

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

California Independent System) Docket No. ER98-997-000
Operator Corporation)
)

DEPOSITION OF: JOSEPH W. COMISH

February 14, 2001 - 10:37 a.m.

Location: Ray, Quinney & Nebeker
79 South Main Street, Sixth Floor Salt Lake City, Utah

Reporter: Susette M. Snider, RPR, CRR
Notary Public in and for the State of Utah

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I N D E X

WITNESS	PAGE
JOSEPH W. COMISH	
Examination by Mr. Ward _____	6
Examination by Ms. Sherif _____	13
Examination by Ms. Key _____	62
Examination by Mr. Kochrel _____	68
Further Examination by Mr. Ward _____	69
Further Examination by Ms. Sherif _____	70

EXHIBIT NO.	E X H I B I T S	PAGE
1	Cross-Answering Testimony of _____ Mark R. Minick on Behalf of Southern California Edison Company	46

* * *

1 Wednesday, February 14, 2001; 10:37 a.m.

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P R O C E E D I N G S

4

5 MR. STRAIGHT: Mike, can I just get one
6 thing on the record before we go any further?

7

MR. WARD: Sure.

8

MR. STRAIGHT: This is Sam Straight, and I
9 represent WSCC in the matter today. And I just want to
10 get on the record, in all the materials that have been
11 provided to us, the large majority of it is beyond
12 Mr. Comish's knowledge or experience or expertise. And
13 we got a list of topics that we're here to be deposed
14 on here today from Mr. Ward, and, you know, I just kind
15 of want to lay the groundwork that that's what we're
16 here to talk about today, the WSCC's really narrow role
17 that may have any effect in this proceeding, we're a
18 nonparty, and kind of stick to those questions to avoid
19 a lot of objections.

20

MR. WARD: No problem.

21

JOSEPH W. COMISH,

22

having been first duly sworn to tell the truth,

23

was examined and testified as follows:

24

* * *

25

1 EXAMINATION

2 BY MR. WARD:

3 Q. Mr. Comish, my name is Mike Ward. We're
4 here to take your deposition on a consensual basis.

5 MR. KOCHREL: Michael, can you speak up
6 some so we can hear it?

7 MR. WARD: Certainly.

8 (A discussion was held off the record.)

9 Q. (By Mr. Ward) Mr. Comish, could you
10 provide your full name and business address for the
11 record?

12 A. My name is Joseph W. Comish. I work for
13 the Western Systems Coordinating Council. I'm the
14 director of dispatcher training. Our address is
15 615 Arapeen Drive, that's A-r-a-p-e-e-n, in Salt Lake
16 City, Utah 84108.

17 Q. Mr. Comish, during the course of this
18 deposition, I'm going to be referring to the Western
19 Systems Coordinating Council as the WSCC --

20 A. Good.

21 Q. -- so that the reporter understands, for
22 the record.

23 Could you describe the function of the WSCC
24 with regard to reliability and control area operators?

25 A. WSCC is one of 10 reliability councils in

1 North America that make up the North American Electric
2 Reliability Council. WSCC is also an interconnection,
3 it's a reliability region, and the role of WSCC, which
4 is made up of nearly all of the parties involved in
5 generating and selling power in the western region, the
6 role is to develop what you might call the rules of the
7 road. That is, we establish the reliability criteria
8 under which we expect our entities to operate.

9 Q. What enforceability do the reliability
10 criteria that you develop carry?

11 A. The only rules for which we are able to
12 impose sanctions are established by our reliability
13 management system, which is a contract that is signed
14 by parties in which they commit themselves to
15 maintaining our reliability criteria and to submit to
16 sanctions if they do not meet the criteria.

17 Q. And what types of sanctions may be applied
18 if they do not meet the criteria?

19 A. It could be as minor as a letter to upper
20 management or -- to a monetary fine.

21 Q. How does WSCC go about developing the
22 reliability criteria?

23 A. It could start in several different ways.
24 One person may have an idea of something that needs to
25 be changed or included in the criteria. They may

1 suggest that to, for example, the operations committee
2 of WSCC. The operations committee chairman may assign
3 that, then, to a subcommittee that is more in line with
4 the area that that suggestion falls into. The
5 subcommittee may develop language -- provided they
6 agree with the suggestion, may develop language. Then
7 they will post that for due process, public comment,
8 for a period of 60 days.

9 It will then look at all the comments that
10 have been provided, make adjustments to the language if
11 they deem it's appropriate, and if the changes are
12 significant, they'll repost the proposed language for
13 further comment. Assuming that the changes are not
14 significant, the new language would then be submitted
15 to the standards committee under which that started
16 out. And in this case, the example I'm using, the
17 operations committee is the standards committee that
18 has jurisdiction. It has to be provided, again,
19 publicly 30 days before that standards committee, the
20 operations committee, next meets where it will consider
21 approving the standard.

22 And, again, assuming that that -- the
23 criterion is adopted by the operations committee, it
24 still has one further step to go. It must go to the
25 board of trustees, and the board of trustees will give

1 final approval. Once they have provided their
2 approval, it becomes part of our reliability criteria.

3 Q. Let me step back one second. What are your
4 responsibilities at WSCC?

5 A. Generally I'm responsible for anything
6 having to do with operations, the operation side of the
7 system, as opposed to the planning side. That includes
8 administering and developing a training program, a
9 system operator certification program, special projects
10 like the communications system, the EHV data pool and
11 those kinds of things.

12 Q. Has the WSCC developed a set of minimum
13 operating reserve requirements?

14 A. Yes.

15 Q. Are those requirements final and
16 enforceable through RMS?

17 A. Yes, they are.

18 Q. Could you describe the operating reserves
19 requirements that are included in the minimum operating
20 reserve criteria or MORC, I think we refer to it as
21 occasionally.

22 A. Okay. The operating reserve -- minimum
23 operating reserve required is for a control area you
24 must maintain regulating reserve sufficient to allow it
25 to meet the control performance criteria established by

1 NERC. In addition to that, there must be a
2 continuously (sic) reserve sufficient to meet the
3 disturbance control standard under NERC and also under
4 WSCC criteria.

5 And that continuously reserve shall be the
6 greater of either the loss of generating capacity due
7 to forced outages of generation or transmission
8 equipment that would result from the most severe single
9 contingency, or the sum of 5 percent of the load
10 responsibility served by hydrogeneration and 7 percent
11 of the load responsibility served by thermal
12 generation. So it's the greater of those two values.
13 Whichever value is selected, at least half of their
14 reserve has to be spinning.

15 Now, in addition to that, the control area
16 must maintain operating reserve to cover possible loss
17 of interruptible imports. If it has any on-demand
18 obligations, it must maintain reserve to cover those
19 on-demand obligations.

20 Q. How would a control area operator go about
21 calculating the amount of required contingency reserve?

22 A. They would look at their largest possible
23 contingency. Let's suppose that's a generating unit,
24 and let's suppose it's a thousand megawatt, the
25 generating unit. Then they would calculate how much of

1 their load's being carried by hydrogeneration and how
2 much by thermal. They would apply 5 percent to the
3 total hydrogeneration, 7 percent to the total thermal
4 generation, sum those two together, compare that with
5 the largest contingency. And then the larger of the
6 two calculations would become their operating reserve
7 requirement.

8 Q. Earlier you mentioned in your definitions
9 load responsibility. Can you define the term "load
10 responsibility" for me?

11 A. There's a word-for-word definition here.
12 Load responsibility is a control area's firm load
13 demand, plus firm sales, minus firm purchases for which
14 reserve capacity is provided by the supplier. In other
15 words, it's the firm demand within the control area,
16 plus any firm sales they may have, less any firm
17 purchases they might be making.

18 Q. A very simplistic example here, assuming
19 you have a largest contingency of 500 megawatts --
20 these are very unrealistic numbers, by the way -- and a
21 load responsibility that is 1,000 megawatts of hydro
22 and 1,000 megawatts of thermal. What would be the
23 contingency reserve requirement for the control area?

24 A. In that case the reserve requirement would
25 be the 500 megawatt largest contingency. That's larger

1 than the 5 and 7 percent.

2 Q. And if the largest contingency were only
3 50 megawatts, what would be the contingency reserve
4 requirement?

5 A. It would be 120 megawatts. It would be
6 larger than the contingency based on the 5 and
7 7 percent.

8 Q. I want to ask you to assume a number of
9 facts. Assume that there is an on-site generator at a
10 facility, a business of some sort, that serves an
11 on-site load of the same size, approximately, and that
12 on-site load also has standby service in the generator.
13 If the generator goes down, it will be served by energy
14 that is connected to the grid or the distribution
15 system. Also assume that on a given day the generator
16 that is serving that load is operating and serving the
17 load. Must a control area operator include that load
18 in its load responsibility?

