Submitted By	Company	Date
Brian Theaker	NRG Energy, Inc. ("NRG")	June 7, 2012

NRG submits the following comments on the CAISO's May 29, 2012 Flexible Ramping Product ("FRP") Workshop ("Workshop").

Nature of FRP. NRG appreciates the CAISO's effort to hold a workshop to provide stakeholders with an opportunity to discuss the details of the proposed FRP in greater detail. As observed at the workshop, it is difficult, if not impossible, to discuss the technical aspects of the proposed FRP independent of the policy implications of the proposed FRP. To NRG, this difficulty arises because of dual nature of the proposed FRP, a product that the CAISO seems to need both for reliability and to manage costs. It does not seem likely that the issue of whether FRP is a reliability product or a cost-control product will be fully resolved in one direction or the other. The current proposed design for this product, which allows the CAISO to procure FRP in the Day-Ahead ("DA") time frame or the real-time time frame to control the cost of this product, will perpetuate this ambiguity. As a result of the ambiguity about the fundamental nature of this product, the final design of FRP will be driven more by policy considerations than by technical considerations.

**Explicit/implicit approaches.** Of the two approaches (explicit and implicit) to the FRP design that the CAISO has proposed, NRG prefers the explicit approach as being consistent with the reliability nature of this product. The CAISO recognizes the reliability nature of its other ancillary service products by committing to procure 100% of the expected requirement in the DA market.

False Opportunity Cost / Double Payment issue. NRG understands that including the energy opportunity cost in the FRP price, when it is likely that energy will be dispatched from that FRP capacity, is controversial. While it may be likely that the energy will be dispatched from FRP capacity, it is not guaranteed that the energy will be dispatched from that capacity. It may be difficult to find an appropriate middle ground between including the energy opportunity cost and not including the energy opportunity cost, but such a middle ground seems appropriate, given the nature of FRP. Additionally, NRG remains unclear as to why the RT AS opportunity cost is not included in the FRP price, if providing FRP would prevent a market participant from providing another real-time AS.

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<sup>&</sup>lt;sup>1</sup> See, e.g., the August 18, 2011 Board Memo seeking a Decision on the Flexible Ramping Constraint at 1 ("Management proposes to implement a new flexible ramping constraint in the market optimization to address identified *reliability and operational issues."* – emphasis added.) and at 2 ("As discussed below, the ISO has observed numerous instances in which awards and commitments are rendered infeasible due to load forecast error, generation variability, and changes in intertie flows. *These instances pose reliability concerns.* If there is insufficient committed resource flexibility, the ISO may be forced to draw on operating reserves, regulation, or the interconnection through increases in the area control error." – emphasis added.)

**Cost Allocation.** NRG remains unconvinced that allocating FRP costs on the basis of real-time deviations, however those deviations may be measured, is the right approach. This approach, while it may fit the currently-available settlements data, does not reflect either causation or synchronization cost allocation principles, because actual deviations (which the CAISO cannot predict when it procures FRP) do not drive the CAISO's near-term FRP procurement decisions. It seems much more likely that an assessment of variability from all supply and demand sources over a long time horizon (season) drives the CAISO's FRP procurement decisions, rather than actual realized deviations over a short time horizon (hour, day, month)

**In summary:** the current dual nature of the FRP, left unresolved, will preserve ambiguity that will complicate the design of this product. NRG appreciates the CAISO's efforts to deepen stakeholder understanding of the proposed FRP through the workshop, but greater understanding will not, in and of itself, resolve this ambiguity regarding the nature of this product.