





# Welcome to the SDG&E 2013 Request for Offers of Eligible Renewable Resources Pre-Bid Conference







# 2013 Request for Offers of Eligible Renewable Resources Pre-Bid Conference

January 15, 2014 | 9:30am-12pm Webinar ID: 1630396 (866) 837-9781



### **Conference Outline**

Agenda	Speaker(s)	Title(s)	Time
1. Agenda Review & Legal Disclaimers	Tina Chase Abby Snyder	Energy Policy Advisor Senior Counsel	9:30-9:35
2. Welcome & Context	Maria Boldyreva Tina Chase	Procurement Advisor Energy Policy Advisor	9:35-9:45
3. SDG&E Supplier Diversity	Bruce Mayberry	Diverse Business Enterprise Senior Advisor	9:45-9:50
4. RFO Scope & PPA Changes	Tina Chase Ted Roberts Abby Snyder	Energy Policy Advisor Origination Manager Senior Counsel	9:50-10:05
5. Bid Assessment Methodology	Jonathan Jacobs Maria Boldyreva Scot Rolfe	Independent Evaluator, PA Consulting Procurement Advisor Principal Analyst	10:05-10:25
6. How to Prepare a Conforming Bid	Maria Boldyreva Scot Rolfe	Procurement Advisor Principal Analyst	10:25-10:45
7. Bid Submission Process	Leilan Johnson	Origination Analyst	10:45-10:50
8. Q&A Session I			10:50-11:10
9. Interconnection	Bruno Velosa Ken Parks	Transmission Planning Team Lead Customer Generation Manager	11:10-11:40
10. Q&A Session II			11:40-12:00



### <u>Anti-trust:</u>

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 2013 RPS 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 & Context

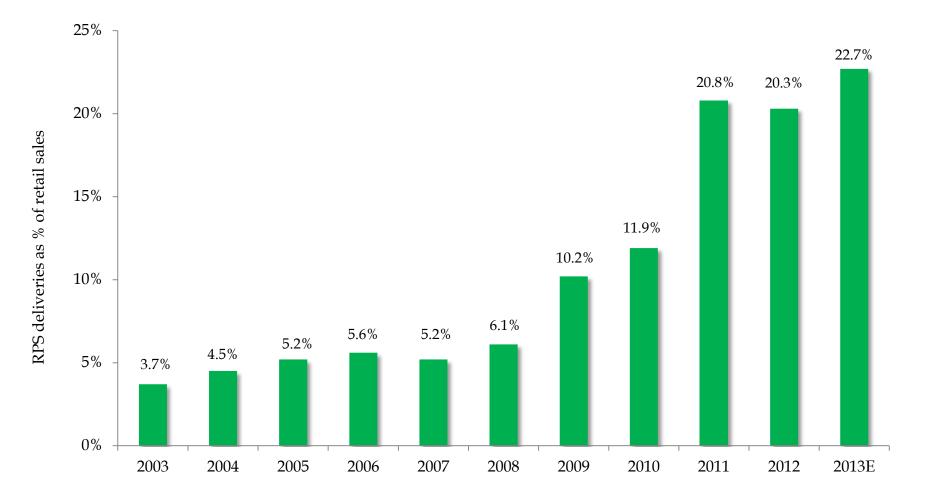
Maria Boldyreva|Procurement AdvisorTina Chase|Energy Policy Advisor



- We are delighted to have launched this 2013 RFO to continue to bring renewable energy to San Diegans and to help us meet our RPS goals.
- We are committed to meeting the State's RPS goals and to continue to be compliant with the RPS regulations.
- In designing this RFO, we have embedded lessons learned and plan to continue to be inclusive in incorporating our Stakeholder's perspectives.
- Assessment and selection transparency is paramount to us, and our Independent Evaluator, Jonathan Jacobs, will be explaining how today.
- Although material progress has been made in the implementation of the SBX1-2 RPS legislation, some regulatory issues continue to be in flux.



### **SDG&E's RPS Performance**





### 2013 Highlights

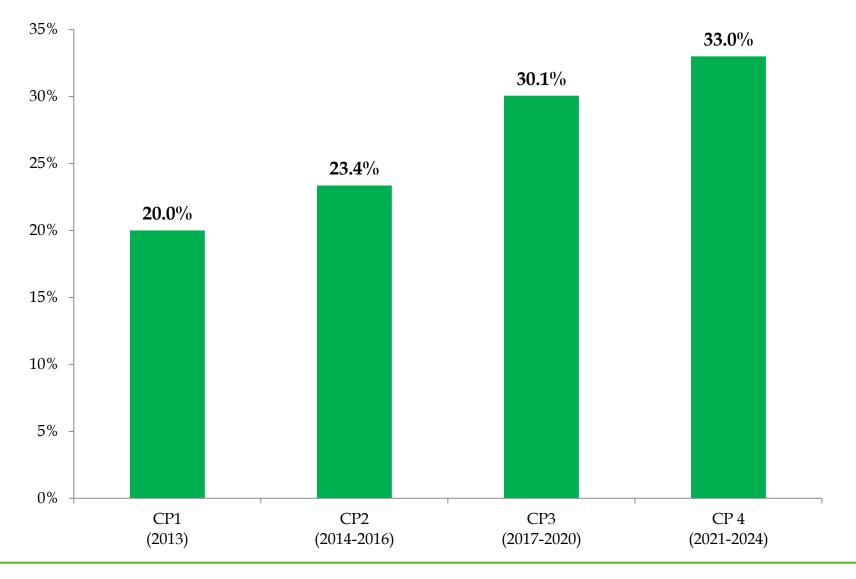
Seven projects, totaling over 500MW, achieved commercial operation in 2013

- NRG Solar Borrego
- Otay Landfill V& VI
- Campo Verde Solar
- Csolar IV South
- Arlington Valley Solar
- Catalina Solar
- SunEdison Cascade
- Sol Orchard