19 A. Yes.

20 Q. Let me again ask you some very simple
21 numbers here. If you are a control area operator with
22 1,000 megawatts of hydro load responsibility,
23 1,000 megawatts of thermal load responsibility and a
24 hundred megawatt load being served by an on-site
25 generator -- on that day being served by the on-site

1 generator -- and let's assume that their largest
2 consistency (sic) is only 50 megawatts so that's not
3 relevant -- what would be the total contingency reserve
4 requirement for the area control operator?

5 MR. STRAIGHT: And if you need her to read
6 the question back, she can do that.

7 Q. (By Mr. Ward) Let's also assume that the
8 on-site generator is an thermal generator.

9 A. Well, is it included in the thousand
10 megawatts?

11 Q. No.

12 A. And are there any purchases or interchange
13 off system?

14 Q. No.

15 A. So the total load within the control area,
16 then, would be 2100 megawatts, if -- if I've got all
17 your numbers correct, and you have 1100 megawatts of
18 thermal. And if somebody has a calculator -- it's like
19 77 megawatts would be 7 percent of that, so we're
20 talking 127 megawatts would be the reserve requirement.

21 MR. WARD: Thank you, Mr. Comish. I have
22 no more questions at this time.

23 EXAMINATION

24 BY MS. SHERIF:

25 Q. Good morning, Mr. Comish. My name is Linda

1 Sherif, and I represent the Cogeneration Association of
2 California and Arco CQC. Thank you for being with us
3 today.

4 I'm going to start by asking you some
5 general questions about your background. Could you
6 please tell me what the highest degree that you have
7 is?

8 A. Education?

9 Q. Yes.

10 A. I have a bachelor of science degree in
11 mathematics.

12 Q. And what school is that from?

13 A. Utah State University.

14 Q. And in what year did you get that?

15 A. 1964.

16 Q. Do you have any other college degrees?

17 A. No.

18 Q. Could you please describe any other
19 training or certificates or professional accreditation
20 that you have that's relevant to your job duties at the
21 Western Systems Coordination Council?

22 A. I've been a NERC certified system operator,
23 a WSCC certified system operator. I had operated the
24 Utah Power & Light Company control area for 20 some
25 years before going to WSCC.

1 Q. I'm going to ask you about your employment
2 history. For right now I'm interested in
3 non-university or college training programs.

4 A. I thought you said experience, but that's
5 okay. Go ahead.

6 Q. Could you tell me -- you said you have --
7 you're a NERC certified system operator?

8 A. Yes.

9 Q. Could you tell me what you had to do to
10 obtain that accreditation status?

11 A. There are two ways to obtain that. One is
12 to take the NERC exam. The other is to be on the group
13 that made up the NERC exam, and that's the way I got
14 it.

15 Q. And in what year?

16 A. 1998 -- excuse me, 1999.

17 Q. Thank you.

18 And you said you're also a WSCC certified
19 system operator?

20 A. Yes.

21 Q. Could you tell me how you obtained that
22 accreditation?

23 A. Same way, involved in making up the exam
24 that operators take.

25 Q. I just want to clarify. So you didn't

1 actually take either the NERC exam or the WSCC exam; is
2 that correct?

3 A. I didn't take them in a test setting.
4 However, as part of my job in that involvement, I have
5 taken both exams on several occasions to make sure that
6 they're still valid and accurate.

7 MR. KOCHREL: Excuse me. Could we ask
8 Ms. Sherif to be closer to a microphone so we can hear
9 her questions?

10 MS. SHERIF: Sorry.

11 Q. Mr. Comish, could you please tell me who
12 was your first full-time employer?

13 A. I assume by full-time you mean year-round.
14 That would be the United States Air Force.

15 Q. And when did you start?

16 A. 1964.

17 Q. Do you remember the month?

18 A. October.

19 Q. What was your job title or description --

20 A. In the air force I was, for the first year,
21 a student pilot, and the remaining four years I was in
22 I was an instructor pilot.

23 Q. Did your employment at the U.S. Air Force
24 in any way relate to electric utility system
25 administration, operation, planning or reliability

1 activities?

2 A. No.

3 Q. And when did you leave the U.S. Air Force?

4 A. I left active duty in November of 1969, but
5 I remained with the reserve for three years beyond that
6 and then separated entirely.

7 Q. During the three years you were on reserve,
8 did your reserve activities have anything to do with
9 electric utility system administration, operation,
10 planning or reliability activities?

11 A. No.

12 Q. What month did you leave the air force in
13 1969?

14 A. November.

15 Q. November? Thank you.

16 Starting in November 1969, were you
17 employed?

18 A. After moving back to Utah, I was employed
19 full-time by the reserve for about a month while I got
20 some required training, and then I started with Utah
21 Power after finishing that training in December of '69.

22 Q. And what was your first job title at Utah
23 Power?

24 A. Junior engineer.

25 Q. Now, let me just make sure I'm clear. You

1 haven't gone to engineering school, correct?

2 A. No. I -- I had a lot of engineering
3 classes in the process of getting my degree, but I did
4 not have an engineering degree in any way.

5 Q. Did Utah Power retain you as part of a
6 training program?

7 A. They hired me as a programmer for the
8 dispatch computer, and in the next few years I moved
9 through various other jobs and basically got on-the-job
10 training.

11 Q. Thank you.

12 Let's start with your first job title,
13 junior engineer. As a junior engineer did your job
14 responsibilities encompass activities related to the
15 administration of an electric utility system?

16 A. No.

17 Q. Did your job responsibilities encompass
18 activities and assignments related to the operation of
19 an electric utility system?

20 A. Yes.

21 Q. Could you describe in detail what your job
22 activities and assignments were in regard to
23 operations? And when you answer, could you distinguish
24 between generation, transmission and distribution?

25 A. Okay. As I indicated, my first job was as

1 a programmer for the dispatch computer. That was the
2 computer used to run both the generation and
3 transmission system. I did not have anything to do
4 with distribution, only with generation and
5 transmission. And so it was my job to write programs
6 or update programs related to running the overall bulk
7 power system.

8 Q. Were your job assignments more focused on
9 the software development aspect or more on making
10 decisions as to the operation of the electric utility
11 system?

12 A. Well, initially I was involved in the
13 software, but I had to know the system. I had to know
14 what factors to consider in developing the software.

15 Q. Did your job responsibilities encompass
16 activities and assignments relating to the planning of
17 an electric utility system?

18 A. No.

19 Q. Did your job responsibilities encompass the
20 evaluation of electric utility system reliability?

21 A. No.

22 Q. Do you remember the month and year when
23 your title changed, if your title did change, with Utah
24 Power?

25 A. No, I don't. I think it was -- I think it

1 was probably about a year, and then I moved up to
2 associate engineer.

3 Q. Could you describe what your job activities
4 and assignments were as an associate engineer?

5 A. Still programming the computer for about
6 two more years.

7 Q. So that takes us to 1972?

8 A. Yes.

9 Q. What happened in 1972?

10 A. At that time the company decided to take
11 the programming responsibilities for the dispatch
12 computer away from the operations side of the house and
13 put it with computer services. At the same time the
14 company began to get deeply involved in interchange
15 transactions with other companies, and I became the
16 first full-time scheduler that the company had.

17 Q. Okay. Could you describe your job
18 activities and assignments as a scheduler?

19 A. Develop the daily and monthly load
20 forecasts, determine resource availability and market
21 availability and develop day-to-day operating plans for
22 the system operators to implement.

23 Q. Did you have any responsibilities related
24 to administration of the electric utility system?

25 A. No.

1 Q. Did you have any responsibilities related
2 to the operation of the electric utility system?

3 A. Yes.

4 Q. Could you describe what those were?

5 A. I think I just did.

6 Q. Okay. Your description, the way I
7 understood it, related to operations. Did it have a
8 planning component as well?

9 A. No.

10 Q. Could you -- I know you've answered this
11 generally, but could you parcel out for me what your
12 responsibilities were with regard to reliability
13 evaluations in the context of generation reliability?

14 A. Well, in the process of developing daily
15 plans, it was partly my responsibility to ensure that
16 we didn't overschedule our transmission system. As far
17 as the generator reliability, I guess the only -- the
18 only thing I had to do with that was in being involved
19 in the outage scheduling process. If the generator
20 needed an outage, I might influence the time period in
21 which that occurred to minimize the cost to the system.
22 That's about it.

