



SDG&E 2016 Preferred Resources LCR RFO Bidder's Conference

SDG&E Energy Innovation Center

4760 Clairemont Mesa Blvd
San Diego, CA 92117

By Phone: 1-866-814-8399
Pass Code: 1670738

Audience link:

<https://engage.vevent.com/rt/sempra/index.jsp?seid=132>

April 13, 2016

11:00 am to 2:00 pm (PDT)

The logo for San Diego Gas & Electric (SDGE) features the letters "SDGE" in a bold, black, sans-serif font. A thick red horizontal bar is positioned below the "D" and "G", extending to the right and curving upwards under the "E".

A  Sempra Energy utility®

The Sempra Energy logo consists of a stylized red figure of a person in motion, holding a blue flame or energy source aloft. To the right of the figure, the text "Sempra Energy utility" is written in a blue, serif font, with a registered trademark symbol (®) at the end.

Agenda

Time	Presenter	Topic
11:00	Scot Rolfe	Safety Moment and Legal Disclaimers
11:05	Pat Charles	Welcome
11:10	Steve Taylor	SDG&E and Supplier Diversity
11:15	Pat Charles	Solicitation Overview
11:25	Scot Rolfe/Jon Jacobs	Overview of the Independent Evaluator's Role RFO Need/Schedule/Conformance Requirements
11:30	Pat Charles	- Incremental nature, Defining dates, milestones, periods, terms - Resource Criteria, Eligibility Requirements
12:00	Evan Bierman	Overview of Bidding Protocol
12:15	Scot Rolfe	Offer Submission Process (Power Advocate)/Top 8 mistakes to avoid
12:30	Scot Rolfe	Evaluation
1:00	5 Minute Break	Refreshments
1:05	Joanne Wang	Collateral Requirements/Credit Application
1:15	Bruno Velosa(CAISO)/ Mike Turner (WDAT&Rule 21)	Interconnection Overview
1:45	Kerriann Weaver	Energy Efficiency
1:55	Liyang Wang	Demand Response
2:00-?	All	General Q&A Session and Networking



Safety Moment

Safety first

- Emergency Evacuation Plan overview
- Logistics
 - Restrooms
- Housekeeping questions?

Legal Disclaimers: Anti-Trust Guidelines & Document Conflict

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

Document Conflict:

- This presentation is intended to be a summary level discussion of the information and requirements established in the 2014 All Source 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

Pat Charles
Origination Analytics Manager

General Q&A Guidance

- SDG&E has posted (and will continue to post) questions and answers on the solicitation website (<http://www.sdge.com/2016PrefResourcesLCRRFO>)
 - Q&A's that apply to all product types are included on the main page; product type specific Q&As will be included on the page for each product type
- Questions from today will be written down; all questions and answers will be posted on the RFO website
- Questions can be submitted to PrefResourcesRFO@semprautilities.com (please cc the IE) at any time until the question submittal deadline
- Questions received (and answers) will be posted to the website periodically
- Deadline to submit questions: June 17, 2016
 - SDG&E will post the final set of answers no later than June 24, 2016 (offers are due on July 1, 2016)

SDG&E and Supplier Diversity

Steve Taylor
Generation and Supply Manager, E&FP

<http://www.sempra.com/about/supplier-diversity>

Background on Diverse Business Enterprises (DBE) Program

General Order (GO) 156

- Adopted by the California Public Utilities Commission in 1986
- Promote greater competition among utility suppliers by expanding the available supplier base and to encourage greater economic opportunity for women, minority, and disabled veteran owned businesses historically left out of utility procurement
- In 2012 Electric Procurement was added to GO 156 reporting

Currently at SDG&E

- Supplier diversity goals are part of every executives' department goals and are a component of every employee's compensation goals
- 42.7% of SDG&E's goods and services procurement dollars were spent with DBEs in 2015
- \$105 million of our energy procurement dollars going to DBEs in 2015



DBE or SDVBE Firm Must Meet the Following Requirement

To be eligible for consideration under G.O. 156 a DBE or SDVBE a firm must have the following requirements for certification:

- (1) a business enterprise:
 - (a) that is at least 51 % owned by a minority or service disabled veteran individual or group(s) or
 - (b) if a publicly owned business, at least 51 % of the stock of which is owned by one or more minority groups, and
- (2) whose management and daily business operations are controlled by one or more of those individuals.

Diverse Supplier Certification*

- Minority, Woman or LGBT owned companies
 - California Public Utilities Commission (CPUC) Supplier Clearinghouse (free)
- Service Disabled Veteran Business
 - State of California, General Services Office of Small and Disabled Veteran Business (OSDC)
- NMSDC
 - Regional affiliates of the National Minority Supplier Development Council (NMSDC)
- Others
 - 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.*



GO156 Electric Procurement Reporting Progression

- **Year 2011** - All California IOUs were required to begin separate reporting on electric procurement spending (similar to gas procurement)
- **Year 2012** - SDG&E was the first California IOU to:
 - Contract long-term power purchase agreements in of renewable energy with DBE
 - Complete electric market wholesale transactions with DBEs

Year 2013 to date (Reference Section 1.E)

- SDG&E encourages Diverse Business Enterprises (“DBEs”), as defined in G.O. 156, to participate in the DBE program and in this RFO.
- SDG&E encourages developers to utilize DBEs during various stages of project development and construction. As a part of G.O. 156, SDG&E will require developers to identify and verify their DBE contractors/subcontractor spending, if any.
- Like other qualitative factors, in the event of a tie between two offers, SDG&E will consider a Respondent’s status as a DBE and or a Respondent’s plan to utilize the services of DBEs during project development.



