SDG&E 2016 Request for Offers Combined Heat and Power (CHP) Pre-Bid Conference

March 8, 2016 | 1:00pm – 3:00pm

Teleconference - Dial: (866) 261-3296

https://engage.vevent.com/rt/sempra/index.jsp?seid=123

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 2016 CHP 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.

Overview and Agenda

CHP RFO Team

Names	Roles
Patrick Charles	Manager - Origination Analytics
Sue Garcia	Manager – Settlements and Systems
Scot Rolfe	Principal Analyst - Origination Analytics
Bruno Velosa	Team Lead, Generation Interconnection
Michael Turner	Principal Engineer, Customer Generation
Georgetta Baker Abby Snyder	Regulatory Legal Commercial Legal
Alan Taylor	Independent Evaluator (Sedway Consulting)

Agenda*

Welcome	1:00
CHP Settlement Overview (Sue Garcia)	1:10
SDG&E and Supply Diversity (Sue Garcia)	1:20
RFO Eligibility and Timeline (Scot Rolfe)	1:30
Evaluation Process and IE Role (Scot Rolfe)	1:50
Interconnection (Bruno Velosa and Michael Turner)	2:00
RFO Materials (Scot Rolfe)	2:30
Bid Submission via PowerAdvocate (Scot Rolfe)	2:45

* Agenda and times are subject to change

Independent Evaluator

Sedway Consulting has been retained as the Independent Evaluator (IE) for this solicitation.

Contact Information:

Alan Taylor
Sedway Consulting
821 15th Street
Boulder, Colorado 80302
(303) 581-4172 [phone]
(303) 581-4127 [fax]
Alan.Taylor@sedwayconsulting.com

Role of the Independent Evaluator

The role of the IE is to:

- Monitor SDG&E's solicitation and negotiation process to ensure reasonable and uniform treatment of all potential counterparties.
- Monitor SDG&E's valuation methodologies and selection processes to ensure reasonable, fair and equal treatment of all offers.
- The IE is privy to all offer data, invited to participate in all negotiations and should be copied on all correspondence between SDG&E and bidders.

Procurement of CHP from Settlement Agreement

Sue Garcia

Settlement Agreement Overview

- CHP Settlement Agreement became effective on November 23, 2011
- California Target of 3,000 MW by 2020
  - SCE – 1,402 MW
  - PG&E – 1,387 MW
  - SDG&E – 211 MW
    - 160 MW (3 RFOs between November 2011 through November 2015)
    - 51 MW (Up to 4 RFOs between 2016 through 2018)
- GHG IOU Reduction Target is 2.72 MMT CO2e of GHG annual reductions from CHP by 2020 (revised in D.15-06-028)
  - SCE – 1.22 MMT
  - PG&E – 1.22 MMT
  - SDG&E – 0.28 MMT

Impact of D.15-06-028 on SDG&E in the Second Program Period

- *Reduced SDG&E's GHG Reduction Targets as shown above.*
- *SDG&E's MW Target of 51 MW shall be procured no later than 2018.*
- *All offerers must provide a report from an independent, California-licensed professional engineer certifying that counterparty has a feasible written plan for the safe construction and operation of the generating facility in accordance with existing applicable state or federal standards and in compliance with Prudent Electrical Practices (as defined in the CHP PPA); a copy of the Safety Plan; and an attestation that the counterparty will abide with the Safety Plan and safety standards.*
- *GHG Accounting Changes*
  - *All renewable-fueled and bottoming-cycle CHP facilities will be considered "new" and treated as a GHG credit instead of neutral for GHG accounting purposes.*
  - *Existing efficient CHP facilities with no change in operations will count as a GHG reduction credit instead of neutral calculated against the previous two calendar years of data compared to the double benchmark.*

SDG&E and Supplier Diversity

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

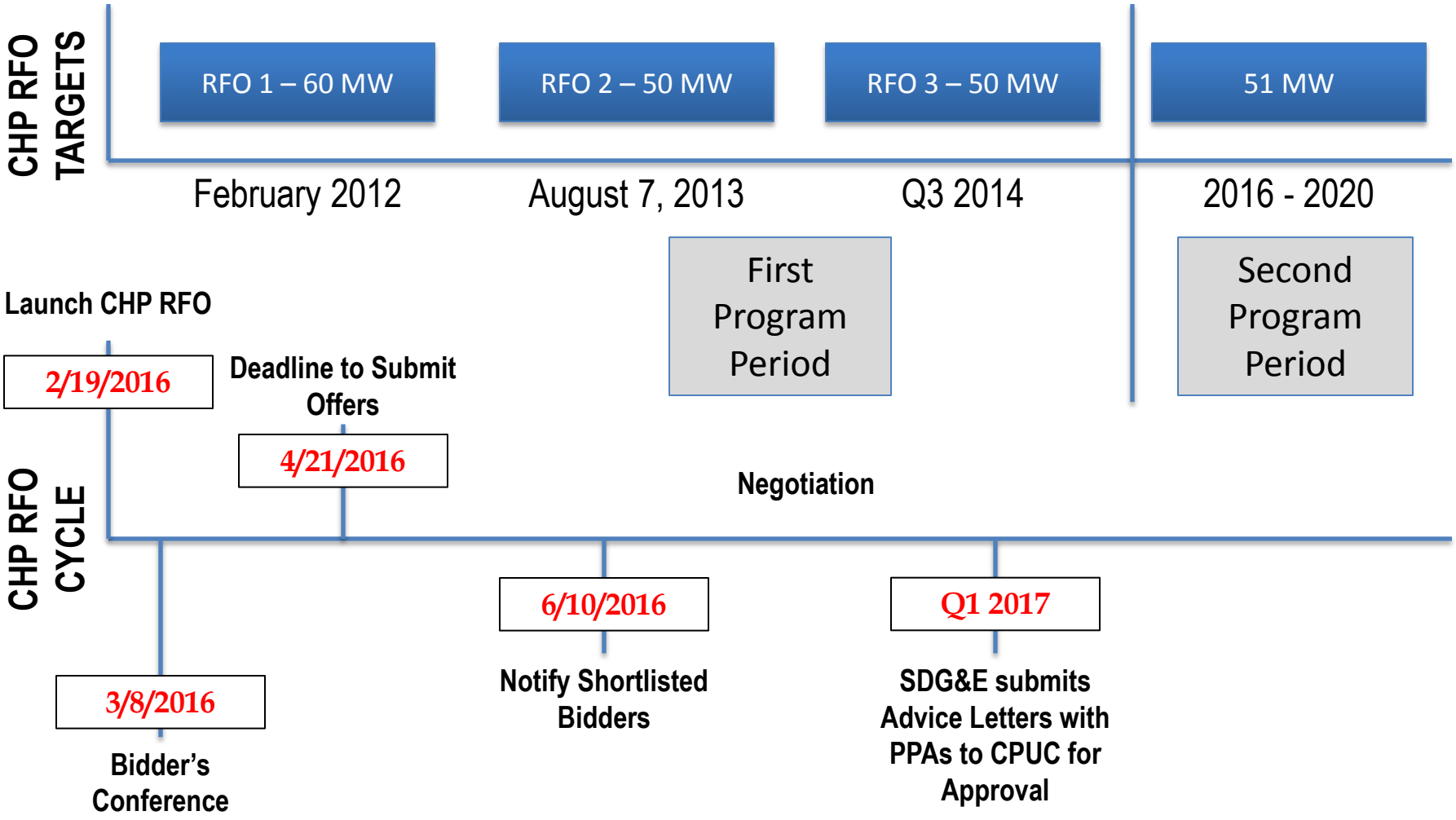
EBeale@semprautilities.com

858-636-5538

2016 CHP RFO Eligibility and Timeline

Scot Rolfe | Origination Analytics

CHP RFO Program Cycle



Eligibility Requirements

Resource Types:

