BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission's Own Motion to Adopt New Safety and Reliability Regulations for Natural Gas Transmission and Distribution Pipelines and Related Ratemaking Mechanisms.

Rulemaking 11-02-019 (Filed February 24, 2011)

MOTION OF THE UTILITY REFORM NETWORK TO SET ASIDE SUBMISSION AND REOPEN THE RECORD FOR THE TAKING OF ADDITIONAL EVIDENCE



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Thomas J. Long, Legal Director Marcel Hawiger, Energy Attorney

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November 16, 2012

MOTION OF THE UTILITY REFORM NETWORK TO SET ASIDE SUBMISSION AND REOPEN THE RECORD FOR THE TAKING OF ADDITIONAL EVIDENCE

Pursuant to Rule 13.14(b), the Utility Reform Network (TURN) submits this Motion to Set Aside Submission and Reopen the Record in order to take into evidence a portion of the October 2, 2012 Reporter's Transcript of PG&E's oral testimony in the Joint Evidentiary Hearings conducted in I.12-01-007 and I.11-02-016 concerning valve automation. This portion of the transcript, including pages 194-214 of the joint evidentiary hearing transcript, is attached as Appendix A.

TURN explains below how this evidence, which was unavailable prior to the submission of the record on May 31, 2012, constitutes admissions by PG&E witnesses concerning the response times of remote controlled valves (RCVs) and automatic shut-off valves (RCVs). These admissions are directly relevant to the scope of the valve automation program proposed in R.11-02-019, and specifically to the choice between RCVs versus ASVs, which was a primary issue in dispute.

NATURE AND RELEVANCE OF EVIDENCE

The evidence consists of the oral testimony, in response to cross-examination by Ms. Strottman from the City of San Bruno, of PG&E expert witnesses Kazimirsky and Slibsager. These witnesses submitted testimony in Investigation 11-12-007 concerning "PG&E's SCADA System and the Milpitas Terminal." Mr. Slibsager is the Manager of Gas System Operations, and has been with PG&E for 29 years. Mr. Kazimirsky is a Principal Engineer in charge of SCADA and Controls Group, and has been with PG&E for over 32 years.

TURN Motion to Reopen R.11-02-019 November 16, 2012 During cross examination, these witnesses (primarily Mr. Slibsager)

discussed the differences between RCVs and ASVs and the amount of time

required to initiate closure of these valves by a control room operator (RCV) or

an automated signal (ASV). Of particular relevance are pages 201, 202 and 206 of

the Reporter's Transcript; however, TURN submits the entire 20-page section of

cross-examination by Ms. Strottman (2 RT 194 to 2 RT 214) for completeness.

Mr. Slibsager testified that depending on the amount of SCADA

information they were receiving, a control room operator would initiate closure

of an RCV in "as short as 25 or 30 minutes and as, you know, as long as maybe

an hour and a half." Mr. Slibsager further explained that given the conditions on

September 9, 2010, a gas control operator might never have initiated closure

without on-site assistance.

PG&E has proposed its automated valve program in this proceeding as a

tool to achieve gas flow shut-off within 30 minutes of a rupture. Mr. Slibsager's

testimony is directly relevant to assessing the efficacy of using RCVs, rather than

ASVs, to accomplish this goal. In particular, Mr. Slibsager's testimony is directly

relevant to the testimony PG&E submitted in this proceeding contending that gas

shut off after a rupture can be achieved with an RCV within 30 minutes.1

The choice between RCVs and ASVs is no small matter. It is the primary

issue in dispute concerning the scope of PG&E's valve automation program.

¹ See, Exh. 1, p. 4-24, Menegus/PG&E.

WHY EVIDENCE WAS NOT PREVIOUSLY ADDUCED

The record in this proceeding was submitted on May 31, 2012. The oral testimony in the Joint Evidentiary Hearings in I.12-01-007 and I.11-02-016 was taken on October 2, 2012, more than four moths after submission of the record in this proceeding. The Proposed Decision in this proceeding was issued on October 19, 2012. TURN is moving for the admission of this evidence, which we have cited in our comments on the Proposed Decision.

