2013 RPS Solicitation
Request for Proposals Conference

January 13, 2014
Overview of the Conference

◆ Introduction
  ◆ Safety Moment
  ◆ Words from Senior Management

◆ Overview
  ◆ Elements of the Bidder’s Conference
  ◆ Meet the Team
  ◆ Independent Evaluator
  ◆ Supplier Diversity

◆ The RPS RFP Materials
  ◆ Process & Schedule
  ◆ Eligibility Requirements
  ◆ Products Sought by SCE
  ◆ Keys to Success
  ◆ RFP Website Demonstration

◆ Pro Forma PPA
  ◆ Resource Adequacy & Deliverability Status
  ◆ Network Upgrade Costs
  ◆ Payment Caps
  ◆ Delivery Obligations
  ◆ Curtailment
  ◆ Safety

◆ Proposal Evaluation
  ◆ Evaluation Process
  ◆ Evaluation Components
    ◆ Quantitative
    ◆ Qualitative

◆ Interconnection
  ◆ Interconnection Processes
  ◆ Conversions
  ◆ Repowering

◆ Panel Discussion – Questions & Answers

SCE team members will be available after the conference to answer additional question and discuss other SCE Power Procurement programs.
The Independent Evaluator

Presented By Wayne Oliver
Independent Evaluator (IE)

◆ Primary Role of the IE is to:

– Monitor SCE’s solicitation and negotiation processes to ensure fair and equal treatment of all potential counterparties;
– Monitor SCE’s evaluation methodology and processes to ensure the processes have been implemented as described and to ensure fair and equitable treatment of all proposals;
– Prepare a report on the RFP process and proposed transactions to the CPUC when a PPA is filed for CPUC approval;
Independent Evaluator (IE)

- Requirement for an IE mandated through CPUC Orders
- IE performs an independent review of the proposals and a detailed review of the utility evaluation and selection process
- The IE monitors communications between SCE and Bidders and is copied on all correspondence
- The IE has access to all bid data and is invited to participate in all contract negotiations with short listed Bidders
- Merrimack Energy has been retained as the IE for this solicitation
  - Wayne Oliver (waynejoliver@aol.com) - key contact
Supplier Diversity

Presented By Cristina Radu
Supplier Diversity; Potential Funding for Development Security

**Supplier Diversity**

- SCE encourages Women-Owned, Minority-Owned, and Disabled Veteran-Owned Business Enterprises (“WMDVBE”) to participate in the RPS RFO.

- CPUC General Order 156 sets the rules governing the development of programs to increase participation of WMDVBEs in procurement of contracts from utilities as required by CPUC Code.

- For additional information, please visit SCE’s website, [www.sce.com/SD](http://www.sce.com/SD).
  - Guidance is also available at [www.sce.com/EnergyProcurement](http://www.sce.com/EnergyProcurement) under the heading “Help & Guidance”.
  - Contact Cristina Radu at 626-302-3412 or [cristina.radu@sce.com](mailto:cristina.radu@sce.com) regarding power procurement opportunities and activities.

Opportunities to participate for Bidders and WMDVBEs are: direct contracting with SCE, subcontracting with PPA holders, etc.
Potential Funding for Development Security

- Offers associated with the Hopi Tribe and/or Navajo Nation that qualify under the requirements of D.13-02-004 may be entitled to use available funds from the Mohave SO2 Revolving Fund to meet the development security obligations under the RPS RFO PPA, subject to the provision of the necessary documentation and assurances in the Final Agreement.
Process & Schedule

Presented By Dan Chase
A Few Terms to Start

- **Applicant** is the authorized person or entity filling out and submitting the Proposal on behalf of the Seller
- **Seller** is the Special Purpose Entity that owns the Project and seeks to sign the Power Purchase Agreement with SCE
- **Parent(s)** is the entity or entities that own an interest in the Seller
- **Project** is that certain ERR Power Generation Facility
- **Proposal** is the offer to supply Product – there may be several proposals related to a Project

