

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 P R O C E E D I N G S

2 PRESIDING JUDGE: The hearing will come to
3 order. This hearing is in the matter of California
4 Independent System Operator Corporation, Docket Number
5 ER98-997 and Docket Number ER98-1309-000. We will take
6 appearances at this time. All right.

7 MR. WARD: Good morning, your Honor. Michael
8 Ward, Swidler, Berlin, Shereff, Friedman, for the
9 California Independent System Operator Corporation. I have
10 previously entered an appearance. And with me is Michael
11 Kunselman of our office, who also has previously entered an
12 appearance.

13 PRESIDING JUDGE: Very well. All right.

14 MS. KEY: Your Honor, Jennifer Key, from the law
15 firm of Steptoe & Johnson, representing Southern California
16 Edison Company. I have also already made an appearance in
17 this case.

18 PRESIDING JUDGE: All right.

19 MR. ALCANTAR: Good morning, your Honor, Michael
20 Alcantar, the law firm of Alcantar & Elsesser. With me
21 today is Linda Sherif, of our office. Both of us have
22 previously entered appearances in this case. We represent
23 the Cogeneration Association of California and the ARCO CQC
24 Kiln in this proceeding.

25 PRESIDING JUDGE: Are there any other appearances

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1 before we go to Staff?

2 MR. STRAIGHT: Would you like me to make my
3 appearance?

4 PRESIDING JUDGE: Yes.

5 MR. STRAIGHT: Sam Straight, law firm of Ray,
6 Quinney & Nebeker, representing WSCC, and William Joseph
7 Comish today, who's appearing under subpoena. I have
8 entered an appearance at the deposition of Mr. Comish.

9 PRESIDING JUDGE: All right. Very well. All
10 right. If we are ready.

11 MR. LONG: Judge.

12 PRESIDING JUDGE: I'm sorry, Commission Staff.

13 MR. LONG: I am Joseph H. Long. With me is Joel
14 M. Cockrell, for the Staff.

15 PRESIDING JUDGE: Off the record.

16 (Discussion off the record.)

17 PRESIDING JUDGE: All right, back on the record.

18 We are ready for the first witness.

19 Whereupon,

20 J.W. (BILL) COMISH

21 was called as a witness and, having first been duly sworn,
22 was examined and testified as follows:

23 PRESIDING JUDGE: All right, counsel.

24 MR. COCKRELL: Mr. Straight.

25 MR. STRAIGHT: Yes.

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1 MR. COCKRELL: I think we are ready for you.

2 Mr. Comish has just taken the stand.

3 MR. STRAIGHT: Yes. I am ready to go. I am just
4 here defending.

5 MR. ALCANTAR: Perhaps I might help, your Honor.
6 Mr. Comish has been subpoenaed in this action.

7 PRESIDING JUDGE: All right.

8 MR. ALCANTAR: He has not provided any direct
9 testimony. He was deposed, although that document, I don't
10 believe, is in this record. So he will be questioned
11 today, somewhat unusually, I suppose, from your standpoint,
12 because he does not have a set of prepared testimony or an
13 exhibit with which you would base, perhaps, some review or
14 understanding of his position here. But the parties do
15 have an opportunity to examine him today because of his
16 position with the WSCC and the positions that have been
17 taken by that counsel with respect to an important point in
18 this case with respect to the ISO's positions.

19 MR. WARD: Your Honor, if I may.

20 PRESIDING JUDGE: All right.

21 MR. WARD: The parties agreed jointly to waive a
22 prefiled testimony of Mr. Comish. Unfortunately, I was
23 under the impression that there would be direct testimony
24 that would cover the issues that were in his deposition,
25 because they were not currently in the record. If

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1 Mr. Straight is not doing so, I can either conduct a direct
2 examination, or if the parties wish, we could move the
3 deposition into the record and let them cross-examine on
4 that basis.

5 PRESIDING JUDGE: All right. Well, that's up to
6 the parties.

7 MR. ALCANTAR: We certainly have no opposition to
8 the introduction of the deposition in this case.

9 MR. STRAIGHT: We have no opposition to that at
10 all. I think it would be appropriate.

11 PRESIDING JUDGE: All right.

12 MR. LONG: We agree.

13 PRESIDING JUDGE: All right.

14 MR. WARD: Your Honor, can I then have marked as
15 Exhibit Number ISO, what is our next in order. 13, the
16 deposition of Mr. William Comish. I would provide one to
17 the witness, two to the Court and two to the court
18 reporter.

19 PRESIDING JUDGE: Counsel, what are we marking
20 this, ISO-14?

21 MR. WARD: 14, I believe.

22 PRESIDING JUDGE: No, you have a 13.

23 MR. WARD: We do, 14. I'm sorry, 13 will be the
24 substituted Deluca testimony. ISO-14.

25 MR. COCKRELL: I thought I was missing something.

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1 PRESIDING JUDGE: On your index, you have ISO-13.

2 MR. WARD: There will be substituted testimony.

3 Yes, this will be ISO-14. Thank you. Inasmuch as it
4 appears that there is no objection, I would move the
5 admission of this exhibit at this time.

6 PRESIDING JUDGE: All right. We will mark for
7 identification the deposition of Joseph W. Comish as
8 ISO-14. Are there any objections to the receipt of
9 ISO-14?

10 MR. LONG: No, your Honor.

11 PRESIDING JUDGE: All right. ISO-14 is also
12 accepted into evidence.

13 (Exhibit ISO-14 identified and received.)

14 MR. WARD: In that case, your Honor, I have no
15 questions at this time for Mr. Comish.

16 PRESIDING JUDGE: All right. Cross-examination.

17 MR. ALCANTAR: Yes, your Honor.

18 CROSS-EXAMINATION

19 BY MR. ALCANTAR:

20 Q Good day, Mr. Comish. My name is Michael
21 Alcantar. I represent CQC and the Cogeneration Association
22 of California. You are employed by the WSSC -- or the
23 WSSC, are you not?

24 A Yes.

25 Q How long have you been so employed?

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1 A A little over 10 years.

2 Q Is it accurate to say that the WSCC is a
3 voluntary organization?

4 A It's an organization in transition from voluntary
5 to somewhat less voluntary.

6 Q Its membership today, however, participates in
7 this organization by its own election and by voluntary
8 measure, does it not?

9 A That's correct.

10 Q Now, those individual members include, for
11 example, Southern California Edison Company and Pacific Gas
12 & Electric Company, do they not?

13 A Yes.

14 Q Is it accurate to say that the bylaws of the WSCC
15 also incorporate the fact that individual system
16 responsibilities, for example, say, SCE's responsibilities
17 for establishing its operating requirements on its system
18 take precedent over the WSCC regulations?

19 A That may be. I haven't read the bylaws in that
20 kind of detail. However, I should make clear it's the
21 responsibilities of the members to meet the WSCC criteria
22 in all respects.

23 Q Does this language refresh your recollection,
24 that is, "the responsibilities of the WSCC to assist in
25 coordinating, planning and operation between bulk power

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1 systems and this responsibility shall not conflict with the
2 responsibility of individual member systems, pools and
3 associations to carry out their own coordination planning
4 and operation within their respective areas"?

5 A That helps, yes.

6 Q And what does that help you recall?

7 A Just the words -- I don't live by the bylaws on a
8 day-to-day basis, so it's been a while since I read the
9 full agreement.

10 Q Well, you would agree with me then that the
11 individual system responsibilities take precedence over the
12 WSCC directives, would you not?

13 A I am not sure I could agree with that
14 specifically. I am having trouble envisioning a case where
15 there would be a conflict. If there's a conflict where the
16 member systems criteria or what it felt its
17 responsibilities were were more stringent than WSCC, then
18 certainly, we would not encourage less than that.

19 Q Today you are here, are you not, because there
20 may well be a conflict between some of your member
21 companies, say, in California, regarding the treatment of
22 QFs and one of your members, the ISO, with respect to the
23 treatment of QFs, wouldn't that be correct, or do you know?

24 A Well, I suppose there is a conflict. Otherwise,
25 we probably wouldn't be here. I don't think there's a

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1 conflict between what the California ISO is trying to do
2 and WSCC.

3 Q I understand that. Let's start down to
4 understand your position in relationship to the board of
5 trustees of the WSCC, all right? The board of trustees
6 establishes policy criteria, does it not?

7 A It gives final approval on policies and criteria
8 that are developed by other committees.

9 Q So in terms of that final approval, that is the
10 body, the board of trustees who establishes the policies
11 and criterion; isn't that correct?

12 A That's correct.

13 Q Individual employees such as yourself do not
14 establish in this context policy and criteria; is that
15 correct?

16 A That's correct.

17 Q Was your testimony, either from your deposition,
18 or here today, as you contemplated presenting it, reviewed
19 and approved in terms of policy and criteria by your board
20 of trustees?

21 A No, it was not.

22 Q Were you consulted in this matter, in terms of
23 either prior to your deposition or since your deposition,
24 by the ISO with respect to your testimony here today?

25 A I am not sure what you mean by with respect to my

1 testimony. My original involvement in this case was as a
2 result of answering questions from the ISO.

3 Q From the ISO?

4 A Yes.

5 Q Were those in written form or in oral form?

6 A Written.

7 Q Did -- excuse me for just a minute.

8 Did you have any oral communications with ISO
9 representatives regarding this matter?

10 A I don't recall specifically any oral
11 communication. There may have been. If so, it is more in
12 the matter of when we are going to get our answer. I don't
13 recall anything beyond that.

14 Q Can you define for me your understanding of the
15 term "behind the meter" load when it comes in the context
16 of a QF and an integrated host operation?

17 A My understanding of that is that the meter does
18 not meter either the load or the generation, but simply the
19 net of the two.

20 Q What is "behind the meter" then?

21 A Both load and generation.

22 Q Is that meter located on a site boundary then, is
23 that in your contemplation of your definition?

24 A I suppose it could be interpreted that way.

25 Q So behind this site boundary meter, there is both

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1 load, say, an industrial operation like a refinery, any
2 generator or QF operating behind that same or integrated
3 with that same operation, is that consistent with your
4 definition?

5 A Yes.

6 Q When you refer to "netting," you are referring to
7 the fact that the generator, integrated with the industrial
8 site or industrial facility, is serving electrical
9 requirements of that industrial facility before any load is
10 either taken through the site boundary meter or generation
11 is exported out from the site boundary meter. Is that
12 consistent with your definition?

13 A Yes.

14 Q There is an operations committee within the
15 structure of the WSCC, is there not?

16 A Yes, there is.

17 Q Did that operations committee make any formal
18 review or findings with respect to meter operations as we
19 have just described them, behind the meter operations as we
20 have just described them?

21 A No, they have not.

22 Q Now, members of the WSCC include utilities that
23 are jurisdictional under the Public Utilities Regulatory
24 Power Act, are they not, or do you know?

