
**Welcome to SDG&E's 2017
Green Tariff Shared Renewables
Request for Offers
Bidders' Conference**

*March 29, 2017 | 1:30 pm to 3:30 pm
Hosted by Web Event Services*

Safety Moment

Jennifer Summers | Commercial Energy Policy Advisor

Bidders' Conference Outline

1. Welcome and Legal Disclaimer 1:30 pm – 1:40 pm	Jennifer Summers Commercial Energy Policy Advisor
2. SDG&E and Supplier Diversity 1:40 pm - 1:45 pm	Steve Taylor E&FP Generation and Supply Manager & E&FP Diversity Champion
3. Role of Independent Evaluator 1:45 pm – 1:50 pm	Harry Judd Independent Evaluator
4. a) RFO Goal, Scope & Evaluation b) Bid Submission Process; Q&A Session 1:50 pm - 2:30 pm	Mike Ruzzo Energy Procurement Advisor Evan Bierman Senior Origination Analyst
5. Power Purchase Agreement Overview 2:30 pm - 2:45 pm	Mike Ruzzo Energy Procurement Advisor
6. Interconnection, Transmission and Distribution; Q&A Session 2:45 pm - 3:00 pm	Ramsey Ayass Generation Interconnection Team Lead Jim Spurgeon Customer Generation Manager
7. EcoShare Specifics 3:00 pm – 3:30 pm	Brandon Henzie Customer Programs Manager

Legal Disclaimers:

Anti-trust:

All participants in today's meeting shall comply with anti-trust guidelines. These guidelines direct meeting participants to avoid discussions of topics or behavior that would result in anti-competitive behavior, including restraint of trade and conspiracy to create unfair or deceptive business practices or discrimination, allocation of production, imposition of boycotts and exclusive dealing arrangements.

Rejection of Offers:

SDG&E MAKES NO GUARANTEE THAT A CONTRACT AWARD SHALL RESULT FROM THIS RFO EVEN AFTER AN OFFER HAS BEEN SELECTED AS A WINNING BID. SDG&E RESERVES THE RIGHT AT ANY TIME, AT ITS SOLE DISCRETION, TO ABANDON THIS RFO PROCESS, TO CHANGE THE BASIS FOR EVALUATION OF OFFERS, TO TERMINATE FURTHER PARTICIPATION IN THIS PROCESS BY ANY PARTY, TO ACCEPT ANY OFFER OR TO ENTER INTO ANY DEFINITIVE AGREEMENT, TO EVALUATE THE QUALIFICATIONS OF ANY RESPONDENT OR THE TERMS AND CONDITIONS OF ANY OFFER, OR TO REJECT ANY OR ALL OFFERS, ALL WITHOUT NOTICE AND WITHOUT ASSIGNING ANY REASONS AND WITHOUT LIABILITY OF SEMPRA ENERGY, SDG&E, OR ANY OF THEIR SUBSIDIARIES, AFFILIATES, OR REPRESENTATIVES TO ANY RESPONDENT. SDG&E SHALL HAVE NO OBLIGATION TO CONSIDER ANY OFFER.

Document Conflict:

This presentation is intended to be a summary level discussion of the information and requirements established in the RFO Materials. To the extent that there are any inconsistencies between the information provided in this presentation and the requirements in the RFO Materials, the RFO Materials shall govern.

Welcome

Jennifer Summers | Commercial Energy Policy Advisor

Overview of Solicitation

- SDG&E is committed to the State's RPS goals and to continue to be compliant with RPS regulations.
- SDG&E worked together with the CPUC and other IOUs to develop a successful auction process. We have tried to incorporate lessons learned from the prior RAM RFOs and will continue to watch closely and learn from these solicitations.
- SDG&E is issuing this auction-style RFO for the purpose of implementing its Green Tariff Shared Renewables Programs:
 - EcoShare - <http://www.sdge.com/environment/connected-to-the-sun/ecoshare>
 - EcoChoice - <http://www.sdge.com/environment/connected-to-the-sun/ecochoice>
- Assessment and selection transparency is paramount to us. Our Independent Evaluator, Harry Judd, will be involved in every step of the process.

General Q&A Guidance

- SDG&E will post questions and answers on the solicitation website at: <http://www.sdge.com/procurement/2017GTSRRFO>
- Questions can be submitted to either:
 - ECRRAMSolicitation@semprautilities.com
 - RAMSolicitation@semprautilities.com
- Respondents **MUST** copy the IE on all communications
- Questions received and answers will be posted to the website periodically
- Deadline to submit questions is April 26
- Offers are due by May 5

SDG&E and Supplier Diversity

Steve Taylor | Generation & Supply Manager

Background on Diverse Business Enterprises (DBE) Program

- *SDG&E encourages Women, Minority, Disabled Veteran, Lesbian, Gay, Bisexual and Transgender (LGBT) Business Enterprises (“Diverse Business Enterprises” or “DBE”s) to participate in the ECR RAM RFO*
- *General Order (GO) 156*
 - GO 156 adopted by the CPUC in 1986, with electric procurement reporting added in 2012
 - Sets rules governing the development of programs to increase participation of DBEs in procurement of contracts from utilities as required by CPUC Code
 - Goal is to promote greater competition among utility suppliers by expanding the available supplier base and to encourage greater economic opportunity for women, minority, service disabled veteran, and LGBT owned businesses historically left out of utility procurement
 - SDG&E encourages developers to utilize DBEs during various stages of project development and construction. SDG&E will require developers to identify and verify their DBE contractors and/or subcontractor spending, if any.

Diverse Supplier Certification and Eligibility

- *SDG&E Support of DBE's*
 - Supplier diversity goals are part of every executives' department goals and are a component of every employee's compensation goals
 - 43% of SDG&E's goods and services procurement dollars were spent with DBE's in 2016
 - \$68 million of our energy procurement dollars were spent with DBE's in 2016
- *For certification* and eligibility under GO 156, a DBE firm must meet the following requirements:*
 - 1) Must be a business enterprise:
 - a) that is at least 51% owned by a Woman, Minority, Disabled Veteran, or LGBT individual or group(s), or
 - b) if a publically owned business, at least 51% of the stock of which is owned by one or more DBE individual(s) or group(s), ; and,
 - 2) whose management and daily business operations are controlled by one or more of those DBE owners

**Certification does not guarantee any business enterprise the right to bid or receive a contract.*

Diverse Supplier Certification and Eligibility (*continued*)

- ***Obtaining Certification****
 - ***Minority, Woman or LGBT Owned Business***
 - California Public Utilities Commission (CPUC) Supplier Clearinghouse <http://www.thesupplierclearinghouse.com/>
 - ***Service Disabled Veteran Business***
 - State of California, General Services Office of Small Business and Disabled Veteran Business Enterprise Services (OSDS) <http://www.dgs.ca.gov/pd/Programs/OSDS.aspx>
 - ***Others Offering Certification***
 - Regional affiliates of the National Minority Supplier Development Council (NMSDC)
 - Small Business Administration 8(a) (SBA)
 - Women Business Enterprise Council (WBEC-WEST)
 - State and municipal government agencies

**Certification does not guarantee any business enterprise the right to bid or receive a contract.*

Supplier Diversity Resources

- *SDG&E Supplier Diversity Team Websites*
 - <http://www.sempra.com/about/supplier-diversity/>
 - <http://www.cpuc.ca.gov/puc/supplierdiversity/>
- *Local SDG&E Power Supplier Advisory Panel (PSAP)*
 - Panel of SDG&E executives and employees, developers, DBEs and bankers focused on identify potential barriers to the participation of eligible DBEs in the electric procurement market, and work with regulatory agencies and DBEs to remove those barriers
- *Statewide IOU Supplier Diversity Roundtable (SDR)*
 - Representation of California IOUs executives and employees, developers, DBEs and bankers to promote and accelerate the entry of eligible DBEs into the electric procurement market in an open and transparent forum
 - 3 Working Groups: Wholesale, RA and Subcontracting Indirect Spend

Supplier Diversity Contact Information

Erica Beal

Diverse Business Enterprise Program Manager

EBeal@semprautilities.com

858-636-5538

Steve Taylor

E&FP DBE Champion / Generation & Supply Manager

SRTaylor@semprautilities.com

858-654-6361

Role of the Independent Evaluator

Harold Judd | Accion Group

Overview Independent Evaluator

ACCION GROUP (ACCION) is approved by the CPUC as the Independent Evaluator for the RFO.