Existing Combined Heat and Power

- An Existing CHP Facility is one that was operational before the Settlement Effective Date (November 23, 2011)

New Combined Heat and Power

- A CHP Facility that became or will become operational after the Settlement Effective Date (November 23, 2011)

Repowered Combined Heat and Power

- A CHP Facility that has had its prime mover(s) replaced or refurbished per Exhibit A of the CHP Pro Forma PPA

Expanded Combined Heat and Power

- A CHP Facility that has increase the power rating per Exhibit A of the CHP Pro Forma PPA

Utility Prescheduled Facility (UPF)

- An Existing CHP Facility that has changed operations to convert the facility to a utility controlled scheduled dispatchable generation facility, including but not limited to an Exempt Wholesale Generator

Eligibility Requirements

Term Start Dates

Within 24 months of PPA Execution (Existing)
Within 36 months of CPUC Approval (Expanded)
Within 60 Months of CPUC Approval (New and Repowered)

Eligibility

Nameplate Capacity 5 MW or larger
The CHP Facility and its associated delivery point must be located within the CAISO controlled transmission grid.
Meets the definition of cogeneration under CPUC Code 216.6
Meets the Emissions Performance Standard established by the PUC 8341 (SB 1368)
Meets the federal definition of qualifying cogeneration under 18 CFR 292.205 implementing PURPA
UPF Only: CHP Facility that met the PURPA efficiency requirements (18 CF 292.205) as of September 2007 and converts to a Utility Prescheduled Facility

CHP RFO Product Offering

Generating Facility			CHP Base Load Facility	Utility Prescheduled Facility
Nameplate			Larger than 5 MW	
PPA Type			CHP Pro Forma PPA	SDG&E "UPF" PPA
Product			Base Load Energy	Dispatchable Energy, Capacity
Delivery Point			Within CAISO	
Economic Curtailment			Bidder may participate in Curtailment Option	Not Applicable
Pricing	Capacity ($/kW-year)		As Bid	As Bid
	Heat Rate ($/MMBtu) OR Strike Price ($/MWh)		As Bid	As Bid
Term	W/out Credit and Collateral	Existing / Expanded	No More than 7 Years	
	W/ Credit and Collateral	Expanded / Repowered	No more than 12 Years	
		New	No more than 12 Years	N/A

Communications

- *Communications with SDG&E should done by email (chprfo@semprautilities.com) until the short-list is selected*
  - This allows SDG&E to post Q&A such that all bidders have the same information before submitting bids
  - All e-mail communications should be cc'ed to the IE, Alan.Taylor@sedwayconsulting.com

Evaluation Process and IE Role

Scot Rolfe | Origination Analytics

Bid Conformance and Data Management

- *Bids should comply with all the requirements of the RFO*
  - Any bids that are rejected because of conformance issues will be discussed with the IE
  - Any bids that are accepted that may have minor conformance issues will also be discussed with the IE
  - The goal is to ensure all bidders are treated in a fair manner

- *The IE will review and validate SDG&E's methods of processing the bid information and evaluating offers to ensure that the evaluation is done fairly with no preferential treatment to any bidder*

Affiliate Bids

- *An affiliate bid will be closely examined during the evaluation of the offer*
  - This ensures the offer is evaluated in the same manner as other offers
- *If an affiliate bid were to make the short-list, then all communications and negotiations will be closely monitored and assessed by IE*
  - This ensures no preferential terms and conditions are included in an affiliate offer

Conformance Criteria Checklist

- ❑ *Facility Interconnection and Deliverability*
  - The project must have completed at minimum a CAISO Phase 1 study; if interconnecting at distribution voltage, the project must have completed a WDAT interconnection study.
  - New Facilities - Respondents with new projects must apply for interconnection and seek to be evaluated as an RA resource, which requires a CAISO deliverability study.
  - Existing Facilities - An Offer from respondents with existing facilities must either be a RA resource or the Respondent must seek to become a RA resource, which generally requires a CAISO deliverability study. Evidence of current RA status or pending request for a deliverability study must be included in the offer.
  - Permitting - Existing, Repowered, and Expanded and Utility Prescheduled Facilities must submit evidence that all interconnection agreements and permits have been received and the facility can operate under those permits and conditions for the entirety of the proposed contract term.
- ❑ *Site Control – the respondent may either:*
  - Have site control at the time of bidding for the duration of the term proposed within the PPA, or;
  - If the Respondent does not have such site control at the time of bidding, they must obtain site control within a reasonable time after shortlisting.
- ❑ *Facility Ownership*
  - The Respondent will own the facilities and have responsibility for development, land acquisition, permitting, financing, construction and operation for the facilities.
- ❑ *Affiliate Relationship*
  - The Respondent must state the affiliate relationship with SDG&E and/or Sempra Energy, if one exists.
- ❑ *Offer Requirements and Limits*
  - Respondents must submit at least two Offers per project (one by which the respondent assumes all of the GHG emissions costs, and a second where the respondent passes on some specified portion or all of those costs onto SDG&E). The number of Offers per project will be limited to ten.

Economic Evaluation

Offer Costs

Capacity price

Energy price (or Heat Rate Bid)

GHG Allowance Costs (Incurred by SDG&E)

Transmission Costs (Incurred by SDG&E

Offer Benefits

Capacity Value

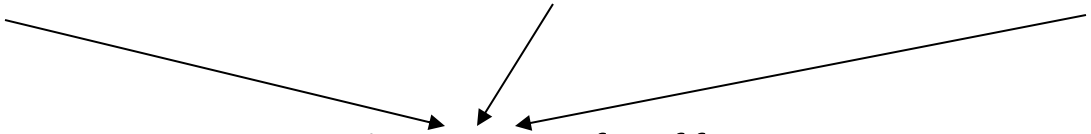
Energy Value

(Considers Time of Delivery, Curtailability, Dispatchability and location)

CHP Settlement Targets

GHG Reduction

MW Goals



Attractiveness of Offer

The IE critiques and reviews the SDG&E's evaluation and ranking of offers to ensure all offers are assessed correctly and the lowest net market value combination of offers is selected for the short-list to meet the CHP Settlement goals.

