

INTEGRATED ENERGY POLICY REPORT COMMITTEE WORKSHOP

BEFORE THE

CALIFORNIA ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

In the Matter of: )  
 )  
Informational Proceeding and ) Docket No.  
Preparation of the 2004 Integrated ) 03-IEP-01  
Energy Policy Report (IEPR) Update )  
Planning for California's Future )  
Transmission Grid )  
\_\_\_\_\_ )

CALIFORNIA ENERGY COMMISSION

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PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

COMMISSIONERS PRESENT

John Geesman, Presiding Member

James Boyd, Associate Member

ADVISORS PRESENT

Melissa Ann Jones

Michael Smith

Christopher Tooker

STAFF PRESENT

Laurie ten Hope

ALSO PRESENT

Joe Eto

Consortium of Electric Reliability Technology  
Solutions; Lawrence Berkeley National Laboratory

Vikram Budhraj

Consortium of Electric Reliability Technology  
Solutions; Electric Power Group

Gary L. DeShazo, Manager

California Independent System Operator

Rich Ferguson

Center for Energy Efficiency and Renewable  
Technologies

Jane Hughes Turnbull, Principal

Peninsula Energy Partners

League of Women Voters

Jane Bergen

League of Women Voters

Osa L. Armi, Attorney

Shute, Mihaly and Weinberger, LLP

Save Southwest Riverside County

ALSO PRESENT

Tony Smeerdyk  
Save Southwest Riverside County

Joseph Lyons  
California Manufacturers and Technology

Christopher Ellison, Attorney  
Ellison, Schneider and Harris, LLP  
American Wind Energy Association

Patricia Mayfield, Manager  
Southern California Edison Company

Kevin J. Dasso, Director  
Pacific Gas and Electric Company

David M. Korinek, Manager  
San Diego Gas and Electric Company

Ellen M. Petrill, Program Director  
Electricity Innovation Institute

Alvin Pak, Director  
Sempra Energy

Robin Podmore, President  
Incremental Systems

Steven Eckroad, Manager  
Electric Power Research Institute

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

9:35 a.m.

PRESIDING MEMBER GEESMAN: Good morning.

I'm John Geesman and sitting to my left is Commissioner Jim Boyd. We are the Committee designated by the Commission to initiate the 2005 Integrated Energy Planning Report. This is the first of what will invariably be a very large number of public workshops and hearings.

It's ironic that we are commencing the 2005 effort five days ahead of, or six days ahead of our adoption of the 2003 report, which is available on our website for those of you who have not yet seen it. It will be brought before the full Commission next Wednesday for consideration, and I would presume, adoption.

It is truly a masterful job that my colleague, Commissioner Boyd, is principally responsible for. And it's one of the primary reasons we're here today initiating the '05 process on the topic of transmission.

The 2003 report contains a shall we say brutally candid assessment of some of the problems the state has faced in adequately planning for and permitting necessary expansions to the

1 transmission system.

2 We hope to build on that effort in the  
3 '05 process. An important component of that is  
4 reassessing the planning criteria that are used in  
5 determining the benefits and costs of transmission  
6 projects.

7 We're fortunate today to have two  
8 experts that we've worked with before to have  
9 prepared a report which our various panelists have  
10 been asked to respond to. And certainly members  
11 of the public are encouraged to respond to. Joe  
12 Eto and Vikram Budhraj, both of them have been  
13 able to make time for us today in a very busy  
14 schedule because of their involvement in the  
15 national review of the events leading to the  
16 blackout in the northeast in mid August.

17 The report has already stimulated quite  
18 a bit of reaction. It was cited as the  
19 instigating event of the State Treasurer's  
20 proposal which he made a couple of days ago, and  
21 which I know will be brought before the joint  
22 meeting of the Public Utilities Commission, the  
23 Energy Commission and the Power Authority  
24 tomorrow. I believe that the Power Authority is  
25 planning on holding hearings on that proposal in

1 January.

2 I attended an event yesterday where  
3 Senator Bowen, the Chair of the Energy and  
4 Utilities Committee in the Senate, indicated the  
5 importance of the Legislature addressing  
6 transmission in the coming session.

7 These issues are starting to snowball in  
8 terms of the public's attention. It's important  
9 before we get too far down the road in terms of  
10 our engagement with them, that we review the  
11 criteria that we believe the state ought to apply  
12 in assessing what upgrades to the transmission  
13 system we believe are worthy of going forward.

14 We invited the Public Utilities  
15 Commission to participate. Unfortunately, because  
16 of their joint hearing today with FERC in San  
17 Francisco, they were unable to do so. But they  
18 will be actively engaged in this process, as well.

19 With that let me say that we'll start  
20 with Joe. We'll follow our agenda. I do want to  
21 add to the agenda that after our first panel if  
22 members of the audience care to make comments on  
23 the report, the appropriate time to do so would be  
24 before our lunch break.

25 We will take time for any comments, both

1 on the topics raised by the first panel and on the  
2 report, itself. We'll then have a lunchbreak, and  
3 in the afternoon engage the other panels that  
4 we've got scheduled for the subject matter to be  
5 designated on the agenda.

6 Joe.

7 MR. ETO: Thank you very much,  
8 Commissioner Geesman, Commissioner Boyd. It's a  
9 pleasure to address you today about some of our  
10 work.

11 Let me introduce myself. My name is Joe  
12 Eto. I'm a Staff Scientist at the Lawrence  
13 Berkeley National Laboratory. My time is  
14 principally spent managing the program office for  
15 something known as the Consortium for Electric  
16 Reliability Technology Solutions.

17 This is a consortium involving four of  
18 the national laboratories, 11 major universities  
19 and some private sector folks. We're conducting  
20 public interest R&D in the area of transmission  
21 reliability for a number of clients, principally  
22 the U.S. Department of Energy's Transmission  
23 Reliability Program, and also the California  
24 Energy Commission's Public Interest Energy  
25 Research Program, specifically the Energy Systems

1 Integration Group led by Laurie ten Hope.

2 It is through that activity in which we  
3 have principally been focused on developing  
4 software tools under sponsorship from the  
5 Department of Energy; installing prototypes of  
6 them at the California ISO to help manage  
7 reliability through the PIER program that I'm here  
8 before you today.

9 One of our activities, I think the  
10 reason why we're engaged today is we did a  
11 scenario analysis activity for the PIER program,  
12 looking at transmission R&D needs. And as part of  
13 that, try to start envisioning what the future of  
14 transmission might look like in the state.

15 That led to a discussion with the  
16 Commissioners' Office asking us to think more  
17 broadly about looking at the transmission system,  
18 the benefits that it's brought to California and  
19 some of the planning issues and policy issues that  
20 might be going forward.

21 And so it's in that context that we've  
22 prepared this study which I'll be presenting to  
23 you today. Let me not take all or even any of  
24 the -- or much of the credit for the actual work.  
25 The work was led by Vikram Budhraj at the Power

1 Group, along with his colleagues Jim Dyer, Fred  
2 Mobasher and Stephen Hess.

3 If the questions get too difficult I'll  
4 probably have to ask him to help me decipher some  
5 of the numbers.

6 So what we want to do today is cover  
7 four principal topics. I think the first part of  
8 the talk will really be essentially a history  
9 lesson. Now, I'm younger than many of you in the  
10 room and so many of you know this history much  
11 better than I do, but I want to review how we got  
12 to the transmission infrastructure that we have  
13 today.

14 I think sort of reviewing that past,  
15 looking why some of these decisions were made, and  
16 what some of the outcomes of them have been is  
17 really very very critical in terms of putting us  
18 in position to talk about or discuss issues that  
19 we need to work through in thinking about how to  
20 go forward in transmission in California.

21 An important part of that discussion  
22 will be in a first effort to try to review some of  
23 the unanticipated benefits and value that that  
24 transmission system has brought to the ratepayers  
25 of California.

1           And I think that, again, is a really  
2 important touchstone going forward because we will  
3 submit that many of these benefits are not  
4 traditionally captured. It's important to be  
5 aware of them. I'm not going to advocate for a  
6 particular means to capturing them, but just to  
7 acknowledge that they exist and they need to be  
8 reflected in a comprehensive planning process  
9 going forward.

10           I'm going to use that to do something  
11 more to the current, I'm going to quickly go over  
12 the recent history. I'll defer many of the  
13 specific issues to the planning work that the  
14 staff here at the Commission have done for the  
15 IEPR. I'm not intending to review those projects  
16 in detail.

17           But I think it's important to understand  
18 what is being posited as the motivations for some  
19 of those projects, relate those back to some of  
20 the benefits that we've talked about from the  
21 historic transmission investments.

22           And then move into essentially a  
23 touchstone to the discussions today of what we see  
24 as some of the key policy issues that ought to be  
25 thought about as we go forward in planning the

1 transmission grid for California going forward.

2 So, let's go back to history. Prior to  
3 the '60s the California utilities operated  
4 essentially as electrical islands unto themselves.  
5 They were vertically integrated firms producing  
6 and transmitting electricity to captive customers  
7 within their service territories.

8 California was fortunate in some ways in  
9 being ahead of the curve technologically because  
10 access to hydro resources in the Sierras really  
11 pioneered the development of many of the high  
12 voltage transmission technologies that we see  
13 today.

14 This led, in the very early '60s, and I  
15 think especially prompted by the blackout of the  
16 northeast back in 1965, but also by a recognition  
17 of the resource diversity benefits that could be  
18 obtained from exchanges across the region to the  
19 construction of some early transmission lines.

20 Pacific AC Intertie, which is about 1000  
21 miles long was originally 800 megawatts connecting  
22 California to the hydrologic resources in the  
23 northwest. It was quickly expanded to 1400  
24 megawatts in '69. And now is at about 3200  
25 megawatts.

1           The Pacific DC Intertie, built  
2           principally by the munis in California, was built  
3           about a year later. Started out around 1400  
4           megawatts. Now is up to about 3100 megawatts.  
5           That's an 825-mile-long line, and again a very  
6           unique -- and I think this is an important  
7           point -- at the time that these were built  
8           transmission lines of this length and of these  
9           voltages had not been contemplated before. These  
10          were path-breaking, technological advances in the  
11          state of the art of electric transmission, in  
12          which the California utilities and those in the  
13          west were at the forefront of.

14                 Let's turn to the southwest. Thinking  
15                 about issues of fuel diversity, California  
16                 utilities began building and participating in the  
17                 construction of coal-fired power plants in the  
18                 southwest, and the building of transmission lines  
19                 to bring that power to the load centers in  
20                 southern California.

21                 Initially about 2000 megawatts of  
22                 capacity was built over these three high voltage  
23                 lines. Subsequently they've been increased, and  
24                 I'll talk about that a little bit later. Again,  
25                 the principal benefit here being again fuel

1 diversity. In the first case, looking at the  
2 hydrological resources of the northwest. In this  
3 case, looking at the tremendous coal resources in  
4 the southwest.

5 I think again a fuel diversity issue  
6 came up really, I would say, in response to some  
7 of the Power Plant Industrial Fuel Use Act that  
8 was restricting the use of natural gas to  
9 participation in some of the Palo Verde nuclear  
10 power plant projects, and the need to bring that  
11 power to the markets in southern California. So,  
12 again, we're reinforcing the lines to the  
13 southwest. Those lines are now -- as a result --  
14 about 5100 megawatts.

15 Finally, as a result of infrastructure  
16 development along the southwest power link we were  
17 able in the mid '80s to interconnect with Mexico,  
18 bringing power from plants there. And that was  
19 more recently reinforced just this year to about  
20 800 megawatts of capacity.

21 Continuing on. In the late '80s, and  
22 this is going to be the beginning of an important  
23 trend that I want you to be observant of as we  
24 talk about some of these later projects. The  
25 municipal utilities in southern California banded

1 together to build a DC link to coal-fired power  
2 plants in the Utah area. Again the use of DC  
3 technology, a very advanced technology, one of the  
4 highest voltage DC lines in the country, I  
5 believe. And importantly, built by the munis.  
6 This is a recurring theme that I want to come back  
7 to.

8 This thing comes back with the COT  
9 project now being built by TANC, the association  
10 of a lot of the municipal utilities in northern  
11 California. Again, bringing power from the  
12 northwest to California. These projects have now  
13 migrated along with the earlier AC interties to be  
14 referred to affectionately as the COI project.

15 Finally in sort of the last part of this  
16 story was another effort by the municipal  
17 utilities to increase access to power in the  
18 southwest. This is the link through the southwest  
19 to some of those. And this is kind of sort of the  
20 end of the story in terms of the modern era of  
21 transmission construction in California. And I  
22 want to talk about some of the themes that  
23 underlie that.

24 Here is a summary now. Essentially now  
25 we have about 18,000.2 megawatts of non

1 simultaneous import capability into the state. We  
2 look at that in terms of initially what we've been  
3 able to avoid in terms of instate construction and  
4 we assume we can see that that, if you look at a  
5 power plant cost of about \$550 a kW, that comes  
6 out to about \$10 billion of avoided instate  
7 construction.

8           You look now at the cost of that  
9 investment at \$4 billion and you can see the kinds  
10 of benefits that transmission has brought in terms  
11 of deferring or avoiding instate construction of  
12 power plants.

13           But I don't want to look at California's  
14 activities purely in isolation. These are part of  
15 a larger set of regional activities that have gone  
16 on to build the WECC infrastructure network. And  
17 there's a variety of reasons and motivations for  
18 why those are taking place.

19           One, of course, is reliability. The  
20 ability to interconnect with your neighbors, to  
21 share load in times of adversity. Clearly a very  
22 important driver in the initial creation of the  
23 transmission system and the linkages between the  
24 major vertically integrated (indiscernible).

25           This issue of load diversity has come up

1 several times. I'm going to talk a lot more about  
2 that. Fuel diversity is another part of that.  
3 Access to remote generation, again deferring  
4 generation instate, firm purchases, economy  
5 energy. I think this economy energy I want to  
6 come back to quite a bit, in terms of having the  
7 optionality, the ability to take advantage of  
8 windfalls essentially in the regional endowments  
9 of resources and to be able to access them.

10 Let me now paint a picture of what we  
11 see. We see very early on an initial spate of  
12 capacity being built, followed by a large increase  
13 in capacity through the mid '80s, essentially  
14 stopping by the mid '90s. Interestingly, this  
15 trend, these lines are being built by both the  
16 investor-owned utilities as well as by the  
17 publicly owned utilities. By the end of the '80s  
18 you see that tapering off and these lines here  
19 being built principally by the municipal  
20 utilities.

21 Exploring some of the causes for that  
22 change are really part of the reasons why we're  
23 trying to look at some of these issues here in  
24 teeing off this discussion about how we go forward  
25 with transmission in the state.

1           So the main focus of our report was to  
2           sort of reflect on this history and then reflect  
3           back on the motivations for the original  
4           construction; contrast them with, in fact, the  
5           realized benefits. And so the bulk of our report  
6           really is focused on trying to do first order of  
7           approximations of a number of benefits that may  
8           not have been anticipated, or they certainly  
9           weren't explicitly factored in terms of quantified  
10          values, into the original planning decisions, but  
11          which have been important benefits, benefits which  
12          we think ought to be taken into consideration  
13          going forward and looking at options for  
14          transmission investment in the state.

15                 The first one I'll talk quite a bit  
16          about has to do with reliability. And  
17          specifically going to measure that essentially by  
18          the ability to reduce instate reserve margins by  
19          being able to count on the availability of  
20          imports.

21                 The next is we'll try and talk about  
22          what has been the benefit by having these accesses  
23          is to regional markets and the resulting resource  
24          diversity that underlies that. We'll have to try  
25          to quantify that in some detail.

1 I want to talk in general terms about  
2 some of the environmental benefits, but I want to  
3 be clear that there are tradeoffs here. I also  
4 want to talk about really an important benefit  
5 that I think is very difficult to capture, but  
6 which is really quite fundamental to some of the  
7 things the transmission brings, which is the sense  
8 of optionality. The ability, not necessarily that  
9 you actually are taking, but the ability under  
10 adverse circumstances to be able to take resources  
11 from other parts of the region very easily.

12 And then I think there are some  
13 institutional benefits that have arisen, and I'll  
14 speak to those very directly. Let's talk about  
15 reliability.

16 Over the last 25 years, as a result of  
17 interconnections, the California resource planners  
18 have effectively, you know, in speaking with their  
19 legs, reduced the effective instate capacity  
20 reserve margins by 3 to 5 percent. Essentially  
21 what they're doing is they're saying that we can  
22 now count on about 2500 megawatts of economy  
23 imports in all of our planning studies. And by  
24 that means reduce the kinds of instate planning  
25 reserve requirements that we used to use of around

1 18 percent to down to 15 percent region.

2 If you try to quantify that 3 percent  
3 reserve margin benefit in terms of avoided instate  
4 capacity construction you come up with figures of  
5 between \$750 million and \$1.2 billion.

6 Second, kind of the economic side of the  
7 construction of the plants has been these access  
8 to regional markets and the resource diversity  
9 that's entailed there. I think the most, you  
10 know, key to this really was in the mid '80s, the  
11 formation of the Western Systems Power Pool. This  
12 was an umbrella agreement that allowed the western  
13 utilities to very easily enter into a wide variety  
14 of energy capacity and transmission transactions  
15 with each other, using that high voltage  
16 infrastructure that they had jointly created.

17 And so what you see is now the Pacific  
18 Northwest dominated by (indiscernible) resources  
19 now becoming more available to California at a  
20 better price than what California was able to  
21 generate that power at internally. Similarly, a  
22 call from the southwest being able to be brought  
23 into California. In fact, by the last part of the  
24 last decade about, you know, 20 percent of our  
25 generation was, in fact, coming through imports at

1 a substantial savings to the state. And also  
2 providing access to these markets which in some  
3 sense has the feedback effect of taming some of  
4 the internal markets where natural gas is the  
5 marginal fuel.

6 A benefit of this that I can't speak to  
7 quite as directly is essentially, although I  
8 suppose it's captured by the lower resource  
9 margin, is the sense also of greater asset  
10 utilization. By doing this diversity sharing, by  
11 doing this resource sharing across seasons, across  
12 time periods, they're able to utilize the assets  
13 more fully.

14 On environmental benefits I want to be  
15 very clear that there are both benefits and  
16 tradeoffs. I think there's some cases where you  
17 can argue for a win/win and some cases I think  
18 it's an issue of tradeoffs and you have to go into  
19 your own personal evaluations about what the  
20 values of those tradeoffs are.

21 In the case of the northwest I think  
22 there's a clear win on both sides. Essentially  
23 what we're doing by these diversity exchanges is  
24 we're taking water that will be spilled because  
25 there's too much water behind these dams; getting

1 it at a very favorable rate. We've avoiding  
2 instate generation from fossil-fired power plants,  
3 offsetting the NOx emissions associated with that.

4 The same kind of tradeoff is taking  
5 place when we take coal from the desert southwest.  
6 However here it's not so much a matter of reducing  
7 absolutely generation from fossil fueled power  
8 plants as much as displacing the location at which  
9 that generation takes place.

10 And here's where the tradeoff needs to  
11 be assessed. You know, I would argue that in  
12 terms of offsetting instate generation of  
13 electricity closer to large population centers  
14 you've actually reduced the health effect impacts,  
15 some of the airborne pollutants that are created  
16 from the generation of electricity.

17 At the same time you're simply  
18 displacing those to another part of the country.  
19 You have to make the tradeoff and the assessment  
20 about on net whether society's better off or worse  
21 off by those kinds of tradeoffs. But I think it's  
22 important to factor those dimensions in when you  
23 start thinking about transmission and what it  
24 means in terms of the resource diversity and  
25 environmental benefits it brings to the state.

1           This I want to talk about just a little  
2 bit. You know, I mentioned it a little bit  
3 earlier, you know, we are essentially relying  
4 principally in the state on natural gas as the  
5 marginal fuel. When you have access to regional  
6 markets you're essentially broadening the pool of  
7 resources you have the ability to draw from. That  
8 inevitably allows you to broaden your market,  
9 obtain better prices -- am I going backwards?  
10 Excuse me. Yeah, I'm sorry, I did speak to that  
11 already.

12           This is this issue of optionality that I  
13 want to speak to now. And it's really the  
14 insurance value that is provided by having  
15 infrastructure that provides access -- there's one  
16 of these new-fangled mice that is not connected to  
17 a cord, and it continues to slide off the table  
18 each time --

19           (Laughter.)

20           MR. ETO: -- so I find myself talking  
21 and kind of looking over the side, trying to catch  
22 it before it hits the ground each time. So I  
23 think I've kind of got it glued up here on top of  
24 this other cord. And I hope it won't be as  
25 distracting to me in these next few slides. Like

1 in terms of which direction the slides need to go.

2 Unplanned events happen in the power  
3 system. That's how the power system is planned.  
4 In the case of transmission we know a lot about  
5 that in terms of the reliability criteria. But it  
6 also occurs in terms of the resource availability  
7 areas. So we have a number of examples where  
8 unplanned events like the oil embargo which, you  
9 know, sent prices through the roof; and the  
10 existence of this transmission infrastructure with  
11 access to other types of resources at lower cost  
12 allow us to save a huge amount of money that we  
13 would have otherwise have to had spent on instate  
14 generation.

15 This can happen both in terms of  
16 deferring or offsetting instate generation. It  
17 can also happen in terms of losing some of the  
18 out-of-state generation by having access to yet  
19 other sources of out-of-state generation, in the  
20 case of the Mojave shutdown or the Palo Verde  
21 nuclear outage.

22 This option value, this ability to take  
23 advantage -- or not to take advantage, not be  
24 hostage to the uncertainties that are inevitable  
25 in power system operations really is a critical

1 value that I don't believe has been very well  
2 captured in many of the kinds of studies that we  
3 do in looking at the value of transmission  
4 expansion in terms of access to resources that we  
5 would otherwise not have available to us.

6 This could be very fortuitous. We have  
7 an example here in the mid '80s in which  
8 tremendous availability of hydropower allowed for  
9 a huge amount of import and deferral of instate  
10 generation to the tune of \$900 million. That one  
11 year of savings more than paid for all the  
12 investments in that northwest power link in the 15  
13 years prior.

14 I want to also speak to secondary  
15 benefits. I think it's very important. These are  
16 quite intangible, but I think very very real. In  
17 the first, as we talked about the creation of this  
18 Western Systems Power Pool, California Systems  
19 Power Pool, this really, in some ways, if you  
20 think about it, was the regulated version of the  
21 things that are now being institutionalized  
22 through the California ISO.

23 The notion of reserved sharing; the  
24 notion of coordinated reliability operation; a lot  
25 of the institutional foundation. The

1 relationships among the players were seeded by the  
2 creation of that high voltage network which gave  
3 folks a forum in which to have these discussions,  
4 to work out some of these business arrangements.  
5 And I would argue as hard a time as had creating  
6 the ISO, it would have been even harder had we not  
7 had those prior existing institutional  
8 arrangements for how to do these types of joint  
9 planning and reliability management exercises.

10 The second part I want to mention is  
11 sort of a collateral benefit outside of the energy  
12 field which is the creation of the State Water  
13 Project, which very much took advantage of the  
14 existing infrastructure of transmission in the  
15 state in terms of locating the various pumping  
16 station and plants. And it was really kind of  
17 a -- it went back and forth in terms of being able  
18 to take advantage of that hydro capacity over that  
19 high voltage network in return for returning very  
20 low cost offpeak economy energy to run those pumps  
21 at night. So here was kind of a win/win across  
22 resources within the state.

23 I said I'd talk a little bit more about  
24 what this resource benefit has been, and this very  
25 quickly, is an effort to sort of show the

1 methodology for the energy import savings method  
2 that we've calculated.

3           Essentially what we're trying to do here  
4 is look at the amount of imports and the value  
5 that they brought to California in terms of  
6 offsetting generation within the state. So the  
7 value of that generation really is the difference  
8 between the marginal cost of generation instate  
9 versus the cost of the imports that are displacing  
10 the need for that generation times, of course, the  
11 amount of those imports.

12           So we make a number of assumptions about  
13 what the marginal cost of electricity has been.  
14 We did a lot of assessment of what some of those  
15 historic economy energy purchases were. And  
16 again, I want to be very clear that we were really  
17 just focusing on the economy purchases here; we  
18 are not at all including the firm transactions  
19 which were the principal reason why these high  
20 voltage lines were planned and built in the first  
21 place. That is to say these lines were built to  
22 bring firm power from dedicated plants to  
23 California in many cases, and it was the extra  
24 capacity on this line that allowed us to take  
25 advantage of some of this regional diversity and

1 the energy savings that result from that, or the  
2 cost savings that result from that.

3 So what we did is we looked at economy  
4 imports from the Pacific Northwest; we looked at  
5 them over time. We looked at those differentials  
6 between the marginal costs of generation and the  
7 costs of those imports, and we came up with a  
8 value, just in nominal dollars, of \$7 billion at  
9 least from the northwest. This compares with an  
10 investment in northwest capacity of on the order  
11 of \$2 billion.

12 We repeat that exercise again looking at  
13 the desert southwest. Here again displacing  
14 instate generation for lower cost coal generation  
15 out of the state purchased on the economy market.

16 Here the benefits looked at almost \$6  
17 billion. Again, against an investment of under \$2  
18 billion.

19 So let's summarize where we are at in  
20 the presentation right now. We have reviewed sort  
21 of the history of the creation of the transmission  
22 infrastructure in the state; and we've identified  
23 some of the ancillary benefits that have resulted  
24 from the construction of that infrastructure.

25 We see that the investments total about

1       \$4 billion. And the kinds of benefits that we see  
2       from that investment included about \$10 billion in  
3       avoided instate peaking capacity that would have  
4       otherwise had to have been built to meet the  
5       appropriate reserve margins.

6                 We've created an access to a very broad  
7       resource base across the region. We've been able  
8       to import quite a bit of power from utility-owned  
9       or contracted generation in the southwest. We've  
10      reduced planning reserves by substantial amount,  
11      on the order of a billion dollars.

12                And then we have these energy import  
13      totals from economy exchanges that were  
14      anticipated, windfalls essentially, of \$7 billion  
15      from the northwest and about \$6 billion from the  
16      southwest.

17                Let's now transition to where we sit  
18      today. And I don't want to spend a lot of time on  
19      this, I just want to sort of highlight some of the  
20      active projects that are in discussion. These are  
21      very well covered in the staff's input to the IEPR  
22      process. Many of you have that. I don't intend  
23      to repeat that.

24                Looking at the issue of reliability of  
25      market operations everybody's heard of Path 15

1 now. Looks like that's going forward. Was not  
2 able to go forward under direction from the IOUs.  
3 Essentially the Department of Energy had WAPA step  
4 in and lead the construction of that. I would  
5 expect that to be in service in about a year.