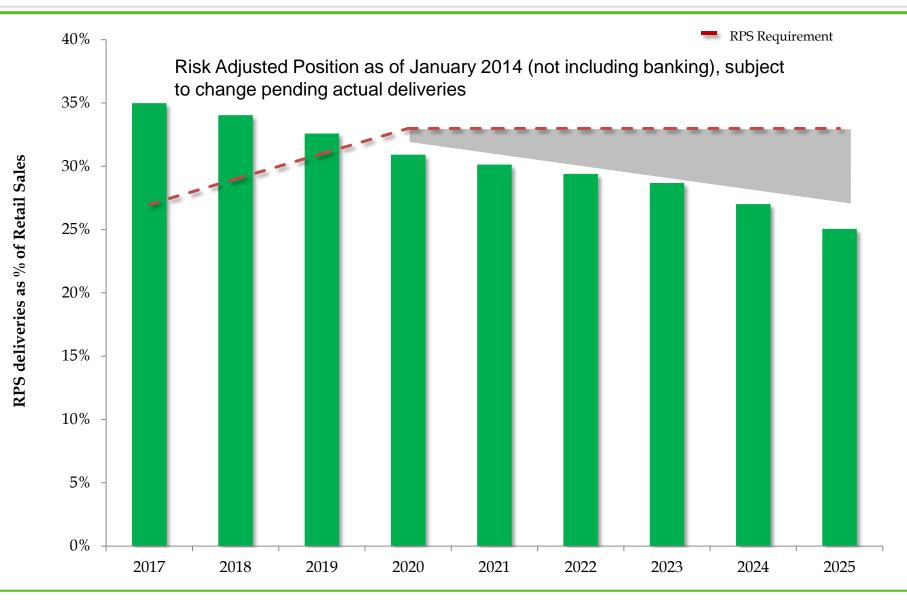
### **RPS Requirements Going Forward**





2013 Renewables RFO: Bringing Renewable Energy to San Diego

### **Current Contingent Need**





### **Preferred Products**

- **Bundled Products:** term of up to 15 years, projects with CODs as early as 2016 will be accepted, but the initial delivery date will be January 2020 at the earliest, projects with CODs as early as 2021 will also be considered
- **Firmed & Shaped Products:** term of up to 15 years, projects with CODs as early as 2016 will be accepted, but the initial delivery date will be January 2020 at the earliest, projects with CODs as early as 2021 will also be considered
- **Unbundled Products:** term of up to 5 years, RECs that will be generated no earlier than January of 2018 with a preference for those generated in 2020 or 2021

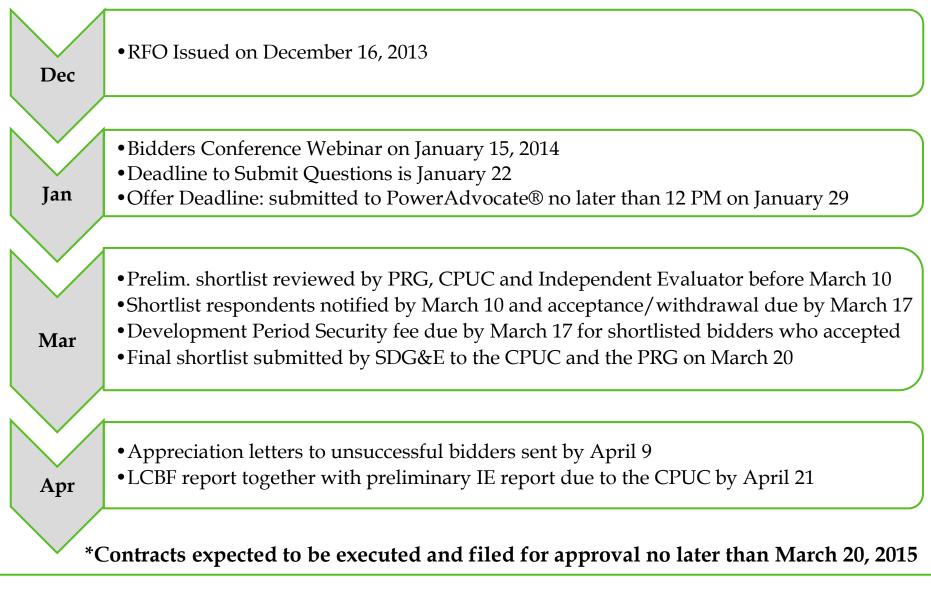
### SDG&E in interested in bids from existing, repowered, and new facilities



- Full clarity regarding
  - Procurement process improvements (PD anticipated Q1 2014)
  - Procurement expenditure limitations (PD anticipated Q1 2014)
  - LCBF reform (PD anticipated Q1 2014)
- SDG&E is and will continue to work in the CPUC OIR effort to bring clarity to the above as soon as possible



### **RFO Schedule**



SDGE

# SDG&E Supplier Diversity

Bruce Mayberry | DBE Senior Advisor



General Order (GO) 156

- Adopted by the California Public Utilities Commission in 1986
- Promote greater competition among utility suppliers by <u>expanding the</u> <u>available supplier base</u> and to encourage greater economic opportunity for <u>women, minority, and disabled veteran owned businesses</u> historically underrepresented in utility procurement

*Currently at SDG&E* 

- "Advancing supplier diversity is more than just a priority for San Diego Gas & Electric<sup>®</sup> (SDG&E<sup>®</sup>); it's become part of our company's DNA." – *Jessie Knight, CEO, SDG&E*
- Supplier diversity goals are part of <u>every executive's</u> department goals and are a component of <u>every employee's</u> compensation goals
- 38% of our goods and services procurement dollars went to diverse business enterprises (DBEs) in 2011
- 47% of our gas procurement dollars went to diverse business enterprises (DBEs) in 2013



### GO156 Electric Procurement Reporting Progression

- **2011** All California *IOUs* were required to begin separate reporting on electric procurement spending (similar to gas procurement)
- **2012** SDG&E was the first California IOU to:
  - Contract long-term power purchase agreements for renewable energy with DBEs
  - Complete electric market wholesale transactions with DBEs
- **2013 -** for this RFO (Reference Section 1.E)
  - SDG&E encourages DBEs to participate in the RPS 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 Respondents status as a DBE and or a Respondent's plan to utilize the services of DBEs during project development.



