

Rulemaking: 10-05-006

Exhibit No.: _____

Date: August 4, 2011

Witness: Gary Ackerman

WESTERN POWER TRADING FORUM

**ORDER INSTITUTING RULEMAKING TO INTEGRATE AND
REFINE PROCUREMENT POLICIES AND CONSIDER
LONG-TERM PROCUREMENT PLANS**

**TRACK I TESTIMONY ON TRACK III ISSUES
BROUGHT FORWARD FOR CONSIDERATION**

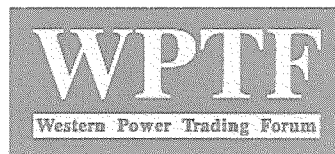


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**TESTIMONY OF THE WESTERN POWER TRADING FORUM
ON TRACK I AND RELATED SUPPLEMENTAL ISSUES**

Chapter I – Introduction and Summary

This testimony is submitted on behalf of the Western Power Trading Forum (“WPTF”) in response to the March 10, 2011, Administrative Law Judge’s Ruling Revising System Track I Schedule (“March 10 Ruling”) and the June 13, 2011, Administrative Law Judge’s Ruling Addressing Motion for Reconsideration, Motion Regarding Track I Schedule and Rules Track III Issues (“June 13 Ruling”). Specifically, the June 13 Ruling cites the earlier March 10 Ruling as follows:

Based on input from the parties and Energy Division staff, it is preliminarily determined that aspects of certain Rules Track III issues will be addressed concurrently with the System Track I schedule set forth above, including: 1) procurement rules relating to once-through cooling issues; 2) refinements to the bid evaluation process, particular weighing competing bids between utility-owned generation and power purchase agreements; 3) refinements to the existing timelines associated with the utilities’ RFOs for resource adequacy products; and 4) utility procurement of greenhouse gas related products.

Please note that some of these issues may be able to be addressed and resolved in their entirety on the System Track I schedule set forth in this Ruling, but others are too big and complex to completely resolve in the time available. Accordingly, some of these issues may only be addressed in part, or certain threshold issues resolved.¹

The June 13 Ruling confirmed that parties may address those four issues, plus the additional issue of procurement oversight rules, “including the oversight responsibilities and authority of various entities (including Independent Evaluators and the Procurement Review Group) and

¹ June 13 Ruling, at pp. 4-5.

• 1 standards of conduct applicable to the utilities and their employees.”² WPTF’s testimony
• 2 focuses on Track III issues (1) and (2) above, along with discussion of issues related to
• 3 procurement oversight rules.

• 4 **A. Description of WPTF**

• 5 WPTF is a California non-profit, mutual benefit corporation. It is a broadly based
• 6 membership organization dedicated to enhancing competition in Western electric markets in
• 7 order to reduce the cost of electricity to consumers throughout the region while maintaining the
• 8 current high level of system reliability. WPTF actions are focused on supporting development of
• 9 competitive electricity markets throughout the region and developing uniform operating rules to
• 10 facilitate transactions among market participants.

• 11 WPTF provides a voice through which its members can influence the development of
• 12 market structures throughout the West. The membership of WPTF includes generators,
• 13 scheduling coordinators, investment banks, energy service providers, energy consultants and
• 14 public utilities, all of which are active participants in the restructured California electricity
• 15 market. WPTF has a vital interest in the development of a competitive electric market and in the
• 16 reduction of barriers that may exist in the very structure of new markets.

• 17 **B. Testimony Format**

• 18 The Administrative Law Judge’s Rulings cited above provided general guidance as to the
• 19 structure of intervenor testimony. Generally, ALJ Allen asked that parties “clearly specify if
• 20 their proposals are: 1) Specific proposals for the Commission to approve by the end of this
• 21 calendar year on these issues; 2) General policy recommendations that the Commission should

² Id, at p. 6.

- 1 consider, on an ongoing basis, when making determinations on these issues; or 3) Proposals for
- 2 future Commission processes to address these issues.”³

- 3 My testimony thus has four chapters. Chapter I is this introduction that provides
- 4 procedural background and an overview of my testimony. Chapter II deals with once-through
- 5 cooling issues. Chapter III discusses refinements to the bid evaluation process. Chapter IV
- 6 concludes with a discussion of issues related to procurement oversight rules.

- 7 My Statement of Qualifications is contained in Attachment 1 hereto.

- 8 **Chapter II – Once-Through Cooling Issues**

- 9 The Scoping Memo⁴ in this proceeding provided that a number of procurement policies
- 10 related to Utility Owned Generation (“UOG”) or contracted once-through cooling (“OTC”)
- 11 generation units would be considered. Examples of such policies are to include, but not be
- 12 limited to, policies encouraging retirement of OTC units. It also specified that to the extent
- 13 possible, these issues would be resolved as part of the second phase of Track III, as informed by
- 14 the concurrent development of Track I.⁵ As pointed out in the January 26, 2011, motion filed by
- 15 the Independent Energy Producers Association (“IEP”),⁶ Track III was originally planned to
- 16 include issues related to procurement necessitated by OTC regulations.⁷

³ Id, at pp. 6-7

⁴ See, December 3, 2010, Assigned Commissioner and Administrative Law Judge’s Joint Scoping Memo and Ruling (“Scoping Memo”).

⁵ Scoping Memo, at pp. 42-43.

⁶ January 26, 2011, Motion of the Independent Energy Producers Association for Reconsideration of the Schedule for this Proceeding (“IEP Motion”).

⁷ IEP Motion, at p. 2.

• 1 In its February 23, 2011 prehearing conference statement, WPTF concurred with IEP that
• 2 retirements due to OTC regulations will eliminate significant amounts of flexible generating
• 3 capacity in load centers and in constrained local areas that would otherwise be available to help
• 4 in the integration of renewable resources, and therefore, the consideration of OTC issues should
• 5 be brought forward from Track III to Track I. Ensuring that the grid can be operated reliably in
• 6 their absence is an issue in this proceeding that will affect utility operations significantly, and
• 7 will be a significant determinant with respect to how much new generation procurement, if any,
• 8 that the utilities need to undertake. Therefore, WPTF appreciates the fact that the June 13 Ruling
• 9 provided that issues related to procurement necessitated by OTC regulations would be
• 10 considered in Track I and not relegated to its formerly scheduled later consideration in Track III.