New and Repowered Facilities

Project Viability

- Can influence the ranking of the offer
- The IE reviews any adjustments to the selection of offers to ensure that it is uniformly applied to offers and is reasonable
- The factors considered in project viability include:
  - i. Technology
  - ii. Bidder Experience (financing, construction, operation)
  - iii. Credit and collateral
  - iv. Permitting, site control and other site-related matters
  - v. Fuel status
  - vi. Transmission upgrades

Procurement Review Group (PRG) and IE Report

- *During the course of this RFO, IE will be reporting on the progress and any issues on this RFO to the PRG*
- *The PRG includes CPUC Energy Division, DRA, TURN and other interveners*
  - This group oversees SDG&E's procurement process

IE Report

- *Public and confidential IE reports following the required IE template guidelines*
- *These reports are filed at the CPUC with the SDG&E request for contracts approval from the CPUC*

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/TariffAppendixDD_Nov4_2014.pdf
- **Cluster Windows:** Cluster 6, April 1st to April 30th 2013 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

	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	Lesser of • 15% of phase I study estimated network upgrade costs • $20,000 per MW (but not less than the lesser of $50,000, or the estimated cost of network upgrades)	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	Lesser of • $7.5 million • 15% of Phase I estimated network upgrade costs • $20,000 per MW (but not less than the lesser of $50,000, or the estimated cost of network upgrades)	Lesser of • $15 million • 30% of lower of phase I or phase II study estimated network upgrade costs (but not less than the lesser of $500,000, or the estimated cost of the network upgrades)	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

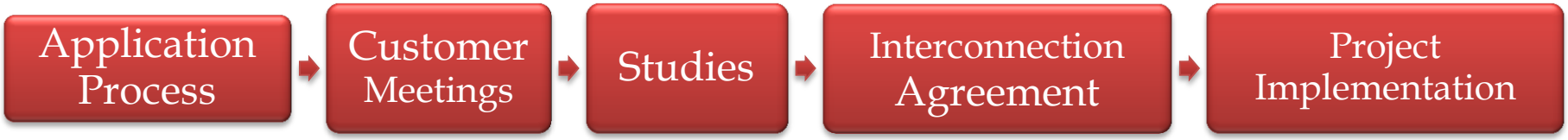
SDG&E Contacts:

- 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) Generator Interconnection Process

Michael Turner | Customer Generation

Wholesale Distribution Open Access Tariff – Generator Interconnection Process (GIP)



Distribution Interconnections

- Wholesale Distribution Open Access Tariff (WDAT) is managed by SDG&E's Customer Generation group under the Transmission & Distribution Engineering Department
- SDG&E's distribution voltage is defined as facilities operating at 12.47 kV or below
- All Applications must be submitted to SDG&E's Customer Generation group
- Pursuant to SDG&E's WDAT Attachment H – Generator Interconnection Procedures (GIP)

Application Package

Distribution Interconnection Application Package

- **Complete Interconnection Request**
- **Site Control Evidence**
- **Site Plan Diagram**
- **Single Line Diagram**
- **Invoice sent to Interconnection Customer (IC)***

Application Location - http://sdge.com/wdat

Interconnectionn Package

Email to:
WDATSGIPAPPLICATIONS@semprautilities.com
Or mail to:

Customer Generation – CP52F
San Diego Gas & Electric
8316 Century Park Court
San Diego, CA 92123-1582

Processing Fee*

Customer Payment Services – CP61C
San Diego Gas & Electric
PO Box 129831
San Diego, CA 92112-9831

Application Process Timeline: (Fast Track & Study Process)

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

Sec 6.1
Reasonable Efforts
The Distribution Provider shall make reasonable efforts to meet all time frames provided in these procedures, including the payment of refunds, unless the Distribution Provider and the Interconnection Customer agree to a different schedule. If the Distribution Provider cannot meet a deadline provided herein, it shall notify the Interconnection Customer, explain the reason for the failure to meet the deadline, and provide an estimated time by which it will complete the applicable interconnection procedure in the process.

Fast Track Study Process

Fast Track – approximately 6 months

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

Independent Study Process

Independent Study Process – approximately 18 months

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

Cluster Study Process

Cluster Study Process – approximately 18 months

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

Scoping Meeting

- Allows Face- to-Face Interactions with IC and SDG&E
- Review the Project
  - IC provides high level project overview
  - SDG&E Distribution Planning provides feedback, system information, suggests any alternatives
- Agree on a Point of Interconnection (POI) and generator size
- Review CAISO Metering & Telemetering requirements
- Determine Next Steps
  - System Impact Study/Phase 1
  - Facilities Study/Phase II
  - Small Generator Interconnection Agreement (SGIA)

Study Process

Study	Timing	Study Procedures	Study Deposit
System Impact Study	60 BD	• **Dynamic Analyses** • **Updated Interconnection Cost estimates**	≤ 5 MW: $10,000 > 5 MW: $50,000 + $1000/MW
Facilities Study	45/60 BD	• **Electrical switching configuration** • **Cost of equipment, engineering, procurement and construction work** • **Time required to complete construction and interconnect** • **Final Interconnection Cost estimates**	≤ 5 MW: $15,000 > 5 MW: $50,000 + $1000/MW

Cluster Study Process

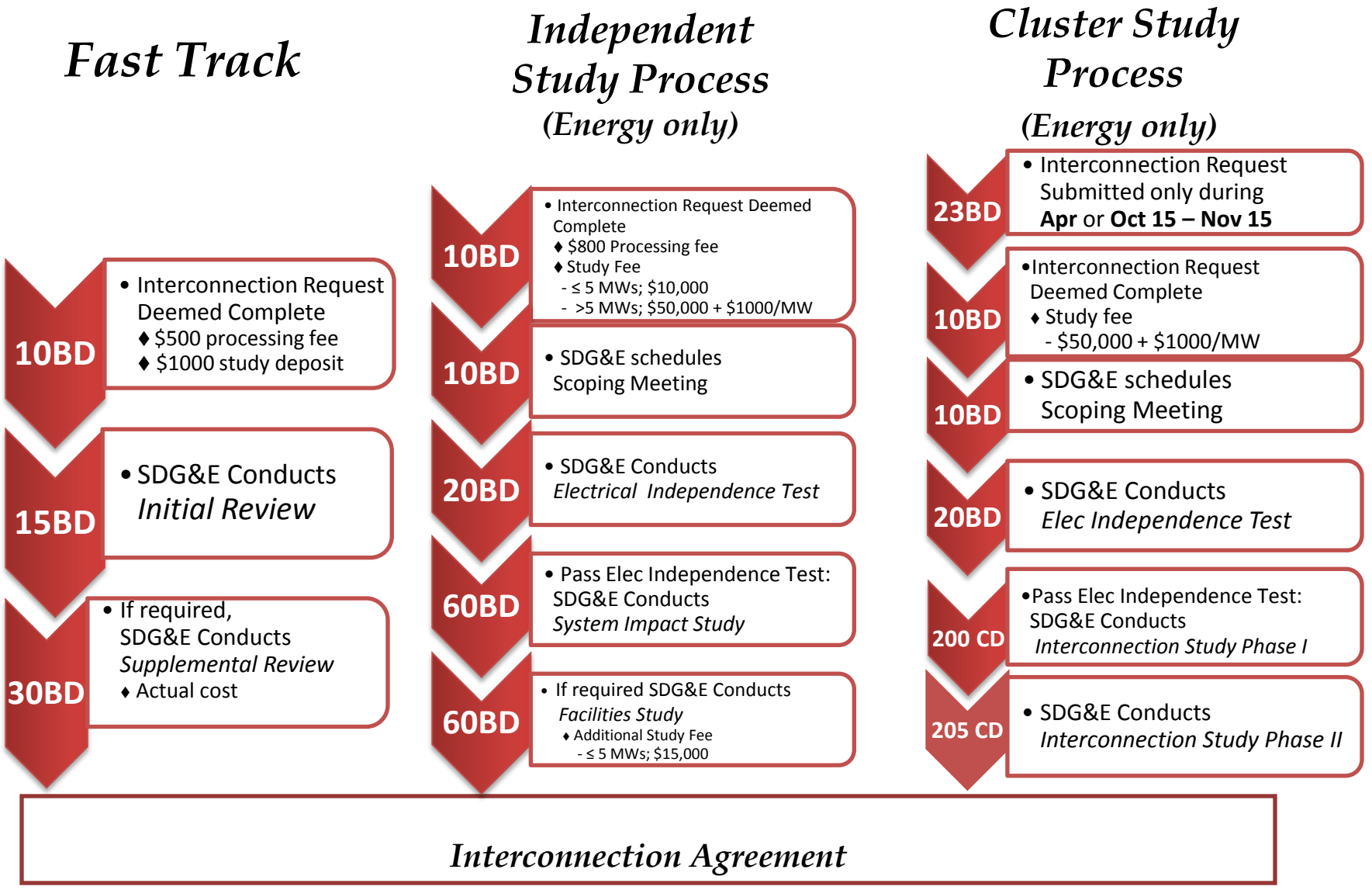
Study	Timing	Study Procedures	Study Deposit
Phase I (Start June 1)	200 CD	• **Dynamic Analyses** • **Updated Interconnection Cost estimates**	$50,000 + $1,000/MW
Phase II (Start May 1)	205 CD	• **Electrical switching configuration** • **Cost of equipment, engineering, procurement and construction work** • **Time required to complete construction and interconnect** • **Final Interconnection Cost estimates**	

