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BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

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IN THE MATTER OF: : Docket Number:
CONNECTICUT INFRASTRUCTURE : PL04-14-000, et al
- - - - - x

Legislative Office Building
300 Capitol Avenue
Room 2C
Hartford, CT

Thursday, January 6, 2005

The above-entitled matter came on for technical
conference, pursuant to notice, at 10:10 a.m., Chairman Pat
Wood, III, presiding.

- APPEARANCES:
- DONALD W. DOWNES, Chairperson
 - PAUL G. AFONSO, Chair
 - JOHN W. BETKOSKI, III, Commissioner
 - RICHARD BLUMENTHAL, Attorney General

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APPEARANCES CONTINUED:

NORA BROWNELL, Commissioner, FERC
ROBERT E. EARLEY, Assistant Counsel
SAEED FARROKHPAY, Engineer
SENATOR JOHN W. FONFARA
ANNE C. GEORGE, Commissioner
JACK R. GOLDBER, Commissioner
MICHAEL HARRINGTON, Commissioner
MARY J. HEALEY, Office of Consumer Counsel
SENATOR THOMAS J. HERLIHY
LINDA J. KELLY, Commissioner
RONALD LeCOMTE, Director
JOSEPH McCLELLAND, Director
SARAH McKINLEY, Manager of State Outreach
WILLAIM NUGENT, President
S. DEREK PHELPS, Executive Director
TONY VALLILLO, President and COO
GORDON VAN WELIE, President and CEO
ROGER C. ZAKLUKIEWICZ, Vice President

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

2 (10:10 a.m.)

3 MR. DOWNS (Presiding): Good morning, ladies and
4 gentlemen. If everyone would be kind enough to migrate
5 toward a seat, we'll try to get started here.

6 I apologize that we're a couple of minutes late
7 here. We were trying to give everybody an opportunity to
8 arrive.

9 We have a number of folks yet who have not
10 appeared. As you see, we're getting our act together up
11 here also.

12 First off, I'd like to introduce myself. My name
13 is Don Downes, the Chairman of Connecticut's Public Utility
14 Commission. We are fortunate today to be hosting our
15 colleagues from the Federal Energy Regulatory Commission.
16 Our good friend and colleague, Chairman Pat Wood and
17 Commissioner Nora Brownell are to my right and to your left.

18 I'd also like to introduce a few other people
19 before we get going, just so you know who the players are.
20 That way, you can write us angry letters later, expressing
21 your displeasure.

22 To my left, your right, my friend and
23 distinguished colleague, my Vice Chairman, Jack Goldberg;
24 next to Jack, our good friend and colleague, Commissioner
25 Linda Kelly, both of the Connecticut PUC.

1 Commissioner Betkoski and Commissioner George are
2 apparently somewhere between here and home at the moment, so
3 I expect we will be seeing them shortly.

4 There are a number of legislators who are
5 scheduled to be present, and I want to just stop for one
6 moment and thank our good friends of the Legislative Branch
7 for being kind and hospitable and providing us with the
8 venue and the support services and so forth. We very much
9 appreciate it.

10 If you don't mind, I think maybe what I will do
11 is introduce those folks as they begin to arrive a little
12 bit later on in the program. With us today, we also have
13 some representatives of some of other states. In
14 particular, we have my friend Ron LeCompte, who is the
15 Director of the Electric Power Division of the Massachusetts
16 DTE, who represents Massachusetts at the moment.

17 And our friend --

18 MR. LeCOMPTE: And, Chairman Afonso sends his
19 regrets. He won't be able to make it but sends his
20 commitment to work within the process here.

21 MR. DOWNES: I thank you, sir. Also with us,
22 representing the New Hampshire Public Utility Commission, is
23 Commissioner Michael Harrington. We're glad to see you here
24 this morning. Welcome to Connecticut.

25 Representing the New England Conference of Public

1 Utility Commissioners is our distinguished friend and
2 Executive Director, Bill Nugent, a former Commissioner from
3 Maine, also.

4 I'll say, in addition -- well, good morning, sir.
5 Perfect timing.

6 SENATOR HERLIHY: Good morning. Happy New Year.

7 MR. DOWNES: Our distinguished Senate Ranking
8 Member of the Energy and Technology Committee, having been
9 reappointed for this term, our good friend, Tom Herlihy.
10 Next to him is our distinguished Attorney General, Dick
11 Blumenthal. Thank you for coming.

12 Next to Dick is our good friend, the head of the
13 ISO New England, Gordon van Welie. Say hi, Gordon. Thank
14 you, Gordon. I appreciate it.

15 And my apologies to anybody that I overlooked. I
16 will point out a few other victims later on.

17 But at this point -- I'm sorry, oh, excuse me.
18 Thank you. I appreciate it. David has just pointed out --

19 I want to make a special point of introducing a new friend
20 of ours here and a person with whom we have already started
21 to develop a strong working relationship, Commissioner Gina
22 McCarthy, the designee of Commissioner of the Department of
23 Environmental Protection.

24 Gina and I have taken up where Art Rock and I
25 left off, continuing the relationship between the utility

1 and the environment sides of public policy, in an effort to
2 move these kinds of projects and others forward. Would you
3 be willing to stand up, just so everybody can get a good
4 look at you? Thank you, Gina. I appreciate it.

5 Okay, again, I want to thank you all for
6 appearing and joining us today. And I especially want to
7 thank our friends from FERC for coming to actively
8 participate in this process.

9 This is the second public event in a process
10 that's intended to inform the concerned citizens of our
11 state, as well as the public policymakers who represent
12 them, about the necessary transmission improvements in
13 Southwest Connecticut.

14 The transmission problems in this area are
15 notorious, recognized as the most urgent in New England and
16 among the top ten most urgent in America.

17 The last time were lucky enough to meet from our
18 friends from FERC was here in the LOB in the first of these
19 two meetings on October 13th of last year. At that time,
20 the sponsors of the project, the Connecticut Light and Power
21 Company and the United Illuminating Company, as well as the
22 Independent System Operator of New England, were charged
23 with two kinds of analyses:

24 First, the physical root and engineering issues
25 surrounding Phase II, and, secondly, the economic analysis

1 of the costs involved. At that time, those of you who were
2 here, will recall that, per Chairman Wood's request, time
3 was given for the Companies to respond with a study to
4 review all the possible solutions for the Phase II Southwest
5 transmission system need.