• 11 **A. Staff’s OTC Proposal is Flawed and Should Not Be Adopted**

• 12 The June 13 Ruling provided that parties’ testimony should address the proposal attached
• 13 as Appendix A to the June 13 Ruling. The staff’s proposal concerns procurement rules related to
• 14 contracts with any facility subject to the State Water Resources Control Board’s *Statewide Water*
• 15 *Control Policy on the Use of Coastal and Estuarine Water Used for Power Plant Cooling* (the
• 16 “Staff OTC Proposal”) and provides as follows:

• 17 Utilities may not enter into a contract for longer than one year with any facility
• 18 identified in the State Water Resources Control Board's 'Statewide Water Control
• 19 Policy on the Use of Coastal and Estuarine Waters Used for Power Plant Cooling'
• 20 (Once-Through Cooling or OTC facilities), and Utilities may not enter into a contract
• 21 with any OTC facility that requires operation of that facility beyond the compliance
• 22 date identified in the SWRCB policy; unless:

• 23 a) A facility is found by the Water Resources Control Board to be fully in
• 24 compliance with Section 316(b) of the Clean Water Act; or

• 25 b) If the Commission authorizes the procurement of new capacity in the LTPP
• 26 proceeding, contracts longer than one year and/or that extend beyond the Water
• 27 Resources Control Board OTC compliance date as detailed in the October 1, 2010
• 28 Statewide Water Control Policy on the Use of Coastal and Estuarine Waters Used for

- 1 Power Plant Cooling or successor documents for the express purpose of enabling the
- 2 repowering of those OTC facilities are permitted if those contracts do not result in
- 3 operation of the once-through-cooling system beyond the compliance date; or
- 4 c) If an OTC facility elects to comply with the State Water Resources Control
- 5 Board OTC policy by means of SWRCB Track 2 (under which water intake is
- 6 reduced by 93% or screens or similar technologies that are expected to be approved
- 7 by the State Water Resources Control Board are utilized), contracting with such a
- 8 facility beyond the State Water Resources Control Board's compliance date is
- 9 permitted. If the Track 2 compliance mechanism is not accepted for that OTC facility
- 10 by the State Water Resources Control Board, any such contract must require that the
- 11 contract terminate within one year from the date of the State Water Resources
- 12 Control Board decision on the proposed Track 2 technology or before the State Water
- 13 Resource Control Board's compliance date, whichever is sooner.

- 14 WPTF believes that the Staff OTC Proposal is flawed and problematical, for a number of
- 15 reasons. First, it presumes that elimination of once-through cooling is the same as actual shut
- 16 down of the plants that utilize OTC. It is not. As noted below, studies are underway to more
- 17 fully assess the reliability impacts of the closure of the OTC plants. Those evaluations may well
- 18 lead to a realization that shut down of those facilities is unnecessary and inefficient, and the
- 19 owners of the plants will undoubtedly fully analyze all of the potential alternatives to determine
- 20 whether there are creative and resourceful ways that can keep the plants operating in an efficient
- 21 manner. In short, the Commission should not presume that aging power plants will absolutely
- 22 cease operations by arbitrary deadlines. Moreover, the utilities' testimony also expressed several
- 23 of the flaws in the Staff OTC proposal.

- 24 For example, San Diego Gas & Electric Company ("SDG&E") opposes the element of
- 25 the Staff OTC Proposal that limits contracts with OTC facilities to one year. As the utility points
- 26 out, this serves no discernible purpose and should not be approved by the Commission. Instead
- 27 of limiting contracts with OTC units to one year, WPTF agrees that the Commission should
- 28 focus its OTC policy implementation on addressing the need for replacement capacity when and
- 29 if it is determined that the capacity actually needs to be replaced.

• 1 WPTF also concurs with the Southern California Edison Company (“SCE”) observation
• 2 that the OTC Staff Proposal would create undue risk, likely lead to higher costs for bundled
• 3 customers, create grid reliability concerns and hinder the integration of new and higher levels of
• 4 renewable generation.⁸ As Pacific Gas and Electric Company (“PG&E”) points out, “While the
• 5 majority of the OTC units are aging and are coming close to the end of their useful lives, many
• 6 of them provide needed local transmission reliability support which will continue to be required
• 7 until suitable replacement capacity is built.”⁹

• 8 The Staff OTC Proposal would lead to inefficient outcomes that would increase costs and
• 9 jeopardize reliability. The Staff OTC Proposal should not be adopted. Instead, the Commission
• 10 should wait for the final results from the CAISO’s evaluation studies, and only then make a
• 11 determination as to the need for replacement capacity.

• 12 **B. The timing of the retirement or repowering of OTC power plants should be**
• 13 **factored into this LTPP cycle.**

• 14 WPTF recommends that the Commission should further assess the impacts of the State
• 15 Water Resources Control Board’s OTC policy in this LTPP cycle. The testimony sponsored by
• 16 the California Independent System Operator (“CAISO”) indicates that studies are underway to
• 17 assess the impact of OTC retirements consistent with the SWRCB’s policy. The Commission
• 18 should wait until those studies are complete to make any determination as to whether or not there
• 19 is a need for replacement capacity. Accordingly, a modest delay in this proceeding to receive the
• 20 additional analyses undertaken by the CAISO would still result in a decision that allows

⁸ Testimony Of Southern California Edison Company On Track III Issues – Rules Track III Procurement Policy (“SCE Testimony”), at p. 9.

⁹ Pacific Gas and Electric Company Testimony on Procurement Rules (“PG&E Testimony”), at p. 1-1.

- 1 sufficient time to pursue competitive procurement in this LTPP cycle, if deemed necessary, or in
- 2 the next cycle, while meeting the deadlines in the SWRCB’s OTC policy.

- 3 **Chapter III – Refinements to the Bid Evaluation Process**

- 4 As noted in the June 13 Ruling, refinements to the bid evaluation process may be
- 5 discussed by parties in their testimony, with particular attention to the following three topics: 1)
- 6 weighing competing bids between UOG and power purchase agreements (“PPAs”); 2)
- 7 refinements to the existing timelines associated with the utilities’ RFOs for resource adequacy
- 8 products; and 3) utility procurement of greenhouse gas related products. My testimony focuses
- 9 on the first topic, how competing bids should be weighed, as between UOG and PPAs. In
- 10 addition, the December 3, 2010, Scoping Memo provided that additional issues that might be
- 11 considered would include (a) How development costs incurred by an Investor-Owned Utility
- 12 (“IOU”) and included in an IOU offer should be addressed (“at-risk” or ratepayer-guaranteed);
- 13 and (b) what measures should be taken to prevent sharing of sensitive information between IOU
- 14 staff involved in developing IOU offers and staff who create RFO evaluation criteria and who
- 15 select the winning offers. My testimony addresses each of these issues, as well.