Small Generator Interconnection Agreement (SGIA)

SGIA – Small Generator Interconnection Agreement, ≤20MW

Process	Duration	Responsible Party
Following the Facilities Study/Phase II	30 CD	SDG&E
•IC executes SGIA; or •IC fails to execute SGIA; or •IC has not requested to file unexecuted SGIA; or •IC has not initiated Dispute Resolution; + Interconnection Request Deemed Withdrawn	120 CD	Interconnection Customer (IC)
		SDG&E
		SDG&E & IC

Flow Charts & Timing



Contact Information

Ken Parks
San Diego Gas & Electric
8316 Century Park Court, CP52F
San Diego, CA 92123
Office: (858) 636-5581
kparks@semprautilities.com
sdge.com/wdat

RFO Materials

Scot Rolfe | Principal Origination Analyst

RFO Materials

- 2016 CHP RFO Document (.pdf)
- Project Description Form (.doc)
- Offer Form (.xlsx)
- Pro Forma CHP PPA (.doc)
- UPF Tolling PPA (.doc)

All documents are located on the 2016 CHP RFO website:

http://www.sdge.com/2016chprfo

Solicitation Document

- **2016 CHP RFO Document**
- Project Description Form
- Offer Form
- Pro Forma CHP PPA
- UPF Tolling PPA

• Provides a background and procurement process overview
• Sets up Eligibility Requirements
• Interconnection Requirements
• An overview and participation eligibility of SDG&E's CHP RFO
• RFO schedule and deadlines
• Evaluation Criteria
• Required Forms and Documentation
• Communications, Q&A and etc.

Project Description Form

- 2016 CHP RFO Document
- **Project Description Form**
- Offer Form
- Pro Forma CHP PPA
- UPF Tolling PPA

Additional Information on the Project/Facility submitted into SDG&E's CHP RFO:

- System and Equipment Description
- Operating Parameters
- Site Description, Site Control and Condition
- Permitting Plans
- Environmental Information
- Other

Offer Form Overview

- 2016 CHP RFO Document
- Project Description Form
- **Offer Form**
- Pro Forma CHP PPA
- UPF Tolling PPA

- Bidders (regardless of PPA type) are encouraged to populate all fields of the Offer Form. Where text is required, be brief as you will be required to submit a project description document which will allow for narrative responses.

Form Field Key(s):

Free Form Field
Pull Down Menu
Calculated Field
Comment Field

- Green fields are data entry fields.
- Orange fields are pull-down menus
- Blue fields are calculated for reference
- Purple fields contain comments to help clarify input requirements

How to Prepare a Conforming Bid

Remember the basics

- All bidders must submit at least two offers. One offer will have the bidder responsible for the GHG allowance costs and the other will have SDG&E responsible for some or all the GHG allowance costs
- 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 in average generation per hour
  - Don't overlook the drop-down boxes, or put text in numeric fields
- Check to see that the data in the offer 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
- **DO NOT** add new worksheets or change worksheet names

Each RFO requires processing many bids and all their documents. Little time is available to check with bidders regarding inconsistencies on pricing forms.

PPA Election

San Diego Gas and Electric Company ("SDG&E") is issuing this 2013 CHP RFO to achieve its megawatt ("MW") and Greenhouse Gas ("GHG") Emissions Reductions Targets, established in the CHP Program Settlement Agreement that was approved by the CPUC Decision 10-12-035. This RFO solicits offers from owners and operators of existing or new CHP Facilities.

Option A
Any CHP Facility with a nameplate larger than 5 MW may bid into the CHP RFO, including CHP Facilities seeking firm and as-available capacity PPAs, provided that the CHP Facility meets the definition of cogeneration under California Public Utilities Code §216.6 and the Emissions Performance Standard established by Public Utilities Code §8341 (Senate Bill 1368). A CHP Facility must meet the federal definition of a qualifying cogeneration facility under 18 CFR §292.205 implementing PURPA.

Pro Forma CHP PPA:
New,
Existing
Repowered, or
Expanded

Option B
This RFO also provides for CHP Facilities converting to Utility Prescheduled Facilities. A CHP Facility that met the PURPA efficiency requirements (18 C.F.R. §292.205) as of September 2007 and converts to a Utility Prescheduled Facility is also eligible to participate in the CHP RFOs. After the Existing CHP Facility converts to a Utility Prescheduled Facility, it may be either a Qualifying Facility or an Exempt Wholesale Generator if the facility otherwise meets the criteria in Section 4.2.2.2. Option B can be bid for incremental capacity above the amount bid for Option A.

Utility Prescheduled Facility:
Existing CHP wishing to change operations to "UPF"

Sellers Election of Option Option A - Pro Forma CHP

Contact & Other Information

Bidder Contact Information required for RFO questions and notifications.