Websites (Per Section 1.E of RFO)

- 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



Minority or woman-owned company

• 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.* 



### **Supplier Diversity Contact Information**

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# RFO Scope & PPA Changes

Tina Chase	Energy Policy Advisor
Ted Roberts	Origination Manager
Abby Snyder	Senior Counsel



### **Summary of Products Solicited**

Product	High-level Description
Content Category 1	<ul> <li>First point of interconnection ("POI") with a California Balancing Authority ("CBA") or with distribution facilities used to serve end users within a CBA; or</li> <li>Scheduled from the eligible renewable resource ("ERR") into a CBA without substituting electricity from another source; or</li> <li>Have an agreement to dynamically transfer electricity to a CBA</li> </ul>
Content Category 2	<ul> <li>Firmed and shaped ERR products providing incremental electricity and scheduled into a CBA</li> <li>Incremental electricity is defined as not in the portfolio of the retail seller prior to the firmed and shaped transaction</li> <li>Energy and RECs must be sold simultaneously to SDG&amp;E</li> <li>Substitute energy contract must be at least five years, or the length of the contract term (if shorter than five years)</li> </ul>
Content Category 3	• ERR products, or any fraction of the electricity generated, including unbundled RECs, that do not qualify as Category 1 or 2
*See D.11-12-052	



### Products for 2020 and 2021

Product	Size	COD	Term
Content Category 1	≥ 20 MW up to 100 MW Deliveries should be limited to no more than 250 GWh/year	Initial delivery date no earlier than January 2020, and no later than December 2021, projects may have COD's as early as 2016	Up to 15 years
Content Category 2	≥ 20 MW up to 100 MW Deliveries should be limited to no more than 250 GWh/year	Initial delivery date no earlier than January 2020, and no later than December 2021, projects may have COD's as early as 2016	Up to 15 years
Content Category 3	Deliveries should be limited to no more than 150 GWh/year	SDG&E will accept offers for RECs that have been generated no earlier than January 2018, with a preference for 2020 and 2021	Up to 5 years

• SDG&E encourages those facilities with contracts expiring within the specified COD periods above to bid into this solicitation



### **Other Potential RPS Programs & Solicitations**

Product	High-Level Description
Renewable Market- Adjusting Tariff (Re- MAT) Feed-In Tariff	<ul> <li>Standard offer with no RFO</li> <li>Project capacity of up to 3 MW permitted</li> <li>CPUC approval of the PPA will not be required</li> <li>Product Types: Baseload, Peaking, and Non-Peaking</li> <li>Program began November 1, 2013</li> </ul>
SB1122 Feed-In Tariff	<ul> <li>Standard offer with no RFO</li> <li>Project capacity of up to 3 MW permitted</li> <li>CPUC approval of the PPA will not be required</li> <li>Bioenergy Product Types: Wastewater, Dairy/Agricultural, and Forest</li> <li>Program currently under development at CPUC</li> </ul>
Renewable Auction Mechanism (RAM) RFO	<ul> <li>RAM project capacity must be greater than 3 MW, with a maximum of 20 MW permitted</li> <li>Next RAM RFO anticipated late Q2 2014</li> </ul>
Share the Sun	<ul> <li>Solar projects apply under Re-MAT FiT, but sell facility capacity directly to customers</li> <li>Project size limit is 3 MW</li> <li>SDG&amp;E will purchase unsubscribed capacity</li> <li>The CPUC has not yet approved this program</li> </ul>



## **PPA Overview (Material Changes From 2013)**

- For projects with Time of Delivery (TOD) pricing, there are four discrete sets of TOD factors (on the next slide) that are differentiated according to the project's ability to provide Resource Adequacy to SDG&E. Be sure to utilize the correct set for your project:
  - <u>Energy Only</u> (not providing any Resource Adequacy).
  - <u>System RA</u> (located outside of SDG&E's service territory <u>and</u> outside of the greater Imperial Valley Region as defined by CAISO), but interconnected directly to CAISO.
  - <u>Greater Imperial Valley RA</u> (outside of SDG&E's service territory <u>but</u> within the greater Imperial Valley region as defined by CAISO).
  - <u>Local RA</u> (projects located within SDG&E's service territory.
- CPUC-mandated change to Standard Terms and Conditions (STC) No. 2 (Definition of Green Attributes):

Because RECs are now the currency of RPS compliance, the former STC-2 is obsolete and superfluous. The new STC-2 is a modifiable STC. SDG&E has modified STC-2 by retaining most of the language from the former STC and adding a sentence at the end setting forth the requirement for projects using biomethane as fuel to transfer to SDG&E sufficient Green Attributes to ensure that there are zero net emissions associated with the production of electricity from the biomethane.

See the new STC-2 in the "Green Attributes" definition of the pro forma PPA.



## **Updated Time of Day (TOD) Factors**

TOD Period	Period Days and Hours	Energy Only TOD Factors	Full Capacity Deliverability Status TOD Factors (LOCAL)	Full Capacity Deliverability Status TOD Factors (IV)	Full Capacity Deliverability Status TOD Factors (SYSTEM)
Winter On-Peak	Nov 1 – Jun 30 5 pm -9 pm weekdays	1.265	1.026	1.117	1.169
Winter Semi-Peak	Nov 1 – Jun 30 6am -10pm weekdays excluding peak	0.955	0.759	0.834	0.883
Winter Off-Peak	Nov 1 – Jun 30 All Weekend Hours, NERC Holiday Hours, and Weekday Hours not already considered On-Peak or Semi-Peak	0.883	0.702	0.771	0.816
Summer On-Peak	Jul 1 - Oct 31 2 pm - 9pm weekdays	1.364	3.340	2.585	2.289
Summer Semi-Peak	Jul 1 – Oct 31 6am -10pm weekdays excluding peak	1.021	1.049	1.038	0.973
Summer Off-Peak	Jul 1 – Oct 31 All Weekend Hours, NERC Holiday Hours, and Weekday Hours not already considered On-Peak or Semi-Peak	1.024	0.960	0.985	0.956



- Is a Confirm to the EEI Master Power Purchase and Sale Agreement
- Any party wishing to transact the sale of RECs to SDG&E will need to have an EEI Master Agreement with SDG&E in place or else negotiate one in parallel with the REC Confirm.
- The pro forma Confirm is in the RFO materials