Additional terms used have the meaning set forth in the *Pro Forma* PPA and the CAISO Tariff
The Contracting Process

- After the Proposal Due Date:
  - SCE will check all proposals for conformity & completeness
  - Compare Proposal information with the Interconnection Documents
  - Evaluate & rank proposals
  - Select a Short-List
  - Notify participants
  - Open negotiations

- Following successful negotiations:
  - Seller may refresh the pricing component (only) of their Proposals
  - SCE will Re-evaluate & re-rank proposals, make a Final Selection, and notify participants
  - Parties will sign the PPA
# 2013 RPS Solicitation Schedule

<table>
<thead>
<tr>
<th>Dates</th>
<th>Cumulative Days</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 6, 2014</td>
<td>0</td>
<td>SCE releases 2013 RPS Solicitation RFP.</td>
</tr>
<tr>
<td>January 13, 2014 (Prior + 7 days)</td>
<td>7</td>
<td>SCE hosts a Bidders’ Conference.</td>
</tr>
<tr>
<td>January 31, 2014 (Prior + 18 days)</td>
<td>25</td>
<td>Sellers to upload to the 2013 RPS Solicitation RFP Website their full Proposal e-Binder exactly as described in the Form of Seller’s Proposal. Sellers to upload to the RFP Website their “Proposal Structure Letter” exactly as described in the Form of Seller’s Proposal.</td>
</tr>
<tr>
<td>1:00 p.m. PST (the “Proposal Due Date”)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>March 20, 2014 (Prior + 48 days)</td>
<td>73</td>
<td>SCE presents Initial Short-List to CPUC and PRG. Latest date SCE advises all Sellers on the status of their Proposals relative to SCE’s Initial Short-List. For Sellers whose Proposals have been named to the Initial Short-List, the 3-month negotiations period begins.</td>
</tr>
<tr>
<td>June 18, 2014 (Prior + 90 days)</td>
<td>163</td>
<td>SCE and Short-Listed Sellers complete negotiations of the Final Agreements.</td>
</tr>
<tr>
<td>June 25, 2014 (Prior + 7 days)</td>
<td>170</td>
<td>Last day on which any Seller who completed negotiations of a Final Agreement may submit refreshed pricing for delivery of the Product.</td>
</tr>
<tr>
<td>July 18, 2014 (Prior + 23 days)</td>
<td>193</td>
<td>SCE presents Final Short-List to CPUC and PRG. SCE makes final selections, notifies each Seller of its status relative to SCE’s final selection and prepares to sign the Final Agreement.</td>
</tr>
<tr>
<td>October 16, 2014 (Prior + 90 days)</td>
<td>283</td>
<td>SCE submits the Final Agreements by way of Advice Letters to the CPUC for approval.</td>
</tr>
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Eligibility Requirements

Presented By Dan Chase
Eligibility Requirements

• Eligible Renewable Energy Resources ("ERR")
  • Defined by the California Energy Commission

• Phase II Interconnection Study or equivalent or better
  • Facilities Study
  • Generation Interconnection Agreement
  • Wholesale Distribution Access Tariff Agreement
  • Conversion documentation

• Site Control
  • Sufficient to delivery Product to SCE
    • Demonstrate ownership, lease, binding option, BLM Right-of-Way Grant, or BLM Application in the 1st position
  • Must include
    • ERR Generation Facility site
    • Generation tie line pathway

• CEC Certification – Prior to the Proposal Due Date
  • Seller must seek CEC Pre-Certification for new or repowered ERRs
  • Seller must possess CEC Certification for existing ERRs
Eligibility Requirements