Required for notification of short-list status

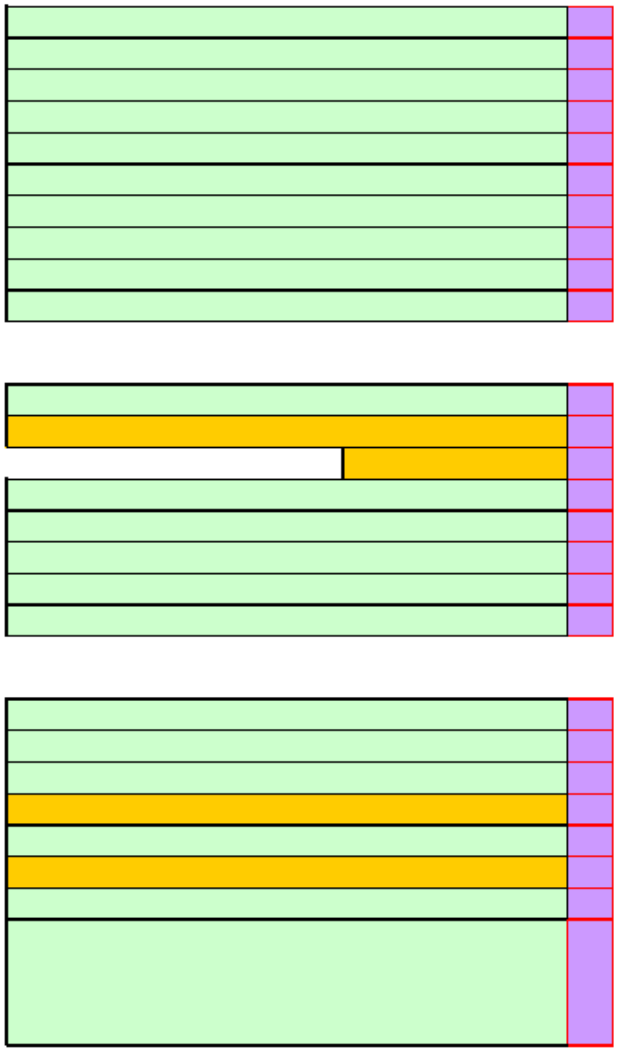
Required by the PPA and will aid in streamlining the conformance checking process

Project Information

General Information:
Parent Company to Project Company
Project Company Legal Name
Project Name
Project Address 1
Project Address 2
Project City
Project State
Project Zip Code
Project Latitude
Project Longitude

Generating Unit Details:
Facility Name
Facility Vintage
Will Meet Credit Requirements
CAISO Resource ID
Unit Scheduling Coordinator ID
California Air Resources Board ID
California Energy Commission ID
Energy Information Administration ID

Transmission Interconnection
Point of Interconnection
Interconnection Voltage (kV)
Name of Nearest 230kV Substation
Service Territory
If Other please provide:
Existing Zone
Delivery Point
Delivery Restrictions (If any)



Information required for Program reporting purposes

Will be used for PPA and will aid in streamlining the conformance checking process

Required for Capacity Benefit and Congestion Cost Analysis.

Project Status (1 of 2)

Project Information

QF Contract Expiration Date

Only applicable to New or Expanded Facilities
Project Start Date:
Financing Secured:
Engineering Start:
Construction Start:
Commissioning Start:
Commercial Operation Date:

This form is required to confirm eligibility and conformance.

Electric Interconnection
Interconnection Agreement Status
CAISO Full Deliverability Status?
Interconnection Agreement Start Date
Interconnection Agreement Term
Interconnecting Utility
Interconnection Level
Approximate Interconnection Voltage

Required for conformance checking

For New, Expanded, and Repowered Facilities Only
- Interconnection process
- Interconnection Capacity
- Queue Position (If Applicable)
- CAISO Cluster Number (If Applicable)
- Estimated Reliability Upgrade Costs
- Estimated Deliverability Upgrade Costs
- Estimated Date of Interconnection

A Phase 1 study or WDAT study is an eligibility requirement.

Project Status (2 of 2)

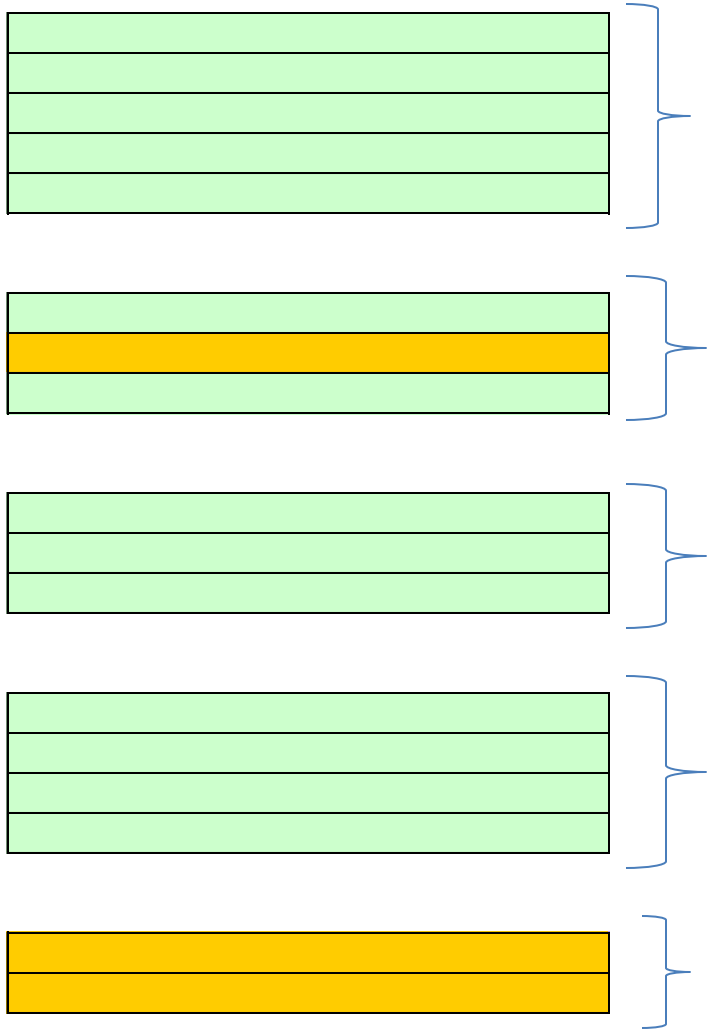
Fuel Interconnection
Facility has fuel supply agreement?
Fuel resource can support production profile?
Fuel agreement Start Date
Fuel agreement term
Fuel Supplier

For Natural Gas Facilities Only
Fuel Interconnection Agreement Status
Gas Interconnection Level
Gas Interconnection Point

Water Interconnection and Source
Facility has water interconnection agreement?
Water rights can support production profile?
Water Utility

Thermal Host
Facility has a thermal host for the Useful Thermal Energy Output
Name of thermal host:
Thermal Host is viable through term of contract
Description of thermal host use

Approvals
FERC approved QF CHP facility?
California approved QF CHP facility?