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 Beale
- Program Manager - Supplier Diversity & Supplier Relations SDG&E
 - EBeale@semprautilities.com
 - 858-636-5538

Role of the Independent Evaluator

Jon Jacobs & Barbara Sands
PA Consulting

Independent Evaluator Introduction and Role

- Jonathan Jacobs and Barbara Sands of PA Consulting Group will be the Independent Evaluators (“IEs”) for this solicitation. Both Jonathan and Barbara have been the IE for previous SDG&E’s RFOs (e.g., All-Source, RPS, RAM, all-source RFO and peaking capacity RFO)
 - The role of the IE is to ensure that SDG&E’s evaluation of bids is transparent and that all bidders are treated fairly and equitably
 - The IE is expected to assure that affiliate and utility owned bids are not favored
 - The IE oversees SDG&E’s Cost Development Team and Evaluation Team
 - The IE will also ensure that bid compliance decisions are fair
 - The IE oversees the modeling of the bids including how each bid is represented the models

The IE provides advice to SDG&E on evaluation issues as they arise



Independent Evaluator Contact Information

Any emails sent to SDG&E at
PrefResourcesRFO@semprautilites.com
MUST also be cc'd to these addresses:

Jon Jacobs -
jonathan.jacobs@paconsulting.com

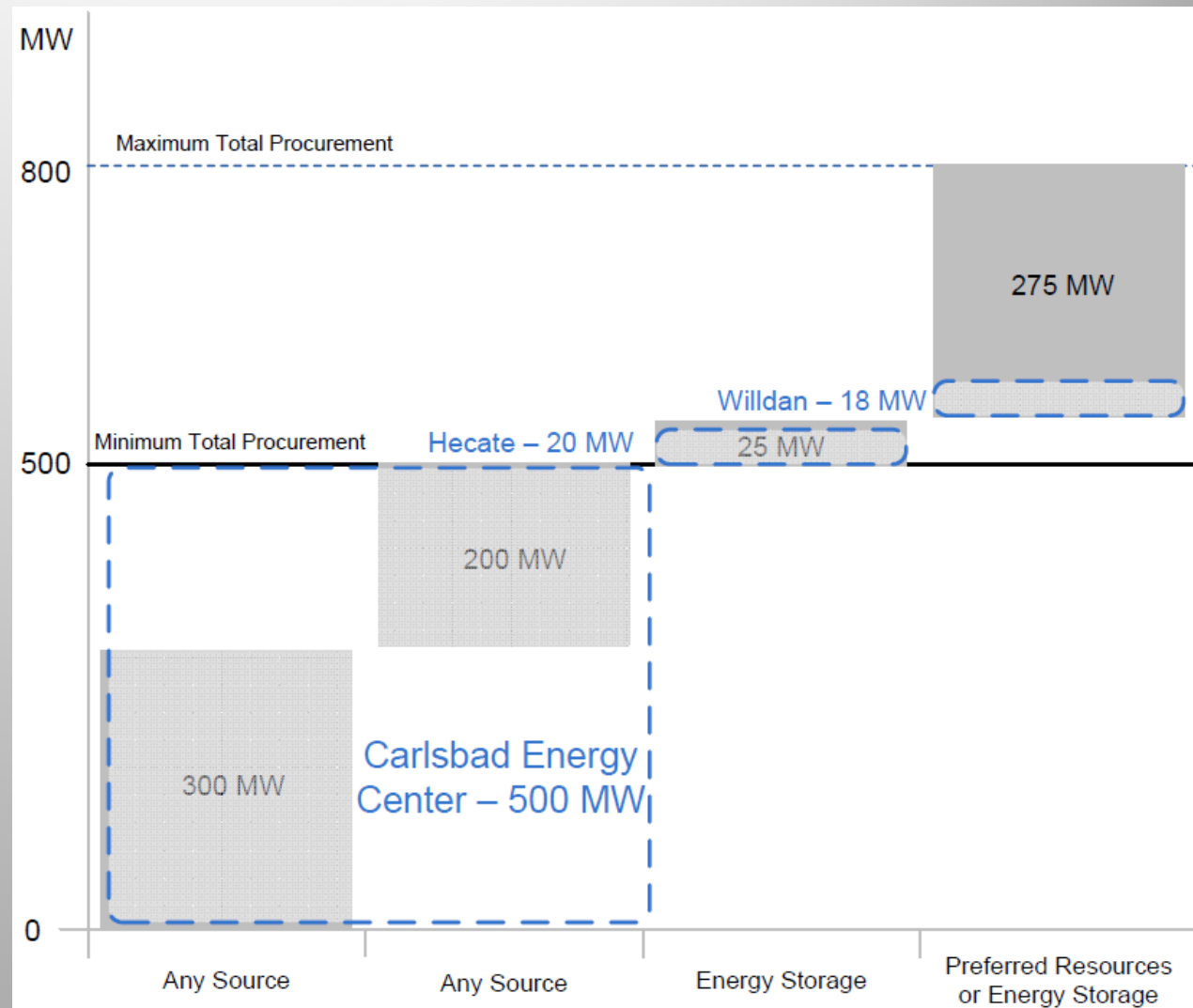
Barbara Sands -
Barbara.Sands@paconsulting.com

