any facilities that will be constructed by IC and deeded to SDG&E will have to be built to SDG&E specifications.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

Project Location Tool



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>

Interconnection Process Contact Information



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