Status of various interconnections is required for conformance checking. If the field is not applicable simply insert "N/A"

Permits

Permitting Status*

REQUIRED PRIOR TO BEGINNING CONSTRUCTION		Issuing Agency	Date of Application/Filing	Date Granted	Expiration
AFC	Authorization for Construction	CEC			
APCP	Air Pollution Control Permit	APCD			
BBP	Bridge Building Permit	DPLU			
BP	Building Permit	DPLU			
GP	Grading Permit	DPLU			
HP	Health Permit	DEH			
MUP	Major Use Permit	DPLU			
NPDESP	National Pollutant Discharge Elimination System Permit	SWRCB			
SPPE	Small Power Plant Exemption	CEC			

REQUIRED PRIOR TO COMPLETING CONSTRUCTION		Issuing Agency	Date of Application/Filing	Date Granted	Expiration
EP	Encroachment Permit	CDOT			
SAA	Streambed Alteration Agreement	CDFG			

REQUIRED PRIOR TO HANDLING HAZARDOUS MATERIALS ON SITE		Issuing Agency	Date of Application/Filing	Date Granted	Expiration
HMP	Hazardous Materials Permit	DEH			

REQUIRED PRIOR TO COMMENCEMENT OF OPERATIONS		Issuing Agency	Date of Application/Filing	Date Granted	Expiration
CO	Certificate of Occupancy	DPLU			

REQUIRED PRIOR TO GENERATION OF ELECTRICITY		Issuing Agency	Date of Application/Filing	Date Granted	Expiration
MBR	Order Granting Borrower Market-Based Rate Authority	FERC			

OTHER REQUIRED PERMITS:		Issuing Agency	Date of Application/Filing	Date Granted	Expiration

Status of permits and applications are necessary for evaluation of project viability. If a permit is not required or applicable simply insert "N/A"

Design Information

Project Information			
Generating Unit Specifications:			
Generating Facility Nameplate (MW)			
Proposed Contract Generation (MW)			
Facility Vintage			
First Year of Commercial Operation			
Year of Upgrade/Expansion			
Facility Design			
Primary Mover Technology			
Prime Mover Manufacturer(s)/Supplier(s)			
Primary Fuel Type			
LHV/HHV Ratio (If Known)			
Secondary Fuel Type			
Secondary Uses			
Secondary Mover Technology			
Fuel Emission Factor (lbs CO2e/MMBTU)			
Effective Facility Heat Rate (MMBtu/MWh)			
Please populate form 6.b CEC-2843 Information			
Generation Operations	**Forecast**	**Historical**	
Avg (during operational hrs only) Fuel Input HHV | F avg (MMBtu/hr):		#DIV/0!	
Avg (during operational hrs only) Electric Output | P avg (aMWh):		#DIV/0!	
Electric Heat Rate HHV -average across the year (MMBtu/aMWh)	#DIV/0!	#DIV/0!	
Average Hourly On-Site Electricity Consumption (aMWh)		#DIV/0!	
Average Hourly Electricity Exported (MWh):		#DIV/0!	
Average Hourly Mechanical Energy Output | M avg (Hp-hr)		#DIV/0!	
Average Hourly Useful Thermal Output | Q Avg (MMBtu):		#DIV/0!	
Useful Energy Output (MMBtu)	0.0	#DIV/0!	
Annual Fuel Input (MMBtu)		-	
Carbon Dioxide Emissions Factor (lb/MMBtu)			
Other Green House Gases, Emission Factor (lb/MMBtu)			
Carbon Dioxide Equivalent Emission Factor (lbs. CO2e/MMBtu)	0	0	
Will facility meet SB 168 Requirement (1,100 lbs CO2e/MWh)			

This information is required for the PPA and CHP Program reporting

This information is used to calculate the GHG reduction credits GHG allowances costs

Form 6.b. CEC-2843 Information

Topping Cycle Historical or Predicted Fuel Energy Input and Energy Ouputs												
	Standard Hours per Month	Full Load Hours	Fuel Energy Input	Net Electricity Generation	On-Site Electricity Use from CHP	Electricity Exported from CHP System	Useful Mechanical Energy Output from CHP System	CHP System Thermal Energy Output	CHP system Thermal Energy Return	Waste Heat to Thermal Host Facility	Host Site Thermal Energy Process Demand	Useful Thermal Energy Output
Units	HOURS	HOURS	MMBtu	MWh	MWh	MWh	HP-HR	MMBtu	MMBtu	MMBtu	MMBtu	MMBtu
January-11	744											0
February-11	672											0
March-11	744											0
April-11	720											0
May-11	744											0
June-11	720											0
July-11	744											0
August-11	744											0
September-11	720											0
October-11	744											0
November-11	720											0
December-11	744											0
January-12	744											0
February-12	696											0
March-12	744											0
April-12	720											0
May-12	744											0
June-12	720											0
July-12	744											0
August-12	744											0
September-12	720											0
October-12	744											0
November-12	720											0
December-12	744											0
	Wtd Avg	0	0	0	0	0	0	0	0	0	0	0

This information is used to support analysis for GHG reduction credits.

Routine Maintenance

Routine Maintenance and Testing

Month	Peak (hours)	Non-Peak (hours)	Total (hours)
January	0	0	0
February	0	0	0
March	0	0	0
April	0	0	0
May	0	0	0
June	No Outages allowed during this period	0	0
July		0	0
August		0	0
September		0	0
October	0	0	0
November	0	0	0
December	0	0	0
Total (hours)	0	0	0

Hours per Period for Reference

Peak (hours)	Non-Peak (hours)	Total (hours)
416	328	744
372	306	678
420	324	744
412	308	720
412	332	744
408	312	720
412	332	744
424	320	744
392	328	720
432	312	744
380	340	720
408	336	744
4888	3878	8766

Used to calculate adjusted annual energy production

There are a maximum of 550 Maintenance Outage hours per year (set forth in the CHP Pro Forma PPA)

Time Period Definitions	Summer MAY 1 - SEPTEMBER 30	Winter OCTOBER 1 - APRIL 30	
ON-PEAK (Peak)	11:00 a.m. - 6:00 p.m.	5:00 p.m. - 8:00 p.m.	Weekdays
SEMI-PEAK (Peak)	6:00 a.m. - 11:00 a.m.	6:00 a.m. - 5:00 p.m.	Weekdays
	6:00 p.m. - 10:00 p.m.	8:00 p.m. - 10:00 p.m.	Weekdays
OFF-PEAK (Non-Peak)	10:00p.m. - 12:00 mid.	10:00 p.m. - 12:00 mid.	Weekdays
	5:00 a.m. - 6:00 a.m.	5:00 a.m. - 6:00 a.m.	Weekdays
	5:00 a.m. - 12:00 mid.	5:00 a.m. - 12:00 mid.	Weekends
	5:00 a.m. - 12:00 mid.	5:00 a.m. - 12:00 mid.	Holidays
SUPER OFF-PEAK (Non-Peak)	12:00 mid. - 5:00 a.m.	12:00 mid. - 5:00 a.m.	All Days

Time of Day definitions provided for reference

Delivery Profile

Form Field Key(s):
Free Form Field
Pull Down Menu
Calculated Field
Comment Field

Energy Profile (aMWh)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Super Off-Peak	155.0	141.3	155.0	150.0	155.0	150.0	155.0	155.0	150.0	155.0	150.0	155.0
Off-Peak	177.0	165.6	163.4	158.8	179.8	158.4	178.2	163.8	174.4	164.2	188.0	177.4
Semi-Peak	206.0	185.6	212.8	205.6	230.2	231.5	231.1	239.2	222.5	212.4	191.0	205.8
Peak	206.0	185.6	212.8	205.6	179.0	180.1	179.7	186.0	173.1	212.4	191.0	205.8