RFO Need / Schedule / General Conformance Requirements

Pat Charles
E&FP Origination Analytics Manager

RFO Procurement Authorization and Progress

- The Track 4 Decision authorized:
 - Up to 800MW of energy storage
 - Up to 775MW of preferred resources (not including energy storage)
 - Up to 600MW from ‘any source’, such as conventional resources, or
 - Some combination thereof totaling up to 800MW
- SDG&E separately requested Commission approval for the Carlsbad Energy Center (A.14-07-009) & received approval for 500MW
- SDG&E has requested Commission approval for 38.5MW of preferred resources resulting from the 2014 All-Source RFO (Hecate / Willdan)
- SDG&E is soliciting :
 - 140 MW of preferred resources (+ / -)
 - Third party-owned, contracted resources for all preferred resources (EE, DR, Renewables, DG, and Energy Storage)
 - In addition, SDG&E is soliciting energy storage systems to be owned by SDG&E



RFO Conformance Requirements

- This solicitation is for Local Capacity Requirements (LCR) as authorized in the Track 4 Decision (D.14-03-004)
- 4 main conformance requirements for all resource types:

Location

- Resources must be located / must interconnect within the Local San Diego Subarea
- For programs, customers enrolled must be located within SDG&E's service territory

Resource Adequacy

- The resource must qualify to count for RA / meet the RA counting rules / provide 'RA Value' (energy efficiency)

Incremental

- The resource must be 'demonstrably incremental' to the assumptions used in the CAISO studies done that underlie the 500 – 800 MW authorization

Contract Term

- SDG&E will consider all contract terms
- SDG&E encourages offers for various delivery terms (3, 5 or 10 – EE, DR / 10, 15 or 20 years for other resource types)
- Some portion of contract term MUST encompass 2022

RFO Conformance Requirements - Location

‘San Diego Local subarea projects are those located in SDG&E’s service territory connecting to SDG&E owned transmission or distribution facilities at a point that is at or electrically west of the Miguel or Suncrest substations and electrically south of the San Onofre Nuclear Generating Station 230 kV switchyard.’