- 16 **A. There Are Fundamental Differences Between UOG and PPA Projects that**
- 17 **Make Bid Comparisons in an RFO Impossible and Create a Real Perception**
- 18 **of Unfairness When the Utilities Evaluate their Own UOG Projects in**
- 19 **Competition with PPA Proposals.**

- 20 There is a very simple explanation as to why it is fundamentally inappropriate to have
- 21 IOUs evaluate their own UOG proposals in competition with PPAs. The PPA contract period
- 22 does not match up with the life of a UOG asset, creating a fundamental problem of uneven life
- 23 cycles that seriously and irreparably tilts any discounted cash flow analysis in favor of the longer
- 24 lived UOG assets. Moreover, the risk profile of the two types of projects is completely different

- 1 for the two types of projects, with UOG projects having assurance of ratepayer cost recovery
- 2 while PPA projects must factor a return into their bids. These irrefutable facts alone should lead
- 3 the Commission to reject the notion that an RFO that requires comparisons of UOG versus PPA
- 4 projects is credible or manageable. Indeed, the fact that at least two of the utilities continue to
- 5 try and convince this Commission that such a process could be structured in a fair manner even
- 6 though they pose no solutions to these fundamental issues of how to structure a fair comparison
- 7 between the two types of projects should raise the Commission’s suspicions as to what motivates
- 8 these two utilities so eager to shoehorn UOG projects into the competitive RFO process – WPTF
- 9 strongly suspects it is that the UOG projects enhance utility profits through additions to rate base,
- 10 whereas PPAs do not. To examine this issue in more detail, it is instructive to look at PG&E’s
- 11 testimony on the subject. In its testimony, PG&E provides a good summary of the differing
- 12 UOG options that can participate in an RFO:
 - 13 There are three main types of UOG offers, which differ in the roles of the potential
 - 14 counterparty and the roles of the IOU. In a Purchase and Sale Agreement (“PSA”)
 - 15 offer, the potential counterparty is responsible for developing, permitting,
 - 16 constructing, testing, and completing the facility, which is then handed over to the
 - 17 IOU. In an Engineering, Procurement, and Construction (“EPC”) offer, the IOU
 - 18 develops and permits the facility, while the potential counterparty is responsible for
 - 19 constructing the facility. In a utility development offer, the IOU develops, permits,
 - 20 and constructs the facility. In addition to these three main types of UOG offers, there
 - 21 may be UOG offers that can be hybrids of these three types, in which the potential
 - 22 counterparty and the IOU each have specified roles as a facility is developed,
 - 23 permitted, constructed, and completed. Regardless of the type of offer, all UOG offers
 - 24 result in utility ownership of a facility.¹⁰
 - 25
 - 26 PG&E then discusses how UOG offers and PPA offers are evaluated on each of four evaluation
 - 27 criteria (Market Valuation, Portfolio Fit, Project Viability, and Credit) identified in Section A of

¹⁰ PG&E Testimony, at p. 2-5.

• 1 its testimony.¹¹ A look at how each of these is analyzed shows the problem inherent in a utility's
• 2 review of its own proposal.

• 3 PG&E's methodology for Market Valuation allegedly computes capacity, energy, and
• 4 ancillary service benefits in the same way for PPA offers and UOG offers. "For a PPA offer, the
• 5 costs are defined in the offer specification. For a UOG offer, the costs are formulated as
• 6 described in Section B above. The costs of a UOG offer are converted into a series of periodic
• 7 (typically, monthly) cash flows that mimic the costs occurring with a PPA. Once this is done,
• 8 PPA offers and UOG offers are all evaluated on Market Valuation using the same methodology
• 9 and tools."¹² However, there is no transparency associated with the utilities' development of the
• 10 UOG comparative cash flows – i.e, no system of checks and balances that ensure that the UOG
• 11 cost estimates have been accurately stated, that the cash flow conversions are unbiased, nor does
• 12 there appear to be any attempt to account for the different risk profile of the UOG compared to
• 13 the PPA. Finally, there does not appear to be any attempt by PG&E to address the fundamental
• 14 unfairness of comparing thirty-year (or longer) UOG service lives with ten-year PPAs. In
• 15 summary, the utilities deconstruct the costs of their own UOG projects to make them fit in a cash
• 16 flow analysis in a manner that lacks any transparency, and therefore creates a serious perception
• 17 of "managing the outcomes." The whole process intrinsically reeks of self-interest and brings to
• 18 mind the Latin expression, "*Quis custodiet ipsos custodes?*"¹³

¹¹ Id, at pp. 2-6 to 2-9.

¹² Id, at p. 2-7.

¹³ Traditionally attributed to the Roman poet Juvenal from his *Satires* (Satire VI, lines 347–8), which is literally translated as "Who will guard the guards themselves?"

• 1 Similar concerns exist with regard to Portfolio Fit, which the utility describes as follows,
• 2 “Portfolio Fit accounts for how well an offer’s features match PG&E’s portfolio needs, including
• 3 temporal, locational, and fuel diversity aspects.”¹⁴ It is not simply a rhetorical question to ask
• 4 who is more likely to develop a proposal that best fits the PG&E portfolio, the utility itself, or an
• 5 Independent Power Producer (“IPP”)? Pride of authorship would certainly play a role here in
• 6 causing the utility to ascribe higher portfolio fit values to its own proposal. Precisely the same
• 7 factor is involved with regard to considerations of Project Viability, which generally centers on
• 8 credit related factors and experience of the developer. Again, there is an utter lack of
• 9 transparency with respect to how a utility ascribes creditworthiness and developer experience
• 10 scores to its own projects versus PPAs, again creating a perception that the outcomes of the RFO
• 11 process, when it includes UOG projects, can be entirely “managed” by the utilities to favor their
• 12 own projects.

• 13 PG&E next discusses what it characterizes as being “additional distinguishing
• 14 characteristics” of RFO offers, which include Strategic Flexibility and Residual Value and
• 15 Technological Obsolescence.¹⁵ Here again, participants in the RFO process are provided no
• 16 transparency with respect to how the utilities score their own UOG projects versus PPAs,
• 17 creating, yet again, a perception that there is the potential for favoritism to its own UOG. With
• 18 regard to strategic flexibility, it states that “Any owner of a facility has the possibility to capture
• 19 some value associated with strategic flexibility. In contrast, a PPA may be restrictive in

¹⁴ PG&E Testimony, at p. 2-7.

¹⁵ Id, at pp. 2-9 through 2-11.

• 1 unforeseen ways”¹⁶ – but PG&E fails to provide any examples of what these unforeseen
• 2 restrictions might be, much less provide any concrete description of how they deal with this issue
• 3 in a head to head competition of UOG versus PPA. PG&E goes on to say that, “The benefits of
• 4 potential residual value are absent from PPA offers, while the costs of potential technological
• 5 obsolescence are present in PPA offers.”¹⁷ What PG&E describes as this “asymmetry between
• 6 UOG offers and PPA offers” that “should cause UOG offers to have slightly higher Market
• 7 Valuation than PPA offers, all else equal,”¹⁸ not only betrays the utility’s bias in the bid
• 8 evaluation process, but is a direct admission that a head to head comparison of UOG to PPA is
• 9 not doable.