ACCION was founded in 2001 and has experienced professionals with extensive industry experience in the areas of:

- Evaluation & Dispatch Modeling
- Transmission & Distribution Systems
- Power Plant Construction & Operation
- Risk Analysis
- Legal Services (contracting & contract review)
 - PPA / APSA / Green Field Development / Turnkey Projects

Harry Judd has more than thirty years of experience in regulated industries and emerging markets; His experience includes the following:

- 85 Independent Evaluator engagements over the previous ten years
- Consultant providing crucial guidance to major clients including BPA, PGE, the Nuclear Decommissioning Finance Committee, the Georgia Public Service Commission, and the Hawaiian Electric Company

Bid Conformance

- *IE's role in the ECR RAM RFO:*
 - Monitor the Standards of Conduct to
 - Ensure equal treatment of all bids
 - Set separation of the Company's Evaluation Team & Bidders
 - Support clear & consistent Communication & Messaging
 - Create confidence in the Market regarding the Process
 - Review Draft Documents & Process before PUC Filing
 - Provide Independent Contact for Bidders
 - Inform PUC of status, complaints & issues
- *Bids should comply with all the requirements of the RFO*
 - Any bids that are rejected because of conformance issues will be discussed with the IE
 - Any bids that are accepted that may have minor conformance issues will also be discussed with the IE
 - The goal is to ensure all bidders are treated in a fair manner

Overview of Schedule, Product, Procurement Targets and Eligibility Requirements

Mike Ruzzo | Energy Procurement Advisor

GTSR Program Overview & Procurement Targets

Green Tariff Shared Renewables Program

- Program was passed into law by Senate Bill 43 and implemented by the CPUC in D. 15-01-051 and 16-05-006

GTSR program is intended to:

- Make clean, renewable energy available to bundled utility customers, whether or not they own a home and/or can afford a significant capital investment;
- Increase the overall volume of renewable energy in the San Diego area; and
- Increase options for institutional, commercial and residential customers to meet their renewable energy goals.

Solicitation Targets

- 0.5 - 20 MW for EcoShare
- 10.5 - 20 MW for EcoChoice
- 1.75 - 4.2 MW for Environmental Justice (EJ) projects. Can be either EcoShare or EcoChoice

RFO Schedule / PPA Execution and Approval

EcoShare Schedule

NO.	ITEM	DATE
1.	RFO Issued and SDG&E Begins Accepting Bids	March 22, 2017
2.	Bidder's Conference; 1:00 PM to 4:00 PM, PPT	March 29, 2017
3.	DEADLINE TO SUBMIT QUESTIONS	April 26, 2017
4.	Answers to all questions will be posted on SDG&E's website	May 1, 2017
5.	DEADLINE TO SUBMIT OFFERS/CLOSING DATE Offers must be uploaded to PowerAdvocate® by no later than 12 P.M. (i.e. NOON) Pacific Standard Time	May 5, 2017
6.	NOTIFICATION TO WINNING and CONTINGENT BIDDERS	June 16, 2017
7.	BIDDERS ACCEPTANCE/WITHDRAWAL LETTER due from Winning Bidders indicating: a) Withdrawal from SDG&E's solicitation; OR b) Acceptance of standing as a winning bid; withdrawal from participating in any other solicitation and evidence of withdrawal notice to all other solicitors	June 23, 2017
8.	Deadline for winning and contingent bidders to demonstrate fulfillment of customer participation requirements (60 days from Bidder's acceptance)	August 22, 2017
9.	SDG&E issues appreciation notices to unsuccessful Respondents	August 29, 2017
10.	Execute PPAs	August 29, 2017
11.	SDG&E submits Tier 2 Advice Letter with PPAs to CPUC for approval	September 26, 2017
12.	Anticipated CPUC approval	November 22, 2017

EcoChoice Schedule

NO.	ITEM	DATE
1.	RFO Issued and SDG&E Begins Accepting Bids	March 22, 2017
2.	Bidder's Conference; 1:00 PM to 4:00 PM, PPT	March 29, 2017
3.	DEADLINE TO SUBMIT QUESTIONS	April 26, 2017
4.	Answers to all questions will be posted on SDG&E's website	May 1, 2017
5.	DEADLINE TO SUBMIT RAM OFFERS/CLOSING DATE Offers must be uploaded to PowerAdvocate® by no later than 12 P.M. (i.e. NOON) Pacific Standard Time	May 5, 2017
6.	NOTIFICATION TO WINNING AND CONTINGENT BIDDERS	June 16, 2017
7.	WINNING BIDDERS ACCEPTANCE/WITHDRAWAL LETTER due from Winning Bidders indicating: a) Withdrawal from SDG&E's solicitation; OR b) Acceptance of standing as a winning bid; withdrawal from participating in any other solicitation and evidence of withdrawal notice to all other solicitors	June 23, 2017
8.	SDG&E issues appreciation notices to unsuccessful Respondents	July 14, 2017
9.	Execute PPAs	July 14, 2017
10.	SDG&E submits Tier 2 Advice Letter with PPAs to CPUC for approval	August 11, 2017
11.	Anticipated CPUC approval	October 5, 2017

*Note: SDG&E has no control over CPUC approval, these date are approximate

Eligibility Requirements

Resource:

- Resources must be CEC-certifiable as an eligible renewable resource;
- Resources must utilize a commercially proven technology;
- Resources must be new facilities;
- Resources must be located in SDG&E service territory or the Imperial Valley
- Resources must sell entire output to SDG&E (full buy/sell) or all output in excess of onsite load to SDG&E (excess sales);
- Project shall comply with the CARB's Voluntary Renewable Electricity (VRE) Program
- Project must meet Green-e® Energy eligibility criteria throughout the Delivery Term of the ECR PPA
- To qualify as an Environmental Justice project, the generating facility must be located in one of the census tracts listed on SDG&E's website

Project Capacity:

- Resources must be a minimum of 500 kW and a maximum of 20 MW installed nameplate capacity
- ECR-EJ Resources must be a minimum of 500 kW and a maximum of 1MW installed nameplate capacity
- All capacity ratings specified in this RFO must be nameplate capacities for **alternating current** ("ac") generation as provided to the bulk power transmission or distribution system unless otherwise noted.

Eligibility Requirements

Location/Site Control:

- Projects must be located within the service territory of SDG&E or located in the Imperial Valley and either directly connected or dynamically transferred via pseudo-tie into SDG&E's service territory at the Imperial Valley substation by the CAISO
- The Respondent must have, at time of bidding, full site control for the duration of the 10, 15, or 20-year power purchase agreement, as applicable, evidenced by documentation of:
 - Direct ownership
 - Lease
 - Option to lease or purchase upon PPA approval. The option must be an exclusive option to the Bidder effective until the completion of the RFO cycle.

Note: If shortlisted, Respondent's interconnection documents must be: 1) in the name of the same entity that will execute the ECR PPA, or 2) shall have been assigned to such entity by the time Respondent accepts its position on the shortlist.

Eligibility Requirements

Interconnection:

- Respondents must: (i) have a completed Phase II interconnection study, or have an interconnection agreement; and (ii) provide a copy of the most recent completed Phase II study or interconnection agreement must be included in the offer.
- For projects dynamically transferred via pseudo-tie into SDG&E's service territory, Respondents must: (i) provide a completed Phase II interconnection study or interconnection agreement, and (ii) provide documentation certifying the existence of dynamic transfer arrangements with a sufficient level of detail for SDG&E to determine conformance with Category 1 content specifications, RFO requirements, and to ensure that the dynamic transfer arrangement conforms with all other California state laws and decisions issued by the California Public Utilities Commission, the California Energy Commission, and any other regulatory authorities with jurisdiction over utility procurement in California.