6 Path 26, the next link down after you  
7 get through with Path 15. They have been able to  
8 increase that path rating principally through the  
9 introduction of a remedial action scheme. There  
10 was talk about construction. The initial economic  
11 analyses don't favor that. That's something I  
12 think we'll be revisiting as we go forward.

13 Rainbow Valley, of course, has received  
14 quite a bit of attention. PUC has voted not to  
15 authorize going forward with that project on  
16 several occasions. That translates into sort of  
17 what are you going to do now in the San Diego  
18 area. I'll speak to that next.

19 Looking at markets. I believe Edison  
20 has indicated its intention to build a second 500  
21 kV line to the Palo Verde Nuclear Power Plant.  
22 Again, the principal motivation here is access to  
23 the lower cost generation. There's a huge amount  
24 of generation being built in the desert southwest,  
25 all expected to be of very low cost due to the

1 reliance on combined cycle technology and access  
2 to natural gas. That will be coming up.

3           Next, access to stranded renewables.  
4 Clearly in terms of the state's articulated plans  
5 to increase its reliance on renewable energy  
6 resources there's going to be a need to try to  
7 reinforce our ability to bring those resources  
8 from instate locations into the transmission  
9 system. Tehachapi being a principal area of focus  
10 at this time.

11           And then we have a number of selected  
12 load pockets. San Francisco, we know quite a bit  
13 about the reliability concerns about this  
14 essential peninsula of load, and the reliance on  
15 variable generation and frail transmission lines  
16 bringing the power into there.

17           San Diego we talked about a little bit  
18 on the prior page. Now the issue is to sort of,  
19 given the reliability issues that are facing San  
20 Diego, what's the best way to address them.  
21 Looking at now specifically at more local  
22 generation options.

23           Silicon Valley not growing quite as fast  
24 as it once was growing, still tremendous increases  
25 in loads. Still a need to reinforce that system

1 to insure deliverability going forward.

2 So having reviewed these projects I want  
3 to turn now to the final phase of this talk which  
4 is to tee up a set of policy issues for folks to  
5 start thinking about as we go into this next round  
6 of discussions about transmission planning and  
7 process going forward.

8 Last year I had the opportunity, through  
9 the Consortium for Electric Reliability Technology  
10 Solutions, to participate with staff to the  
11 Department of Energy preparing the national  
12 transmission grid study.

13 One of the activities that followed from  
14 that was the specific task to our organization to  
15 survey ISOs to get their sense of where the  
16 bottlenecks were in the country.

17 Here's a summary of some of our  
18 findings. One of the critical issues was  
19 basically trying to sort of posit or understand  
20 what type of market was going to be in place that  
21 would allow transmission investment to go forward.  
22 In a sense, you know, we're in a transition state  
23 in wholesale of generation market and electricity  
24 markets across the country.

25 Without some assumption about what that

1 market is going to look like, investments in  
2 assets like transmission, which are very very  
3 long-lived, are quite difficult to make. You're  
4 basically -- you're asking people to sink a lot of  
5 capital in something that's going to be around for  
6 quite a bit of time. And the payoff is to come  
7 from an uncertain market structure. Really it's a  
8 very very tough sell.

9 I think the other thing that we're  
10 finding, of course, is related to, and again this  
11 goes really to the regional nature of many of  
12 these projects, is the lack of an established  
13 process for reviewing and improving projects  
14 specifically built for economic grounds, or rather  
15 how you factor those economic issues into  
16 decisions which were once driven solely by some of  
17 the reliability standards that NERC would  
18 promulgate.

19 That is to say we have a tradition of  
20 building to NERC standards. It's very clear to  
21 us, in view of the benefits that transmission has  
22 brought, that there is significant economic  
23 benefits from transmission investment. Yet  
24 there's really not a framework in which those  
25 benefits can be articulated or traded off versus

1 some of the other costs and benefits that need to  
2 be considered in the transmission planning  
3 process.

4 I think a direct reflection of this  
5 transition that we're going on is this long and  
6 uncertain regulatory approval process.  
7 Particularly with regional projects, multiple  
8 agencies, many of them the federal government, but  
9 again what is the path to market. What are the  
10 hurdles that need to be crossed. How long will it  
11 take to cross. These are all transaction costs  
12 that developers need to overcome. They are  
13 significant, and they have held up many many  
14 projects.

15 I guess a lot of this translates  
16 ultimately to how are you going to make a buck.  
17 And so the transmission owners really are sort of  
18 caught in this whipsaw between federal direction  
19 that might sort of say let's build these  
20 transmission lines, state price freezes on retail  
21 rates that basically say where are you going to  
22 get the funds to pay for these things.

23 So there's not a really harmonization in  
24 this case between state and federal policy about  
25 what should be built and how it's going to get

1 paid for.

2 This, I believe, really is a direct  
3 reflection of one of the principal problems that I  
4 see facing transmission today, which is that in  
5 many cases transmission is being used to bring  
6 resources from one part of the country to serve  
7 another part of the country. And the person who  
8 is paying for the transmission is the person in  
9 the middle who is the ratepayers of the  
10 transmission owner.

11 And so the issue we have here is a  
12 disconnect from the people who might benefit from  
13 that resource diversity and those who are being  
14 asked to pay for it in their rates.

15 So what kind of sharing mechanisms can  
16 we create or are needed to allow that to take  
17 place in a more rational fashion in which those  
18 who benefit can pay and those who bear the costs  
19 can be remunerated.

20 I don't want to speak too much on -- how  
21 are we doing on time? Okay. Lack of  
22 deliverability standard for new generation. I  
23 think in the southeast you call this the  
24 participant funding discussion in terms of what is  
25 involved in getting these -- allowing the new

1 power to get to market. What are you going to  
2 have to pay in order to do that. This again  
3 reflects the tremendous uncertainty of the  
4 developers of these power plants. They don't know  
5 what the ultimate market for their products are  
6 going to be, or what it's going to end up costing  
7 them to deliver.

8 Here is something that comes right back,  
9 this next point, right back to what I think is a  
10 big conundrum for us in the planning process.  
11 Which is that, you know, I've mentioned before,  
12 transmission is a very very long-lived asset.  
13 Some of these lines have been around 50 years now,  
14 40, 50 years now.

15 Yet we're using planning processes that  
16 are geared really largely toward looking at the  
17 economics of power plants. And so you're looking  
18 at like an eight- to ten-year planning timeframe  
19 for an asset that's going to last 30, 40, 50  
20 years. So there's somewhat of a disconnect here  
21 between the way -- the framework which you're  
22 valuing certain types of projects and excluding  
23 your ability to sort of really consider some of  
24 the longer range methods of some other types of  
25 projects.

1           Let's speak to the last one. I think  
2           sort of the reverse side of that uncertainty is to  
3           the extent they rely on private investment to  
4           bring for these generation power plants, to the  
5           extent that the markets for which that power is  
6           quite uncertain. You know, you're finding, as we  
7           have found, you know, cancellations. People don't  
8           build all the plants -- are going to build.

9           And so we're kind of in this kind of  
10          chicken-and-egg problem. Do you build the  
11          transmission first; let the generation come to  
12          that. Do you wait till you have enough announced  
13          plants for generation; build the transmission  
14          lines to get to that generation, and then find out  
15          the generation has gone away. I mean how do you  
16          kind of get out of this box that we're in. This  
17          is the kind of question that I would submit is  
18          growing now nationally, and we need to be thinking  
19          about here in California.

20          Specifically toward California we're  
21          making a number of recommendations and here's a  
22          high-level overview of them. We think that  
23          initially it is going to be appropriate to think  
24          about longer time horizons for planning such that  
25          the benefits and costs of all the resource options

1 that one might consider, including transmission,  
2 can be valued consistently along with the other  
3 options that you're trading off.

4 We think that the methodologies that  
5 ought to be used to evaluate these projects need  
6 to begin to count this optionality, this ability  
7 to better able to respond to unforeseen  
8 circumstances. That is a value. It's very  
9 difficult to capture. I think we need to do some  
10 more work on that.

11 I think once we have established the  
12 need and essentially the business case we need to  
13 be very clear in terms of what is that process for  
14 reviewing cost recovery so that all participants  
15 have a better sense of what the rules of the road  
16 are, rules of the game are before they get into it  
17 so they have a clear sense of what it is they're  
18 up against and they can make a calculated business  
19 decision toward what would be prudent in terms of  
20 their investments.

21 I think the final one really is a flip  
22 side about this optionality value. Clearly the  
23 transmission asset is a strategic asset. It  
24 figures very importantly in the way in which  
25 wholesale markets are operated.

1           And here I would just argue that we need  
2           to be much clearer in reflecting the electrical  
3           engineering realities of the transmission system  
4           when we think about some of the economic theories  
5           that we talk about in terms of how we might want  
6           to organize these markets that are going to  
7           operate over them. In the end the physics are  
8           going to win.

9           So let's talk about some of the  
10          strategic issues that we hope will be spoken to,  
11          and sort of provide a context for some of our  
12          discussions today.

13          I think a critical issue for this state  
14          is recognizing about 10 to 15 gigawatts of our  
15          resource base instate is 40 or 50 years old.  
16          These plants are on their last legs. What is  
17          going to replace them.

18          So even if you think load growth is  
19          going to be flat, which I don't think any of us  
20          believe, you still have this issue of huge  
21          retirement of the installed capacity based in  
22          California. What's going to replace it. What's  
23          going to be able to bring that power to the state,  
24          to the load centers.

25          Related to that the qualifying

1 facilities at the end of the contract terms. I  
2 think we're concerned specifically about sort of  
3 as the economy recovers what the impact on that  
4 load growth profile is. Obviously load growth has  
5 slowed. It is still growing, at what rate going  
6 into the future. How do we plan adequately to  
7 insure that that growth is not impeded, or is  
8 managed in a way that folks are all conscious of  
9 and are comfortable with, the implications of  
10 those planning options, very very critical.

11 I've talked a lot about the difficulty  
12 of short lead time in the planning process and the  
13 need to have longer lead times in the planning to  
14 consider the specific benefits of transmission  
15 projects.

16 And, again, I think the ISO has begun to  
17 address this issue of the market impacts of  
18 transmission, the economic benefits. I think more  
19 work is needed there. And we just need to be very  
20 clear about what values we place on those economic  
21 benefits as opposed to the traditional reliability  
22 benefits that we've taken into account.

23 And then finally, you know, we don't  
24 operate in a vacuum. Electrically we are very  
25 much a part of the western region. Those efforts,

1 if they are to bring value to the region as a  
2 whole, should be coordinated and interlinked with  
3 those regional efforts and activities.

4 I'm not going to repeat these benefits.  
5 Let's go on to some of the recommendations that we  
6 have. We think the starting point for California  
7 is to develop a much longer range vision, a  
8 strategic vision and plan envisioned essentially  
9 for the California grid of the future.

10 What do we want our transmission system  
11 to look like. Not ten years from now, but 20 or  
12 30 years from now. How do we really sort of  
13 actualize this long-range planning into something  
14 tangible in terms of providing a framework under  
15 which shorter term planning efforts which need to  
16 occur can be integrated. How do we sort of keep  
17 that long view in front of us as we go through the  
18 specific processes with the particular timeframes  
19 that we have.

20 We think there is a need to really  
21 simplify the regulatory review and approval  
22 processes. These need to be done, following due  
23 process, of course. They need to be done in a  
24 much more coordinated fashion. A lot of churn can  
25 be eliminated by trying to take a more holistic

1 view about those processes and develop a more  
2 consistent integrated approach toward that.

3 I think related to that is again  
4 linkages within the west to the other planning  
5 entities, the SSIWG Group, the CREPC Group. This  
6 is, again, there's a large number of players that  
7 need to be involved. It's a large task. I don't  
8 want to under-estimate the tremendous effort that  
9 will be required. But that is how a more rational  
10 approach will emerge, rather than the piecemeal or  
11 hodge-podge approaches that we're being faced with  
12 today.

13 We have said this before, but I think  
14 this emerges as essentially a policy  
15 recommendation, that we need to start being  
16 clearer about what is our policy with regard to  
17 the strategic benefits that transmission brings.  
18 Do we have a policy. What is the policy. How  
19 will these policies be implemented. What is the  
20 approach that we want to take from a planning  
21 standpoint in trying to anticipate and respond to  
22 contingencies.

23 This next one is kind of a mouthful. I  
24 think, you know, once you have a policy you have  
25 to implement that. And I commend the Commission

1 for starting this set of workshops to speak to  
2 these issues, to try to bring out the types of  
3 considerations, the types of new thinking and new  
4 approaches that need to be brought forth to really  
5 capture these benefits and costs in a  
6 comprehensive fashion.

7 And I think we would all benefit by  
8 transparency in that process so that we are all  
9 looking at the same sets of costs and benefits,  
10 and then can be very clear, you know, that there's  
11 political decisions to be made and that we're not  
12 just sort of arguing about numbers, which are  
13 apples and oranges.

14 I think a similar policy with regard to  
15 contingencies really has to do with the issue of  
16 fuel diversity, you know, how do we integrate  
17 things about the resource portfolio standard. How  
18 do we integrate our thinking about the future  
19 resource mix of California's electricity base.  
20 How do we reflect that into a transmission  
21 planning process.

22 This will result in a number of  
23 implementation activities. Among them will be  
24 plans to begin looking at either new corridors or  
25 existing corridors in terms of reinforcement, to

1 provide access to either new or existing markets  
2 within the western interconnection.

3 These are activities that need to start  
4 now if we're to sort of have the information that  
5 we need to make decisions about planning for those  
6 rights-of-way, acquiring them, addressing the  
7 important issues that need to be addressed as part  
8 of allowing them to be built.

9 Many of these issues are ones that  
10 California cannot address alone, but clearly  
11 getting better harmony between the state and the  
12 federal regulatory authorities that have the  
13 jurisdictions over these investments, in terms of  
14 the cost recovery, and cost allocation policies,  
15 is essential for providing the assurances that  
16 investors are going to need to put their money  
17 into transmission going forward.

18 I think there's also opportunities for  
19 improvement on the operation and planning side in  
20 terms of the coordination of the many assets  
21 within the state, between the ISO, the federal and  
22 state agencies, and the municipalities.

23 I think there's probably a number of  
24 actions, and hopefully some of our discussions  
25 today will begin to touch on some of them that we

1 can do in the very short term to expedite some of  
2 these activities.

3 Finally, I think -- the next item is to  
4 really start thinking more about, again I'll go  
5 back to policy, as opposed to sort of wandering  
6 into some of these import amounts, let's think  
7 more about what would be desirable. Start  
8 planning toward some targets; make more explicit  
9 resource planning decisions about what is going to  
10 be required in terms of the import capability, and  
11 at what kind of expansion we need to support  
12 future imports.

13 And then finally I would be remiss,  
14 coming from a technology R&D activity, not to put  
15 in a plug for the need to consider advances in  
16 technology R&D that can really help us expand  
17 capacity over existing quarters without  
18 significant new construction. Make sure those new  
19 technologies are adequately considered. And  
20 moreover, are rewarded in the planning process.

21 I think there is a reluctance to  
22 consider new technology. I think it's well  
23 founded. But I think that we can't shy away from  
24 the opportunities that they present. We need to  
25 incorporate them into our planning activities

1 going forward.

2 So, with that, I conclude my prepared  
3 remarks. And I turn back to the Commissioner to  
4 see how we want to go forward in terms of  
5 organizing these panels.

6 PRESIDING MEMBER GEESMAN: Why don't we  
7 go ahead right into the panel, and then --

8 MR. ETO: Okay.

9 PRESIDING MEMBER GEESMAN: -- take  
10 questions in the context of that panel.

11 MR. ETO: All right.

12 PRESIDING MEMBER GEESMAN: I think it  
13 might be best if you all came up here. We can  
14 move over.

15 MR. ETO: Okay.

16 PRESIDING MEMBER GEESMAN: The important  
17 thing is to turn on the microphone. You know it's  
18 on when the green light is on.

19 MR. ETO: All right. Well, let me  
20 invite the panelists to come to the front. Vikram  
21 Budhraj from the Electric Power Group; Rich  
22 Ferguson from the Center for Energy Efficiency and  
23 Renewable Technologies; and Gary DeShazo from the  
24 California Independent System Operator.

25 (Pause.)

1           MR. ETO: All right, the way we've  
2 conceived of this initial session is to get  
3 reactions to the report in the broadest sense.  
4 We've invited a diversity of representatives to  
5 speak to us about that.

6           And so the format that we're going to  
7 use here is I'm going to ask each of the panelists  
8 to respond to the questions that were prepared by  
9 the Committee to organize this initial set of  
10 discussions.

11           What I'll then do is open that up to the  
12 audience for public comment. And that public  
13 comment, as the Commissioner has indicated, can go  
14 either to the presentation, itself, the substance  
15 of the report, or directly in response to the  
16 panelists and the comments they've offered.

17           So, let's start. I'm going to start by  
18 introducing Vikram Budhraj; he's the CEO of the  
19 Electric Power Group, a key author of the report,  
20 itself. And I'll ask him to comment on several  
21 issues; and all the panelists have several issues.

22           The topics that we have for this session  
23 are what is a reasonable timeframe to assess  
24 transmission line benefits. What value  
25 transmission projects provide as insurance against

1 unforeseen events, for example, natural disasters.

2 How vital is transmission system  
3 expansion to the accessibility and development of  
4 renewable resources. What benefits are realized  
5 by expanding transmission access to regional  
6 markets. What other benefits have traditionally  
7 been provided by the transmission system. And  
8 what has been done to capture these benefits in  
9 planning and permitting. And how do we factor or  
10 how should we factor these benefits into the  
11 planning process.

12 So, Vikram.

13 MR. BUDHRAJA: Just a clarification. Do  
14 you want me to cover all of those items or --

15 (Laughter.)

16 MR. BUDHRAJA: Just a format question.

17 MR. ETO: I think it would be good if  
18 you could speak to them in broad terms. Again,  
19 these really sort of underlie the motivation for  
20 the report, which was to try to speak to and  
21 identify some of the benefits that transmission  
22 have brought that haven't been traditionally  
23 accounted for in some of the planning processes.

24 And the question of what they are and  
25 how they might be incorporated really is kind of

1       this opening set of issues that we want to cover  
2       in this panel.

3               MR. BUDHRAJA: Thank you. And let me  
4       start by thanking both Commissioners Geesman and  
5       Boyd for their leadership to facilitate this  
6       workshop.

7               I think transmission is what I refer to  
8       as the forgotten middle. People focus a lot of  
9       attention on both the generation side and the  
10      distribution side, but without transmission it  
11      doesn't work. And I'm pleased to see and have the  
12      opportunity to comment on it.

13              We are transitioning to a market-based  
14      system. And nationally the reliances that new  
15      generation projects will be developed by private  
16      companies. But most private companies I've dealt  
17      with, the leadership focuses on next quarter and  
18      the next quarter and the next quarter. And  
19      generally ten-year plans and 20-year plans are not  
20      part of the vernacular.

21              And unfortunately when we talk about  
22      transmission I think we have to think long term  
23      because it becomes very difficult to plan and  
24      execute a transmission project in the three- to  
25      five-year time horizon.

1           The challenge that it sets up is that  
2           traditionally all transmission projects, all the  
3           ones that Joe went through, with the exception  
4           perhaps of the Pacific Intertie, were all tied to  
5           specific generation projects.

6           And traditionally, local utilities build  
7           generation and associated transmission to serve  
8           their loads. I think we are now transitioning  
9           away from local markets to regional markets. And  
10          in regional markets it's not clear where the  
11          generation is going to be; when it is going to be  
12          developed. And so looking for precision on  
13          generation development plans and having those  
14          determine when you build transmission just doesn't  
15          work anymore.

16          So, the consequences of that is that you  
17          end up either no transmission or transmission  
18          lagging the development of generation projects and  
19          thereby contributing more to congestion and  
20          stranded generation and so forth. I think one of  
21          the examples that Joe pointed out was some of the  
22          wind projects in the Tehachapi area, which are, at  
23          times, basically stranded.

24          So this whole issue of how widely this  
25          transmission system expansion to accessibility,

1 and not just for traditional resources, but also  
2 renewable resources. It really comes down to if  
3 you don't have transmission you can't get your  
4 power to the market. And if you can't get your  
5 power to the market you basically end up with  
6 stranded generation assets.

7 The other question that always keeps  
8 coming up is well, don't we have interconnection  
9 standards which, from a planning standpoint,  
10 address the question of building generation,  
11 planning and connectivity.

12 I think we need to move beyond the  
13 interconnection standards to a deliverability  
14 criteria because it's not just enough to  
15 interconnect generation to the transmission  
16 system, but if it cannot move freely across the  
17 interconnected transmission network then you  
18 again, in effect, end up with generating power  
19 plants that can't get the power to the market.

20 Another big issue in terms of, you know,  
21 benefits and costs and so forth that relates to  
22 who pays for transmission. And I guess I'd like  
23 to reverse that question to basically say who ends  
24 up paying for the absence of transmission. And I  
25 think as we've seen from the market dysfunction

1 that took place in California, costing \$20- to  
2 \$30-billion, at the end of the day it's the  
3 consumers who pay.

4 And so transmission basically the  
5 absence of it translates to inefficiency,  
6 unreliability, inability to access markets,  
7 inability to respond to contingencies, and all of  
8 those costs end up on the consumer's back.

9 And so we have to really think about  
10 transmission as a public good that benefits  
11 consumers; and the absence of transmission means  
12 they end up paying for the inefficiencies that it  
13 costs, and the bottlenecks and the constraints and  
14 all of the things that we talk about.

15 Another question, and I'm not going in  
16 any particular order, you know, has to do with the  
17 whole process of planning and permitting.  
18 Unfortunately, I think our permitting and  
19 regulatory review processes have evolved into  
20 proving the future. And by that I basically mean  
21 very precise modeling as to what's going to happen  
22 when.

23 And the reality is the future cannot be  
24 proven. And it is very easy for people to argue  
25 about, you know, what assumptions, about load

1 growth and population growth and fuel prices and  
2 you name it. But if you step back from all of  
3 this, as the list that Joe pointed out, it's clear  
4 we have an aging infrastructure, a growing  
5 population, growing economic activity. And  
6 somehow energy and electricity is going to have to  
7 be provided. Because without electricity the  
8 economy doesn't work.

9 And we either have to basically say we  
10 shut our borders and we're going to do it all  
11 internally and build gas-fired power plants and  
12 renewables and so forth. That's fine, but even if  
13 you do that then you have to look at pipelines and  
14 LNG terminals and the whole issue of  
15 infrastructure to support that development.

16 So, as I think about it, and some of  
17 these questions that have been posed, they really  
18 come down to when you talk about transmission  
19 you're talking about infrastructure. And when you  
20 talk about infrastructure, economic development  
21 depends on having adequate infrastructure.

22 And when people build factories and so  
23 forth, they don't really have to think of building  
24 interstate highways to move their goods. The  
25 interstate highways are there. They've been

1 planned ahead of time, and they know how to move  
2 the product.

3 I think transmission is similar. That  
4 we need to think of it as long-term infrastructure  
5 that is essential for the modern digital economy.

6 Therefore, from a time horizon  
7 standpoint you have to think long term. It's very  
8 difficult to put airports after houses have been  
9 built. I think transmission is no different. And  
10 so you have to think long term and we put out a  
11 number, 25 years, you know. Maybe it's 20, or  
12 maybe it's, you know, we can debate that.

13 But the point is focusing on the next  
14 five years, the history of transmission for the  
15 next five years has already been written. And if  
16 that's what we're going to focus on we aren't  
17 going to get anywhere.

18 The other point I mentioned is  
19 deliverability. Absence of deliverability means  
20 inefficiency, congestion, bottlenecks,  
21 unreliability and all of that gets transformed  
22 into costs that consumers pay.

23 The example in the report points out  
24 that the current transmission access charges for  
25 the ISO, and Gary can speak to it more, are

1 approximately \$400 million, or \$2 a megawatt hour.  
2 If you look at that in terms of the total cost  
3 that's about 2 percent, actually with the market  
4 dysfunction the bills have gone up, but, you know,  
5 roughly 2 percent of the average consumer bill.

6 And so the question really becomes if we  
7 had more transmission I would venture to guess  
8 that there wouldn't be any disagreement that the  
9 markets will be more efficient because the ability  
10 to exercise market power or have stranded  
11 generation and so forth would be taken away. That  
12 translates into lower costs in the wholesale  
13 market. That means benefit to customers.

14 Now, can we transmit that to, let's say,  
15 a \$1 a megawatt hour improvement in market prices  
16 as a result of building a lot more transmission?  
17 We can debate that, but you know, the answer is  
18 going to be, it will be some improvement, whether  
19 it is \$1 or \$2 or \$3, 1 percent, 2 percent, 3  
20 percent, you can debate it.

21 But the point is a \$1 improvement,  
22 roughly speaking, would translate to \$1.5 billion  
23 worth of additional investment capacity that we  
24 can add to the infrastructure and really not only  
25 get the benefits of improved market efficiency,

1 but optionality, reliability, contingencies and  
2 all of the elements that Joe very correctly  
3 pointed out.

4 I guess the last couple of points again  
5 on this question of who pays. I think it's the  
6 wrong question, frankly. I think it sets up an  
7 issue of, you know, trying to shift costs around.  
8 But at the end of the day these costs are going to  
9 be paid for by consumers, whether they pay them in  
10 efficiency or they pay them by investing in the  
11 infrastructure.

12 And so from a regulatory policy  
13 standpoint it seems to me that having a framework  
14 that recognizes it and promotes transmission  
15 investment would be very desirable.

16 You know, there's a question that talks  
17 about what has been done to capture these benefits  
18 in planning and permitting. I guess all I would  
19 say is just let's look at the record, you know,  
20 that in the last 20 years how much new  
21 transmission outside of the municipal utilities  
22 has been built in California.

23 And we can point to what I would call  
24 band-aids, new transformers and capacitors, and  
25 just removing some reliability-associated

1 constraints. But in terms of improving the  
2 ability to move electrons around freely across the  
3 grid, I don't think much has been done.

4 And so we, you know, we can keep doing  
5 what we've been doing, or we can address this  
6 issue more strategically; think about new  
7 methodologies that, perhaps, should be utilized.

8 And on that point let me just close with  
9 the following observation. It's already been  
10 pointed out that transmission is around for a long  
11 time, 50-year life or even longer. But the  
12 reality is that some of the traditional  
13 methodologies where we tried to do a present-worth  
14 analysis using cost of capital, kinds of discount  
15 rates, you know, 10 or 15 percent.