November 16, 2012	Respectfully submitted,	
	By:/s/	
	Thomas J. Long, Legal Director Marcel Hawiger, Energy Attorney	

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TURN Motion to Reopen R.11-02-019 November 16, 2012

Appendix A:

Joint Evidentiary Hearing in I.12-01-007/I.11-02-016

October 2, 2012

2 RT 194-214

1	MS. STROTTMAN: Yes, thank you.
2	CROSS-EXAMINATION
3	BY MS. STROTTMAN:
4	Q Good afternoon. My name is Britt
5	Strottman and I represent the City
6	of San Bruno.
7	Can you hear me?
8	WITNESS KAZIMIRSKY: A Yes.
9	WITNESS SLIBSAGER: A Yes.
10	Q So I am going to ask you a few
11	questions about your automated valve program
12	and automated valves in general. So to whom
13	should I direct that question those
14	questions to?
15	WITNESS KAZIMIRSKY: A I guess it
16	depends on the question.
17	Q Well, I'll direct turn your
18	attention to page 8-17 of your testimony,
19	lines 12 through 14. Who could speak to
20	that?
21	WITNESS SLIBSAGER: A I think I would
22	speak to that.
23	Q Okay. Can you please take a minute
24	just to read it?
25	A Then that was, I'm sorry, lines 12
26	through 14?
27	Q Lines 12 through 14.
28	A (Reviewing document) Okay.

1 So it says PG&E has embarked on an 2 aggressive program to increase SCADA 3 visibility and control capability on its 4 transmission pipelines, focusing on the most densely populated areas in our service 5 6 territory; is that correct? That is correct. 7 8 0 So does this aggressive program, 9 quote, unquote, aggressive program include the automated valve program you testified to 10 later on? 11 12 That is what it's referring to, A 13 ves. 14 Is the program aggressive because 0 15 of the problems PG&E had with its control capabilities on September 10, 2010? 16 17 MR. WEED: Objection, assumes facts not 18 in evidence. 19 MS. STROTTMAN: Your Honor, I don't 20 think it assumes. I'm just asking a guestion 21 if the aggressive program is because of 22 the problems from September 10th. 23 ALJ WETZELL: Overruled. MS. STROTTMAN: I'm sorry. 24 25 September 9. 26 WITNESS SLIBSAGER: So I think it's 27 actually a response to process improvement 28 related to the events of September 9th that

PG&E has been moving forward on and has been 1 2 a recommendation by the National 3 Transportation Safety Board that's been issued to PG&E and the industry. 4 So is that a yes to my question? 5 Well, those are the activities 6 7 we're undertaking as a result of those process improvements. I'm --8 9 To answer my question --So --10 A 11 -- is the program aggressive 12 because of what happened on September 9, 13 2010? 14 In response to it being a process 15 improvement to what occurred, yes. 16 I'm not sure I understand 17 the question. I mean, aggressive -- I mean 18 it's process improvement related to 19 the incident and the accident that happened 20 on September 9, 2010. 21 So the program -- I'm using your 22 words, an aggressive program. That's right. Installation of this 23 24 number of valves and this amount of work is 25 really quite, quite large. 26 And it's because of the events of 27 September 9, 2010? 28 In respect of it being process

Q I'm sorry. I don't think you're

answering my question. I'm sorry. I'm

asking -
A Well, we undertook this activity as

a result of our -- of the NTSB

improvements associated with that event, yes.

a result of our -- of the NTSB recommendations and PG&E's review of the incident and installing these valves as part of the our PSEP program.

Q Is the program labeled aggressive because of the problems PG&E had with its control capabilities?

A Maybe I misunderstood then. I think aggressive, it's such a large amount of work that's being done in such a short period of time.

Q Okay. So could you please explain to me in layman's terms how an automated valve with an automated capability works?

A An automatic valve with automatic capability, installing an automated valves that have both either automatic or remote capability.

The automatic function is intended to be a functionality we're using where we have the pipeline crossing earthquake faults and the automatic nature of it, it will actually activate and close the valves based

1 on thresholds and triggers without operator intervention in my control room. 3 Q What other triggers besides 4 earthquakes? A It's increased flow through 5 the pipeline that may signify that a pipeline 6 7 is ruptured or broken as a result of an earthquake occurring. 8 9 O And could you please explain to me in layman's terms how an automated valve with 10 11 a remote control capability works? 12 A It would be a valve in my control 13 room. It would be actually operated by my 14 control room, meaning that my control room 15 operators would send a signal to open or 16 close the valve. 17 O So how do you make the decision to 18 place -- or how does PG&E make the decision whether to place an -- can I call it an 19 20 automatic or automated valve with automatic 21 capability an ASV? 22 A Yes. 23 Is that fair? 0 24 Α That's fine. 25 Can I call an automated valve with 26 remote control capability an RCV? 27 A That would work. 28 So how does PG&E make the decision

