HECO 100 MW Renewable Energy Request For Proposals

Pricing Evaluation

Technical Conference

Pricing Proposals

- Pricing formula requirements [RFP, §2.4, pages 9-10]
  - Fixed price (in $/MWh) for the term of the contract
  - Fixed price (in $/MWh) that escalates by a fixed escalation rate for the term of the contract, or by different fixed rates for various periods of the contract
  - Bidders must provide expected hourly output profile [Response Package, page B-31]
- Bidders are encouraged to provide varying levels of pricing associated with meeting corresponding levels of performance standards [RFP, page 8]

Pricing Proposals (continued)

- Pricing Scenarios
  - A1-D1: Wind Farm projects less than 50 MW; 2 MW/minute ramp rate during most of day; 1 MW/minute ramp rate during certain times of day; sustained ramp rate up or down of 10 MW per 10 minute period
  - A2-D2: Wind Farm projects less than 50 MW; 2 MW/minute ramp rate during all times of day; sustained ramp rate up or down of 10 MW per 10 minute period

Provided as a summary only; see RFP Appendix B, pages B-5 to B-9 for a detailed description.

Pricing Proposals (continued)

- AA1-DD1: Wind Farm projects between 50 MW and 100 MW; 2 MW/minute ramp rate during all times of day; sustained ramp rate up or down of 20 MW per 10 minute period
- AA2-DD2: Wind Farm projects between 50 MW and 100 MW; 3 MW/minute ramp rate during all times of day; sustained ramp rate up or down of 20 MW per 10 minute period
- Non-Wind Farm Projects: 2 MW/minute ramp rate during most of day; 1 MW/minute ramp rate during certain times of day; sustained ramp rate up or down of 10 MW per 10 minute period

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Pricing Proposals (continued)

- Scenario prefix "A"; < 50 MW Wind Farms
  - Base ramp rate standards
  - Maximum Sustained Ramp Rate Upward or Downward of 10 MW per 10 minute period
  - Continuous compliance with Frequency Regulation Performance Standard: Provide droop response (e.g., 5%) in the event of system overfrequency disturbance

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Pricing Proposals (continued)

- Scenario prefix "B"; < 50 MW Wind Farms
  - Base ramp rate standards
  - Maximum Sustained Ramp Rate Upward or Downward of 10 MW per 10 minute period
  - Provide droop response (e.g., 5%) in the event of system overfrequency disturbance only on an On-Call basis

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Pricing Proposals (continued)

- Scenario prefix "C"; < 50 MW Wind Farms
  - Base ramp rate standards
  - Maximum Sustained Ramp Rate Upward of 10 MW per 10 minute period; Maximum Sustained Ramp Rate Downward of 10 MW per 10 minute period only when operationally possible (i.e., would not apply when there is a drop-off in wind)
  - Continuous compliance with Frequency Regulation Performance Standard: Provide droop response (e.g., 5%) in the event of system overfrequency disturbance

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Pricing Proposals (continued)

- Scenario prefix "D"; < 50 MW Wind Farms
  - Base ramp rate standards
  - Maximum Sustained Ramp Rate Upward of 10 MW per 10 minute period; Maximum Sustained Ramp Rate Downward of 10 MW per 10 minute period only when operationally possible (i.e., would not apply when there is a drop-off in wind)
  - Provide droop response (e.g., 5%) in the event of system overfrequency disturbance only on an On-Call basis

Provided as a summary only; see RFP Appendix B, pages B-5 to B-9 for a detailed description.

Pricing Proposals (continued)

- Renewable Energy Credits or Environmental Credits must accompany any energy purchased by HECO [RFP, page 2]

Price Evaluation

- Initial Price Evaluation Components [RFP, pages 24 and 25]
  - Total cost of energy purchased: Bid price ($/MWh) x Contract Energy (MWh)
  - Increase in operating cost, if any, to maintain grid reliability (e.g., additional spinning reserve or reduced system fuel efficiency)
  - Transmission system or distribution system upgrade costs, if any, beyond the Grid Interconnection Point
  - Savings due to reduction in fuel costs based on operating profile of Bidder's project
  - Cost of capital structure rebalancing resulting from imputed debt, if any

Price Evaluation (continued)

- Initial Price Evaluation
  - The extent to which each of the components is considered in the initial price evaluation will depend on the number of proposals received, the size (in MW) of the project covered by each proposal, the types of resources proposed, and the bid price of each proposal
  - A consideration of price and non-price factors will be used in the process to select bidders for a short list

Price Evaluation (continued)

- Detailed Price Evaluation
  - Detailed evaluation of the pricing proposals for the various scenarios will be performed on the proposals on the short list
  - Depending on the number and nature of bids, some of the components identified in the Initial Price Evaluation may instead be evaluated in this detailed evaluation step
  - HECO will perform a portfolio type analysis to examine different combinations of Bidder's pricing proposals

Price Evaluation (continued)

- An evaluation will be made of Bidder's pricing and HECO's costs to determine an overall portfolio cost
  - For example, a proposal portfolio could involve a project developer including certain levels of proposed self-curtailment and/or some energy storage aspects to address ramp rate requirements. On the HECO side, operational adjustments could be implemented to provide additional response capability to minimize impacts of the intermittent source(s) [RFP, page 9]

Price Evaluation (continued)

- The utility reserves the right to consider other factors
  - Depends on the content of the proposals

Thank You