16 If you use a 10 percent discount rate  
17 the benefits that start in year 10 and beyond  
18 basically come down to negligible on a present-  
19 worth basis. And many times the benefits of  
20 transmission don't start flowing until five to  
21 seven to ten years down the line.

22 And so trying to force a methodology  
23 that would require proving that transmission will  
24 produce positive benefits above the rate increase  
25 in year one or two or three or four, I think this

1 is the point. And we basically relegate ourselves  
2 to never doing anything other than what's needed  
3 for reliability as opposed to economic and market  
4 efficiency and insurance benefits.

5 Those are some of the observations. Let  
6 me pass it on.

7 MR. ETO: Thank you very much, Vikram.  
8 Next I'd like to invite Rich Ferguson from CEERT,  
9 not CERTS, to speak to some of the questions here.  
10 Rich.

11 MR. FERGUSON: Thanks, Joe. One  
12 disclaimer, I'm not an Executive Director at  
13 CEERT, nor do I want to be. That's my boss, John  
14 White, who is down in San Francisco today. Also  
15 want to thank the Commissioners for facilitating  
16 this. It's very appropriate this is in the energy  
17 policy review arena, because in fact in the  
18 electricity sector transmission policy is energy  
19 policy.

20 I had to chuckle when Vikram was talking  
21 about the dangers of using net present value with  
22 discount rates of 10 or 15 percent. As I like to  
23 tease my environmental friends, I say a discount  
24 rate of 10 percent, the world isn't worth saving,  
25 so.

1 (Laughter.)

2 MR. FERGUSON: And you don't get  
3 transmission lines built, either.

4 I'm going to preface my remarks by  
5 drawing a distinction between intrastate  
6 transmission and interstate transmission.

7 We're all aware of the problems that  
8 exist on Path 15. Commissioner Geesman and I were  
9 on the Power Exchange Board and watched with  
10 interest the difference between the SB-15 price  
11 and the MP-15 price, and wondering how big that  
12 would have to get before somebody realized it was  
13 worthwhile building some more wire down the  
14 Valley.

15 So, you know, congestion, moving power  
16 around the state is something that's being  
17 addressed. Actually the ISO market redesign ought  
18 to help identify with more accuracy what those  
19 problems are.

20 Various reliability issues that Joe  
21 mentioned on the Peninsula and various other  
22 places clearly have to be solved. And that's an  
23 intrastate transmission issue.

24 Similarly the access to renewable  
25 resources inside the state to fulfill the newly

1 enacted portfolio standard is primarily an inter -  
2 - intrastate -- I'm going to get these mixed up  
3 sooner or later -- internal to California.

4 There's some interest in bringing some geothermal  
5 from Reno area, but by and large, you know, those  
6 are all intrastate.

7 And those, I think, are the issues that  
8 are being focused on; need more policy guidance;  
9 and need more work. And I don't think there's any  
10 complaint about what needs to be -- this agreement  
11 about what needs to be done to do this. And I'm  
12 going to get back to that on the renewable side  
13 here in a minute.

14 The interstate transmission issues,  
15 though, are entirely different. As Joe pointed  
16 out, the Pacific Intertie and those lines were  
17 built to access the hydropower which was once  
18 plentiful in the Pacific Northwest. The southwest  
19 lines were primarily for coal with a little bit of  
20 nuclear from Palo Verde.

21 But in today's environment, when we talk  
22 about resource diversity that's really a euphemism  
23 for coal. That the interstate and the whole drive  
24 for expanding the western interstate transmission  
25 system is to provide access to California markets

1 by the coal industry. And we just have to keep  
2 that in mind, because that is the energy policy.  
3 You know, if California wants to become more  
4 dependent on coal-fired power then it needs to  
5 build those lines.

6 I submit that's not the direction that  
7 the state is going. It recently adopted a policy  
8 of increasing our reliance on mostly instate  
9 renewable resources. There was a bill passed in  
10 the Legislature giving at least potential  
11 authority to the Air Resources Board to control  
12 carbon dioxide emissions from cars as a global  
13 warming mitigation strategy. I don't think more  
14 coal is the energy policy that this state wants to  
15 pursue.

16 So that's why I make a very sharp  
17 distinction between the kind of transmission  
18 issues that face the state internally to move  
19 power around to make sure that instate we've got  
20 our house in order.

21 But the question of building more lines  
22 to coal centers in Utah or the southwest is a  
23 whole different issue which is front and center a  
24 policy issue, an energy policy issue that needs to  
25 be fully debated, you know, in every forum that we

1 have. And it shouldn't be swept under the rug  
2 with euphemisms like resource diversity or access  
3 to markets which are, after all, California  
4 markets we're talking about. It's not as if we're  
5 going to build coal plants and export the power to  
6 Oregon or someplace.

7 So I would hope that the first priority  
8 is to concentrate on the instate transmission  
9 problems that we have which are significant, and  
10 wait until we've settled this debate about the  
11 increased reliance on coal and the impacts on  
12 global warming before we decide that we're going  
13 to go that route.

14 I also had to sort of chuckle about the  
15 idea that the interstate transmission is a boon to  
16 reliability. Those of us that were in the  
17 Legislature working on the first attempt at  
18 deregulation, AB-1890, all remember when the line  
19 went down in Oregon, Idaho, or wherever it was up  
20 there, and shut down the state on a Saturday when  
21 the Legislature was out. And we came back Monday  
22 and every other word out of the legislature's  
23 mouth was reliability, reliability, reliability.

24 And, of course, that was an interstate  
25 transmission problem that hurt our reliability.

1 And who knows what role that had in the whole  
2 effort to deregulate markets in California.

3 The coal industry, of course, talks a  
4 lot about clean coal. And I've always thought  
5 that's kind of an oxymoron. No coal that I've  
6 ever seen is clean. But there's talk about being  
7 able to sequester the carbon and somehow, you  
8 know, make that neutral on climate change. And  
9 that may happen one day. It's a daunting task.

10 So I would suggest that perhaps one of  
11 the factors in the state's policy toward  
12 increasing reliance on coal and interstate  
13 transmission may be to defer a decision to  
14 increase that dependence on coal until, in fact,  
15 power plants are being -- clean coal power plants  
16 are being built that do sequester carbon.

17 So, that's another factor that the  
18 interstate transmission argument needs to be  
19 considered.

20 There were several questions about, you  
21 know, how do we develop a coherent policy that  
22 determines transmission decisions. And I have to  
23 agree with Joe, it's a chicken-and-egg problem.  
24 You can't talk about -- well, we do, but you  
25 shouldn't talk about generation here, there and

1 the other place on the one hand, completely  
2 disassociated from whatever is going on in the  
3 transmission.

4 And then, you know, on the other hand  
5 you talk about transmission completely divorced  
6 from the resource. Transmission, with all due  
7 respect to Vikram, is a way of moving energy from  
8 where it's produced to where it's used. And it's  
9 a means to an end, it's not an end in itself. I  
10 will get back to that.

11 But the obvious cases, the renewable  
12 resource portfolio standard that was introduced  
13 which determined that we're going to increase our  
14 renewable energy generation in the state from 10  
15 percent to 20 percent, and the Energy Commission  
16 has even suggested we do that in the next seven  
17 years, which is a daunting task. And I see the  
18 Governor-Elect says, well, if we're going to do 20  
19 percent, why not 30 percent. Fine with me. But  
20 you have to think about how it is that you're  
21 going to get that energy to market.

22 And Tehachapi is just a perfect example  
23 of this chicken-and-egg thing, because nobody is  
24 going to plan to build more wind up at Tehachapi  
25 unless they have a way to get it to market. On

1 the other hand, it doesn't make much sense to talk  
2 about building a lot of transmission into  
3 Tehachapi unless you know that those power plants  
4 are going to get built.

5 So those two decisions have to be made  
6 simultaneously. There has to be some overriding  
7 policy that, yes, we're going to depend on these  
8 energy resources, and we're going to do what needs  
9 to be done to get those to market. And you can't  
10 do one -- you can't do either one separately.

11 If, heaven forbid, the state says, okay,  
12 we're going to depend on western coal, you know,  
13 from here on out. We're going to build all these  
14 lines. I mean, so be it. That's a joint  
15 decision, where the energy is going to come from  
16 is a joint decision with how you move it to  
17 market. They cannot be separated.

18 And CEERT has gone on record as  
19 suggesting that this needs to be a multi-agency  
20 kind of decision that involves the ISO for sure,  
21 because they're very good at talking about, well,  
22 if we do do this where will this energy go. You  
23 know, just because there's a financial connection  
24 between Tehachapi and somewhere doesn't mean  
25 that's where the energy goes.

1           Fascinating report that the ISO Staff  
2           came out with in early September about the  
3           renewable resources and if you put them in the  
4           system, where they would go. And, in fact, some  
5           of that energy displaced resources in Oregon, and  
6           other places in around the west. So we need that  
7           expertise because it doesn't follow the financial  
8           transaction path.

9           So the ISO and the PUC and the Energy  
10          Commission seem like the ideal troika to -- I mean  
11          that's a bad word now, given what's going on in  
12          Russia, but triumvirate, how about that -- to sit  
13          down and decide these issues as a coherent  
14          package. But they do involve fundamental policy  
15          issues that can't be swept under the rug by  
16          talking about access to markets and resource  
17          diversity and stuff like that.

18          So I say, in terms of some of these  
19          questions and what has to be done to capture these  
20          benefits in planning and permitting I submit that  
21          having this coherent package would go far to avoid  
22          the kinds of problems that have arisen, and maybe  
23          rightly so, with transmission.

24          Valley Rainbow is a good case in point.  
25          That the proponents of Valley Rainbow did not make

1 a good case that that was needed. And, you know,  
2 I have my, I mean if you had looked about that as  
3 okay, San Diego needs more power, we're going to  
4 get this from farther east and we're going to  
5 bring it down along Valley Rainbow. If that had  
6 been a concrete policy decision there would have  
7 been a need for the line.

8 But, as it was, that policy overlay  
9 didn't exist. And you're just scratching your  
10 head and saying, hmm, should we do Valley Rainbow  
11 or should we build Otay Mesa. And I think it gets  
12 lost in the shuffle.

13 So I think the way around the problems  
14 that Vikram mentioned about siting transmission is  
15 to have unified coherent policy that determines  
16 which resources you're going to make use of, and  
17 which markets they're going to go to, and how you  
18 need to get it there.

19 Even that isn't easy, as you know. The  
20 PUC came out with a request of the utilities to  
21 say okay, what kind of transmission upgrades would  
22 you need to implement the portfolio standard. And  
23 they all went off and turned their cranks in their  
24 computers and came up with these three different  
25 models with no coordination between them, no

1 coordination with the munis, and were very unhappy  
2 with that.

3 Especially down around Tehachapi where  
4 you get into the Path 26 issues. Which would make  
5 sense to solve all those problems all at once.  
6 But it involves the PG&E system, it involves the  
7 Edison system, it involves DWP. There's some  
8 private lines down there. There's talk about more  
9 private lines.

10 You're just not going to get there by  
11 the approach that we have had. And the only way  
12 we can see is to, you know, have the triumvirate,  
13 get all the players in the room and say, look,  
14 we've got to find a coherent, statewide, multi-  
15 system approach to solve these problems because  
16 here's the policy and this is what we're going to  
17 implement.

18 What questions haven't I mentioned? So,  
19 anyway, we can talk some more, I'd be interested  
20 in other feedback. But to my mind that's the most  
21 important. The first thing that we have to decide  
22 in order to get ahead in the transmission problem  
23 is aside from the intrastate issues we're trying  
24 to minimize constraints and maximize the  
25 effectiveness of pricing around the state.

1           But we need to be very clear about what  
2           the energy policy is, not the transmission policy,  
3           the energy policy. And then build the  
4           transmission system so that we can implement that  
5           policy. And then that's the goal that the  
6           Commission should take on.

7           MR. ETO: Thank you very much, Rich.  
8           Let's hear now from Gary DeShazo from the  
9           California ISO.

10          MR. DeSHAZO: Well, first of all thank  
11          you very much for the opportunity to be here. And  
12          I guess that from my perspective these two  
13          gentlemen really have covered pretty much the  
14          entire gamut of I think what this is all about.  
15          And I'm not sure that I can add that much more to  
16          that.

17          But I will say that I'm a transmission  
18          planner. I've been doing that for 25 years. And  
19          so if Vikram is asking if we should build more  
20          transmission, well, then I think, well, you think.  
21          And I'd certainly say that. To me it's sort of  
22          like asking a five-year-old, you know, if they  
23          want candy.

24          But, you know, having said that I think  
25          if you take that one step further and at least in

1 terms of what I've been seeing as I've been  
2 involved in the California energy markets, and  
3 specifically mostly with northern California, is  
4 that you ask a five-year-old if they want candy,  
5 and the five-year-old, and they say, yeah, but  
6 what do you have.

7           And so now things become a lot more  
8 complex. And that's what I think maybe in a  
9 nutshell is sort of what I'm seeing happening  
10 around California. I'm not sure that folks would  
11 necessarily argue that transmission is not  
12 important, and certainly transmission must be  
13 added. It's just a matter of where should it go,  
14 and the timing that it should be applied. And,  
15 oh, by the way, have you taken into account  
16 generation. Have you taken into account  
17 environmental justice. And do you think that your  
18 planning standards are maybe too strict or not  
19 strict enough. And the list just goes on and on  
20 and on.

21           And so from my perspective, being a  
22 transmission planner, the world is a very complex  
23 place to be right now. I can remember when I  
24 first started in this industry a transmission  
25 planner was basically considered, I think, pond

1 scum because that's -- the only thing that they  
2 did was tie the resource to the load, because  
3 everybody was very interested in the resource and  
4 everybody was very interested in the load. They  
5 didn't really care too much about how the  
6 connection was made as long as it was made.

7           And so I never believed, you know, 25  
8 years ago that I would be sitting in front of  
9 folks such as yourselves thinking that, well,  
10 we're pretty much elevated way above pond scum  
11 right now due to the fact that everybody wants to  
12 be a transmission planner.

13           And the neat thing about that is nobody  
14 understands it but me, and so maybe that will just  
15 keep me --

16           (Laughter.)

17           MR. DeSHAZO: -- working for awhile.  
18 So, I guess that in working through this report  
19 and listening to the comments made, I really don't  
20 have any issues with the statements that were  
21 made. I tend to really agree with all of them.

22           I certainly believe that transmission is  
23 an important component of this state's needs and  
24 of its future policy. And I think it's something  
25 that we really need to address now rather than

1 later for all of the reasons that have already  
2 been mentioned.

3 I think that some of the things that  
4 have concern, at least the ISO has been, for one,  
5 issue of timing. When is it that something  
6 actually needs to be accomplished or needs to be  
7 done. You know, there's those that believe that  
8 just in time is the right way to do it, so we  
9 shouldn't be looking much further than maybe four  
10 or five years out.

11 And then you have a report such as the  
12 one that's in front of us today that suggests  
13 that, you know, we ought to be looking 25 to 30  
14 years out.

15 I think that both of those answers are  
16 right, but they need to be placed in the right  
17 context. And for us to be looking at what our  
18 future energy needs are and how we're going to  
19 meet those, whether it's through generation,  
20 renewables or trying to access something from out  
21 of state, five years is just something that's just  
22 not right.

23 That's great for looking at how you can  
24 manage your capital budgets and so on and so  
25 forth, but the fact is when it comes time to build

1 a 230 kV line or a 500 kV line in the state, it's  
2 a very complex problem and it takes a lot of time.  
3 And we need to know what we're going to be doing  
4 long before we ever really get to that stage.

5 Valley Rainbow has been mentioned.  
6 There's maybe some, you know, Path 15 has been a  
7 part of that. There's been a lot of issues that  
8 have surrounded those projects. And whether right  
9 things were done or wrong things were done, to at  
10 least the ISO in terms of what we see is that it  
11 just illustrates the complexity of the nature of  
12 what we're trying to accomplish.

13 I don't think that it's too terribly  
14 wrong, someone like the Energy Commission or the  
15 PUC, to ask the question is how does this fit into  
16 what it is that we want to get to. And, oh, by  
17 the way, can you tell me what we want to get to.  
18 I don't see that there's a problem with that kind  
19 of question.

20 And I think that to a certain extent  
21 some of that is embedded in some of the issues  
22 that we've had. That there really isn't a very  
23 clear picture out there.

24 Now for me, and the ISO, as a  
25 transmission planner, I think things are very

1 clear in terms of what is out there. I think we  
2 have a very good handle on what we have in our  
3 state, and I think that the transmission  
4 organizations that are responsible for the  
5 transmission here and those that the ISO is over,  
6 I believe they've been doing a very good job  
7 trying to keep up and keep pace with the needs of  
8 maintaining a sufficient level of reliability  
9 within the state.

10 The missing piece, though, is what do  
11 you do in order to keep that part going. I mean  
12 we could study the state for years, and I don't  
13 think that we're really going to come up with much  
14 other stuff that we already have in front of us  
15 today.

16 But the real issue is what are we going  
17 to do to try to develop our transmission  
18 infrastructure with our neighboring control areas,  
19 or neighboring states. There's the STEP process  
20 that is going on in southern California right now.  
21 It's really an effort that was -- it was initiated  
22 between some folks in Arizona and the ISO. And  
23 that has turned out to be, I think, a rather  
24 successful process.

25 I think that maybe later on today that

1       there will be some more discussion about what's  
2       happened there and what's going on with that  
3       process.  But I think from a regional planning  
4       perspective, STEP illustrates what can be done.

5                 One of the more recent ones is Rocky  
6       Mountain effort that was just initiated.  And they  
7       sort of look at STEP as maybe the poster child of  
8       how that ought to be done.

9                 The northwest has another process it's  
10       started, but unfortunately I don't see that that's  
11       moving like I would like to see it moving.  But  
12       that's, I think, for those of you who are familiar  
13       with the northwest, I think it's just the  
14       northwest being the northwest.  And they're very  
15       steeped in process, and they are actually  
16       proceeding down that path.  They've got a really  
17       nice process.  I'm just not exactly sure what  
18       they're going to do with it whenever they're  
19       finished.

20                Because the thing about it is that you  
21       can get transmission planners around the table and  
22       we can talk all day about what it takes to serve  
23       the load and have a reliable system.  But that's  
24       only a piece of the overall equation.  Because in  
25       today's market there are many other things that

1 are going on out there. And until you bring those  
2 folks to the table and you have a reasonable  
3 debate and discussion about what the needs are,  
4 who pays, who doesn't, who gets responsibility,  
5 who doesn't, we're really not going to get very  
6 far because all the transmission planner will be  
7 able to do is just simply tell you, well, this is  
8 the way it's been in the past, and they don't  
9 understand who ought to pay for this; we don't  
10 know where the money's going to come from; and so  
11 on and so forth. You just won't get anywhere that  
12 way. You have to have other folks at the table in  
13 order to do that.

14 The ISO views transmission as an  
15 important step in securing California's energy  
16 future. We think that the regional planning  
17 processes that are ongoing right now are the way  
18 to go. Last year the ISO initiated a new  
19 objective for this year which was to develop a  
20 long-term transmission expansion plan for  
21 California. That's a corporate objective that we  
22 have for 2003.

23 And I think STEP, the work in STEP is  
24 really fitting into that; plus some of the work  
25 that we've been doing internally. So, at least

1 from the ISO's perspective we're starting to think  
2 about that. When I think about 25 or 30 years out  
3 that one scares me a bit, especially if you have a  
4 guy that's trying to build power flows or  
5 stability databases in order to study that.

6 That's not a very easy thing to do, but  
7 that, I think, really brings me to the other part  
8 of this. And I think that the reason that I'm  
9 enjoying this industry so much now is that  
10 transmission planning is not what transmission  
11 planning used to be.

12 Transmission planning isn't about  
13 running power flows and stabilities. That is  
14 certainly a component because that's what helps us  
15 make sure that we're meeting our reliability  
16 requirements.

17 But transmission planning is as much  
18 about economics as it is about the others. And  
19 that, in fact, is probably one of the key  
20 components of an overall robust transmission  
21 planning process. And for those of you who have  
22 been following what the ISO has been doing for the  
23 last couple of years, it's pretty clear, at least  
24 from the folks that I work for, that they want to  
25 inject that part of the economic process into the

1 transmission planning process.

2 And in fact the way I think that it  
3 would be viewed as working is you do the economic  
4 part to find out where the needs are, and then you  
5 can follow that up with your reliability planning  
6 and see how that's going to work.

7 There's always the reliability  
8 assessment that must be done, but there's an  
9 overall coordinated effort, I think, that needs to  
10 be done in order to make that work out well.

11 There's no doubt in the ISO's mind that  
12 there are benefits to expanding our transmission  
13 system. We think that it's something that needs  
14 to be done, and we're certainly looking for anyone  
15 that is willing to work with us to try to find out  
16 the best way to do that.

17 But having said that, it's not something  
18 that we necessarily believe is our own charge to  
19 do. And that gets back to some of my earlier  
20 statements about the complexity of the nature of  
21 things these days, is that our charge is  
22 reliability. And it's nondiscriminatory access to  
23 the transmission system. And that's our core  
24 business. That's what we do, and we do that very  
25 very well.

1           But that's not what all this other stuff  
2           is about. There's other things that are  
3           associated with that, and so that's when you need  
4           the help from others like the Commission and the  
5           PUC that bring, you know, their expertise to the  
6           table to create the overall process that will take  
7           us forward.

8           And the ISO really is seeking the  
9           opportunity to work in a practical way with  
10          everyone so that if we can get all this stuff  
11          figured out so that we know what we need to be  
12          doing, then we can do those pieces and it should  
13          work and it should carry us forward.

14          The ISO, I think, also would like to  
15          see -- well, let me just mention the Rocky  
16          Mountain subregional group that was started, I  
17          don't know whether any of you here attended that.  
18          But it started out with the governor from the  
19          State of Wyoming and -- I knew if I was going to  
20          bring this up I was going to forget the other, but  
21          there were two governors there. There was also a  
22          FERC Commissioner there. Clearly demonstrating  
23          that there was interest on the state-side of  
24          seeing regional planning go forward.

25          You see that in the STEP process, at

1 least from Arizona, where you have the Arizona PUC  
2 involved in that.

3 I would very much like to see a similar  
4 thing happen with California to see the  
5 Commissions take an active role in some of these  
6 subregional planning efforts to at least  
7 demonstrate to those that there is an interest, at  
8 least within California, that we want to try to  
9 secure some sort of transmission benefits for us.  
10 I think that would go a long ways to helping some  
11 of that, I think, move forward.

12 I guess overall I think that the report  
13 that has been prepared really, for me, lays out, I  
14 think, a number of the issues if maybe not all of  
15 them, that are things that we need to be looking  
16 at and thinking about.

17 You know, with all due respect to  
18 Vikram, I don't think that they're new. I think  
19 that from time to time when I was in Arizona  
20 working on the Mead-Phoenix project, a lot of my  
21 time was spent thinking about things like this,  
22 which was how do we create opportunities to create  
23 transmission access for my company to something  
24 beyond just the State of Arizona.

25 And I'm sure that many others have done

1 that, as well. But I think it's gotten lost in  
2 all the stuff that has happened. And so I think  
3 the timing of this, at this point in time, to me  
4 is probably apropos that it's starting to bring  
5 maybe folks back to thinking in terms of what are  
6 our big issues. Because we seem to be sort of  
7 wallowing around down in the weeds right now. We  
8 need to kind of get up and start thinking about  
9 where it is that we need to go. And then we can  
10 put the expertise to work to see if we can find  
11 ways to come up with ways to achieve those goals.

12 MR. ETO: Thank you very much, Gary. I  
13 want to open it up for public comment at this  
14 point, but I want to use my prerogative, as the  
15 moderator, to offer a comment and an observation.

16 I very much want to second Rich's  
17 observation that transmission planning is part of  
18 resource planning. And, in fact, if you say that  
19 what we're doing is transmission planning, I think  
20 that you've already decided you know what the  
21 answer is. And I think the answer needs to be  
22 formulated in a much larger planning context. So  
23 I wanted to second that.

24 But more fundamentally I want to make  
25 the observation that I think is extremely

1 important that we recognize that what it is we are  
2 about to engage in is something that many of us,  
3 you know, was sort of a hushed word a few years  
4 ago. Planning. I think it's a recognition that  
5 the market is a very very powerful force, but it  
6 is a means to an end. And those ends are  
7 legitimately the role of policy and planning.

8 And I think it's in that context we  
9 should be thinking about how to do that better  
10 going forward.

11 So, with that, I would open it up to  
12 public comment. Rich, you want to --

13 MR. FERGUSON: If I can just comment.  
14 One of the things that we didn't, I think none of  
15 us addressed, and given the regime change here in  
16 Sacramento, has come up, and that's the extent to  
17 which any changes in the amount of direct access  
18 or, you know, a new change in the market structure  
19 here in California is going to affect the  
20 transmission and resource planning and how the  
21 Commission and the various agencies could deal  
22 with this uncertainty. Because it does matter.

23 None of us, maybe because nobody has an  
24 idea, but if anybody has any suggestions about how  
25 we factor in, you know, potential market changes

1 I'd be very interested in hearing them.

2 MR. ETO: Vikram, do you have another  
3 comment?

4 MR. BUDHRAJA: Yeah, I think two  
5 observations. One is, and Gary made the point  
6 that this whole issue of who is in charge and what  
7 needs to be done. And I think this is a very  
8 fundamental question that we are grappling with.

9 We've lived through a few years of, you  
10 know, the market will provide. It did, but we  
11 didn't like what it provided.

12 (Laughter.)

13 MR. BUDHRAJA: And so that's one point,  
14 you know, this question of who's in charge, who's  
15 responsible for reliability. And I think, you  
16 know, while I can't comment on any of the specific  
17 factual things around the blackout in the midwest,  
18 but the same question comes up, you know, who's  
19 responsible, who's in charge, and who's driving us  
20 forward. Or is it somehow that we are going to  
21 organize ourselves and these good things will  
22 happen.

23 Well, good things can happen, but at the  
24 same time I think this is a very important  
25 fundamental issue and it ties to what Rich was

1 saying, and I totally agree with, you know, we do  
2 need to think about energy policy and what that  
3 should be. And how do we address that in this  
4 context.

5 But there's some fundamentals which I  
6 want to point out, too. Our population is going  
7 to grow. Our needs are going to grow. Power  
8 plants are being retired. In fact, just this week  
9 Duke announced some retirements, Reliant announced  
10 retirements a month or so ago. And so the need  
11 for infrastructure is there.