• SCE’s Preference:
  • Proposal Contract Capacity $>20\ MW$ for ERRs located within the service territory of PG&E, SDG&E, or SCE, and directly interconnected to the CAISO or the distribution system of either PG&E, SDG&E, or SCE
  • Proposal Contract Capacity $\geq 3\ MW$ for ERRs located outside the service territory of PG&E, SDG&E, or SCE, and directly interconnected to the transmission or distribution system of a California Balancing Authority
    • CAISO
    • LADWP
    • Imperial Irrigation District
    • Turlock Irrigation District
    • Balancing Authority of Northern California (formerly SMUD)
  • Proposal Contract Capacity $\geq 1.5\ MW$ for ERRs located within the Western Los Angeles sub-area of the Los Angeles basin local reliability area or within the Moorpark sub-area of the Big Creek/Ventura local reliability area
Products Sought by SCE

Presented By Dan Chase
Products Sought by SCE

- **Portfolio Content Category 1**
  - First point of interconnection to a California Balancing Authority ("CBA")
  - First point of interconnection with the electricity distribution system used to serve end users within the boundaries of a CBA
  - Dynamically transferred to a CBA
  - Scheduled into a CBA on an hourly basis without substituting electricity from another source

- **All Green Attributes, Capacity Attributes, Resource Adequacy Benefits, and any other attributes that exist or are created during the Term that are attributable to the output of the ERR Generating Facility**
Keys to Success

Presented By Laura Kuhls-Gilcrist
Keys to Success

**Pre-Short List**

- Read, understand and follow instructions
- Know deadlines and what is expected
- **Completely** submit your bids
  - Generation Profile
    - No blanks, no averages
- If you have any questions, contact the RPS Solicitation team
- Submit a competitively priced offer
- Quickly cure deficiencies
Keys to Success

**Short Listing through Final Offers**

- Work with assigned SCE Contract Manager to identify and resolve larger issues first
- Timely complete document negotiation
  - Exhibit B - Generating Facility Description & Site Description
    - Explain known discrepancies
    - Label everything
    - Err on the side of inclusiveness
    - Pay attention to details
- Submit unconditional final offers
  - Obtain management approvals before submitting final offers
Keys to Success

**Post Execution**

- Development Security
  - 1\textsuperscript{st} half (Effective Date + 30 days)
  - 2\textsuperscript{nd} half (CPUC Approval + 30 days)
- Monthly Milestone updates
  - 5th day of every month
- Pre-CEC Certification
  - Effective Date + 180 days
- CAISO New Resource Implementation
- On-boarding pre Commercial Operation
  - COD – 6 months
SCE's *Pro Forma* Power Purchase Agreement

Presented By Todd Larsen
Generators apply for interconnection to the CAISO Grid and make a selection for “Full Capacity Deliverability Status” (FCDS) or “Energy Only” (EO)

- **Full Capacity Deliverability Status:**
  - Requires Seller to have a Deliverability Study for the Project
  - Qualifies Seller to be counted for Resource Adequacy (RA) purposes
  - May require Seller to finance additional Deliverability Network Upgrades

- **Energy Only:**
  - No RA benefit for bid valuation purposes
  - Seller may still have to finance other Reliability Network Upgrades as part of its interconnection agreement
Resource Adequacy and Full Capacity Deliverability Status

*If Seller’s project is an EO project, then*

- Seller’s Product Payments will be calculated using the EO Time of Delivery (TOD) Factors

- SCE gets any RA Benefits that may be allocated to Seller, but Seller has no obligation to provide RA Benefits
If Seller’s project is an FCDS project, then

• Seller must include a date on which Seller will begin delivering RA Benefits (RA Guarantee Date)

• Prior to the RA Guarantee Date, Product Payments will be calculated using the EO TOD Factors, regardless of whether Seller achieves FCDS early and is providing RA Benefits to SCE

• Starting on the RA Guarantee Date, Product Payment will be calculated using the FCDS TOD Factors regardless of whether Seller actually is able to provide any RA Benefits

• Starting on the RA Guarantee Date, if there is an RA Deficit (calculated as Qualifying Capacity minus Net Qualifying Capacity), Seller must pay SCE an RA Deficit Payment (RA Deficit amount x Capacity Procurement Mechanism price)
Network Upgrade Costs and Seller’s “Buy-Down Right”