6 So, we're here today to review the work product
7 of that group. It has become known as the ROC Group, which
8 was formed to respond to this directive.

9 The ROC Group was composed of experts from ISO
10 New England, CL&P, and United Illuminating, as well as
11 substantial supplemental expertise from a variety of
12 consultants.

13 It is important that the public understand that
14 the opinion of the experts is one of a number of factors
15 that we, as regulators, are required by law to consider in
16 determining whether to permit a particular project to
17 proceed.

18 Nonetheless, their advice is extremely persuasive
19 and in these kinds of circumstances, the advice of experts
20 is often about the only advice we have to go on.

21 I know there are many people present who have
22 strong opinions on the merits or problems of this project
23 and their opinion is obviously extremely important.

24 My friend, Derrick Phelps and Chairman Katz of
25 the Siting Council would be glad to tell you about the many

1 hours of public hearings that have already been conducted by
2 the Siting Council, and there will, no doubt, be additional
3 opportunities for the public to express their opinions,
4 generally, on these proposals.

5 But today, we need to focus on the work product
6 of the ROC Group, and allow everyone present to understand
7 the conclusions of that this group of experts has arrived
8 at. Only then will regulators be able to give this
9 information, the weight it deserves.

10 On a broader scale, every decisionmaking process
11 has to have finality. We've now been through a process that
12 has taken almost two years to get to this point.

13 Today's event is another step in reaching final
14 conclusions on the transmission project. And I have to
15 digress for a second here, because it's important that
16 people understand the imperative for making a decision soon.

17 Every year, load grows by at least three percent.
18 In some areas in Southwest Connecticut, it's growing by more
19 than six to eight percent on an annualized basis.

20 We have no real opportunity to have transmission
21 lines in place and functioning, much sooner than three to
22 four years out from here. In addition to the reliability
23 threat, there's also cost.

24 For the years 2004 and 2005, we estimate that the

1 FMCCs, the congestions charges, specifically and separately
2 called out on the bill -- never mind the pieces that are
3 actually hidden in the actual costs of energy and
4 transmission -- will exceed \$200 million.

5 These are the reasons for the urgency in making
6 this decision. So, with that, I would like at this time to
7 turn the -- to yield to my good friend, my colleague from
8 the great state of Texas, the Honorable Pat Wood, the
9 Chairman of the Federal Energy Regulatory Commission.

10 CHAIRMAN WOOD: Thank you, Don, and I thank your
11 colleagues and all of our friends back from the dias a short
12 two months ago. We had a good meeting here on the 13 of
13 October, and we appreciate the efforts that folks have made
14 since that time to get a lot of work done, to update the
15 record, not only for our purposes, but obviously more
16 importantly, for the Siting Council, who's got to make an
17 important part of this decision in the near future.

18 I know we've got, shortly before Christmas, some
19 reports that we'll delve into in just a moment. I don't
20 want to spend a lot of preamble time before we get to that.

21 But I do want to say, as just a reminder for
22 those that may not have been at our last meeting, why is the
23 Federal Energy Regulatory Commission involved in what is
24 really fundamentally, at first blush, a state matter, the
25 siting of a transmission line?

1 As a former state regulator, both Nora Brownell
2 and I know that that is a very tough part of the job. In
3 our state, we did it at the PUC, so you lucky devils, y'all
4 got to push it off to another -- to the Siting Council that
5 Pam Katz heads. I know we've got Derrick here as well from
6 the Council today.

7 But it's a very difficult part of the job. But
8 why is the Federal Government involved in this one? There
9 are two reasons: Reliability and cost.

10 The reliability of the New England grid is an
11 interstate matter, if there ever was such a thing. The
12 Commission has authority over transmission in interstate
13 commerce, and the power grid in New England, although
14 interconnected with New York and Canada, is highly
15 interconnected with the six-state region.

16 Multiple states brings federal jurisdiction and
17 so we're here. Reliability is a very important concern with
18 regard to the project that we're talking about today, as we
19 discussed in more depth last time.

20 And certainly the reliability of any proposed
21 engineering of this project, which was really to be focused
22 on under-grounding that was raised by the ISO New England,
23 by the consultants, by the different people appearing before
24 the Siting Council's proceeding, and have brought the issues
25 actually before our Commission as well, raises a lot of

1 issues about reliability that I'd like us to focus on quite
2 a bit today and get down into the brass tacks on.

3 The second issue -- and, again, it follows out
4 from the fact that this is a regional transmission grid, a
5 highly interconnected grid here in New England, and has been
6 operated that way for a long history.

7 The cost allocation for that grid -- and this is
8 different in different parts of the country -- but in New
9 England, the regional transmission facilities, what we call
10 the pool transmission facilities, the higher voltage, multi-
11 state facilities, have been paid for really pro rata by
12 everybody in New England for a long part of its history.

13 The Commission recently re-endorsed that cost
14 allocation proposal in New England for the next five years.
15 I guess there's four years left in that five-year timeframe,
16 and these projects that we're talking about today, would
17 fall under that rubric or that cost allocation format.

18 And I think because those are collected under a
19 federal tariff, the Federal Energy Regulatory Commission was
20 called in here, and the size of the dollars we're talking
21 about for these transmission projects in Southwestern
22 Connecticut, are noteworthy.

23 There aren't many transmission projects that our
24 Commission and our Staff travel twice in two months to come
25 and take care of. But this one is a big-dollar deal. It's

1 important for reliability.

2 It also has brought now for the second time in a
3 row, regulators from other states whose customers will be
4 called upon to finance all or part of this project. And so
5 that brings a federal interest here, and so for those of you
6 that wonder why we're here, it's here for reliability and
7 for economic reasons, which is a big part of our job across
8 the entire country.

9 Without a lot of further ado, we want to kind of
10 pick up where we left off before. Again, I appreciate that
11 a lot of work has been done in the interim to get us back to
12 focusing on the issues today.

13 So I'd like to turn it over to Sarah McKinley
14 from our Staff to run the meeting from here.

15 MS. MCKINLEY: Yes, thank you, Mr. Chairman. Our
16 first speaker today is David Boguslawski from Northeast
17 Utilities Service Company, who will give us a review of the
18 issues.