Note: If shortlisted, Respondent's interconnection documents must be: 1) in the name of the same entity that will execute the ECR PPA, or 2) shall have been assigned to such entity by the time Respondent accepts its position on the shortlist.

Eligibility Requirements

Developer Experience:

- The Respondent and/or members of the project development team must have experience. Respondents must provide evidence of having completed, or begun construction, of a project using a technology similar to the offered technology, that is at least 500 kW nameplate capacity.
- The Respondent will maintain contractual control of the facilities and be responsible for development, land acquisition, permitting, financing and construction for the facilities. Respondents must provide a description of how operational control will be maintained.

Project Start Date:

- Offers must provide an anticipated delivery start date that is **within 36 months after the expected CPUC PPA Approval date.**

Other Incentives Not Permitted:

- Respondents shall not have sought Small Generator Incentive Program (SGIP) benefits, California Solar Incentives (CSI) or Net Energy Metering (NEM) Program benefits for the projects being offered and shall not plan to seek or participate in such programs for the entire term of the PPA.

Overview of the ECR Offer Evaluation Process

Evan Bierman | Senior Origination Analyst

Evaluation process for the ECR RAM RFO

Once the bids are received and the relevant data is identified and extracted to a database, the evaluation process for the RFO will consist of the following steps:

1. Screen the bids for conformance with the eligibility requirements
2. Analyze the bids using SDG&E's Least-Cost / Best-Fit (LCBF) evaluation methodology to create an initial quantitative ranking, and a subsequent final ranking which may modify the initial ranking based on qualitative criteria
3. Select winning bids for projects based on the final ranking

Pricing Options – FCDS or Energy Only

Full Capacity Deliverability Status (FCDS):

1. FCDS projects are capable of providing resource adequacy, and generally have a higher value than energy-only projects.
2. Projects which are located in SDG&E's local area are capable of providing local resource adequacy under CPUC and CAISO resource adequacy programs. Projects outside of SDG&E's local area are capable of providing system resource adequacy, which is less valuable than local resource adequacy.
3. FCDS projects capable of providing local resource adequacy are valued higher than FCDS projects capable of providing system resource adequacy.
4. FCDS projects must commit to achieve FCDS as close to COD as possible, but no later than the end of 2025.
5. The bid price will be multiplied by the FCDS TOD factors as shown below for deliveries in each TOD period:

FCDS TIME OF DAY PRICE MULTIPLIERS						
Location	Summer On-Peak	Summer-Semi-Peak	Summer Off-Peak	Winter On-Peak	Winter Semi-Peak	Winter Off-Peak
Local	2.304	1.204	0.853	1.495	0.866	0.746
System	1.927	0.958	0.869	1.464	0.948	0.827

Pricing Options – FCDS or Energy Only

Energy-Only Status:

1. All renewable resources are valued based upon their ability to displace other forms of generation. Projects which cannot provide resource adequacy are unable to displace a capacity-related attribute provided by other forms of generation, and may require SDG&E to procure additional resource adequacy to make up for the shortfall.
2. The submitted price will be multiplied by the energy-only TOD factors as shown below for deliveries in each TOD period:

ENERGY ONLY TIME OF DAY PRICE MULTIPLIERS					
Summer On-Peak	Summer-Semi-Peak	Summer Off-Peak	Winter On-Peak	Winter Semi-Peak	Winter Off-Peak
1.581	0.957	0.896	1.509	0.977	0.853

LCBF Overview

- Valuation and Selection Process
 - Least-Cost/Best-Fit (LCBF)
- Quantitative Evaluation
 - Net Market Value (NMV)
 - Each conforming offer is valued using this discounted cash flow analysis
- Qualitative Evaluation
 - Used to differentiate similarly valued offers
- Shortlisted Offers



NMV - Typical Benefits and Costs

Typical Benefits	Typical Costs
Energy	Contract Payments
Ancillary Services (A/S) - Spin, Non-Spin, Reg Up, Reg Down	Variable Energy Costs (Fuel, VOM, GHG Compliance)
Capacity (RA)	Transmission Interconnection
Renewable Energy Credits (REC's)	Renewable Integration Adder

Transmission Adder Calculation

Transmission Adder

1. Transmission costs from a project's latest transmission study will be used to calculate a transmission adder that will be applied to the project's Bid Ranking Price.
2. Only transmission costs that are reimbursable to the bidder will be used to compute the transmission adder. Amounts paid by the bidder for distribution interconnections and transmission-level upgrades that are not reimbursed will not be used in calculating the transmission adder. Those should be included in the respondents bid price.
3. In all cases, the reimbursable costs shown in the transmission studies submitted by the bidder will be used for adder computation.

Qualitative Evaluation

Criteria may be considered in the Qualitative Evaluation:

- Project development status:
 - Electrical interconnection status
 - Permitting status
 - Fuel and water interconnections
 - Site control
- Developer attributes
 - Project financing
 - Development experience
 - Project viability
- Other attributes
 - Contribution to other procurement targets (CHP, RPS, Energy Storage)
 - Portfolio fit
 - Technology risk
 - Proximity to High Hazard Fuel Zone and ability to exceed the minimum fuel requirements from these zones
 - Start Date and Term

Overview of Bidding Protocols

Evan Bierman | Senior Origination Analyst

Required Bid Forms

Offer Form – There is no limit on the number of Forms that can be submitted. Therefore, respondents are encouraged, but not required, to submit additional offers for our consideration with shorter tenors or with escalators.

Interconnection Agreement or Phase II Interconnection Study (or distribution level equivalent) and / or Fast Track Documentation – Submit a copy of the most recent completed interconnection agreement, Phase II interconnection study or equivalent Fast Track documentation. For Projects located in Imperial Valley and dynamically transferred via pseudo-tie into SDG&E's service territory by the CAISO, submit copies of a completed Phase II interconnection study and provide documentation certifying the existence of the dynamic transfer arrangements.

Site Control Documentation – Submit copies of site control documents demonstrating: a) direct ownership; b) a lease; or c) an option to lease or purchase upon PPA approval (must be an exclusive option to the Bidder that will last until the completion of the RFO cycle).

Site Maps – Submit copies of all project maps showing location, facilities, layout, Interconnection, etc. and the Project single line diagram.

Resource Report - please submit a verifiable fuel resource plan

Full PVSyst Model (Solar Only) – the full PVSyst file must be submitted by exporting the entire project that contains the prj, met, inv, pan, etc. files.

**The Pricing Forms must be in Excel or Excel-compatible format (not in PDF). Copies of the completed interconnection agreement, interconnection study and site control documentation must be in PDF format.*

Website and Offer Form Walk Through

www.sdge.com/2017GTSRRFO

Mistakes on forms that can cause rejection of a bid

- **Critical information missing**
- **Entering information incorrectly: i.e. prices in cents/kWh and deliveries in kWh instead of \$/MWh and MWh**
- **Adding or renaming worksheets**
- **Making the utility fill out your bid form**

Bid Submission Process

Evan Bierman | Senior Origination Analyst

Registration and Logging On

Ways to Register:

1. Receive an invitational email from SDG&E followed by a link to access PowerAdvocate®
2. Register as a first-time user on www.PowerAdvocate.com
 - Request for access using the Referral Information

Referral Information

Are you registering for a specific Event: * Yes
 No, I would simply like to register.

Who referred you to this Event: *

Name of that individual's company: *

Name or description of the Event: *

3. Request for access using the PowerAdvocate® link located at:
<https://www.poweradvocate.com/pR.do?okey=67434&pubEvent=true>

How to Log On:

1. Launch a web browser and go to: www.poweradvocate.com, and then click on the orange **Login** button.
2. Enter your account **User Name** and **Password** (both are case-sensitive)
3. Click **Login**.

The Supplier Dashboard

What information is displayed on my Dashboard?

Your Dashboard displays all bid events to which you have been invited.