### **Credit Provisions**

Collateral to Support Long Term PPAs	From	То	Category 1 and 2 Security Amount	Category 3 Security Amount
Bid Acceptance Fee	within 5 business days from formal notification of shortlisting	Contract Execution	\$100,000	10% of contract value
CPUC Approval Security	Contract Execution	CPUC Approval Date	\$2.50/MWh multiplied by 2 times expected annual generation	Security amount, reflecting credit exposure, to be posted by the seller within 30 days following final, non- appealable CPUC approval. The amount of credit exposure is determined by SDG&E based on its internal models using available market data and/or best estimates.
Development Period Security		Date on which all Conditions Precedent are satisfied or waived	\$5 00 / N/NA/b	TBD
Construction Period Security	Date on which all Conditions Precedent are satisfied or waived	COD	\$10.00/MWh multiplied by 2 times expected annual generation	TBD
Delivery Term Security	COD	End of Term	\$20.00/MWh multiplied by 2 times expected annual generation	TBD



# Bid Assessment Methodology: Checks & Balances, LCBF

Jonathan Jacobs | Independent Evaluator, PA Consulting

Maria Boldyreva | Procurement Advisor

Scot Rolfe | Principal Analyst



### **Role of the Independent Evaluator**

- Jonathan Jacobs of PA Consulting Group, was the Independent Evaluator for a variety of SDG&E's RFOs (RPS and RAM) as well as a 2006 all-source RFO and 2007 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 bids are not favored.
- The IE runs the LCBF model and provides interpretations of the process.
- The LCBF criteria are listed in SDG&E's 2013 RPS Plan and will be discussed in following slides.

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



### **Assessment Methodology (Cat 1 and 2)**

- Each bid will be evaluated through Least Cost, Best Fit process using the Commission's Net Market Value (NMV) methodology.
- Bids will be evaluated on net of contract benefits less contract costs. Contract costs are composed of three quantitative elements:
  - Levelized Contract Cost (TOD-adjusted)
  - Transmission upgrade cost
  - Congestion cost estimate
- Contract benefits are composed of two quantities, Energy Benefit and Capacity Benefit.
  - Energy Benefit (TOD-adjusted)
  - Capacity Benefit (Adjusted by Capacity Benefit Ratio, zero for energyonly projects)



For bids that have similar Bid Ranking Prices, SDG&E will evaluate qualitative factors, including:

- Project Viability
  - Project viability is an important criterion
  - Viability calculations are subject to SDG&E review and revision
- Contract Term
  - Up to 15 years (>15 years are not eligible)
- Project Size
  - SDG&E prefers projects that >20 MW, unless outside the CAISO balancing authority
  - Prefer projects up to 100 MW with < 250 GWh per year (projects generated >250 GWh per year will be rejected)
- COD
  - January 2020 at the earliest with a preference for CODs in 2018 or later
- DBE Component
  - Either through ownership or material subcontracting



- Each bid will be evaluated through Least Cost, Best Fit process using the Commission's Net Market Value (NMV) methodology.
- *Contract cost is composed of one quantitative element:* 
  - REC price



## **Qualitative Analysis (Cat 3)**

For bids that have similar Bid Ranking Prices, SDG&E will evaluate qualitative factors, including:

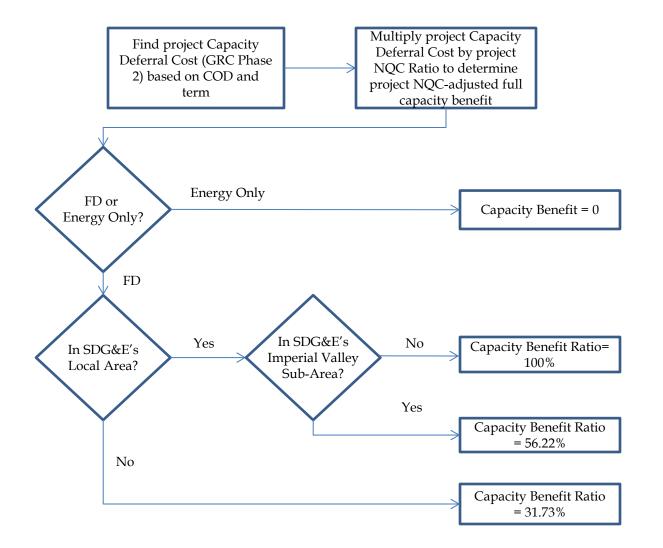
- Project Viability
- Contract Term
  - REC delivery date January 2020 at the earliest
  - 15 years or less
- Offer Size
  - Up to 150 GWh per year
- REC Shelf Life (36 months)
  - Prefer generation no earlier than January of 2018 with a preference for those generated in 2020 or 2021
- DBE Component
  - Either through ownership or material subcontracting



- Lowest cost RECs that SDG&E can verify are valid under CPUC rules will be chosen
- Verification will require that bidder provides documentation of the source(s) of the RECs, the period of time when the RECs were generated, and (if not connected to CAISO) where in California the energy was delivered



### **Capacity Benefit Calculation**





### **Capacity Benefit Ratio**

2014 Capacity Benefit						
Source			Proxy for cost of building new generation			
Method			Value derived by applying the ratio of: (forward capacity deficiency penalty price for local and system RA/cost of building new generation) to the Capacity Deferral Cost			
	Sco	pe			Values all capacity at	ttributes
				LO	CATION	
INTERCONNECTION 1				OG&E LOCAL AREA (IV)	CAISO OUTSIDE SDG&E LOCAL AREA	IMPORTS TO CAISO FROM OUTSIDE CALIFORNIA
CAPACITY BENEFIT RATIO FOR FULLY DELIVERABLE PROJECTS 100% of Capacity Benefit		56.22% of Capacity Benefit		31.73% of Capacity Benefit	31.73% of Capacity Benefit (must qualify as a CAISO System RA resource)	
CAPACITY BENEFIT FOR ENERGY-ONLY PROJECTS Zero			Zero	Zero	Zero	
AVERAGE DELIVERABILITY BENEFITS	SOLAR PV		SOLAR T	HERMAL	WIND	BASELOAD
LOCAL	\$19.14		\$21	1.03	\$7.65	\$9.73
SYSTEM	\$11.48		\$12	2.62	\$4.59	\$5.84