25 A Yes, they are.

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1 Q I take it from your previous answers with respect
2 to this behind the meter issue, since the board and the
3 operating committee, operations committee has not made any
4 evaluation of this behind the meter issue, they similarly
5 have not made evaluations of the members's obligations
6 under PURPA with respect to establishing their policies and
7 criteria; is that correct?

8 A That's probably correct, yes.

9 Q I am surprised by the answer, only to the
10 extent -- is that on all levels that you believe the board
11 of trustees and the operations committee do not consider
12 the obligations under PURPA with respect to its member
13 facilities?

14 MR. STRAIGHT: Judge, can I object on foundation.

15 PRESIDING JUDGE: All right. What is your
16 objection?

17 MR. STRAIGHT: Just that he lay some foundation
18 in terms of this witness's ability to answer that question,
19 and his level of knowledge with all levels of the WSCC.

20 MR. ALCANTAR: I think I can phrase the question
21 differently then.

22 PRESIDING JUDGE: All right.

23 BY MR. ALCANTAR:

24 Q Do you have any knowledge of the board's -- of
25 any board action or any operations committee action that

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1 considered or rejected consideration of PURPA obligations
2 associated with its membership?

3 A I don't have any knowledge of anything
4 specifically being done in that regard. I am having
5 trouble seeing why we would be concerned with that. The
6 requirements of those kinds of regulations have little to
7 do with the reliability of the interconnection.

8 Q Well, we will get to that. Let me pass on that
9 for a moment. We will come back to that particular
10 assertion. Now, do you report -- you personally, do you
11 report to the executive director of the WSCC, is that your
12 immediate supervisor?

13 A Yes.

14 Q And that -- the main executive director is who?

15 A Dennis Eyre.

16 Q Mr. Eyre -- actually, could you spell Eyre for us
17 for the record?

18 A E-y-r-e.

19 Q Mr. Eyre is a nonvoting member of the board of
20 trustees; is that correct?

21 A Yes.

22 Q Do you know how long Southern California Edison
23 and Pacific Gas & Electric have been members of the
24 operating committee of the WSCC?

25 A I would say as long as there has been an

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1 operating committee.

2 Q How long has that been, for point of reference?

3 A Well the organization was formed in '67. I am
4 not sure when the operating committee was formed. Sometime
5 after that, I suppose.

6 Q But for the entire of your -- is it 12-year
7 tenure? I'm sorry, I've forgotten.

8 A A little over 10 years.

9 Q But for the entirety of your 10-year tenure,
10 Southern California Edison and Pacific Gas & Electric
11 Company have been members of the operating committee; is
12 that correct?

13 A Yes.

14 Q What is your familiarity with California state
15 law or state regulation relating to qualifying facilities?

16 A Very little.

17 Q How little? What are the areas that you are
18 aware of?

19 A I was aware that California was doing something
20 20 years or more ago, that they had major issues with
21 cogeneration, qualifying facilities, that there were
22 standard offer contracts that they had. Other than that,
23 not much awareness until reviewing testimony for this
24 case.

25 Q So by doing something, you understand California

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1 to have integrated into its system qualifying facilities
2 under PURPA; is that correct?

3 A Yes.

4 Q Are you aware that since the inception of this
5 program, and continuing to today, that those facilities,
6 qualifying facilities, typically net meter as we have
7 described it, their load behind the meter?

8 A I am aware of it now, yes.

9 Q You have never been aware of it before?

10 A No.

11 Q When did you become aware of it?

12 A When I got testimony in this case and started to
13 review it.

14 Q So within the last three months is when you --

15 A Yes.

16 Q Before that, you never knew?

17 A That's right.

18 Q Do you think members of the operations committee
19 would have known that?

20 A Probably the California members knew it.

21 Q Do you think that this same metering, net
22 metering protocol is used somewhere other than California
23 in the WSCC service territory, or do you know?

24 A If it is, I am not aware of anyplace where it has
25 been used --

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1 Q Well, let's break that down. Have you
2 investigated each and every service territory and its
3 protocols with respect to QF net metering in the WSCC
4 service territory?

5 A No, I have just started that process.

6 Q As of the time of your deposition, if I recall
7 correctly from reading it, you have not -- you did not know
8 and you were not aware of any such requirements or any such
9 protocols in any of the systems, in any of the integrated
10 systems in the WSCC; is that correct?

11 A That's correct. As of the time of my deposition,
12 the only company I had any familiarity within that regard
13 was PacifiCorp, Utah Power. When I worked there, we did
14 not have anything like that.

15 Q You did not have anything like that because you
16 did not have any on-site generation netting from load?

17 A We didn't have any situations where the load and
18 generation were not metered separately.

19 Q You didn't have any QFs?

20 A I don't recall specifically that we had what was
21 considered QF.

22 Q All right.

23 A Now since that time, I have done some
24 investigation, and I have only looked at a few control
25 areas so far, but none of them indicate that they meter

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1 that way.

2 Q Now, in the past, your reflection of what you
3 just told us about your experience with the PacifiCorp -- I
4 take it when you were there it was Utah Power & Light;
5 right?

6 A It was -- Utah Power merged with PacifiCorp.
7 During the last few years I was there it was PacifiCorp.

8 Q During your tenure, you are not able to tell us
9 whether or not you had qualifying facilities on the system
10 that you were qualified for; is that correct?

11 A To my knowledge, there were no qualifying
12 facilities on the system at that time.

13 Q Let's move to California. You have no -- you
14 were not aware until the last three months, for a
15 substantial period of time, this form of net metering of
16 load and generation has been going on?

17 A That's correct.

18 Q Are you aware today, as you sit here, that PURPA
19 and California state law direct actions and policies for
20 the interconnected utilities to encourage the development
21 and interconnection of QFs?

22 A I am aware of that, yes.

23 Q Do you know what policies have been adopted to
24 support that encouragement?

25 A Not specifically, no.

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1 Q Do you believe that one of those policies is
2 permitting net metering of load and generation?

3 A I take it from the testimony I have reviewed,
4 that's the case, yes.

5 Q Is it accurate to say that at the time of your
6 deposition, you had no knowledge of PURPA requirements
7 related to QF operation?

8 A That's pretty accurate, yes.

9 Q I want to ask you just a couple of questions
10 about your background in terms of capacity planning. Could
11 you define for me what you understand the term "capacity
12 planning," in a utility context, to mean?

13 A Well, in my experience, it was a matter of a
14 vertically integrated utility having responsibilities to
15 serve a defined service territory. It was the utility's
16 responsibility to forecast what the load requirements were
17 going to be and the capacity needed to serve those, and
18 then to plan for that capacity.

19 Q Is there a distinction that you just made between
20 capacity planning on a, say, day-to-day operations basis
21 and capacity planning in terms of generation development,
22 supply and integration?

23 A Sure, there's a difference.

24 Q Could you distinguish for me the term
25 "transmission planning"?

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1 A Well, transmission planning is similar to
2 capacity planning in that you have to look ahead at what
3 the system is going to need. The load forecast drives the
4 need for capacity, and the generation or sources for the
5 capacity drive the need for transmission.

6 Q Now, in your experience with the utility before
7 you came to WSCC, you were a transmission planner, were you
8 not?

9 A No, I was not.

10 Q Transmission operator?

11 A Transmission generation operator, yes.

12 Q You operated generation?

13 A Well, understand, I worked at the system
14 operations control center, and we directed both
15 transmission and generation operations.

16 Q Have you ever operated a qualifying facility, in
17 your experience?

18 A No.

19 Q Can you distinguish for me -- well, let's start
20 here, define for me what you would -- how would you
21 interpret the term "traditional utility type power
22 generator"?

23 A I guess I would characterize it under the
24 direction of the system operator dispatches as to the needs
25 of the system, as opposed to not under the direction of the

1 system operator and generating how the generator wanted to.

2 Q Is it also a facility that would fall under the
3 governance or oversight of a wholesale power generator or
4 wholesale power generation, if you know, under the Federal
5 Power Act, or do you know?

6 A Which were you referring to?

7 Q A traditional utility generator?

8 A Would you repeat the question, please?

9 Q Would the traditional utility generator also be a
10 facility that falls within the oversight of the Federal
11 Power Act as a wholesale power generation supplier?

12 A You are speaking in today's world or in the
13 past?

14 Q You tell me. Any time that you had that
15 experience.

16 A Actually, I have no knowledge of that.

17 Q You are aware -- well, let me ask you this, could
18 you distinguish for me the characteristics of a traditional
19 utility generation facility from what is referred to as a
20 qualifying facility under PURPA?

21 A I thought I had already done that.

22 Q Maybe you need to do it for me again so I
23 understand the distinction.

24 A The traditional utility generator is under the
25 direction of the system operator. It varies its output

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1 according to the needs of the system, whereas a qualifying
2 facility, if it varies its needs at all, are not in
3 response to the system operator, but in response to the
4 load that it serves.

5 Q And the load that it serves would be the
6 integrated industrial host, if you will?

7 A Right.

8 Q In meeting that obligation, would it be fair to
9 say that the QF is a steam or thermal processing plant
10 first and a power plant second?

11 A Yes.

12 Q And likewise, would it be fair to say that the
13 traditional utility generation plant is in this sense not a
14 steam or thermal generation supplier but solely an
15 electricity supplier?

16 A Yes.

17 Q The WSCC has a dispute resolution process for its
18 members, does it not?

19 A It does.

20 Q Can you describe that process for us, how does it
21 work or how are issues brought to it. How does the process
22 work?

23 A I don't have very detailed knowledge of that. I
24 have not been involved in it. It hasn't been used very
25 often if at all. But generally, it's a matter of a -- the

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1 member system who has a dispute can bring that to the
2 dispute resolution process. It is addressed by various
3 bodies in WSCC, and if it's not able to be resolved there,
4 I guess eventually, it ends up with either the North
5 American Electric Reliability Council or the Federal Energy
6 Regulatory Commission.

7 Q You, in the beginning part of your answer, you
8 suggested that not only do you have limited experience but
9 you are not sure that this dispute resolution process has
10 been used ever. Is that because you are not aware of any
11 process that has been triggered during your tenure at the
12 WSCC?

13 A That's correct.

14 Q Would you be -- let's say tomorrow, PacifiCorp
15 brought a dispute that it was having because of a -- the
16 WSCC imposition of a penalty for its operations, to the
17 WSCC dispute resolution process. Would you automatically
18 or as a matter of course be made aware of that filing?

19 A Not necessarily, no.

20 Q So you would not likely have knowledge of any
21 such process if it had been brought?

22 A That's correct.

23 Q Now, do you advise the operations committee of
24 the WSCC?

25 A I coordinate their activities, yes.

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1 Q Would a dispute over the assessment of a penalty
2 over operations be brought up in the operations committee
3 or not?

4 A No.

5 Q If the operations committee had a dispute against
6 the California ISO, out of the control area of its
7 operations, would you be aware of it?

8 A Yes.

9 Q If the answer to that question is yes, why is it
10 that if the ISO brought a dispute about operations criteria
11 being imposed on it through the dispute resolution process,
12 you wouldn't be aware of it?