19 (Slides.)

20 MR. BOGUSLAWSKI: Thank you, Chairman Wood.
21 Thank you, Chairman Downes, Senator Herlihy, Attorney
22 General Blumenthal, other Commissioners, and distinguished
23 guests here today.

24 Your attendance here today is yet another signal
25 to all of us of how important you feel about resolving the

1 matters before us in Southwest Connecticut.

2 I would just go a bit further that and say,
3 especially given the snow and the freezing rain and the
4 travel arrangements that you all had to make to get here, it
5 just shows even further, not only are you here for the
6 second time, but you're here under adverse conditions, as
7 well, and we really appreciate it.

8 Back on October 13th, we had an agenda format
9 that contained each of these items. We spent hours on this
10 agenda.

11 And there was a consensus at the last meeting,
12 and the consensus clearly was that in Southwest Connecticut,
13 we need to upgrade the transmission system.

14 But we left the meeting with open issues. There
15 were technical studies that were left unresolved; there were
16 cost issues. The Bethel-to-Norwalk project costs had
17 changed, but had not been finally estimated.

18 We had issues of who should pay for the lines,
19 and at the close of that meeting, Chairman Wood set the
20 goals for this meeting. And I went back and looked at the
21 transcript and found three goals:

22 Find reliable solutions by the next meeting;
23 conform the solutions to the state statutes; and ball-park
24 the costs and the allocation of those costs before us in
25 this next meeting.

1 We have addressed each of these issues, and I'm
2 here today to just open the session, to set the stage.
3 Importantly, the last three months shows real progress, and
4 I think you'll see that today.

5 I plan to use very few slides at the beginning of
6 the presentation that I used last time, really as refresher,
7 and I will run through them very quickly. But I think it's
8 important that, again, everyone understands the problem we
9 are trying to solve, which is an inadequate transmission
10 system in Southwest Connecticut.

11 The map, we're all familiar with at this point.
12 The Southwest quarter of the state uses half the energy and
13 doesn't have high-voltage power lines serving it.

14 That leads to reliability concerns that have been
15 discussed already this morning, and certainly in the October
16 13th meeting. It leads to rising costs for consumers.

17 You'll hear from the ISO this morning, talking
18 about \$300 million, roughly, in 2005, and rising from there,
19 unless we fix the problem. So, one of our messages today is
20 that the cost of doing nothing is substantially more
21 expensive than the cost of fixing the problem.

22 Now, agreeing on a problem is the first step in
23 solving a problem; we all know that; that's pretty basic.
24 And one of the things that I feel good about today, much
25 better than a year and a half ago, is that everyone agrees

1 that there is an urgent need to upgrade the system.

2 In the October 13th meeting, we talked about a
3 lot of technology that's out there ahead of us,
4 possibilities. We talked about some short-term fixes.

5 I included this map last time and I'm including
6 it again today, really to show that we have done an awful
7 lot to upgrade the electrical system in Southwest
8 Connecticut already.

9 We have installed DVARs and a static VAR
10 compensator to import more power into the region. Those are
11 very high-tech. They're on the system and working right
12 now.

13 On the next couple of slides, I'm going to show
14 you some progress that we've made from Bethel-to-Norwalk, to
15 date.

16 But part of the message in this slide is, we have
17 been applying band-aids to the system for years and years
18 and years, and we really are out of room. The band-aids
19 can't take the place of an effective, long-term energy
20 strategy for the state and the region, and that's really
21 what this is all about.

22 So, I have identified the problem. Here is what
23 we believe the solution to be: That is, to upgrade the
24 system; upgrade the transmission system.

25 On this map, I show, to the left-hand side of the

1 map, the Bethel-to-Norwalk Project. You can read the chart,
2 21 miles of high-voltage 345 kilovolt lines. Again, I'm
3 going to cover that project and where it stands, in the next
4 couple of charts.

5 Most of the meeting today will be about the
6 Middletown-to-Norwalk Project, which is the 69-mile upgrade
7 that runs from Middletown to Norwalk, Connecticut.

8 We also have another application pending before
9 the Connecticut Siting Council, which is the installation of
10 some underground 115 kilovolt cables from Stamford -- from
11 Norwalk to Stamford, Connecticut, needed to serve the
12 growing needs in the Stamford-Greenwich area.

13 With respect to the first project, the Bethel-to-
14 Norwalk Project, some have called it Phase I. I'm feeling
15 really good about what's been accomplished in the past three
16 months since our last meeting.

17 First of all, the Connecticut Siting Council has
18 reviewed, in detail, our highly detailed construction plans,
19 and they have approved them all. There was one plan out of
20 several that they asked us to go back and to move a
21 transition station, a point from where you go underground to
22 overhead lines, they asked us to move the station a bit,
23 which means we've got to go back and do some engineering and
24 file some more papers with the Council, and I suspect
25 they'll take that up as promptly as they can, right after we

1 do our engineering revisions, but we now have what we need
2 from the Siting Council to get on with building the lines.

3 Point Two: We've made our cost allocation
4 filing with ISO New England on the Bethel-to-Norwalk
5 Project, and a decision is expected from the ISO on who pays
6 -- the region versus the State of Connecticut -- probably
7 sometime in the second quarter. I put down May on the
8 slide.

9 Steve Whitley will cover the allocation process,
10 but what our filing shows is that we expect the Bethel-to-
11 Norwalk Project to cost some \$357 million, when you include
12 some of the ancillary projects that are necessary to make
13 that project work.

14 We've also included in that application, an
15 alternative that, had the project been done substantially
16 overhead, the project would have cost some \$279 million. We
17 are seeking regional cost support for that project in our
18 application.

19 The third point is that we have largely completed
20 agreements with the Connecticut Department of
21 Transportation. Those agreements cover how we can build on
22 state roads with respect to underground transmission lines.

23 And as you might well expect, we are trying to
24 build underground on some of the more contested state roads
25 in the state, so when it comes to interrupting traffic,

1 there are valid, very valid concerns, safety concerns,
2 traffic flow concerns that the Department of Transportation
3 has. We have made a lot of progress. We are essentially at
4 the agreement-signing stage with the Department of
5 Transportation.