## How to Prepare a Conforming Bid: Required Forms and Common Mistakes

Maria Boldyreva | Energy Procurement Advisor

Scot Rolfe | Principal Analyst



## **Required Forms – Category 1 and 2 Offers**

- 1) Participation Summary
- **2) Project Description Form** *Submit one per project.*
- 3) **Pricing Form** *Respondents may submit up to three pricing options per project.*
- 4) Credit Application
- **5) Model PPA** *Required for offers that include energy deliveries. Respondents shall populate and redline the Model PPA.*
- **6) Project Viability Calculator** *Respondents must self assess the viability of the proposed project using the CPUC's Project Viability Calculator.*
- **7) Interconnection Documents** *Respondents must provide an electronic copy of project's completed CAISO GIP Phase II or equivalent study (Electric Reliability Corporation Transmission Operator), or exception. If the facility is existing, must provide the facility's interconnection agreement.*

**Category 2 Offers** 

**8) Firming and Shaping/Substitute Energy Agreement** – Respondents must provide evidence of the proposed project's firming and shaping agreement (draft or executed version if completed)

The Participation Summary, Project Description Form, Credit Application, redlines to the Model PPA and Additional Narrative Form must be in Word format (not in PDF). The Pricing Form and Project Viability Calculator must be in Excel format (not in PDF). Interconnection Documents and Firming and Shaping Agreement in PDF.



## **Required Forms – Category 3 Offers**

- 1) Participation Summary
- **2) Project Description Form** Submit one per project
- **3) REC Pricing Form** *Respondents may submit up to three pricing options per project*
- **4) Model REC Agreement** *Required for offers for unbundled RECs only. Respondents shall populate and redline the Model REC PPA*
- **5) Project Viability Calculator** *Respondents must self assess the viability of the proposed project using the CPUC's Project Viability Calculator (only for projects under development)*

The Participation Summary, Project Description Form, redlines to the Model REC Agreement must be in Word format (not in PDF). The Pricing Form must be in Excel format (not in PDF). PDF).



# 10. Entering prices in cents/kWh and deliveries in kWh instead of \$/MWh and MWh

Pricing form entries that are inconsistent with the units shown at the top of the pricing form column may require corrections. If time constraints in the RFO processing are too great, the bid may be declared non-conforming and rejected.

### 9. No project location

At the very least, a bid must have a fixed physical location. Entering vague information such as "Anywhere in California" or "Any location in conformance with CEC regulatory guidelines and California Public Utilities Code" will result in the bid being declared non-conforming and rejected.

### 8. Inconsistent contract terms between worksheets

Prices and deliveries should start at the same date as the contract start date. Deliveries and prices should stop in the final contract year. Pricing 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 pricing form, may be declared non-conforming and rejected.



### 7. Forgot to specify Time-of-Day or Flat Pricing

Contracts that sell under Time-of-Day ("TOD") Pricing have different costs and benefits than contracts with Flat ("non-TOD") Pricing. Bids that offer TOD Pricing that are then declared Flat Pricing by bidders may be declared nonconforming and rejected.

### 6. Adding or renaming worksheets

*If the bid has multiple options for pricing/COD/deliveries/etc., fill out separate pricing 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.* 

### **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. Pricing form data inconsistent with project description form

The Project Description Form and the Pricing 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 pricing forms match the Project Description Form, the entire bid may be 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. Out-of-ISO projects priced "at the busbar"

The RFO states that bid prices should be as delivered to SDG&E. Projects that do not interconnect with CAISO must be "wheeled" to CAISO under the appropriate Open Access Transmission Tariff for the host balancing authority, and all other balancing authorities between the project and the CAISO. Bids that do not incorporate these costs, or other factors such as transmission losses and expected curtailments, may be declared non-conforming and rejected.



### 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 (renewablerfo@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. Failure to submit corrected bid forms may result in a bid being declared non-conforming and rejected.



#### First, remember the basics

- Review all required forms and in case of any questions please contact us (<u>renewablerfo@semprautilities.com</u>)
- Ensure your bid conforms with the RFO participation criteria
- Fill –in ALL Required Forms
- Conform entries to the units designated on the forms
  - Numbers entered in columns marked "MWh" are megawatt-hours, "\$/MWh" are in dollars per megawatt-hour, etc.
  - Deliveries based on AC, not DC
  - Profiles should be percentages of maximum capacity expected in the hour
  - Don't overlook the drop-down boxes, or put text in numeric fields
- Check to see that the data in the pricing form and the project description form are consistent
- Complete all relevant sections of the form
  - Blank cells will assumed to be "zero" and will be filled with zeroes if necessary
- Please do not add new worksheets or change worksheet names

Each renewable RFO requires the processing of hundreds of bids. There will be little time to check with bidders regarding inconsistencies on pricing forms.



### Second, make sure you have a complete and conforming bid

- ALL required forms and documents should be submitted
- A "bid" consists of one project and at least one option
  - Projects are specific plants at specific locations to be developed by the bidder ("developer")
  - Options are the contractual terms including commercial operation date, term, energy deliveries, maximum capacity, point of interconnection, point of delivery, and price
- Bids should include all of the terms above at a minimum
  - Alternate locations for projects are not options, they are separate projects
  - Fill out separate Pricing Forms for each project/option combination
    - Do not add worksheets or change worksheet names
    - Project description forms do not have to be filled out for separate project/option combinations, but all Pricing Forms should conform with information in the Project Description Form