1 to place an ASV or an RSV on a line? The ASVs were determined as 3 a result of the fault process and the thought 4 that if there were an earthquake that we would want a quick shutoff of those pipelines 5 without intervention from the control room to 6 make that happen. And the RCVs were intended to be a decision made in the control room to 8 9 close those valves. 10 So that an RCV, you said a control room operator makes the decision to close --11 12 Α That's right. 13 0 -- the valve? 14 A (Nods.) 15 And what training does that control 16 room operator have in making that 17 determination? 18 A One of the operator OQs or operator 19 qualifications my operators hold is 20 the remote operation of valves. So they are 21 trained on how to use the SCADA system to 22 make that control valve close based on 23 analysis of upstream and downstream 24 conditions relative to the pipeline 25 conditions. So it's an operator 26 qualification that they hold that allows them 27 to do that.

So does the control room operator

28

have to check in with the supervisor to make that decision?

A The senior transmission coordinator on shift is a control room operator that's there 24 by 7, part of my control room staff has the authority to issue those orders and have the control room operators activate those valves to close.

Q So if there was an RSV on Line 132 placed upstream from the break in Segment 180, how long would it have taken to shut off the gas?

A So a remote control valve if it had existed, it would have, the time it would have taken to make the decision would have depended on the amount of information the operator could have gleaned from the SCADA system before they made that decision.

So I don't have precise answer in the respect of they didn't exist on September 9. As we are installing these across our system, we're adding a number -- great number of these, 220 of them in the first phase between now and 2014. So with that comes a lot of increased visibility.

So, it's hard for me to give you a precise number but I mean the actual

activation of the valve once the person sends the signal is about two to five minutes. But it's all about the analysis and the amount of data they have available to them to make that decision to send the signal. That would require time.

Q Could you give me a range?

A You know, every situation's different. Depends on how much information they're getting. But I mean I think it could be — it could be I think as short as 25 or 30 minutes and as, you know, as long as maybe an hour and a half. Depends on the amount of information they're getting to make that decision.

Q And what about an ASV. What if an ASV was placed upstream from the break in Segment 180, how long would it have taken to turn off the gas?

A ASV automated -- actuated automatically so it would have closed as soon as it got the signal from the valve.

Q So it's fair to say that if an ASV was on Line 132, the gas would have been cut off right away?

A Providing the valve operated appropriately as it was designed to, yes.

O And what about an RCV?

A That's back to the answer I gave
a minute ago. Depends on how much analysis
and how quickly my folks could have
assimilated information. And based on
the level of information they received on
that day, I think it would have taken them
a considerable amount of time to make
the decision to close that valve.

Q Wouldn't a prudent operator install
an RCV to shut off the gas in an event of
a catastrophic failure?

A Remotely controlled valve?

Q Yes.

A Well, PG&E had at the time over 300 remotely controlled valves in their system.

We just didn't have one at that location.

Q So is it your answer then that -so I guess the answer to my question wouldn't
a prudent operator install an RCV to shut off
the gas in a high pressure gas line like Line
132 an event of a catastrophic failure?

MR. WEED: Objection. It's an incomplete hypothetical, calls for speculation.

MS. STROTTMAN: I don't think it does. We can just say the hypothetical is the exact situation of what happened on September 9, 2010, which I'm sure you're familiar with.

PUBLIC UTILITIES COMMISSION, STATE OF CALIFORNIA SAN FRANCISCO, CALIFORNIA

1 MR. WEED: It's still objectionable as 2 it's just those two valves or is it every 3 valve on 5000 miles of pipe or --4 MS. STROTTMAN: Segment 180. MR. WEED: -- which is it? 5 6 MS. STROTTMAN: Q Actually, just Line 7 132. WITNESS SLIBSAGER: A Well, PG&E like 8 9 I said, we had over 300 remotely controlled 10 valves on the system. So we actually over 11 time, we installed them where we thought it 12 was prudent and necessary, and that's just 1.3 the process we've had in place. 14 So I think we've been doing 15 the prudent thing by installing them as we 16 retrofitted facilities and as we saw need for them. Just didn't -- we did not have them at 17 18 that location on September 9. 19 Q And is it fair to say that a fire 20 fueled by gas makes the fire more dangerous? 21 I'm not sure I know that. 22 You do not know that? 0 23 Well, I mean --Α A fire fueled by gas, doesn't that 24 0 25 make a fire more dangerous? 26 That's something else. I'm --27 Is a fire fueled by gas a dangerous 28 situation?