6 I'd just like to take a moment to personally
7 thank the extensive efforts of Chairman Downes and Chairman
8 Korda of the Department of Transportation, and the Attorney
9 General, for the support of his office in the process of
10 getting to the end of this agreement. Thank you.

11 The fourth bullet deals with building the lines
12 themselves. We've actually gone out to bids, received bids,
13 negotiated contracts, and are close to awarding those
14 contracts for much of the undergrounding.

15 This will allow us to start the undergrounding
16 work when the weather clears, and, in the meantime, gear up
17 for the weather to clear, so we're ready to go as soon as we
18 can.

19 Now, in the meantime, we've been working on the
20 substation ends of those upgrades. This is a picture of
21 some of the gas-insulated substation equipment. It's a bit
22 fuzzy, I know. It was a digital camera.

23 But this is at Plum Tree Substation in Bethel.
24 The work is 70-percent complete, and just to give you a
25 sense of the size, you see trucks in the background there,

1 that are small, relative to the size of the equipment.

2 On the other end of the line is the Norwalk
3 substation. This substation has had extensive site
4 preparation work that was necessary, because we're building
5 at a substation that is surrounded by Route 7 on one side
6 and a river on the other side, and, therefore, we needed to
7 upgrade the site, expand the site in a way where we could
8 make more room available to include all the equipment that's
9 necessary to make this project and the coming projects work.

10 We are set to have the gas-insulated substation
11 equipment installed in the first quarter of 2005 at this
12 site.

13 On the Middletown-to-Norwalk Project, which some
14 would refer to as Phase II, we've also made a lot of
15 progress. We're going to get into this in a lot more detail
16 with the subsequent speakers, and, I'm sure, with the
17 question and answer periods.

18 But we've had the Reliability and Operability
19 Committee, the ROC Group, formed, and they have completed
20 their technical studies with consultants from around the
21 world to determine the maximum amount of underground that's
22 technically feasible.

23 The Siting Council has conducted hearings on
24 electric and magnetic fields. I show a picture here of one
25 of the maps we included in some of the work that they had us

1 do.

2 The KEMA report, the consultant that -- the
3 independent consultant that the Siting Council hired to test
4 the amount of undergrounding that could be done, had
5 indicated that we might be able to do up to 44 miles,
6 subject to further study.

7 We have tested KEMA's suggestions. We included
8 them in the ROC report, and there have been further hearings
9 of KEMA at the Siting Council.

10 Lastly, the Siting Council has also conducted
11 hearings on a DC technology option that had been suggested
12 by ABB.

13 And, lastly on this slide, Connecticut Light and
14 Power Company and United Illuminating Company have updated
15 their cost estimates for the three solutions that were found
16 to be reliable by the ROC Group.

17 So you will see later on that we say that 24
18 miles of underground can, in fact, be operated reliably.
19 It's the maximum undergrounding that we can do.

20 I will tell you, on a personal note, for my team,
21 we are incredibly disappointed that 24 miles was all we
22 could find a way to do. We pushed the envelope, we pushed
23 the consultants, we pushed our engineering design people to
24 look at the substation equipment to see how we could modify
25 it.

1 And while we have a feeling of extreme
2 disappointment, on the one hand, on the other hand, we are
3 really proud of ourselves for coming up with a way to make
4 the 24 miles of underground work, because we know that's
5 what the State of Connecticut wants.

6 In today's presentation, you're going to hear
7 from Steve Whitley, John Prete, Ann Bartosewicz, and then
8 again from Steve, on all the things that you asked us for,
9 Chairman Wood, at the last meeting. I think you'll find our
10 presentations to be directly responsive to what you asked us
11 to do, and I look forward to the day.

12 MS. MCKINLEY: Chairman Downes?

13 MR. DOWNES: I might break in just very briefly
14 to introduce a very important person, the new Senate
15 incoming Chairman of the Energy and Technology Committee, an
16 old friend of ours, has represented the great City of
17 Hartford for many years in the Legislature, both as the
18 Representative and now as Senator, our good friend, John
19 Fonfara. Thank you for coming. We appreciate it.

20 I saw Ed slip in and slip back out again, but I'm
21 sure he'll be back with us in just a couple of minutes, but
22 our good friend and distinguished House Chairman of the
23 Energy and Technology Committee, Terry Backer, who has
24 served in that capacity for the last two years, came in and
25 departed quickly, but I'm sure he will reappear this

1 afternoon. I apologize for interrupting.

2 MS. MCKINLEY: Thank you. Our next presenter is
3 Steve Whitley, from ISO New England, who is going to talk
4 about the scope and findings of the investigation. And
5 we're going to have a slight change to our program. At the
6 end of that, he's also going to discuss reliability
7 benefits. Steve?

8 (Slides.)

9 MR. WHITLEY: Thank you. On behalf of the ISO
10 and the ROC Group, I also want to thank Commissioner Downes,
11 Chairman Wood, and the other distinguished representatives
12 here today.

13 I'd like to take this time to give some
14 recognition to the ROC Group, the engineers and consultants
15 that worked so hard since our last meeting. Roger Zack, to
16 my left, is the Co-Chair of the ROC Group from Northeast
17 Utilities. Roger is the kind of guy that turns over every
18 stone to identify what the issue is and to find a solution
19 that will work. Roger and I are firmly behind what the
20 results of the ROC Group report say, and that we have found
21 solutions that will work and that we have identified that
22 there are no fatal flaws in these solutions.

23 Also, the engineering staff and consultants that
24 worked on these projects, worked countless hours since the
25 last meeting, over the weekends, through the holidays, to

1 get this work done, and I just want to express my
2 appreciation for everything they've done.

3 Actually, the first thing I want to do is talk
4 about reliability, rather than putting it at the end of the
5 presentation.

6 Just like Commission Downes and Chairman Wood
7 said, reliability in Connecticut and in New England, is
8 critically affected by this transmission project. Without
9 the project, we simply cannot meet bulk transmission system
10 reliability criteria.

11 That means we can't keep the lights on without
12 taking very drastic actions to do so. We know that anytime
13 we've had blackouts in the past, it's been related to a lack
14 of infrastructure, a lack of the ability of operators to
15 operate the system to meet the demands that they have on
16 that system.