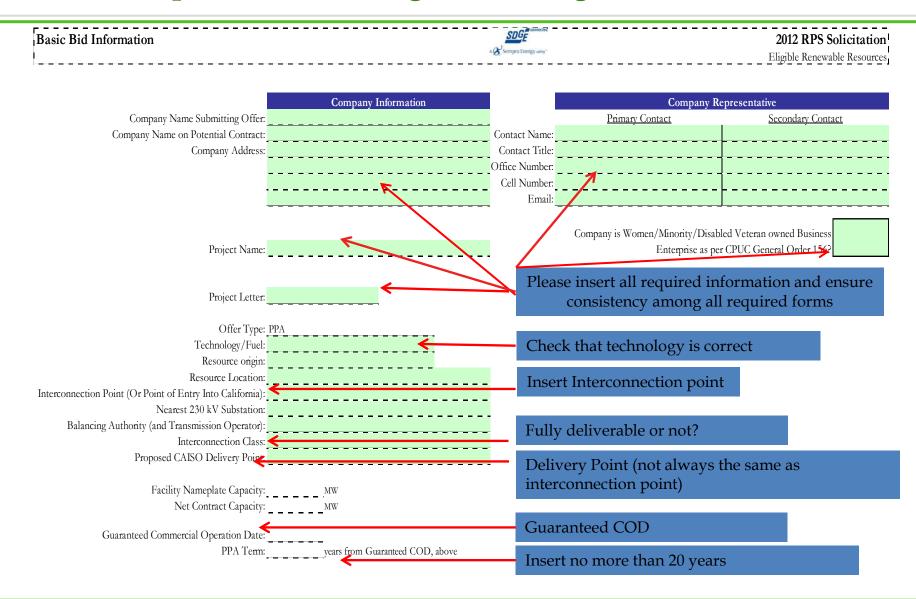


### Third, do the homework and live with the bid

- Make sure that bid pricing is sufficient to cover required returns
  - Pricing should be consistent with pricing assumptions in project's proforma financial model
  - The simpler, the better
- Have a reasonable build-out schedule for the project
  - COD should be consistent with project schedule
  - Project schedules should include reasonable assumptions for negotiations, regulatory approvals and transmission interconnections
- Deliveries and profiles should be consistent with resource and equipment
- Make sure that costs, capacities and deliveries incorporate effects of expected outages, transmission tariffs, line losses and curtailments <u>up to</u> <u>and including the point of delivery</u>



### How to Prepare a Conforming Bid: Pricing Form (PPA)



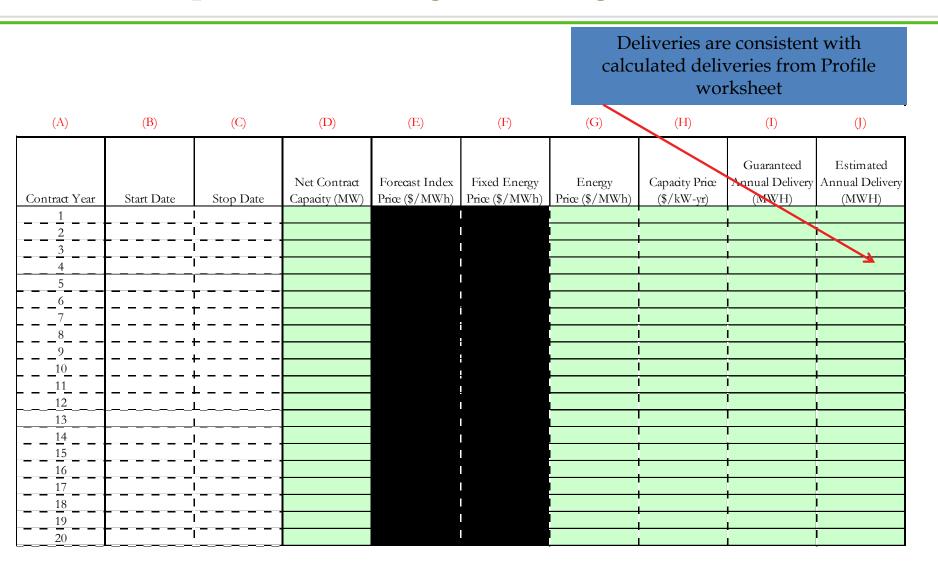


### How to Prepare a Conforming Bid: Pricing Form

Delivery Profile				A Construction Energy unit							2012 RPS Solicitation Eligible Renewable Resources					
factor she	the table be ould be the ported on th	ratio of e	expect	ed genera	tion in the	hour to p	roject nar	neplate ca					-		-	entages c capacity
			1				GENER	TION AS I	PERCENT	ENAMEPI	ATE CAPA	CITY (%)				
						WIN	TER		LIGHT			IMER		WIN	<b>YTER</b>	
Hour Hour				WINTER												
	Hour	of	of													
Weekday	Beginning	Day	Week	January	February	March	April	May	June	July	August	September	October	November	December	
Monday	12:00 AM	1	1				!	<u> </u>			ļ		<b>┝</b> – – – -		{	
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Monday	2:00 AM	3	3		L	4	<b></b>		L						<u> </u>	
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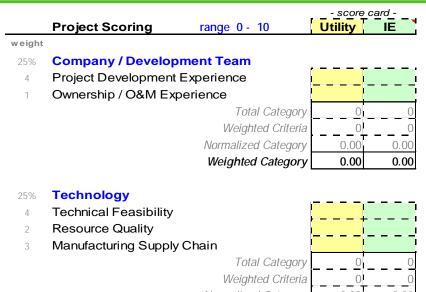


## How to Prepare a Conforming Bid: Pricing Form





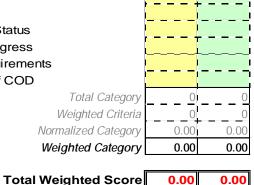
### How to Prepare a Conforming Bid: Project Viability Calculator (PVC)



### Normalized Category 0.00 0.00 Weighted Category 0.00 0.00

#### 50% **Development Milestones**

- 4 Site Control
- 4 Permitting Status
- 4 Project Financing Status
- 4 Interconnection Progress
- 3 Transmission Requirements
- 3 Reasonableness of COD



• Project Viability Calculators are required by the CPUC.

• Scoring must be done according to the criteria guidelines described in the workbook.

- Criteria weighting is set by the CPUC. SDG&E will correct any adjustments made by bidders to the criteria weighting
- If the bidder cannot provide documentation to validate the entries in the PVC, or the bidder has values that do not follow the CPUC guidelines, SDG&E may modify entries to conform to CPUC specifications.



## **Bid Submission Process**

Leilan Johnson | Origination Analyst



#### 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 <u>www.PowerAdvocate.com</u>
  - Request for access using the Referral Information

<b>Referral Information</b>	
Are you registering for a specific Event: *	<ul> <li>Yes</li> <li>No, I would simply like to register.</li> </ul>
Who referred you to this Event: *	renewablerfo@semprautilities.com
Name of that individual's company: *	San Diego Gas & Electric
Name or description of the Event: *	39272: 2013 SDGE RPS RFO

3. Request for access using the PowerAdvocate® link located at: <u>https://www.poweradvocate.com/pR.do?okey=39272&pubEvent=true</u>

### How to Log On:

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



### What information is displayed on my Dashboard?

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



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## Accessing the RFP Event and Submitting Documents

### How to Access the RFP Event from Dashboard:

- 1. To download the RFP package, click **1** or the **1**. **Download Documents** tab.
  - RFO Document
  - Participation Summary Form
  - Project Description
  - Bundled Pricing Form
  - REC Pricing Form
  - Model PPA
  - REC Agreement
  - Credit Application
  - Project Viability Calculator
- 2. To upload documents, click **2** or 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**.

