

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20426

OFFICE OF ENERGY MARKET REGULATION

In Reply Refer To:  
California Independent System Operator  
Corporation  
Docket No. ER12-1630-000  
**June 8, 2012**

California Independent System  
Operator Corporation  
250 Outcropping Way  
Folsom, CA 95630

Attention: Andrew Ulmer  
Director, Federal Regulatory Affairs

Reference: Deficiency Notice Regarding Order No. 755 Compliance Filing

Dear Mr. Ulmer:

On April 27, 2012, the California Independent System Operator Corporation (CAISO) submitted a compliance filing and proposed tariff changes to establish a revised compensation methodology governing the provision of frequency regulation service, as required by Order No. 755.<sup>1</sup> CAISO proposes to establish a two-part compensation methodology for frequency regulation service, which includes a capacity payment and a performance payment for resources providing frequency regulation service, as required by Order No. 755.

Please be advised that the filing is deficient and that additional information is required by the Commission to process the filing. Please provide the information requested below:

1. Please provide step-by-step numerical examples of the entire frequency regulation

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<sup>1</sup> *Frequency Regulation Compensation in the Organized Wholesale Power Markets*, Order No. 755, 76 FR 67,260 (Oct. 31, 2011), FERC Stats. & Regs. ¶ 31,324 (2011) (Order No. 755), *order denying reh'g*, Order No. 755-A, 138 FERC ¶ 61,123 (2012).

compensation process outlined in the compliance filing, starting with bids for capacity and mileage and ending with the settlement statement.

- a. The examples should show all steps in the entire frequency regulation compensation process, including, but not limited to, resource bids (including opportunity costs), the co-optimization/market clearing process, which resources are awarded capacity, the calculation of mileage multipliers for the system and individual resources, accuracy adjustments, and the settlement process. Enough detail should be included to provide Commission staff with a thorough understanding of the entire frequency regulation compensation process.
  - i. Please include any and all functions used in the methodology to establish the marginal clearing prices for mileage and capacity.
  - ii. If a bid that includes inter-temporal opportunity costs is the marginal bid, please explain whether the marginal price paid to suppliers will include the inter-temporal element.
2. Please explain whether CAISO uses a resource-specific estimate of mileage in the optimization routine? If so, please explain how this estimate is calculated. Indicate whether and how the resource-specific estimate of mileage enters the optimization routine's objective function and any associated constraints in the answer, in addition to the explanation. If the resource-specific estimate of mileage is not used in the optimization routine, please explain why not.
3. CAISO states that the maximum ancillary service bid price is \$250.
  - a. To establish a maximum mileage bid price, CAISO assumes a mileage multiplier of 5 and divides the maximum ancillary service bid price by the assumed multiplier to arrive at a maximum mileage bid price of \$50. Please provide the basis of the assumed multiplier of 5.
  - b. Please explain the relationship between the mileage bid price and capacity bid price and the ancillary service bid price cap. Include equations, if necessary. Is the ancillary service bid price cap applied to each ancillary service separately, or are the bids combined and together must fall under the cap?
4. Please explain how the AGC system dispatches resources for regulation up and regulation down service. For example, are faster-ramping resources dispatched first or are resources dispatched *pro rata*? Additionally, please explain how the AGC system dispatches resources in relationship to how resources are selected in the market clearing process.
5. CAISO's proposed tariff language provides that mileage requirements for either regulation up or regulation down will reflect the minimum of: (a) the product of the respective regulation capacity requirement and the system mileage multiplier;

(b) the average instructed mileage for the applicable trading hour from the prior calendar week; or (c) the product of a resource's resource-specific mileage multiplier and a resource's self-provided or bid-in regulation capacity, which number is then summed for all resources. Please explain and justify the significance of each of these conditions and CAISO's use of a minimum of these conditions to determine the mileage requirement.

6. Please explain whether the bid cost recovery process includes the capacity payment as well as mileage (adjusted for performance). Additionally, please explain in detail how any uplift payments will function under the tariff. This explanation should include, but not be limited to, an explanation of how uplift is paid compared to a resource's offer to sell both regulation capacity and mileage, as well as a description of how the accuracy adjustment and any uplift payment interact with each other.

This letter is issued pursuant to 18 C.F.R. § 375.307(a)(1)(v) (2011) and is interlocutory. This letter is not subject to rehearing pursuant to 18 C.F.R. § 385.713, and a response to this letter must be filed with the Commission within thirty (30) days of this letter.

In addition, please provide a copy of the response to all parties that have either requested or been granted intervention in this proceeding. Pending receipt of the above information, a filing date will not be assigned to the filing. Failure to respond to this letter within the time period specified may result in an order rejecting the filing.

Sincerely,

Steve P. Rodgers, Director  
Division of Electric Power  
Regulation – West