• 10 Ultimately, I agree with Southern California Edison’s (“SCE’s”) witness who concludes
• 11 that “Any attempt to request ‘utility bids’ that can be evaluated in competitive solicitations, or
• 12 numerically compared to market bids, is, at its foundation, conceptually unworkable.”¹⁹

• 13 **B. IOU Development Costs should be at Risk and Not Ratepayer Guaranteed**

• 14 There is a fundamental disparity between utility UOG and IPP project development costs.
• 15 Depending on the type of UOG proposal, development costs may be recovered from ratepayers
• 16 even if the project does not come to fruition, while PPA development costs are only recovered if
• 17 the project gets built. As background, D.07-12-052 did not “permit IOUs to recoup from

¹⁶ Ibid.

¹⁷ PG&E Testimony, at p. 2-10

¹⁸ Id at p. 2-11.

¹⁹ SCE Testimony, Ex. SCE-3, at p. 13.

• 1 ratepayers any bid development costs associated with losing PSA or EPC bids, in the event that
• 2 any such costs are incurred.”²⁰ The Commission went on to note in the same discussion that:

• 3 We agree with parties and find it important to recognize that even the perception of
• 4 bias in an RFO can be sufficient to dampen participation from other potential non-
• 5 utility investors and developers are less likely to get support from capital markets if
• 6 there is a perception that merchant bids will be undermined by utility built or affiliate
• 7 projects.²¹

• 8 Although D.07-12-052 did not “permit IOUs to recoup from ratepayers any bid development
• 9 costs associated with losing PSA or EPC bids, in the event that any such costs are incurred,”²²
• 10 this directive does not apply to what PG&E characterizes as a “utility development offer” (see
• 11 page 8, above). WPTF strongly recommends that the project development costs of “utility
• 12 development offers” also be at risk and not ratepayer guaranteed.

• 13 This is also, in fact, consistent with the Commission’s prior actions with regard to
• 14 proposals of SCE for ratepayer funding of its Project Development Division (“PDD”). First
• 15 proposed in SCE’s 2006 GRC (A.04-12-014), the PDD raised a good deal of opposition from
• 16 parties such as the Division of Ratepayer Advocates, Aglet and WPTF, all of whom objected to
• 17 SCE’s proposal to use \$4.95 million in test year 2006 ratepayer funding for utility generation
• 18 project development in the competitive market structure that had been established by the
• 19 Commission. In D.06-05-016, the Commission agreed with these concerns, finding that:

• 20 While we recognize there is value in having more participants such as SCE in the
• 21 process, we find it necessary to subject SCE to the same cost recovery risks as

²⁰ D.07-12-052, at p. 207. As further clarification of these acronyms, footnote 233 at p. 197 of the decision provides, “For the purposes of this discussion, the term UOG includes, but is not limited to, utility-built, Engineer, Permit and Construct (EPC), and Purchase and Sale Agreement (PSA) acquired resources.”

²¹ Id, at p. 208.

²² D.07-12-052, at p. 207. As further clarification of these acronyms, footnote 233 at p. 197 of the decision provides, “For the purposes of this discussion, the term UOG includes, but is not limited to, utility-built, Engineer, Permit and Construct (EPC), and Purchase and Sale Agreement (PSA) acquired resources.”

- 1 faced by independent producers. Independent producers’ development costs
- 2 associated with unsuccessful projects are not recoverable from ratepayers. It is a
- 3 matter of fairness that SCE assume that same risk, if it chooses to participate.²³

- 4 Subsequently, in its 2009 GRC (A.07-11-001), SCE sought a vast expansion of the PDD
- 5 budget. The utility requested \$5,012,000 to continue the PDD activities authorized for rate
- 6 recovery in the 2006 GRC and another \$21,572,000 to begin generation-related technology
- 7 demonstration, testing, and evaluation and to fund the incremental staffing required to conduct
- 8 that work. Once again, DRA and WPTF objected to this expansion of the PDD, and once again
- 9 the Commission agreed:

- 10 For the same reasons as set forth in D.06-05-016, we reject SCE’s \$20 million
- 11 request for cost recovery of RD&D. In D.06-05-016, the Commission expressed
- 12 concerns regarding the potential to create an uneven playing field for competitors.
- 13 The Commission stated, “...from a policy perspective, we feel it is important that
- 14 the project development costs for proposed new projects should not be
- 15 specifically included in rates.” These same concerns continue to exist. To address
- 16 these concerns, the Commission excluded SCE’s entire PDD request from rates.²⁴

- 17 Permitting utilities to recoup their development costs, regardless of whether a project gained
- 18 Commission approval (whether through the approval of RFO results or a CPCN application),
- 19 would clearly add to the “perception of bias” that the Commission cautioned against. Recovery
- 20 of such costs also creates a competitive advantage in favor of utility projects. WPTF wishes to
- 21 be explicit here. Whether UOG proposals are permitted to be bid in an RFO or confined solely
- 22 to CPCN applications (as discussed below in Section D), development costs must be included in
- 23 the financial analysis of the UOG proposal. More specifically, should the Commission decide
- 24 that UOG projects can participate in RFOs – and WPTF reiterates its earlier statement that UOG

²³ D.06-05-016, at p. 52.

²⁴ D.09-03-025, at pp. 41-42.

- 1 projects should NOT be allowed to participate in RFOs – any development costs that are
- 2 associated with that project must be included with all the other costs of the project in the
- 3 evaluation process. Should the proposal be rejected, those development costs should be at risk
- 4 and not ratepayer guaranteed unless the UOG proposal gains Commission approval. Costs
- 5 associated with unsuccessful UOG proposals should be the responsibility of utility shareholders,
- 6 just as is the case with IPPs.

- 7 **C. The Commission should Ban All UOG Proposals in Utility RFOs. UOG**
- 8 **Should be Proposed only Through Traditional CPCN Applications and Only**
- 9 **Approved in Exceptional Circumstances When a Competitive Solicitation**
- 10 **Has Failed.**

- 11 WPTF believes that the CPUC’s procurement policy is at an important crossroads. It has
- 12 had a long-term commitment, as best expressed in D.06-07-029, to market structures that will
- 13 ultimately foster robust and cost-effective investment:

- 14 “With this decision today, the Commission seeks to signal that it is committed to
- 15 the fundamental principles that have guided electricity market restructuring in
- 16 California and elsewhere: competition and customer choice.”²⁵
- 17

- 18 This commitment needs to be put into practical and concrete action in this proceeding, by
- 19 explicitly and decisively banning direct competition between UOG and PPAs. SCE leads off its
- 20 discussion of this topic with a clear, declarative section header: “Utility-Owned Generation and
- 21 Power Purchase Agreements Are Not Comparable During a Bid Evaluation Process.”²⁶ SCE
- 22 then explains that, “UOG and contracted-for generation are fundamentally different products.”²⁷
- 23 While WPTF does not agree with all of SCE’s self-serving descriptions of what it sees as the

²⁵ D.06-07-029, at p. 2.

²⁶ SCE Testimony, at p. 13.

²⁷ Ibid.

• 1 differing attributes of UOG versus PPAs, WPTF agrees with the statement that they are not
• 2 comparable during a bid evaluation process.