			1	2	3	4	5	6	7	8	9	10	11	12
12x192 Energy Profile			EXPECTED NET GENERATION (aMWh)											
			WINTER				SUMMER					WINTER		
Day Type	Hour Beginning	Hour Ending	January	February	March	April	May	June	July	August	September	October	November	December
SUN	12:00 AM	1	1	1	1	1	1	1	1	1	1	1	1	1
SUN	1:00 AM	2	1	1	1	1	1	1	1	1	1	1	1	1
SUN	2:00 AM	3	1	1	1	1	1	1	1	1	1	1	1	1
SUN	3:00 AM	4	1	1	1	1	1	1	1	1	1	1	1	1
SUN	4:00 AM	5	1	1	1	1	1	1	1	1	1	1	1	1
SUN	5:00 AM	6	1	1	1	1	1	1	1	1	1	1	1	1
SUN	6:00 AM	7	1	1	1	1	1	1	1	1	1	1	1	1
SUN	7:00 AM	8	1	1	1	1	1	1	1	1	1	1	1	1
SUN	8:00 AM	9	1	1	1	1	1	1	1	1	1	1	1	1
SUN	9:00 AM	10	1	1	1	1	1	1	1	1	1	1	1	1
SUN	10:00 AM	11	1	1	1	1	1	1	1	1	1	1	1	1
SUN	11:00 AM	12	1	1	1	1	1	1	1	1	1	1	1	1
SUN	12:00 PM	13	1	1	1	1	1	1	1	1	1	1	1	1
SUN	1:00 PM	14	1	1	1	1	1	1	1	1	1	1	1	1
SUN	2:00 PM	15	1	1	1	1	1	1	1	1	1	1	1	1
SUN	3:00 PM	16	1	1	1	1	1	1	1	1	1	1	1	1
SUN	4:00 PM	17	1	1	1	1	1	1	1	1	1	1	1	1
SUN	5:00 PM	18	1	1	1	1	1	1	1	1	1	1	1	1
SUN	6:00 PM	19	1	1	1	1	1	1	1	1	1	1	1	1
SUN	7:00 PM	20	1	1	1	1	1	1	1	1	1	1	1	1
SUN	8:00 PM	21	1	1	1	1	1	1	1	1	1	1	1	1
SUN	9:00 PM	22	1	1	1	1	1	1	1	1	1	1	1	1
SUN	10:00 PM	23	1	1	1	1	1	1	1	1	1	1	1	1
SUN	11:00 PM	24	1	1	1	1	1	1	1	1	1	1	1	1

The typical hourly schedule for weekdays, weekends, and holidays should be input here. For UPFs, input your historical operations.

Contract Pricing (1 of 5) – Contract Term and Bid ID

Select Applicable PPA	HP Pro Forma	If you are electing to change operations to UPF, please select 'CHP UPF' (Make sure this Matches Tab 1 For Tolling Resources, input forecast generation based historical operation
Bid Number:	1	
Contract Start	1/1/2013	The term Start Date must be on the first day of the month
Term (Months)	90.0	Term must not exceed 144 months
Contract End	6/30/2020	The term End Date must be on the last day of the month
Term (Years)	7.5	

Energy Payment and Pricing Terms

Energy Payment Calculation Meth: Variable — Variable payments will depend on the 'The simple average of natural gas market price indices from Natural Gas Intelligence, Platts Gas Daily and Natural Gas Week at the applicable Gas Index

Please enter in your forecast energy profile in the 'Delivery Profile Tab'. (Based on Historical Operation)

Energy Profile (aMWh)	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Super Off-Peak	155.0	141.3	155.0	150.0	155.0	150.0	155.0	155.0	150.0	155.0	150.0	155.0
Off-Peak	177.0	165.6	163.4	158.8	179.8	158.4	178.2	163.8	174.4	164.2	188.0	177.4
Semi-Peak	206.0	185.6	212.8	205.6	230.2	231.5	231.1	239.2	222.5	212.4	191.0	205.8
Peak	206.0	185.6	212.8	205.6	179.0	180.1	179.7	186.0	173.1	212.4	191.0	205.8

Outage Profile												
Off-Peak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Peak	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0

Availability by Period (Hours)	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
Super Off-Peak	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Off-Peak	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Semi-Peak	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Peak	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Calculated Expected Yearly Genera	8,766
Calculated Expected Yearly Fuel Us	72,758

Contract Pricing (2 of 5) – Fixed Energy Price

The following section only applies to bidders wishing to bid on a fixed energy price basis:

	Price ($/MWh)
Contract Year 1	$50.00
Contract Year 2	$50.00
Contract Year 3	$50.00
Contract Year 4	$50.00
Contract Year 5	$50.00
Contract Year 6	$50.00
Contract Year 7	$50.00
Contract Year 8	$50.00
Contract Year 9	$50.00
Contract Year 10	$50.00
Contract Year 11	$50.00
Contract Year 12	$50.00
Average Price ($/MWh)	**$50.00**

If the Fixed Energy Price has been selected, Energy Pricing adjusts only during the contract year specified. This will not be consistent with calendar year convention unless the term start date is coincident with January 1 of any given year.

If the cells have been highlighted grey, then the price during that period will not be applicable to your bid. The highlighting is based on the proposed contract term above.

Contract Pricing (3 of 5) – Variable Energy Price

The following section only applies to bidders wishing to bid on a variable energy pricing basis:

If the variable pricing method is used, the energy price for each contract is calculated using the following formula:

Heat Rate HHV (MMB	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Super Off-Peak	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300
Off-Peak	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300
Mid-Peak	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300
Peak	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300

Gas Index: SoCal Border — PG&E Citygate or Socal Border

	Forecast Gas Price ($/MMBtu	Transportation Service	Variable O&M ($/MWh)	Forecast Energy Price
Contract Year 1	$8.00	$0.00	$0.25	$66.65
Contract Year 2	$8.00	$0.00	$0.50	$66.90
Contract Year 3	$8.00	$0.00	$0.75	$67.15
Contract Year 4	$8.00	$0.00	$1.00	$67.40
Contract Year 5	$8.00	$0.00	$1.25	$67.65
Contract Year 6	$8.00	$0.00	$1.50	$67.90
Contract Year 7	$8.00	$0.00	$1.75	$68.15
Contract Year 8	$8.00	$0.00	$2.00	$68.40
Contract Year 9	$8.00	$0.00	$2.25	$68.65
Contract Year 10	$8.00	$0.00	$2.50	$68.90
Contract Year 11	$8.00	$0.00	$2.75	$69.15
Contract Year 12	$8.00	$0.00	$3.00	$69.40
Average Price	**$8.00**	**$0.00**	**$1.63**	**$68.03**

<---- This will be your approximate contract energy price

Contract Pricing (4 of 5)

Capacity Pricing and Payment Terms

Contract Capacity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Firm Capacity (MW)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As-Available Capacity	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

Utility Prescheduled Facilities should not bid in As-Available Capacity, Only Firm Capacity

Net Qualifying Capacity ("NQC") Calculation by			CPUC, CAISO, Etc.									