Dashboard		Company Filter: All Companies		Fill-In Data Sheets					
Event / Buyer	Msg	Open	Close	Download Documents	Upload Documents	Commercial	Technical	Pricing	
190 -cbl-1: 190 First St. Cable/Wiring Electric Power Utility		05/16/10 8:00 AM EDT	06/08/10 4:00 PM EDT	1	2	3	4	5	
T42g: Colorado River Sluice Gates Great Western Utilities	1/1	04/04/10 10:00 AM EDT	06/30/10 4:00 PM EDT	1	2	3	4	5	
1998-01: Grid Expansion Electric Power Utility		09/01/10 8:00 AM EDT	12/29/10 4:00 PM EST	1	2	3	4	5	

Open and Pending Pre-Bid events

Pending (not Pre-Bid) and Closed events

Buying entity

Event name/number

Number of unread/total messages; click to access the Messaging tab.

The numbers on the Dashboard represent a general workflow, though you can work in any order:

- 1 Download the bid package.
- 2 Upload bid documents, proposals, etc.
- 3 4 5 Fill in online datasheets if present.

More Information & Additional Help

PowerAdvocate Support

- Support@poweradvocate.com
- (857) 453-5800

Online Help

- Access the Help System at any time by clicking on the **Help** button



Dashboard Profile Company **Help** Logout

Event Dashboard

Fill-In Data Sheets

Event	Msg	Open	Close	Download Documents	Upload Documents	Commercial	Technical	Pricing
35697 : 2013 SDGE Energy RFP Sempra Energy		05/02/13 5:00 PM EDT	05/14/13 4:00 PM EDT	1	2	3	4	5

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*Please submit your questions by
April 26th*

Overview of Power Purchase Agreements

Mike Ruzzo | Energy Procurement Advisor

Standard PPA Terms - Applicable to GTSR Programs

Term	Description
Documents	<ul style="list-style-type: none"> Both EcoChoice and EcoShare PPAs use the non-modifiable, pre-approved standard RAM PPA
Contract Duration	<ul style="list-style-type: none"> 10, 15, or 20 contract years
Contract Capacity	<ul style="list-style-type: none"> 0.5 – 20 MW (0.5 – 1 MW for Environmental Justice Projects)
Commercial Operation Deadline	<ul style="list-style-type: none"> Must achieve Commercial Operation within 36 months of CPUC approval. One, 6 month extension allowed for certain permitting delays, interconnection delays or force majeure
Performance Security	<ul style="list-style-type: none"> <u>CPUC Approval Security (Execution to CPUC Approval)</u>: The greater of \$100,000 or \$2.50/MWh multiplied by 2 times expected annual generation <u>Development Period Security (CPUC Approval to CP Satisfaction Date)</u>: \$5.00/MWh multiplied by 2 times expected annual generation <u>Construction Period Security (CP Satisfaction Date to COD)</u>: \$10.00/MWh multiplied by 2 times expected annual generation <u>Delivery Term Security (COD to End of Term)</u>: \$20.00/MWh multiplied by 2 times expected annual generation

Standard PPA Terms - Applicable to GTSR Programs

Term	Description
Energy Price Adjustments	<ul style="list-style-type: none"> • Deliveries exceeding 110% of contract capacity in each hour are paid \$0/MWh • Energy deliveries exceeding 115% of annual Contract Quantity or 115% of the TOD Delivery Cap in any period are paid a fraction of the energy price. <ul style="list-style-type: none"> • For EcoCoice, you are paid 0% of the energy price for excess energy • For EcoShare, you are paid 75% of the energy price for excess energy
Guaranteed Deliveries	<ul style="list-style-type: none"> • Minimum annual deliveries of 90% of expected annual net energy production for baseload projects, based on one year of rolling production. • 75% for peaking projects
Economic Curtailment	<ul style="list-style-type: none"> • SDG&E shall curtail energy deliveries from the project for the economic purposes • Seller is to be paid for an amount the project is deemed to have been able to deliver
Resource Adequacy/Full Capacity Deliverability Status	<p>Seller must apply for deliverability as soon as possible (but not required as part of bid) if bidder is selecting FCDS pricing. Seller must receive FINAL deliverability studies (e.g. Final Phase II deliverability studies)</p> <ul style="list-style-type: none"> • FCDS is not a condition precedent to commercial operation • For FCDS projects, the PPA TOD factors include the value of FCDS. The TOD adjusted price will be reduced by a Deliverability Value until the project achieves FCDS. Once the project achieves FCDS, the Deliverability Value will be added back to the TOD-adjusted price. FCDS projects must achieve FCDS by no later than Jan. 1, 2027 • For Energy Only projects, the PPA TOD factors do not include the value of FCDS

2017 CAISO Generator Interconnection & Deliverability Allocation Procedures (GIDAP)

Ramsey Ayass | Senior Engineer

CAISO Generator Interconnection and Deliverability Allocation Procedures

Interconnection to SDG&E transmission system is governed by the CAISO's FERC approved Tariff:

- **Cluster Windows:** April 1 – April 30 of each year (If any date is not a Business Day, then the applicable date shall be the next Business Day.)

GIDAP PROCESS

- **Interconnection Request (IR)**
- **Scoping Meeting**
- **Project Grouping**
- **Phase I Interconnection Study**
- **Phase II Interconnection Study**
- **Posting of Financial Security**
- ❖ **Large/Small Generator Interconnection Agreements (LGIA/SGIA)**