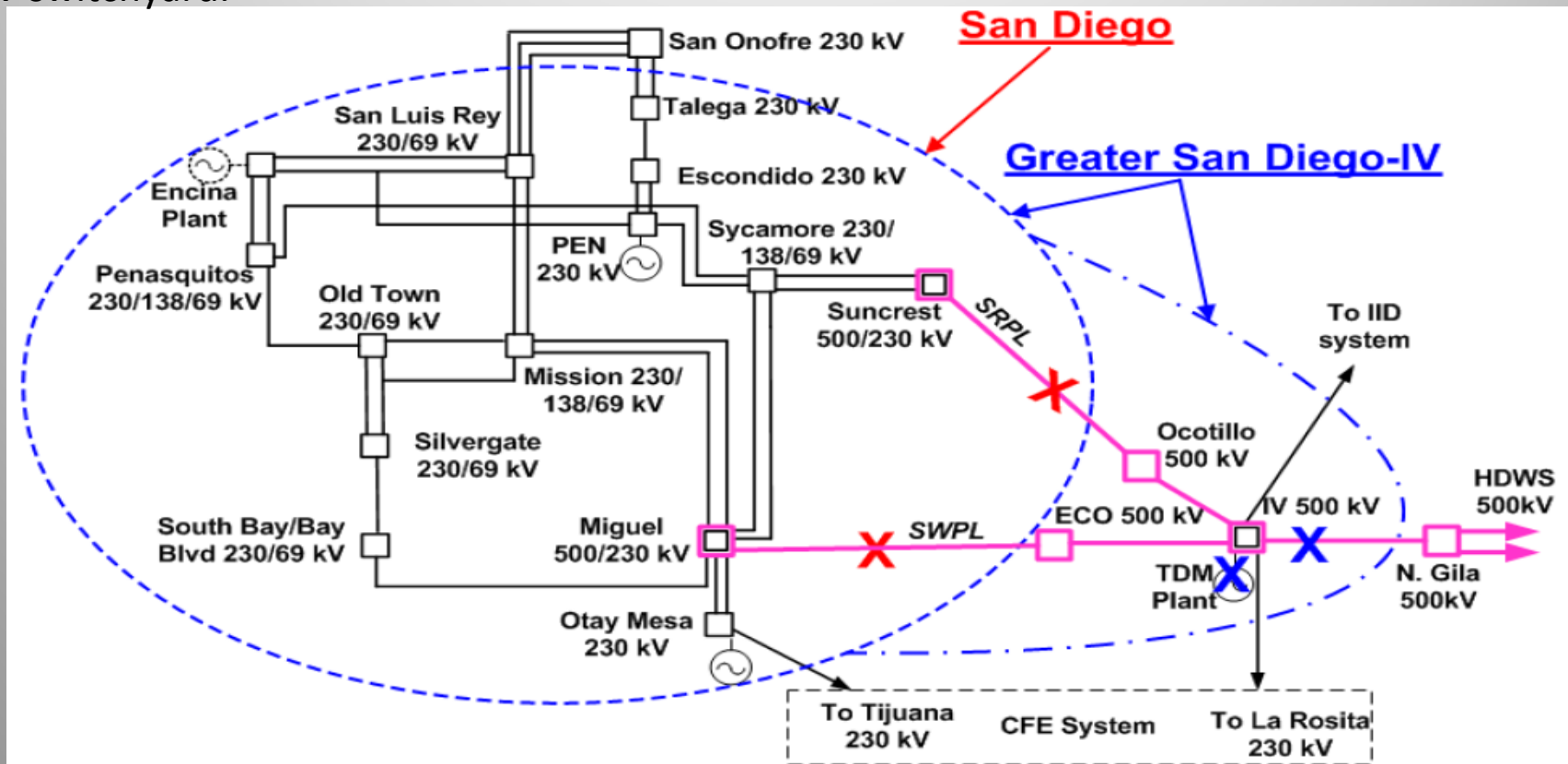


Diagram source: <http://www.caiso.com/informed/Pages/StakeholderProcesses/LocalCapacityRequirementsProcess.aspx>

See “Presentation – Final 2015 and 2019 Local Capacity Requirement San Diego Local Area”, pg 14



RFO Conformance Requirements – Resource Adequacy (RA)

- IOUs must meet CPUC RA requirements on a monthly basis.
 - RA resources used to meet these requirements have a ‘must offer obligation’ in the CAISO energy markets
- The resources that SDG&E is seeking through this RFO are intended to count toward SDG&E’s RA obligations or are required to provide RA value

Generation or energy storage resources

- Must go through the CAISO deliverability study process and receive a non-energy only deliverability status

Use limited resources (such as DR programs or energy storage)

- Must be capable of operating / being dispatched for 4 hours on 3 consecutive days

Energy Efficiency

- Provide RA value by lowering the RA requirement (by reducing load)

- More information is available from the CAISO and the CPUC websites

For example, please see the CAISO Tariff, Section 40 -

http://www.caiso.com/Documents/Section40_ResourceAdequacyDemonstrationForAllISCsInTheCAISOBAA_May1_2014.pdf and the annual CPUC decisions governing the RA program: 2011 RA Requirements: D10-06-036, 2012: D11-06-022, 2013: D12-06-025, 2014: D13-06-024, 2015: D14-06-050



RFO Conformance Requirements – “...demonstrably incremental...”

The Track 4 decision, OP 6 , requires that SDG&E observe the requirements listed in OP 4 of D.13-02-015 – the Track 1 decision

- OP 4, b. “The resource must be demonstrably incremental to the assumptions used in the CAISO studies, to ensure that a given resource is not double counted.”
- CAISO studies for track 4 were ordered via a revised scoping ruling issued 5/21/2013, available here: <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M065/K202/65202525.PDF>
 - Attachment A to the revised scoping ruling includes the Track 4 study assumptions
 - The CAISO study is more fully explained and the results are presented in the testimony of Mr. Robert Sparks, available at:
http://www.caiso.com/Documents/Aug5_2013_Track_4_Testimony_RobertSparks_R12-03-014.pdf

See tables on following slides for additional resources

RFO Conformance Requirements – “...demonstrably incremental...”

<i>Resource</i>	<i>Is your Program or Resource Incremental? Check these resources...</i>
Demand Response (DR)	<p>1) SDG&E's current DR Programs (http://www.sdge.com/business/demand-response-overview)</p> <p>2) SDG&E's proposed 2015-16 DR programs (http://www.sdge.com/regulatory-filing/10486/oir-enhance-role-dr-meeting-state-resource-planning-ops-reqmt); approved via D.14-05-025</p> <p>3) 2013 IEPR DR Forecast: (http://www.energy.ca.gov/2013_energypolicy/documents/demand-forecast_CMF/mid_case/ ; click on SDGE Mid.xls</p>
Energy Efficiency (EE)	<p>1) SDG&E's current EE programs (see http://www.sdge.com/save-money/upgrade-and-save -- gives information on SDG&E's EE rebate programs; CPUC Decision approving SDG&E's current programs: http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M034/K299/34299795.PDF ; and reporting on SDG&E's current EE programs at http://eestats.cpuc.ca.gov/Views/Documents.aspx</p> <p>2) SDG&E's proposal for 2015 EE programs (http://www.sdge.com/regulatory-filing/10501/2015-energy-efficiency-program-portfolio-changes-phase1-rulemaking-13-11-005)</p> <p>3) See "Energy Efficiency Adjustments for a Managed Forecast: Estimates of Incremental Uncommitted Energy Savings Relative to the California Energy Demand Forecast 2012-2022" of September 14, 2012 at http://www.energy.ca.gov/2012_energypolicy/documents/demand-forecast/IUEE-CED2011_results_summary.xls ; See the 'mid savings elec' tab -- as discussed and directed in the revised scoping memo - Att A, p. 4, footnote 10</p>



RFO Conformance Requirements – “...demonstrably incremental...”

<i>Resource</i>	<i>Is your Program or Resource Incremental? Check these resources...</i>
Renewables	See Chart 2 (p. 12) from the Revised Scoping Memo and 'the commercial interest RPS portfolio' - see: http://www.cpuc.ca.gov/PUC/energy/Procurement/LTPP/2012+LTPP+Tools+and+Spreadsheets.htm scroll down to '2012-2013 Transmission Planning Process Portfolios - May Revise (XLSX)'
Distributed Generation (DG)	Revised Scoping Memo mentions roof-top PV, but no other DG; therefore any other DG offered, that is not currently in operation, would be incremental
Energy Storage	Revised Scoping Memo is silent on energy storage; therefore any energy storage offered, that is not currently in operation, would be incremental

RFO Conformance Requirements – limit on Number of Offers

A MAXIMUM OF SIX (6) OFFERS PER RESPONDENT PER PROJECT OR PROGRAM WILL BE ACCEPTED.