23 Q. Thank you.

24 Same question, only this time if you could
25 focus on transmission reliability.

1 A. Again, transmission reliability, it was
2 just basically a matter of making sure that the
3 schedules I developed did not overload the transmission
4 system. If there was a forced outage of a transmission
5 line or even a scheduled outage, then I had to take
6 that into account in developing the plans.

7 Q. Are you done?

8 A. Yes.

9 Q. The same question with specific regard to
10 distribution reliability.

11 A. No involvement in distribution.

12 Q. So at what point did your job title change
13 from scheduler?

14 A. I really can't remember whether it was 1975
15 or 1976. I became the power control supervisor.

16 Q. I'm sorry. What was the job title?

17 A. Power control supervisor.

18 Q. And this is still with Utah Power?

19 A. Yes.

20 Q. What were your duties in that position?

21 A. I supervised the -- I supervised the
22 engineers and schedulers and other such personnel
23 related to operating the system.

24 Q. This is the transmission system or the
25 transmission and distribution system?

1 A. No. Transmission and generation.

2 Q. At this point did your job expand to
3 include any activities related to administration of the
4 electric utility system?

5 A. I'm not sure what you mean by
6 administration of the electric system. I mean I felt
7 comfortable before saying no because I just did
8 operations. But as a supervisor I'm not sure.

9 Q. Okay. Let me just ask you this: How many
10 people were you supervising, do you recall?

11 A. I don't remember exactly. It was
12 approximately a half a dozen.

13 MR. WARD: Can I just interrupt for one
14 minute? Could the folks on the phone go on mute unless
15 you're going to speak? We're getting a lot of paper
16 noise and shuffling that's making it difficult both for
17 you to hear and for some of the questions to be heard.

18 MR. KOCHREL: Michael, we've been on mute,
19 but we'd really like people to speak up, if they could.

20 MR. WARD: Okay.

21 MS. SHERIF: I'll try.

22 Q. Could you describe with specificity -- you
23 said you supervised engineers and schedulers, but could
24 you describe what activities and assignments you did in
25 your role as regards to generation operations?

1 A. Just one further step up the ladder from
2 what I was doing as a scheduler, supervising the people
3 who made the daily plans, improving those plans.

4 Q. Okay. Well, let me rephrase. And you can
5 tell me if I'm correct or not, and then we can skip
6 ahead. You are now supervising people who were doing
7 the same tasks that you were doing when you were a
8 scheduler; is that correct?

9 A. Yes.

10 Q. Okay. How long were you in the position of
11 power control supervisor?

12 A. I don't recall. In 1978 the job was
13 expanded to include the system operators, the
14 supervision of the system operators. Sometime after
15 that, in the early -- early '80s, I think I was
16 promoted to manager of power operations.

17 Q. Okay. Let me break this up a little bit.
18 In 1978 when your job was expanded to include system
19 operators, were you doing any of the job tasks of a
20 system operator or were you supervising system
21 operators in their carrying out of the tasks of a
22 system operator?

23 A. I supervised the chief dispatcher who
24 supervised the real-time operators.

25 Q. Why don't you briefly describe what the

1 chief dispatcher does and what the system operators do.

2 A. The chief dispatcher is responsible for
3 making sure the system operators or dispatchers are
4 doing their job properly. The operator's job is to
5 keep the system in balance, to make sure that the load
6 and generation are matched, to implement schedules with
7 other control areas in accordance with the plan laid
8 out, to adjust to any real-time changes for that plan
9 such as forced outages to generation and transmission
10 and to keep records of all that.

11 Q. Now, you said in the early 1980s you were
12 promoted to manager of power operations?

13 A. Yes.

14 Q. What were your job duties at that point?

15 A. The same as before but expanded to include
16 supervision over the hydro system, that is, the water
17 part of it, not the generation, but I supervised the
18 hydrographers.

19 Q. I apologize. I don't know what a
20 hydrographer is.

21 A. Somebody who keeps track of the water on
22 the system and controls its release.

23 I also picked up a small group who
24 developed operating procedures related to the
25 transmission system, in particular, switching

1 procedures.

2 Q. Other than switching, do you recall what
3 other procedures you were involved with?

4 A. No. That group was only for switching --

5 Q. Okay.

6 A. Yeah.

7 Q. So we're up to the early '80s. Do you
8 recall when you next changed job title or job duties,
9 regardless of whether there was a title change?

10 A. I think it was probably after the merger
11 with PacifiCorp. That process started in 1987 and was
12 completed in early 1989. At that time I was made the
13 director of system operations for the merged company.

14 Q. Now, when you say you were made director of
15 system operations for the Mertz Company (sic), did you
16 leave Utah Power to join the Mertz Company or was the
17 Mertz Company --

18 A. No, no, no. The merged company.

19 Q. Oh, the merged company.

20 A. Which is now PacifiCorp rather than Utah
21 Power.

22 Q. So somewhere around 1987 you became
23 director of systems operations?

24 A. No, 1989.

25 Q. 1989. Could you tell me what your duties

1 were in that position?

2 A. I supervised the power schedulers, the
3 system operators, operating engineers, software and
4 hardware technicians associated with the entire company
5 which has serviced territory in Utah, Wyoming, Idaho,
6 Oregon, Washington, Montana and northern California.

7 Q. Could you describe how your job activities
8 and assignments expanded with this promotion in the
9 area of generation operations?

10 A. More units to supervise.

11 Q. Is that all?

12 A. Basically, yeah.

13 Q. What about with regard to transmission
14 operations?

15 A. A larger system to cover, somewhat of an
16 increase in complexity.

17 Q. Did your role now expand to distribution
18 operations?

19 A. No.

20 Q. Did your responsibilities expand in the
21 area of planning and -- generation planning?

22 A. Yes. There are two aspects of generation
23 planning. I may have been misunderstanding when you've
24 asked that question before. There's the short-term
25 where you look at the generation you have and plan how

1 to use it, okay? That could stretch out as far as a
2 year into the future. If you're talking about the
3 capacity side of it, that has never been one of my
4 responsibilities, planning when to build capacity.

5 Q. And when you say that was never one of your
6 responsibilities, do you mean at Utah Power and later
7 PacifiCorp or do you mean throughout your professional
8 career to today?

9 A. Throughout, yeah.

10 Q. Could you explain in your position we're
11 discussing now what your job activities and assignments
12 were with regard to transmission planning?

13 A. Well, again, they were not -- I mean I had
14 no responsibility for deciding when to build additional
15 transmission, but I was responsible for making the
16 optimum use of the existing transmission, and to that
17 extent, I had operating engineers who would run studies
18 in my direction and decide what changes in operation we
19 might need to make. That's about it as far as the
20 transmission planning goes.

21 Q. Did your job responsibilities expand in the
22 area of generation reliability?

23 A. Could you tell me what you mean by
24 generation reliability?

25 Q. Well, let me ask a different question.

1 PacifiCorp was a regulated monopoly in this time
2 period?

3 A. Yes.

4 Q. It owned generation?

5 A. Yes.

6 Q. Did you participate or were you aware of
7 any studies with regard to forced outage rates or
8 maintenance schedules?

9 A. Yes. And if that's what you mean, then I
10 could have said there was something similar going clear
11 back to my time as power control supervisor, that I was
12 involved in economic studies of how much maintenance
13 was it worth doing on a unit in terms of what's the
14 replacement energy cost if the unit's out of service.
15 Those kinds of things would apply all through the early
16 '80s, through the early '90s -- well, through the late
17 '80s.

18 Q. With regard to -- I'm trying to get some
19 detail in regard to your specific job activities and
20 assignments. You mentioned participating in economic
21 studies.

22 A. Yes.

23 Q. Performing them? Reviewing them?

24 A. Both.

25 MR. STRAIGHT: Counsel, you'd first asked

1 him a question about generation reliability. You asked
2 him to define it, and I don't know if we still have a
3 definition we're all working from. And then there
4 weren't any other pending questions about specifics.

5 Q. (By Ms. Sherif) Okay. Did you understand
6 my definition?

7 A. I'm not sure. I responded with my
8 definition, and I guess that's about it.

9 MS. SHERIF: One moment.

10 (A discussion was held off the record.)

11 Q. (By Ms. Sherif) Were you ever responsible
12 for long-term generation planning?

13 A. No.

14 Q. That's fine.

15 With regard to your job responsibilities in
16 the area of transmission reliability, did your job
17 responsibilities expand in scope or only with regard to
18 the system becoming larger and more complex?