SDG&E Interconnection Procedures to Connect to the Electric Distribution System

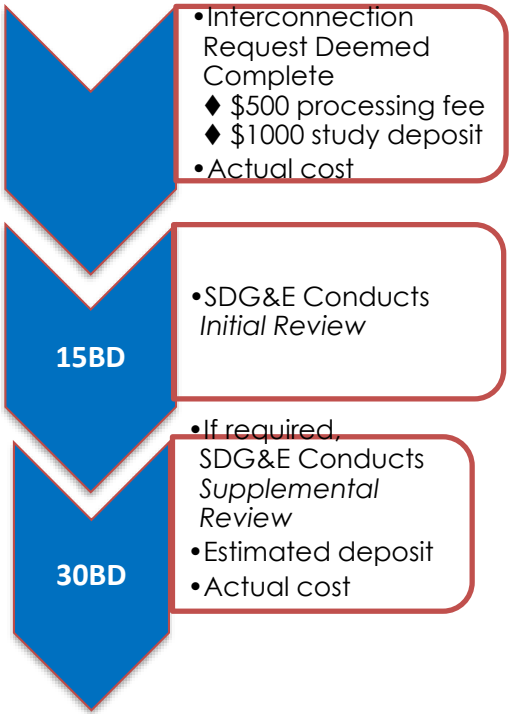
Jim Spurgeon | Customer Generation

WDAT Study Process Timelines

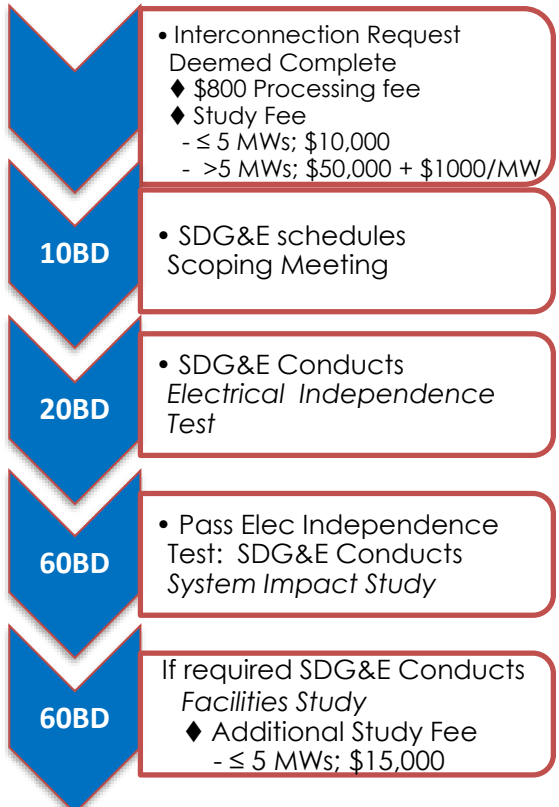
Fast Track Process

2.0MW or Less for any location

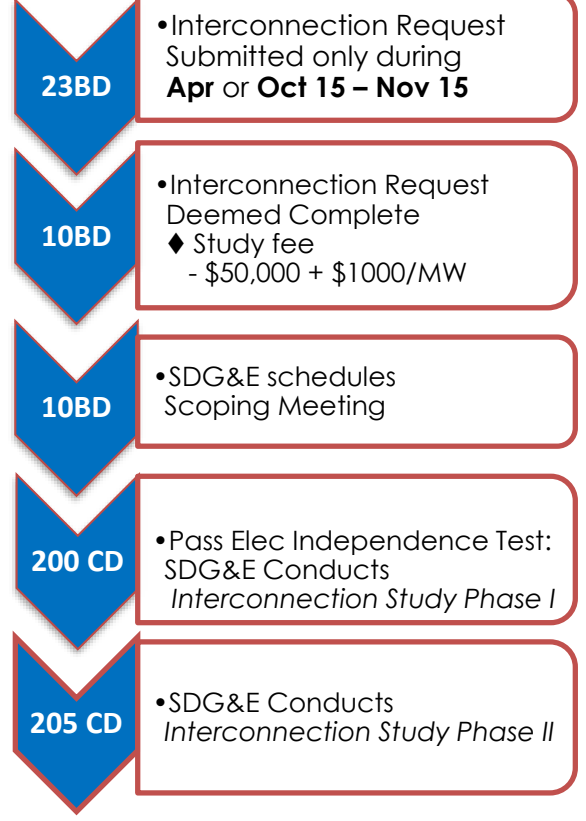
≤3MW @ 12kV for inverter based gen w/in 2.5 miles of substn



Independent Study Process



Cluster Study Process

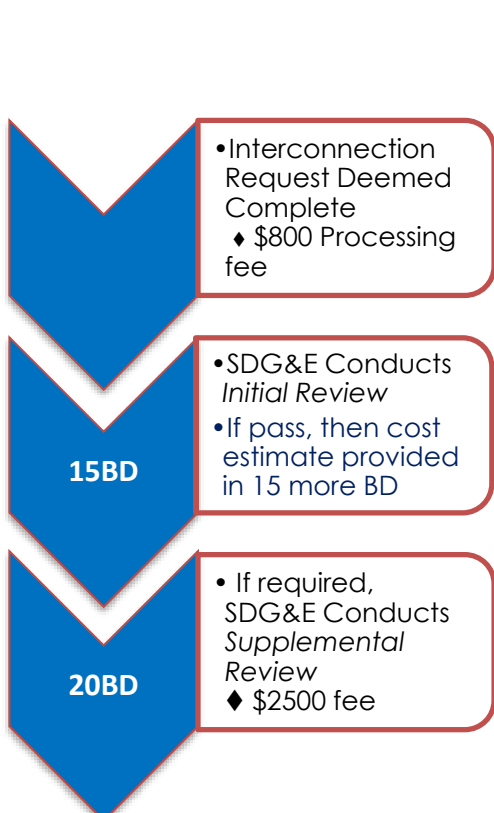


Interconnection Agreement

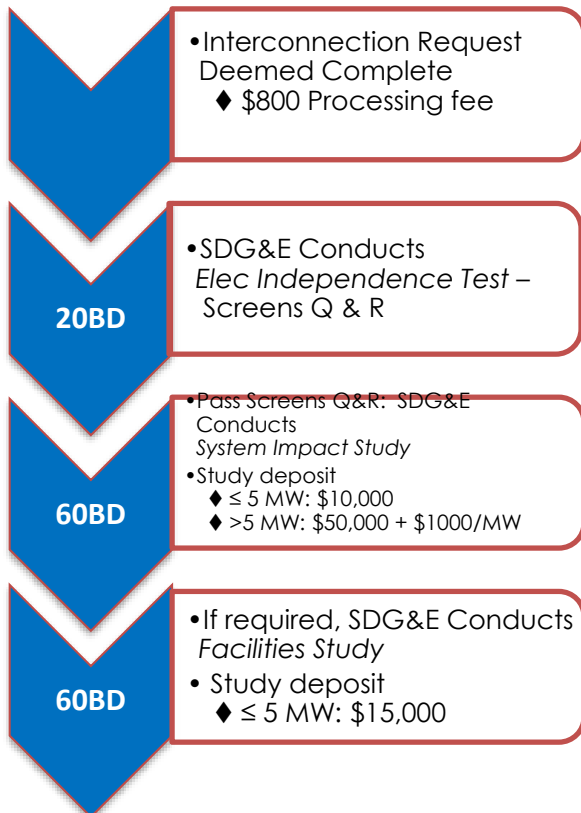
Rule 21 Study Process Timelines

Fast Track Process

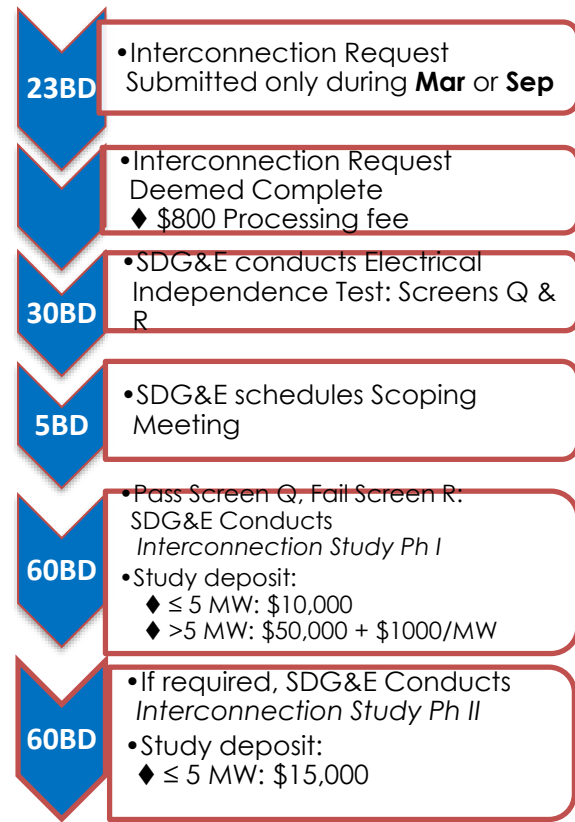
1.5 MW or Less or
Any Size Non-exporting



Independent Study Process



Distribution Group Study Process



Interconnection Agreement

Enhanced Community Renewables Customer Participation and Marketing Requirements

Brandon Henzie | Program Manager

Eligibility Requirements – EcoShare ONLY

Securities Opinion:

- Prior to or concurrent with EcoShare PPA execution, the developer must provide an original legal opinion, in form and substance acceptable to SDG&E, and addressed to SDG&E, issued by a law firm listed in The American Lawyer annual “AmLaw 100” list for the then-current year stating that the transactions between the Customers and the Applicant meet the requirements specified in the RFO protocol.*

Marketing Materials

- Developer must have marketing materials successfully reviewed by SDG&E prior to submitting a bid into the EcoShare solicitation.

Community Interest:

- EcoShare applicant must demonstrate fulfillment of its Community interest requirement within 60 days of notification of contract award

*SCE, on behalf of itself, SDG&E and PG&E, filed a Petition for Modification on March 27th, 2017 to modify the type of lawyer or law firm permitted to issue the legal opinion and what the opinion must contain. Please see *Petition of Southern California Edison Company (U 338-E)*, *Pacific Gas and Electric Company (U 39-E)*, and *San Diego Gas & Electric Company (U 902-E)* for modification of Decision 15-01-051, filed March 27, 2017.