• 3 Finally, SCE reiterates its recommendation that the utility has made previously, “that
• 4 UOG projects should be proposed only when competitive processes cannot deliver the products
• 5 that the utility needs to serve its customers in a cost-effective manner. In such instances,
• 6 however, utility-owned projects should be proposed to the Commission via more traditional
• 7 methods, such as an application for a certificate of public convenience and necessity (CPCN).”²⁸
• 8 While WPTF concurs with this recommendation, we urge the Commission to recognize and
• 9 include in its Decision in this proceeding that a determination that a competitive process cannot
• 10 deliver the needed products can only be established when and if a competitive process has been
• 11 conducted and failed. In short, the CPCN process should not be an election by the utility, but
• 12 rather an outcome of a failed competitive solicitation. We note, further that it is totally
• 13 congruent with the Commission’s earlier pronouncement, as cited above, “that it is committed to
• 14 the fundamental principles that have guided electricity market restructuring in California and
• 15 elsewhere: competition and customer choice.” Notwithstanding this concurrence, the instances
• 16 where competitive processes are inadequate will be rare, and the Commission should do its best
• 17 to prevent utilities from undermining those competitive processes to create the opportunity for
• 18 UOG.

• 19 In stark contrast to SCE’s recommendation is the position of PG&E. In its testimony, the
• 20 utility notes that in D.07-12-052, the Commission allowed PSA offers to be submitted and
• 21 considered in RFOs, but prohibited other types of UOG offers from being submitted and

²⁸ Id at p. 16.

• 1 considered in RFOs, until the Commission considered how UOG and PPA offers may be
• 2 evaluated head-to-head.²⁹ The utility suggests that Track III of this proceeding is the forum for
• 3 the Commission to consider such an evaluation methodology and then requests that “the
• 4 Commission allow all types of UOG offers—not just PSA offers—to be submitted and
• 5 considered in RFOs.”³⁰ The utility then requests that the Commission act on this issue no later
• 6 than the closing of Track I in this Proceeding.

• 7 WPTF concurs that the Commission should act on this recommendation. However, it
• 8 should unequivocally reject the PG&E request and instead enunciate the following policy:

• 9 “UOG offers shall not be considered in RFOs. Rather, utility-owned projects
• 10 shall be proposed to the Commission via traditional applications for a certificate
• 11 of public convenience and necessity only when and if a competitive solicitation
• 12 has failed.”

• 13 By taking this concrete step now of eliminating UOG projects except when competitive
• 14 solicitations has failed, the Commission will be taking a important step toward full reform of the
• 15 fundamentally flawed hybrid market that exists in California today by enhancing markets
• 16 mechanisms and competition, rather than emasculating the framework envisioned by the
• 17 Commission through its endorsement of market structures.

• 18 WPTF believes that the competitive supply of electricity and related products maximize
• 19 benefits to consumers because not only are competitive suppliers more efficient and innovative
• 20 than monopoly utilities, competitive entities are better able to manage the inherent risks --
• 21 particularly fuel, price, operational, and environmental -- involved in generation investment.
• 22 Relatively speaking, utilities poorly manage these risks and instead pass the cost on to consumers

²⁹ D.07-12-052, at pp. 206-207, Finding of Fact 94, Conclusion of Law 46, and Ordering Paragraph 30.

³⁰ PG&E Testimony, at p. 2-14.

• 1 who shoulder the full burden of procurement risk. The Commission’s support for competitive
• 2 market structures in D.06-07-029 was explicit in that it intends for consumers to be able to
• 3 capture the benefits that competitive markets foster.

• 4 The Commission supported the development and use of robust capacity, energy and
• 5 ancillary services markets that support investment in D.06-07-029,³¹ in recognition that
• 6 consumer benefits are maximized when they are not forced to shoulder the entire risk of
• 7 investment decisions. WPTF concurs with this policy determination and strongly supports
• 8 progress toward competitive wholesale and retail markets for that reasons. However, in that
• 9 decision, the Commission recognized that the Locational Marginal Pricing (“LMP”) energy
• 10 market remains under development for implementation in 2008 and the resource adequacy
• 11 capacity market is in a nascent stage. For this reason the Commission supported interim
• 12 procurement mechanisms.

• 13 Importantly, the Commission recognized the need to minimize damage to the market
• 14 structures in the interim while the wholesale market structures develop and mature. The question
• 15 then in this proceeding is what to do in the meantime to support the market as it develops while
• 16 minimizing the damage of utility procurement solicitation creates in the interim.

• 17 WPTF strongly believes that consumers benefit most effortlessly and that the
• 18 procurement process proceeds most effortlessly, when electricity and related products are
• 19 provided by competitive suppliers. In all of the areas in the country with organized markets
• 20 there is an explicit recognition of the incompatibility of utility rate based generation investment
• 21 and healthy competitive wholesale markets. For this reason most organized markets either

³¹ See p. 33.

- 1 restrict utility build outright or restrict the ability to build new generation to utility affiliates.
- 2 When new generation is allowed to be built by affiliates, those entities are subject to the same
- 3 market rules and risks as competitive generation.
- 4 If the Commission accepts the premise that utilities should continue to be allowed to offer
- 5 resources in competition with competitive suppliers, WPTF believes that these offers need to be
- 6 evaluated by the Commission in the context of traditional CPCN applications. The current
- 7 system of allowing PSAs to participate in utility RFOs does not encourage a truly independent
- 8 analysis that can quantifiably and fairly compare utility-owned power supply projects to
- 9 competitive supply options, especially when this comparison is made by the conflicted utilities or
- 10 the independent evaluators who are paid by the utilities. Rather, if the utility can convincingly
- 11 demonstrate, as noted above, that “competitive processes cannot deliver the products that the
- 12 utility needs to serve its customers in a cost-effective manner,” and the inability of the market to
- 13 provide the needed products has been proven through a competitive solicitation, then and only
- 14 then should UOG be permitted. I expect that such situations will be rare. Importantly, however,
- 15 this also means that proposed utility-owned resource projects should be subject to the same cost
- 16 guarantees and risks as competitive suppliers, without any allowance for cost over-runs or cost-
- 17 of-service treatment, as discussed above.

• 1 **Chapter IV – Procurement Oversight Processes**

• 2 The June 13 Ruling offered parties the opportunity to comment on the Staff Proposal
• 3 appended to the ruling as Appendix B. WPTF offers comments herein on three issues, (1) how
• 4 to assure the independence of the IE; (2) the Code of Conduct that the IOUs and their staff are
• 5 required to abide by in their procurement activities; and (3) resolution of issues associated with
• 6 the Cost Allocation Mechanism (“CAM”) required under Senate Bill (“SB”) 695.