13 A You mentioned earlier, I believe, in your
14 questioning, that this involved the penalty. Now, if there
15 is a penalty involved, it could only be through the
16 reliability management system, and transactions or
17 activities under the RMS are confidential.

18 Now, I may be brought into it if necessary, with
19 my expertise and certification, but absent that, I don't
20 try to find out anything about RMS. I have signed a
21 confidentiality agreement not to release any information,
22 and to avoid doing it by accident, I try to avoid knowing
23 anything about it unless I have to.

24 Q All right. So, let me understand this. So for
25 an operations dispute that's outside of RMS, you would

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1 necessarily be part of the process of being aware of and
2 addressing that issue?

3 A Yes.

4 Q Now, with respect to RMS disputes for penalties,
5 as you have described them, that happened to trigger out of
6 an operations issue, would you be made aware that there is
7 a dispute, and you are saying you wouldn't investigate what
8 is behind the dispute, or you wouldn't be made aware of the
9 dispute at all?

10 A I may not be made aware of it at all.

11 Q All right. Has the operations group filed any
12 action against the California ISO or any other control area
13 concerning the net metering of qualifying facilities on
14 their systems?

15 A No.

16 Q During your tenure, has any penalty been imposed
17 upon the ISO or any other control area with respect to its
18 net metering of qualifying facilities?

19 A Not that I am aware of, no.

20 Q Are you aware of whether the operations committee
21 has received a recommendation from any entity disputing the
22 appropriateness of net metering of QFs in California prior
23 to the ISO's raising this issue?

24 A No.

25 Q Would you assume with me --

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1 MR. ALCANTAR: May I have a moment, your Honor,
2 off the record?

3 PRESIDING JUDGE: Sure.

4 BY MR. ALCANTAR:

5 Q Would it be fair to describe --

6 MR. ALCANTAR: I'm sorry, back on the record,
7 your Honor.

8 PRESIDING JUDGE: Yes.

9 MR. ALCANTAR: Thank you.

10 BY MR. ALCANTAR:

11 Q Mr. Comish, would it be fair to describe your
12 position in this action as "opposed," you personally being
13 opposed to the net metering of QF load and generation
14 behind the site boundary meter?

15 A No.

16 Q Have you conducted or has the WSCC conducted any
17 study as to the implementations of a policy that would
18 require the elimination of net metering for QFs?

19 A No, we have not.

20 Q Have you individually or has the WSCC
21 organizationally made any analysis of the impact of a
22 decision on encouraging new QF generation, or retaining
23 existing QF generation on the grid if net metering were
24 eliminated?

25 A No.

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1 Q Is it your opinion that a reduction in capacity
2 in California will not reduce the reliability of service in
3 the state of California?

4 A No, that's not my opinion.

5 Q In fact, a reduction of available capacity in
6 California would indeed reduce reliability of service in
7 that state in your opinion, would it not?

8 A On the basis of their current tight situation, I
9 would say any reduction would hurt, yes.

10 Q Earlier in your testimony, you mentioned the
11 reliability management system. I think you have an acronym
12 for it. RMS, yes?

13 A Yes.

14 Q What is the reliability management system?

15 A It's a FERC-approved contract, voluntarily signed
16 by members of WSCC, in which they commit themselves to
17 complying with the WSCC criteria, reliability criteria.

18 If they do not comply, they report themselves and
19 pay, or are assessed some sort of penalty or sanction.

20 Q They are or might be?

21 A Might be, are, depending on what phase of RMS we
22 are in and what particular criterion is involved.

23 Q The RMS resulted from a petition filing at FERC;
24 is that correct, an application?

25 A Yes.

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 Q And FERC approved the RMS filing as submitted by
2 the WSCC?

3 A I don't know if it was submitted, but yes, there
4 were changes and they approved it.

5 Q Were you involved in any way with the development
6 of the RMS?

7 A No.

8 Q But you are aware of it in what way, in what
9 context?

10 A It's a major program at WSCC. It's discussed at
11 many meetings.

12 Q Right. So you are aware of what FERC has
13 approved but you are not aware of what went -- what
14 assumptions went into the FERC's approval of the RMS; is
15 that correct?

16 A That's correct.

17 Q You have never reviewed the petition or
18 application made by the WSCC in support of the RMS; is that
19 correct?

20 A Well, there are many documents on our Web site.
21 As I have had time, I have downloaded those and looked at
22 them. But, actually, to say I have reviewed them enough to
23 be familiar with them, I would have to say no.

24 Q Well, let's probe a few things to see what your
25 familiarity is. When the WSCC petitioned to adopt the RMS,

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 are you aware of whether the FERC was informed that the
2 WSCC disputed the state of California's policies regarding
3 QF net metering?

4 A No, I am not aware of that.

5 Q Are you aware -- you are not aware, or you are
6 not aware of whether they were informed or whether you were
7 aware that they were not informed?

8 A I am not aware, either way, by strongly --

9 MR. WARD: Your Honor, excuse me, this is not my
10 witness, but I do have to object to the question. There's
11 no foundation laid as to whether the state of California
12 has a policy of a net metering that the WSCC would oppose,
13 or whether the WSCC proposes any policy on net metering.

14 MR. ALCANTAR: And I think this witness
15 acknowledged, your Honor, in earlier questioning, that he
16 understood that that was a policy of the state, and one
17 that the utilities have been operating under for 15 years.

18 I can rephrase the question, if you like. I can
19 also give you a reference to California's law in point.
20 But I think we can get over this issue pretty quickly.

21 PRESIDING JUDGE: I will overrule the objection.
22 You may answer.

23 MR. ALCANTAR: Thank you.

24 THE WITNESS: I have forgotten the question.

25 BY MR. ALCANTAR:

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 Q Okay, I'm sorry. Let's try it this way. Is it
2 accurate to say that FERC was not aware or made aware of
3 any dispute that the WSCC had with net metering as employed
4 in California or QF facilities?

5 A Well, since there was no dispute, they wouldn't
6 have been made aware of it.

7 Q Thank you. Very logical answer, thank you.
8 Now, in this proceeding -- and we will get to it
9 a little later, you have a position with respect to the
10 appropriate calculation of reserve criteria for loads
11 served by QF resources, do you not?

12 A Yes.

13 Q When the WSCC petitioned FERC to adopt the RMS,
14 did the WSCC inform the FERC of your interpretation, or did
15 it have an identical interpretation that it informed FERC
16 of in the calculation of reserves for qualifying
17 facilities' served load?

18 A There was no interpretation related to this at
19 this time. We -- as a matter of fact, one of the first
20 criteria that was put into the RMS program was the
21 operating reserve. We had our definition, and that was
22 what was put into the program.

23 Q And just so I understand, when the RMS system was
24 developed by the WSCC, that was in consultation with the
25 operations committee and approved by the board of trustees;

1 is that correct?

2 A It was more than the development committee, it
3 was with the operations committee. Yes, there were
4 operations committee members involved in the development of
5 the program, and it was ultimately approved by the board.

6 Q Your point is, the full force of the WSCC, every
7 committee that it has that could have been involved, and
8 ultimately, the board of trustees reviewed and approved
9 this filing, this petition. Can you describe for me your
10 understanding of what authority or jurisdiction the WSCC
11 has to require end-use customers to gross meter their
12 system -- maybe I ought to start here. We have got a term
13 that we have been using called "net metering." Could you
14 describe for me what your understanding of the term "gross
15 metering" would be?

16 A Well, it probably does not agree with my
17 definition of true gross metering, but as I understand it
18 in this application, we are referring to actually measuring
19 the net output of the generating plant and the net load of
20 the lowered net demand of the load.

21 Q Let's try to break it up. Let's assume, get this
22 picture in our heads, that we have a -- excuse me, an
23 industrial facility that has two generators and two sources
24 of load -- two electric motors as an example. Under net
25 metering, at the site boundary meter, the single meter for

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 this facility, this integrated facility, we would determine
2 only after electrons flowed from the generator to the load,
3 or net of that number, what happened at the meter, whether
4 there was excess power delivered to the grid, or
5 insufficient power so it was supported from the grid at
6 that single meter. That's net metering; is that correct?

7 A Yes.

8 Q Would you agree that gross metering means that in
9 this same picture we have with two generators and two load
10 sources, that each one of those loads, either generator, is
11 separately metered and separately identified in terms of
12 its particular load, second particular load, first
13 particular generation, second particular generation?

14 A Yes, although I would modify that slightly to
15 indicate that where you talked about identifying individual
16 generators and loads, I suppose it would also be possible
17 to combine the two generators or combine the two loads.
18 The result would be similar.

19 Q While it's possible, are you -- is it your
20 position in this case that gross metering would require
21 revenue quality meters on each individual load and each
22 individual generator?

23 A Let me clarify something here. I have no
24 position interpreting metering. Okay. My position relates
25 to calculation of operating reserves to meet WSCC

1 criteria.

2 Q In order to determine what loads we have on the
3 system to measure that reserve criteria, how do we define
4 it, don't we define it by metering the loads, by your
5 understanding?

6 A No.

7 Q By your recommendation?

8 A No.

9 Q We have no interest in what the load actually
10 is. We have an interest only in what the load might be?

11 A No. By definition, the load will equal resources
12 being used to serve the load. If I meter the resources, I
13 don't need to meter the loads as well.

14 Q So in the situation we have just described, you
15 don't need to know anything about the load in this
16 two-load, two-generator facility. You just need to know
17 about the generation?

18 A Yes.

19 Q What if the generation that is provided to the
20 grid is only after it serves this load, does that affect
21 your calculation of reserve?

22 A Certainly.

23 Q It's true, is it not, that the WSCC criteria that
24 you are aware of expressly allows the net metering of
25 generation and so-called auxiliary load consumed at a

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 generation site or generation station?

2 A I don't believe it expressly permits that, no.

3 Q Does it permit the net metering of station load?

4 A The criteria don't address metering to that.

5 MR. ALCANTAR: Just a moment, your Honor.

6 BY MR. ALCANTAR:

7 Q I would like to move to your consideration of the
8 definition of establishment of the control area for a
9 moment.

10 A Okay.

11 Q Under the WSCC criteria, a control area is
12 required or not required to determine its control area firm
13 load in real-time?

14 A It is required in terms of developing its load
15 responsibilities. We would have to know its firm load as
16 part of the calculation.

17 Q In determination of reserves, is that a
18 requirement?

19 A Yes.

20 Q So it has to determine its real-time actual load
21 instantaneously to meet your criteria?

22 A Yes.

23 Q Does the WSCC criteria require this real-time
24 assessment, or may it determine control area firm load
25 based upon forecasting of generation supply and load?

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 A When the control area is setting up its operating
2 program the next day, it has no way to go except by
3 forecast. But at the same time, the metering should be
4 there.

5 Q Do you acquire reserves in anticipation of a
6 load, or do you acquire reserves real-time of the load?

7 A Yes.

8 Q When you acquire them in real-time, is that
9 because you prepared for that eventuality or just because
10 you happen to be able to mysteriously find them
11 instantaneously, the reserves?