Marketing Requirements

- Developers are responsible for marketing their ECR project and recruiting interested customers
- All marketing materials produced by participating developers must:
 - Be reviewed by SDG&E prior to use or publication
 - Comply with SDG&E's branding guidelines
 - Comply with all Green-e Energy communications guidelines and requirements
- Please allow 30 days for the marketing review process
- Evidence of SDG&E marketing material review is required prior to submitting a bid into the ECR solicitation
- References:
 - Submit marketing materials to CTTS@sdge.com
 - Marketing requirements are outlined at: <http://www.sdge.com/developer-marketing-requirements-and-review-process>

Community Interest

- Bidders will have **60 days from the date of notification of contract award** to fulfill the ECR community interest requirements
 - If community interest requirements are not met, the awarded capacity will be assigned to the next highest ranking least-cost best-fit (LCBF) ECR project in the solicitation
 - “Community” is defined as customers living within 10 miles of the project site, or within the same municipality or county as the project site
 - After the PPA is executed, customers can come from anywhere within SDG&E’s service territory
- **Interest Type 1 - Expression of Interest:** A signed document or submission of an online form using digital e-signature technology is required for each customer indicating interest in the project. Information required in the document includes customer name, service address, and subscription amount.
- **Interest Type 2 - Commitment to Enroll:** requires the same information as an expression of interest, and also requires that the SDG&E service account number for the customer be provided.

Community Interest - 2

- To satisfy the community interest requirement:
 - Residents or businesses meeting the applicable location requirements must have **committed to enroll in at least 30%** of the facility's capacity, or have provided **expressions of interest in the project sufficient to reach 51%** of the proposed facility's capacity.
 - Customers providing community interest must meet all eligibility requirements outlined in [Schedule ECR](#).
 - At least three (3) individual customers must have committed to enroll or provided the necessary expressions of interest. This requirement increases with project size (i.e. a 20 MW project would require commitments to enroll or expressions of interest from at least 20 individual customers).
 - At least 50% (by number of customers) and at least 1/6th (by load) of the demonstrated community interest in the project must come from residential customers.
 - A guarantee of subscription levels from a third-party institutional customer, such as a municipality working to develop an ECR Project in its community, satisfies the community interest requirement.
- More information, including applicable forms, is available at <http://www.sdge.com/environment/ecoshare-for-developers>

PPA Terms Specific to the EcoShare Program

Term	Description
Documents	<ul style="list-style-type: none"> EcoShare PPA documents consist of the non-modifiable standard RAM PPA, and either a PPA Rider for EcoShare or EcoShare for DERP participation
Product Type	<ul style="list-style-type: none"> Baseload or as-available intermittent resources
Minimum Subscription Requirement	<ul style="list-style-type: none"> 1st Contract Year: 50% of Project's Contract Capacity 2nd Contract Year: 75% of Project's Contract Capacity 3rd Contract Year: 95% of Project's Contract Capacity Remaining Years: 95% of Project's Contract Capacity <p>* A five percent (5%) margin is reasonable to account for Subscription changes in the normal course of business if the Project is below the Minimum Subscription Requirement.</p>
Energy Payments	<ul style="list-style-type: none"> Seller to be reimbursed by Customers who are Subscribed to the Project Capacity (Subscribed Capacity) When Unsubscribed Capacity is above the Minimum Subscription Requirement, Seller is paid Contract Price for deliveries from Unsubscribed Capacity, adjusted by TOD Factors based on when energy is delivered
Energy Price Adjustments	<ul style="list-style-type: none"> When Unsubscribed Capacity is below the Minimum Subscription Requirement, Seller is paid DLAP plus REC Price for the deliveries from Unsubscribed Capacity

PPA Terms Specific to the EcoShare Program

Term	Description
Customer's Minimum and Maximum Subscription	<ul style="list-style-type: none"> • <u>Customer's Minimum Subscription</u> is an amount of energy per year equal to or greater than 100 kWh per month on average (calculated on an annual basis) or 25% of Customer's forecasted annual consumption • <u>Customer's Maximum Subscription</u> is an amount not more than 2 MW of nameplate generating capacity for a calendar year <ul style="list-style-type: none"> ○ Federal, state, or local governments, schools or school districts, county offices of education, the California Community Colleges, the California State University, or the University of California may exceed the 2 MW cap provided that no single entity, its affiliates or subsidiaries Subscribes to more than 20% of any single calendar year's total cumulative rated generating capacity
Appendix J	<ul style="list-style-type: none"> • Seller to provide Customer Subscription information monthly, in the form of Appendix J
EcoShare Tariff	<ul style="list-style-type: none"> • Buyer's Schedule ECR EcoShare Tariff, as posted on Buyer's website at http://www.sdge.com
Customer-Seller Agreement	<ul style="list-style-type: none"> • Between Customer and Seller for Customer Subscription to Seller's Facility. • Buyer shall not be a party to, and is prohibited from requesting pricing information contained in, the CSA

PPA Terms Specific to the EcoShare Program

Term	Description
AmLaw 100 Legal Opinion*	<ul style="list-style-type: none"> • Seller shall deliver to Buyer an original legal opinion, in form and substance acceptable to Buyer, issued by a law firm listed in The American Lawyer annual “AmLaw 100” list for the then-current year, stating that the transactions between the Customers and Seller: <ul style="list-style-type: none"> a) comply with securities law, and that Buyer and its ratepayers are not at risk for securities claims associated with the Project, and b) comply with one of the following: <ul style="list-style-type: none"> i. do not involve the offer or sale of “securities” under Cal. or federal law ii. involve the offer or sale of securities registered under federal securities law and exempt from qualification under Cal. securities law, iii. involve the offer or sale of securities exempt from registration under federal securities law and are qualified under Cal. securities law, or iv. involve the offer or sale of securities exempt from registration under federal securities law and exempt from qualification under Cal. securities law, as applicable. • The legal opinion may not contain any exceptions or qualifications unacceptable to Buyer in its reasonable discretion. • Seller must submit to Buyer an attestation from an officer of Seller that the fact certificate provided by an officer of Seller to the law firm issuing the legal opinion is true and complete and that Seller’s business model with Customers is, and throughout the Delivery Term will be, as described in the legal opinion. <p><small>*SCE, on behalf of itself, SDG&E and PG&E, filed a Petition for Modification on March 27th, 2017 to modify the type of lawyer or law firm permitted to issue the legal opinion and what the opinion must contain. Please see <i>Petition of Southern California Edison Company (U 338-E), Pacific Gas and Electric Company (U 39-E), and San Diego Gas & Electric Company (U 902-E) for modification of Decision 15-01-051, filed March 27, 2017.</i></small></p>

Appendix

Appendix

Appendix

Appendix

Generation Interconnection Information

SDG&E Interconnection Website: <http://www.sdge.com/generation-interconnections/overview-generation-interconnections>

- Download and review SDG&E Interconnection Handbook
- Links to CAISO interconnection queue, tariffs and websites
- Links to SDG&E interconnection queue, tariffs and websites
- Link to NERC/WECC Reliability Standards
- Links to Process Summaries
- Link to SDG&E Self Generation Technologies site

CAISO Generation Interconnection Process Contact:

- Lead Interconnection Specialist : Leslie Feusi (916) 351-2330
Lfeusi@caiso.com

SDG&E Contacts:

- Generation Interconnection Team Lead: Bruno Velosa (858) 654-8293
BVelosa@semprautilities.com
- Generation Interconnection Project Manager: Marlene Mishler (858) 654-8640
MMishler@semprautilities.com
- Energy Administrator: Dan McCarron (858) 637-7905 DMcCarron@semprautilities.com

SDG&E Interconnection Procedures to Connect to the Electric Distribution System

Jim Spurgeon | Customer Generation

Interconnection Process - Distribution



Distribution Interconnections

- The process to interconnect to SDG&E's distribution system is managed by the Customer Generation group in the Transmission & Distribution Engineering Department
- SDG&E's nominal distribution voltage is 12kV with limited 12.47 kV and 4 kV
- All Applications must be submitted to SDG&E's Customer Generation group
- Two application processes:
 - WDAT - Wholesale Distribution Open Access Tariff (FERC)
 - Rule 21 - SDG&E Electric Rule 21 (CPUC)

Application Package (WDAT and Rule 21)

Distribution Interconnection Application Package (for WDAT and Rule 21) Includes:

- Complete Interconnection Request
- Site Control Evidence
- Site Plan Diagram
- Single Line Diagram

An Invoice will be sent to Interconnection Customer (IC) and payment must be made before the application is considered complete:

- WDAT Application Fee: \$1,500
- Rule 21 Application Fee: \$800

WDAT
Wholesale Distribution Open
Access Tariff
(FERC)

WDAT Application Form and Location

WDAT Application Location - <http://sdge.com/wdat>

WDAT Interconnection Package submitted to:
WDATSGIPAPPLICATIONS@semprautilities.com

Or mail hardcopy application package to:

Customer Generation - CP52F

San Diego Gas & Electric

8316 Century Park Court

San Diego, CA 92123-1582

Application fee to be submitted to:

Customer Payment Services - CP61C

San Diego Gas & Electric

PO Box 129831

San Diego, CA 92112-9831

WDAT Application Process Timeline: (Fast Track & Study Process)

Process Milestone	Duration	Responsible Party
Submit Application	Clock Starts	Interconnection Customer (IC)
Application Deemed Complete or Provide Notice of Additional Items	10 BD	SDG&E
Provide Additional Items or Requests Extension	Additional 10 BD	Interconnection Customer (IC)
Deem Application Complete or Withdraw Application	Upon submittal of additional items	SDG&E

Sec 6.1

Reasonable Efforts

The Distribution Provider shall make reasonable efforts to meet all time frames provided in these procedures, including the payment of refunds, unless the Distribution Provider and the Interconnection Customer agree to a different schedule. If the Distribution Provider cannot meet a deadline provided herein, it shall notify the Interconnection Customer, explain the reason for the failure to meet the deadline, and provide an estimated time by which it will complete the applicable interconnection procedure in the process.

WDAT Fast Track Study Process

Fast Track

- **Eligibility:**
 - i) ≤ 2 MW regardless of location on the circuit
 - ii) ≤ 3 MW if located on mainline (3 ϕ and $>4/0$ or 336) and 2.5 circuit miles from substation
- **\$1500 non-refundable fee (\$500 processing + \$1,000 study deposit)**
- **Must Pass Fast Track Screens in Section 2**
 - Initial Review
 - Supplemental Review (if needed) Cost: typically \$2500
- **Small Generator Interconnection Agreement (SGIA)**

WDAT Independent Study Process

Independent Study Process:

- **\$800 non-refundable interconnection fee + study deposits:**
- **Eligibility: Pass Electrical Independence Test**
- **System Impact Study:**
 - **≤5 MW: \$10,000**
 - **>5MW: \$50,000 and \$1000/MW**
- **Facilities Study: \$15,000**
- **Follow Study Process in WDAT Section 3**
- **Small Generator Interconnection Agreement (SGIA)**

WDAT Cluster Study Process

Cluster Study Process – approximately 18 months

- **Generator Project (≤ 20 MW) grouped in a cluster with other projects**
- **2 Application Windows:**
 - **April 1-30**
 - **October 15 – November 15**
- **Follow Study Process in Section 4**
- **Study deposit: \$50,000 + \$1,000/MW**
- **Small Generator Interconnection Agreement (SGIA)**

WDAT Study Process

Study	Timing	Study Procedures	Study Deposit
System Impact Study	60 BD	<ul style="list-style-type: none"> • Dynamic Analyses • Updated Interconnection Cost estimates 	$\leq 5 \text{ MW: } \$10,000$ <hr/> $> 5 \text{ MW: } \$50,000 + \$1000/\text{MW}$
Facilities Study	45/60 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 	$\leq 5 \text{ MW: } \$15,000$ <hr/> $> 5 \text{ MW: } \$50,000 + \$1000/\text{MW}$

WDAT Cluster Study Process

Study	Timing	Study Procedures	Study Deposit
Phase I (Start June 1)	200 CD	<ul style="list-style-type: none">• Dynamic Analyses• Updated Interconnection Cost estimates	\$50,000 + \$1,000/MW
Phase II (Start May 1)	205 CD	<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	

WDAT Small Generator Interconnection Agreement (SGIA) ≤20MW

Process	Duration	Responsible Party
Following the Facilities Study/Phase II	30 CD	SDG&E
<ul style="list-style-type: none"> •IC executes SGIA; or •IC fails to execute SGIA; or •IC has not requested to file unexecuted SGIA; or •IC has not initiated Dispute Resolution; + Interconnection Request Deemed Withdrawn	120 CD	Interconnection Customer (IC)
		SDG&E
		SDG&E & IC

Rule 21
SDG&E Electric Rule 21
Generator Facility
Interconnections
(CPUC)

Rule 21 Application Form and Location

Rule 21 Application Location:

http://regarchive.sdge.com/tm2/pdf/ELEC_ELEC-SF_142-05203.pdf

WDAT Interconnection Package submitted to:

DGAPPLICATIONS@semprautilities.com

Or mail hardcopy application package to:

Customer Generation - CP52F

San Diego Gas & Electric

8316 Century Park Court

San Diego, CA 92123-1582

Application fee to be submitted to:

Customer Payment Services - CP61C

San Diego Gas & Electric

PO Box 129831

San Diego, CA 92112-9831

Rule 21 Fast Track Study Process

- Size limit: ≤1.5 MW; \$800 application fee
- Initial Review (13 screens) – 15 BD from receipt of valid application package
 - Pass Initial Review:
 - Identify upgrades/interconnection facilities
 - Prepare cost estimate
 - Draft Generator Interconnection Agreement (GIA)
 - Fail Initial Review:
 - Request Supplemental Review or Detailed Study
 - Withdraw IR
- Supplemental Review (3 additional screens) - 20 BD from receipt of additional information
 - Pass Supplemental Review:
 - Upgrades Required - Cost Estimates; Draft Generator Interconnection Agreement (GIA)
 - No Upgrades Required – Draft GIA
 - Fail Supplemental Review:
 - Request Detailed Study
 - Withdraw IR

Rule 21 Independent Study Process

Applicability

Size:

- >1.5 MWs and ≤ 5 MW: \$10,000 study deposit
- > 5 MW: \$50,000 study deposit + \$1000/MW

Electrical Independence Tests

Transmission System – Screen Q

Pass – Electrical Independence Test for Distribution System

Fail – Transmission Cluster Study (WDAT)

Distribution System – Screen R

Pass – Independent Study Process

Fail – Distribution Group Study Process

Rule 21 Independent Study Process

Independent Study Process

Interconnection System Impact Study

- Scoping Meeting Scheduled (5 BD after passing Screens Q & R)
- Provide Detailed Study Agreement to Applicant (15 BD)
- Commence SIS from receipt of DSA from Applicant (30 BD)
- Final SIS report (60 BD)
- Schedule Results Meeting if requested by applicant – (10 BD from SIS report)
- Tender Draft GIA (if **IFS waived**) w/in 30 CD after waiving IFS

Interconnection Facilities Study (if required)

- ≤ 5 MW: Requires additional \$15,000 deposit; additional information
- Commence IFS, issue final report (60 BD if upgrades/45 BD no upgrades)
- Schedule Results Meeting if requested by applicant (5 BD - from request)
- Tender Draft GIA (w/in 30 CD of issuing IFS)

Rule 21 Cluster Study Process

Distribution Group Study Process

Phase I Interconnection Study

- Application must be submitted during two study windows: **March** and **September**
- Scoping Meeting Scheduled (5 BD - after Elec. Independence Test)
- Provide Detailed Study Agreement to Applicant (15 BD)
- Conduct Phase I study and issue final study results report (60 BD from start of study)
- Results meeting upon Applicant request (optional; 5 BD to schedule meeting)
- Tender Draft GIA (30 CD after results meeting if Phase II study is waived).