19 A. It's the size of the system.

20 Q. And when was the next time that your job
21 description or job title changed?

22 A. In November 1990 when I left PacifiCorp and
23 went to WSCC.

24 Q. Like Mr. Ward, in my questions I'm going to
25 say "WSCC" as shorthand for the Western Systems

1 Coordinating Council.

2 What is your current position at WSCC?

3 A. Title is director of dispatcher training.

4 Q. Have you held this position since 1990?

5 A. Yes.

6 Q. Between 1990 and now have you held any
7 other titles or positions at WSCC?

8 A. No.

9 Q. Is responding to public inquiries about
10 WSCC operating criteria one of your job
11 responsibilities?

12 A. It's not in my job description, but if
13 somebody needs an answer, then I may be the one to
14 provide it.

15 Q. For example, if I called the WSCC office
16 here in Salt Lake City and requested specific
17 information on a WSCC operating criteria or on how a
18 control area operator should implement that criteria,
19 would I be instructed to direct my question to you?

20 A. Most likely, yes.

21 Q. Who other than yourself is responsible for
22 providing the public with accurate and official
23 representation as to the implementation of WSCC
24 operating criteria by control area?

25 A. It could be the executive director or the

1 assistant executive director.

2 Q. Could you identify those two people by
3 name?

4 A. The executive director is Dennis Eyre,
5 E-y-r-e. The assistant director is Robert Dintelman,
6 D-i-n-t-e-l-m-a-n.

7 Q. Would both these persons be a source for
8 official and authoritative information on WSCC
9 operating criteria and the proper implementation of
10 that criteria?

11 MR. STRAIGHT: I'm just going to object and
12 ask you to define what you mean by official and
13 authoritative. He's not a lawyer.

14 Q. (By Ms. Sherif) Authorized to speak on
15 behalf of WSCC as to what the interpretation of its
16 operating criteria is.

17 A. Yes, they would be.

18 Q. As would yourself?

19 A. Yes.

20 (A discussion was held off the record.)

21 Q. (By Ms. Sherif) I have a few more
22 background questions. Have you ever provided expert
23 testimony before a court or administrative --

24 A. Yes.

25 Q. -- commission? Yes?

1 A. (Witness nodded.)

2 Q. Could you briefly list what courts or
3 administrative bodies you've provided expert testimony
4 before?

5 A. The Utah Public Utilities Commission, the
6 Idaho Public Utilities Commission. And I, frankly,
7 don't remember the court jurisdiction, but it was in
8 Idaho. I think that's all.

9 Q. Have you ever provided expert testimony on
10 the calculation of control area firm load?

11 A. No, I haven't.

12 Q. Could you please give me your understanding
13 of the purpose of the California investor-owned
14 utilities retail standby service rate as it applies to
15 a qualifying facility?

16 A. I have no understanding.

17 Q. Are you aware that the Federal Energy
18 Regulatory Commission has implemented regulations
19 addressing the proper design of retail backup and
20 maintenance rates applicable to qualifying facilities?

21 A. No, I'm not.

22 Q. Mr. Ward asked you about the WSCC's
23 responsibility with respect to electric utility
24 reliability earlier, so I'm not going to ask you that
25 question again. What I will ask you is can you provide

1 a reference to a WSCC document that addresses what the
2 WSCC's responsibilities are?

3 A. I suppose the agreement and bylaws would
4 provide that -- now are you -- wait, wait, wait. Are
5 you talking about responsibilities for developing the
6 criteria?

7 Q. Mr. Ward asked you to describe the function
8 of the WSCC, and you gave a couple of different things.
9 But the thrust of it was the role was to develop the
10 rules of the road.

11 A. Okay. If you're asking can I point you to
12 a document that says WSCC's responsibilities are to
13 develop the rules of the road, I probably can't. It's
14 just an inherit part of the -- you know, being one of
15 the members of the North American Electric Reliability
16 Council and their rule of developing criteria. And
17 they expect us to develop criteria that are more
18 applicable to our region as opposed to the entire North
19 American Region.

20 Q. Can you assume with me a generating unit
21 with no planned or scheduled outages and a forced
22 outage rate of 10 percent?

23 A. I'm sorry. Can I do what?

24 Q. I'm going to ask you a question, and in the
25 question I want you to assume that there exists a

1 generating unit --

2 A. Oh, okay.

3 Q. -- that currently has no planned or
4 scheduled outages --

5 A. Okay.

6 Q. -- and it has a forced outage rate of
7 10 percent.

8 A. Okay.

9 Q. Do you have these assumptions in mind?

10 A. Yes.

11 Q. All other things being equal, is a
12 1,000-megawatt control area that is served by a single
13 1200-megawatt generating unit more or less reliable
14 than an identical 1,000-megawatt control area served by
15 12 generating units each of which is 100 megawatts in
16 size?

17 A. That's a bit of a stretch. I mean it's not
18 even a realistic hypothetical. However, you know,
19 obviously having one resource that covers all your load
20 is not as reliable as having multiple resources.

21 Q. Hasn't it been established by utility
22 reliability analysis that installing multiple smaller
23 generating units results in an electrical system with
24 greater reliability than an identical system comprised
25 of a fewer number of large generating units, all other

1 things being equal?

2 A. I don't think I could say that's been
3 established. You know, how many units are we talking
4 about? What's the relative size? There are too many
5 variables to look at to just respond directly to that.

6 Q. If we assume that everything else is held
7 constant and the one variable in comparing these two
8 control areas is that one has multiple smaller
9 generating units while the other one has a fewer number
10 of larger generating units, can you answer the question
11 then?

12 A. Well, generally speaking, it would be more
13 reliable to have more units. But there are so many
14 other things that enter into it such as the forced
15 outage rate of each of the units, and that could be
16 impacted by the types of units they are.

17 Q. As I stated, if we held other variables
18 constant such as the forced outage rate and the type of
19 units so that the only distinction is the number and
20 size.

21 MR. STRAIGHT: Counsel, that's the third
22 time, the same question, so we can just move on. And
23 he's answered it.

24 MS. SHERIF: He hasn't answered it. I've
25 had an assumption that all other variables are

1 constant, and he's provided an answer that assumes that
2 all other variables aren't constant.

3 THE WITNESS: Well, they are constant. If
4 I have a system being served by a very few units with a
5 very low forced outage rate, there may not be that much
6 difference between that system and one served by
7 multiple units with a very low forced outage rate.
8 But -- well, that's as far as I can take it.

9 Q. (By Ms. Sherif) Okay. Thank you.

10 Would you agree that the state of
11 California needs more, not less, generation operating
12 within the state today?

13 A. Yes.

14 Q. Would you agree that an interpretation by a
15 new control area operator in California on how to
16 implement an existing WSCC criteria that has the result
17 of reducing the amount of available generation within
18 the state would reduce the reliability of the
19 California electric system, all other things being
20 equal?

21 A. No. That was a pretty long question. I
22 hope I followed it all the way through.

23 MR. STRAIGHT: Would you like to have it
24 read back?

25 THE WITNESS: Would you, please?

1 (The question was read.)

2 THE WITNESS: Well, I'm not sure what all
3 other things being equal would amount to, but, no, I
4 wouldn't agree with that.

5 Q. (By Ms. Sherif) In your opinion should the
6 WSCC support or oppose a change in the manner a
7 California control area operator implements a WSCC
8 criteria if that control area operator's actions reduce
9 the reliability of the California electric system?

10 A. If it actually reduced the reliability of
11 the system, we would oppose that.

12 Q. Are you aware that rolling blackouts have
13 occurred in Pacific Gas & Electric's service area in
14 this calender year?

15 A. Yes.

16 Q. Would you accept, subject to check, that
17 qualifying facilities provide, as available, capacity
18 and energy to Pacific Gas & Electric Company totaling
19 over 600 megawatts?

20 A. I can accept that.

21 Q. Has the WSCC made any evaluation on the
22 impact of reducing the available capacity in the PG&E
23 service area by over 600 megawatts?

24 A. No, we have not.

25 Q. In your opinion should a control area

1 operator that has sustained rolling blackouts be
2 advocating policies that may encourage the reduction of
3 over 600 megawatts of existing generation?

4 A. On the face of it, it doesn't sound like
5 the right thing to do.

6 MS. SHERIF: Thank you.

7 Mr. Straight, I was going to ask Mr. Comish
8 some questions now about PUC Code Section 2827. Would
9 this be a good time to take a break?