12 A Generally, you prepared for them, yes.

13 Q That would be in a forecast then, would it not?

14 A In a forecast. However, as you get closer and
15 closer in real-time, you are able to forecast better. When
16 it comes to measuring what you actually have, you have the
17 metering there in real-time to do it to determine whether
18 you need to make adjustments or not.

19 Q I am intrigued by your flipping between operating
20 and planning with me. I am trying to understand, from an
21 acquisition of reserves standpoint, when I am planning to
22 acquire reserves, I am doing them on a forecast basis
23 first; right?

24 A Yes.

25 Q Then just like every marketplace, once I have

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 made my forecast, I live or die with the results of my
2 forecast, do I not?

3 A To the extent you are unable to adjust in
4 real-time to changes, but that's part of the reason for the
5 planning is to plan some flexibilities.

6 Q Does the WSCC have restrictions on the
7 methodology that a control area employs, either on a
8 forecast basis or a real-time operational basis, to
9 establish its reserve margins or reserve requirement?

10 A I do not have restrictions on the methodology so
11 long as the results match what we are after in the
12 criteria.

13 Q Does the WSCC have a methodology that measures or
14 reviews the margin of error between the forecast utilized
15 between the control operator and its actual needs for
16 reserves?

17 A No.

18 Q In your judgment, is the ISO currently operating
19 in the California operating system in a reliable manner?

20 A I would have to say as far as I know, they are,
21 and that there have been no major system upsets or
22 disturbances that spread to other parts of the
23 interconnection.

24 Q You are aware, are you not, that the ISO does not
25 currently meter all on-site electric energy consumption

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 that is satisfied by internal generation from behind the
2 meter facility?

3 A I am aware of that, yes.

4 MR. ALCANTAR: Just one moment, your Honor.

5 BY MR. ALCANTAR:

6 Q Has the ISO sought a waiver from the WSCC
7 requirements with respect to this net and gross metering
8 issue?

9 A I am not even sure what they would seek a waiver
10 for. We have no requirements regarding metering.

11 Q Have they sought a waiver from you with respect
12 to the use of site boundary meter, net metering information
13 for the calculation of reserves?

14 A Again, we have no metering requirements. They
15 couldn't seek a waiver from us.

16 Q So I take it because of that, the WSCC has not
17 fined or even warned the ISO of its current practices being
18 in violation of some WSCC criteria for this net metering
19 operation?

20 A There is no metering requirement in which they
21 can be in violation. There is only the operating reserve
22 requirement which they may be violating because they don't
23 have the direct metering.

24 Q This is a refinement that's been lost on me in
25 your last bit of testimony. So let's see if we can

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 understand your point now. So there's no metering
2 requirement, but if they don't meter properly, there's a
3 reserve requirement problem?

4 A Yes.

5 Q So let's get over the stridency of keeping
6 metering segregated from your reserve concerns. But in
7 your parlance, you are aware of the metering, the net
8 metering methodology that's currently employed in
9 California; correct?

10 A That's correct.

11 Q You are aware of reserve calculations that are
12 predicated in part upon that net metering methodology;
13 correct?

14 A I am aware of that potential. I don't know
15 exactly how the committee, ISO calculates its reserve
16 requirements, but if it is limited to the load of which it
17 has knowledge, and it does not have knowledge of the full
18 amount of the load because of the net metering problem,
19 then there's a potential problem.

20 Q There's a potential problem, but as far as you
21 know, no action has been taken by the WSCC to warn or
22 penalize the ISO for this potential act?

23 A Not at this point, no.

24 Q Tell me, where do you understand the wires
25 jurisdiction of the WSCC system to end? Where does it

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 stop?

2 A It stops at the DC links to the eastern
3 interconnection. Other than that, I mean, everything
4 within WSCC in terms of bulk power system is under our
5 jurisdiction.

6 Q Okay. Does it -- when you are at home, does it
7 extend to your microwave in your kitchen?

8 A No, it doesn't. Let me clarify that.

9 Q All right.

10 A The distribution system which serves the load
11 that you are talking about is connected to the transmission
12 system, and that's the full WSCC interconnection. To the
13 extent that events on the distribution system can affect
14 the overall reliability of the interconnection system, then
15 we have a concern.

16 Now, our concern does not normally go down to the
17 level of distribution system quality, or service
18 reliabilities or anything like that. But to the extent
19 that events there can affect the interconnection, then we
20 have a concern.

21 Q So, it extends to the distribution system?

22 A In some cases, yes.

23 Q If I have a facility that's served at primary
24 transmission voltage, where does the WSCC system stop, at
25 the meter?

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 A I am not sure I can answer that question. We
2 never looked at it as the WSCC system stops anywhere.

3 Q So if I understand that last answer then, you
4 could have rules, requirements, penalties that extend
5 beyond a customer's service meter and interface with the
6 distribution or transmission system; is that correct?

7 A I guess we could. I don't know that we do, but
8 we could if we felt that it was necessary for the
9 reliability interconnection.

10 Q You consider that authority to be from what
11 source?

12 A From the agreement and bylaws of WSCC.

13 Q Do you know of any end user who has agreed in
14 bylaws that you may affect their private property behind a
15 site boundary meter?

16 MR. STRAIGHT: Objection; that calls for a legal
17 conclusion.

18 MR. ALCANTAR: I have asked what he knows.

19 MR. STRAIGHT: Okay.

20 PRESIDING JUDGE: No, I will overrule the
21 objection.

22 THE WITNESS: I don't know.

23 BY MR. ALCANTAR:

24 Q Does the criteria that you talked about with
25 respect to reserve requirements and its dependency or

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 interface with net meter requirements change depending upon
2 the size of the loads or the generation?

3 A No, the whole dependency of the size there
4 relates to whether a control area's largest contingency, or
5 the calculation of resources being used to serve load
6 responsibilities is the determining factor. The size of
7 the load itself doesn't enter into it.

8 Q So you would apply the same rules to, say, less
9 than 1 megawatt load as you applied to a more than 1
10 megawatt load?

11 A I would have to say, yes, there is no basis for
12 separating rules.

13 Q Do you review or have any awareness of the
14 filings that the ISO makes before this Commission related
15 to its tariff?

16 A No.

17 Q What is your familiarity with standby service
18 rates in the state of California?

19 A I'm sorry, standby service rates?

20 Q Standby service rates.

21 A Oh, rates.

22 Q In the state of California.

23 A I have no knowledge of those rates.

24 Q Are you aware, as an employee of the WSCC, how
25 operational customers in California procure reserves from

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 their standby customers?

2 A I guess I wasn't even aware that the utility
3 distribution companies were obtaining reserves. They are
4 part of the California ISO area, and a control area has
5 reserve responsibilities.

6 Q If I sign a contract with a local utility to
7 provide me with standby service in the event of an outage
8 of my generator, do you have that in your head?

9 A Yes.

10 Q What would be, in your mind, the responsibilities
11 of the utility in terms of securing reserves to meet the
12 obligations of that class of customers of standbys who have
13 signed this contract?

14 A They would be either obligated to obtain the
15 resources themselves or to let the control area operator
16 know that that obligation exists and to add it to the
17 control area's obligation.

18 Q How would they calculate that obligation?

19 A It becomes a nondemand obligation, I suppose.
20 Whatever the generator is putting up, they would have to be
21 prepared to back up.

22 Q For each and every single generator who needed
23 standby service?

24 A Probably not all simultaneously, no. I suppose
25 they could use a calculation similar to our criteria.

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 Q What would your criteria be?

2 A It's either the largest contingency or 5 percent
3 of the hydro generation plus 7 percent of the thermal
4 generation being used to serve the load.

5 Q Is the utility, under your regulations, entitled
6 to look at the reliability for -- I'm sorry, let me start
7 over.

8 Is the utility, under the WSCC regulations,
9 entitled to consider the likelihood of the standby service
10 customer demanding power from the utility? Or, I'm sorry,
11 from either the utility or the control area manager under
12 its standby service?

13 A Well, they have the right to consider whatever
14 they want to. I am not sure what you mean exactly.

15 Q Under your criteria, do they have that right?

16 A You mean can they say -- I can assume that this
17 plant has zero forced outage rate; therefore, I have to
18 carry no reserve for it.

19 Q That it has a realistic forced outage rate?

20 A No, that would not match our criteria.

21 Q So under your criteria, that utility, under this
22 hypothetical we are talking about, would assume that the
23 generator was never operating and the load was always fully
24 required?

25 A No, I don't see how you would arrive at that

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 conclusion.

2 Q I am trying to figure out how your reserve works,
3 from what you told me.

4 A Our reserve calculation does not assume that no
5 generation is ever available. The reserve calculation
6 assumes that sometime somewhere, the units could trip off,
7 and that the amount of reserve that we are asking the
8 control area to carry will be adequate to cover for that
9 loss.

10 Q All right. Let's assume that we have a utility
11 system that has a standby service customer class, not a
12 difficult assumption; correct? That's what they all have.

13 A Correct.

14 Q In that class, there is even a subclass that has
15 qualifying facility generation serving the load. You have
16 that in your mind?

17 A Yes.

18 Q Under your criteria, is the utility barred from
19 assessing the fact that this subclass with qualifying
20 facilities service supplying the load has a greater or
21 lesser reliability of online service, so that they may
22 determine the level of standby service required for reserve
23 calculation purposes?

24 A If I am following your question, I think the
25 answer is no. They do not have that right.

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 Q So, if that logic holds, the utility must assume,
2 must it not, under your reserve criteria as you are
3 testifying to today, that all of those generators in the
4 standby service criteria that they are evaluating are not
5 operating; is that not correct?

6 A No, that's not correct.

7 Q What can they assume then about the operation of
8 those facilities if they can't take them into
9 consideration?

10 A Well, I don't know what they want to assume.
11 What they are required to obtain is adequate operating
12 reserve to meet our criteria. That's -- let's say these
13 are all thermal generators. Then they would have to
14 maintain 7 percent of their total output in reserve.

15 Q By "their," what do you mean by "their"?

16 A By those standby generators you are talking
17 about. They would only have to maintain 7 percent of that
18 total, assuming they are all thermal generators.

19 Q So you would assume that 7 percent of the total
20 generation of this standby class is the reserve margin
21 generation, if it was all thermal?

22 A Effectively, that would be it. In actuality,
23 what I want the control area to do is look, 7 percent of
24 the total thermal generation is the reserve requirement.

25 PRESIDING JUDGE: Why don't we take a recess at

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 this point, 10 minutes. Before we do that, off the
2 record.

3 (Recess.)

4 PRESIDING JUDGE: The hearing will come back to
5 order.

6 MR. ALCANTAR: Your Honor, if I could seek your
7 indulgence for just a moment. Based upon our
8 off-the-record discussion, I would -- just showing you
9 where my priorities really are, would like to request of
10 you and the parties the indulgence to recess these
11 proceedings, should we not finish otherwise before then, at
12 4:00 p.m. on Friday, May 4.