17 And what the operators have to do when they get
18 in that situation, is, they have to prevent the big grid
19 from going down. They have to take action that affects the
20 local area, in order to protect the grid from widespread
21 outages.

22 What that means is, eventually you have to get
23 into precautionary or pre-contingency load shedding to
24 prevent instability of the grid. That's where this is
25 going, if we cannot move ahead on this project.

1 You've seen that happen in other areas of the
2 country, and I think you've seen the devastating effects
3 that has to the economy of those regions when it does
4 happen. We know that the blackout that happened just in
5 2003, August of 2003, had enormous economic effects on the
6 Northeast.

7 I've seen three different estimates, ranging from
8 \$10 to \$12 billion, just for a blackout that affected two
9 days of operations. If you look at what happened in
10 California, entire industries left the state and moved to
11 other states and other countries, and we certainly don't
12 want that to happen.

13 So, the bottom line is, this line is desperately
14 needed for reliability. Like Dave said, all the easy stuff
15 has been done. They've propped up the system, re-
16 conductor'd, put in capacitor banks, put in the latest
17 technologies, DVARs, STATCOMs, and the system is stretched
18 to its limit.

19 We're trying to serve a 3500 megawatt load center
20 at 115KV and we have just run out of capability.

21 Now, to echo something that Commissioner Downes
22 said, we've been looking in just the last couple of months,
23 at factors that affect load forecasts for the next five
24 years. And, you know, we use economic services that tell us
25 what the demographic indicators are for our region.

1 Those numbers are coming back to us with higher
2 growth numbers that we even saw last year, so as much as
3 we've been emphasizing it in the past, it's even more
4 important. We've been focusing on demand response in the
5 load pockets, and we've gotten tremendous success in
6 Connecticut with demand response, but the demand is
7 continuing to grow, so, reliability is a very key issue
8 here, the number one issue.

9 And the reliability issues I'm talking about
10 dwarf the second set of economic numbers I'm going to show
11 you, and these numbers look huge, but they are just peanuts
12 to the reliability issues that are there if we don't get
13 this solved.

14 And here are the peanuts type of numbers, and
15 they are, like Dave said, about \$300 million a year that
16 we're calling inefficiency costs because of a lack of
17 infrastructure in Southwest Connecticut.

18 Just to go over the categories, we're projecting
19 about \$240 million in 2005, to pay for going-forward costs
20 for older, inefficient units in Connecticut, to keep them
21 alive to help keep the lights on in Connecticut. We have to
22 do that because we can't do it without the transmission
23 system there.

24 We've also invested in something called a GAP
25 RFP, an emergency measure to bring in emergency demand

1 response and emergency generation on trailers into Southwest
2 Connecticut, and that's at a cost of about \$33 million, just
3 to have them there.

4 They're very inflexible on when we can use them.
5 We can't use them until right before we go into our
6 emergency actions that we call OP-4, because of the air
7 quality issues. We also have congestion costs, because we
8 often have to run units out of merit in the real-time
9 dispatch, and those costs are projected to be about \$4
10 million a year.

11 We also have to run commit units out of economic
12 order, to have them online to be prepared for first and
13 second contingency operation, because we have a lack of
14 transmission in the area. We project that to be \$31 million
15 in 2005. That's a total of \$380 million.

16 Again, that's a number I'm going to call peanuts,
17 compared to the cost to a regional economy, if we don't
18 protect reliability in this region and we have to resort to
19 load-shedding to keep the lights on.

20 Now, the ROC Committee has been composed of
21 members from the ISO, myself, and our engineering staff from
22 System Planning, and engineers from UI, CL&P. That's United
23 Illuminating and CL&P. We've also used a number of
24 consultants that I'll show you in a minute.

25 We began this process in June of 2004, began a

1 series of screening studies to identify the magnitude of the
2 problem under different configurations. We've provided
3 interim reports in August and in October, that began to show
4 us the volatility that we were experiencing and the
5 magnitude of the temporary over-voltages that we saw under
6 various switching conditions on the grid. Today I'm going
7 to talk about the results we have concluded with after
8 conducting these studies through the month of December.

9 As Dave said, the objectives were twofold for the
10 ROC Committee: First, determine the amount of underground
11 cable at 345 KV that could be technologically feasible to be
12 used in Southwest Connecticut, but that also would meet the
13 reliability and operability requirements for Southwest
14 Connecticut and the bulk power system of New England.
15 Basically we're trying to find a solution that would work.

16 The amount of studies that were conducted, the
17 amount of work that was done, is really unprecedented, and
18 this application is unprecedented for the amount of
19 underground cable that's being installed into a very weak
20 115 KV transmission system in Southwest Connecticut.

21 And as we found during our study work, that was
22 key. You may be able to put underground cable in a very
23 strong, robust transmission system that already has a lot of
24 cable and a lot of generation and that makes that a very,
25 quote, "stiff" system, but when you try to put it into a

1 propped-up 115 KV system that already is being propped with
2 a lot of capacitors online to maintain voltage, the
3 capacitance that you get with this underground cable, really
4 causes technical problems.

5 So, we did a number of -- literally thousands of
6 studies to do frequency scans to determine where we began to
7 see problems and then dig deeper into those problems in
8 something we call dynamic voltage studies. We looked a
9 multiple lengths of cable, different configurations, and we
10 ran a lot of sensitivity cases, looking at things that
11 really affected the results.

12 We learned a lot in this process. We looked at
13 the sensitivity to the amount of cable, the load levels for
14 the system. We looked at peak load level levels, 50-percent
15 load levels, 70-percent, various load levels, and we found
16 that just those load level changes affected the results.

17 We also looked at the type of load that you have
18 in this electrical model that we developed. You know, you
19 can have a load in the wintertime that might be more
20 resistive type load, as compared to a summer type load where
21 you have air conditioning spinning that is a more inductive
22 type load.

23 We found that those changing factors really
24 affected the results. And we all know that that type of
25 load changes on our power system all the time, so we had to

1 be able to handle that volatility and that variability.

2 We also looked at various generation dispatch
3 scenarios and transfer conditions across the system, and we
4 found that that also affected the performance of this bulk
5 system with this underground cable in service.