10 MR. STRAIGHT: And, actually, I think we'll
11 probably object to that whole line of questions. We
12 took a quick look at it before we started this morning.
13 One, he's not a lawyer; two, he just saw it this
14 morning --

15 MS. SHERIF: I'm not -- I'm not -- my
16 questions don't relate to legal interpretation, and if
17 you wanted, I could do it as a hypothetical where I did
18 the legal interpretation.

19 MR. STRAIGHT: Well, again, we're just real
20 uncomfortable with something he's never seen before
21 this morning, answering a bunch of questions --

22 MS. SHERIF: Okay. I can do it -- I can do
23 it as a hypothetical.

24 MR. STRAIGHT: You can ask your questions,
25 but we're probably going to object, he may not be able

1 to answer. That's all I'm telling you. But why don't
2 we take five minutes anyway?

3 MS. SHERIF: Okay.

4 (A recess was taken.)

5 Q. (By Ms. Sherif) Mr. Comish, assume with me
6 that somewhere on the WSCC system there is a
7 residential customer and this residential customer has
8 a solar or wind turbine generator or possibly a hybrid
9 wind/solar generator. This generator has a capacity of
10 not more than 10 kilowatts. The generator is located
11 on the customer's premises, and it is interconnected
12 and operated in parallel with the electric grid. Do
13 you have everything so far?

14 A. I think so.

15 Q. This generator is intended primarily to
16 offset part or all of the customer's own electrical
17 requirements. Would it violate WSCC criteria or the
18 MORC if the residential customer was metered in the
19 following way: The customer was metered by measuring
20 the difference between the electricity supplied through
21 the electric grid and the electricity generated by the
22 residential customer and fed back to the electric grid
23 over a 12-month period.

24 (A discussion was held off the record.)

25 Q. (By Ms. Sherif) And, actually, let me

1 clarify the calculation is made by measuring the
2 difference between the electricity supplied to the
3 residential customer and the electricity generated by
4 the residential customer and fed back to the electric
5 grid over a 12-month period.

6 A. Well, the 12-month period makes the whole
7 thing sort of irrelevant. What's important to the
8 control area is calculating load in real-time, and
9 whatever method you're talking about, if it involves
10 not knowing how much energy is being generated by the
11 customer's generator, then by the strictest
12 interpretation of the rules, that would be a violation.

13 Q. What do you mean by the strictest
14 interpretation of the rules?

15 A. From the standpoint of the control area not
16 knowing how much load it has, how much generation it
17 has, that would be a violation of the rules.

18 Q. Are you --

19 A. Obviously -- well, yeah, let me just leave
20 it at that.

21 Q. Is there some discretion as to how strictly
22 the rules are to be interpreted?

23 A. Not really.

24 Q. Not really. Is there any discretion as to
25 how strictly the rules are to be interpreted?

1 A. Well, understand, from my level all I see
2 is whether or not the control area is meeting its
3 obligations. How the control area chooses to implement
4 things internally to meet its obligations is entirely
5 up to the control area. As long as they meet our
6 requirements, then they can do it however they want to.

7 Q. So the control area operator has some
8 discretion in how strictly to interpret the rules?

9 A. Not how strictly, how they meet the rules,
10 how they meet the requirements.

11 Q. Could you explain to me what you mean by
12 how they meet the requirements?

13 A. Well, operating reserve, for example, is an
14 obligation we put upon the control area. Now, within
15 the control area the control area can pass on part of
16 that obligation to other entities within the control
17 area, usually by contract. So, you know, we don't care
18 how they met the criteria, provided they met the
19 criteria.

20 Q. Is there some way that a control area could
21 interpret WSCC criteria in such a manner that it could
22 net energy meter this residential customer in the way I
23 laid out to you?

24 A. There may be things -- you know, you'd have
25 to suggest a method to me, and then I would be able to

1 make a judgment as to whether that's good or bad.

2 Q. How about based on the historical
3 reliability of either that individual generator or
4 generators of that same type as a class?

5 A. No, I wouldn't -- that's -- what has been
6 in the past doesn't necessarily mean it will be that
7 way at all times. No. I was thinking more in terms
8 of -- I mean, the situation you described sounded like
9 a way to determine who owes money to who. Now, if the
10 control area said, In addition to that metering with
11 this 12-month settlement, we also have real-time
12 metering on your generator or your resource that tells
13 us what's there, then that would be acceptable to me.
14 But --

15 Q. But it's not acceptable absent the
16 real-time meter?

17 A. Yes, that's right.

18 Q. Yes, it's not acceptable?

19 A. Yes, it's not acceptable.

20 Q. Thank you.

21 Are you aware whether PG&E -- whether
22 Pacific Gas & Electric Company or Southern California
23 Edison Company either currently or in the past ever
24 engaged in the type of metering that I just described
25 to you for a residential customer with a solar or wind

1 or hybrid system?

2 A. I'm aware of it now only because of the
3 testimony that I've reviewed for this case.

4 Q. In light of this, is it currently your
5 opinion that Pacific Gas & Electric and/or Southern
6 California Edison and/or the California Independent
7 System Operator are currently in violation of WSCC
8 criteria?

9 A. I'm not specifically aware of it, no.

10 Q. You're not specifically --

11 A. The potential -- the potential is there,
12 but all I have so far is testimony of people that I
13 don't know. So that's -- that's all the information I
14 have about that situation.

15 Q. If that information was verified, would it
16 be your opinion that Southern California Edison,
17 Pacific Gas & Electric Company and the ISO are in
18 violation of WSCC criteria at this time or, to the
19 extent they engaged in this behavior in the past, in
20 the past?

21 A. If you're describing the entire situation,
22 then possibly they are in violation and have been in
23 violation. But I doubt if you can explain to me
24 exactly what calculations they're using at this time in
25 determining their operating reserve or have used in the

1 past. So it's possible that they have done something
2 to make up for the lack of proper metering.

3 Q. Mr. Comish, I believe you've already
4 received a copy of Southern Cal Edison's testimony in
5 this proceeding; is that correct?

6 A. Yes. Some, anyway.

7 Q. I'd like to ask you some questions about
8 two pages of Mr. Minik's testimony.

9 I have copies for everyone. This is in the
10 record. I don't think it needs to be an exhibit, but
11 it can be if you want.

12 For purposes of the transcript, I'm going
13 to be referring to the Cross-Answering Testimony of
14 Mark R. Minik on behalf of Southern California Edison
15 that was filed in this proceeding, Docket
16 No. ER98-997-000, on November 29, 2000, and we're
17 looking at only two pages of it, page 11 and page 12.

18 And I'm specifically going to be asking
19 questions from page 11 at line 6 through page 12 at
20 line 11, if you'd like to take a minute to review that.

21 MR. STRAIGHT: Counsel, I would suggest we
22 might as well mark it as an exhibit so when the
23 transcript comes back we've got it attached.

24 MS. SHERIF: Okay.

25 (A discussion was held off the record.)

1 (Exhibit-1 was marked.)

2 Q. (By Ms. Sherif) Are you done?

3 A. Yes.

4 Q. Mr. Comish, as described by Mr. Minik, was
5 Southern California Edison's historical practice of
6 adhering to FERC Order No. 69 treatment of behind the
7 site boundary meter load in determining its control
8 area firm load consistent with WSCC criteria?

9 MR. STRAIGHT: I'm going to object on lack
10 of foundation. I mean there's a lot of facts in there
11 that are not before him at all.

12 MS. SHERIF: I'm not asking him to testify
13 as to the accuracy of Mr. Minik's testimony. Mr. Minik
14 will be available for cross-examination at the hearing.
15 I'm really asking that assuming that Mr. Minik's
16 testimony is true, is the description he provides a
17 violation of WSCC criteria?

18 MR. STRAIGHT: And I guess my objection
19 goes to we don't have FERC Order 69 in front of us. We
20 don't know -- my objection goes to foundation still.

21 Q. (By Ms. Sherif) Please answer.

22 A. And I still -- I don't know if we have
23 enough facts here to -- to say they're violating or
24 not. I don't know -- I don't know Mr. Minik. As far
25 as I know, he's not involved in operating the -- or was

1 not involved in operating the Southern Cal Edison
2 system before the formation of the ISO. It's unlikely
3 that he's familiar with what the control area operators
4 were doing in terms of calculating load, but -- so --
5 and I don't know that either, so I can't -- I can't say
6 whether they're violating or not.