• 7 **A. Independent Evaluators should be Selected by the Commission and Not by the**
• 8 **Utilities.**

• 9 The Staff Proposal defines the role of the Independent Evaluator (“IE”) as being “to
• 10 monitor the fair and unbiased nature of an Investor-Owned Utility (IOU)’s procurement
• 11 solicitation process, including, but not limited to: all communications about the solicitation to
• 12 market participants, the operation of the solicitation, and the selection and negotiation process.
• 13 IEs provide an independent evaluation of the IOU’s bid evaluation and selection process and
• 14 help inform the Commission and the Procurement Review Group (PRG) about the process.”³²
• 15 WPTF does not dispute this description of the IE’s role. However, the Staff Proposal fails to
• 16 address the fundamental issue of how independence is actually to be achieved because it
• 17 continues the practice of having the IE be retained and paid by the utility whose procurement it is
• 18 supposed to evaluate on an independent basis. In that regard, WPTF recommends that any IE be
• 19 retained and paid by the Commission.

• 20 It is important that the rationale for use of the IE not be disregarded. The IE mechanism
• 21 was developed in response to the Commission’s decision that it was time to “allow greater head-

³² Attachment 1, at p. 8.

• 1 to-head competition and hereby lift the affiliate ban on long-term power products. Accordingly,
• 2 we adopt certain guidelines and safeguards, including an independent third party evaluator (IE)
• 3 requirement.”³³ While it was highly appropriate for the Commission to develop the IE
• 4 mechanism as a counterbalance to the risks of favoritism that arise due to allowing utility
• 5 affiliates to bid in utility RFOs, the Commission failed to take all the steps necessary to insure
• 6 actual independence. The utility IEs to date have been both retained and paid by the utilities,
• 7 which is a breach of any commonsense notions of independence.

• 8 The maxim that “He who pays the piper shall call the tune” is applicable here. It is
• 9 fundamentally unfair to the firms that have been retained to serve as IEs that they must rely on
• 10 payment (and hopes of retention in future RFOs) on the utility whose procurement they are
• 11 expected to review and critique on an independent basis. The Commission must correct this flaw
• 12 in the IE mechanism and direct that henceforth all IEs are to be selected, retained and paid by the
• 13 Commission itself. Only with this step can a truly independent evaluator be selected and
• 14 commissioned to act as the watchdog that the interests of ratepayers deserve.

• 15 **B. Information Controls are Essential to Prevent the Sharing of Critical**
• 16 **Information.**

• 17 RFOs should be both competitive and fair. To the extent utility personnel have any role
• 18 in evaluating bids in an RFO, there must be strict protocols to ensure that there is no sharing of
• 19 sensitive competitive information between IOU staff that develop UOG proposals and IOU staff
• 20 who evaluate RFO offers and select the winning bids. This issue was previously addressed in
• 21 D.07-12-052. There, the Commission specified as follows:

³³ D.04-12-048, at p. 2.

- 1 ...we will relax for the moment the proposed restriction to exclude head-to-head
- 2 competition between PPAs and PSAs (and in appropriate circumstances, EPCs).
- 3 However, we reiterate that, as a precondition for conducting an RFO seeking utility
- 4 ownership options, the IOU, in conjunction with its IE, PRG, and ED staff shall
- 5 develop a strict code of conduct – to be signed by any and all IOU personnel
- 6 involved in the RFO process – to prevent sharing of sensitive information between
- 7 staff involved in developing utility bids and staff who create the bid evaluation
- 8 criteria and select winning bids.³⁴

- 9 With regard to this topic, WPTF agrees with the PG&E statement that an effective Code of
- 10 Conduct should specify to whom it applies, to which information it applies, what activities are
- 11 prohibited, and what happens if the Code of Conduct were violated.³⁵ Furthermore, developing
- 12 the Codes of Conduct with IE, PRG and Energy Division input is also an appropriate approach.
- 13 WPTF would also endorse the suggestion that the Commission itself should approve or authorize
- 14 such a Code of Conduct. It is important to note, however, that such a code of conduct is essential
- 15 even if the Commission decides, as WPTF believes it should, that UOG projects will not be
- 16 allowed to compete directly against PPAs in the RFOs. With this exception, WPTF supports the
- 17 Code of Conduct guidelines provided in Appendix B.

• 18 **C. There Is Additional Work That Needs To Be Completed with Respect to**

• 19 **CAM**

- 20 In Attachment 1 of Appendix B of the June 10 Ruling, a Staff proposal with respect to
- 21 CAM is set forth that “explains the rules related to participation, roles, and meeting protocols for

³⁴ This code of conduct would be very similar to the codes of conduct and bans on preferential access to information that apply between a utility and its generation affiliates. Therefore, the internal IOU functions involved in project development and bid preparation. Thus, if a utility were soliciting turnkey bids or EPC contracts as well as PPAs in a given solicitation, the individuals performing the bid evaluation would have to be functionally separated from the individuals preparing the bids (or the cost estimates) for projects that would ultimately be utility-owned (we note that some of the utilities already do this). Under this restriction, the employees developing the utility-owned project would be barred from access to any evaluation protocols, input assumptions, or bid information not made generally available to outside bidders. This approach would provide assurance that the utility could not use “inside information” to the advantage of its own project, without requiring the publication of every detail of the bid evaluation protocol. Footnote in original. D.07-12-052, at pp. 206-207.

³⁵ PG&E Testimony, at p. 2-13.

• 1 the CAM group.”³⁶ WPTF has no objection to Staff proposals in that regard. However, the Staff
• 2 proposals for CAM ignore that there has been a fundamental change in CAM brought about by
• 3 the passage of SB 695.

• 4 SB 695, among other things, provided for the transitional reopening of Direct Access
• 5 retail choice. It also said that once the Commission had authorized that reopening, it must also

• 6 (2) (A) Ensure that, in the event that the commission authorizes, in the situation of
• 7 a contract with a third party, or orders, in the situation of utility-owned
• 8 generation, an electrical corporation to obtain generation resources that the
• 9 commission determines are needed to meet system or local area reliability needs
• 10 for the benefit of all customers in the electrical corporation's distribution service
• 11 territory, the net capacity costs of those generation resources are allocated on a
• 12 fully nonbypassable basis consistent with departing load provisions as determined
• 13 by the commission, to all of the following:

- 14 (i) Bundled service customers of the electrical corporation.
- 15 (ii) Customers that purchase electricity through a direct transaction with
• 16 other providers.
- 17 (iii) Customers of community choice aggregators.

• 18
• 19 Through Decision (“D”) 11-05-005, the Commission has addressed some of the
• 20 important issues that SB 695 raises with respect to CAM, but did not address the most
• 21 fundamental issue of just which utility investments should be afforded CAM treatment. Instead,
• 22 D.11-05-005 notes that are some issues that remain to be resolved, which include:

- 23 1. The development of policies and processes for distinguishing between
• 24 system and bundled resource needs, and related cost allocation.
- 25 2. Whether there should be a test of “who benefits” under SB 695, and if
• 26 so, the construction of such a test.³⁷
- 27

³⁶ See June 13 Ruling, page 3.