Defining what a separate project entails: Variation of significant project details, including the following, will constitute a separate ‘project’ or ‘program’:

- Differing commercial operation dates or delivery start dates
- Differing delivery terms
- Differing energy deliveries or dispatchable configurations
- Differing maximum capacity
- Differing points of interconnection
- Differing operational constraints
- Differing equipment suppliers

Fill out separate offer forms for each offer. Only one Project Description Form is required per Respondent (per project) to the extent that all bids can be adequately summarized in the space provided.



Product Type Resource Criteria and Eligibility Requirements (EE and DR)

Participation and Resource Criteria	Resource Type	
	EE	DR
Resource Specific Requirements	Customers enrolled must be within SDG&E's service territory;	Customers enrolled must be within SDG&E's service territory; supply-side resources only; No permanent load shifting; No fossil-fuel back-up generation; Must be dispatchable
Program size limits	500 kW - 140MW	500 kW - 140 MW
<u>Preferred</u> Contract Term (Years)	Encoraging various terms (3, 5 or 10 years)	Encoraging various terms (3, 5 or 10 years)

Product Type Resource Criterial and Eligibility Requirements

Participation and Resource Criteria	Resource Type		
	Renewable	Energy Storage	DG
Resource Specific Requirements	RPS Product Category: Category 1 (bundled products as defined in Public Utilities Code 399.16(b)(1)(A-B))	As defined by the PUBLIC UTILITIES CODE SECTION 2835	Interconnect at distribution voltage; GHG emissions must be less than or equal to the SGIP emission factor of .320 metric tons of CO2e per MWh
Type of facility/resource	New, Repowered and Expanded	New, Repowered and Expanded	New, Repowered and Expanded
Project Size/Resource	3 MW -140 MW	ESSPPTA or ESSBOT: 500 kW – 140 MW ESSEPC: 10 MW – 140 MW	500 kW – 140 MW
<u>Preferred</u> Contract Term (Years)	Encouraging various terms to be offered - 10, 15 or 20	Encouraging various terms to be offered - 10, 15 or 20	Encouraging various terms to be offered - 10, 15 or 20



Product Type Resource Criterial and Eligibility Requirements - continued

Participation and Resource Criteria	Resource Type		
	Renewable	Energy Storage	DG
Interconnection Requirements	Full Deliverability	Full Deliverability	Full Deliverability
CAISO Deliverability Study	Interconnection/WDAT/Rule 21 or CAISO Phase II Study	Interconnection/WDAT/Rule 21 or CAISO Phase I Study (or fast track screen) or evidence of repowering (CAISO BPM)	Interconnection/WDAT/Rule 21 or CAISO Phase II Study
Site Control	Direct ownership; a lease or an option to lease or purchase upon PPA approval	Direct ownership; a lease or an option to lease or purchase upon PPA approval	Direct ownership; a lease or an option to lease or purchase upon PPA approval

Overview of Bidding Protocol

Evan Bierman

Senior Origination Analyst

Scot Rolfe

Principal Business Analyst

RFO Offer Documents Required

Required Documents	Resource Type				
	EE	DR	Renewable	Energy Storage	DG
Offer Form	X	X	X	X	X
Project Description Form	X	X	X	X	X
Electric Interconnection Information	N/A	N/A	X	X	if applicable
Credit Application	X	X	X	X	X
DBE documents	if applicable	if applicable	if applicable	if applicable	if applicable
Pro Forma redline	X	TBD	X	X	TBD
Other	1. Workpaper (s) associated with energy savings profile (EE measures) 2. M&V Plan	N/A	PVSyst Files (Solar only) and fuel resource plan	N/A	N/A



Offer Form Overview

- Excel-based offer(bid) forms
- Spreadsheets are protected(locked) so only data entry fields should be editable
- DO NOT try to add rows, columns, sheets, or in any way change the layout of your offer form
- If you find any errors, or have any problems using the offer forms, please contact us at PrefResourcesRFO@semprautilities.com (please cc the IE) immediately



Offer Form Sections by Resource

Resource Type	Sheet Names						
	Instructions	Contact Information	Program/Project Description	Capacity and/or Price	Energy Savings or Delivery Profile	Operational Constraints	Other Resource Specific Sheets
Renewable	X	X	X	X	X		
DR	X	X	X				
EE	X	X	X	X	X		X
Storage	X	X	X	X		X	X
DG	X	X	X				

Instruction Sheet and Form Color Key

Distributed Generation Products Offer Form

2014 All Source LCR RFO

San Diego Gas and Electric Company ("SDG&E") is issuing this 2014 All Source LCR RFO to meet the Local Capacity Requirement outlined in the LTPP Track 4 decision. As part of this requirement, this RFO solicits offers for Distributed Generation within the Local Capacity Area for SDG&E.