13 PRESIDING JUDGE: Are there any objections to
14 that? All right. Very well, if we continue with the
15 hearing to that time, we will recess at 4:00 on Friday.
16 All right.

17 MR. ALCANTAR: Thank you, your Honor.

18 BY MR. ALCANTAR:

19 Q Good day, Mr. Comish. When we broke, you were
20 identifying the reserve requirements related to the WSCC
21 criteria, the 7 percent of thermal plus 5 percent of hydro
22 serving the load and/or the single largest contingency?

23 A It's or the single largest contingency, whichever
24 results in a greater amount.

25 Q All right. We were also trying to contrast that

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 requirement and what it would mean in terms of the
2 calculation of a class of standby customers who had QF
3 generation serving their load. I would like to test the
4 understanding of your last comment, where you were trying
5 to correct us into the right framework of looking at the
6 standby load in relationship to the reserve requirements.
7 Was it your assumption that the reserve requirements for
8 the system would be larger than the requirements associated
9 with this standby subgroup we were talking about?

10 A That would be a logical conclusion, yes.

11 Q So let's keep in our assumption that the system
12 is a large -- an SCE-type system, and the standby service
13 class is a smaller subset of that class, and a further
14 subset of the standby service class is a class served by QF
15 generation.

16 In that instance, in that circumstance, can you
17 tell us whether or not there would be a material difference
18 to the reserve calculation, whether or not you knew from
19 net metering or gross metering about this subclass of
20 QF-served load?

21 A There would be a difference, yes.

22 Q How would that difference matter?

23 A The difference would matter --

24 Q Under what set of circumstances?

25 A In difference of the total amount required using

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 net metering, there is a reserve that does not appear to
2 the control area operator. Yet, if the generator serving
3 that load were to trip off, the control area operator would
4 be obligated to immediately serve that load.

5 Q Let's try it this way. Remember we are SCE now,
6 right?

7 A Okay.

8 Q We are a large system, our single largest
9 contingency is, let's assume it's 12,000, or 1200
10 megawatts.

11 A Okay. Let me point out something here. SCE has
12 no reserve obligations.

13 Q Okay.

14 A They are not a control area.

15 Q Let's assume that the control area we are talking
16 about is an SCE-type utility-sized control area; right?

17 A Okay.

18 Q Assume with me that their single largest
19 contingency is 1200 megawatts.

20 A All right.

21 Q Let's also assume that all of the load behind the
22 meter that you are talking about is 300 megawatts. Tell me
23 what difference your knowledge of the standby service load
24 served by QFs has in terms of the determination of the
25 reserve requirement imposed by the WSCC on this assumed

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 service territory or control area.

2 A If the 1200 megawatt largest contingency is the
3 ruling criteria for that control area, then it would have
4 no impact.

5 Q All right.

6 A In other words, if 1200 megawatts is larger than
7 5 percent hydro plus 5 percent thermal, then there would be
8 no impact.

9 Q Let's now further assume that we are in the same
10 system, instead of the single largest contingency criteria
11 controlling, that we are going to make it simpler, we are
12 wholly a thermal system, no hydro, and our -- the total
13 load reported on our system at meters, on our system,
14 reflecting firm load on the system, is -- if I can do this
15 simply for you, is 10,000 megawatts. Your reserve
16 requirement would be 7 percent, correct, of that 10,000?

17 A Yes.

18 Q So, in that instance, we would have to procure
19 700 megawatts of reserves, or at least plan for them?

20 A You say 1200 megawatts is no longer the largest
21 contingency?

22 Q Yes, I took that off the tail.

23 A If the largest contingency is something less than
24 700 megawatts.

25 Q Right.

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 A In that case, there would be an effect on the
2 reserve calculation, because the 300 megawatts of net
3 metered load, if it didn't appear, of course, you wouldn't
4 be able to take it into account. If it did appear, it
5 would be 300 megawatts added to the 10,000. Or does the
6 10,000 include the 300?

7 Q So that's the differential we are talking about,
8 300 on top of 10,000 hypothetical, the difference between
9 your assessment that your firm load obligation extends
10 behind the site boundary meter to account for this 300
11 megawatts that you say might come onto the system?

12 A Yes.

13 Q Now, in that circumstance, help me understand,
14 didn't you just assume that the entirety of the generator
15 serving that 300 megawatts of load was always offline?

16 A No, I didn't.

17 Q How could you not assume that if you had to add
18 it as firm load obligation on the system to get to 10,300?

19 A Well, there's no doubt the firm load obligation
20 is there. If any of that trips off, the control area has
21 to offer it.

22 Q Didn't you just assume that it all trips off?

23 A No, I didn't. The calculation of the reserve
24 requirement would be 10,300 megawatts times 7 percent.

25 Q Assuming -- I am just baffled by your point. If

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 I have to assume that the full 300 megawatts is a firm
2 obligation on the system, don't I correspondingly have to
3 assume that none of the generation is serving that load
4 associated with it as a QF?

5 A I don't see how you assume that. If you make
6 that assumption for the 300 megawatts, you would have to
7 make the same assumption for the 10,000. We are not saying
8 that you have to maintain 1 megawatt of reserve for every
9 megawatt of generation.

10 Q For the 10,000 that's not served by QFs, I
11 understand your point. But it strikes me -- and I don't
12 want to be argumentative about it, but you have just gone
13 through the calculation now, I think this is the third
14 time, we are under our hypothetical, the QFs serving the
15 load behind the meter of 300 megawatts, and you have just
16 added 100 percent of that load, 300 megawatts, onto the
17 firm load, the 10,000, onto the system, have you not?

18 A Yes, I took 7 percent on that and added it onto
19 the reserve --

20 Q I appreciate that you have added 7 percent, but
21 you have assumed, for the purpose of load, to go into your
22 7 percent calculation, that none of the generation, QF
23 generation, is serving that 300 megawatts; isn't that
24 correct?

25 A No, I haven't. I have not made that assumption

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 any more than I have made the assumption that the other
2 10,000 megawatts of firm load is being served by generation
3 that could trip off simultaneously.

4 Q Would it be fair to characterize a portion of
5 your deposition responses that the WSCC, with respect to
6 the methodology used by a particular control area operator
7 to procure reserves, is in part based upon a -- "if you
8 don't tell me, I won't enforce" rule?

9 A It has to be to some extent, yes, because we
10 don't have knowledge of the details of every system.

11 Q If the ISO were to calculate operating reserves,
12 requirements, as you have just suggested, on a gross load
13 basis rather than a net load basis, would it tend to need
14 to procure more ancillary services under your reserves or
15 less?

16 A It would be more.

17 Q Would you agree that we are in an area of
18 capacity scarcity in California and in the West?

19 A Yes.

20 Q Would your position lead to more frequent
21 declarations of system emergencies because of the
22 requirements to acquire more ancillary and reserve
23 services?

24 A It could, yes.

25 Q Now, from a policy perspective, reserves are

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 secured, at least in part, to cover load variations; is
2 that not correct?

3 A There is some component for that purpose, yes.

4 Q And based upon your earlier statements, I
5 understand it that control area compliance with the WSCC
6 operating reserve requirements -- criteria, excuse me,
7 operating reserve criteria, is established based upon
8 actual load incurred; is that correct?

9 A Yes.

10 Q Not forecast, but actual?

11 A Yes.

12 Q The accuracy of the load forecast concerning
13 reserves, the anticipated reserves that you would need to
14 secure for actual time periods, impacts the control area's
15 compliance or noncompliance with the WSCC criteria; is that
16 correct or not?

17 A Only if they are unable to adjust in the
18 real-time market to whatever circumstances might change.

19 Q So, if I follow the logic of that statement, I
20 would be -- if I were solely interested in avoiding WSCC
21 penalties or liabilities for failure to meet the criteria,
22 I would be much happier oversubscribing ancillary service
23 and reserve requirements, would I not, forecasting them to
24 be of greater need than less need?

25 A If they were free, yes.

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 MR. ALCANTAR: Your Honor, for the ease of the
2 questioning to this witness, I have prepared -- yes, I have
3 prepared a document, cross-examination exhibit. It's four
4 points long. Ms. Sherif will pass that around to the
5 parties. I would like to ask some questions arising from
6 this hypothetical. I thought it would be more useful to
7 have the hypothetical in front of the witness and in front
8 of the parties.

9 PRESIDING JUDGE: Do you want this marked as an
10 exhibit?

11 MR. ALCANTAR: Yes, please, your Honor. I am not
12 sure of the next in our order CAC --

13 MS. KEY: I have -- 13 would be your next.

14 MR. ALCANTAR: Thank you.

15 MS. KEY: But I was wrong on the ISO because they
16 added one on me.

17 PRESIDING JUDGE: Is it 12; is that right?

18 MR. ALCANTAR: We have one vote for --

19 PRESIDING JUDGE: It's your exhibit.

20 MR. ALCANTAR: I am trying to get that clear.

21 Our records suggest that the prepared rebuttal testimony of
22 Mr. Ross was CAC-12, your Honor, so this should be next in
23 order 13.

24 PRESIDING JUDGE: Off the record.

25 (Discussion off the record.)

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1 PRESIDING JUDGE: Back on the record. We are
2 marking this CAC-13 for identification.

3 (Exhibit CAC-13 identified.)

4 MR. ALCANTAR: Thank you, your Honor.

5 PRESIDING JUDGE: The document furnished by CAC
6 counsel has the heading "hypothetical assumptions for the
7 determination of customer class contribution to operating
8 reserve requirement."

9 All right. CAC-13 for identification.

10 MR. ALCANTAR: Thank you, your Honor.

11 BY MR. ALCANTAR:

12 Q Mr. Comish, do you have this document in front of
13 you?

14 A Yes.

15 Q When you have taken a few moments to review it
16 and have it committed as best you can to memory?

17 MR. STRAIGHT: Counsel.

18 PRESIDING JUDGE: Yes?

19 MR. ALCANTAR: Yes.

20 MR. STRAIGHT: At the lunch break, if there's any
21 way to fax that to me, I would appreciate it.

22 MR. ALCANTAR: We will see what we can seek Staff
23 to do, or impose on Staff to do.

24 MR. STRAIGHT: All right.

25 THE WITNESS: Okay, I have read the

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 hypothetical. I have to point out that this is not the way
2 we would normally calculate anything having to do with the
3 reserve or load responsibility. But go ahead and ask your
4 questions.

5 BY MR. ALCANTAR:

6 Q I am actually going to, since it's so close to
7 the lunch hour, move to another area and come back to
8 this.

9 I would like you to help me understand the
10 calculation of penalties associated with the failure to
11 meet operating reserve requirements, as the WSCC would like
12 to establish them, or at least as you would like to
13 establish them for the WSCC.

14 Let's start with -- we have a WSCC member,
15 thermal generation system, 100 percent thermal generation,
16 underforecasted its load responsibility in each and every
17 hour of the month by 1 percent -- I'm sorry, 10th of a
18 percent. .1 percent. And there's 744 hours in this
19 particular month. In an hour where the forecasted load
20 responsibility was 12,000 megawatts, would the operating
21 reserves procured, based upon your suggestion of the WSCC
22 criteria, be this 7 percent of the 12,000 figure, or 840
23 megawatts?

