Arizona Public Service ("APS") appreciates the California Independent System Operator's ("CAISO") response to comments of its first Draft Energy Imbalance Market ("EIM") Straw Proposal and the opportunity to provide feedback on the May 30th released Straw Proposal Revisions.

APS offers up the following comments to the Revised Straw Proposal:

**Kudos:**

- The changes called out in Section 2.2 were very helpful in furthering APS' understanding of EIM functionality and in demonstrating the CAISO's willingness to address stakeholders' concerns and comments.

- APS is appreciative of the CAISO's parallel stakeholder initiative to discuss market rule oversight and looks forward to participating in that initiative.

- APS agrees with the guiding principles defined in Section 3.10 and requests that whatever alternative is selected as a solution for Transmission Service, that solution would apply a uniform transmission rate to all EIM energy. From the examples and the text it reads as though entities inside the CAISO and outside the CAISO are being treated differently. APS believes that the system needs to be equal for all parties.

- The GHG Emission Cost Examples were helpful in illustrating various cost allocation categories that APS had previously been unaware of.

- APS looks forward to the upcoming EIM Training Opportunities and would like to suggest the following as part of the training:

**Additional Educational Opportunities:**

Because the EIM proposal attempts to reach entities that are not as familiar with CAISO standard practices as ISO participants, APS offers up the following suggestions to assist entities that have less familiarity with non EIM-specific business practices that will impact EIM participation:

- **Flexible ramping constraint and planned flexible ramping product:** APS suggests a separate partial day workshop be held to explain the flexible ramping constraint and planned flexible ramping product that are planned to be in place prior to the EIM. APS staff is grateful of the opportunity to attend the ISO's comprehensive training programs and have attended several; however, more detailed training related to specific new programs that will be settled within the EIM will be helpful for those that are evaluating the benefits of joining the EIM.
- **Greenhouse gas ("GHG") emissions proposal:** APS appreciates the acknowledgement and progress toward defining GFG costs and allocations. The examples, however, appear incomplete and overly complex. The audience on June 6th tried to clarify these examples and were unable to do so. We suggest holding a separate workshop dedicating time specifically to these scenarios and

others than stake holders are bringing forward. The results of this workshop could be incorporated into the next version of the draft.

**Revision Requests:**

- Section 3.7.10.3 provides a summary of costs to transact in the EIM. APS requests review of this section for a comprehensive list of all costs and how they are assessed – including Variable Energy Resource ("VER") forecast fees, uplift charges, potential transmission usage fees and any other fees not listed in this section. Also, please provide clarification for the fees currently described in this section – i.e., please define a bid segment fee. It would be helpful to illustrate the application of these fees with examples, such as was performed in the GHG emissions section.

- Terminology: APS finds the terminology and different market naming to be unnecessarily complex. We suggest the examples use a simple naming and time designation as such:

  - H1 for the first hour of the example.
  - The four 15 minute intervals would be referred to as H1.1 through H1.4
  - Within each of the 15 minute intervals are three 5 minute intervals. We suggest these be referred to as H1.1.1 through H1.1.3

- Unit trip example: Please provide an example of how a unit trip would be managed in an EIM. Please include a step-by-step illustration from pre-schedule to the trip of who makes the adjustments to generation, when and what penalties are involved.

- Figure 1 shows meter and ICCP data in the post-hour section, yet the EIM is to manage items like the trip mentioned above or VER integration. It must have more real-time meter data and ability to make mitigating fixes. Who and how does this happen? What role does an EMS system play when generation drops off unexpectedly?

- GHG Examples: Please identify: (1) how congestion revenues are distributed and (2) how GHG emissions cost is determined. Also – the emissions rate should be communicated as $/metric-ton carbon dioxide equivalent and the emissions factor should be defined as metric-ton carbon dioxide equivalent/MWh so that multiplying the two gets the $/MWh emissions value per generator. That said, ideally, the GHG allowance cost should be determined and entered by each entity that is required to purchase the allowances, which in the examples provided, appears to be a luxury granted only to generators that reside in California. If this idea is discussed and not included, a variable emissions rate should be considered as a GHG input parameter. Emissions rates are not a constant, as indicated by the current GHG plan. Finally, please review the examples for mathematical accuracy. Explanations for how congestion revenues and export allocations are calculated do not appear to be consistent across examples.