12 Now then the question is, well, where  
13 will the power come from. Well, geothermal can  
14 only come from where the geothermal fields are.  
15 Wind can only come from where the wind -- are.  
16 Gas-fired, you've got to either transport the gas  
17 or build power plants where the gas is.

18 Now, if you're saying that it has to  
19 come from the markets, then you look at where the  
20 market hubs that are going to evolve. And, yes,  
21 they might be fueled by coal or gas or what-have-  
22 you, but if you're going to basically say that in  
23 our future we're going to rely on the market, then  
24 you build transmission to the market hubs, or you  
25 build transmission to the geothermal fields or

1 wind or wherever those resources are going to be.

2 And so the decision on where the  
3 resources are going to get developed is not clear.  
4 But I don't see wind power being developed in the  
5 center of Sacramento, for example. It's got to be  
6 where the wind regime is, you know.

7 So I think we need to kind of step back,  
8 take a longer term horizon, link it up to the  
9 policy issues and start to think about what  
10 transmission infrastructure should be in place 25  
11 years from now, or 20 years from now. I think we  
12 have consensus that thinking about five years  
13 ahead, you know, that history has already been  
14 written.

15 So we can debate what the time horizon  
16 is, but it's longer than five to ten years, is  
17 what I would submit.

18 PRESIDING MEMBER GEESMAN: Let me follow  
19 that up with a very troubling anecdote I heard  
20 yesterday from Terry Winter, the CEO of the ISO.  
21 Terry and I were on a panel together. He  
22 indicated that during the Valley Rainbow  
23 proceeding the ISO's attorneys had come to him and  
24 said, you know, your name is on some documents  
25 that have been entered into the record of the

1 case.

2 It turned out when Terry was employed at  
3 San Diego Gas and Electric, 1978 or 1979, he had  
4 actually signed the plans for a route for a  
5 transmission line between Valley substation and  
6 Rainbow, 25 years ago.

7 Now, in the ensuing 23, 24 years between  
8 when he'd submitted those plans and when the  
9 actual case was being held, something on the order  
10 of 30- or 40-thousand people had moved into the  
11 area. Right-of-way had never been acquired in the  
12 late 1970s. I would submit to you it is probably  
13 a lot cheaper, certainly from a public opposition  
14 standpoint, would have been a lot more achievable  
15 to have made that decision back then.

16 That probably applies to a number of  
17 potential transmission routes around the state. I  
18 think as Vikram indicated, we pretty much know  
19 where the renewable resources are. And with a  
20 growing population land is not getting any  
21 cheaper.

22 MR. BUDHRAJA: I think one of the  
23 observations that links up to Commissioner  
24 Geesman's point, and Rich pointed out, here we are  
25 addressing the intrastate transmission issues.

1           The reality is that I've probably been  
2           in more, in one way shape or form, for everything  
3           that's on the list that Joe has put up here, Paths  
4           15, 26, Rainbow Valley, Tehachapi, Palo Verde,  
5           Devers No. 2, maybe not some of the load pocket  
6           lines.

7           But these are all issues that were  
8           identified and visible 10, 20, 30 years ago. So  
9           we are finally starting to address the problems or  
10          needs that first surfaced a long time ago. And,  
11          you know, all I can think of is we can use the  
12          approach of the way it has been that defer  
13          decisions until they become so self evident that  
14          you can't avoid making them, or they get forced on  
15          you. Or come up with a longer term framework that  
16          addresses the fundamental issues so that we can  
17          identify the future Paths 26 and 15s and so forth,  
18          and start doing something about it now, as opposed  
19          to wait for new problems to emerge.

20                 MR. ETO: Gary.

21                 MR. DeSHAZO: I just have to comment on  
22                 that because he's told me that, as well. And I  
23                 think that among all the stuff that's been going  
24                 on, some of it bad, some of it good, that I think  
25                 that's one of the ones he's somewhat proud of.

1           But neither here nor there, it is always  
2 a problem that I think transmission planners face.  
3 I mean, as ridiculous as it may sound, you know,  
4 those of you who go through model homes, you know,  
5 they always have the cardboard tvs and the  
6 cardboard this and that, and some, I think it was  
7 an operator back in Arizona suggested, well, maybe  
8 we ought to just put cardboard transformers out  
9 there or something like that, so that at least  
10 when there wasn't anybody out there, that as  
11 people were starting to move in, and if you're  
12 talking about Arizona where the growth rate was  
13 quite high, what you're having here is that one  
14 year there may not be anything there. The next  
15 year, all of a sudden, there's development that's  
16 out there.

17           And so the question is how do you go out  
18 and try to protect for something that you can  
19 really only show you'll need five years from now.  
20 Well, in five years, man, the developers have been  
21 there and they're gone.

22           And so trying to work out that  
23 relationship with the regulators so that you can  
24 at least keep those kinds of things at hand is  
25 important.

1           But, at the same time, -- and I guess  
2           that what comes to mind, too, is some of the  
3           issues, or a number of the issues that I'm  
4           currently facing in San Francisco where PG&E is  
5           attempting to build a new 230 kV line into San  
6           Francisco out of the corridor.

7           As soon as I can kind of get past the  
8           fact that the costs for building transmission are  
9           just extraordinarily high, but if you look at  
10          where they're trying to go with this, it's a very  
11          complicated thing. And it's very difficult to get  
12          people on board to say this is what we want to do.

13          And, in fact, what you have are factions  
14          that are suggesting that we ought to shut all the  
15          generation down in the City and just do everything  
16          with transmission. And I think that all of us  
17          would probably agree with the fact that to try to  
18          do everything with transmission we just don't have  
19          enough money in the world in order to do that.

20          Besides that, the power's got to be  
21          produced somewhere, so it's going, you know, to  
22          have to go someplace. And the issues have been  
23          mostly around education and trying to help the  
24          communities and others, and including the City, to  
25          understand what are the issues surrounding how you

1       serve the load in that area.

2                   And that is not a very easy thing to do.  
3       And it takes a tremendous amount of time in order  
4       to accomplish that.  And it gets down to public  
5       process.  And so if you don't do a good public  
6       process, then most likely you're probably going to  
7       get -- you're going to lose.

8                   So, there is that component that we all  
9       must keep in mind is that if we're going to go out  
10      and try to hold these things that we've been able  
11      to get or identify, that there's a public process  
12      that goes with that.  And I think education is a  
13      good portion of that.  And I think that's at least  
14      something that the ISO has come to realize a  
15      little more clearly over the past 12 to 18 months.

16                  MR. FERGUSON:  I just have to put my two  
17      cents worth in, too.  Actually thank the  
18      Commissioner for making my point, but of course  
19      Valley Rainbow was all tangled up with Sun Desert  
20      and a lot of other things that were sort of  
21      happening, not as a result of any particular  
22      policy, but were just sort of happening.  And when  
23      Sun Desert died, you know, things started falling  
24      apart.

25                  And I kind of had the same feeling, you

1 know, when Valley Rainbow re-emerged at the PUC  
2 that it was like deja vu all over again, because  
3 again there wasn't any coherent policy that was  
4 driving this thing. It was some calculations that  
5 people were doing.

6 And so I think it proves my point that,  
7 you know, if the state sets out a clear path where  
8 it wants to go it will make all these processes  
9 much much simpler.

10 Now, that's not to say that determining  
11 what that path should look like is going to be  
12 simple. But on the other hand that's why you guys  
13 get paid the big bucks, right?

14 COMMISSIONER BOYD: Joe, this moves me  
15 to unfortunately make a comment or two. And  
16 then --

17 (Laughter.)

18 COMMISSIONER BOYD: I really do look  
19 forward to -- oh, I only wish it were the big  
20 bucks -- I do look forward to public comments on  
21 this, as well. There's a very learned public out  
22 there as I look across the audience.

23 But I very much appreciate what you all  
24 said, found it really interesting. I've got pages  
25 of notes here. But there are some common themes

1 and I don't want to engage in anecdotes of what  
2 happened in the past because I could tell my  
3 horror story of early in the year 2000 sitting in  
4 a room full of people who were going to fix Path  
5 15, only to watch that get unilaterally derailed.

6 But somebody said here we need to look  
7 forward, and that's what we need to do. And the  
8 consequences of the past we have to live with, but  
9 I heard a lot of things I've heard repeatedly that  
10 have become almost icons that I follow or look  
11 for. Like the longer view, the insurance, how  
12 much, who pays and how.

13 But the system, the system is the thing,  
14 I think, all of you in one way or another, in  
15 various words, talked about. That you have to  
16 look at the whole system. We can no longer afford  
17 to look at the pieces. I think some of that is  
18 the problem that California is no longer the  
19 frontier it once was. There's no room anywhere.  
20 There's 35 million people, there's not 10 or 12  
21 and lots of room to put things up.

22 So even though Gary talked about just in  
23 time has been the traditional easiest way to solve  
24 things, that isn't going to work in California  
25 anymore. And if we don't take the long, long view

1 that Vikram talks about, it'll really be expensive  
2 to build a transmission line when you start  
3 relocating things that are already put in places,  
4 if we can even convince the public.

5 But also the dominant theme has been we  
6 need some kind of energy policy. You need to know  
7 all the pieces of the puzzle before you can start  
8 assembling the puzzle. That's going to be  
9 extremely difficult. I mean I think we're now  
10 recovering from the fallout of decisions that were  
11 made that the market will do everything and you  
12 don't even need government anymore, to a  
13 realization that well, somebody's got to be  
14 responsible to the people for taking the long  
15 view.

16 And I think you're now participating in  
17 that long view. And I think I'm eternally  
18 grateful for the creation of the legislation for  
19 the Integrated Energy Policy Report. Because as  
20 we sit through that process it will continue, it  
21 will provide a continuous forum for dialogue. And  
22 here we are, already talking about the 2004  
23 update, and 2005 major plan. And as Commissioner  
24 Geesman said, 2003 has not even been ratified by  
25 the Commission yet.

1           So it's a real-time thing that has to be  
2       dealt with. So I think this is a real good start.  
3       But, you have identified some major issues that  
4       while it's very good to continue to have these  
5       forums on transmission alone, we need concurrent  
6       forums on all the other pieces. And we need some  
7       folks to step up to the table and start making  
8       some real hard decisions on energy policy.

9           And they're happening. The RPS is an  
10      energy policy decision. Some of us are trying to  
11      encourage it be accelerated, et cetera, et cetera.  
12      Those things will happen. But there's going to be  
13      a lot of things happening concurrently. Nobody's  
14      going to hand us an energy policy in spite of I  
15      think the comments around town in the last few  
16      weeks about maybe a new policy is coming.

17           I think when somebody turns that rock  
18      totally over they'll see what we've all been  
19      looking at for the last couple years. There's too  
20      many snakes to grab all at once.

21           But, nonetheless, I think I'm just  
22      commending everybody here for pushing this thing  
23      forward. And we've got to keep working at it.  
24      But we do have to plug it into a system of some  
25      kind, and we do need some major decisions.

1           And I look forward for those people out  
2 there to tell us what all those things are.

3           MR. ETO: Very good. Well, let's have  
4 public comment now. I invite you to come to the  
5 microphone, to identify yourself, and address  
6 either the panelists or myself; try to respond to  
7 your comments and questions. And you need to give  
8 a card to the recorder.

9           MR. PAK: Good morning, Commissioners.  
10 For the record my name is Al Pak; I represent  
11 Sempra Energy Resources. I'd actually planned to  
12 go last, but --

13           COMMISSIONER BOYD: You may be last. I  
14 saw no other hands.

15           (Laughter.)

16           MR. PAK: As reluctant as I am to  
17 criticize Mr. Budhreja's work in public, I wanted  
18 to raise an issue that we think has been  
19 completely missed in the report, and one that  
20 Sempra Energy Resources plans to raise in the  
21 future process that we're going through here.

22           Sempra Energy Resources is a developer,  
23 owner and operator of generation facilities  
24 throughout the United States, but principally  
25 focused here in the southwest.

1           We are finding that transmission affects  
2           the value of our facilities, our access to market.  
3           And because we have a direct financial stake in  
4           the transmission grid, more and more of our  
5           conversations internally have focused on taking a  
6           direct financial stake in transmission facility  
7           and becoming a merchant developer for new  
8           transmission facilities.

9           One of the things the report fails to  
10          discuss is the potential role that non-utility  
11          developers and non-traditional developers of  
12          transmission might bring to the table. You  
13          certainly see the benefits of that in the Path 15  
14          upgrade.

15          Obviously we think that our  
16          participation in this segment of the market would  
17          not only enhance our business plan, but would also  
18          solve a number of the issues, both regulatory and  
19          financial, that have been raised in the report.

20          Obviously non-utility development of  
21          transmission raises other issues related to  
22          property rights, access priorities and operational  
23          issues. But we believe those issues can be solved  
24          through reasonable negotiations between parties.

25          And if not solvable that way, then through at

1 least initially some heavy-handed regulation that  
2 would favor our participation in the market.

3 We recognize at this point that policies  
4 encouraging third-party non-utility development of  
5 transmission is probably an issue, and is not ripe  
6 for it becoming a recommendation. But on behalf  
7 of Sempra Energy Resources let me offer our  
8 assistance to you in this process, in converting  
9 the issue into a recommendation. In that regard  
10 we intend to file written comments on November  
11 17th in this docket on this specific issue.

12 Thank you.

13 MR. ETO: Thank you. Do any of the  
14 panelists want to respond?

15 MR. BUDHRAJA: I think the absence of  
16 noting independent transmission development is not  
17 meant to suggest that's not a viable path. I  
18 think we are really focused on trying to put a  
19 policy spotlight on the need to think about  
20 transmission differently than has been done in the  
21 past.

22 But having said that, I want to make an  
23 observation, and that is this whole issue of NUGs,  
24 non-utility generating resource says, and used to  
25 be called NUTs, non-utility transmission service

1 providers and so forth, I think from a public  
2 policy standpoint, having more participants is  
3 good. However, what I've observed around the  
4 country is that what used to be the regulatory  
5 compact has been replaced by a regulatory  
6 contract. And I haven't seen much in the way of  
7 merchant anything, transmission or generation,  
8 being built.

9           And so I think from a public policy  
10 standpoint the important issue is going to be to  
11 recognize that because I just don't -- have not  
12 come across many investors who are basically  
13 saying we'll build the transmission on the come.  
14 Because the reality is that if you're trying to  
15 build transmission to remove something that is  
16 congested, well, you can't measure congestion  
17 after the fact. And unless they define property  
18 rights, you know, there's no way to collect the  
19 rents. Exception, of course, is DC links and so  
20 forth, you know.

21           So, I think having broad participation  
22 in addressing transmission problems is good. But  
23 from a public policy standpoint unless the  
24 question of who pays and how is addressed, I think  
25 we'll be waiting for the market to provide. And

1 it may not provide.

2 MR. FERGUSON: In the recent discussion  
3 regarding transmission upgrades to Tehachapi, the  
4 issue of potential private players came up. And  
5 especially because of the multi-agencies that are  
6 involved, the seams issues that are there, it  
7 could be that a private developer could actually  
8 do better than either one of the utilities, you  
9 know, to fill that seam.

10 So, I certainly agree with Vikram that,  
11 you know, I see a role for, at least potentially,  
12 for private developers. But I go back to my  
13 earlier comments, that clearly whatever does get  
14 built has to fit into the overall state energy  
15 policy.

16 If it's a way of facilitating that  
17 policy I think lots of people would be supportive.  
18 If it's kind of an end-run around that policy, I  
19 think you're going to run into a lot of trouble.  
20 So I would encourage to participate in this policy  
21 report, but I think a lot of people are looking,  
22 you know, for alternative solutions like that to  
23 get around some of the problems we've been having.

24 MR. ETO: Gary.

25 MR. DeSHAZO: Well, I guess that the

1       only thing that was coming to mind when Tehachapi  
2       comes up is that one of the roles that I think  
3       that we play is trying to find ways to increase  
4       the utilization of what we have.

5                 And that sometimes that tends to be  
6       overlooked. And it's not necessarily with just  
7       the transmission solution. It could be a  
8       combination of different things occurring. Maybe  
9       it's small generators. Maybe it's transmission,  
10      you know, things along that line.

11                And Tehachapi, at least for the ISO, we  
12      looked at it as a way to -- what was our way to  
13      try to bring two systems together and increase the  
14      utilization of both.

15                And I think that when you try to do  
16      things like that I think that out of that  
17      sometimes you will see some needs develop where  
18      opportunities for some of these other private  
19      developers to step up and do something because  
20      they have a little more clarity about maybe what  
21      can be done, or where they could go, or how they  
22      could support the system, rather than just your  
23      traditional transmission assessment to get a  
24      resource to a load.

25                MR. ETO: Other public comment?

1 (No response.)

2 MR. ETO: Come, now, let's not be shy.

3 MS. PETRILL: Hi; I'm Ellen Petrill from  
4 the Electricity Innovation Institute. I'd like to  
5 commend you on your report and also this workshop,  
6 because I think that what we want to do is enable  
7 and unleash innovation. And the way to get that  
8 going is getting human beings together with a lot  
9 of different perspectives and some brilliant  
10 minds.

11 So I want to emphasize just a couple of  
12 points. One is take advantage of stakeholders in  
13 the process, the transmission planners, as well as  
14 coal companies, and those who don't agree with  
15 coal. I think we all need to be sitting down at  
16 the table and finding innovative ways to work  
17 together as partners instead of adversaries. So,  
18 I think those kind of brainstorming sessions are  
19 the way to make that really work.

20 And then second I think it's really  
21 important to include advanced technologies and  
22 research and development in the process. So you  
23 need to tie this process with the PIER program,  
24 transmission program and again include the  
25 stakeholders that are really critical to this

1 process in that, as well.

2 So, some technologies that we ought to  
3 consider are bulk energy storage, power  
4 electronics, and then multiple use of transmission  
5 lines, transmission access corridors like  
6 communications, maybe in the future gas, water,  
7 sewage, those kinds of things.

8 So, again, I think innovation is what we  
9 need to encourage so we can unleash that.

10 Thank you.

11 MR. BUDHRAJA: No, I think it's a point  
12 we've made, and I think new technologies have to  
13 be part of it. I often say that, you know, our  
14 load factor on this power system is 56 percent, or  
15 55, you know, give or take.

16 If you use N-minus-1 for transmission  
17 that means average utilization is down to 28  
18 percent, you know. And so, yeah, if we could have  
19 storage and other technologies that can  
20 substantially change the utilization profile of  
21 the transmission system, I think that would be  
22 very complimentary and very desirable.

23 But one caution. I think we need to,  
24 and I go back to Commissioner Boyd's comments, you  
25 know, we need to think long term; we need to think

1 holistically from a system standpoint. And I  
2 think not get trapped in, well, this is the only  
3 solution. Because my experience is that we're  
4 going to need a portfolio of solutions that  
5 include technology, that include renewables, that  
6 include transmission, that include conservation.

7 And if you compress the timeframe, then  
8 it gets into, you know, my solution versus your  
9 solution. If we look long and hard, and look  
10 holistically, I think there's room for all of  
11 those things, and they need to be pursued. There  
12 might be tradeoffs in terms of timing and so  
13 forth. But I think that's very important to keep  
14 in mind.

15 MR. ETO: Thank you.

16 MR. DeSHAZO: I would like to echo  
17 exactly what Vikram has said, is that -- and I'm  
18 facing -- we face that in San Francisco where the  
19 attempt is that a single solution is going to be  
20 the solution that's going to save the world. And  
21 that just simply will not work.

22 The issues that we have faced have been  
23 trying to find a way to balance that in the right  
24 way, such that we end up with a solution that, you  
25 know, one, it's the right thing to do and it makes

1 sense. And that realizing that no one is going to  
2 win, but everyone is going to win. It's just that  
3 you're not going to win, you know, everything that  
4 you want.

5 And it's very clear to us that for that  
6 area there's clearly a balance between  
7 transmission needs and generation needs, and the  
8 energy efficiencies and other things that bring in  
9 some of the technological solutions, there are  
10 ways to bring all of that together.

11 But when the issue is that I got to  
12 solve the problem like now, and 2005 is no  
13 different to me than tomorrow, that we don't have  
14 the time to allow for some of those things to  
15 develop. They need to be developed and need to be  
16 able to be demonstrated. And once that can be  
17 done, then they can be accounted for. And  
18 certainly can be planned for.

19 But that's been, I think, by and large,  
20 the biggest issue is you can go out and account  
21 for energy efficiencies, or you can say we can do  
22 some of these technological things. The key is  
23 that's fine. We have no problem in incorporating  
24 that. Either you take it in and just subtract it  
25 from the overall load growth somehow, or whatever.

1 But planning can accommodate that.

2 But we have to know that it's going to  
3 be there. And that's, I think, the largest  
4 hurdle. And that does take some time, but I think  
5 we need to be thinking about that now so that we  
6 can roll that into the overall plan. Because it  
7 is going to have to be long term. And I think if  
8 we can demonstrate that, that that'll work out  
9 well. There's a place for all of it.

10 MR. ETO: Yeah, I guess I would like to  
11 add to that my own thoughts, which are that  
12 clearly the size of the solution space increases  
13 the longer out in time you're allowed to consider  
14 options. If your problem is tomorrow, you have to  
15 do something by tomorrow.

16 But I guess I'd turn that around and re-  
17 emphasize the need for this long review so that a  
18 range of solutions can be considered. And I think  
19 the consideration and this balancing is critical.  
20 And I want to make a process point that balancing  
21 that I'm thinking about really is not a computer  
22 optimization, but really a balancing of  
23 perspectives and processes, public processes,  
24 where those views could be held.

25 And so it may not be to the nth decimal

1 point according to an optimization program, but it  
2 is a solution that does fairly balance the  
3 interests, particularly in view of the many things  
4 that can't be well quantified or incorporated into  
5 some of the traditional planning techniques.

6 And so again that argues for the long  
7 review and a process perspective on trying to  
8 address these questions.

9 Other comments?

10 Well, you're a quite group. Well, let  
11 me turn it back to the Commissioner and --

12 PRESIDING MEMBER GEESMAN: Why don't we  
13 come back, then, at a little after 1:00. We'll  
14 reconvene at 1:15 sharp, our next panel.

15 (Whereupon, at 11:45 a.m., the workshop  
16 was adjourned, to reconvene at 1:15  
17 p.m., this same day.)

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## 1 AFTERNOON SESSION

2 1:16 p.m.

3 MR. ETO: Thank you for coming back.

4 What we wanted to do this afternoon is, you know,  
5 this report that was prepared and presented this  
6 morning is a start of a process; and the intent of  
7 that process is to be very open and hear a broad  
8 range of perspectives.

9 And this afternoon panel we begin to  
10 broaden those perspectives by inviting a number of  
11 folks who do have distinct perspectives on the  
12 issues of transmission planning. And we want to  
13 hear from them and make sure that that is  
14 something that goes into this process, as well.

15 Specifically we want to recognize that  
16 transmission, along with any other energy project,  
17 really is not cost free. There are costs and  
18 benefits associated with any of the decisions that  
19 we might make in the resource planning area.  
20 Transmission is certainly no different and has  
21 very unique costs and benefits.

22 Lest we not have a comprehensive view of  
23 those, we do want to hear from folks that have a  
24 perspective on some of -- specifically some of the  
25 costs, environmental or local or otherwise. And

1 toward that end we've assembled this panel this  
2 afternoon.

3 We've invited Jane Turnbull from the  
4 League of Women Voters; Osa Armi and Tony Smeerdyk  
5 from the Save Southwest Riverside County group.  
6 We have several other folks invited. If they come  
7 I'm going to ask them to come up here or be first  
8 on the list when we have public comment.

9 We want to speak to a number of  
10 discussion topics. We wanted to ask folks how  
11 they saw the role of transmission in providing  
12 affordable and reliable electricity to the  
13 constituents that they represent.

14 We wanted to ask your perceptions of the  
15 opportunities or benefits that you've realized  
16 from transmission upgrades. And we want to  
17 understand in particular the importance and role  
18 of public participation and transmission planning  
19 processes toward insuring more effective planning  
20 results for California's future transmission grid.

21 We want to look more prospectively how  
22 could the state or how can the state more  
23 effectively conduct transmission line planning and  
24 permitting to minimize land use and environmental  
25 impacts associated with transmission expansion.

1           And looking forward even further how can  
2           transmission corridors be most effectively planned  
3           for and used in the future.

4           I think we'll follow a similar format to  
5           that used this morning, which is I'll invite each  
6           of the panelists to offer prepared remarks on  
7           these questions, or the report, itself. Then  
8           we'll open it up for a public comment session and  
9           more of a roundtable type of discussion.

10           So let me start by introducing Jane  
11           Turnbull from the League of Women Voters.

12           MS. TURNBULL: Thank you, Joe. I'm here  
13           this afternoon as a representative of the Energy  
14           Committee of the League of Women Voters of  
15           California. This workshop considering  
16           California's future transmission grid is very  
17           timely. We commend Commissioner Geesman and the  
18           staff of the Energy Commission for embarking on  
19           this challenge.

20           Californians are accustomed to reliable  
21           and reasonably priced electricity. Often we've  
22           taken it for granted, at least until our lights  
23           didn't go on and the cost of power showed signs of  
24           skyrocketing.

25           Over the past several years as our

1 state's economy faced serious problems resulting  
2 from the changes in government, governance and  
3 regulation of the electric industry, the League of  
4 Women Voters has undertaken efforts to better  
5 understand the workings of the industry.

6 We have studied the causes of the  
7 problems and are trying to envision what this  
8 state's energy policies should look like in the  
9 future.

10 You should know that the League has two  
11 separate roles, education and advocacy. Positions  
12 on any issue are developed only after a process of  
13 study and then consensus. Advocacy is based only  
14 on established positions. Existing League energy  
15 positions state that state energy policy should  
16 consider the impacts of energy development and use  
17 on public health and safety and on the  
18 environment.

19 We also have positions on sustainable  
20 communities that look toward the well being of  
21 future generations. These positions focus on the  
22 interdependence of economic, environmental and  
23 social demands, emphasizing that the balancing of  
24 these demands should be addressed through  
25 equitable and democratic means.

1           In developing plans for upgraded or new  
2 energy resources community members share an ethic  
3 of responsibility to one another and to future  
4 generations. Our position, and I quote, is the  
5 full social and environmental costs of production,  
6 provision and disposal of goods and services  
7 should be acknowledged and addressed.

8           Furthermore, governance and leadership  
9 should encourage democratic deliberation. We call  
10 for public participation in the decision-making  
11 process and assert that neighborhood liveability  
12 and ecological integrity both need to be  
13 considered.