7 MS. SHERIF: Okay. Thank you.

8 Could we have one moment?

9 MR. STRAIGHT: Sure.

10 (A discussion was held off the record.)

11 MS. SHERIF: Thank you.

12 MS. KEY: This is Jennifer Key. We're
13 going to have some questions if they're finished.

14 MS. SHERIF: No, no, no. I'm just pausing.
15 I apologize.

16 (A discussion was held off the record.)

17 MS. SHERIF: I'm leaving the topic of
18 Southern California Edison.

19 Q. Mr. Comish, again, this is a hypothetical,
20 an assumption. I know you don't know the underlying
21 facts, but assuming the facts that I tell you are true,
22 please tell me your opinion. If the ISO filed a tariff
23 amendment to exempt retail customer-owned generation
24 that is under 10 megawatts and does not participate in
25 the ISO's ancillary services and/or its end balance

1 energy markets and is interconnected at the
2 distribution level -- do you have in mind the
3 characteristics of the generator in my assumption?

4 A. Well, I get that it's small and it's
5 connected at the distribution level.

6 Q. Okay.

7 A. The rest of that stuff is -- is the new
8 language of the California ISO, and I won't -- I won't
9 pretend to have much knowledge about details of that.

10 Q. Okay. Let me just say it doesn't sell
11 power to the ISO.

12 A. Okay.

13 Q. If the ISO amended its tariff so that a
14 generator that fit these characteristics was exempt
15 from installing ISO telemetry so that there was no
16 real-time telemetry, would this violate WSCC criteria?

17 A. Not necessarily. And I can see now you've
18 led me down a garden path here. In the previous --
19 understand that our criteria don't apply to how load is
20 metered or calculated. It applies to how the control
21 area meets its operating reserve requirements. And one
22 of the things it has to take into account is the load
23 in its area. Now, if it has an acceptable way of
24 estimating the load, then I guess that -- that wouldn't
25 necessarily be a violation of the -- of the criteria,

1 not to have the metering. But that would basically
2 require assuming the load is there full-time at a
3 hundred percent and therefore potentially overstating
4 the reserve requirements, but that's acceptable.

5 Q. I apologize. I didn't catch the tail end
6 of that. Why would the estimate potentially be an
7 overestimate?

8 A. Well, most loads are not at full demand a
9 hundred percent of the time. With real-time metering,
10 you can tell where they are. Without real-time
11 metering, you have to guess. And the safe,
12 conservative guess is they're at peak conditions at all
13 times. And that would result in potentially having
14 more reserve than is necessary at some times, but
15 that's certainly not a violation.

16 Q. And, again, I want to clarify. When you
17 said the ISO could estimate instead of having a meter,
18 that estimate is for the purpose of calculating reserve
19 requirements?

20 A. Yes.

21 Q. Let's say that the ISO decided that it was
22 going to file a tariff amendment so that the retail
23 customer-owned generation that is smaller than
24 one megawatt in size would not have its generation and
25 load behind the site boundary meter separately metered,

1 rather, it would be net metered at the point of
2 interconnection with the utility distribution company.
3 Would that violate WSCC reliability criteria?

4 (A discussion was held off the record.)

5 Q. (By Ms. Sherif) Oh, and only the load as
6 measured by the meter at the site boundary would be
7 considered load since that's the only load that's being
8 measured.

9 MR. STRAIGHT: Do you want that read back?

10 THE WITNESS: This is just like the other
11 question only the size difference, or did you change
12 something else in there?

13 Q. (By Mr. Sherif) It's so the distribution
14 level, it's under one megawatt. The difference here is
15 it's not just limited to telemetry. In the prior
16 question I was only asking you about telemetry. Here
17 the ISO's filed a tariff amendment so that the
18 generator is being net metered. There's one meter at
19 the site boundary between the UDC and the generator so
20 that the behind the site boundary meter load and the
21 behind the site boundary meter generation are not
22 separately metered and the load that's being measured
23 at the site boundary is net of the customer's own
24 consumption of cogeneration.

25 A. Okay.

1 Q. Or internal generation.

2 MR. WARD: I have to ask you, last time you
3 went an additional step and said and was not counted in
4 the ISO's load, when you first asked the question.

5 MS. SHERIF: At the meter, at the meter at
6 the site boundary.

7 MR. WARD: Are you asking Mr. Comish
8 whether just the metering --

9 MS. SHERIF: The question assumes that the
10 ISO is not estimating the load.

11 MR. WARD: Okay.

12 THE WITNESS: Okay. And what was the
13 bottom line?

14 Q. (By Ms. Sherif) Does this violate WSCC
15 criteria?

16 A. You're really stretching it. Let me say
17 again that all WSCC cares about is that the control
18 area has enough reserve to meet the criteria. How it
19 does that is up to the control area. Now, if you're
20 trying to tell me that there is load hidden in the
21 control area that the control area doesn't know
22 anything about, that -- that results in a violation of
23 our criteria. Now, it doesn't sound -- well, I don't
24 know. You're saying that the --

25 Q. It's not --

1 A. -- ISO is granted an exemption.

2 Q. Yeah. It's not hidden. The ISO has filed
3 a tariff allowing this.

4 A. Okay. And so are they violating criteria?

5 Q. Yes.

6 A. I don't know. How are they allowing for
7 that kind of an exemption? Are they taking -- are they
8 estimating that that load is there at all times?

9 Q. No. There's no estimate.

10 A. By strict interpretation, that could be a
11 violation. Now, whether we'd ever interpret it that
12 way, that's another question. But --

13 Q. Who has discretion for this varying
14 interpretation, the control area operator or the WSCC?

15 A. The control area operator unless they
16 decide to ask us. If they were to sit down with us and
17 give us all the facts, then we would provide an
18 interpretation. But absent their doing that, then they
19 would be making the interpretation, and if they chose
20 not to report anything to us, then we wouldn't know
21 about it.

22 Q. Can someone other than a control area
23 operator make this request? Can I make this request
24 for all the control area operators in the WSCC?

25 MR. STRAIGHT: And, Counsel, what request?

1 I'm sorry.

2 MS. SHERIF: For the clarification of the
3 strict interpretation of this rule.

4 THE WITNESS: Well, now you're asking me to
5 set policy, and I don't set policy.

6 Q. (By Ms. Sheriff) You did testify, however,
7 that you were the individual that a member of the
8 public could ask to speak to if they had a question
9 about interpretation of WSCC criteria; is that correct?

10 A. I didn't say I was the only one. I also
11 named two other individuals. And, by the way, there
12 were others I left out. I should have considered the
13 officers of WSCC.

14 Q. Okay. Well, let's go back. Who is
15 authorized to interpret WSCC criteria, and can they do
16 so alone or only in committee?

17 MR. STRAIGHT: And, Counsel, the prior
18 question that you'd asked was who can speak
19 authoritatively and officially on behalf of WSCC. I
20 think this is now a very different question you're
21 asking.

22 MS. SHERIF: I think it's the same
23 question, but let's just clarify it in the answer.

24 THE WITNESS: So the question is who can
25 provide the interpretation of the criteria? Was that

1 the question?

2 Can you read that back to me?

3 Q. (By Ms. Sherif) Well, let's state it more
4 precisely. WSCC has reliability criteria?

5 A. Correct.

6 Q. To the extent there is a dispute or a
7 question or an issue as to how those reliability
8 criteria are to be interpreted properly, who has the
9 authority or what group or multiple individuals in
10 combination can, on behalf of WSCC, authoritatively and
11 officially interpret the implementation of a
12 reliability criteria?

13 A. I could. The executive director could.
14 The assistant executive director could.

15 Q. Each one of you could do so acting alone?

16 A. Using our own judgment in terms of whether
17 we needed to act alone, yes.

18 It might also be the chairman of WSCC or
19 the vice chairman. It could be the minimum operating
20 reliability criteria work group or the compliance
21 monitoring and operating practices subcommittee. And
22 depending on just how involved the scenario is and how
23 many different companies or members it might affect, we
24 might choose to go all of those routes in making an
25 interpretation.

1 Q. Mr. Comish, are you aware that Chapter 18
2 of the Code of Federal Regulations at
3 Section 292.305(c) states that, and I'm quoting, The
4 rate for sales of backup power or maintenance power,
5 one, shall not be based upon an assumption unless
6 supported by factual data that forced outages or other
7 reduction in electric output by all qualifying
8 facilities on an electric utility system will occur
9 simultaneously or during the system peak or both?