- Seller’s Interconnection Study will identify the estimated cost of Interconnection Facilities and Distribution Upgrades (i.e. non-reimbursable costs) and Network Upgrade Costs (i.e. typically “reimbursable costs”)

- The estimated amount of the total Network Upgrade Costs (Reliability Network Upgrades and, for FCDS projects, the Deliverability Network Upgrades, if applicable) is set as a Network Upgrade Cost Cap in the PPA

- After the PPA is executed, if that estimate goes up in a subsequent study, revision of the study, or in the final GIA, then SCE can terminate the PPA

- Seller has the right to pay SCE back for the amount in excess of the Network Upgrade Cost Cap, in which case SCE no longer has this termination right
Payment Caps for Excess Delivered Energy

**Real-Time Payment Cap**

- In any Settlement Interval (i.e. 10-minute interval), the Product Price is $0 for any energy Seller delivers in excess of 110% of the Contract Capacity

**Annual Payment Cap**

- Once Seller has produced 115% of its Expected Annual Net Energy Production (EANEP) in a Term Year, the Product Price is reduced by 25% for any additional energy Seller delivers in that Term Year
Payment Caps for Excess Delivered Energy

**Expected Annual Net Energy Production (EANEP)**

- EANEP = Capacity x “Capacity Factor” x 8,760 hours per year

» Example: 100 MW wind project
25% Capacity Factor
Energy Price = $100/MWh
EANEP = 219,000 MWh/year
Energy Cap = 251,850 MWh/year
Energy Price Above Cap = $75/MWh
Seller’s Product Delivery Obligation

- Seller’s Product Delivery Obligation (i.e. minimum energy deliveries) is a percentage of Expected Annual Net Energy Production (EANEP)
  - For Base Load Generating Facilities:
    - 90% of the EANEP during the prior 12-month period
  - For Wind Generating Facilities:
    - 140% of the EANEP during the prior 24-month period
  - For Non-Wind Intermittent Generating Facilities:
    - 170% of the EANEP during the prior 24-month period

- If Seller delivers less than its Product Delivery Obligation (except for certain excused amounts, such as Curtailed Product or Lost Output), it must pay a Product Replacement Damages Amount.
Section 3.12(g) of the PPA breaks Seller’s curtailment obligation into two categories:

- (i) and (ii) cover curtailment instructions that SCE, in its role as Scheduling Coordinator, communicates to Seller from the CAISO, Transmission Provider, or other valid authority (e.g. WECC), or due to an Emergency
- (iii) is SCE’s right to curtail Seller for any other reason

When does SCE pay for curtailed energy?
Curtailment

Payment for Curtailed Energy

• SCE does not pay for curtailed energy if the curtailment instruction was made pursuant to 3.12(g)(i) or (ii) (i.e. ordered by CAISO, T.P., etc. or due to an Emergency.)

• SCE does not pay for curtailed energy if SCE gives Seller a Curtailment Order pursuant to 3.12(g)(iii) and
  o The Curtailment Order is for Non-On-Peak hours, and
  o SCE has hours remaining within the Curtailment Cap

  ▪ Curtailment Cap is set at Contract Capacity x 50 hours/yr

• SCE does pay for curtailed energy if SCE gives Seller a Curtailment Order pursuant to 3.12(g)(iii) and
  o The Curtailment Order is for On-Peak hours, or
  o SCE has used all of the hours within the Curtailment Cap
Curtailment

**Banked Curtailed Product**

- Any Curtained Product that during Non-On-Peak hours that SCE paid Seller for because SCE had used all of the hours within the Curtailment Cap are “banked”

- At the end of the Original Term, the total amount of Banked Curtailed Product from all years has to be paid back at SCE’s election, as follows:
  - Seller must keep producing beyond the end of the Original Term (“Curtailed Return Term”) until the earlier of:
    - two times the total amount of Banked Curtailed Product has been delivered to SCE, or
    - two years after the end of the Original Term.
  - The contract price for all energy delivered during the Curtailed Return Term is 50% of the original contract price.
Safety

• Prior to the start of construction Seller must provide to SCE a report from an independent engineer that Seller has a written safety plan for the safe construction and operation of the Generating Facility.