14           The transmission grid is only one facet  
15 of our complex electric system. We need to  
16 recognize its significance, but at the same time  
17 we must relate it to the generation of power at  
18 one end of the production system and the  
19 distribution of energy at the other.

20           We also need to understand the  
21 challenges that are associated with expanding  
22 and/or retrofitting the transmission grid. And  
23 find out what options exist. All of us need to  
24 work together to help foster a planning process  
25 that enables broad participation and acceptance of

1 responsibility. A planning process that considers  
2 economic and environmental justice, as well as  
3 technical excellence and costs.

4 The challenges being addressed here  
5 today are certainly real. And though today's  
6 outcome can only be ideas, with perhaps a few  
7 commitments, the League hopes that this outcome  
8 will lead to a democratic and intelligent planning  
9 process. We will be pleased to work with the  
10 Energy Commission and other parties in our state  
11 that have a similar objective.

12 Thank you.

13 MR. ETO: Did you also want to add  
14 additional comments speaking to some of the  
15 specific questions for this panel, or do you want  
16 to --

17 MS. TURNBULL: I think I'd like to wait  
18 for the specific questions.

19 MR. ETO: Not a problem. All right.  
20 Let me introduce Osa Armi and Tony Smeerdyk from  
21 the Save Southwest Riverside County.

22 MS. ARMI: Thank you. I'm the lawyer  
23 here and Tony is the engineer. I'll start out  
24 talking about lawyer stuff, and then Tony will  
25 pick up and talk about some of the engineering

1 items.

2 I work at a lawfirm called Shute, Mihaly  
3 and Weinberger. We're in San Francisco. We do  
4 public interest and public sector land use  
5 environmental law which is sort of a long way of  
6 saying we represent community groups like Save  
7 Southwest Riverside County. We represent  
8 government agencies and from time to time  
9 represent developers of environmentally beneficial  
10 projects.

11 So, representing Save Southwest  
12 Riverside County, SSRC I'll call them from here on  
13 out, was something we do a lot of. We represented  
14 SSRC at the Public Utilities Commission during the  
15 approximately two years, little bit more, of  
16 litigation over the Valley Rainbow project. And I  
17 assume that's why I've been invited to speak here,  
18 to talk about some of the lessons learned and  
19 maybe shed some light on how the community came to  
20 respond the way it did. And how other projects  
21 could be structured to have a better reception in  
22 the community.

23 I don't know, but I assume you don't  
24 often hear from people in my shoes. I'm not  
25 entirely sure what would be most useful to you, so

1 I'll keep my remarks short, and then I'd love to  
2 answer any questions that you might have for me.

3 So I'm going to speak to the two, I  
4 think they're the two middle questions you had,  
5 which are how important is public participation in  
6 this process. And what can the state do to try to  
7 rationalize the planning process from the  
8 perspective of community participation.

9 So, how important is community  
10 participation, unbiased perspective? Very. If  
11 you don't have the community on your side, or  
12 worse, you've got the community against your  
13 project, your project's in real jeopardy.

14 And so thinking about how to structure  
15 your project and how to inform and involve the  
16 community is obviously really critical toward  
17 trying to have a successful project.

18 One of the biggest mistakes I think  
19 developers have historically made, and when I say  
20 developers I mean anybody that wants to build a  
21 major project in somebody's back yard, a common  
22 assumption, and I think a mistaken assumption, is  
23 that the community is going to be irrational;  
24 they're going to be unreasonable; they're going to  
25 be obstructionist; they're not going to be

1 constructive in their participation in your  
2 process.

3 And although I think there might be  
4 examples of that out there, my own advice to you  
5 would be to not go in with those assumptions.  
6 Because in my experience in looking at the clients  
7 I represented, there have been real efforts made,  
8 and I think really successful efforts, made at  
9 being constructive, reasonable and, you know,  
10 respectful in the process.

11 Another common mistake I would say is to  
12 sort of adopt a bulldozer mentality. An idea that  
13 the community isn't going to get what it wants in  
14 the end, and so, you know, in essence why don't  
15 they just step aside and let the project go  
16 forward. Both of those are obvious mistakes from  
17 my perspective; and, you know, don't sort of feed  
18 into ultimate success for your project.

19 Just to give you an idea of -- well,  
20 actually I'm going to leave Valley Rainbow out of  
21 it. I'd be more than happy to answer questions,  
22 but I'm not going to rehash it from up here. I  
23 think that's probably not productive.

24 So, in order to be sort of involving the  
25 community in a way that's going to be helpful to

1       you, I'd say involve the community as absolutely  
2       as early as possible, even when you don't know in  
3       precise detail what your project's going to  
4       involve. Because there's nothing worse than  
5       having them come in at the end, hear about it only  
6       at the last minute, and say to you, well,  
7       goodness, you know, that's an important cultural  
8       site to us and you've put your project right over  
9       the top of it. Why didn't you ask whether that  
10      site was important.

11                Like I said, avoid the bulldozer, we-  
12      will-bury-you mentality. It tends to only add  
13      fuel to the fire.

14                And to the extent you can, in thinking  
15      about it in sort of in economic terms, realize  
16      that what the community is telling you when they  
17      say, you know, your project is damaging to our  
18      community, you are hurting our environment. They  
19      are telling you about externalities having to do  
20      with your project. They're telling you about the  
21      real cost. And those costs, although sort of  
22      harder to quantify, are no less real in terms of  
23      getting your project built than the cost of the  
24      wires and the towers.

25                And I think, you know, we've been

1 talking about this I guess all morning, in  
2 essence, you know, what are the true costs of the  
3 transmission. The impacts to the community are an  
4 obvious one I would say.

5 So, just moving on briefly to state  
6 structures, how the state can rationalize this  
7 process. My own experience here is going to be  
8 speaking to you really just from the perspective  
9 of the Valley Rainbow application.

10 And my own experience in that was that  
11 the system worked relatively well. There were  
12 obvious problems and, you know, clearly could be  
13 streamlined and improved. And, you know, there  
14 are lots of suggestions I would have for that.  
15 But the basic structure of having an adversarial  
16 process where all parties have to come before a  
17 hopefully unbiased, and in this case, truly  
18 unbiased decision-maker, who takes the facts,  
19 weighs them, makes a recommendation and ultimately  
20 makes a decision worked very well in our case.

21 You know, we had a community group that  
22 was able to hire attorneys, my lawfirm, who was  
23 able to hire experts from many fields including  
24 economics and electrical engineering and come up  
25 with a case. And ultimately the decision-maker

1 decided that the utility had failed to make their  
2 case.

3 So I would say in addition to retaining  
4 that structure to the extent, and basically the  
5 same form it's in now, I would say another  
6 important thing to focus on would be a full and  
7 complete compliance with the California  
8 Environmental Quality Act.

9 And then finally retaining intervenor  
10 compensation. And I know that that's going to be  
11 a sort of touchy issue in this room. I think some  
12 people assume that if you eliminated intervenor  
13 compensation you'd eliminate intervenors. You  
14 would eliminate participation by the public in a  
15 significant fashion in these issues.

16 And I think probably the effect that it  
17 would have would be to cause more unconstructive  
18 community participation. You'd have fewer groups  
19 like SSRC participating at the level of everybody  
20 else at the table, and more groups sort of lobbing  
21 volleys from the outside.

22 I think the intervenor compensation  
23 program that the Commission has is really  
24 wonderful in that it enables community groups to  
25 participate in a constructive, real and complete

1 fashion. And really ought to be maintained for  
2 that.

3 So that's enough lawyer remarks for the  
4 moment. Let's give it to Tony.

5 MR. SMEERDYK: Thank you, Osa, and thank  
6 you, Commissioners, for giving us the opportunity  
7 to speak before this group.

8 My name is Tony Smeerdyk and I'm a  
9 resident of the French Valley area, one of the  
10 locations where the Valley Rainbow project was  
11 proposed to route through.

12 By way of background, in all fairness,  
13 I'm not only a resident there impacted by the  
14 impact of the project, but I'm also a retired  
15 Edison engineering manager. And I've had the  
16 opportunity to work with several of you in this  
17 room over my 30 years of tenure with Edison. So I  
18 do come with a little bit of knowledge about the  
19 business. And so I was able to support the SSRC  
20 group with some technical insight and help them  
21 rationalize what the project was all about, and to  
22 come up with possibly what some alternative  
23 projects were or could have been for the project,  
24 itself.

25 And so with that assistance the group

1       who was, you know, entirely a grass roots,  
2       homeowner type organization, haus fraus and people  
3       that had absolutely no understanding of what  
4       electricity is all about, they did have the  
5       fortitude, if I can call it that, to organize and  
6       say, hey, maybe there is reason to investigate the  
7       need for this project and to see whether or not  
8       there were actual alternatives.

9               We never did go on to a strategy of "not  
10       in my backyard". It was a thorough investigation  
11       into the need and into the justification of the  
12       project.

13               And I think the end result of this  
14       project, it points out maybe the changing climate  
15       in the area of transmission planning, particularly  
16       since the deregulation process. Because it  
17       pointed out that the proponent of the project was  
18       very interested in the reliability aspect of  
19       service to its grid, as well as being able to  
20       export its power to different areas.

21               And we -- I'm sorry, I lost my train of  
22       thought. I'll come back to it.

23               Anyway, the key point I think I want to  
24       make was that the people who were very concerned  
25       about this projects are people who do not know

1 anything about electricity, the manufacturing, the  
2 distribution, power delivery aspects of it. So  
3 they really don't understand what these big towers  
4 and these big wires are about. And they are  
5 strictly concerned with the impact it has to the  
6 land values and to the aesthetics of the area that  
7 the line was proposed.

8 And so at first when they were thinking,  
9 hey, why is this coming through here, and when  
10 they saw that the project, itself, had some  
11 alternatives they saw that the opportunity existed  
12 for evaluating or to compress the project into  
13 alternative concepts. Gosh, I'm sorry.

14 I guess the point that I was trying to  
15 get to -- I want to get back to the regional  
16 transmission planning. Since the proponent was  
17 looking at the concept of maintaining the wire  
18 grid, the process, itself, failed to include the  
19 adequate amount of resources other than just the  
20 wire capacity that's needed in order to maintain  
21 the reliability to its grid.

22 In other words, the responsibility of  
23 resources was not properly included because that,  
24 under the process of deregulation, actually ended  
25 up being the responsibility of others. So the

1 primary responsibility of the ISO and the utility,  
2 itself, was how do we maintain our wires business  
3 with adequate capacity and reliability in order to  
4 meet our public.

5 And so when the planned, the technical  
6 aspects of the plan was reviewed, it became quite  
7 evident that resources needed to be addressed in  
8 more detail and to be incorporated more into the  
9 overall plan. And that, itself, gave enough  
10 justification to say, hey, there are project  
11 alternatives other than a line from point A to  
12 point B with 29 different proposed locations  
13 through an existing urban area.

14 So, that was a real important factor.  
15 And that's something for the Commission to  
16 consider is that when regional transmission line  
17 planning is done it needs to incorporate all of  
18 the alternatives, including from generation that's  
19 in place, and/or even proposed generation that's  
20 on the drawing board.

21 And so we felt that that was very  
22 important, and we were being requested to host an  
23 aesthetically impacting transmission line on the  
24 basis of an incomplete picture. So we thought  
25 that was very important to point out.

1           So, some of the other points that are  
2 really important for consideration in the  
3 transmission line planning process is Vikram  
4 talked this morning about aging plants and more  
5 efficient power plants being available out of  
6 state, so relocating some of these assets to out  
7 of state, and hence longer line transmission line,  
8 more power flow to the load centers from out of  
9 state, and at the lower cost per kilowatt hour the  
10 saving cost to the ratepayers.

11           Well, there are many other things that  
12 obviously need to go into this equation because we  
13 have existing power plants. I've also  
14 participated a little bit in the application 24 of  
15 the CEC which is the Escondido Power Plant that  
16 Sempra Energy Resources is proposing.

17           And in that particular project, as well  
18 as Calpine's project proposal, they boast and talk  
19 about new power plants that are energy efficient  
20 by as much as 20 to 30 percent more efficient than  
21 existing power plants. Well, that's a very  
22 significant margin. And so if existing power  
23 plants can utilize the existing underground  
24 transmission fuel delivery system, and increase  
25 their efficiency by 20 or 30 percent by renewal or

1 rebuilding, then perhaps that's a great  
2 alternative for providing an integrated electric  
3 grid, rather than going at risk of shipping huge  
4 blocks of megawatts long distances. And so that's  
5 something that absolutely needs to be looked into.

6 The other major concern was that the  
7 local citizens felt overall that they did not get  
8 an accurate picture of the proposed project in  
9 that it appeared that the project, itself, was a  
10 segment of the whole master plan. And only the  
11 section of the line, the Valley to Rainbow  
12 portion, was addressed. And without any  
13 discussion about any future requirements.

14 And yet there were exhibits available  
15 that showed that the line impacts Southern  
16 California Edison's customers in the Riverside  
17 County in a very severe way. And then the line  
18 routes politically out into the remote areas to  
19 get to San Diego beyond Rainbow down to the  
20 southern end of the San Diego grid. Thus it  
21 appeared that unfair impact to customers  
22 throughout the southern California region.

23 So, you know, these are all issues that  
24 utilities need to take a look at. Is it fair for  
25 everybody concerned? Is everybody impacted in the

1 most reasonable and most equitable balanced way.  
2 And if it isn't it needs to be clearly articulated  
3 as to, you know, why is it necessary to go through  
4 a real dense urban area, and then remote all the  
5 way the rest of the way.

6 So as far as any future recommendations  
7 I am a firm believer in the 20- to 30-year plan,  
8 if that's at all possible. And utilities need to  
9 have some kind of a vehicle available for them  
10 that if future transmission corridors are indeed  
11 necessary and needed in a long-range timeframe,  
12 there needs to be a process whereby they can  
13 secure the right-of-way at a much earlier process  
14 than within the three-year timeframe as was  
15 proposed by the Valley Rainbow project.

16 And that's just not do-able for a major  
17 500 kV transmission line. You need to have a  
18 little longer window than that. So I would  
19 certainly recommend identifying the need for the  
20 project; secure the rights-of-way; and then at  
21 least a large part of the battle will have been  
22 overcome simply because then the right-of-way is  
23 part of the public record, and it's part of the  
24 disclosure as people buy their homes in the area.

25 So, anyway, I'll leave it at that for

1 right now.

2 COMMISSIONER GEESMAN: You had mentioned  
3 that you'd participated in SDG&E's power plant  
4 siting project near Escondido, the Palomar  
5 project?

6 MR. SMEERDYK: Yes.

7 COMMISSIONER GEESMAN: Do you have a  
8 sense in terms of the ease of participation or  
9 level of information provided of the difference  
10 between that process and the process that you went  
11 through with respect to the Valley Rainbow  
12 project?

13 MR. SMEERDYK: The Palomar project, the  
14 power plant project was -- the level of  
15 participation I did was to address here at a  
16 hearing here at the CEC on the need for the  
17 project. And just from a technical standpoint to  
18 support the project only because it made absolute  
19 sense for that project to be constructed in a  
20 load-deficient generation area.

21 I did that for two reasons. Number one,  
22 because it's a good project and it made sense to  
23 me for that project to be developed, and to be  
24 approved in an expeditious manner.

25 And second of all because I was working

1 with the SSRC group on the Valley Rainbow and I  
2 saw it as an immediate mitigating project for the  
3 Valley Rainbow as an alternative to help them over  
4 the concerns of resource availability to that  
5 particular area.

6 But, on the other hand, what I found  
7 interesting was that through the discussions with  
8 the various folks I found that because of the  
9 process of deregulation and because of the --  
10 because of the process of deregulation it became  
11 quite apparent that the Valley Rainbow project  
12 proposed by San Diego Gas and Electric under  
13 Sempra's hat, and the Sempra Palomar project were  
14 actually competing projects.

15 And so that didn't make sense to us.  
16 And so the -- so I felt that the Palomar project  
17 went a lot smoother because it just made sense; it  
18 was a real fit for need, whereas the Valley  
19 Rainbow was just a lot more drawn out and a lot  
20 more complicated.

21 COMMISSIONER GEESMAN: Thank you.

22 MR. ETO: I'd like to invite Joe Lyons  
23 from the California Manufacturers and Technology  
24 Association to speak.

25 Before Joe gets started, I know folks

1 are coming in from lunch. If Holly Pease or Alex  
2 Leupp are in the audience I invite you to come up.  
3 We'll figure out a way to get more chairs up here  
4 for you.

5 MR. LYONS: Well, thank you. I  
6 appreciate the opportunity to address the group  
7 and take part in this discussion. It's absolutely  
8 that we have more infrastructure to mitigate  
9 market power and reduce delivered cost to  
10 ratepayers. And also for reliability reasons.

11 Now, first of all on cost. Industrial  
12 customers, very important to all ratepayers, but  
13 it certainly is important to us, as well. We, for  
14 lack of putting it a better way of putting it, got  
15 whacked in 2001. Industrial customers bore the  
16 brunt of the 2001 rate increases. And we have our  
17 direct access customers have -- are subject to a  
18 2.7 cent cost responsibility surcharge or exit  
19 fee.

20 So it's very important to us to reduce  
21 costs wherever possible. And certainly  
22 transmission plays a major role in reducing the --  
23 in providing affordable electricity and reducing  
24 the delivered cost to ratepayers.

25 On the reliability issue, of course

1 that's very important to industrial customers  
2 also. The transmission bottlenecks and all the  
3 problems that come with transmission congestion.  
4 We have many members in the Silicon -- that we  
5 share with Silicon Valley manufacturers in Silicon  
6 Valley, Oracle, among others, and you talk to them  
7 about reliability, just a flicker of a light  
8 switch can wreak havoc. And of course not just in  
9 the Bay Area, but in Los Angeles and other parts  
10 of the state, as well.

11 As far as recommendations, I mean the  
12 thing that first comes to mind is transmission  
13 siting. CMTA hasn't taken a formal position on  
14 siting, but it's something -- transmission siting,  
15 but it's something that we're going to be taking a  
16 very close look at in the coming months.

17 And frankly, there's a very good case to  
18 be made for it. And we're certainly -- let me put  
19 it this way. There's three things that come to  
20 mind. One is the present system on transmission  
21 siting is broken. Number two, the Energy  
22 Commission has had a good track record when it  
23 comes to generation siting. They've done a good  
24 job I think.

25 And number three, it makes sense, it

1 does make sense to have it at one place rather  
2 than at two different agencies. Of course, the  
3 one thing that comes to mind is certainly the cost  
4 allocation rate issues, which the Energy  
5 Commission does not have any experience at and the  
6 expertise for. So, perhaps keep that at the PUC.

7 But at any rate that's something we're  
8 going to be taking a close look at. And I want to  
9 take this opportunity to thank Commissioner  
10 Geesman for the role he's played in making sure  
11 that people are talking about that and looking at  
12 that, and seriously looking at that.

13 I would also say that the state, we need  
14 better and more upfront cooperation and  
15 communication between the environmental agencies  
16 and the transmission planning, the energy planning  
17 agencies. And I think effective communication  
18 there can go a long way to improving the process.

19 So those are my comments.

20 MR. ETO: Thank you, Joe. Can I just  
21 check one last time whether Holly Pease or Alex  
22 Leupp are here. No. Okay.

23 Commissioner.

24 COMMISSIONER GEESMAN: I had a question  
25 for Osa. We heard a lot this morning about the

1 necessity of better focus on planning efforts, and  
2 in particular a longer term perspective on  
3 planning.

4 In terms of eliciting an appropriate  
5 level of public involvement in that process do you  
6 think that's something that can be achieved? I  
7 mean, reflecting back on your experience at the  
8 Valley Rainbow proceeding, had that been preceded  
9 10 years, 15 years by a planning process -- I  
10 don't know who lived out there at the time -- but  
11 is that too abstract an issue for the public to  
12 become involved with?

13 Certainly I think from the perspective  
14 of state government there's a lot of logic and  
15 rationale in trying to get many of these issues  
16 addressed in a planning context as opposed to an  
17 adjudicatory context but are we going to get  
18 public involvement or not.

19 MS. ARMI: I think you'll have probably  
20 two different kinds of public involvement. If  
21 you're -- let me first talk about ratepayer  
22 advocacy, because there, I think, if you're going  
23 to do a public planning process where, you know,  
24 on the table you have all the options, you've got  
25 transmission, which would then result in purchase

1 of power from Arizona and Nevada, and you know,  
2 coal and maybe nuclear.

3 And then also on the table you'll have  
4 maybe some shorter distance transmission planning,  
5 purchase of renewables, maybe purchase of natural  
6 gas fired power from within the state.

7 I think at that planning level you'll  
8 get participation by ratepayer advocates who are  
9 worried about what's the cost going to be to  
10 ratepayers. And you're going to get participation  
11 by your national environmental groups that are  
12 worried about things like exporting pollution to  
13 other countries, Mexico, for example. Or worried  
14 about exporting -- well, having local land use  
15 impacts in the form of transmission and power  
16 plant siting, but also are concerned about the  
17 long-term development of renewables. And would  
18 like for your planning process to reflect that.

19 So I definitely think there's a way to  
20 structure a planning process that would involve  
21 those kinds of players.

22 If what you're talking about, though, is  
23 having discussions of more of a siting nature, ten  
24 years out, it's going to be a little bit more  
25 difficult because you're not going to have

1       specifics in mind, I assume.  You won't have  
2       routes on a map drawn.

3                 But there is a model for getting public  
4       participation in advance planning of land use  
5       issues.  And that's the state planning and zoning  
6       law that looks at general plans.  And those  
7       general plans will sometimes look at development  
8       of land 15, 20 years out, and get very, sort of  
9       excited and active public participation.

10                And so to the extent possible, if you  
11       could either have your planning process joined  
12       with the local general planning process, or have  
13       it mimic that in terms of its structure, I think  
14       you're going to maximize your public involvement  
15       that way.

16                And I wouldn't underestimate the  
17       importance of making transmission planning at the  
18       local level consistent with local general plans.  
19       Because you do have jurisdictions that are  
20       thinking very hard about where do you put public  
21       utilities.  And the state agencies should be tying  
22       into that process.

23                MR. ETO:  Jane, would you like to make a  
24       comment?

25                MS. TURNBULL:  Yeah.  I'd like to follow

1 up on that to some extent. I noticed that Osa did  
2 speak to the value of the adversarial approach to  
3 transmission siting. And I have to say that  
4 representing the League, and also as an  
5 individual, I don't think adversarial approaches  
6 are necessarily the best way to go.

7 I think there can be means of  
8 collaborative, long-term planning that brings the  
9 stakeholders together at the beginning. And if  
10 they have some responsibility.

11 I think Commissioner Geesman's previous  
12 question was a very good one because it does  
13 appear as though there is a gap between the state  
14 planning responsibility and what happens at the  
15 local level. And I think that has to be dealt  
16 with with some kind of regional process. And  
17 whether that be a multi-county process that looks  
18 at things on a regular level, or some other  
19 process, I'm not really certain.

20 I think this IEPR effort, the integrated  
21 approach that the Energy Commission has been  
22 taking this past year, to look at the whole has  
23 really benefitted California enormously. I think  
24 it's been extremely well done, and it has forced  
25 people to think in terms of what our immediate

1 needs are, but also what our long-term needs are.

2 And I think there may be means to refine  
3 and develop that process that would take advantage  
4 of this need to also think at a regional level.

5 MR. ETO: I'd like to invite Osa to  
6 respond, and offer a chance to clarify where she  
7 sees the adversarial process working well vis-a-  
8 vis the planning and permitting processes that  
9 we've been speaking to here.

10 MS. ARMI: Well, I think because I'm a  
11 lawyer I'm naturally going to feel comfortable and  
12 sort of favor the adversarial process in some  
13 cases.

14 And I think the Valley Rainbow case was  
15 one of those cases because you had one reflection  
16 of reality that was presented in the form of the  
17 application for this project. And you had very  
18 little in the way of questioning of that reality.

19 And so it was ultimately was the role of  
20 the Office of Ratepayer Advocates at the Public  
21 Utilities Commission and of my client to ferret  
22 out what we saw as problems with that application.  
23 And we were able to do that because of the  
24 adversarial process, essentially.

25 We were able to obtain information

1 through informal and formal discovery. We were  
2 able to ask very pointed questions of the other  
3 side's witnesses. We were able to present our own  
4 witnesses. And ultimately you had a judge that  
5 was presented with two very different stories  
6 about what the truth was in this case. And she  
7 had a very difficult decision to make, which was  
8 to sort out who was more believable on a whole  
9 range of issues.

10 You know, it's hard to imagine that case  
11 being resolved through sort of everybody sitting  
12 around a table and agreeing as to, you know, what  
13 the truth was.

14 I'm not saying there wasn't room for  
15 some kind of mediation in that case. As somebody  
16 that's done litigation in other fora, I was  
17 surprised actually to see no real sort of  
18 settlement efforts during the course of the case.  
19 It really turned out to be sort of an all-or-  
20 nothing, everybody presents their case, the judge  
21 decides, makes recommendations to the Commission.  
22 Then the Commission ultimately votes. And it was  
23 a three-two vote, so it was very close.

24 Sorry, it was a three-two vote, and then  
25 it was a five-zero vote on the ultimate decision.

1           So one of the recommendations I would  
2           have in order to improve the process at the Public  
3           Utilities Commission, if they were -- you know, if  
4           I was actually speaking to them about this, would  
5           be to perhaps, you know, I don't know how exactly  
6           this would be structured, but to have the  
7           potential for mediation part way through the  
8           process. Because litigation is obviously very  
9           expensive. It was very expensive for my client.  
10          I'm sure it was very expensive for SDG&E in this  
11          case, as well.

12                 MR. ETO: I guess a question I want to  
13                 ask is, you know, a lot of where I see the  
14                 discussions going are toward a more longer range  
15                 of front view of planning in which, I think,  
16                 ultimately having recourse to adversarial  
17                 processes will remain a part of that.

18                 But, clearly you came into a situation  
19                 where they were pretty far down the road on some  
20                 of those planning decisions. And I'm wondering if  
21                 you would continue to advocate for an adversarial  
22                 role in these earlier phases of the fact finding  
23                 and the establishment of the need, that then  
24                 downstream result in specific projects and plans  
25                 emerging.

1           And so where in this overall life cycle  
2           planning, so to speak, do the adversarial versus  
3           the more collaborative approaches work well from  
4           your perspective?