10 MR. STRAIGHT: What was the question again?

11 THE WITNESS: Am I aware of that.

12 MS. SHERIF: Just is he aware of that.

13 THE WITNESS: No, I'm not.

14 Q. (By Ms. Sherif) Prior to our review of
15 Mr. Minik's testimony, were you aware of FERC Order
16 No. 69?

17 A. No.

18 Q. And I apologize. This is going to be a
19 little redundant because I misread my own typed notes.
20 But were you aware that FERC Order No. 69 states that,
21 and that is quote, The commission -- referring to
22 FERC -- believes that probabilistic analyses of the
23 demand of qualifying facilities will show that a
24 utility will probably not need to reserve capacity on a
25 one-to-one basis to meet backup requirements?

1 MR. STRAIGHT: And the question is what
2 again? I'm sorry.

3 MS. SHERIF: Was he aware of this.

4 THE WITNESS: No, I was not aware of that.

5 Q. (By Ms. Sherif) Thank you.

6 A. I'm not aware of anyplace where we require
7 reserve on a one-to-one basis.

8 Q. Mr. Comish, what is the name of the control
9 area operator that Salt Lake City is in?

10 A. PacifiCorp.

11 Q. How many control area operators are there
12 in WSCC's territory?

13 A. Well, by control area operator, I assume
14 you mean the controlling entity. The -- there are 30
15 control areas in WSCC.

16 Q. Is there a PacifiCorp East and a PacifiCorp
17 West?

18 A. Yes.

19 Q. And those are two different control areas?

20 A. They're the same company, but, yes, they
21 are control areas separate --

22 Q. And Salt Lake City is in which one?

23 A. PacifiCorp East.

24 Q. Does PacifiCorp East include a retail
25 customer's on-site consumption of electric energy

1 satisfied by internal generation behind the meter as
2 control area firm load when it calculates operating
3 reserves?

4 A. I don't know.

5 Q. Have you tried to find out?

6 A. No.

7 Q. Is there any method or procedure by which
8 the WSCC ascertains whether control area operators are
9 in compliance with WSCC criteria?

10 A. In general, yes.

11 Q. And what is that?

12 A. Well, we have a compliance monitoring
13 program wherein teams of experts from various member
14 systems go out to visit other members and ask
15 questions. It's a review, not an audit, but it's --
16 that's one method. And then, of course, there's the
17 reliability management system wherein the -- the
18 control area reports on itself as to how it's
19 performing.

20 Q. When I asked you previously whether you
21 knew whether PacifiCorp East was including a customer's
22 on-site consumption of electric energy satisfied by
23 internal generation as control area firm load and you
24 said you did not know, were you referring to yourself
25 as an individual or to WSCC as an organization?

1 A. I think both. Going back to when I worked
2 for Utah Power and PacifiCorp, there were no customers
3 like that.

4 MR. STRAIGHT: And, Counsel, he's here as a
5 representative of WSCC today.

6 MS. SHERIF: I know, but I wanted to make
7 sure there wasn't a report on his desk that he couldn't
8 remember but it had the information.

9 Q. When these reviews occur as part of the
10 compliance monitoring program, are control area
11 operators asked whether they're including a retail
12 customer's on-site consumption of electric energy
13 satisfied by internal generation behind the meter as
14 control area firm load?

15 A. Currently, no, that's not the case.

16 Q. Is WSCC planning on asking this question of
17 all control area operators in the future?

18 A. We'll be seriously considering it, yes.

19 Q. Is there any reason why WSCC would not ask
20 every control area operator whether it was complying in
21 this regard?

22 A. Understand that the situation you're
23 talking about is in the details at the lower levels of
24 the system that we're just not familiar with. When we
25 go out and monitor a control area for compliance, we

1 ask questions related to their overall compliance with
2 the criteria. We do not get into specific situations
3 about the types of generational load balance they may
4 have. We do ask if they have qualifying facilities or
5 independent power producers, and if they do, who's
6 providing the reserve for those, who's providing the
7 load following services and those kinds of things. But
8 we were not aware of a situation where there was net
9 metering going on, so we didn't ask about it.

10 Q. Previously we had a line of questions where
11 you stated that WSCC would respond to this issue that
12 we've been discussing if a control area operator
13 requested it but wouldn't necessarily initiate a
14 discussion of interpretation of calculating control
15 area firm load with regard to internal generation. Do
16 you recall that? I can probably phrase that better.

17 What I'm really wondering is can a party
18 that is not a control area operator seek an
19 interpretation from the WSCC with regard to the
20 calculation of control area firm load?

21 A. Yes.

22 Q. In addition to the compliance monitoring
23 program, you also mentioned that the control area
24 operators self-audit through RMS.

25 A. Yes.

1 Q. Does any part of that self-audit include
2 providing information as to whether they're including a
3 retail customer's on-site consumption of electric
4 energy satisfied by internal generation behind the
5 meter as control area firm load?

6 A. No.

7 MR. STRAIGHT: Could you read that question
8 back? I just lost all of that.

9 (The question was read.)

10 Q. (By Ms. Sherif) And you answered.

11 Well, I have a list of -- I'm not sure if
12 it's 30 control areas in the WSCC's territory, but I
13 pulled it off the NERC site. I would like to not have
14 to go through each one of them. Would your answers for
15 each of these control areas be the same as what you
16 answered for PacifiCorp, namely, that you don't know
17 what their current status is in regard to metering
18 on-site generation?

19 A. That's right, it would be the same answer.

20 MS. SHERIF: Thank you.

21 Could I have one moment?

22 MR. STRAIGHT: Sure.

23 (A discussion was held off the record.)

24 MS. SHERIF: Okay.

25 Q. I have a general question with regard to

1 the term "operating reserve." Is that intended to only
2 cover generator outages or does that also include other
3 variables?

4 A. It's intended to cover load swings,
5 generator outages, transmission outages --

6 Q. Are you finished?

7 A. Seemed like there may be other things.

8 Q. I'll give you a minute.

9 A. Ah, could be on-demand obligations you have
10 to another system, could be for interruptible imports
11 that you're buying from another system. It's intended
12 to cover all of those things.

13 Q. Thank you.

14 I realize you're not an attorney, and if
15 you can't answer this question, just say that you don't
16 know. But to the extent you have some personal
17 experience or knowledge or information, please answer
18 it. Do you know whether WSCC decisions with regard to
19 reliability criteria or MORC are subject to review or
20 oversight by FERC or any other body?

21 A. Well, we have a -- an arbitration process,
22 dispute resolution process, but, you know, that's still
23 within WSCC. I don't know of any case where FERC has
24 jurisdiction over the way we settle it, except if the
25 dispute resolution process fails, we may take it to

1 NERC or to FERC. But --

2 Q. Are you aware of any time when a dispute
3 has gone to FERC after the dispute resolution process?

4 A. Well, I'm not aware of any, but that
5 doesn't mean it hasn't happened.

6 Q. Have there been --

7 A. Is that a gunfight going on?

8 Q. Have there been any occasions where the ISO
9 declared a system emergency and where you believed that
10 the system conditions did not absolutely require that
11 the emergency be declared?

12 A. No.

13 MS. SHERIF: I'm complete.

14 MR. WARD: Jennifer?

15 MS. SHERIF: Jennifer?

16 MS. KEY: I'm here.

17 MS. SHERIF: Now you're on.

18 MR. WARD: You're up.

19 MS. KEY: I understand

20 EXAMINATION

21 BY MS. KEY:

22 Q. Okay. Mr. Comish, I want to go back to the
23 hypothetical that Mr. Ward had started with, and I
24 believe in that hypothetical there was a system where
25 there was a thousand megawatts of thermal generation, a

1 thousand megawatts of hydrogeneration and also a
2 customer, retail customer, with on-site generation of a
3 hundred megawatts, and I think also the basic
4 assumption that there was also 2200 megawatts of load,
5 a potential 2200 megawatts of peak load. Do you have
6 that --

7 MR. WARD: Jennifer, if I can restate what
8 it was.

9 MS. KEY: That's fine.

10 MR. WARD: There was a thousand megawatts
11 of load served by hydro --

12 MS. KEY: Okay.

13 MR. WARD: -- a thousand megawatts of load
14 served by thermal, plus a hundred megawatts of load
15 served by on-site generation.

16 Q. (By Ms. Key) Okay. That is the
17 hypothetical that I want to begin with.

18 Now, I'm just going to expand on that a
19 little. And I want you to assume that that hundred
20 megawatt load that's served by on-site generation is a
21 load that is putting demand on the system 24 hours a
22 day, 365 days a year and that the generator that serves
23 it has a forced outage rate of about 10 percent. Is it
24 your position, Mr. Comish, that that hundred megawatts
25 of load, of that on-site load, is control area firm

1 load demand 24 hours a day, 365 days a year?