	Firm Capacity Price ($/kW-)	As-Available Capacity Price	Fixed O&M ($/kW-Year)
Contract Year 1	$100.00	$0.00	0.00
Contract Year 2	$100.00	$0.00	0.00
Contract Year 3	$100.00	$0.00	0.00
Contract Year 4	$100.00	$0.00	0.00
Contract Year 5	$100.00	$0.00	0.00
Contract Year 6	$100.00	$0.00	0.00
Contract Year 7	$100.00	$0.00	0.00
Contract Year 8	$100.00	$0.00	0.00
Contract Year 9	$100.00	$0.00	0.00
Contract Year 10	$100.00	$0.00	0.00
Contract Year 11	$100.00	$0.00	0.00
Contract Year 12	$100.00	$0.00	0.00
Average Price	**$100.00**	**$0.00**	**$0.00**

Please provide capacity pricing in $/kW-year. Fixed O&M is applied to Firm Capacity. As-Available Capacity pricing only applies to CHP Pro Forma Bids.

The As-Available Capacity Price is only applicable to Pro Forma PPA bids. If you are bidding in a Utility Prescheduled Facility do not populate the pricing fields with As-Available Pricing Data.

Simple Average for your reference

Contract Pricing (5 of 5)

Seller Assumes [X%] of GHG Costs	50%	
Scheduler Coordinator Selection	SDG&E	

Participant must provide at least 1 bid where seller assumes 100% of GHG costs

Economic Curtailment Option

Participants electing this option, will be given some quantitative preference in the bid ranking process.

Calendar Quarter	On-Peak (MWhs)	Off-Peak (MWhs)	Total
January-March			0
April-June			0
July-September			0
October-December			0
Total (MWhs)	0	0	0

Max On-Peak	Max Off-Peak	Total
1209	957	1209
1232	952	1232
1232	976	1232
1218	990	1218
4891	3875	4891

Two bids will be required. SDG&E recommends starting with a bid whereby the seller assumes 100% of the GHG costs. Once that bid has been completed, the Seller should save a copy of the workbook and submit a second bid with an alternative GHG cost sharing proposal.

Bidders are offered the option to participate in a real-time economic curtailment program whereby SDG&E can curtail generation if CAISO market prices drop below $0/MWh.

Credit & Milestones

Required for New, Repowered, or Expanded Facilities desiring a term greater than 7 years and up to 12 years.

Corporate Organizational Link	
Annual Report Link	
Link to Company Website	
Performance Assurance Option	
Performance Assurance Amount	

Milestones

Target Date	Milestone Name / Description
1/1/2014	Bid Expiration Date
1/2/2014	Project Start Date
1/3/2014	Financing Secured
1/4/2014	Permits Secured (CEC, Air District, local)
1/5/2014	Engineering Start
1/6/2014	Construction Start
1/7/2014	Commissioning Start
1/8/2014	Commercial Operation Date
1/9/2014	

UPF Facility Information

Required for UPF Facilities Only	
Number of Units	
Facility Maximum MW Output	
Facility Minimum MW Output	
Facility Heat Rate (HHV) at Maximum MW Output	
Facility Heat Rate (HHV) at Minimum MW Output	
Fuel Type	
Annual Operating Hours (exclusive of startup, shutdown, or maintenance time)	
Maximum number of Annual Starts	
Maximum Number of Daily Starts	
Total	
Cold	
Warm	
Hot	
Start-up time (Minutes)	
Cold Start to Synchronization	
Cold Start to Minimum Load	
Cold Start to 100% Capacity	
Ramp Rates (Minimum load is minimum sustainable load within emissions limits)	
Initial Synchronization to Minimum Load	
Minimum Load to Maximum	
Maximum Load to Minimum	
Startup Energy	
Start Initiation to Synchronization	
Synchronization to Minimum Load	
Startup Electrical Energy Required	
Off-Line Energy Consumption	
Assuming ready-to-start	
Black Start Capability	
Can facility be remote black started by SDG&E System Operations?	
Is operator dispatch required prior to Black Start?	
Time from receipt of dispatch order to first unit at minimum load?	
Time from receipt of dispatch order to last unit at minimum load?	
Black Start generator fuel type and source?	
Minimum gas pressure req'd at gas meter to start the first Unit without fuel gas compressors?	

If a facility wishes to bid in all or part of available capacity to be utility prescheduled SDG&E will need to know the following operating parameters

This information is used to forecast the dispatch, the energy benefits, GHG allowances costs and GHG reduction benefits (if any)

Pro Forma and UPF Power Purchase Agreements*

- 2016 CHP RFO Document
- Project Description Form
- Offer Form
- **Pro Forma CHP PPA**
- **UPF Tolling PPA**

- Pro Forma CHP PPA
  - Meant for base load CHP Facilities greater than 5 MW.
  - Pro Forma and for the most part, non-modifiable

- Utility Prescheduled Facility (UPF)
  - An agreement where SDG&E is dispatches the facility (or a part of it) on a pre-schedule basis and the facility is responsible for managing its own fuel (negotiable).

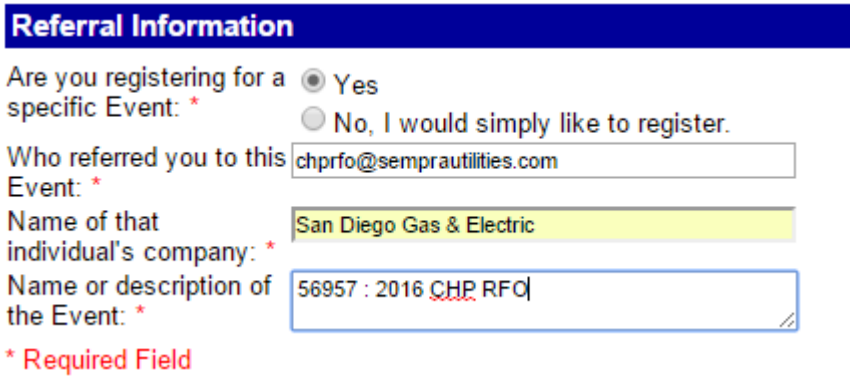
* SDG&E prefers that bidders do not make extensive modifications to the PPAs.

Bid Submission Process

Registration and Logging On

Ways to Register:

1. First-time users must register on www.PowerAdvocate.com as a Supplier using the Referral information below to access this RFO event:



2. Users with an existing PowerAdvocate® account may request for access to this event using the link below: https://www.poweradvocate.com/pR.do?okey=56957&pubEvent=true

How to Log On:

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

The Supplier Dashboard

What information is displayed on my Dashboard?

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

Accessing the RFO Event and Submitting Documents

How to Access the RFO Event from Dashboard:

1. To download the RFO package, click  or the **1. Download Documents** tab.
   - RFO Document
   - Offer Form
   - Project Description
   - Pro Forma PPAs

2. To upload documents, click  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**.

- Offer Form (.xlsx)
- Project Description Form (.doc)
- CEC-2843 Application Form
- Electric Interconnection Information
- Redline forms of the Applicable PPA (.doc or .docx)
- Any supplemental offer information

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

Please submit your questions by April 11, 2016

to

chprfo@semprautilities.com