• Examples of unsafe operations may include:
Proposal Evaluation

Presented By Kateryna Krasynska
Valuation and Selection Overview

- SCE incorporates “Least-Cost Best-Fit” principles
  - Quantifiable attributes are explicitly accounted for in the valuation (“Least-Cost”)
  - Qualitative attributes implicitly are accounted for in the selection (“Best-Fit”)

- Proposals are evaluated using levelized net cost analysis (described in detail later)

- After the quantitative valuation process, SCE evaluates each proposal’s qualitative characteristics
Valuation and Selection: 2-Step Process

**Step 1**

**Indicative Offers Received – Initial Review**
- Conforming project size and delivery point
- Valid Phase II study or better
- COD in 2016 or later
- Complete proposal submission

**Initial Valuation and Selection**
Quantitative Valuation / Qualitative Assessment*

**Short-List – Negotiation Period**

**Step 2**

**Refresh Offers Received**

**Final Valuation and Selection**
Quantitative Valuation / Qualitative Assessment*

**Final Selection**

*Described in detail later
## Quantitative Valuation Components

### Levelized Costs

**Contract Payments**
- TOD-adjusted, based on the proposed energy price, expected generation profile and contract term

**Transmission Cost**
- Cost adders for required network upgrades based on latest Interconnection Study or Agreement

**Debt Equivalence Cost**
- Cost of mitigating contract commitments on SCE’s balance sheet

**Integration Cost**
- Cost of maintaining a reliable energy supply
- $0/MWh pursuant to D.13-11-024

**Congestion**
- Locational cost resulting from certain resource locations
- Incremental Cost Adder for Energy-Only projects

### Levelized Benefits

**Energy Benefits**
- Market value of energy based on SCE’s internal forecast, taking into account dispatchability of resource
- Additional ancillary services and real time benefits may be applied to dispatchable projects

**Capacity Benefits**
- Based on SCE’s forecast of net capacity value and the expected quantity of Resource Adequacy (RA)
- RA quantities are based on Commission’s applicable accounting rules (e.g. exceedance methodology for solar and wind)

**Congestion**
- Locational benefit resulting from certain resource locations

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**Proposals are ranked based on a net levelized cost basis that weighs costs and benefits to SCE’s resource portfolio:**

Levelized Costs – Levelized Benefits = Renewable Premium
The project viability calculator (PVC) is a tool for the utilities to evaluate the viability of a renewable energy project, relative to all other projects that bid into the solicitation:

- Company/Development Team
- Project Development Experience
- Ownership/O&M Experience
- Technology
- Technical Feasibility
- Resource Quality
- Manufacturing Supply Chain
- Development Milestones
- Site Control
- Permitting Status
- Project Financing Status
- Interconnection Progress
- Transmission Requirements
- Reasonableness of Commercial Operation Date ("COD")
Qualitative Assessment: Other Key Characteristics

- Contribution to other SCE program goals
- Transmission area
- Congestion, negative price, and curtailment considerations not captured in the quantitative valuation
- Energy-Only concentration
- Facility interconnection process progress
- Portfolio fit of COD
- Seller concentration
- Contract capacity (MW) – strong preference:
  - Within SCE, PG&E or SDG&E service territory – >20 MW
  - Within CAISO, outside of SCE, PG&E or SDG&E service territory – ≥3 MW
  - Western LA Basin or Moorpark – ≥1.5 MW meeting minimum 2013 RPS requirements
Qualitative Assessment: Other Key Characteristics (Continued)

- Expected generation (GWh/year)
- Dispatchability
- Alternative Renewable Premium (i.e., including integration costs)
- Environmental impacts of seller’s proposed project on California’s water quality and use
- Resource diversity
- Benefits to minority and low income communities
- Local reliability
- Environmental stewardship
Useful Resources