2 A. It's part of the control area's load
3 responsibility, yes.

4 Q. I'm asking whether it's control area firm
5 load demand which is a term which is -- WSCC defined
6 it.

7 A. As part of load responsibility, yes. And,
8 yes, it is.

9 Q. Okay. Now I want to change the assumption
10 a little bit. This time I'm going to keep the 2,000
11 megawatt loads, but now we're going to have 10
12 customers each with on-site generators of a hundred
13 megawatts each. And we're going to make the same
14 assumption. There's a hundred megawatts -- well,
15 there's a total of a thousand megawatts of on-site load
16 served by these 10 generators, and each of the 10
17 generators has a 10-percent historical outage rate. In
18 this case, would the entire thousand megawatts of
19 on-site load be considered control area firm load
20 demand 24 hours a day, 365 days a year?

21 A. I should have clarified one part of the
22 question before I answered, and let me do that now. If
23 the generator trips, if it encounters that 10-percent
24 forced outage rate, how is the load served?

25 Q. From other generation located on the grid.

1 A. Okay. If that's the case, then, yes, the
2 whole thousand megawatts is part of load
3 responsibility.

4 Q. So that in all hours of the day, because
5 that load is always on, operating reserves would have
6 to be procured for that load?

7 A. Yes.

8 Q. Okay. Does that answer basically assume
9 that all 10 generators could fail simultaneously?

10 A. No, obviously not. We don't carry complete
11 reserve level for every generator that's on the system.
12 We only -- we take into account the fact that the
13 forced outages are random, unpredictable, but not all
14 at once, because we only call for 5 percent of the
15 hydro and 7 percent of the thermal generation as
16 operating reserve. We don't ask -- California's a
17 40,000-megawatt system. To ask them to carry 40,000
18 megawatts of reserve, that's -- no way.

19 Q. Okay. You mentioned earlier that
20 estimating load is one way to control area operators'
21 use to determine the level of operating reserves that
22 they need to procure; is that correct?

23 A. No, I didn't say they do. I said if they
24 chose to not meter the generation -- or at least this
25 is what I intended to say. If they chose not to meter

1 the generation, then an alternative process to
2 calculate their load responsibility might be to assume
3 full output of that unit at all times. And, you know,
4 that runs the risk of having more reserve than is
5 necessary, but it's not likely to violate our criteria.

6 Q. I don't really -- that wasn't my question.
7 My question was there are several ways a control area
8 operator can determine the amount of load it has load
9 responsibility for; is that correct?

10 A. I don't believe I said several ways, but,
11 yes, a -- there may be alternative ways other than
12 metering that a control area could determine its load
13 responsibility.

14 Q. And is one such methodology by estimating
15 the load, estimating its load responsibility?

16 A. Not its entire load responsibility but
17 small pieces of it, perhaps.

18 Q. Can you explain that answer?

19 A. Well, there's no way I would consider it
20 acceptable for the control area to estimate its load
21 responsibility entirely. I mean it's got to have some
22 metering somewhere that measures the input to the
23 system. Now, if there are small pieces of that that
24 it's deemed it's acceptable to estimate rather than
25 meter and the method of estimating is to assume full

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1 load at all times, then I would -- I would consider
2 that acceptable.

3 MS. KEY: Just one minute.

4 (A discussion was held off the record.)

5 Q. (By Ms. Key) You agree, then, Mr. Comish
6 that to the extent a control area lacks real-time
7 metering on generation that the only alternative is to
8 assume that all -- the full capacity of that generator
9 is being -- is -- that that generator's being used at
10 full capacity at all times?

11 A. If we -- if we define full capacity as
12 some -- well, strike that.

13 Yeah, yes, I would say that's a safe
14 assumption.

15 Q. I know Ms. Sherif has had you read pages 11
16 and 12 of Mr. Minik's testimony where it was indicated
17 that SCE's current as well as historical method for
18 forecasting control area load was based on historical
19 load data that included a reasonable probability that a
20 certain percentage of QF generators would be off-line
21 for maintenance or be forced off-line at any moment of
22 time. During that time -- let's assume that what
23 Mr. Minik has said is true -- was SCE ever accused of
24 violating WSCC criteria for its load forecasting
25 process?

1 A. No.

2 MS. KEY: I have nothing further.

3 MR. WARD: Joel or --

4 MR. KOCHREL: Joel with the staff. If we
5 get a chance, we'd like to ask one or two questions.

6 MR. WARD: You're on.

7 MR. KOCHREL: Okay.

8 EXAMINATION

9 BY MR. KOCHREL:

10 Q. Mr. Comish, I'm Joel Kochrel with
11 commission staff of the Federal Energy Regulatory
12 Commission. I have one short line of questions.

13 If the parties to this case -- and by
14 parties, I define that as representatives of the ISO,
15 of the CAC of California Group, of Edison and of PG&E
16 and of staff -- work out language on an agreement
17 that's acceptable to them to estimate or otherwise
18 define the firm load of -- firm on-site load instead of
19 using an on-site meter, would the WSCC be amenable to
20 looking at whatever language is submitted to them,
21 giving a view as to whether it violates the WSCC
22 criteria or not or to recommend changes to it to make
23 sure it's in compliance with that criteria?

24 A. It's a trap. I can see it right now.

25 I think --

1 Q. Isn't that the kind of thing you do --

2 A. No, this is not the normal kind of thing
3 for us to do. But if it's that important, yeah, I
4 think we would take a look at it and try to help you
5 work it out.

6 MR. KOCHREL: Thank you very much.

7 MR. STRAIGHT: Anyone else?

8 MR. WARD: Was there anything else, Joel?

9 MR. KOCHREL: No, that's it.

10 MR. WARD: I just wanted one follow-up to
11 Ms. Sherif's questions

12 FURTHER EXAMINATION

13 BY MR. WARD:

14 Q. When the WSCC determines whether a control
15 area operator is in violation of standards, does the
16 WSCC use the WSCC's interpretation of those standards
17 or the control area operator's interpretation of those
18 standards?

19 A. We use our interpretation.

20 Q. And what you've been talking about today is
21 in your interpretation, not a control area operator's
22 interpretation?

23 A. Yes.

24 MR. WARD: I have nothing further.

25 MS. SHERIF: I have a follow-up.

1 become more certain that, yes, it is the WSCC agreement
2 and bylaws.

3 MS. SHERIF: Thank you.

4 MR. STRAIGHT: That's all.

5 MR. WARD: Thank you, all.

6 (The deposition concluded at 12:55 p.m.)

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C E R T I F I C A T E

State of Utah)
 ss.
County of Salt Lake)

I, Susette M. Snider, a Registered Professional Reporter, Certified Realtime Reporter and Notary Public in and for the State of Utah, do hereby certify:

That the deposition of JOSEPH W. COMISH, the witness in the foregoing deposition named, was taken on February 14, 2001; that said witness was by me, before examination, duly sworn to testify the truth, the whole truth, and nothing but the truth in said cause;

That the testimony of the witness was reported by me in stenotype and thereafter transcribed into typewriting and that a full, true, and correct transcription of said testimony so taken and transcribed is set forth in the preceding pages;

That the same constitutes a true and correct transcription of the testimony so taken and transcribed and that the witness deposed and said as in the foregoing annexed deposition set out.

I further certify that I am not of kin or otherwise associated with any of the parties of said cause of action and that I am not interested in the event thereof.

WITNESS MY HAND and OFFICIAL SEAL at Salt Lake City, Utah this 15th day of February, 2001.

Susette M. Snider, RPR, CRR
Utah License No. 196

1 Case: California ISO Corporation
Case No.: ER98-997-000
2 Reporter: Susette M. Snider, RPR, CRR
Date taken: February 14, 2001

3 WITNESS CERTIFICATE

4 I, JOSEPH W. COMISH, HEREBY DECLARE:

5 That I am the witness referred to in the foregoing
6 testimony; that I have read the transcript and know the
contents thereof; that with these corrections I have
7 noted this transcript truly and accurately reflects my
testimony.

8	PAGE-LINE	CHANGE/CORRECTION	REASON
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17 No corrections were made.

18
19 JOSEPH W. COMISH

20 SUBSCRIBED and SWORN to at
21 this day of , 2001.

22
23 Notary Public
24
25