Form Field Key:

Free Form Field

Pull Down Menu

Calculated Field

Comment Field

Instructions:

- Follow instructions as they appear in each fields' comments or pop-up messages
- Complete all fields in the "Contact Information" and "Project Information" worksheets
- Fill out all fields in the units requested
- Do not add, change, or move any cells, rows, columns or worksheets in the workbook

Offer Forms

- Fill out EVERY applicable field. Failure to do so could result in non-conformance
- Abundant free-form fields to describe any aspects of your project/program that don't fit exactly within our entry fields, please use them

Offer Submission Process

Scot Rolfe
Principal Origination Analyst

Registration and Logging On - update

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: *

* Required Field

3. Request for access using the PowerAdvocate® link provided in the RFO documents

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.

Accessing the RFP Event and Submitting Documents

How to Access the RFP Event from Dashboard:

1. To download the RFP package, click  or select the **1. Download Documents** tab

- RFO Document
- Project Description
- Offer Form
- Credit Application
- PPA Document
- Other forms

2. To upload documents, click  or select the **2. Upload Documents** tab. Select the “Commercial and Administration” Document Type, then click Browse to navigate to your document and click Open. Finally, click Submit Document

- Project Description Form (.doc or .docx)
- Offer Form (.xls or .xlsx)
- Interconnection Documents (.pdf)
- Site Control Documentation (.pdf)

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

PowerAdvocate®

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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Top 8 Mistakes

8. Inconsistent contract terms between worksheets or documents

- Prices and deliveries should start at the same date as the contract start date. Deliveries and prices should stop in the final contract year. Offer forms for contracts of 15 year terms that only have 10 years of pricing and deliveries, or any other mismatch that is not explained in the offer form, may be declared non-conforming and rejected

7. Missing documents

- Any of the required documents that are not submitted before the RFO closing date could be declared non-conforming

6. Using incorrect units

- Offer form entries that are inconsistent with the units shown at the top of the pricing form column may require corrections. For example: \$/MWh vs. cents/kWh

Top 8 Mistakes

5. Bidding DC capacity and energy instead of AC capacity and energy

- Important for solar PV developers. Utilities do not sell DC electricity to retail customers. Bidding DC megawatts and megawatt-hours will cause inaccurate contract evaluations, and such bids may be declared non-conforming and rejected

4. Adding or renaming worksheets

- If the bid has multiple options for pricing/COD/deliveries/etc., fill out separate offer forms for each option. Adding worksheets, or renaming worksheets, create problems with interpretation and processing, and the bid may be declared non-conforming and rejected

3. Wrong project technology

- Make sure that the Project Information form describes the technology as “Solar PV” if it is solar photovoltaics, “Wind “ if the project is wind, etc. For projects that are a combination of technologies, enter “Hybrid”

2. Pricing form data inconsistent with project description form

- The Project Description Form and the Offer Forms should describe the same project and pricing options. If options are submitted that are inconsistent with the Project Description Form, the options may be declared non-conforming and rejected. If none of the submitted offer forms match the Project Description Form, the bids may be rejected

Top 8 Mistakes

1. Making the utility fill out your bid form

- Bidders must be evaluated fairly, and the utility must demonstrate that bidders have been treated equally in an RFO. Creating ambiguities in a pricing form that forces the utility to “fill out” critical sections, either as additions or corrections, is not only a time-consuming process that can lead to inaccuracies, but can also be construed as special treatment of bidders, creating conflict of interest and jeopardizing the integrity of the RFO process
- If you have made mistakes in your pricing forms, you can notify us by email (PrefResourcesRFO@semprautilities.com), but you must make the corrections yourselves and submit them separately, with a notice to us that the revised form replaces the form previously submitted. Please include the name of the form to be replaced and the date of the original submission. All corrections must be submitted before the bid closing deadline. Failure to submit corrected bid forms may result in a bid being declared non-conforming and rejected