6 The we simulated various fault and switching
7 conditions to test the ability of our equipment to withstand
8 these transient over-voltage under those switching
9 conditions.

10 A number of experts were used from all over the
11 world. GE from Schenectady was the prime consultant for the
12 applicants from day one. They have a lot of expertise in
13 this type of work.

14 The ISO employed PB Power from the UK, Shawnee
15 Power from Virginia as one of the leading experts in
16 insulation coordination; EnerNex, out of Oak Ridge,
17 Tennessee, is the place where we have a lot of expertise in
18 insulation coordination and T&A analysis; Teshmont, from
19 Canada; ABB out of Raleigh, Solutions from California, and
20 K&R Consulting from Western Massachusetts.

21 What we had to do was to develop models, detailed
22 representations of the network, and then validate the
23 accuracy of those models, and then break the studies down
24 into different buckets, and have each consultant go off and
25 do a set of studies that we directed them to do, call

1 everybody back together every day on the phone to get
2 results, interpret results and to set up the next cases.

3 Then we also had face-to-face meetings with
4 consultants to learn what we had found and to identify next
5 steps. So, by doing it that way in a massive effort,
6 breaking the work up into those buckets, we were able to get
7 this done, and we definitely had some significant findings.

8 Because of the weakness of the system that we
9 have in Connecticut, with this much capacitance added by
10 these cables, we found that there is a very high degree of
11 sensitivity to changes in load levels, changes in the amount
12 of cable, changes in the load type, and certainly the amount
13 of capacitance that's being added to the system.

14 We found that as you got closer with more
15 underground cable, you got closer to this 24-mile proposal,
16 the volatility of results increased and the unpredictability
17 of results increased. In talking to the various consultants
18 and doing research, we actually found that really nobody
19 today around the world has put in this much cable in a weak
20 system such as we're proposing here.

21 So we did do a lot of analysis to quantify this
22 volatility for these various scenarios, evaluate the
23 capability of the existing equipment in Connecticut -- the
24 surge arresters, the transformers, the breakers, all the
25 power system equipment -- to withstand these transient

1 conditions, and looked at what alternatives were there to
2 mitigate these voltage spikes that we saw.

3 The bottom line of what we found is that we do
4 find three solutions that will work. There is what I'm
5 going to call the maximum overhead solution with four miles
6 of underground of cable work, 13 miles of underground cable
7 work, and 24 miles of underground cable can work, if a
8 number of mitigating actions are taken.

9 Certainly, the risks are increased as you add
10 underground cable, but based on our analysis, the risks are
11 acceptable in going to 24 miles, if these mitigating actions
12 are taken. That involves replacing HPPF cable with XLPE,
13 which reduces the capacitance of the cable, but introduces a
14 developing technology for XLPE cable at 345 KV, and then the
15 extensive replacement of surge arresters and higher voltage-
16 rated equipment on the power system. Literally thousands of
17 surge arresters will be replaced in Connecticut, on
18 substation equipment, and breakers will be acquired that are
19 rated higher than 345 KV. Essentially they will be
20 purchasing 500 KV breakers.

21 Clearly, we've reached the end of the line with
22 24 miles. That's as far as we can go. We did a lot of work
23 to develop what is an adequate safety margin to protect
24 reliability for Connecticut and the rest of the bulk system,
25 and if we go beyond that 24 miles, we're into that safety

1 margin, and we can't do that, so that's as far as we can go.

2 We also looked at the proposal by KEMA to put in
3 something called C-Type filters to help mitigate these
4 harmonic issues, and that would enable adding more
5 underground. KEMA had done some frequency scanning studies
6 to show that these may have some potential benefit, so we
7 modeled those devices in our studies and found that in some
8 cases, those devices help and in other cases, they actually
9 hurt things.

10 And what was interesting about this is that the
11 system results change so much, depending on which line is in
12 and which line is out, and when you have a fault, so you may
13 tune a device like this that might work for one set of
14 conditions, but the power system can literally be in
15 thousands of different types of conditions with lines in or
16 out for different dispatches, and so that device is very
17 unpredictable. It may be optimized for one thing, but it
18 can't be optimized for all of those different things.

19 So, based on that analysis, those devices cannot
20 be accepted by the ROC Committee as a solution.

21 We also looked at the ABB proposal for HBVC. ABB
22 is a vendor that makes HBVC, and they proposed that it would
23 solve all the problems in Southwest Connecticut.

24 So we brought ABB in with our engineers from

1 Planning and Operations at the ISO and the Companies, and
2 asked a number of questions about the proposal, so that we
3 could do an evaluation.

4 What we have determined is that HBVC is not a
5 solution for this problem. We need an integrated, free-
6 flowing, AC network in Southwest Connecticut to handle the
7 widespread variations in dispatch conditions that we have
8 and outage conditions that we have. The HBVC system
9 proposal involved as many as ten multi-terminal HBVC
10 connections into the AC network. It simply could not be
11 operated in a reliable manner to replicate the capability of
12 an AC system.

13 We also noted that the cost would be nearly
14 double what's being proposed here, and would likely get
15 little to no support for acceptance into our pool as a cost
16 that should be shared throughout the region.

17 ABB also proposed a more conventional, two-
18 terminal HBVC facility, which certainly has been proven
19 around the world that can work for certain applications, but
20 that particular application wouldn't solve our reliability
21 problems in Southwest Connecticut.

22 The next steps that we have: After the Siting
23 Council makes a final determination of the route, begin the
24 cost review for the Bethel-Norwalk Project, which is Phase
25 I. That will be a process I'll talk about a little bit

1 later. Determine what amount of that cost should be
2 regionalized and what amount should be localized.

3 There's a Reliability Committee meeting at NEPOOL
4 scheduled for February 2nd, which will begin the process.
5 We do have a formal application in from the applicants for
6 that project.

7 We anticipate that there will probably be three
8 NEPOOL Reliability Committee meetings set up to go through
9 that in detail. The ISO has also set up a stakeholder
10 meeting on February 7th, open to the public.

11 The applicants will come in and make a
12 presentation on their costs, and the ISO will ask a lot of
13 questions, and it will be open for the stakeholders to also
14 ask questions. That means regulators, as well as NEPOOL
15 participants.

