



# **The Gambia National Forum on Renewable Energy Regulation:**

## **Case Study-Auctions as a Means to Promote Renewable Energy**

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February 1, 2012

[www.cpuc.ca.gov/PUC/energy/DistGen/](http://www.cpuc.ca.gov/PUC/energy/DistGen/)





# Renewable Auction Mechanism Program Overview

- On December 16, 2010, the Commission adopted RAM via Decision 10-12-048
  - Initial 1000 MW procurement cap over 2 years
  - Projects up to 20 MW in size and any RPS renewable technology
  - Projects located in the IOU service territories
  - Projects can interconnect at the distribution or transmission level
  - Projects must achieve commercial operation within 18 months of executed contract (with one 6-month extension for regulatory delays)
  - Each IOU must hold 2 auctions per year

Link to RAM decision: [http://docs.cpuc.ca.gov/word\\_pdf/FINAL\\_DECISION/128432.pdf](http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/128432.pdf)





# RAM Guiding Principles

## Operating Assumptions:

- Sufficient number of developers in the DG market segment to ensure competition
- Projects greater than 20 MW would participate in RPS solicitations

## Guiding Principles:

- Identifies least-cost viable projects that can interconnect quickly
- Creates a sustainable and long-term market for system-side renewable DG projects
- Provides sufficient payment to simulate untapped market segments at the distribution level while preserving competition
- Minimizes the transaction costs for the seller, buyer, and the regulator
- Equitably allocates risk between the buyer and the seller
- Adequately addresses project viability





# Key Program Design Elements of RAM

- Project viability screens
- Market-based pricing
- Standard, non-negotiable contract
- Cost containment mechanism
- Preferred distribution interconnection sites
- Process for modifying program





# Project Viability Screens

- Seller must meet minimum criteria to participate in the auction in order to lower risk of project failure
  - **Site Control:** 100% site control through (a) direct ownership, (b) lease or (c) an option to lease or purchase that may be exercised upon award of a RAM contract
  - **Development Experience:** One member of the development team has (a) completed at least one project of similar technology and capacity or (b) begun construction of at least one other similar project
  - **Commercialized Technology:** Project is based on commercialized technology
  - **Interconnection Study:** Bidder must have received results from its first interconnection study (system impact study or phase I cluster study)





# Market-Based Pricing

- Seller develops bid price that reflects cost to build a project and provide a return on investment
- Bids are selected on price plus transmission upgrade costs
- Products with similar characteristics are compared to each other
  - Baseload, peaking intermittent, and off-peak intermittent product categories
- Lowest cost projects are selected until the auction capacity cap or revenue requirement cap is reached
- Bid price is not negotiable and is paid as bid





# Standard Contract

- CPUC approved standard, non-negotiable contracts for each IOU through an open stakeholder process
- Decision requires certain terms to ensure there is “skin in the game:”
  - 18 month online date plus one six month extension for regulatory delays
  - Project development deposit
  - Performance deposit





# Cost Containment

- Interim approach for containing program costs - 1000 MW program cap
- Decision orders staff to develop a methodology for establishing a revenue requirement that would be used to cap RAM procurement
  - Methodology should capture the IOUs' need for RAM projects relative to other RPS procurement options
- IOUs have discretion to reject bids
  - Evidence of market manipulation
  - Prices are not competitive with other RPS procurement options
  - If IOU wishes to utilize this discretion, it will need to publicly state why bids were rejected







# Preferred Interconnection Sites

- IOUs are required to provide maps to assist developers in identifying good interconnection sites:
  - Interconnection is one of the most expensive and uncertain steps in project development for system-side DG
  - Greater transparency of the distribution system will allow project developers to identify good sites to interconnect in order to lower interconnection costs
  - IOUs must provide available capacity at the substation and circuit level for their distribution and transmission systems
- Anyone can access the maps, which are available on the IOU RAM websites





# Process for Modifying Program

- RAM program has been designed so that it can be quickly modified and improved based on IOU and developer feedback
- IOUs are required to hold a program forum each year to solicit feedback from participants
  - IOUs can request program changes based on feedback
  - CPUC staff can recommend program changes based on feedback from program forums and utility annual RAM reports





# Program Status

- First auction closed on November 15, 2011
- IOUs will submit executed contracts to CPUC in March/April for 30 day CPUC review/approval
- In order to increase program transparency, filing will also include solicitation data, such as:
  - Names of participating companies and number of bids per company
  - Number of bids received and shortlisted
  - Distribution of projects sizes bid into auction
  - Participating technologies





# RAM Results

- Very robust participation and pricing from solar PV of all project sizes
- Minimal response from other technologies
- Bids submitted in all project sizes and short-listed bids range from small to large
- Short-listed bids have a combination of low-price and zero to low transmission costs
- Next Steps
  - IOUs will hold program forums to discuss lessons learned and proposed program modifications
  - Second auction will close May 31, 2012





# Preliminary Conclusions

- First auction functioned as expected
- Contracting process is streamlined and efficient
  - Program could be expanded to larger project sizes in order to further streamline the RPS contracting
- Competition in peaking intermittent category was very robust; anticipate greater competition in the next auction
- Ground-mount solar PV between 3 – 20 MW was the most competitive
- Streamlined process to modify the program is very important in order to learn from experience





# Thank you!

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