- The Participation Summary (.doc or .docx)
- Project Description Form (.doc or .docx)
- Credit Application (.doc or .docx)
- Redlines to the Model PPA and/or Model REC Agreement (.doc or .docx)
- The Pricing Form (.xls or .xlsx)
- Project Viability Calculator (.xls or .xlsx)
- Interconnection Documents (pdf.)
- Firming and Shaping/Substitute Energy Agreement (pdf.) Category 2 only



PowerAdvocate Support

- <u>Support@poweradvocate.com</u>
- (857) 453-5800

Online Help

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

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# Please submit your questions by January 22, 2014 to <u>renewablerfo@semprautilities.com</u>



## CAISO Generator Interconnection & Deliverability Allocation Procedures

Bruno Velosa | Transmission Planning Team Lead



Interconnection to SDG&E's Transmission System

- 2010 CAISO merged Large Generator Interconnection Procedures (LGIP) and Small Generator Interconnection Procedures (SGIP) into one process, **Generator Interconnection Procedures (GIP)** in response to mounting issues due to the high number of small projects Interconnection Requests through SGIP.
  - Large Projects > 20MW (2 Studies)
  - Small Projects < or = 20MW (2 Studies)
- 2012 CAISO Transmission Planning Process (TPP) Generator Interconnection Procedures (GIP) Integration (resulted in the new Generation Interconnection Procedures: GIDAP)



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/TariffAppendixDD\_Nov5\_2012.pdf

• **Cluster Windows:** Cluster 7, April 1<sup>st</sup> to April 30<sup>th</sup>, 2014.

**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 \$50,000 plus \$1,000 per MW (\$250K max.)
  - 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

**NOTE:** Through Cluster 4, Costs for Deliverability Network Upgrades (DNUs) are shared by all projects in a cluster study group choosing FC. For Cluster 5 under the CAISO Tariff Appendix DD, will address high cost & large scope DNUs through the TPP.



## **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.* 



## Definitions

- The Network Upgrades (NU) are classified into local and area based on distribution of generators in the 5 % Distribution Factor (DFAX) circle.
  - Determines contribution of generator to the flow on a line
  - PSSE MUST Program
- <u>3 Network Upgrade Types for Generation Projects</u>
- Area Delivery Network Upgrades (ADNU)
  - NU needed to support deliverability of generators spread over a large area one or more Competitive Renewable Energy Zones (CREZ's)
  - Expensive LDNUs driven by large amount of generation (exceeding base portfolio MW in the entire CREZ) are reclassified as ADNUs
- Local Delivery Network Upgrades (LDNU)
  - NU needed to support deliverability of generators spread over a local area
  - NU specific to generators in a concentrated area as the NU
- <u>Reliability Network Upgrades</u>
  - Specific to generation project
  - Required to address a problem that cannot be managed through market congestion management



- 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.



- 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 Transmission Planning (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)



- 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**

	Network Upgrades •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	<ul> <li>Lesser of</li> <li>15% of phase I study estimated network upgrade costs</li> <li>\$20,000 per MW</li> <li>(but not less than the lesser of \$50,000, or the estimated cost of network upgrades)</li> </ul>	Lesser of    \$ I million   30% of lower of phase I or phase II study estimated network upgrade costs  (but not less than the lesser of \$100,000, or the estimated cost of the network upgrades)	100% of lower of phase I or phase II study estimated network upgrade costs						
Greater than 20MW	<ul> <li>Lesser of</li> <li>\$7.5 million</li> <li>15% of Phase I estimated network upgrade costs</li> <li>\$20,000 per MW</li> <li>(but not less than the lesser of \$50,000, or the estimated cost of network upgrades)</li> </ul>	<ul> <li>Lesser of</li> <li>\$15 million</li> <li>30% of lower of phase I or phase II study estimated network upgrade costs</li> <li>(but not less than the lesser of \$500,000, or the estimated cost of the network upgrades)</li> </ul>	100% of lower of phase I or phase II study estimated network upgrade costs						



- 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*



## Allocation of TP deliverability after GIDAP Phase II

- Step 1: Determine how much TP deliverability to reserve for prior queued projects
  - Based on criteria measuring near-term viability of prior queued projects
  - *If TP deliverability is fully consumed by above, none is available for the new cluster*
- Step 2: Allocate available TP deliverability to current cluster and "parked" previous cluster (A) projects
  - Eligible projects must meet two minimum threshold criteria related to permitting and project financing:
    - Applied for government permit/approval for construction of generating facility
    - *On an active short-list for an LSE's request for offer*



# Allocation of TP deliverability when (A) and (B) MW meeting threshold criteria exceeds amount available

- Calculate a numerical score for each eligible project and allocate TP deliverability to highest scoring projects
- Three categories of development milestones
  - *Permitting status*
  - *Project financing status*
  - *Land acquisition*
- *"Borderline" project (last project where remaining available TP deliverability is less than project's capacity)* 
  - *Project may accept available TP deliverability, then choose* 
    - Partial deliverability, or
    - *Reduce physical capacity to amount allocated*



## After the allocation process – Option (A) projects

- An Option (A) project that does not obtain TP deliverability in the current cluster allocation may either:
  - *Execute an Energy Only (EO) GIA, or*
  - Defer execution of EO GIA and "park" for one cycle, or
  - Withdraw from the queue
- If it parks and does not obtain TP deliverability in the next cluster's allocation, it must either
  - Withdraw from the queue, or
  - *Go forward as an EO project and meet all requirements associated with an EO GIA.*
- If it withdraws, it is eligible for partial refund of first posting, based on failure to be allocated deliverability
  - *Refund eligibility will extend to 18 months after phase II*