³⁷ D.11-05-005, at p. 16

• 1 That order, however, does not provide any timeline for resolving these issues, saying only that
• 2 “we intend to further develop the record in later phases of this proceeding in order to resolve
• 3 these issues.”³⁸

• 4 WPTF strongly urges the Commission to resolve these issues, and sooner rather than
• 5 later. Since SB 695 was enacted, there have been numerous instances where the utilities have
• 6 claimed that specific projects meet the criteria of SB 695, and therefore CAM cost allocation
• 7 must be afforded. With additional issues, such as the potential for replacement capacity for
• 8 OTC, looming on the horizon it simply cannot be left to utility discretion to determine which
• 9 cost recovery mechanism it prefers, nor is it appropriate for the Commission to make rulings on
• 10 this critical competitive issue without providing stakeholders with a meaningful opportunity to
• 11 vet the criteria that the Commission will use in making these important decisions. The decision
• 12 about when to employ CAM will impact the procurement decisions of competitive retail
• 13 suppliers because when CAM is employed, there are commensurate allocations of the underlying
• 14 capacity to those suppliers. This “on-behalf of procurement” is anathema to competitive retail
• 15 suppliers and their customers who elect retail service specifically as an alternative to utility
• 16 service. Therefore, the application of CAM should be circumspect and limited. Moreover, the
• 17 Commission should recognize that a broad application of CAM is not contemplated by the
• 18 legislation, given that it is that very same legislation that put in a place a transitional reopening of
• 19 retail choice markets for the first time in over nine years. It simply makes no sense for the
• 20 Commission to adopt a broad applicability of CAM when doing so will seriously undermine the
• 21 competitiveness of the retail choice markets that the very same legislation sponsored.

³⁸ Id, at p. 17.

- 1 In short, there must be some clarity and certainty put around this “on-behalf of
- 2 procurement” if competitive retail suppliers are going to be able to make investments to serve
- 3 their customers. To provide such clarity and certainty, the Commission must establish some
- 4 criteria for when such cost allocation treatment is warranted – and when it is not. WPTF has
- 5 several suggested criteria that the Commission should employ in this regard. The first would be
- 6 that authorizations for UOG or PPA investment that are made in response to a system emergency
- 7 should be afforded CAM treatment, such as the directive issued by the Commission to SCE in
- 8 the aftermath of the 2006 heat storms. Another relevant metric could be that CAM treatment
- 9 cannot and will not be authorized for any UOG or PPA projects that would cause systemwide
- 10 resources to exceed the established planning reserve margin.³⁹
- 11 WPTF urges the Commission to deal with this issue expeditiously in this phase of this
- 12 proceeding, and require parties to include this topic in their briefing.
- 13 This concludes my testimony.

³⁹ In fact, WPTF would urge the Commission to not approve any UOG or PPA project that would cause the system wide resources to exceed the planning reserve margin, but if for inexplicable reason, such resources are approved, they should not be afforded CAM treatment.

Attachment 1

Statement of Qualifications

GARY B. ACKERMAN, President, Foothill Services Inc.

SPECIALIZED PROFESSIONAL COMPETENCE

Economic and political assessment of new energy ventures, including merchant-plant development, and development of electricity and natural gas trading and marketing; private-interest advocacy.

PROFESSIONAL EXPERIENCE

Western Power Trading Forum: Founder and executive director of a mutual-benefit, non-profit corporation. Mission is to encourage and promote lower electricity prices and enhanced system reliability in policies undertaken either by the Federal Energy Regulatory Commission (FERC), California Independent System Operator (ISO), or the California PUC. Current membership includes major market participants in the Western-states electricity business. (1998 - present)

ZGlobal Inc.: Marketing advisor on LMP software to forecast the impacts of the CAISO MRTU system. (2007 – present)

Automated Power Exchange: Expert witness testimony regarding dispute between cogeneration project (seller), a bankrupt Energy Service Provider, and the California Power Exchange (buyer). (2002)

Ridge Energy Group: Prepared study for Houston-based compressed-air storage developer on the market feasibility utilizing storage with wind-based energy sited in California or Arizona. (2002)

Southern Nevada Power Project: Co-developed the plan for a gas-fired generation project to be located in the Sandy Valley area of Southern Nevada. Project currently being developed by Diamond Energy (1995 – present)

Sale Agent for Rio Linda Power Generation Project: Represented the interests of developer/seller of 500 MW gas-fired project sited in Sacramento area to FPL Energy. Negotiated joint venture development agreement for re-siting facility before the California CEC. (1999 – 2001)

Occidental Petroleum: Advise natural gas marketing group on strategies to enhance value to electric generation buyers of gas commodity and storage services from client's Elk Hills facility in Bakersfield. (1999 - 2001)

Wellhead Electric: Advised cogeneration developer and operator on restructuring options in the new California market. (1998 - 1999)

Robinson-May Department Stores: Advised department-store chain regarding strategies for retail procurement of electricity. (1998)

Mock Energy Services/Avista Energy: Regulatory Affairs coordinator for the joint venture, represented client in all aspects of California electricity restructuring including the Independent System Operator/Power Exchange (ISO/PX) Trust Advisory Committee, WEPEX Steering Committee, and served as the President of the ISO's Scheduling Coordinator Users Group from February 1997 to January 1998.

Chevron U.S.A.: Development of a natural-gas-fueled merchant electric generating facility which would dramatically alter the way power is bought and sold in the western U.S. (1994 – 1995)

CSW Energy: Assistance to the independent power plant development non-regulated subsidiary of Dallas-based Central and Southwest Services. (1993 – 1995)

ARK/CSW Energy: Advise the cogeneration joint venture on all aspects of business development from earliest conceptual stages to the execution of power purchase agreements. (1991 – 1998)

Decision Focus, Inc.: Developed new business and sold utility planning software for DFI's electric, and gas and oil business. (1982 – 1989)

EDUCATION

University of Chicago - M.A., Economics, (1976)

Michigan State - B.A., Economics, (1973)

Publications

Reports:

1. Impact Assessment of the 1977 New York City Blackout, (with W.T. Miles, and J. Corwin), Special report for U.S. Department of Energy, Division of Electric Energy Systems, HCP/T5 103-01, Palo Alto, July 1978.