RFO Evaluation Overview

Scot Rolfe
Principal Business Analyst

RFO Evaluation Topics

- 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

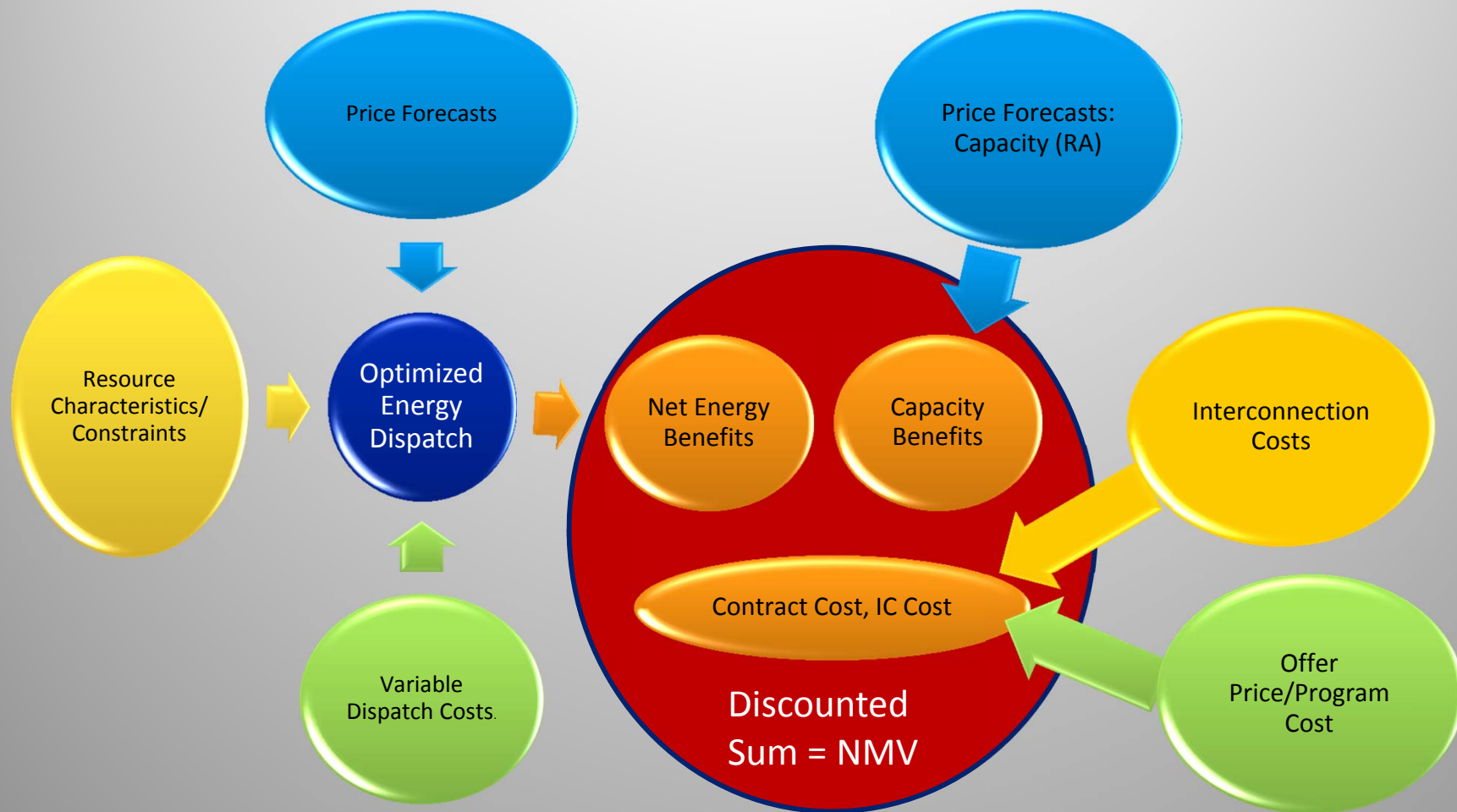
Quantitative Valuation Process: NMV



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

High-Level Overview, Quantitative Valuation Process



NMV: Optimized Dispatch

- Must-Take Resources (Non-Dispatchable)
 - Expected generation profile valued against energy forward price curves
- Dispatchable Resources
 - Storage and DR Resources modeled with dispatch optimization models accounting for resource-specific operating characteristics to determine an optimal generation profile to value against energy forward price curves

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
- Diverse Business Enterprise (“DBE”) status
- Loading Order Ranking
- Other attributes
 - Contribution to other procurement targets (CHP, RPS, Energy Storage)
 - Non-quantifiable flexibility and curtailment options
 - Portfolio fit (Capacity, energy, term, etc.)
 - Technology risk



5-Minute Break
(time permitting)

Collateral Requirements

Joanne Wang
Director – Energy Risk Management

Collateral Requirements

Shortlist Acceptance Fee: higher of \$100K or \$2/kW * Highest Delivered Capacity

- Pay in 10 business days after shortlisted

Pre-COD collateral requirements are the amount of SDG&E's exposure to Seller's default or non-performance from Effective Date to project COD

- Including potential Development Period Security and Construction Period Security

Collateral requirement during delivery period is based on the potential market exposure that SDG&E may have if Seller defaults or fails to perform

- May vary by product type

Collateral requirements can be satisfied by the combination of:

- Unsecured Credit: granted by SDG&E to the Seller based on credit worthiness (credit application)
- Secured Credit: Cash or letter of credit posted by the Seller

Overview of Credit Application

CREDIT APPLICATION FOR 2016 Preferred Resources LCR RFO

General Information

Legal Company Name _____

Doing Business As (DBA) _____

Credit Support Provider (Legal company name of Guarantor) _____

Street Address _____

City _____

State _____

Zip Code _____

Federal Tax ID # _____

Organized & existing under the laws of: (State) _____

Year Incorporated/Established _____

Credit Issues Contact:

Name _____ Title _____ Phone _____ FAX _____ E-Mail _____

Please provide the following information with this application when applying for unsecured credit:

- Most recent three (3) fiscal years', CPA-audited, financial statements including notes to the financial statements.
- When using a credit support provider, include most recent three (3) fiscal years', CPA-audited, financial statements of the credit support provider.
- No need to attach financial statements when they are available in the web; provide address: _____
- When three (3) years of audited financial statements are not included or web address was not provided, it will be interpreted as Respondent not applying for unsecured credit. In this case, Security Collateral will be collected by SDG&E in an amount to be determined.

Please provide the cost of credit per \$100,000 of requested security



2016 CAISO Generator Interconnection & Deliverability Allocation Procedures

Bruno Velosa | Transmission Planning Team Lead

CAISO Generator Interconnection and Deliverability Allocation Procedures

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

- CAISO Tariff Appendix Y (GIP tariff) applies to interconnection requests through Cluster 4
http://www.caiso.com/Documents/TariffAppendixY_Nov5_2012.pdf
- CAISO Tariff Appendix DD (GIDAP tariff) applies to interconnection requests starting with Cluster 5
http://www.caiso.com/Documents/AppendixDD_GeneratorInterconnectionAndDeliverabilityAllocationProcess_asof_Mar15_2016.pdf
- Cluster Windows: Cluster 8, April 1st to April 30th 2015 and Cluster 9, April 1st to April 30th , 2016.