24 A Are you saying procured in advance?

25 Q What they purchased in that, what they actually

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 needed to require and did acquire in that hour?

2 A Is based on -- and the 12,000, again, was that a
3 forecast or an actual?

4 Q This -- let's start with it being on a forecasted
5 basis of what they are acquiring, 12,000 megawatts. It's
6 their forecasted load responsibility. Then they missed the
7 forecast; right?

8 A Yes.

9 Q And actuals are higher than what they assumed by
10 this 10th of a percent.

11 A All right.

12 Q Let me just start with -- they forecasted the
13 responsibility for 12,000 megawatts, and based upon that
14 forecast, if that were the sole basis that we were looking
15 at for their operating reserve requirement, the required
16 reserves would be 7 percent of that figure; is that
17 correct, again, assuming this is a total thermal system?

18 A Well, it also assumes that there are no firm
19 imports or exports, that it's all internal generation for
20 12,000 megawatts of thermal.

21 Q That's correct. I am trying to simplify this as
22 much as I can so I can understand your penalty assessment
23 on this particular operation, okay? So with those
24 assumptions in place, let me confirm with you. 7 percent
25 of the 12,000 would be the measure that I would use for

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 acquiring reference, at least on the forecasted basis;

2 correct?

3 A Yes.

4 Q So I would be purchasing 7 percent of 12,000 as
5 840 megawatts. You can check my math later, if you want.

6 A Okay.

7 Q Now, in the actual hour that we are trying to
8 deal with, the load was 12,012 megawatts, because they were
9 underforecasted in that hour, and every hour of the month,
10 by a 10th of a percent, so the operating reserve
11 requirement in that situation should be 12,012 times the 7
12 percent; correct?

13 A Yes.

14 Q Is the WSCC member out of compliance in this
15 particular hour that we identified in their reserve
16 requirement?

17 A They are by a small amount, yes.

18 Q The reserve deficiency would be reserved as what?

19 A In this case, it would be megawatts.

20 Q So it would be .84 megawatts?

21 A That's correct.

22 Q The other feature in your regulation has a
23 percent deficiency. How would that be determined? Are you
24 familiar with the term "percent deficiency" corresponding
25 with the "reserve deficiency"?

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1 A You say that's in the reliability management
2 system or in the criterion?

3 Q Yes, it's in the RMS.

4 A Well --

5 Q You are not familiar?

6 A I am not that familiar with RMS.

7 Q Now, if we assume that this WSCC member is out of
8 compliance by this .84 megawatts or 1.8 percent, or a 10th
9 of a percent, in each and every hour of the month, let's
10 assume that their percentage deficiency during that month
11 would be 99.99 percent, that would be a 10th of a percent
12 they are missing, what level of noncompliance does this
13 assumption reflect under the RMS that you filed with FERC,
14 is this a level 1, 2, 3, 4?

15 A The level depends on not only the number of times
16 that you violate, but the magnitude by which you violate.
17 And I am afraid I don't know that much about where this
18 would end up on that scale. Assuming, of course, that the
19 control area would report it for a 28.4 megawatt violation,
20 I am frankly having trouble how they would manage to make
21 such a small area exactly with that much every hour of the
22 month.

23 Q Again, it's a hypothetical. I am trying to
24 decide what this penalty would be if we identify a system
25 that has that level of error in it. So bear with me.

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 MR. ALCANTAR: Your Honor, might I ask that we
2 take a recess a bit earlier. I think there's another
3 witness that would help this witness.

4 PRESIDING JUDGE: I think this is a good time for
5 a recess. The reporter needs a recess now.

6 MR. ALCANTAR: Okay.

7 PRESIDING JUDGE: We will recess to 1:00 p.m.

8 (Whereupon, at 12:00 p.m., the hearing was
9 recessed, to be reconvened at 1:00 p.m. this same day.)

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1 AFTERNOON SESSION (1:00 p.m.)

2 Whereupon,

3 J.W. (BILL) COMISH

4 resumed the stand and, having been previously duly sworn,
5 was examined and testified further as follows:

6 PRESIDING JUDGE: All right. The hearing will
7 come back to order.

8 All right, Counsel, if you are ready, you may
9 resume your cross-examination.

10 MR. ALCANTAR: Thank you, your Honor.

11 CROSS-EXAMINATION (Continued)

12 BY MR. ALCANTAR:

13 Q Mr. Comish, when we broke, we were talking about
14 the penalties that would be imposed upon a certain
15 hypothetical or assumed utility system, control area
16 system, which was out of compliance by .84 megawatts, or
17 less than a 10th of a percent of a particular hour; do you
18 recall that?

19 A Yes.

20 Q There are sanctions, are there not, in the WSCC
21 reliability management system for such "violations," if you
22 will, of the WSCC standards?

23 A Yes.

24 Q Under the hypothetical I have given you, would it
25 be correct that this is a so-called level 1 noncompliance

1 that we have described?

2 A I believe it would be. I don't have the table
3 showing noncompliance levels, but yes, I think it would
4 probably be level 1.

5 Q I'm sorry, did I not provide you a copy of the
6 compliance tables before lunch?

7 A You just gave me an assessment of sanctions,
8 number of occurrences at a given level, but there was
9 another table that you showed me and then took back.

10 Q I'm sorry about that. Let's see --

11 MR. ALCANTAR: May I approach, your Honor?

12 PRESIDING JUDGE: Yes, you may.

13 THE WITNESS: I think this is the same document I
14 already have.

15 BY MR. ALCANTAR:

16 Q Okay. Excuse me, sorry. I am falling over.
17 Will that one help you?

18 A Yes.

19 Q Mr. Comish, have you been able to recall now
20 whether or not the type of noncompliance we have described
21 would be referred to as a level 1 noncompliance event?

22 A I believe it would be, yes.

23 Q What is your understanding of the level of
24 penalty that would have been assessed under this
25 hypothetical for the level 1 violation?

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 A This would fall in the category of four more
2 violations, and the cost for level 1 is the higher of \$2000
3 or \$2 per megawatt of the sanction measure.

4 Q So let's assume that during the month, this
5 hypothetical operating system was .1 percent, 1/10 of a
6 percent, off in every hour; that's the .84 megawatts times
7 774 hours in this assumed month, times the \$2 level. That
8 would be the proper level of the penalty, would it not,
9 four more times, but it was every hour of the month?

10 A Yes, but in this case, I think it would be \$2000
11 rather than \$2 per megawatt.

12 Q Because the \$2 per megawatt calculation that I
13 gave you would be less than \$2000; right?

14 A Right.

15 Q Now, assume with me the procurement cost for
16 operating reserves in the month we have just talked about
17 is \$150 per megawatt-hour in one, and then we have an
18 identical month the following month, where procurement
19 costs for the reserves is \$30 per megawatt-hour. Is the
20 calculation of the WSCC penalty the same?

21 A The calculation of the penalty has nothing to do
22 with energy cost.

23 Q Right. If this control area operator that we
24 have used, this assumed one, were to underforecast its
25 load, each and every hour, so that the percent efficiency

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 was greater than 90 percent -- I'm sorry, less than 90
2 percent -- in other words, they were off 10 percent every
3 hour, would the total monetary penalty to them be \$20,000 a
4 year based upon this \$2000 a month charge?

5 A Well, now, you have changed the picture here.
6 What is the percentage of noncompliance?

7 Q Yes.

8 A They are complaint less than 90 percent of the
9 time?

10 Q I am trying to find out where is the bottom line
11 on level 1 failures to comply.

12 A I believe that table you showed me shows that if
13 they are compliant 90 percent or greater, but must be less
14 than 100 percent, then it's the level 1.

15 Q I would like you to return to what would have
16 been introduced a while ago, Exhibit CAC-13. Do you have
17 that in front of you?

18 A Yes.

19 Q Let me just modify with you some terminology that
20 I think will make this more understandable to you and to
21 all of us. Let's say that point 3 on this hypothetical
22 says instead of "coincident system demand," we replace it
23 with the words "load responsibility"?

24 A All right.

25 Q In bullet 4, same change, strike "coincident

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 system demand" and use "load responsibility" as the term.

2 Is the calculation or the figures that I would use to
3 calculate total system operating reserve under this, under
4 this hypothetical, the 12,404 megawatts times 7 percent?

5 A You had three customer classes here. Are they
6 all firm customers?

7 Q Yes.

8 A Then the load responsibility is 12,404 megawatts,
9 that would be the basis of the calculation, yes.

10 Q Would the contribution to that total by class C,
11 the total reserve, be 9, representing the megawatts, times
12 .07, to equal .63 megawatts? Would that be the right
13 calculation?

14 A Assuming that it's all thermal generation, yes.

15 Q Would the contribution by the other classes, A
16 and B, be calculated in the same manner, just using their
17 respective coefficient?

18 A Well, I am going to make a leap here and assume
19 we can get the same final total by taking percentages of
20 each class. That is not the way we calculate it.

21 Q Assuming that math works out though, this is the
22 way we calculate it; correct?

23 A Yes.

24 Q Thank you. Are you familiar with the -- let me
25 start over.

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 Let me ask you if you agree or disagree with the
2 following definition: load is the amount of electric power
3 delivered or required at any specified point or points on a
4 system.

5 A That's an incomplete definition, but it's not
6 entirely wrong.

7 Q Would you agree with this definition of a system:
8 a combination of generation, transmission and distribution
9 components comprising an electric utility or group of
10 utilities?

11 A That sounds reasonable, yes.

12 Q Now, your familiarity with the Federal Power Act
13 and with PURPA, does it extend to a level of understanding
14 that a qualifying facility is expressly not an electric
15 utility. Do you know that or not?

16 A I don't know that, no.

17 Q Do you know the definition of "load" relied upon
18 by the ISO in comparison to what I have just asked you in
19 terms of definitions of "load"?

20 A Well, I think as far as I can see, they are
21 relying on the WSCC definition of load responsibility,
22 which is considerably broader than that definition you read
23 earlier.

24 Q So, do you know if the WSCC has a different
25 definition of "load" than that used by the NERC?

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1 A I don't know that, no.

2 MR. ALCANTAR: Let me have just a moment off the
3 record, your Honor. I believe I am finished.

4 PRESIDING JUDGE: Off the record.

5 (Discussion off the record.)

6 PRESIDING JUDGE: Back on the record.

7 MR. ALCANTAR: Thank you, your Honor, I have
8 completed my cross.

9 PRESIDING JUDGE: Further cross-examination?

10 MS. KEY: Yes.

11 CROSS-EXAMINATION

12 BY MS. KEY:

13 Q Good afternoon, Mr. Comish. I am Jennifer Key,
14 an attorney representing Southern California Edison
15 Company. I will make every effort not to revisit areas
16 Mr. Alcantar visited, but some may overlap. I would just
17 ask a clarifying question.