16 The cost review for Middletown-Norwalk, will be
17 later. The applicants cannot finish their application for
18 that until they get the final design determined, after the
19 Siting Council makes its ruling.

20 Then, after that, the same process will take
21 place for the Middletown-Norwalk Project. That's where we
22 are with the ROC Committee. We have completed our final
23 report.

24 Questions?

25 CHAIRMAN WOOD: We've got a few.

1 COMMISSIONER BROWNELL: Steve, for those who
2 aren't fully familiar with engineering, I just want to make
3 sure that I can summarize what, exactly, you said.

4 First and foremost, the costs are enormous, and
5 they are growing and \$300 million is probably a conservative
6 estimate for 2005, without even measuring the social costs
7 of a potential blackout, or the environmental costs, which I
8 would assume are enormous, of old, inefficient units, and
9 the economic development costs to businesses.

10 We heard very clearly from the Business Council
11 last time we were here, that this is an issue that I would
12 expect, not unlike California, as you point out, people are
13 thinking of leaving, and they're shortly looking at it very
14 seriously; is that correct?

15 MR. WHITLEY: That's exactly correct.

16 COMMISSIONER BROWNELL: This isn't a some-day-in-
17 the-future reliability issue; this is today, tomorrow, and
18 for any unforeseen circumstance that there's a sense of
19 urgency in timing here.

20 You had not only the members of the Committee,
21 but you had, by my count, at least nine internationally
22 recognized experts who have, amazingly enough, come to some
23 consensus on their recommendations. And while you do have
24 these other reports, there are some flaws in those, and,
25 indeed, there are always going to be in a project of this

1 complexity, a lot of competing reports from a lot of
2 experts.

3 But you got the big guys and a team that has
4 agreed on something, and I know you've checked with the
5 reliability folks at NERC and in our shop; is that correct?

6 MR. WHITLEY: That's correct.

7 COMMISSIONER BROWNELL: I just want to be clear
8 that the time for debate and homework -- when we were here
9 last time, we were pretty disappointed that the homework
10 hadn't been done. But it has been done, so the blueprints
11 here and the time for debate -- although I understand that
12 the Siting Council certainly has to evaluate what's before
13 them, the time for debate has really moved past.

14 MR. WHITLEY: There's a definite sense of urgency
15 here. We have a solution.

16 COMMISSIONER BROWNELL: I just want to make sure
17 that the people of Connecticut get the facts before them.
18 They have heard a lot of rhetoric, but I think we now have a
19 fact-based decision pattern that they need to consider,
20 because I think that they are the ones who are impacted, and
21 putting them at risk, frankly, keeps us awake at night, as I
22 know it does all the people on this panel. Thank you.

23 COMMISSIONER HARRINGTON: I had a question.
24 You're talking about an 05 cost of \$300 million. Give us an
25 idea of who is paying that this year. How is that

1 distributed?

2 MR. WHITLEY: Pretty much all of those costs are
3 in Connecticut.

4 COMMISSIONER HARRINGTON: Thank you.

5 MS. MCKINLEY: Senator Herlihy?

6 SENATOR HERLIHY: Thank you. May I ask either
7 the Chairman or Sarah, will we have an opportunity to ask
8 David Boguslawski questions, or were you planning on saving
9 his questions till the end?

10 MS. MCKINLEY: You can ask your questions now.

11 SENATOR HERLIHY: Can we start with you, Steve,
12 since you're up there right now? Back to Slide No. 3, just
13 as a followup to the concern of the individual who just
14 mentioned that letting the people of Connecticut know all of
15 the facts, since they are essentially paying the tab on
16 this, the very last question had to do with \$300 million.
17 Was that gentleman speaking of the 2005 estimated federally-
18 mandate charges, or was he talking about Slide No. 3 in your
19 presentation?

20 MR. WHITLEY: I think he was talking about Slide
21 No. 3.

22 SENATOR HERLIHY: Could you confirm that to the
23 asker of the question?

24 COMMISSIONER HARRINGTON: Yes, I was talking
25 about the \$308 million that's on Slide No. 3. The question

1 was, who was bearing those costs in 05. The response was,
2 it's all in Connecticut.

3 SENATOR HERLIHY: Thank you. Steve, are the
4 federally mandated charges in addition to this \$308 million?

5 MR. WHITLEY: It's all part of it.

6 SENATOR HERLIHY: So the \$308 million, all the
7 federally mandated charges are broken down in Slide 3?

8 MR. WHITLEY: Yes.

9 SENATOR HERLIHY: Those are borne, not by the
10 people in that Southwest Connecticut zone, but by ever
11 ratepayer in Connecticut?

12 MR. WHITLEY: That's correct.

13 SENATOR HERLIHY: If there are two million
14 ratepayers in Connecticut, roughly, we're talking about each
15 ratepayer in Connecticut paying \$150 in additional penalty
16 charges, I'll call them, as a result of the congestion
17 problem in Southwest Connecticut; is that a fair assessment?

18 MR. WHITLEY: I can't break it down to the end-
19 use consumer and tell you exactly the number.

20 SENATOR HERLIHY: Let me keep it real simple:
21 \$300 million divided by two million, I'm roughly estimating
22 to be \$150 per ratepayer, if there are two million
23 ratepayers in the state of Connecticut.

24 Steve, you mentioned to us during the
25 presentation, that during your review and analysis, you

1 could not find anywhere else in the world where 69 miles of
2 transmission line had 24 miles of it underground? You had
3 never seen anything near close, as extensive, in an effort
4 to avoid placing overhead power lines?

5 MR. WHITLEY: I used the term, "in such a weak
6 system." You can find places where ConEd, for example, had
7 a number of miles of 345 underground transmission, most of
8 it in short sections, but they have a lot of it there, that
9 they have a very -- what we call as engineers, a very stiff
10 system, a very strong system.

11 In Connecticut, we have a very weak system, and
12 what we have found is that when you put this much cable with
13 all that capacitance in a weak system, you quickly run into
14 the danger of being in an unacceptable zone because of this
15 phenomenon.

16 SENATOR HERLIHY: You leave me at least with the
17 impression that in the weakest system in all of New England,
18 we've gone with the most unique and extravagant system to
19 answer and address that problem.