5           MS. ARMI: That's an interesting  
6           question. And I guess it all depends on how  
7           specific you want your plan to get. I mean if you  
8           want to sit here today and decide where all the  
9           power lines are going to go in 30 years, and how  
10          big they're going to be, and you know, then I  
11          think you'd probably want to have the community be  
12          able to participate and --

13          MR. ETO: Sure.

14          MS. ARMI: -- I'd advocate for that kind  
15          of structure early on.

16          On the other hand, if what you're doing  
17          is trying to lay out a vision for the state, and  
18          having, you know, us make fundamental decisions  
19          about whether we want to prefer more renewables or  
20          more power from out of state, and we spend a lot  
21          of resources on transmission or focus more on  
22          other issues, I think that can all proceed the way  
23          it seems to me that you're doing it. And this  
24          seems like a very reasonable and rational process.

25          So I think both can co-exist. You can

1 have both long-range planning and public  
2 participation; and then also more detailed battles  
3 over sitings down the road.

4 MR. ETO: Thank you.

5 MS. JONES: In terms of your  
6 participation in the case, you were presented with  
7 a project. And you looked at the need first. Do  
8 you think that if there was more emphasis on  
9 looking at alternative, perhaps, routes in all  
10 earlier upfront that there would have been  
11 anything -- that there would have been a project  
12 that might have emerged that would have been  
13 acceptable?

14 MS. ARMI: Yes, I guess. Well, let me  
15 sort of take that from the beginning. The case  
16 was structured need first, then routing, because  
17 it only makes sense to do it that way. You're not  
18 going to route a project that you don't need was  
19 sort of the perspective of I think most people who  
20 were involved, you know.

21 As it turned out, there were two or  
22 maybe three different justifications for this  
23 project. Reliability being one, that there was a  
24 shortage of resources in San Diego. Two was  
25 economic, that there was actually an excess of

1 resources to the south and they should be moved to  
2 the north. And there were RMR arguments, as well.

3 And those were all presented and  
4 litigated at some length. And none of them were  
5 accepted. And so that was the end of the story.  
6 There wasn't then discussion about routing.

7 If it had come out a different way, and  
8 you know, the Public Utilities Commission had  
9 decided that there was a need, I think there would  
10 have then followed a constructive discussion of  
11 how should the line be routed.

12 And there were a number of alternatives  
13 that weren't just say a line between two existing  
14 points, but they were, you know, lines in  
15 different locations, lines of different voltages,  
16 lines that were partly underground, and lines that  
17 went far outside the Valley that the utility had  
18 originally considered.

19 So we were definitely prepared to have  
20 that discussion. And I think the community was  
21 prepared, you know, to accept something. But as  
22 it turned out, we didn't need to go to that next  
23 step.

24 MR. ETO: Jane.

25 MS. TURNBULL: I think really we have to

1 go back to what the real question is and what the  
2 issue is. And it is, you know, are we going to be  
3 able to meet the demands for power of Californians  
4 30 years from now.

5 And there are a number of options in  
6 terms of getting to that end point. Certainly  
7 transmission is an important component of it, but  
8 it is not the only components.

9 And, so, you know, I think that's really  
10 the long-term issue. And this is really why the  
11 integrated systems approach is so strong.

12 MR. ETO: Thank you. Do any of the  
13 other panelists or Commissioners -- we have  
14 Commissioner Boyd's Advisor here, also, now --  
15 want to offer questions or comments before we go  
16 to public comment?

17 COMMISSIONER GEESMAN: I have one  
18 question for Joe. The business community, I  
19 think, has done a good job over the last five or  
20 six years of holding the state's feet to the fire  
21 in terms of providing for adequate generation.

22 Nobody has done a particularly good job  
23 holding our feet to the fire as it relates to  
24 transmission resources.

25 Given all of the different competing

1 demands on an organization such as yours or the  
2 Chamber of Commerce, or the Business Roundtable,  
3 any of those different groups, do you see there  
4 being an effective way for the business community  
5 to participate in a planning process that attempts  
6 to identify 10 or 20 years out in the future the  
7 steps necessary to adequately provide for  
8 transmission?

9 MR. LYONS: That's a good question. You  
10 know, there's so much at stake for us when it  
11 comes to the importance of transmission and  
12 affordable electricity and a reliable supply of  
13 electricity that I think we ought to, the business  
14 community ought to redouble its efforts and then  
15 some along those lines.

16 We haven't done that, and I think that's  
17 a worthwhile approach, especially taking the long  
18 view. So that is a -- I'm going to take that home  
19 with me, or take that back to the office with me  
20 and think about that. Because I think it's an  
21 excellent suggestion. Seems to me if we work  
22 together in business groups and the Chamber and  
23 CMTA and others focus on these sort of long-term  
24 views, long-term strategies and long-term needs, I  
25 think it would be very useful. Absolutely.

1 MR. ETO: All right, thank you. Let's  
2 turn to the public comment now. Chris, you're  
3 hardly a member of the public, but --

4 (Laughter.)

5 DR. TOOKER: Sitting in the audience.  
6 My name is Chris Tooker; I'm an Advisor to  
7 Commissioner Geesman.

8 Given the obvious need, and I think  
9 consensus recognition that the state needs to make  
10 certain decisions about our future, and make  
11 decisions and at the same time we need to include  
12 local government and citizens, do you feel it  
13 would be rational to pursue legislation to require  
14 that local governments have energy elements as  
15 mandatory in the general plan process?

16 MS. ARMI: I assume that's for me. It's  
17 a tough question because I definitely think that  
18 the jurisdictions that will ultimately host these  
19 utilities should have done long-term planning on  
20 the subject. But, of course, not every locality  
21 is going to be in that boat.

22 So it might be that that sort of, you  
23 know, it would be a funny fit in some  
24 jurisdictions. So I can't say whether it would be  
25 a great thing to have state legislation on or not.

1 DR. TOOKER: Well, frankly, I don't see  
2 how you can avoid it because this whole issue  
3 comes down to accountability. There's no free  
4 lunch here. We all have to make decisions about  
5 our future, and there are tradeoffs involved.

6 Local governments often complain about  
7 wanting local control. They don't necessarily  
8 want to take responsibility for their local  
9 decisions in terms of the implications for the  
10 state's future. And local governments will accuse  
11 the state in the same vein of making decisions  
12 that don't consider them.

13 It seems to me we all need to come to  
14 the table and the same table to make those  
15 decisions. And it's difficult for us at the state  
16 level to try to coordinate with local governments  
17 who may or may not understand or choose to invest  
18 time and resources in making decisions about their  
19 energy futures. And even understand where they  
20 fit in the picture of the state's needs.

21 MS. ARMI: Right, and I think that's --  
22 the last element is where you might be running  
23 into some problems. Because if you're asking the  
24 locals to plan for, you know, provision of state  
25 resources, and they don't understand what those

1 resources are, they may have a difficult time  
2 including them in their general plan.

3 DR. TOOKER: Why couldn't that be a part  
4 of the development of the energy element of  
5 working with respect to regional and state  
6 agencies to understand statewide and regional  
7 energy needs, and to look at alternatives?

8 We have, in the past, had local  
9 governments that did actually have transmission  
10 line routes identified corridors in their general  
11 plans. We do have governments that have taken  
12 those responsibilities and made those decisions  
13 and understand those tradeoffs.

14 MS. ARMI: Actually that was one of the  
15 ironies of this Valley Rainbow case. If I'm not  
16 mistaken the County of Riverside did, in its  
17 general plan, have provision for transmission  
18 routes, but those were not the routes chosen for  
19 the Valley Rainbow line.

20 So, you know, there has to be a complete  
21 feedback loop where those who are planning the  
22 infrastructure also respect the decisions of the  
23 local governments as to where to put those pieces  
24 of infrastructure.

25 But, yes, you know, my own feeling on

1 general plans is that they're very powerful, very  
2 important, and provide a great source of, I guess,  
3 structured and focused public participation. And  
4 so, you know, as a concept without knowing a whole  
5 lot of the details it sounds like a good one to  
6 me.

7 DR. TOOKER: Thank you.

8 MR. ETO: Did you want to speak on this?

9 MS. TURNBULL: Yeah, I have to agree  
10 with Osa because in my experience working with  
11 local planning commissions and local city councils  
12 and groups like that the whole energy issue is  
13 something that they don't really want to have to  
14 include in their -- within their domain. It's a  
15 whole area of expertise that they currently don't  
16 have and they don't really want to put the energy  
17 into developing it.

18 Certainly if you're dealing with  
19 metropolitan areas such as San Francisco or San  
20 Diego or L.A., you're going to be dealing with  
21 another level of competency. But if you're  
22 dealing with Siskiyou County or, you know, the  
23 City of Eureka or something like that, those  
24 planning people are not really going to be  
25 particularly enthusiastic about getting involved

1 in this.

2 So my point is that there is, I think, a  
3 need to conceptualize some kind of regional  
4 process to provide some vehicle for meshing the  
5 state planning concerns and state priorities with  
6 the local values. And it is a value process.

7 Certainly the locals are going to need  
8 to be involved, but I don't think they are going  
9 to want to take the responsibility.

10 MR. LYONS: Yeah, I agree with Chris --  
11 or with Mr. Tooker, and I think he raised a very  
12 important issue. And I think that the locals have  
13 already have a land use, you know, role. And  
14 therefore they look at these kinds of things and  
15 they ought to be involved, at least, you know,  
16 weighing in early on in the process, because there  
17 is an accountability thing where people try to  
18 shift blame, especially as you get closer to the  
19 project and closer to actually building something  
20 and disrupting, you know, land use and what-have-  
21 you.

22 So I think it's an excellent suggestion  
23 and I think the locals ought to be involved  
24 earlier.

25 MR. ETO: Other comments? Please.

1 MS. BERGEN: I'm Jane Bergen with the  
2 League of Women Voters of California, as Jane  
3 Turnbull is.

4 I want to reiterate what Jane has said  
5 about the need for regional planning. Electricity  
6 service is a perfect medium, if you will, perfect  
7 product to be looked at in the regional sense.  
8 The League is very strongly supportive of regional  
9 planning and land use in particular,  
10 transportation and land use connection can't be  
11 denied. Transportation, land use, jobs, housing,  
12 all of this goes together. And electricity  
13 service goes in there, too.

14 Having small towns include an energy  
15 element in their general plan across the board  
16 doesn't really make much sense. It does make  
17 sense for the local community to incorporate in  
18 its general plan something that has been devised  
19 and developed for its region. So every local  
20 community should have down on their books this is  
21 where we stand, this is what's happening in our  
22 region, and this is what's planned for the  
23 electricity system in our area.

24 I believe that the San Diego community,  
25 and, Jane, you know, too, there is a regional

1 planning group. I think it's related to the COG  
2 down there. And isn't that true? It's an  
3 offshoot of the San Diego SANDAG. And it's  
4 something that nature, done on a regional level,  
5 it makes more sense in terms of physicality of the  
6 system. And then the local communities buy into  
7 that. They know it's there; they know how it's  
8 going to affect them; and it's on their books.

9 But to ask each local community to build  
10 an energy element into their local general plans I  
11 think is probably not realistic or meaningful.

12 Thank you.

13 MR. ETO: Thank you. Would any of the  
14 panelists care to respond? No? Okay.

15 Robin.

16 MR. PODMORE: My name is Robin Podmore.  
17 I work for Incremental Systems. I've worked on  
18 simulation analysis tools that try to explain in  
19 simple terms why power systems black out and why  
20 we need to build transmission.

21 So I have a question. We've seen  
22 cellular phone towers just pop up everywhere. And  
23 they've been accepted. And so what's the  
24 difference? Can someone please explain how could  
25 we make it a win/win situation? Is it because --

1 and how can we, even when the project is justified  
2 to be good for the overall public benefit, how can  
3 we compensate those who have their rates and their  
4 land values and their aesthetics compromised? Is  
5 there something?

6 And also you mentioned that maybe -- you  
7 were surprised it had to be fully black or white.  
8 There was no possibility of mediation. Would you  
9 have considered some compensation at some point so  
10 that, you know, people are actually -- right now  
11 people are motivated to put cellular phone towers  
12 up in their property because I assume they get  
13 some compensation. Is there some way to  
14 compensate those people who have the transmission  
15 line and towers located on their site?

16 MR. ETO: Do you want to take that, Osa?

17 MS. ARMI: I don't know if I'll remember  
18 your entire question, but I want to start by maybe  
19 disagreeing a little bit with your basic premise,  
20 which is that people accept cellular phone towers  
21 without a fight, because I do know of some local  
22 land use battles over precisely that issue. And,  
23 you know, the basic concern is the aesthetics.  
24 And I think there are some underlying concerns  
25 about wildlife, as well as damage to property

1 values and that kind of thing.

2 So I don't think that there's a magic  
3 bullet that the cell phone tower people have that  
4 you transmission folks need to get.

5 I think the other basic difference  
6 between the two projects is that transmission  
7 lines are very long, very tall, and so the sort of  
8 zone of impact is so much larger. I mean this was  
9 really obvious, for example, in the case of the  
10 Temecula Valley where you had, you know, a  
11 spontaneous grassroots group with participation  
12 numbers in the thousands, you know, basically  
13 overnight.

14 And, you know, I can't -- I don't live  
15 there, so I can't really speak to, you know, what  
16 was in the hearts and minds of these people.  
17 Maybe Tony can. But it was a hugely galvanizing  
18 issue of great community concern. And it wasn't  
19 really just about property values. It was about  
20 an affront to their community, you know, their  
21 values, their communities, their school, their  
22 culture, their beliefs.

23 MR. ETO: Tony, do you want --

24 MR. SMEERDYK: Yes. Yeah, you're

25 exactly right, Osa, that the big problem, as I

1 heard the residents talk about the issue, was why  
2 am I giving up a 300-foot strip of my property  
3 that I worked all my life for, because there's  
4 many retired people out there, for these humongous  
5 towers and these huge wires and this electrical  
6 buzzing and all of those environmental impacts.

7 So they were looking at it from a danger  
8 standpoint, first of all. You know, the  
9 electromagnetic field issue came up a number of  
10 times. So there's all of those kinds of concerns.

11 But more than that was, I think, just  
12 the loss of the land that they had, and the huge  
13 towers, and then the aspect of somebody just  
14 coming in and just taking that away from them with  
15 these huge impact of towers on the areas that they  
16 love so much.

17 MS. ARMI: And I remember now another  
18 part of your question was about mediation and  
19 whether there was a middle ground. And there may  
20 well be in other cases. In this case the  
21 developer of the utility came in with the story  
22 that, or their perspective was that undergrounding  
23 was basically infeasible and it was really not up  
24 for discussion.

25 And that, right off the bat, set the

1 stage for the community saying, well, you know,  
2 you don't want to reroute it to unpopulated areas,  
3 and you can't underground it, and you're telling  
4 us we got no choice, it's going through. I mean  
5 that's sort of a laundry list for how to really  
6 get the community up in arms. You know, to tell  
7 them they got no choice and that it's going to be  
8 the absolute worst thing they can imagine.

9 So, you know, obviously if you wanted to  
10 come in and sort of soften the project, you would  
11 do whatever you could to try to underground it.  
12 And you would do whatever you could to try to  
13 reroute it in such a way that it wouldn't be  
14 impacting -- you know, in this case we had impact,  
15 it was going to go over the school site; it was  
16 going to go through the wine country; it was going  
17 to take out homes; it was going to go through a  
18 Native American sacred site. I mean these are  
19 really hot-button issues for a community.

20 MR. ETO: Jane.

21 MS. TURNBULL: Just one quick comment.  
22 I think immediately when people talk transmission  
23 they are thinking of overhead transmission lines.  
24 And there are other options. There is the option  
25 of undergrounding. And it is being used in a lot

1 of places right now, certainly not as well as it  
2 might.

3 This morning Ellen Petrill mentioned the  
4 importance of R&D. And there is a need for R&D in  
5 the transmission area just as much as there is in  
6 the generation area.

7 The potential for undergrounding DC  
8 lines is becoming very real. And then we obviate  
9 the problem of EMF. That's certainly something  
10 that we ought to be looking toward.

11 So I think, you know, back to the whole  
12 original concept of long-term planning, we've got  
13 to do that. And the longer the planning horizon,  
14 you know, the better off we are. That doesn't  
15 mean we have an end-point, you know, in place.  
16 But at least we have some ideas in terms of where  
17 we're going. And people are getting used to it.

18 If somebody comes up, you know, to  
19 anyone of us and says, you know, we have a big  
20 tower going up in our backyard next month, you  
21 know, we're not going to respond very well. But  
22 if we certainly are part of the process and  
23 understand what questions are being asked and why  
24 they're being asked, and what the options are,  
25 then I think the chances of reaching good

1 decisions are very real.

2 MR. ETO: Okay. Other panelists? Other  
3 public comment? Gary.

4 MR. DeSHAZO: Gary DeShazo with  
5 California ISO. I guess I just really can't help  
6 myself --

7 (Laughter.)

8 MR. DeSHAZO: -- here. I tried to, you  
9 know, use my wife. She's been the center of my  
10 reality for 20-some-odd years and so she is one  
11 that while she knows what a transmission line is,  
12 what she likes to do is refer to them as those big  
13 kV lines.

14 And being the kind of person that she  
15 is, obviously she has no desire to want to see  
16 anything like that close to anyplace that she  
17 lives, which is why we argue about what shade of  
18 white we want to paint one of our walls. And  
19 that's sort of how that falls into.

20 But I actually have a couple questions,  
21 well, maybe some statements and some questions  
22 here. The Valley Rainbow project, there's been a  
23 lot of discussion about that. And I think that at  
24 least in my opinion it's clear to me that the  
25 process was never completed with Valley Rainbow.

1           What I heard was references to questions  
2           about why route it here, why route it there and so  
3           on and so forth, and I guess I would submit to you  
4           that if you never have the chance to argue that  
5           adversarially, which, you know, I think is the  
6           right way to do it, how do you know what the right  
7           route was.

8           I would be the first person to tell you  
9           that there is absolutely no replacement for public  
10          process. There is no doubt in my mind, in my 25  
11          years of transmission planning experience, that  
12          will make or break even the smallest project. You  
13          have to do public process and you have to do it  
14          right, and you have to do it well. Because if you  
15          don't it just will not work.

16          The thing about the public process is  
17          it's a very mystical thing. And it takes on a lot  
18          of different veils as you go through the process.  
19          And, in fact, I really would like you to bring  
20          some of your folks up to San Francisco because it  
21          sounds like I might be able to deal with them a  
22          little bit better than what I am dealing with  
23          there right now.

24          Because I have believed that education  
25          was the key. I believed that for these folks in

1 order to make an informed decision they needed to  
2 be educated about what the system did and how it  
3 worked, and how the things related to one another.

4 And I believe that that has made some  
5 progress. But I don't think that it really has  
6 made that much difference in the overall end  
7 result, which is what people want is to have  
8 generation that was there long before they ever  
9 lived there removed.

10 The Jefferson-Martin project, which is  
11 another project that PG&E is putting in. That  
12 project was there before people moved into those  
13 areas. And at least there was an existing line  
14 there, and the proposal was, well, let's just re-  
15 use that and maybe add another conductor to it and  
16 so on and so forth.

17 You get bigger towers, you get something  
18 that's a little larger, but the point is it was  
19 there. These folks moved in knowing that that was  
20 there.

21 So, I believe, and I say this with all  
22 due respect, that doing forward planning and  
23 having this stuff set aside in the future and  
24 expecting that when it comes time to put it in  
25 that that's going to work is a pipe dream.

1 Because I have not ever seen that happen.

2 I would suspect that if you had gone  
3 through the routing process, a part of the CPUC  
4 process, if a separate route, or another route was  
5 chosen, it had nothing to do with those that you  
6 were representing. They may have just  
7 disappeared. I don't know. But that's a question  
8 that we will never know the answer to because we  
9 never got to that point.

10 And you mentioned that you felt that  
11 because the process was done on need, and then  
12 because you need to figure out whether you need it  
13 or not, and then you can deal with the routing.  
14 And I think that's fundamentally flawed. Okay, I  
15 think that they're both part of the process, they  
16 both need to be addressed.

17 Because what I felt happened was you had  
18 people that were really concerned about route that  
19 were forced to talk about need. Okay. And I just  
20 think that the process was never completed. And I  
21 personally feel that that's something that should  
22 have been done and should have gone through the  
23 thing. Because I think your own legal process  
24 really tripped it up, because you never got to the  
25 point where you could try to work and negotiate

1 something that would be workable to all the  
2 parties.

3 I think one other thing that I would  
4 like to maybe just mention with regard to  
5 manufacturing. I just would recall an incident  
6 that I had in Arizona where Intel and Motorola are  
7 very big -- very large, at least Intel has a lot  
8 of manufacturing there. And they were building a  
9 brand new site, very large. They were looking for  
10 three separate independent 69 kV sources into  
11 their place of business.

12 And we were able to come up with two,  
13 but the third one required that we establish a  
14 route through an area in Chandler called Sun  
15 Lakes, which happened to be retired folks. And we  
16 told Intel that if you will go to the Commission  
17 with us and support us in getting this route,  
18 we'll go do it.

19 They couldn't run fast enough. There  
20 was no way they were going to do that, which means  
21 that they ended up accepting the fact of taking  
22 less reliable service.

23 Now, considering the folks that we would  
24 have had to have dealt with there, I really don't  
25 blame Intel for wanting to do that. But I think

1 the point is that in order to make some of this  
2 stuff happen, and the manufacturing industry, as  
3 does commercial, has a tremendous stake in all of  
4 this, what I don't see is that kind of  
5 representation in the process.

6 What I see is all of those that are  
7 opposed to it that would rather it go someplace  
8 else, which by the way, you know, yeah, you can  
9 build a power plant to postpone the line, but I  
10 just consider that you're just exporting the  
11 environmental justice to some other location is  
12 all that that's doing. And so that becomes a --  
13 trying to do that.

14 But we need the manufacturing folks and  
15 others there in the process to help support that.  
16 Because that way you don't really get a balanced  
17 picture. You leave it up to the utilities and  
18 others that are trying to represent that. They  
19 may try, but they're really not the best voice to  
20 do that.

21 Thank you.

22 MR. ETO: Thank you, Gary.

23 MS. ARMI: Can I --

24 MR. ETO: You, and then --

25 MS. ARMI: I just had one bit of

1 feedback for the ISO to the extent they're  
2 listening. My client, before they hired us, was  
3 up participating before the ISO, and I think gave  
4 a pretty good early warning that this was -- the  
5 Valley Rainbow line was proposed for a route that  
6 was going to be trouble.

7           And I mean they showed up, I don't know,  
8 two or three or four, lots of ISO meetings, in  
9 numbers. And the ISO ultimately approved the  
10 project but said that they were taking no position  
11 with regard to route. Which, you know, I took to  
12 be that's what the ISO does. They draw a line on  
13 a map between two points that they want to be  
14 electrically connected, but they're not going to  
15 really think about how do you get between those  
16 two points.

17           The problem is that the two points in  
18 the Valley Rainbow case are only 30 miles apart.  
19 So there's only -- and there's mountains on both  
20 sides. There's a limit to how many different ways  
21 you can get between the two points.

22           So I guess, going forward, one thing  
23 that might be helpful for the ISO to do in terms  
24 of trying to shepherd through projects that are  
25 approvable, would be to serve as an early warning

1 device when they see that a route is trouble. And  
2 to maybe sort of talk to the rest of the  
3 stakeholders, talk to the utility about going back  
4 to the drawing board a little bit with regard to  
5 route.

6 Now that may not be something that you  
7 can fit within your mandate. But I was encouraged  
8 to hear you at the podium now talking about route,  
9 and talking about the ISO thinking about routing  
10 issues, because one thing that would have saved  
11 everybody a lot of time would have been if an  
12 early warning device had keyed in and told the  
13 utility that this was a problematic route.  
14 Because that's what ended up, you know, turning  
15 out to be the truth in the end.

16 MR. ETO: Any of the panelists wish to  
17 respond? Questions? Any further public comment?

18 Well, let me draw this panel to a close,  
19 then. We thank our panelists for sharing some  
20 time with us.

21 COMMISSIONER GEESMAN: Thank you very  
22 much.

23 MR. ETO: May I invite the next group of  
24 panelists to come -- do you want to take a break?  
25 Let's go straight into it. Patricia Mayfield,

1 Kevin Dasso, David Korinek and Chris Ellison.

2 (Pause.)

3 MR. ETO: All right, let's get started.

4 This is our final panel this afternoon. We  
5 thought to sort of come full circle in our  
6 discussions we would ask the transmission owners  
7 and those directly affected by transmission to  
8 come and offer their perspective on this topic of  
9 moving forward in transmission planning here in  
10 California.

11 We've invited, I'm going to go in the  
12 order that they're sitting, David Korinek from San  
13 Diego Gas and Electric; Kevin Dasso from PG&E;  
14 Patricia Mayfield from Southern California Edison;  
15 and Chris Ellison from American Wind Energy  
16 Association.

17 I'll let them go in the order that  
18 they're sitting; I think that's the easiest way.

19 We'll continue with the same format of  
20 offering them the opportunity to offer prepared  
21 remarks, respond to any of the questions that we  
22 have, and then we'll open it up for public  
23 comment.

24 The specific questions we've used to  
25 organize this panel include the following: What

1 plans do transmission owners and the California  
2 Independent System Operator have for both  
3 transmission expansions in the short term and long  
4 term.

5 What are the benefits that you see from  
6 strategic transmission assets and expansions. And  
7 what do you see as the critical elements of  
8 determining the need for transmission expansions.  
9 And how would you more effectively plan for  
10 transmission assets in corridors.

11 And then turning to the state, how  
12 should the state conduct transmission expansion  
13 and corridor planning to effectively involve all  
14 affected stakeholders.

15 So, let's start with David Korinek from  
16 San Diego Gas and Electric.

17 MR. KORINEK: Thank you for the  
18 invitation to speak before the Commission. As to  
19 the first question, what short-term plans do we  
20 have. Our immediate plan is to put our  
21 transmission system back up in the air.

22 We have a lot of transmission on the  
23 ground from the firestorms this past two weeks.  
24 And I distributed a handout that gives you a bit  
25 of a flavor for the extent of the area of San

1 Diego Gas and Electric's system that was affected  
2 by the firestorms. We're still putting customers  
3 back in service. That process will continue for  
4 probably another week.

5 And I want to take this opportunity to  
6 thank some of my associates, PG&E, and others that  
7 are not here, Sacramento Municipal District and  
8 several different utilities from Arizona who  
9 provided crews to us, significant numbers of  
10 crews, to work side-by-side with SDG&E crews in  
11 putting back poles and wires. So we really  
12 appreciate that support in this time of crisis.