18 In this case, one of your roles is to provide a
19 definition of "firm control area load." Will you define
20 that term for me?

21 A Yes. That would be customer demand within the
22 control area that is not normally interruptible that is
23 under contractor tariff or other means.

24 Q In interpreting "firm control area load" and the
25 concept of firm control area load responsibility to answer

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 the ISO's question, did you consult with either the WSCC
2 board or the operating committee?

3 A No.

4 Q Okay. If you had consulted with the operating
5 committee, would you have expected some disagreement with
6 your interpretation?

7 A No.

8 Q You don't think that SCE, as a member of the
9 operating committee, would have agreed with your
10 interpretation?

11 A Now that I am aware of your circumstances, I
12 think they would, but I think most of SCE's members would
13 agree with me.

14 Q Okay. About how many control area members are
15 there?

16 A 30.

17 Q You expressed a concern with net metering of load
18 that does not allow the control area operator to calculate
19 firm control area load; is that correct?

20 A My concern is that it does not allow the control
21 area operator to calculate operating reserve. To get to
22 the operating reserve, he has to be able to calculate the
23 load.

24 Q Are you aware -- you are aware from your
25 deposition that California actually has a statute that

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 expressly permits net metering?

2 A I am aware of it now, yes.

3 Q Are you aware whether there's other states that
4 similarly have net metering and net billing?

5 A I am not aware of that specifically. I believe,
6 since it falls in line with the federal regulations, it
7 probably also is used in other states.

8 Q Would you be surprised if -- you are familiar
9 with the organization, the National Association of -- NARUC
10 is its abbreviation.

11 MR. COCKRELL: Regulatory Commissions.

12 MS. KEY: Thank you.

13 BY MS. KEY:

14 Q You are familiar with NARUC?

15 A Yes.

16 Q Would it surprise you if NARUC had a resolution
17 that specifically endorses net metering?

18 A No, I guess it wouldn't surprise me.

19 Q It wouldn't surprise you that NARUC has indicated
20 in a FERC case that was reported by the Commission that
21 over 20 states have net metering and net billing laws?

22 A Only 20? Yes, I would take your word for that.

23 Q I will go back to this question. Is control area
24 firm load responsibility firm load that's expected to
25 occur, or is it firm load -- is it firm load that's

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 expected to occur?

2 A Yes.

3 Q Is another way to put that that control area firm
4 load responsibility is the load that's likely to occur?

5 A I guess you could put it that way. It's also the
6 load that actually does occur.

7 Q Mr. Alcantar asked this before, but I am going to
8 revisit this area. You are familiar with the term
9 "generator auxiliary load," are you not?

10 A Yes.

11 Q Now, when a generator is running, simultaneously
12 consuming demand from its gross output, in essence, it's
13 selling or delivering a net output to the grid; is that
14 correct?

15 A Yes.

16 Q Now, when such a generator trips offline, or its
17 first forced outage occurs and it immediately needs to
18 restart, it's going to use energy from the grid to restart
19 the unit; correct?

20 A Yes.

21 Q Do most generators use standby contracts to
22 supply this load when it is forced off?

23 A I don't know. Certainly under the old vertically
24 integrated utility paradigm, there was no need for a
25 contract. But what they have now, I don't know.

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1 Q Now, because a generator is always consuming some
2 demand -- or because a generator is consuming demand while
3 it's operating, is that demand, that generator considered
4 firm load?

5 A I don't know that it's considered load in the
6 normal sense. It's a reduction in the net output.

7 Q Could you explain to me if there's an electrical
8 difference from a QF serving a load behind a meter and a
9 generator serving its own load?

10 A Electrically, no.

11 Q So they are electrically identical?

12 A Yes.

13 Q So therefore, if reserves need to be procured for
14 a QF generator for its full output, or if you are going to
15 base the procurement of reserves on the full output of a
16 QF, you would also do likewise for generators, for all
17 generators?

18 A I don't believe I specified that for the QFs. I
19 would assume that the metering that takes place, which
20 meters the net output of the unit auction, illustrates its
21 own energy usage. Not other loads, but the auxiliary usage
22 of the unit.

23 Q Are you saying that you do have to procure
24 reserves for the other loads, but not the load for the QF
25 itself but for its other on-site loads, but that you don't

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 have to procure reserves for the auxiliary power, or
2 otherwise it's often called station power; is that correct?

3 A Yes. The auxiliary power, while it may not
4 totally disappear when it trips, at least is reduced
5 considerably, as opposed to a load you are describing, as
6 far as I have seen, there is no description that that load
7 changes at all. It simply shifts from being supplied by
8 its own generator to being supplied by the grid.

9 Q Doesn't the generator, when it trips -- to the
10 extent it has station power needs, aren't those also served
11 by the grid?

12 A They are.

13 Q And, again, there is no electrical difference
14 between that situation and a QF?

15 A Except that the auxiliary power usually reduces
16 considerably.

17 Q Could the station, the station power load or
18 auxiliary load of a large generator be considerably more
19 than the load of a QF that -- let's say you have a QF
20 that's 100 kV QF, do you expect that it is possible that
21 station power for a unit might be greater than the load of
22 a QF?

23 A You are bringing voltage into this --

24 Q 100 kV -- kilowatts, I'm sorry.

25 A 100 kilowatts.

Excerpt of Trial Testimony in Docket No. ER98-997-000, et al., original pages 77 to 162.

1 Q You have 100 kilowatt QF and a typical large base
2 load generating unit. Is it possible that the QFs, that QF
3 might have smaller loads than the station power load?

4 A It's possible, yes.

5 Q Is it your understanding that the ISO, when it
6 procures, when it performs its forecasts in order to
7 procure reserves, that it currently does not consider the
8 gross load of generators with behind the meter loads?

9 A I do not know what they consider.

10 MS. KEY: I would mark Exhibit SCE-6, your
11 Honor. You will have to forgive me. People will have to
12 handwrite the exhibit number on my exhibits.

13 PRESIDING JUDGE: We will mark the document which
14 has a heading CAC --

15 MS. KEY: This is SCE, SCE Exhibit Number 6.

16 PRESIDING JUDGE: No, but a heading of the
17 exhibit is CAC/EPUC-1 ISO-6, marked Exhibit SCE-6 for
18 identification.

19 (Exhibit SCE-6 identified.)

20 PRESIDING JUDGE: I take it this is a data
21 request, is it not?

22 BY MS. KEY:

23 Q Mr. Comish, as you can see, this is a data
24 request where the ISO is requested as to whether it
25 calculates all on-site electric energy consumption

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1 satisfied by internal generation for the purpose of
2 purchasing reserves, and you will see the answer that it
3 does not do so.

4 A Yes.

5 Q Based on that answer, would you consider that the
6 WSCC is in violation of the "more criteria"?

7 A I'm sorry, the WSCC?

8 Q I'm sorry, that the ISO is in violation of the
9 WSCC's criteria?

10 A It would appear so, yes.

11 Q Now, is the primary purpose of procuring reserves
12 to meet control performance standards 1 and 2, otherwise
13 known as CPS 1 and 2, and to meet the disturbance control
14 standards?

15 A The primary purpose would be to meet the
16 disturbance control standard.

17 Q Now, is it your understanding, based upon the
18 testimony in this proceeding, that SCE did not procure --
19 did not gross meter its QF loads?

20 A That's my understanding now, yes.

21 Q Is it also your understanding that SCE did not
22 take into account gross loads when procuring reserves, but
23 rather, took into account net loads?

24 A Yes.

25 Q To your knowledge, did SCE's practice ever result

1 in having violations of CPS 1, CPS 2 or the DCS criteria?

2 A Not to my knowledge, no.

3 Q Do you think you would have known if that
4 occurred?

5 A Not likely, no.

6 Q As you already testified in response to
7 Mr. Alcantar's questions, if the ISO were to begin abiding
8 by the criteria and procure reserves by taking into account
9 gross loads, you would expect that the ISO would begin
10 procuring more ancillary services than it does today?

11 A Yes.

12 Q Are you aware there is a FERC Staff report on the
13 Western markets that found that the ISO was typically
14 overforecasting its loads and ISO-procuring services?

15 A No, I was not aware of that.

16 Q Given that the ISO has a reported history of
17 overforecasting its loads and overprocuring ancillary
18 services, do you think the ISO should be taking steps that
19 would result in it further increasing the amount of
20 reserves it is procuring?

21 A If the additional amount of reserve were less
22 than the amount that they are already overprocuring, I
23 guess it shouldn't make a difference. If it results in
24 their meeting more operating reserves that they are not
25 procuring, then they need only add as much as necessary.

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1 They don't need to overprocure.

2 Q The criteria you have discussed, the more
3 criteria of 7 percent reserves for thermal generation and 5
4 percent for hydro, do you know about when they were
5 adopted?

6 A They have been around as long as I have been
7 associated with WSCC, as far as I remember, clear back to
8 the 1970s. However, the recent change a few years ago, the
9 change was made to load responsibility. Prior to that, it
10 was for total generation. So introducing load
11 responsibility into the equation reduced the amount of
12 reserve that people had to maintain. Prior to that time,
13 they didn't have to take any -- they were not allowed to
14 take into account interruptible exports or interruptible
15 loads.

16 Q But the 7 percent and 5 percent figures for
17 reserves remained the same?

18 A Yes.

19 Q And from an indication of your answer, you
20 believe they were around at least at or prior to the '80s,
21 to the '70s, those criteria likely predated the enactment
22 of PURPA; correct?

23 A Yes.

24 Q Let's, for the sake of assumption, assume that
25 criteria were adopted sometime in mid-1970s. At the time

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1 they were adopted, was small customer on-site generation as
2 prevalent as it is today?

3 A No, it was not.

4 Q Within a vertically integrated utility system,
5 during the '70s, would utility-owned generation be
6 virtually the only source of generation?

7 A Yes.

8 Q Do you know if the WSCC has reexamined that 7
9 percent and 5 percent levels of reserve requirements in
10 light of the spread of both QFs and other types of
11 distributor generation?

12 A Not in that light, no.

13 Q What would you expect to be a typical forced
14 outage rate for a thermal generator?

15 A 10 to 15 percent, perhaps. These are numbers
16 that I haven't looked at in a long time, so that's just a
17 guess.

18 Q I am going to go through a hypothetical. Let's
19 assume things have improved somewhat, and we will have a 5
20 percent forced outage rate for a generator. Now, if you
21 assume that we have a utility system that has 100 thermal
22 generators that are 60 megawatts each, and each of those
23 generators has a forced outage rate of 5 percent, what is
24 the probability that a single generator will be forced out
25 in an instant of time?

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1 A 100 percent. I know I confused you there,
2 haven't I?

3 Q Yes. Let's say generator A will be forced out in
4 an instant in time.

5 A I don't know. I would have to run the
6 calculations on that. Understand that we are trying to be
7 prepared for a contingency to occur. "Contingency" is
8 defined by Webster as something possible, not certain. But
9 a utility, I would like to think it's certain; you don't
10 know when. So you have to be prepared to withstand it at
11 any time.