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)



Cluster Study Windows and IR

During the Cluster Study Windows, Interconnection Customers (ICs) must submit a completed **Interconnection Request (IR)** and provide evidence to demonstrate **Site Exclusivity** (or an additional \$250K for Large/\$100K for Small deposit in lieu of Site Exclusivity)

- 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

- Commences July 1st each year – Completed and Final Phase I Study report issued by year-end
- 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 Study Results Meeting - within 30 Days of study completion
- Within 5 B-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.

Phase I Interconnection Study

- 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*
- **Option (B)**
 - *Project is willing & able to pay for all Network Upgrades 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

- Commences May 1st each year – Completed and Final Phase II Study
- 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 \$50,000, 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 within 30 Days of final Phase II Study report
- IC written comments/indication of no comments to the SDG&E and CAISO due within 30 Days of receipt of the Draft GIA
- Negotiations to be completed and GIA executed within ~120 Days following completion of Phase II Interconnection Study report.
- SDG&E and CAISO provide final GIA to IC within 15 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*

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



Wholesale Distribution Open Access Tariff (WDAT) and Rule 21 Generator Interconnection Process

Michael Turner | Customer Generation

Contact Information

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Office: (858) 636-5581

kparks@semprautilities.com

sdge.com/wdat



Energy Efficiency

Kerriann Weaver

Manager, Customer Programs
Energy Efficiency 3rd Party Programs

EE – Submittal Requirements

- **EE Offer Form** – Respondents must fill out separate offer form for each offer, maximum of six (6) offers per respondent per program
- **Program Description Form** – Submit one per program
- **Credit Application** – A credit application will be required under all Agreements
- **DBE Subcontracting Form** – Submit completed copy, and a copy of certification documents received from the Supplier Clearinghouse
- **Redline to the EE Purchase Agreement Pro Forma** – Encourage review of terms and conditions and proposed redlines with submittal
- **Measurement and Verification Plan (M&V)** – Submit a proposed M&V Plan
- **Work Papers** – Respondent must provide work paper (s) associated with each proposed measure under the plan

EE – Resource and Conformance Requirements

- Customers enrolled must be located within SDG&E's service territory
- Some portion of the program's term must include the entire calendar year of 2022.
- Minimum resource capacity of 0.5 MW delivered by the program for the Delivery Period
- The EE resource must meet the requirements of the current RA counting rules
- The EE resource must be demonstrably incremental
- Safety – SDG&E will ask that respondents confirm that 3rd party owned/maintained facilities or programs will be operated in accordance with applicable safety standards

EE - Top 'Lessons Learned'

- **The EE resource must be demonstrably incremental**
 - Clear and specific definition of program customer segment
 - EE measures to be demonstrated as not part of existing programs
 - Ensure that customers do not 'double dip' (collect incentives under EE Preferred Resources and through another EE Program)
- **EE resources will be evaluated based on peak capacity and energy savings that Bidders are able to guarantee over the Delivery Period**
- **Review the Pro Forma Purchase Agreement**
- **End-of-year annual M&V report will be required and include:**
 - The expected annual peak capacity savings based on measures installed at the time of the report
 - The forecasted annual energy savings for the following year based on measures installed at the time of the report
 - The actual annual energy savings for the year just passed

EE - Top 'Lessons Learned' - cont.

➤ **Guaranteed Savings**

- Bidders will be required to guarantee that they can achieve at least 80% of the expected peak capacity savings amount and 80% of the expected annual energy savings over 2 consecutive years
- Failure to achieve that guarantee is an Event of Default
- There will be no credits or mitigation for savings deficiencies based on Force Majeure

➤ **Contract Price will be paid in equal monthly installments during the Delivery Period**

- Monthly payments will be prorated based on the extent that guaranteed savings are achieved
- If the Project is unable to maintain the expected level of savings during the year, a true-up payment will be required at the end of the year.

Demand Response (DR)

Liying Wang
Project Manager

DR Resources Criteria

- Conforming bids have to meet the supply resources requirements
 - Supply Resource demand response is a resource that is integrated into the CAISO energy markets (D.14-03-026, OP 3)
- SDG&E would not consider bids with resources that are already being subsidized under another CPUC-regulated program or rate schedule.
- Resource must be dispatchable, either by CAISO or SDG&E
- Fossil-fuel emergency back-up generation resources will not qualify

DR Product Highlights

- Conforming contingency for Energy Storage based DR
 - Energy storage based DR resources are contingent on the CPUC adoption of SDG&E's TOU periods (A. 15-04-012)
- Products provide Resource Adequacy benefits to SDG&E
 - Payment for RA Credits Only
 - Bidders responsible for meeting all CAISO requirements
 - CAISO proposed 20-minute response time/dispatch requirement for local capacity
 - True-up to the Qualified Capacity
 - No Energy Payment
 - Bidders entitled to all benefits, burden all penalties from the market
- Scheduling Coordinator (SC)
 - Third party SC services requirement

***Please submit your questions by
June 17, 2016***

to

PrefResourcesRFO@semprautilities.com

Please cc the IE's at:

Jon Jacobs - jonathan.jacobs@paconsulting.com

Barbara Sands - Barbara.Sands@paconsulting.com

General Q&A Session and Networking