ATTACHMENT D

SUMMARY OF FACTORS TO CONSIDER IN COST COMPARISONS

- "Full Service": Was the ISO established as a “full service” ISO that operates the control area, maintains competitive, bid-based markets for ancillary services and real time energy, and controls access to the transmission system? The California ISO was designed to provide a high level of functionality at its startup, which is accompanied by higher costs levels, as compared to others.

- Incorporation Philosophy: Was the ISO established as a complete, stand-alone entity with minimal reliance on the existing infrastructure of the investor-owned utilities (IOUs)? This was the case with the California ISO in order to emphasize the '"independent" nature of the ISO's responsibilities. This, of course, leads to significantly higher costs.

- Impact of Existing Pools on Transition Costs: Did the ISO make the transition to ISO status from an existing power pool; and by doing so utilize varying amounts of the existing infrastructure of the affiliated transmission owners in the pool, who carried the capital costs of the infrastructure on their books? Or was it created from “scratch”, with all significant development costs recorded on its books?

- Time Constraints: Were the ISO's complex computer systems designed from “scratch” on an accelerated basis under intense time pressure? Software development that would normally require two years or more was compressed by the ISO into less than a year. This tight timeframe, coupled with substantial penalties for late performance, limited the number of vendors who would commit to such an aggressive schedule. This factor had a substantial effect on the ISO’s ability to minimize its infrastructure and Operations & Maintenance costs for its software development, and services such as Telecommunications and Information Technology support. PJM, by contrast, has been able to develop much of its software internally.

- Separate on-line backup facility: Does the ISO have on-line backup capability? The need for absolute reliability of the power grid in a state with more than its fair share of potential interruptions from events such as earthquakes led the designers of the California ISO to plan ahead for contingencies. This system exceeds the backup systems in place for other ISOs.

- Competitive Markets or "Eastern" vs. California Model: The "Reliability through Markets" philosophy adopted by the California stakeholders in designing the ISO placed more reliance on the market than at peer ISOs. The operation of our competitive ancillary services market requires elaborate computer software, communications and billing systems due to the number and complexity of transactions generated. This level of functionality has resulted in a higher level of infrastructure and Operations & Maintenance costs for the ISO as compared to its peers.

- Greater Functionality: Does the ISO conduct complex, market driven operations? Does it operate an active imbalance energy market to permit deviations from schedules?

- Communications Design: What telecommunications infrastructure was used? The designers of the California energy market elected to build an entirely new, dedicated telecommunications network and not rely on the existing infrastructure of the utilities. The planned capacity of this network was designed initially to allow participation by thousands of market participants with "no busy signals", and with minimal costs to increase that capacity even further. These factors did not come without a cost: The ISO's telecommunications costs are significantly higher than those for its peer ISOs. In fact, most of the ISO's higher ongoing operating costs compared to its peers are attributable to telecommunications.

ATTACHMENT D

DOCUMENTS COMPARING THE CALIFORNIA ISO'S GRID MANAGEMENT CHARGE TO THE OPERATING COSTS OF OTHER INDEPENDENT SYSTEM OPERATORS

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