12 Q With a forced outage rate of 5 percent, and 100
13 thermal -- with each generator having the same, what would
14 your theory tell you the likelihood of a generator being
15 forced off, a particular generator being forced off in an
16 instant of time?

17 A I am not an expert on probability theory, but I
18 guess it would be about 5 percent.

19 Q Taking that, that logic, a step further, what is
20 the possibility that two generators will be forced off at
21 the same moment?

22 A Probably something less than that, maybe half.
23 Are you talking about at any given point in time?

24 Q Would probability theory say that you would
25 multiply .05 times .05 to calculate that probability?

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1 MR. STRAIGHT: Objection, Judge, just to the
2 extent he has already testified that he is not an expert on
3 probability theory.

4 PRESIDING JUDGE: Counsel.

5 MS. KEY: I will move on.

6 PRESIDING JUDGE: All right. Objection
7 sustained.

8 BY MS. KEY:

9 Q Mr. Comish, what is your major?

10 A I majored in mathematics.

11 Q Did you take courses in statistics or
12 probabilities?

13 A No, I did not.

14 Q You went to an easier school than I did, but I
15 will move on nonetheless.

16 Are you aware, as a result of this litigation,
17 that the ISO has filed an amendment to its tariff that
18 would permit net metering of generators of under 1
19 megawatt?

20 A No, I was not aware of that.

21 Q Let's assume that the ISO filed an amendment to
22 its tariff that indicated it would allow generators of
23 under 1 megawatt to net meter. Let's also assume that the
24 ISO wasn't going to include the loads of those generators
25 when it estimated its load responsibility for procuring

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1 reserves.

2 In effect, as a result of that amendment, the
3 WSCC would be violating the NARUC requirements?

4 A The ISO --

5 Q I'm sorry, the ISO would.

6 A Again, it's not my concern how they go about
7 providing operating reserves so long as they provide what
8 is required. Now, how many megawatts of 1 megawatt load
9 are we talking about here? If we are talking about an
10 appreciable amount, then I would have concerns.

11 Q So there is a level at which you would not have
12 concerns about whether generators of a certain size are net
13 metered?

14 A I would say so, yes.

15 Q Will you tell us what that size would be?

16 A No, I don't set policy. If that kind of thing
17 needs to be addressed, it will be addressed by the
18 operations committee and the compliance monitoring and
19 operating practices subcommittee. And a criteria will be
20 developed and taken to the board to see if they approve
21 it.

22 Q Would the amendment I described nonetheless, in
23 the purest sense, be a violation of the NARUC/WSCC
24 requirements?

25 A In the purest sense, yes.

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1 Q Your position is that the ISO should be procuring
2 reserves for loads effectively for a QF load on a gross
3 basis. Would that customer also have to pay for
4 transmission on a gross load basis?

5 A I am not an expert on transmission rates. I
6 assume that's addressed by the ISO's tariff.

7 MS. KEY: Excuse me, your Honor, I apologize for
8 the delay.

9 BY MS. KEY:

10 Q We have discussed you are aware there are
11 customers who take what is known as standby service from
12 utilities?

13 A Yes.

14 Q It's your understanding that when you talk about
15 a standby customer's contract demand, that would be the
16 maximum amount of demand that a customer could put on the
17 utility system at any given time?

18 A Yes.

19 Q For customers who are standby customers, because
20 that load can be put on the system at any time, it is the
21 responsibility of the ISO to procure reserves for 100
22 percent of that contract demand of the standby customer?

23 A Are we talking about just the same thing we have
24 been talking about all day, the QFs --

25 Q This is just a standby customer who doesn't

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1 happen to be a QF.

2 A But they are self-generating?

3 Q Yes.

4 A Just offhand, I don't see any difference in the
5 situations.

6 MS. KEY: I think that's all we have, your Honor.

7 PRESIDING JUDGE: Commission Staff?

8 MR. LONG: Just a couple of questions.

9 CROSS-EXAMINATION

10 BY MR. LONG:

11 Q Mr. Comish, would you assume in a given hour
12 there is 100 generation of load, 100 megawatts generation
13 behind the fence. 75 megawatts of that 100 megawatts would
14 take power off the ISO's grid in case that QF were to cut
15 off. 75 megawatts of that load would instantaneously cut
16 off. How much of the load must reserves be provided for by
17 the ISO?

18 A I want to make sure I understand. You have a 100
19 megawatt load. If the generator trips, 25 megawatts of
20 that load goes away, 75 is served off the grid?

21 Q Right.

22 A And it would be -- the 75 megawatts would be the
23 reserve.

24 Q How quickly does that 25 megawatts that would
25 not -- that would kick out, kick off, how quickly would it

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1 have to kick off the system?

2 A It would have to be relatively quickly, because
3 as soon as the generator is gone, the power will start to
4 flow in from the grid to serve the load, and after a period
5 of a few seconds, governors all around the system will
6 respond and supply whatever the deficiency is. Then the
7 control area's automatic generation control system will
8 kick in and start picking up generation to cover the loss.
9 So there is no definitive amount or time, and it would have
10 to be fairly quickly that the load would have to trip.

11 Q Is that any different than any of the other
12 interruptible load on the system?

13 A It's different in a way. Interruptible load can
14 be used as operating reserve, which means it has to be able
15 to shut down within 10 minutes. Now, in that case, the
16 control area -- the control side of the interruptible load
17 would be responding to the loss of its own generation and
18 it would be up to the control area to recover.

19 Q If we can go back to my hypothetical, how would
20 the ISO or the control area meter know what it needs if it
21 has a 100 megawatt generator and two loads on the other
22 side of the fence?

23 A One being interruptible?

24 Q Yes.

25 A In a case like that, it would have to have meters

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1 indicate or, if there's a 100 megawatt load and the ISO
2 knows that take of them is interruptible, it would simply
3 calculate them up to 25. It wouldn't have to meter the two
4 separate loads.

5 Q So they would just have to meter the 75 megawatt
6 load that's going to stay on?

7 A I am assuming that both loads are fed through the
8 same meter, and that the metering would be on the feeder so
9 they would see the 100 megawatt load. But in calculating
10 the reserve requirements, they would know the 25 is
11 instantaneously interruptible and could simply subtract
12 that part of it.

13 Q I need to ask you, in your February 14
14 deposition, you came to that deposition knowing the area
15 that you were going to be questioned. Had you discussed it
16 with any other personnel in the WSCC, the issues that you
17 knew you were going to be deposed on?

18 A Very briefly, I discussed it with Mr. Eyre and
19 with Mr. Denilman, who is the assistant executive
20 director.

21 Q Did you state with them your position that you
22 gave at your deposition -- that you have given here today?

23 A Yes. Actually, I verified their agreement on
24 that position before I responded to the California ISO's
25 question. So there was not much discussion needed before

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1 the deposition.

2 Q So you all three agree on this position?

3 A Yes.

4 Q In your deposition, you said you three were the
5 three unofficial spokespersons for the WSCC.

6 A Well, we haven't been designated in that matter,
7 but yes, when people have questions, they usually come to
8 us first.

9 MR. LONG: I have no further questions.

10 PRESIDING JUDGE: All right.

11 CROSS-EXAMINATION

12 BY MR. WARD:

13 Q Mr. Comish, I just want to go back over two
14 issues rather briefly.

15 MR. ALCANTAR: Excuse me, your Honor. I thought
16 we began today with the ISO saying they were only
17 interested in the introduction of the deposition and they
18 had no other questions. As I understood your rules --

19 PRESIDING JUDGE: It's his witness, though. He
20 subpoenaed the witness.

21 MR. WARD: Actually, it's CAC's witness.

22 MR. ALCANTAR: I think that's the error in the
23 understanding. We subpoenaed the witness.

24 PRESIDING JUDGE: You subpoenaed him.

25 MR. WARD: But they subpoenaed him as a hostile

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1 witness, your Honor.

2 MR. ALCANTAR: I don't think, under the rules,
3 they have the right to reexamine this witness.

4 MR. WARD: Your Honor, if I may respond.

5 PRESIDING JUDGE: Yes.

6 MR. WARD: This is a friendly witness to us, I
7 accordingly would have presented a direct examination.
8 Because he did not have any, I offered the deposition
9 instead and I think I am appropriate to respond to the
10 hostile examination.

11 MR. ALCANTAR: Excuse me, I have been misled by
12 them in terms of the representation by counsel at the
13 outset of this statement. I would at least appreciate
14 going back over the record. He said I have no other
15 questions other than getting this deposition in. That's
16 what I thought we were proceeding with.

17 PRESIDING JUDGE: I think I am a little at fault
18 here. My file did not contain your request for a subpoena
19 because it didn't require the issuance of an order. So I
20 didn't know who subpoenaed the witness. I thought it was
21 the ISO because he marked it with an ISO exhibit number. I
22 operated on the assumption that they subpoenaed the
23 witness. Therefore, it was their witness. Counsel really
24 didn't have an opportunity to examine the witness and I
25 don't permit friendly cross-examination.

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1 So I am going to rule this an exception to my
2 ruling. If you have any further questions, we will give
3 you an opportunity to exercise.

4 MR. ALCANTAR: Thank you, your Honor.

5 PRESIDING JUDGE: All right.

6 MR. WARD: Thank you, your Honor.

7 BY MR. WARD:

8 Q Mr. Comish --

9 PRESIDING JUDGE: Let's go off the record a
10 moment.

11 (Discussion off the record.)

12 PRESIDING JUDGE: Back on the record.

13 BY MR. WARD:

14 Q Mr. Comish, Ms. Key asked you a couple of
15 questions in which she provided you information about the
16 ISO's metering practices, both the current practices and
17 the practices under a recent amendment to the ISO tariff,
18 and asked you if the metering practices so described would
19 violate the WSCC criteria.

20 A Yes.

21 Q The metering practices themselves violate the
22 WSCC criteria?

23 A No. Actually I thought what she was asking me
24 would that result in a violation of the criteria, not
25 whether the metering practices were in violation.

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1 Q Does the WSCC determine violations of the
2 criteria or would the WSCC determine violations of the
3 criteria based on the metering practices or based upon the
4 amount of load actually procured, or the amount of reserves
5 actually procured?

6 A Based upon the amount of reserve.

7 Q In one of her last questions, Ms. Key described a
8 situation where there was a certain amount of contract
9 demand, she didn't specify how much, let me say 100
10 megawatts of standby contract demand?

11 A Yes.

12 Q And asked you if the control area operator would
13 have to procure reserves for 100 percent of that contract
14 standby demand.

15 A Right.

16 Q In saying that the control area operator would
17 have to procure reserves for 100 percent of that contract,
18 that being 100 megawatts of contract demand, would those
19 reserves be 100 megawatts?

20 A No. It would be 7 percent of the demand. When I
21 say procure reserves for, I am assuming the correct
22 percentage applied to load, not to full amount of the
23 load.

24 MR. WARD: Thank you, your Honor.

25 PRESIDING JUDGE: Mr. Alcantar, no further