1	A Of course, yes.
2	Q And that can contribute to property
3	damage; correct?
4	A Yes, of course.
5	Q And put people's lives at risk;
6	correct?
7	A Yes, it could.
8	Q And if I could please direct your
9	attention to it's CPSD-9 which is the NTSB
10	report. Do you have that with you?
11	A The NTSB report?
12	Q Yes. Sorry.
13	A So did you give us a page number?
14	Q Yes. It's small Roman numeral X.
15	Top of the page it says Executive Summary.
16	A Okay.
17	Q If you could please read to
18	yourself the first line and the last
19	paragraph. It starts with "However."
20	A (Reading document).
21	Q I'll just read it out loud: .
22	However, PG&E took 95 minutes to stop
23	the flow of gas and to isolate
24	the rupture site, a response time that
25	was excessively long and contributed to
26	the extent and severity of property
27	damage and increased the life-
28	threatening risk to the residents and

1 emergency responders. 2 Do you agree with that statement 3 from the NTSB in the Executive Summary? 4 So, I'm not sure I agree that it was an excessive long period of time that it 5 took us to shut off the flow of gas. 6 I guess I agree that had it been shut off 8 faster, that potentially some of those things 9 would not have happened. 10 If I can could please have you look 11 at page 125. And it's NTSB finding No. 13, the first finding -- well, it's the first 12 13 paragraph on page 125. 14 Α It's you said No. 13? 15 Yes. 0 16 (Reviewing document) Okay, I read 17 it. 18 And that states: 0 19 Use of automatic shut-off valves or 20 remote control valves along the length 21 of Line 132 would have significantly 22 reduced the amount of time taken to 23 stop the flow of gas and to isolate 24 the rupture. 25 Do you agree with that finding? 26 Not in respect to remote control 27 valves because I think remote control valves 28 still would have taken the operator's

analysis to make a decision to activate those remote control valves.

I'm not so sure looking at what transpired on that day that they would have had enough knowledge to have done that or how fast they would have been able to do that.

Q But you agree that the automatic shut-off valves would have significantly -- the use of it would have significantly reduced the amount of time taken to stop the flow of gas and to isolate the rupture?

A No, not -- I think that that's a conclusion one could draw, but I think it depends on how they were set, what thresholds were automated into the valves to send the signals to shut them off, and whether the valves acted properly on that day, if they actually existed.

Q If they hadn't worked properly?

A Well that, and if they had been, you know, programmed properly. I mean, you know, an automatic shutoff valve would activate based on the amount of flow it was registering, something about a threshold. It would have had to have been programmed correctly and designed correctly.

Q Assuming they worked properly, designed -- were designed properly, would

that ASVs have reduced the amount of time taken to stop the flow of gas?

WITNESS KAZIMIRSKY: A This location was not suitable for the ASV, because the automatic shutoff valve would need to detect the rupture in line. So far up to now technology for that is not really reliable. Technology is not available. That is why we installed the automatic valve only at the fault lines. Location like San Bruno would call for -- would be more for remote control valve, not automatic valve. Remote control valve, like Keith said, would still require operator involvement to make decision to close the valve.

Q So I guess I don't understand why an ASV is not, could not be properly placed in San Bruno. Could you please explain that?

A Because the ASV, the valve that could close automatically without any human intervention, would require exact means of detecting line rupture. And currently there is no reliable technology available for such application. For the earthquake faults the technology is available. Valve can detect the earth movement. Sensors can detect earth movement or acceleration, and they can act upon that. On a straight line like we have

1 in San Bruno, the technology is not reliable. O Does PG&E have any plans to place 3 an RSV on Line 22? 4 A We have. We already implement it. We already have several valves on Line 132. 5 6 Q How many? WITNESS SLIBSAGER: A We've installed 50 of these remote control -- approximately 8 50 in our system. The majority of those have 9 been on the San Francisco Peninsula. 10 11 Q But no, you have not installed any ASVs on Line 132? 12 13 A You know, I don't know the answer 14 to that. They are in the -- they are in the 15 automated valve program wherever we have 16 fault crossings on the Peninsula. I don't 17 know if they've been installed at this time. 18 Q Do you know how I can find that 19 out? 20 WITNESS KAZIMIRSKY: A How to find it 21 out? 22 How to find out that information 23 and --24 A That information is available; but 25 not here, not now. 26 Do you know from whom? 0 27 Probably from the Pipeline Safety 28 Enhancement Program.

