CEC ERC WORKSHOP

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Anaheim's Need for Peaking Capacity

- Current resource portfolio is 500 MW with system; 80% of capacity is must-take/base load
- Customer demand: peak of 550 MW – 590 MW; capacity deficit of 50 MW – 90 MW
- CAISO RA requires 15% planning reserve margin; additional 80 – 100 MW required
- Need quick start for bidding into CAISO/back-up for intermittent renewable projects

Project Description

- 200 MW peaking facility
- 4 GE LM6000 simple cycle units
- Reclaim water used for operations
- Standard SCR equipment ; Designed to attain Nox target of 2.3 ppm
- 10 acre site in the center of industrial zone
- Limited to peaking and reliability needs

ERC Procurement Trail ; First Attempt

- Prior to Judge's initial Court Order
- Determining PM10 ERC's utilizing Section 1309.1 from AQMD Rules
- Determined highest month usage (Converted to lb/day)
  - Based on long-term outlook, 90 hours of operation/turbine per month with 11 start-ups per turbine/month
  - Extrapolated for the rest of the year
  - Resulting in about 4000 hours of operation
  - ERC estimated cost: $5 million to AQMD
- Filed as part of initial AQMD Permit to Construct application in 12/2007

ERC Procurement Trail ; Second Attempt

- Following Judge's initial Court Order 7/28/08, vacating use of 1309.1
- Utilizing AQMD's Rule 1304
- Reduced hours of operation to fit under 4 ton threshold
  - Backed into the operation based on limited PM10 to threshold
  - Resulting in 2,400 hours of operation (reduces operations by almost half)
  - No offsets required; 0 cost for ERCs
- Filed revised AQMD application in September, 2008

ERC Procurement Trail ; Final Attempt

- Following Judge's Clarification Court Order 11/5/08 eliminating ability for offset exemptions under Rule1304.
- Purchased ERC's from the market
  - Very thin market, with few suppliers
  - No ability to negotiate price
  - ERCs needed were not immediately available
  - Total purchase cost: $15.5 million to private investor
- Calculation based on
  - Based on long-term outlook, 90 hours of operation per turbine with 20 start-ups per month
  - Extrapolated for the rest of the year
  - Resulting in 4320 hours of operation, total ERCs needed
- Filed second revision to AQMD application 12/08

Impact on Schedule: Applications file 12/2007

	CEC Timeline	Actual Timeline
Data Adequacy		3/2008
AQMD's PDOC	6/2008	2/25/09
CEC's PSA	45 days from PDOC or 3/10/09	4/21/09
Joint Workshop		5/21/09
AQMD's FDOC	45 days from PDOC or 3/10/09	6/24/09
CEC FSA	60 days from Public Workshop or 7/24/09	10/01/09 ?
CEC License	Based on Initial Application : 1/09 Based on PDOC: 9/09	Minimum of 4 month delay: best guess 2/2010
Operation Date	Two units by 7/11	?

Problems with ERC Methodology

- Highest month determination is problematic, particularly for peaking facilities
- Current methodology requires purchasing more ERCs than needed
  - Higher cost to the utility
  - Takes away from other potential buyers ; scarce ERCs to begin with
  - Purchasing thru the market does not guarantee additional mitigation
- Bought for 4230 hours; use is likely not to exceed 2000 hours
- Typical use is concentrated during the summer months
- Current methodology is punitive
  - Monthly extrapolation
  - 1.2 multiplier increasing the need for higher ERC determination
  - Limits multiple unit facility operations
- Current methodology requires purchasing more ERCs than needed

Recommendation: Use annual determination

- Determine expected needs on an annual basis
  - Allows for concentration for peaking units during summer months without the need to purchase the same monthly amount where not needed
  - Provides operational flexibility; “bank” credits over the year
  - Reduces the need for ERCs ; leaves more ERCs available for other project
  - Reduces costs for the project
  - Concept works for combined cycle projects
- Calculate on the basis of facility rather than per turbine for multiple unit project
  - Greatest Flexibility ; allows operator to dispatch any turbine based on circumstances
  - Bank credits between months and between turbines

Questions

- What is the rationale for the 1.2 multiplier after determining total pounds required based on assumed operations?
- Why does the applicant have to demonstrate securing of credits so early in the process?
  - FDOC not issued until credits secured
  - FSA held up until FDOC is issued
- Is the 12 month licensing process for large projects realistic?
  - How should Utilities/developers plan in advance and in parallel with the process
  - Some equipment must be purchased in advance for vendor guarantees
  - Financial risks associated with uncertainty/delays in the process