13 The longer term I do discuss in my  
14 handout. I will defer to questions that you may  
15 bring up in that regard, if you have any, on my  
16 handout. We are looking at the longer term and  
17 what will come beyond the next five-year period.  
18 And starting to turn toward the east of San Diego  
19 for the next major interconnection in our current  
20 thought process. But I'll defer to questions on  
21 that.

22 Benefits from strategic planning  
23 process, kudos to the CERTS report authors on  
24 identifying some significant benefits that need to  
25 be considered in a strategic process for planning

1 of transmission. I appreciate the issues that  
2 they've raised.

3 I would also agree with Jane Turnbull on  
4 the benefits of a collaborative process. And  
5 certainly when and where that can be done, it may  
6 be much more advantageous than an adversarial  
7 process. And we would certainly welcome the  
8 opportunity to enter into collaborative processes  
9 on routing for future transmission lines.

10 As far as the critical elements of  
11 determining need for transmission expansion, the  
12 major issue in my opinion is that the State of  
13 California needs to give adequate deference to the  
14 ISO in this area of need determination. The ISO  
15 goes through a lengthy process of assessing need.  
16 It goes through a review at the board level of the  
17 ISO for any project over 20 million, and most  
18 transmission projects are.

19 And so we do have a very thorough  
20 process in place in the State of California within  
21 the ISO tariff to address need for projects. And  
22 I strongly encourage the state to give adequate  
23 deference to that process on need.

24 In that context we've had a lot of  
25 comments about Valley Rainbow. And sort of feel

1       like we're back litigating Valley Rainbow, but I  
2       realize that's not the case.

3               One of the things that struck me, and it  
4       was teed up by Gary DeShazo, I believe, in his  
5       closing comments from the lectern a minute ago.  
6       And that was that the PUC process in Valley  
7       Rainbow was bifurcated into a process on need and  
8       a process on routing and - slash - environmental.

9               As Gary correctly pointed out we never  
10       got to the process of routing and environmental.  
11       We got stuck on the process on need. In fact, if  
12       proper deference had been given to the ISO Board's  
13       decision on need, we would not have had to go  
14       through that duplicative process on need at the  
15       PUC at all. We could have gone directly to the  
16       issue at heart, which was a routing and  
17       environmental issue.

18              So, unfortunately, as Gary said, we  
19       never got to that. Deference to the ISO's  
20       decision would have allowed us to get to that.  
21       And an affirmative decision by the PUC would have  
22       also allowed us to get from the phase A on need  
23       into the routing.

24              And I believe that the issues  
25       collaborative process and identifying routing

1 alternatives and the host of options available  
2 would have naturally surfaced through that second  
3 phase of the PUC process. So it's unfortunate  
4 that we did not get to that point.

5 How should the state conduct  
6 transmission expansion and corridor planning. The  
7 issue of corridor planning has been discussed by  
8 several of the parties today. And I believe that  
9 the key here is adequate planning for utility  
10 corridors on public lands.

11 We have a very difficult process with  
12 routing because by federal statute the utilities  
13 are prohibited from pursuing routes on federal  
14 lands until all other options have been exhausted.  
15 And so that forces us onto private lands and state  
16 lands.

17 If you page through my handout, I  
18 believe it's the next-to-the-last page in my  
19 handout, it shows some of the routing constraints  
20 that SDG&E has to deal with getting into its  
21 service area. And, in fact, there are very few  
22 choices to get interconnections into the SDG&E  
23 service area.

24 We have routing bottlenecks on virtually  
25 every front except for a few narrow windows into

1 Riverside County on the north; and an extremely  
2 narrow window into Imperial County on the  
3 southeast edge of our system. And then perhaps a  
4 window into Orange County, but that's a highly  
5 developed area, as well. So that doesn't provide  
6 a great deal of options, either.

7           So we do have, I believe, a real need on  
8 the state level to do a good job in the area of  
9 corridor planning on state lands. And one issue  
10 right now and a collaborative effort that we're  
11 pursuing is with the Anza Borrego State Park  
12 Commission, who is, at the present time,  
13 developing a master plan. And that master plan,  
14 in our opinion, absolutely has to address the need  
15 for a utility corridor for electric and gas and  
16 telecommunications and water across the Anza  
17 Borrego State Park lands.

18           Otherwise basically that whole side of  
19 the County, from north to south, becomes not  
20 usable for utility purposes.

21           With proper collaborative planning we  
22 can identify a corridor that is useful and  
23 mitigates, to the greatest extent possible, the  
24 environmental concerns that may need to be  
25 addressed.

1           Mr. Ferguson shared his view earlier  
2 during the first panel that the demise of Valley  
3 Rainbow, if I recall his comments, occurred, he  
4 felt, because of the lack of a statewide resource  
5 policy. And I would disagree with that statement.

6           In my opinion Valley Rainbow was the  
7 victim of a political agenda on the state level,  
8 and not the lack of a long-range resource policy.

9           In the final analysis we need state  
10 regulators that have vision, leadership and  
11 courage. Vision to look beyond local land use  
12 concerns and look at the broader regional concerns  
13 that are identified in the CERTS report.

14           Leadership to focus on the key policy  
15 issues, such as land planning on public corridors.  
16 And lastly, the courage to rise above political  
17 agendas and do what is right for the people of the  
18 State of California.

19           If the State of California cannot  
20 accomplish those goals, then ultimately we will  
21 need a federal backstop to the transmission  
22 licensing process. So that when the process  
23 becomes quagmired on the state level, there is an  
24 option, and that would be to go to the federal  
25 level.

1           Those are my comments.

2           MR. ETO: Thank you, David. Let's hear  
3 now from Kevin Dasso from PG&E.

4           MR. DASSO: Yes, thank you very much for  
5 the opportunity to address this group here, and to  
6 address the Commission. My name is Kevin Dasso;  
7 I'm the Director of Electric Transmission and  
8 Distribution Engineering at Pacific Gas and  
9 Electric Company. And among other duties, I have  
10 responsibility for transmission planning; and also  
11 supporting development of transmission projects in  
12 our service area.

13           I'll address my comments basically in  
14 the same way that Dave did, and I'll follow the  
15 questions that you provided. But one thing I want  
16 to say in terms of the opportunity to talk here,  
17 PG&E is definitely in this game. We want to be a  
18 player here in California on these issues in our  
19 service area. And we are very much interested in  
20 the outcome, and also interested in shaping the  
21 process that we go through to produce effective  
22 transmission plans.

23           In terms of PG&E's expansion plans, I  
24 guess in the vein of being in the game, PG&E, over  
25 the last four years, has invested a little over a

1 billion dollars and plans to invest another \$1.8  
2 billion over the next five years to address the  
3 transmission system in a number of ways.

4           The first is to expand the capacity for  
5 a variety of needs, both new generation as well as  
6 load growth and other factors. To replace  
7 equipment, essentially keep the equipment that we  
8 have in service and working well. To integrate  
9 new generation. That's a significant issue here  
10 in terms of the way in which the transmission  
11 system is expanded.

12           And then last, but not least, is to  
13 address congestion as well as relieve or reduce  
14 reliance on local reliability must-run generation.  
15 That's a significant issue for PG&E in its service  
16 area.

17           In terms of the next question about  
18 strategic benefits, I think Mr. Eto's presentation  
19 did a very nice job of identifying what those  
20 benefits are. However, I would add that the  
21 benefits that were listed there can really be  
22 achieved best when it's clear that we understand  
23 that transmission is part of a broader -- needs to  
24 be considered in a broader context.

25           The overall resource strategy, as well

1 as load management and other elements, needs to be  
2 considered.

3 The next question, in terms of critical  
4 elements to assess in terms of transmission  
5 expansion, there are really two. And they've been  
6 touched on here a couple of times today. The  
7 first one is really a clear strategy or policy  
8 with respect to procurement. The way in which we  
9 develop our transmission system is going to be a  
10 function in many respects of what it is that we  
11 wanted to accomplish. And procurement is a big  
12 part of that.

13 We are going to have a different  
14 transmission system if we're going to rely on  
15 renewables and distributed generation, than one in  
16 which we were relying on central station power, or  
17 other types of technologies. So that's a key  
18 factor that needs to be considered in expansion  
19 plans.

20 And the second is the structure of the  
21 market. We have gone through a number of changes  
22 here over the last couple of years in terms of how  
23 the market has been structured, the direction that  
24 we're heading. And in many respects we, at PG&E,  
25 have tried to accommodate that.

1           To the extent that the policy direction  
2           has been set that we want to go in a particular  
3           way with respect to purchasing energy in an open  
4           market. We've taken steps to accommodate that.  
5           We're now taking steps to move to a slightly  
6           different market structure. However, it is a key  
7           element in terms of how you go about developing  
8           your expansion plan; understanding the rules,  
9           understanding the objective. And I'm very  
10          confident that we can make the right types of  
11          investments that will support that. But we need  
12          to have some sense of the direction that we want  
13          to go.

14                 In terms of the state planning process  
15                 there's been, you know, a couple of points here  
16                 made in the last couple of presentations about  
17                 need versus the environmental or the siting  
18                 portions of it. And the different positions to  
19                 say that it really is two steps, or that it isn't  
20                 two steps.

21                 It's our view that it is two steps. And  
22                 that it has worked effectively, and can work  
23                 effectively if you consider it that way. We have  
24                 developed two very large transmission projects  
25                 over the last three years in our service area that

1 required action on the part of the ISO, as well as  
2 the California Public Utilities Commission.

3 And while it's been a long arduous  
4 process we have ultimately been successful and  
5 actually have completed construction of those  
6 projects.

7 We did look at it in two ways, and I  
8 think it's very effective in doing it this way.  
9 The first is the need, really looking at it in  
10 terms of need. And I'll echo some of Mr.  
11 Korinek's comments about deferring to the ISO on  
12 that need determination.

13 It's been our experience that they have  
14 the capabilities, they have the skills, and given  
15 the proper input from all the various stakeholders  
16 that they are very adept in doing that  
17 transmission need evaluation. And it's been our  
18 position, and continues to be, that we should  
19 defer to them in terms of the need for the  
20 project.

21 The second step is the routing or the  
22 siting, the environmental reviews. And in this  
23 regard our goal or our desire would be to have a  
24 process that is clear, and one that recognizes, or  
25 actually spells out the roles of the various

1 agencies in that process.

2 Mr. Korinek talked about the two-step  
3 process that the Public Utilities Commission  
4 established in Valley Rainbow. We've seen that  
5 same process in our projects where we focus on  
6 need first, after having gone through perhaps a  
7 two-year or longer process in working with the ISO  
8 and various stakeholders, to then really start  
9 over again and evaluate need. And then get to the  
10 siting process. So, our desire would be to have a  
11 very clear siting process without the duplication  
12 that we've seen in our projects.

13 I guess one last point is I've heard a  
14 lot of good ideas here today. I particularly like  
15 the idea of discussion about corridor planning and  
16 more regional planning up front; having longer  
17 range projects and longer range vision about where  
18 we want to go. I think those are very good  
19 things. They're things that we would support.  
20 And would like to pursue developing those types of  
21 processes.

22 I guess the challenge there is that we  
23 have to recognize that when we do do that long-  
24 term view, that we may, in fact, get it wrong.  
25 That we might not always have the right corridor

1 selected. And as a part of my job on a regular  
2 basis I sign or approve quit claims where PG&E  
3 basically is giving up its right-of-way acquired  
4 perhaps 30 or 25 years ago for a 500 kV line. In  
5 our case, that would have connected nuclear power  
6 plants in various locations. It never developed.

7 And so we have to recognize that we may  
8 not get it quite right. And that there shouldn't  
9 be a disincentive for the process to allow some of  
10 those types of rethinking or re-evaluation over  
11 time.

12 With that I'll conclude my remarks.

13 Thank you.

14 MR. ETO: Thank you, Kevin. Patricia.

15 MS. MAYFIELD: Hi, I'm Pat Mayfield.

16 I'm Manager of Transmission and Interconnection  
17 Planning for Southern California Edison.

18 First I'd like to compliment CERTS on  
19 the fine job that they did in preparing this  
20 report. From a transmission planning perspective  
21 I didn't feel that there were a lot of new truths  
22 there, but it was interesting to see how it was  
23 all combined together. And it had a great deal of  
24 impact on, as a reader, reminding me of the world  
25 in which we operate as a transmission planner.

1           We agree with the report's assessment,  
2           that California's transmission investment have  
3           produced substantial benefits, reliability,  
4           economic, environmental and fuel diversity  
5           benefits. We also agree with the report's  
6           recommendations that California simplify the  
7           regulatory review and approval process.

8           Also incorporate strategic benefits of  
9           transmission into the approval process. And  
10          provide greater certainty on issues related with  
11          cost recovery and cost allocation of transmission  
12          investment.

13          We are concerned, however, about the  
14          process being established, any new process  
15          established, being duplicative of a processes that  
16          we have in place right now. We're concerned that  
17          assigning an additional state agency to the  
18          planning and permitting of transmission could lead  
19          to delays.

20          We're specifically concerned with the  
21          proposal that we've seen recently about the CEC  
22          performing cost/benefits assessments of projects  
23          that we're currently undertaking and about to  
24          initiate licensing on with the CEC. And those are  
25          the Devers-Palo Verde Number Two, a 500 kV line.

1 And also Tehachapi, the transmission reinforcement  
2 to interconnect new renewable wind generation up  
3 in the Tehachapi area.

4 We also supported, as you've heard my  
5 two colleagues say already, that give the ISO  
6 rebuttable presumption in need determinations so  
7 we don't have to go through the process of  
8 demonstrating need more than one time. It's a  
9 very arduous process.

10 And we also encourage agencies and  
11 utilities all continue to work together with the  
12 ISO in coordinating regional planning. The ISO  
13 has been working on the STEPs process. We've been  
14 actively involved in that process for the last  
15 year. And it has been very effective in surfacing  
16 new transmission opportunities; testing them as  
17 far as performance; and evaluating them as far as  
18 the economic benefit to the grid.

19 It's also helpful to pause at this time  
20 and think about what is transmission planning  
21 really. As a transmission planner we go through a  
22 process that's a very technical process of  
23 preparing load forecasts, identifying where new  
24 generation might occur, looking at the performance  
25 of the existing grid under normal and emergency

1 conditions, and testing it so that it meets a  
2 standard reliability performance expectation.

3 What we don't see as transmission  
4 planners, and where we don't have a lot of good  
5 data right now is the overall economics of that  
6 transmission grid. The ISO has done a very fine  
7 job in the last year of building that expertise to  
8 help us understand and appreciate, in the  
9 transmission planning arena, what the economic  
10 impacts are of choices related to transmission  
11 projects.

12 With regard to some of the projects that  
13 we have for the short term, in the last five years  
14 Edison has invested hundreds of millions of  
15 dollars in improvements to the transmission grid  
16 related to reliability must run generation  
17 reductions.

18 Those are basically contracts that are  
19 given to generators to keep them online and  
20 running, to avoid reliability problems. So  
21 through the construction of various transmission  
22 projects we've been able to eliminate those  
23 generation costs and improve the overall cost  
24 effectiveness of the grid.

25 As you've heard already we're looking at

1 some major licensing activities on DPV2 and  
2 Tehachapi. What you may not be aware of is some  
3 of the reports that have been filed by all three  
4 utilities recently in front of the PUC related to  
5 a statewide transmission plan for generation  
6 interconnections on renewables.

7 In Edison's case we had nearly \$2  
8 billion of new transmission that would be  
9 necessary to interconnect the generation that was  
10 identified by the California Energy Commission in  
11 meeting the statewide renewable portfolio standard  
12 that's been established by state law.

13 So it does appear that in the long run  
14 there are major transmission investments and  
15 choices that will have to be examined and looked  
16 at.

17 We support the idea of long-term  
18 transmission planning. I don't really know what  
19 that looks like quite yet. As I said, a lot of  
20 work that we do is very technical. And if we mean  
21 something like let's do some corridor planning  
22 from deciding and talking with the public about  
23 where we're going to build new transmission, I say  
24 that is a very intriguing idea.

25 If we're trying to talk about running

1 power flow assessments or very highly technical  
2 assessments of how the grid performs, we don't  
3 have enough information about what the future  
4 holds to really be able to say one particular  
5 project is really needed or another. But we can  
6 conceptualize transmission projects that we've  
7 done in this renewable statewide transmission  
8 plan. We can talk about what the routing  
9 alternatives and technical alternatives look like.

10 And I also appreciate the comments of  
11 one of the representatives of the League of Women  
12 Voters about the idea that you can't have  
13 individual cities and counties doing energy  
14 planning on their own because the reality of it is  
15 major transmission lines often go through cities  
16 and counties and don't stop to drop off any load  
17 or electricity.

18 So you have to have some kind of  
19 coordinated plan that allows a transmission  
20 project to go 200, 300 miles in order to  
21 accomplish its objective. And that may affect  
22 multiple local jurisdictions along the way. If  
23 they're all doing their own corridor planning,  
24 you're going to have a piecemeal approach and  
25 you're not going to get anything through.

1           Early public involvement, I think, is a  
2           critical issue. And I think Gary DeShazo said it  
3           really well, that if you don't have the public  
4           there to represent its interests you're really not  
5           going to have a good public interest finding. And  
6           that's critical in the permit process in order to  
7           be able to successfully do any condemnation that  
8           may be necessary in the long run.

9           A couple of additional comments. You  
10          know, two years ago I believe in the energy  
11          crisis, we had Gray Davis issue an order that  
12          transmission had to have generation hookup in  
13          about two weeks as one means of staving off the  
14          energy crisis.

15          So we ask the CEC to take a little time  
16          to educate our new Governor about the complexities  
17          of transmission planning. You can't hook up a new  
18          generator in two weeks. It just isn't going to  
19          happen successfully.

20          The other comment I would make is in  
21          some of the ISO assessments that we have published  
22          in recent years, we have made a particular note of  
23          a problem that we have, in particular in southern  
24          California, related to residential air  
25          conditioning.

1 Under faulted system conditions we can  
2 have these motors stall, and it can actually  
3 result in a widespread voltage suppressed  
4 condition. And we need some kind of legislation  
5 that requires new residential air conditioners to  
6 have an under-voltage relay. Because what we're  
7 seeing in our studies in about 2009 to '14 we're  
8 going to see a systemwide voltage collapse because  
9 of all of the new residential air conditioners.

10 Now, we had published some IEEE papers  
11 on this back in 1997. I have a short writeup that  
12 we can share with the Commission on this. But  
13 that is something that, in the short term, we  
14 really should take some time to focus on as a  
15 group to figure out how we're going to address  
16 that particular concern.

17 Also, in closing, this remark is for  
18 Gary DeShazo. Please approve Stagecoach, please  
19 approve Palo Verde-Devers Number Two. Please  
20 approve Tehachapi. Give us the approvals that we  
21 ask for.

22 (Laughter.)

23 MS. MAYFIELD: Thank you.

24 MR. ETO: Thank you, Pat. Let me invite  
25 Chris Ellison to speak.

1           MR. ELLISON: Thank you. My name is  
2 Chris Ellison. I'm from the lawfirm of Ellison,  
3 Schneider and Harris. I'm representing the  
4 American Wind Energy Association.

5           Let me begin by thanking Commissioner  
6 Geesman and Commissioner Boyd and the Energy  
7 Commission for sponsoring this, I think, very  
8 fruitful and interesting discussion.

9           There's a lot of interesting things that  
10 have been said today and AWEA has a very strong  
11 interest in all of it because at least as far as  
12 wind and a number of other renewables are  
13 concerned, energy policy is transmission policy.  
14 That's certainly a statement that the American  
15 Wind Energy Association's Policy Director has  
16 said.

17           If you want to have penetration of wind  
18 and other renewables in the electric system in  
19 California, you have to provide transmission to  
20 where those resources have to be located. I'll  
21 talk more about that in a minute.

22           One of the virtues of being the last  
23 person on the last panel is you get to hear  
24 everything that went before you, and almost  
25 everything that I think is worth saying has been

1       said.

2                   So what I thought I could do is to try  
3       to organize what's been said a little bit, and at  
4       least give you my view of what I think some of the  
5       most important points today have been.

6                   And I think there have been two very key  
7       points made.  And they are, first of all, Vikram's  
8       point at the beginning of this, that although we  
9       obviously need to ask the question what is the  
10      cost of going forward with transmission, that an  
11      equally important question is what is the cost of  
12      not going forward with it.  What is the cost of  
13      doing nothing.

14                  And this is my particular soapbox on  
15      energy policy with respect to a lot of issues.  
16      But I think that the cost of doing nothing is of  
17      particular importance.  I'll come back to that in  
18      a minute.

19                  The second issue is, I believe, and I  
20      think we've discussed it a little bit today, we  
21      have a decision-making process that is heavily  
22      weighted in favor of doing nothing.  And I'll talk  
23      more about why I think that is.

24                  And then I want to conclude a little bit  
25      by talking about how do we break that logjam,

1 where do we go from here.

2 The cost of doing nothing. As we sit  
3 here today, California has some of the highest  
4 electricity rates in the nation; certainly has  
5 some of the highest electricity rates in the  
6 country. I'm sure that Joe Lyons could speak  
7 endlessly on what that means for California's  
8 business and economy. I think you all know that.

9 Even if you don't care about that, if  
10 what you care about is the environment, we have  
11 very significant environmental impacts in this  
12 state as a result of doing nothing. We have a  
13 very aging fossil-fueled fleet in California. A  
14 very high percentage of our fossil fleet in  
15 California is 30, 40, even 50 years old.

16 There are significant air and water  
17 impacts associated with that. We have significant  
18 reliability problems as we sit here today, such  
19 that we've contributed even further to the  
20 environmental issues over the last several years  
21 by having to site peakers on an emergency basis  
22 that are not as clean as some of the other options  
23 that we could have done if we'd had more time.

24 All of those things say to me that the  
25 cost of doing nothing is upon us now, and has

1 already been upon us for some period of time. And  
2 somewhat like the proverbial frog in the pan where  
3 the temperature is slowly rising, who never jumps  
4 out of the pan because it doesn't suddenly rise.  
5 I think we're in somewhat that situation in  
6 California. The status quo is not particularly  
7 good.

8           This decision-making process contributes  
9 to this in a number of ways that have been  
10 discussed today. And let me just, you know,  
11 repeat some of them. We talked today about the  
12 issue of the discount rates and the net present  
13 value means of calculating benefits. That  
14 certainly contributes to it.

15           The chicken-and-egg problem that we've  
16 talked about certainly contributes to it. Debates  
17 about which resources we want to have certainly  
18 contribute to it.

19           We have a fragmented, overlapping and  
20 sometimes conflicting permitting path and approved  
21 planning path in California that certainly  
22 contributes to this decision to do nothing.

23           Vikram's point about proving the future  
24 contributes to doing nothing. The issue about who  
25 pays contributes to doing nothing, as we debate

1 that. And I would second Vikram's point about as  
2 we debate that let's keep in mind ultimately that  
3 the consumer is the one that pays no matter how we  
4 choose to pass that cost through.

5 Deliverability issues and placing the  
6 burden of lumpy upgrades on the marginal new  
7 entrant to the marketplace also have the effect of  
8 contributing to doing nothing and discouraging new  
9 entrants from coming into the marketplace.

10 And we have a system where, just as a  
11 practical matter, opponents to projects are  
12 galvanized. Those who are not particularly  
13 threatened or support projects tend not to show up  
14 in particular proceedings. And I think that also  
15 contributes in many ways to a decision to do  
16 nothing.

17 So in those ways, and many others that  
18 we've talked about today, we have a decision-  
19 making process that is inclined to do nothing and  
20 to keep the status quo with all the problems that  
21 I mentioned at the top.

22 So how do we break that logjam and where  
23 do we go from here. I think we need to make some  
24 very difficult decisions and some very long-term  
25 decisions about our planning process. But I worry

1 that in doing that we not repeat what we did on  
2 the generation side in the 1990s, which was as we  
3 began to debate fundamental changes in what's been  
4 called, I think improperly, deregulation, but  
5 certainly market reform, pretty much everything  
6 stopped for almost a decade as we did that.

7 On the transmission side I don't think  
8 we can afford to do that. We need to figure out a  
9 way to solve the long-term problems and reform our  
10 policy-making apparatus, while at the same time  
11 making the near-term decisions that need to be  
12 made, and to continue moving forward on those  
13 things.

14 And so dividing it in that way, on the  
15 near-term there are some near-term things that I  
16 think we can do that are, if you will, the low-  
17 hanging fruit. And this is where I'll put my AWEA  
18 hat on first and foremost. Renewables are the  
19 low-hanging fruit.

20 We know where they are. Vikram is  
21 right. We don't have to debate about where the  
22 wind resource is or the geothermal resource, or  
23 for that matter, a number of other renewable  
24 resources.

25 We do have a state policy encouraging a

1 particular amount, a significant increase in that  
2 particular form of generation. There is broad  
3 support for that state policy. I think the new  
4 Governor coming in also supports that policy.

5 We have a who-pays policy with respect  
6 to the transmission for renewables. It's in SB-  
7 1078. Talks about rolling it into transmission  
8 rates.

9 So I would suggest that the Tehachapi  
10 issue -- I would certainly second Pat's request to  
11 the ISO to approve Tehachapi -- is something that  
12 we can move forward on and should be moving  
13 forward on even as we discuss some of these  
14 broader issues.

15 And there are others, you know. The  
16 transmission that's necessary for the RPS  
17 generally, I think, is a good place to start.  
18 Both as a means of accomplishing something, of  
19 doing something as opposed to doing nothing. But  
20 also as, if you will, a test case for how to -- we  
21 can certainly learn as we go forward in that  
22 process. I think there's some lessons we could  
23 already learn from the RPS process about  
24 transmission that might inform how we make other  
25 transmission decisions as we go down the road.

1           For the long term, I will close with  
2           several thoughts that have come out of the  
3           discussion today. First, I think it's important  
4           to remember that transmission is a relatively  
5           small part of the overall customer bill.

6           When I spoke at FERC several years ago,  
7           this, I think, was my main point. The  
8           transmission component of the customer bill, it  
9           varies from utility to utility, but it's, you  
10          know, typically in the 10 percent range. But it  
11          is the tail that wags the dog in many respects.  
12          Both economically, and I would also say  
13          environmentally, that a very large portion of the  
14          customer's bill or of the environmental impacts  
15          that is the result of our generation decisions, is  
16          driven by the transmission decisions that we make.

17          And so getting transmission right, which  
18          was the catch phrase at least ten years ago at the  
19          FERC, to me does not mean necessarily getting the  
20          perfectly precise answer to the cost and the  
21          allocation of the cost of transmission. Rather it  
22          means getting the transmission policy in place  
23          that lowers the total customer bill and reduces  
24          the overall impacts of the generation and  
25          transmission system together.