2. The Application of Energy Supply/Demand Models to Regional Power System Planning, (with F. Ma, J. Patmore, and D. Stengel), prepared for U.S. Department of Energy and the University of Oklahoma (DOE EC-77-S-05-5468), Palo Alto, June 1978.
3. U.S. Electric Power Grid Concepts: The Existing System and Proposed Concepts for Improvements to Bulk Power Supply, (with N. Badertsher, J. Corwin, and C. Saylor), reprinted in The National Power Grid Study, Vol. II, (Department of Energy), Washington, DC, September 1980.
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6. Benefits and Costs of Load Management: A Technical Assistance and Resource Material Handbook, (with R. Lau, J. Patmore, F. Ma, and Argonne National Laboratory), ANL/SPG-12, Chicago, June 1980.
7. Generation Planning and Reliability Study, (with T. Bowe, and W. Dapkus), prepared for the Illinois Commerce Commission, Palo Alto, August 1981.
8. Application of Decision Analysis to Electric-Utility Load-Leveling Strategies, prepared for Argonne National Labs (ANL-31-109-38-5306), Palo Alto, September 1981.
9. Analysis of Demand-side Options, prepared for East Kentucky Electric Power Cooperative (1986), Iowa Public Service (1986), and Los Angeles Department of Water and Power (1987).
10. Prospects for Supply, Transportation , Demand, and Price in Western Europe and Contiguous Regions, prepared for the sponsors of the DFI Western European Gas Program, Mountain View, August 1993.

Articles:

- 1."Defense Expenditures and the Survival of American Capitalism", Armed Forces and Society, (with C. Nardinelli), Vol. 3, No. 1, pp 13-16, Fall 1976.
- 2."Short-Term Load Prediction for Economic Dispatch of Generation", IEEE Conference Proceedings PICA-79, (with D. Ross, R. Bischke, R. Podmore, K. Wall), pp 198-204, May 1979.
- 3."A Methodology to Evaluate the Costs and Benefits of Electric Customer Load-Management Technologies", Energy Technology VII Proceedings, (with M.L. Chan, E. Marsh, and J. Yoon), pp 54-66, March 1980.
- 4."Simulation-Based Load Synthesis Methodology for Evaluating Load-Management Programs", IEEE Transactions on Power Apparatus and Systems, (with M.L. Chan, E. Marsh, and J. Yoon), Vol. PAS-100, No. 4, pp. 1771-1778, April 1981.
- 5."Determining the Benefits and Costs of Load Management Systematically", Public Utilities Fortnightly, (with R. Mueller), Vol. 1207, No. 9, pp 26-32, April 1981.
- 6."Data Transfers Among Electric Utilities", Public Utilities Fortnightly, Vol. 107, No. 9, pp 26-32, April 1982.
- 7."Short-Term Load Prediction for Electric-Utility Control of Generating Units", Short-Term Forecasting, D. Bunn and E. Farmer, eds., (Wiley Press, London) December 1985.
- 8."Desktop Computers: Too Young to Offer Any Benefits?" Electrical World (McGraw-Hill, New York), July 1983.
- 9."The Optimal Penetration of Direct Load Control Switches", (with J. Gafford) Transmission and Distribution, (Cleworth Publishing, Cos Cob, CT), July 1983.
- 10."Bridging the Planning and Operations Gap," Electrical World, (McGraw-Hill Inc., NY, NY) October, 1987.
- 11."How an Electric Utility Production Cost Model Can Be Validated," (written on behalf of John Stremel, Decision Focus Inc., and William Stillinger, Northeast Utilities) Public Utilities Fortnightly, (Public Utilities Reports, Arlington, VA), December, 1988.

12. “Deal Triage,” (co-authored with Robert Nicholson, Bank of America Global Project Finance), Infrastructure Finance, (Financial World Publications, New York) February, 1997.

13. “Buyers Beware the Confusion,” (co-authored with Daniel Violette, and Harry Misuriello), Energy Buyer’s Guide, (Information Forecast, Inc., Sherman Oaks, Ca.) May, 1997.

Professional Papers and Panels:

1. *“Attempts to Forecast the Demand for Electricity: The Commonwealth Edison Experience”*, (with G. Corey), Delivered at the University of Chicago, Econometrics and Statistics Colloquium, April 6, 1977.

2. *“Description of SCI Load Management Models”*, (with F. Ma) prepared for Argonne National Laboratory, Special Studies Group, September 1979.

3. *“Key Steps in Load-Management Evaluation and Transferability of Load Data”*, prepared for Argonne National Laboratory, Special Studies Group, October 1979.

4. *“Factors Affecting the Adaptation of Load Management”*, prepared for U.S. Department of Energy, Economic Regulatory Administration, October 1980.

5. *“Short Term Forecasting of Monthly Energy”*, prepared for the EPRI 6th Load Forecasting Symposium, Dallas, Texas, December 1982.

6. *“An Emerging Economic View of World Natural Gas”*, (with D.H. Dorsett, Chevron Corp.) prepared for the 1992 Society for Petroleum Engineers Oil and Gas Economics, Finance, and Management Conference, London, U.K., April 1992.

7. *“A Case Study of an American Demand Management Bid”*, (with James C Crossman, Financial Energy Management) prepared for the 1st National Demand Management Conference, Melbourne, Australia, May 1992.

8. “NUG Needs in an Order 636 World: Opportunities for LDC’s”, prepared for the AGA Strategic Planning Committee Meeting, San Francisco, Ca., August 1992.

9. “Assuring the Independence of ISO’s”, prepared for the Power 97 Conference, Houston, Texas, July 1997.

10. “Market Participation: The Impacts of Cost and Complexity”, (with Ken Nichols and Jenny Klein) prepared for the ISO Conference, Denver, March 1998.

11. “Report from the Front Lines: Status and Update on Implementing Regional Congestion Pricing Schemes”, presented at the Infocast conference on Congestion Pricing and Tariffs, Washington, D.C., September 1998.
12. “The California Experience”, presented at the EEI National Accounts Workshop, Chicago, September 1998.
13. “Scheduling Coordinators’ Experience with the California ISO”, presented at the California Coalition of Public Utility Counsels, Monterey, California, October 1998.
14. “Reviewing the California Experience”, presented at the Energy NewsData Conference on Leaders & Strategies in the New Western Energy Market, Seattle, November 1998.
15. “Scheduling Coordinator Impressions of the ISO”, presented at the Megawatt Daily Conference on California Power Markets, San Diego, February 1999
16. “Panel on Risk Management in Trading”, presented at Distributech 1999, San Diego, February 1999.
17. “Demand Provision of Ancillary Services”, presented at the Technical Advisory Committee of the California Board of Energy Efficiency, San Francisco, February 1999.
18. “Will Retail Competition Work in California?”, key note speech presented at the Annual Sacramento Business Journal meeting on power issues, Sacramento, October 1999.
19. “What happened in California During the Summer of 1999?”, presented at the California Energy Markets conference, San Francisco, October 1999.
20. “ New Policies at the California ISO” presented at the Association of Bay Area Governments conference, Oakland, November 1999.
21. “RTO’s in the Western Region”, presented as keynote speaker for the Power Association of Northern California, March 2000.
22. “RTO’s: Reinventing the Grid”, presented as panelist and moderator at National Gas Intelligence conference GasMart 2000, Denver, April 2000.
23. “Trading’s Future: Reading the Tea Leaves”, presented at the Platts News Energy Service conference on Day of the Trader, New Orleans, October 2002.