1 So if I could please direct your 2 attention to the CPSD report that has been 3 marked 1. Do you have that in front of you? 4 I believe it is the testimony? 5 0 Yes. 6 Α 1 is probably the very beginning of 7 it? I'm sorry, I just have one more 8 0 9 question to ask you about RSVs. Assuming all 10 the facts that SCADA had on September 9th, 11 had there been an RSV upstream of Segment 12 180, Line 132, how long would it have taken 13 to taken shut off the flow of gas? 14 WITNESS SLIBSAGER: A So is your 15 question how long would it have taken my 16 operators to analyze the situation to shut 17 off the flow of gas? 18 Yes. Assuming all the facts that 19 SCADA had on September 9th, yes. 20 I don't have a precise answer. 21 probably would have taken as long as having 22 somebody on site to tell us the precise 23 location of the line break to understand 24 which valve to actually upstream and 25 downstream of the break. 26 So then somebody would have to be 27 onsite? 28 At least to allow us to understand

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1
     precisely where the break was in the system.
               And I'm sorry, why is that?
               Because then we would have to know
 3
     the proximity of the nearest upstream and the
 4
     nearest downstream valve to that location.
 5
               Is that common practice within
 6
7
     PG&E?
               That is what we really were doing
8
9
     that day when we were dispatching our
10
     employees, our field employees to go out
     there and be our eyes and ears. Because we
11
12
     didn't have that information available to us
13
     on SCADA.
14
           O So I'm sorry, if I could have you
15
     go back to the CPSD report, page 167. It has
16
     been marked 1.
17
               It is 167?
           A
18
               Yes, CPSD Recommendation No. 27.
            \bigcirc
19
               That is in regards to RCV
20
     performance study.
21
               Yes, did you have a chance to read
22
     it?
23
               Yes, I did.
24
               So just for the record it says,
     it's Recommendation No. 27:
25
26
               RCV/ACV- PG&E should
27
               perform a study to provide
28
               Gas Control with a means of
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1	determining and isolating
2	the location of a rupture
3	remotely by installing
4	RCVs, ASVs, and
5	appropriately spaced
6	pressure and flow
7	transmitters on critical
8	transmission line
9	infrastructure and
10	implement the results.
11	Did I read that correctly.
12	A Yes.
13	Q Has PG&E performed that study?
14	A That is the study I referred to
15	earlier this morning that we are performing
16	at this point in time.
17	Q How long I assume you can't tell
18	us any conclusions yet to that study?
19	A I really can't. It is looking at
20	basically the spacing of our transmitters to
21	determine the effectiveness of the tool, to
22	whether it can tell us what site it could
23	tell us had occurred. At this point I don't
24	have the results back.
25	Q Excuse me, one minute.
26	MS. STROTTMAN: Thank you, I have
27	nothing further.
28	ALJ WETZELL: Mr. Yang.

MR. YANG: No questions for these witnesses, your Honor.

EXAMINATION

BY ALJ WETZELL:

Q I have just one question to follow-up on the very last question asked by Ms. Strottman regarding Recommendation 27 that we just looked at.

You mentioned that -- you talked about this morning a study that PG&E is conducting. Does that study include whether to install ASVs?

WITNESS SLIBSAGER: A The study is actually to look at the use of leak detection on the system to pinpoint where a leak would have occurred so then we could effectively use RSVs on our system.

Q I guess I would follow-up on the question she asked. Is PG&E or has PG&E performed a study with regard to ASVs?