1           Secondly, let me agree with the point  
2           that several people have made today that you can't  
3           make these decisions by computer optimization.  
4           Computers have enabled us to look at the trees and  
5           the leaves and the twigs in the forest, and that's  
6           all a good thing. But I think at the end of the  
7           day it also raises the problem of losing the  
8           forest for the trees.

9           And ultimately we need judgment here.  
10          We can't just -- if computers could make these  
11          kinds of decisions they would have been made by  
12          now. You know, the reason we're here is because  
13          these decisions are not two-plus-two-is-four.

14          And so they're ultimately a judgment  
15          call. And as much as I think we need a public  
16          process to achieve as much consensus as possible,  
17          we will never achieve a perfect consensus.

18          So the issue, in many ways, distills  
19          down to who do we trust to make that judgment. I  
20          think we need a holistic approach. I think the  
21          person who makes that judgment needs to be  
22          somebody with the power to either implement  
23          directly the planning decision, or at least have  
24          whoever implements it respect the planning  
25          decisions that they have made.

1 I agree with the point that Osa made,  
2 and I think it's an interesting one of looking at  
3 the planning and zoning laws in California as a  
4 model for perhaps how we might go about some of  
5 these things. Chris Tooker's remarks about that I  
6 thought were pretty interesting, too.

7 Lastly, with respect to respecting the  
8 ISO -- or not lastly, next to lastly, with respect  
9 to respecting the ISO, I have a very high regard  
10 for the ISO, and I think that the ISO decisions  
11 are worthy of respect. But the ISO also needs to  
12 have input about the generation mix that they  
13 should be planning for. And that goes to Rich  
14 Ferguson's point. I think you can't just let the  
15 transmission planners go off and plan  
16 transmission, because they will have to, they  
17 necessarily have to make judgments about  
18 generation to do that.

19 So we need a process that understands  
20 that and creates a publicly valid process for  
21 making those judgments.

22 Lastly, I think the Energy Commission  
23 one-stop siting process, notwithstanding its  
24 flaws, is certainly a possible model for looking  
25 at these issues. There are others. But we need

1 to agree on who the judge will be. We need to  
2 have our day in court. And we need to make some  
3 decisions. Because doing nothing is the worst  
4 thing we can do.

5 Thank you.

6 MR. ETO: Thank you very much. Let me  
7 ask first if there are any questions or comments  
8 from the Commissioner or some of the Advisors here  
9 on the panel.

10 COMMISSIONER GEESMAN: A couple of  
11 responses to Chris. I think that if you look at  
12 California bills, as structured by the Public  
13 Utilities Commission, you'll find that  
14 transmission for the average California  
15 residential customer is about 3 percent. So, that  
16 either suggests that we've not been investing as  
17 much as other states have, or that our generation  
18 and other associated costs on the bill are  
19 substantially higher.

20 Also I guess I'd suggest to you in  
21 reviewing whatever we ought to do as a state in  
22 terms of siting, we probably ought not to think in  
23 terms of days in court or judges. I would suggest  
24 that the administrative process tends to sharply  
25 reduce the involvement of the judicial branch,

1 would probably be the best recommendation that any  
2 of us could make.

3 A question for the utility panelists.

4 In terms of financial regulation of the bulk  
5 transmission system, what's the division of labor  
6 now between the FERC and the State of California?

7 My perspective is that much of the financial  
8 regulation here has been federalized. It's all  
9 subject to FERC tariff.

10 And my presumption is that the State of  
11 California's primary interest in this area is one  
12 of land use and energy policy. But if I'm wrong  
13 on that, please correct me.

14 MR. ETO: Kevin, do you want to go  
15 first?

16 MR. DASSO: Yes, I'd be happy to do  
17 that. In PG&E's case we have actually turned over  
18 to the California ISO, for purposes of operation,  
19 and then also put under FERC for purposes of  
20 ratemaking, all of it's 69 kV -- actually 60 kV  
21 and above transmission system facilities. So  
22 virtually all of the ratemaking in terms of the  
23 cost, cost of service, as well as rate design and  
24 so on, for both retail and wholesale, is at the  
25 federal level.

1 I think that is consistent with our view  
2 of deferring to the ISO which is operating under a  
3 federally approved tariff and deferring to FERC  
4 for purposes of ratemaking. And then leaving to  
5 the state the environmental and siting issues.

6 MR. ETO: Pat, do you want to --

7 COMMISSIONER GEESMAN: Same true at  
8 Edison and San Diego?

9 MS. MAYFIELD: Well, at Edison it's  
10 largely our 230 kV and 500 kV network that's under  
11 ISO control and has FERC jurisdictional rates. We  
12 have some 66 and 115, but it's very limited. It's  
13 limited to those areas that generally operate in  
14 parallel with the higher voltage facilities.

15 So, FERC approves the rate base and  
16 establishes, if you will, a transmission service  
17 rate.

18 The PUC still has authority over the  
19 residential customer rate of which a component of  
20 that is the FERC rate component.

21 So whether or not they actually have the  
22 ability to override or cut out a portion of that  
23 FERC rate isn't really clear. And I've never had  
24 my question about that adequately answered by our  
25 regulatory folks as to whether or not FERC can

1 really do -- or the PUC can really do a  
2 controlling total residential or customer rate  
3 setting, if you will.

4 COMMISSIONER GEESMAN: And San Diego?

5 MR. KORINEK: Like PG&E, our entire  
6 transmission system is FERC jurisdictional. And,  
7 of course, the PUC or any other party is welcome  
8 to intervene in that rate case proceeding. And I  
9 believe does do that on a regular basis.

10 In the last rate case that we had, which  
11 was just in the last nine months, at the FERC we  
12 were able to negotiate with the PUC on certain  
13 provisions that they wanted to see as part of our  
14 rate process, even though they were not a  
15 regulatory agency. We still went through a  
16 collaborative process with them to arrive at a  
17 mutual agreement on those issues.

18 COMMISSIONER GEESMAN: But your  
19 presumption is that after the FERC makes a  
20 decision that cost is then passed through to  
21 customers on their bill?

22 MR. KORINEK: I'm not the rate expert,  
23 but that is my assumption.

24 COMMISSIONER GEESMAN: And, Pat, has  
25 your company ever experienced the PUC attempting

1 to override a FERC decision as it relates to  
2 transmission rates?

3 MS. MAYFIELD: No, but the Senate Bill,  
4 I believe it was 1038, has in it a, I guess,  
5 authority it's giving the PUC to establish a  
6 particular transmission rate component that will  
7 enable it to basically create a transmission rate  
8 base if a renewable transmission line fails to be  
9 accepted into FERC rates.

10 So, I think what is starting to blur in  
11 my mind is really who has the authority over  
12 transmission for the long run.

13 COMMISSIONER GEESMAN: Okay.

14 MR. DASSO: Just one thing if I could  
15 add to that, you know, the question about has the  
16 CPUC participated in that process or attempted to,  
17 I guess, put a cap on, or in some other way limit  
18 the rate recovery for transmission, it's one of  
19 the areas that we would like to see cleaned up  
20 through some process.

21 Today there's a gap in the current state  
22 law that really introduces the notion of, as part  
23 of the environmental review, that the Public  
24 Utilities Commission today, under the legislative  
25 statutes, can impose a cost cap. And that that

1 cost cap could, in fact, have an impact on a  
2 utility's ability to return or to recover costs  
3 that might be in excess of that.

4 We don't believe, and we're not certain,  
5 that there's really a strong position on that. We  
6 haven't really run into that issue, but it has  
7 been one that is currently a gap. I think it's  
8 really a holdover from prior restructuring  
9 efforts.

10 COMMISSIONER GEESMAN: Thank you.

11 MR. ETO: Other questions? Let's open  
12 it up for public comment then.

13 MR. ECKROAD: Hi, my name is Steve  
14 Eckroad. I'm the Manager for Advanced Substation  
15 and Transmission Technology at the Electric Power  
16 Research Institute.

17 I'd like to return to a question that  
18 Ellen Petrill this morning broached, but put it to  
19 this panel, having to do with the role of advanced  
20 technology in transmission planning, both in the  
21 near term as well as in the far term.

22 And we did hear some answers from the  
23 panel this morning about yes, it was important in  
24 the far term. But I believe there's a role in the  
25 near term, as well.

1           And there are three particular  
2 technologies, two actually, and then a third one  
3 that I would like to focus your attention on. And  
4 then give you some information about them.

5           And they are bulk energy storage;  
6 flexible AC transmission systems, which has an  
7 acronym of FACTS; and then the third one which is  
8 less far along, but it's still certainly out  
9 there, and that is superconductivity.

10           By way of a few facts regarding energy  
11 storage today, and in the last ten years, bulk  
12 energy storage has been used successfully around  
13 the world. It's been used in Japan, in Germany  
14 and in a number of places in the United States.

15           In fact, right here in California,  
16 Southern California Edison installed the largest  
17 battery plant in the world in 1987. It was a 10  
18 megawatt, four-hour plant, operated successfully  
19 for several years before it unfortunately was  
20 mothballed right at the point at which it would  
21 have been very useful in terms of bulk energy,  
22 buy-low/sell-high type of transactions.

23           But beyond that, bulk energy storage has  
24 been used in Germany, in Puerto Rico and now a new  
25 plant, the world's most powerful battery plant, in

1 Fairbanks, Alaska. Forty megawatts, 15 minutes.  
2 All of these plants are being used for reliability  
3 improvement on the transmission system where they  
4 obviate or reduce the need for reliability must-  
5 run units by doing regulation control.

6           Lead acid batteries and NiCad batteries  
7 are suitable today, and have been demonstrated  
8 today to be useful for that purpose. In fact, I  
9 was talking to David Hawkins just last week of the  
10 California ISO and he agreed that energy storage  
11 in southern California area today could help  
12 tremendously in reliability issues. And that  
13 would be commercially available energy storage.

14           And then there's a whole host of  
15 advanced energy storage options that are being  
16 developed and demonstrated in this country. AEP  
17 has a sodium sulfur battery; TVA is demonstrating  
18 a flow battery. So there's a number of options  
19 that are near term coming. And these are also  
20 being put in place for transmission constraint,  
21 transmission relief.

22           In the area of flexible -- transmission  
23 systems we have TVA has 100 megaVar VAR device;  
24 AEP at 320 megaVar compensator. New York Power  
25 Authority has installed a large compensator. Here

1 in California PG&E has a small static compensator  
2 down in Santa Cruz. And San Diego has a larger  
3 one at Talega.

4 Yet these devices which have been  
5 commercially proven and technically proven, are  
6 still kind of seen as on the fringe of options.  
7 And, in fact, have not even been mentioned today  
8 at all.

9 Energy storage is well known as needed  
10 to make renewables dispatchable. You can have  
11 transmission but you still have the issue of the  
12 fact that the wind blows when it blows, and it  
13 isn't when we necessarily need it. And energy  
14 storage is a very achievable technology to make  
15 renewables dispatchable.

16 We talked about resource planning, and  
17 adding renewables. But we haven't talked about  
18 the other advanced technologies that would be  
19 needed to make this a reality.

20 So I would like to pose to this panel  
21 the question, how do you -- what role do you see  
22 for these technologies? Particularly bulk energy  
23 storage and FACTS devices, both in the near-term  
24 planning -- I mean in the next few years, as well  
25 as in the longer term, which we did address this

1 morning.

2 Thank you.

3 MR. ETO: Who wants to take that first?

4 MR. DASSO: I can take a shot. We have  
5 a -- with respect to storage, actually we're  
6 supporters of both of the two technologies --  
7 supporters as well as users of the two  
8 technologies that you mentioned, first the  
9 storage, and then the second with the flexible AC  
10 transmission.

11 The storage, we have been doing more in  
12 the area of R&D recently. However we did recently  
13 approve a project to install a storage device that  
14 would help us through a transient voltage problem  
15 that's connected on a distribution substation in  
16 the Napa area. So we're working with a commercial  
17 developer for that particular project, and we  
18 think it's just exactly what we're looking for.  
19 We need a very short injection of power -- or a  
20 relatively large injection of power and a very  
21 short period of time, in the order of ten minutes  
22 or so. And we think we've got a good application  
23 there. So we're using that device, or planning to  
24 use that device.

25 And then in terms of the flexible AC

1 transmission, you mentioned the project in the  
2 Santa Cruz area. We actually installed a much  
3 larger project at our Newark substation, which is  
4 located close to the load in the San Francisco Bay  
5 Area, to replace the number of aging synchronous  
6 condensers.

7 And we just recently proposed a project  
8 in the City of San Francisco to install a fairly  
9 large static VAR compensator to address the  
10 dynamic voltage regulation and var support needed  
11 when you begin to rely more on long distance  
12 transmission and less on local generation.

13 So we see those as key elements to  
14 implementing these types of strategies. So, we're  
15 well on our way towards implementing those. And  
16 they're not out there anymore, they're actually in  
17 service today.

18 MS. MAYFIELD: I'll share some things.  
19 Edison is continually looking at new technology.  
20 We have looked at bulk energy storage devices not  
21 only for storage purposes, but for modulating  
22 power swings on the grid.

23 One of the things that we were doing  
24 with the 10 megawatt Chino battery is we were  
25 using it to damp out oscillations that were

1 occurring on the high voltage transmission grid  
2 subsequent to major disturbances.

3 We have looked at FACTS devices and what  
4 they can do to improve through-put on the grid.  
5 We have looked at not only superconductivity types  
6 of devices, conductor as well as storage, but  
7 we're also currently evaluating today applications  
8 of new composite material types of conductor,  
9 ceramic types of materials that are being used to  
10 increase conductor through-put capability.

11 We've looked at dynamic line rating  
12 devices in areas where -- by actually measuring  
13 the temperature of the conductor and wind flow  
14 across the conductor, whether or not we can rate  
15 the line differently and get more power through  
16 the equipment.

17 We've looked at and currently are  
18 participating on a WECC-wide basis, as I believe  
19 PG&E and San Diego, on phasor measurement unit  
20 devices to look at the performance of the grid in  
21 the west in order to, in the end, we hope,  
22 increase path rating capability.

23 And as part of our Palo Verde-Devers  
24 Number Two project, we are planning to use and  
25 implement static VAR compensator devices. We'll

1 have two large devices that we'll be using for  
2 dynamic voltage support in order to be able to  
3 rate the line at what we hope is 1200 megawatt  
4 import capability.

5 So, new technology is not a stranger to  
6 us. We evaluate it as a regular part of the  
7 process that we go through. And like anything  
8 else, it really comes down to what the performance  
9 improvement is, and what the cost of the equipment  
10 looks like.

11 So, we're very comfortable with the new  
12 technology opportunities that are out there, and  
13 ways in which we can incorporate them into our  
14 work.

15 MR. KORINEK: SDG&E also appreciates the  
16 value of these newer technologies as planning  
17 options. And as you said, we have just installed  
18 a 200,000 kiloVar flexible AC transmission device  
19 in our Talega substation near the San Diego Edison  
20 franchise line.

21 Also as part of the Valley Rainbow  
22 project, a significant part of that total project  
23 cost was actually allocated to flexible AC  
24 transmission devices for both rapid voltage  
25 control and also dynamic flow control to enhance

1 the performance of that project. So those would  
2 have also gone in as part of that project.

3 MR. ETO: Other public comments?

4 MR. BUDHRAJA: I have a question for the  
5 three utility panelists, and you know, energy  
6 storage has been mentioned a lot. Let's say there  
7 is a 10- or 25-megawatt energy storage project,  
8 could be batteries or bulk storage. Is that a  
9 transmission investment or a generation  
10 investment? And how will that go through the  
11 process? Or is this another gap that exists in  
12 our current framework?

13 MR. ETO: What do you think, Kevin?

14 (Laughter.)

15 MR. DASSO: Well, I'm not sure how we're  
16 supposed to do it, but we're considering the  
17 battery project, or the storage project that I  
18 talked about as a distribution asset. It's really  
19 connected to the distribution system, although it  
20 does support the transmission system.

21 We haven't really explored that issue.  
22 We have run into occasionally the more  
23 conventional -- questions about more conventional  
24 generation. For example, we've sited, you know,  
25 small combustion turbine to really support the

1 transmission system. We felt it really should  
2 have been a transmission asset since it was  
3 supporting the transmission system, but the  
4 accounting folks determined that really was a  
5 generation asset.

6 So, we haven't dealt with the real  
7 question, I guess, on storage yet. But that's how  
8 we're handling it today. It would be driven to  
9 really where is it connected and what is it  
10 supporting.

11 COMMISSIONER GEESMAN: How does it go  
12 through your capital budget process?

13 MR. DASSO: In this case it was -- it's  
14 actually, it's justified on the basis of having  
15 transmission benefits, but it would be included in  
16 our distribution system budget.

17 MR. ETO: Pat or David, do you want to  
18 offer a perspective?

19 MS. MAYFIELD: My view is it depends  
20 upon who raises the issue.

21 (Laughter.)

22 MS. MAYFIELD: If you're a wind  
23 generator up in Tehachapi and you're talking to  
24 Edison about investing in an energy storage device  
25 so you can put more wind turbines up and ship more

1 power through a transmission-constrained area,  
2 then in my view it's a generation asset.

3 If you're putting an energy storage  
4 device in to somehow modulate or moderate power  
5 flow that occurs, that would affect the total  
6 through-put or rating of a facility, then it would  
7 fall into the category of a transmission asset.

8 MR. KORINEK: I concur.

9 MR. ETO: All right, thank you. Robin.

10 MR. PODMORE: Robin Podmore, Incremental  
11 Systems. A lot of the discussion today seems to  
12 be we've had analogies drawn with treating it as  
13 infrastructure, like roads, which tends to mean  
14 that it's government-funded with a regulated rate  
15 of return.

16 We're seeing a small number of projects  
17 start to occur -- there's one in Australia where  
18 an independent company built a DC line and bought  
19 power at one point at a low spot market price and  
20 sold it at a higher spot market price.

21 I'd like the panel to comment on would  
22 they encourage that sort of investment in their  
23 own service territory, and what they generally  
24 think of totally market-driven transmission  
25 investments and are those feasible and possible.

1 Or what does FERC have to do to make that  
2 possible.

3 So, would you -- yeah, do you think it's  
4 a possible idea to support transmission in  
5 California? And are there any FERC barriers if  
6 you do support it, are there FERC barriers and  
7 obstacles? What are the obstacles to making it  
8 happen? To have purely speculative market-driven  
9 transmission which then answers the question of,  
10 you know, it solves the chicken-and-egg problem  
11 because someone just builds it on the hope that  
12 the generators will come. And it solves the  
13 problem of who pays for it.

14 Thank you.

15 MR. ETO: Do you want to start, David?

16 MR. KORINEK: In my opinion we should be  
17 looking at all ownership models that are  
18 available. And floating the pros and cons of  
19 each, including market-based transmission  
20 investment.

21 And there is no project of that type, as  
22 you know, in California at this time. It's on a  
23 market-based rate structure. So it would  
24 certainly be interesting to see someone bring a  
25 proposal forward like that.

1                   And also go through a process at FERC in  
2                   order to determine how that pricing structure  
3                   would actually be put together. I think that's  
4                   going to be a challenge.

5                   MR. ETO: Kevin or Pat?

6                   MR. DASSO: Yeah, I guess I would agree  
7                   with Dave in that that's just another way of  
8                   accomplishing a particular objective, whatever  
9                   you're after.

10                  I guess I'd get back to my original  
11                  point, or one of my points in terms of what you  
12                  need to do, or what are the critical elements of  
13                  an expansion plan, and that is to understand the  
14                  rules. And understand the structure that a  
15                  merchant transmission project that is developed  
16                  with a clear set of rules and under a clear set of  
17                  guidelines is perfectly fine in terms of how you  
18                  would go about doing it.

19                  I think if you lay out the groundwork  
20                  and lay the rules out that people will come up  
21                  with all kinds of ways in which to solve that.  
22                  And we're not opposed to that. We're certainly  
23                  not opposed to third-party investment in the  
24                  transmission grid.

25                  As part of the structure of the Path 15

1 project which we have been participating in  
2 developing, there's a third-party for-profit  
3 transmission company investing in that project.

4 So it may make sense under certain  
5 circumstances. I have also heard, though, from  
6 some of the developers in those areas that in many  
7 respects the investors are being a little bit  
8 spooked by what's happening in the merchant  
9 generation side. And that although there are a  
10 couple of projects in the east that have been  
11 proposed, that we're hearing that those developers  
12 are not particularly interested in pursuing new  
13 projects until some of those rules about cost  
14 recovery are more clear.

15 Again, back to the structure.

16 MS. MAYFIELD: I think it really depends  
17 upon what your philosophy of the transmission grid  
18 is, and what it's there to do. If you think about  
19 transmission as infrastructure, and it's in place  
20 to support a competitive generation market, then  
21 your view really would be that all asset  
22 investment in that infrastructure should be under  
23 a regulated rate of return. That there should be  
24 very little, if any, connection to the competitive  
25 marketplace in terms of anybody's ability to

1 extract market value greater than a regulated rate  
2 of return.

3 I think one of the things that we  
4 experienced during the energy crisis is that  
5 competitive market participants do have a big  
6 incentive to extract market value. Is that going  
7 to take place on the transmission grid?

8 If you're talking about third-party  
9 investment at regulated rates of return, and  
10 that's all they get, then that's just a question  
11 of who's going to get the investment opportunity.

12 But if you're talking about third-party  
13 investment on the speculation that they're going  
14 to get competitive congestion revenues as a result  
15 of what is taking place in the generation market  
16 which creates that congestion, then I would have a  
17 lot of concern about that particular market  
18 opportunity existing.

19 MR. ETO: Chris, do you want to offer a  
20 perspective?

21 MR. ELLISON: No. I'll tell you what I  
22 want to do, I want to ask my fellow panelists a  
23 slightly different question. Can I get away with  
24 that?

25 I heard some testimony in a proceeding

1 some time ago suggesting that at least as between  
2 PG&E and Edison that there were some significant  
3 differences in the criteria by which you rate  
4 lines.

5 So the first question is, is that true.  
6 And if it is true, what accounts for that. And  
7 are there opportunities to perhaps increase  
8 through-put capability by a rerating of lines?

9 MS. MAYFIELD: Well, line ratings, in  
10 part, at Edison really depend upon the  
11 construction of the facility. The three utilities  
12 each have different construction standards.

13 But also a critical part of that is --  
14 and really what determines conductor rating -- is  
15 in the end, maintaining a safe clearance of the  
16 lowest point of the electrical conductor from  
17 ground, and meeting Geo-95 standards for public  
18 safety. And part of the determination of what  
19 that ground clearance is depends upon your  
20 assumptions in your engineering calculations about  
21 what you conductor temperature is, which goes to  
22 wind speed.

23 My understanding is we all have a little  
24 different assumption about what our average wind  
25 speeds look like. In part because we're in

1 different geographic territories.

2 So, how we rate transmission is  
3 really -- it should be different because our  
4 construction is different, average wind speeds are  
5 different, and we're all trying to meet a common  
6 Geo-95 clearance issue.

7 MR. ELLISON: The testimony that I heard  
8 suggested that the same line under the same  
9 conditions would be rated differently by the two  
10 utilities. Is that not correct?

11 MS. MAYFIELD: I believe that's correct  
12 only because we have different assumptions about  
13 wind speed.

14 MR. ELLISON: So even in the same  
15 geographic location --

16 MS. MAYFIELD: Oh, in the same  
17 geographic location?

18 MR. ELLISON: Yeah.

19 MS. MAYFIELD: I hadn't heard that.

20 MR. ELLISON: Okay. So that sounds  
21 incorrect to you?

22 MS. MAYFIELD: Yeah, that part doesn't  
23 sound quite right.

24 MR. ETO: Kevin, --

25 MR. KORINEK: In the same vein -- I'm

1       sorry.

2                   MR. ETO:  Go ahead, --

3                   MR. DASSO:  I think Pat covered it very  
4       well.  That's basically the issue there with the  
5       line rating, that's the approach.

6                   MR. KORINEK:  Excuse me for charging  
7       ahead.  I was just going to offer another  
8       observation in the same vein as rating  
9       methodology.  And that's implementing emergency  
10      ratings on transmission lines, which SDG&E has  
11      done a lot of.

12                   And we have gone to a process whenever  
13      we can of implementing loss of life emergency  
14      ratings.  In other words, an emergency rating that  
15      is high enough that you are taking some loss of  
16      life on the conductor.  But it's a short term,  
17      it's a limited duration rating.  So it may be good  
18      for 100 hours or for 500 hours or for 1000 hours  
19      of cumulative exposure.

20                   And using that approach we have been  
21      able to defer a large number of transmission  
22      projects that we would have otherwise had to bring  
23      forward to the ISO, and eventually to the state  
24      for approval.

25                   MR. ELLISON:  And just so there's no

1       misunderstanding in the audience, when you speak  
2       of loss of life you're talking about the life of  
3       the transmission investment here, right?

4                   (Laughter.)

5               MR. KORINEK: Thank you for clarifying  
6       that, it's loss of life of the equipment. The  
7       conductor tensile strength is the actual loss of  
8       life I'm referring to. Thank you for the  
9       clarification.

10                   (Laughter.)

11               MR. KORINEK: You are a lawyer, aren't  
12       you. Yes.

13                   (Laughter.)

14               MR. ETO: The record will reflect --

15                   (Laughter.)

16               MR. ETO: Any other public comment?

17       Well, then I'd like to thank the panelists again  
18       and turn it back to the Commissioner.

19               COMMISSIONER GEESMAN: This has been a  
20       fascinating and informative day. And I want to  
21       thank each of the panelists for your  
22       participation. Particularly I want to thank Joe  
23       and Vikram for the fine report that served as the  
24       stimulus for this discussion, and I think a lot of  
25       discussion outside the Commission in other forum

1 within state government.

2 I'd also thank the audience for your  
3 attendance and participation. I suspect the  
4 transcript of today will probably be a valuable  
5 resource for those trying to sift through policy  
6 options in front of the state.

7 I do believe that this is an item that  
8 has commanded the attention of decision-makers at  
9 the highest level in both the executive branch and  
10 the legislative branch of state government. And  
11 it's something that we're all going to have to  
12 come to grips with as to the best approach going  
13 forward.

14 But thank you very much and we will see  
15 you later.

16 (Whereupon, at 3:44 p.m., the workshop  
17 was adjourned.)

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## CERTIFICATE OF REPORTER

I, ALAN MEADE, an Electronic Reporter,  
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