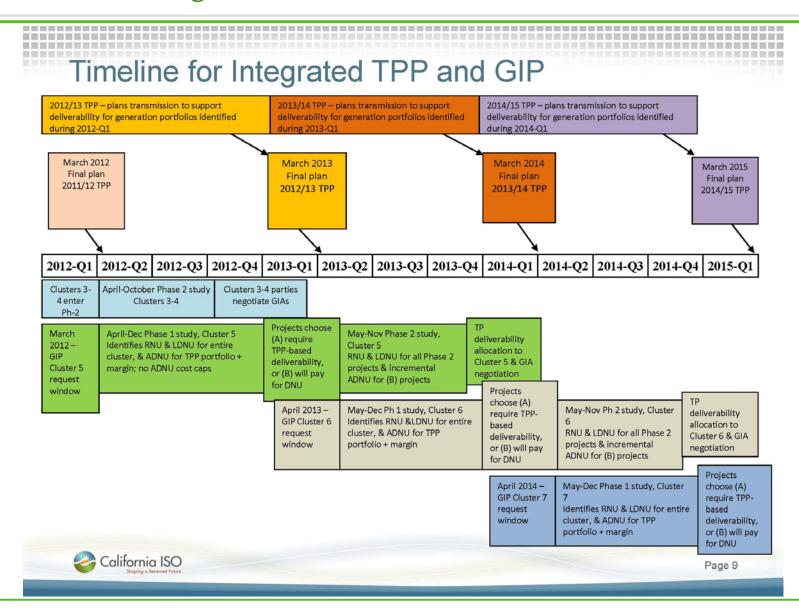


## After the allocation process – Option (B) projects

- IF an Option (B) project is not allocated TP deliverability in the current cluster allocation period, it must either
  - *Execute a GIA agreeing to pay for needed ADNU and LDNU without cash reimbursement, or*
  - Withdraw from the queue
- IF the Option (B) project withdraws, it will be eligible for partial refund of first security posting if its Phase II ADNU cost estimate exceeds Phase I by lesser of 20% or \$20 million
  - *Must withdraw no later than 180 days after phase II results to be eligible for partial refund*
- An Option (A) or (B) project allocated TP deliverability must meet annual retention criteria or lose the allocation
  - Loss of allocation does not terminate GIA: project may amend GIA to continue as Energy Only



### **Timeline for Integrated TPP and GIDAP**





## **Generation Interconnection Information**

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

- 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 : Judy Brown (916) 608-7062 JBrown@caiso.com

### SDG&E Contacts:

- Generation Interconnection Team Lead: Bruno Velosa (858) 654-8293 <u>BVelosa@semprautilities.com</u>
- Generation Interconnection Project Manager: Marlene Mishler (858) 654-8640 <u>MMishler@semprautilities.com</u>

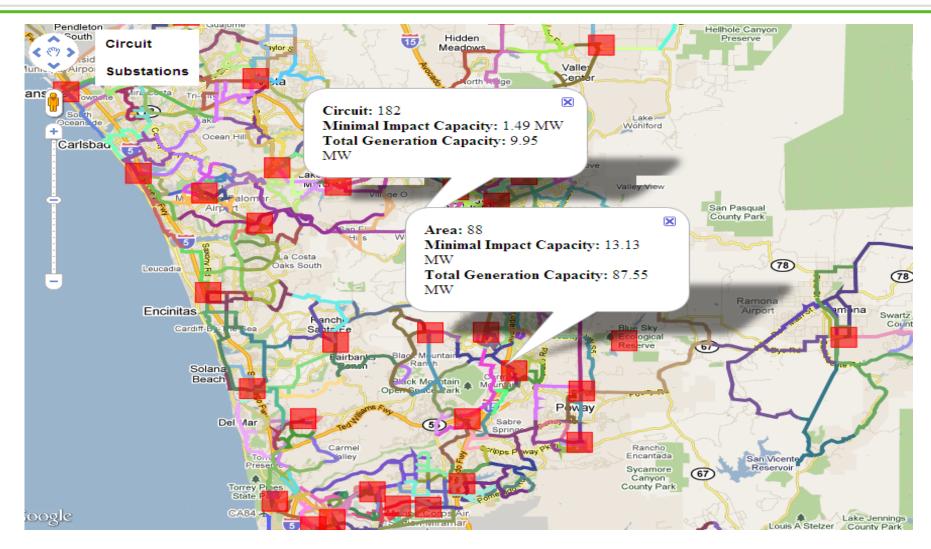


## WDAT & SGIP Interconnection Process

Ken Parks | Customer Generation Manager



## **Distribution Generation Interactive Map**



### Registration Form for access: <u>http//sdge.com/builderservices/dgmap/</u>



## Fast Track & Study Process

### **Fast Track – approximately six months**

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

## **Study Process – approximately 18 months**

- Generator Project; Failed Fast Track or less than 20 MW
- Follow Section 3 Study Process-SGIP
- \$1,000 non-refundable processing fee + study fees
- Small Generator Interconnection Agreement (SGIA)



## **Scoping Meeting**

- Allows Face to Face Interactions with IC and SDG&E
- Review the Project
  - IC provides high level project overview
  - SDG&E provides feedback, system information, suggests any alternatives
- Agree on a Point of Interconnection (POI) and generator size
- Review Metering & Telemetering requirements (CAISO & WDAT)
- Determine Next Steps
  - Feasibility Study
  - System Impact Study
  - Facilities Study
  - Small Generator Interconnection Agreement



Study	Timing	Study Procedures	Study Deposit
Feasibility Study	50 BD	<ul><li>Steady State Analyses</li><li>Initial Interconnection Cost estimates</li></ul>	\$10,000
System Impact Study	90 BD	<ul> <li>Dynamic Analyses</li> <li>Updated Interconnection Cost estimates</li> </ul>	\$25,000
Facilities Study	80 BD	<ul> <li>Electrical switching configuration</li> <li>Cost of equipment, engineering, procurement and construction work</li> <li>Time required to complete construction and interconnect</li> <li>Final Interconnection Cost estimates</li> </ul>	\$25,000



## SDG&E WDAT Contact: Ken Parks Customer Generation Manager: (858) 636-5581 <u>www.sdge.com/wdat</u>



# Please submit your questions by January 22, 2014 to <u>renewablerfo@semprautilities.com</u>