A So the whole -- I mean it is sort of the premise of the whole PSEP program with automated valves. It is that response to PG&E's effort to install those ASV and RCVs on system. We are embarked upon a program to install 20 of them so we make that determination to do that in the Class 3, Class 4 locations which are the highly

1 populated areas. 2 ALJ WETZELL: Thank you. Redirect? 3 MR. WEED: Nothing really. Just one 4 question to follow up on Recommendation 27. REDIRECT EXAMINATION 5 BY MR. WEED: 6 Q If I understand correctly, Mr. Slibsager, PG&E has installed numerous 8 9 RSVs and ASVs; is that correct? WITNESS SLIBSAGER: A That is correct. 10 O And that is related to 11 Recommendation 27? 12 13 A Yeah, through our PSEP program. 14 MR. WEED: Thanks. 15 ALJ WETZELL: Anything further on that 16 one question? MR. REIGER: One point, your Honor. 17 18 RECROSS-EXAMINATION BY MR. REIGER: 19 20 O Prior to installing the -- you make 21 the decisions for these installations based 22 upon on a study or plan? 23 WITNESS SLIBSAGER: A The PSE Project 24 performed those analysis, and they make a 25 decision on how we would actually implement 26 the -- the precise locations of the valves we 27 would actually automate and the distance in 28 spacing between them. So I would have to

1	rely on their expertise how we made that
2	decision.
3	MR. REIGER: Thank you, your Honor.
4	MS. STROTTMAN: Your Honor, I'm sorry.
5	Now I have a question.
6	RECROSS-EXAMINATION
7	BY MS. STROTTMAN:
8	Q Just going back the RSVs, if you
9	had to dispatch somebody to be onsite, why
10	bother even having a RCV?
11	MR. WEED: Objection, beyond the
12	redirect.
13	ALJ WETZELL: I have to agree.
14	Sustained.
15	There being nothing further, that
16	completes your testimony. You are excused.
17	We will go off the record.
18	(Recess taken)
19	ALJ WETZELL: We are on the record.
20	Ms. Jordan, you may call PG&E's next
21	scheduled witness.
22	MS. JORDAN: Thank you, your Honor. At
23	this time we call Mr. David Harrison to the
24	stand.
25	ALJ WETZELL: Thank you, Ms. Jordan.
26	DAVID HARRISON, called as a witness
27	by Pacific Gas and Electric Company, having been sworn, testified as
28	follows:

Appendix B:

Statement of Qualifications of Mark Kazimirsky
Statement of Qualifications of Keith Slibsager

Reproduced from Testimony in I.12-01-007

PACIFIC GAS AND ELECTRIC COMPANY STATEMENT OF QUALIFICATIONS OF MARK KAZIMIRSKY

3	Q 16	Please state your name and business address.
4	A 16	My name is Mark Kazimirsky. My business address is Pacific Gas and
5		Electric Company, 375 North Wiget Lane, Walnut Creek, California.
6	Q 17	Briefly describe your responsibilities at Pacific Gas and Electric Company
7		(PG&E).
8	A 17	I am a Principal Engineer in charge of the Supervisory Control and Data
9		Acquisition (SCADA) and Controls Group in the Gas Transmission
10		Engineering department.
11	Q 18	Please summarize your educational and professional background.
12	A 18	I have an engineering degree in Electromechanical Engineering from the
13		Institute of Technology, Odessa, Ukraine. I have been with PG&E for over
14		32 years in various engineering and management positions. I have
15		extensive experience in gas system operations, SCADA, control systems
16		and automation technologies for the natural gas industry.
17	Q 19	What is the purpose of your testimony?
18	A 19	I am jointly sponsoring Chapter 8.AF.3., PG&E's SCADA System and the
19		Milpitas Terminal, with Keith Slibsager.
20	Q 20	Does this conclude your statement of qualifications?
21	A 20	Yes.

PACIFIC GAS AND ELECTRIC COMPANY STATEMENT OF QUALIFICATIONS OF KEITH SLIBSAGER

3	Q 36	Please state your name and business address.
4	A 36	My name is Keith Slibsager. My business address is Pacific Gas and
5		Electric Company, 77 Beale St., San Francisco, California.
6	Q 37	Briefly describe your responsibilities at Pacific Gas and Electric Company
7		(PG&E).
8	A 37	I am a Manager in the Gas System Operations department. I have
9		responsibility for the gas control room operations including the remote
10		monitoring and controlling function of the pipeline and management of the
11		natural gas pipeline inventory.
12	Q 38	Please summarize your educational and professional background.
13	A 38	I have a Bachelor of Science degree in Agriculture/Plant Science from
14		California State University of Fresno. I have worked at PG&E for 29 years
15		holding various positions of increasing responsibility in gas operations.
16	Q 39	What is the purpose of your testimony?
17	A 39	I am jointly sponsoring Chapter 8.A-F.3., PG&E's SCADA System and the
18		Milpitas Terminal, with Mark Kazimirsky.
19	Q 40	Does this conclude your statement of qualifications?
20	A 40	Yes.