Phase II Interconnection Study (if required)

- ≤ 5 MW: Requires additional \$15,000 deposit; additional information
- Phase II study begins (60 CD after Phase I final study results report)
- Final Phase II study results report completed (60 BD)
- Results meeting upon Applicant request (optional; 5 BD to schedule meeting)
- Tender Draft GIA (30 CD after results meeting)

SDG&E Distribution Interconnection Process

Additional Resources available at www.sdge.com

Go to: CUSTOMER GENERATION in lower right corner

- Pre-Application Report (\$300)
- SDG&E WDAT and Rule 21 Interconnection Queue
- WDAT tariff
- Rule 21 tariff
- Interconnection Interactive Map (shows line capacity and available capacity after existing and queued generators)
- Generator Interconnection Handbook

SDG&E Distribution Interconnection Process

Questions:

Ken Parks - Customer Generation Manager

kparks@semprautilities.com

858-636-5581

Mike Turner - Principal Engineer

mturner@semprautilities.com

858-654-8326

*Please submit your questions by
April 19*

2017 CAISO Generator Interconnection & Deliverability Allocation Procedures (GIDAP)

Ramsey Ayass | Senior Engineer

Cluster Study Windows and IR

During the Cluster Study Windows, Interconnection Customers (ICs) must submit:

- A completed **Interconnection Request (IR)**
- Provide evidence to demonstrate **Site Exclusivity**
 - Or an additional deposit in lieu of Site Exclusivity is required: \$250K for a Large Generating Facility and \$100K for a Small Generating Facility

NOTE: For Cluster 5 under the CAISO Tariff Appendix DD, will address high cost & large scope DNUs through the TPP.

Cluster Study Windows and IR

A completed IR includes:

- IR form
- Point of Interconnection (POI)
- Technical Data (Attachment A, Appendix 1)
- Voltage Level
- Study Deposit - \$150,000*
- IC elects deliverability:
 - Full Capacity (FC) - Delivery Network Upgrades for deliverability built, if needed, required to qualify for Resource Adequacy (RA) in PPA
 - Partial Deliverability for ___% of electrical output
 - Energy Only (EO) - No Delivery Network Upgrades for deliverability built, not qualified for RA
 - * *Pending FERC Approval.* Currently, \$50K + \$1K per MW, up to \$250K

Scoping Meeting and Project Grouping

- CAISO to schedule Scoping Meeting within 5 Business Days of the IR being deemed complete
- Scoping Meetings must be completed within 60 days of the close of the Cluster Study Window
- Face to Face project review with SDG&E and CAISO
- Sets the stage for development of the Phase I Study Agreement
- IC must designate Phase I Point of Interconnection (POI) within 3 Business Days of the Scoping Meeting
- CAISO tenders Phase I Study Agreement including study plan to IC within 10 Business Days of POI designation.
- IC to execute the Phase I Study Agreement within 30 days

After the Scoping Meetings, at the CAISO's option and in coordination with SDG&E, an IR may be studied individually or in a group study based on their interconnection points and shared transmission needs.

Phase I Interconnection Study

- *Typically* commences July 1st each year – Completed and Final Phase I Study report issued by year-end (may be extended)
- SDG&E - Reliability Network Upgrade (RNU) studies (a short circuit, stability, and power flow analysis, including off-peak analysis)
- CAISO - Delivery Network Upgrade (DNU) studies (an On-Peak and Off-Peak (for information only) Deliverability Assessment for FC projects, required to receive Resource Adequacy (RA) qualification for PPA)
- Preliminary identification of the Interconnection Facilities and Network Upgrades required for each IR - Assess the POI and potential alternatives
- Establish max. cost responsibility for RNU, Local Delivery Network Upgrades (LDNU), and Interconnection Facilities

Phase I Interconnection Study

- Phase I Study Results Meeting - within 30 Days of study completion
- Within 10 Business Days of Results Meeting, IC may submit to CAISO desired modifications to the IR, including: decrease in the electrical output of proposed project, modify technical parameters of facility, and/or modify the interconnection configuration.
- GIDAP Phase I results provide each project with cost cap for its RNU and LDNU
 - *Retains GIP provisions on security postings*
 - *LDNU cash reimbursement to align with TP deliverability allocation*
- **Phase I does not cap project exposure to ADNU costs**

Between Phase I and Phase II Interconnection Studies

- To continue to Phase II, IC must elect either Option (A) or Option (B)
- **Option (A)**
 - *Project requires TP deliverability to continue to commercial operation*
 - *Project posts security for RNU and LDNU (not for ADNU)*
 - *Phase II study will not identify any ADNU costs*
 - *Option to park for a year if not allocated TPD*
- **Option (B)**
 - *Project is willing & able to pay for ADNUs without cash reimbursement by ratepayers*
 - *Project posts security for RNU, LDNU, and ADNU*
 - *ADNU security posting equals \$/MW cost rate determined in Phase I Study, times project MW deliverability*
 - *ADNU no cash reimbursement, treated as merchant transmission, eligible for Congestion Revenue Rights (CRRs)*

Phase II Interconnection Study

- Typically commences May 1st each year – Completed and Final Phase II Study report issued by year-end (may be extended)
- Updates analyses performed in the Phase I studies to account for changes, i.e. changes to IRs, withdrawal of IRs, as applicable
- Identifies final Network Upgrades (RNU, LDNU, ADNU) needed to physically interconnect the Generating Facilities and assigns responsibility for financing the identified final Network Upgrades
- Identifies ADNU cost estimates, but not cost caps for Option (B) projects
- Identifies final POI and SDG&E's and IC's Interconnection Facilities and provides cost estimate of the final SDG&E's and IC's Interconnection Facilities
- Phase II Study Results Meeting within 30 Days following Study completion. CAISO, SDG&E, and the IC discuss the Phase II Interconnection Study report, including selection of the final COD.

Note: CAISO shall coordinate the Phase I and Phase II Interconnection Studies with SDG&E and any Affected System Operators

Application of Posting Requirements for NUs to (A)& (B) Projects

<p style="text-align: center;"><i>Network Upgrades</i></p> <ul style="list-style-type: none"> •ADNU, LDNU, RNU for B projects •LDNU and RNU for A projects 			
Project Size	First Posting (Due 90 days after phase I study complete)	Second Posting (Due 180 days after phase II study complete)	Third Posting (Due at start of construction)
20 MW or less	<p>Lesser of</p> <ul style="list-style-type: none"> • 15% of phase I study estimated network upgrade costs • \$20,000 per MW <p>(but not less than the lesser of \$50,000, or the estimated cost of network upgrades)</p>	<p>Lesser of</p> <ul style="list-style-type: none"> • \$1 million • 30% of lower of phase I or phase II study estimated network upgrade costs <p>(but not less than the lesser of \$100,000, or the estimated cost of the network upgrades)</p>	100% of lower of phase I or phase II study estimated network upgrade costs
Greater than 20MW	<p>Lesser of</p> <ul style="list-style-type: none"> • \$7.5 million • 15% of Phase I estimated network upgrade costs • \$20,000 per MW <p>(but not less than the lesser of \$500,000, or the estimated cost of network upgrades)</p>	<p>Lesser of</p> <ul style="list-style-type: none"> • \$15 million • 30% of lower of phase I or phase II study estimated network upgrade costs <p>(but not less than the lesser of \$500,000, or the estimated cost of the network upgrades)</p>	100% of lower of phase I or phase II study estimated network upgrade costs

Generator Interconnection Agreements (LGIA & SGIA)

- Three-party agreement between the CAISO, SDG&E, and IC
- SDG&E to provide Draft GIA to IC no later than the sum of (i) 180 Calendar Days plus estimated time to construct facilities prior to the In-Service Date of the project.
- Negotiations to be completed within 120 Calendar Days of GIA tendering.
- Final GIA to IC within 10 Business Days after completion of GIA negotiation process.

Reimbursement of LDNU postings

- *All projects are reimbursed for RNU costs up to \$60,000 per MW of installed capacity after commercial operation.*
- *Option (A) and (B) projects allocated TP deliverability receive full reimbursement of LDNU postings after commercial operation.*
- *Option (A) projects not allocated TP deliverability that remain in queue as energy only are reimbursed for first LDNU posting.*
- *Option (B) projects not allocated TP deliverability are not eligible for reimbursement of LDNU or ADNU costs*