- For full description of SCE’s valuation and selection methodology, please refer to SCE’s Final 2013 RPS Plan, Public Appendix H.1 SCE’s Least-Cost Best-Fit Methodology at the following link:
  - [D.13-11-024](http://on.sce.com/rps)

- Final congestion adders have been published on SCE’s 2013 RPS RFP web page at the following link:
  - [http://on.sce.com/rps](http://on.sce.com/rps)
Interconnection

Presented By Gary Holdsworth
Interconnection Issues

- Brief Overview of Interconnection Process
- From final study (Phase II or its equivalent) to Interconnection Agreement and/or Distribution Service Agreement
- Conversion from QF to Participating Generator under CAISO Tariff Section 25 (AKA the Affidavit process)
- Conversion from Rule 21 to WDAT Interconnection Agreements
- Notes on Repowering
Overview of Interconnection Process

Cluster Study Process

Alternatives to the Cluster Study Process (for certain eligible facilities) include:
- Independent Study Process (System Impact followed by Facilities Study)
- Fast Track for <5MW (CAISO) or <3MW (WDAT)
Getting to an Interconnection Agreement

• “Final*” Studies
  o Phase II Cluster Study
  o Facilities Study under Independent Study (CAISO/WDAT) or Rule 21
  o Notification of passing Fast Track eligibility under WDAT or Rule 21

• Participating Transmission Owner (PTO) issues draft Generator Interconnection Agreement (GIA) within 30 days (15 days for fast track) of “final*” study

• GIA negotiations commence upon receipt of the draft GIA, can be extended upon mutual agreement

• For generating facilities interconnecting to Distribution System, an additional Distribution Service Agreement is negotiated concurrently with the GIA

* Addendums and revisions to study results can prolong this timeframe. Reassessments and Transmission Plan Deliverability Allocation can also lead to revised final study results
A Qualifying Facility (QF) interconnected to the CAISO grid may convert to a Participating Generator under Section 25.1.2 of the CAISO tariff, without repowering, which is typically referred to as the Affidavit Process.

Requirements for conversion include the following:

- Affidavit from Generating Facility owner to CAISO and PTO that states:
  - Total generating capacity and electrical characteristics are substantially unchanged
  - If there are changes, affidavit will include supporting information regarding the changes
- CAISO/PTO will evaluate if the changes are material enough to warrant conversion without study
  - If immaterial, parties will proceed to an Interconnection Agreement
  - If changes are material, the Generating Facility will be required to submit new interconnection request and enter the interconnection process
Conversions from Rule 21 to WDAT

• Generating Facilities with an executed Rule 21 interconnection agreement are required to sell all power to host utility

• In order to sell to the wholesale market, the generating facility needs a WDAT interconnection agreement

• SCE will allow executed Rule 21 interconnection agreements to convert to WDAT upon request, and may require an affidavit from the customer that the generating facility and electrical characteristics are substantially unchanged from what was studied and incorporated into the interconnection agreement

• Requests to convert from Rule 21 to WDAT in the midst of the study process (prior to execution of an interconnection agreement) are generally not granted. Facilities should complete the current study process and then convert after executing the interconnection agreement
Notes on Repowering

- The *Pro Forma* PPA with SCE disallows repowering of generating facilities during the term of the PPA.

- CAISO Section 25.1.2 (Affidavit process) similarly restricts repowering of QF facilities during the conversion to Participating Generator.

- Immaterial changes to equipment or electrical configuration are allowed, subject to evaluation by CAISO and/or PTO, otherwise the repowering facility is required to enter the Interconnection Process, just like a new generating facility.
Interconnection Questions?

- Website: [www.SCE.com/wps/portal/home/regulatory/open-access-information](http://www.SCE.com/wps/portal/home/regulatory/open-access-information)

- Email: InterconnectionQA@sce.com
Final Thoughts

Consider the following key points as you’re formulating your bid:

- SAFETY
- SUPPLIER DIVERSITY
- LOCATION, LOCATION, LOCATION and ENVIRONMENTAL IMPACTS
- COMPLETENESS and SUBMITTAL
- COST COMPETITIVENESS