20 MR. WHITLEY: That's a good way of looking at it.
21 We need transmission desperately to keep the lights on in
22 Connecticut, and the law is asking us to put as much
23 underground as possible. We've determined the maximum
24 amount we can move reliably. It is pushing us into a risky
25 zone. We've pushed it as far as we can go, and we accept

1 it.

2 SENATOR HERLIHY: Steve, as you well know, ISO
3 will have a difficult challenge of determining what
4 percentage of the cost to build these lines, will be
5 socialized throughout New England, versus borne by the
6 ratepayers of Connecticut.

7 Frankly, your presentation leads me to believe
8 that ISO will be forced to push that more than at least half
9 of the cost to be borne at a local level, versus socialized.
10 We had David Boguslawski talk about how, if the line, which
11 is now projected to be as high as a billion dollars, would
12 have cost \$269 million, had it been the original overhead
13 plan.

14 We're talking about a \$700 million difference
15 right there.

16 MR. WHITLEY: Let me try. First of all, that's
17 going to be covered in another presentation that's coming
18 up. But on your numbers there, they're reaching, 357, I
19 think, for the Phase I project.

20 The overhead alternative for the Phase I project
21 was 270-something, so it's when you get to the Phase II
22 project, which is a lot longer, that you start getting those
23 really high numbers, up to a billion dollars.

24 You have a graph that showed the delta. They
25 don't have detailed estimates on that yet, but there is a

1 delta there, as well, between those two, but I'll talk about
2 that in another presentation that's coming up.

3 SENATOR HERLIHY: Steve, thank you for your
4 openness. I appreciate it.

5 May I ask a question of David Boguslawski?

6 MS. MCKINLEY: Sure.

7 SENATOR HERLIHY: If this is difficult, we don't
8 need to do it. David, on the second page of your
9 presentation, you had a slide of all of the 345 overhead
10 lines throughout Connecticut.

11 MR. BOGUSLAWSKI: Yes.

12 SENATOR HERLIHY: Is there any chance of your
13 putting that back up there?

14 (Slide.)

15 MR. BOGUSLAWSKI: I believe that's the slide.

16 SENATOR HERLIHY: David, this slide points out to
17 everyone here, that of the 400 miles of overhead
18 transmission line, very little of it is in Southwest
19 Connecticut.

20 MR. BOGUSLAWSKI: Correct.

21 SENATOR HERLIHY: David, you indicated that the
22 initial costs that CL&P projected, if the address to the
23 problem in Southwest Connecticut was done with overhead
24 lines, was roughly \$269 million.

25 MR. BOGUSLAWSKI: Senator, I indicated that for

1 the Bethel-to-Norwalk line, which is the left-most line that
2 you see there in the lighter red.

3 SENATOR HERLIHY: If we were to add 269, the
4 original cost of the Middletown-to-Norwalk Phase I, in
5 essence, what would that total be?

6 MR. BOGUSLAWSKI: I'd like to understand the
7 question a little bit better.

8 SENATOR HERLIHY: If the initial cost of Bethel-
9 to-Norwalk was 269, and if we add in the initial cost of
10 Phase I, Middletown-to-Norwalk, how much money are we
11 talking about?

12 MR. BOGUSLAWSKI: You're asking, if they were
13 built overhead, what are the two combined costs?

14 SENATOR HERLIHY: Right.

15 MR. BOGUSLAWSKI: They'd be about a billion
16 dollars, combined. You're going to see a presentation from
17 Ann shortly, where she covers the incremental costs that
18 you're talking about.

19 I can jump ahead and actually cite that for you,
20 if you like.

21 SENATOR HERLIHY: That's okay. Let me just go to
22 Phase I, then. CL&P just announced that the original plan
23 was going to cost roughly, from Middletown-to-Norwalk -- is
24 it \$600 million?

25 MR. BOGUSLAWSKI: Yes.

1 SENATOR HERLIHY: The costs may balloon to a
2 billion dollars?

3 MR. BOGUSLAWSKI: Yes.

4 SENATOR HERLIHY: I guess there was only one
5 comment in your presentation, David, that bothered me. It
6 indicated -- and I don't want to put words in your mouth,
7 but I inferred -- I don't know what you implied -- but that
8 you were gravely disappointed that only 24 of the 69 miles
9 could be put underground.

10 MR. BOGUSLAWSKI: Yes, we were.

11 SENATOR HERLIHY: David, you know that it costs
12 seven to ten times more expense to go underground. All the
13 overhead line would have done, would have been to make that
14 map of Connecticut look more complete in terms of where the
15 overhead lines are now and where they would be after the
16 project.

17 MR. BOGUSLAWSKI: Yes.

18 SENATOR HERLIHY: But the difference between \$600
19 million, the original estimate, and now the potential of a
20 billion-dollar cost with underground being seven to ten
21 times more expensive than the overhead, we're talking about
22 a difference of \$400 million, divided by two million
23 Connecticut ratepayers, Willamantic, Torrington, New London,
24 who are not down in that problem area; we're talking about
25 \$200 electric rate per year.

1 MR. BOGUSLAWSKI: We're talking about a big
2 difference in the price, certainly, and the cost to
3 consumers.

4 SENATOR HERLIHY: I just wanted to confirm that.
5 Thank you.

6 MR. BOGUSLAWSKI: Senator, if I could, the deep
7 disappointment that we have, really is that we know,
8 especially with local people that live along the lines, they
9 would love to have us bury the lines.

10 We know that there is now a law on the books of
11 Connecticut that requires that we find the maximum amount
12 that we can underground. I was quite hopeful, going into
13 the analysis of these lines, that we could find a way to go
14 a little bit more than 24 miles.

15 It was a bit of pride, on the one hand; on the
16 other, the fact of the matter is that when we build a more
17 expensive project, we get to earn more money on it. So we
18 had incentives, both in a personal sense, in a legislative
19 sense, in a financial sense, to try and find a way to do as
20 much undegrounding as possible.

21 And the pride in me, if you will, was that we
22 would do more than 24 miles, and I'm very proud of my team
23 for coming up with the 24-mile solution. I wish we could
24 have done more.

25 SENATOR HERLIHY: David, I understand that you're

1 between a rock and a hard place, with essentially no pun
2 intended.

3 (Laughter.)

4 SENATOR HERLIHY: Was it Nora Brownell -- Nora
5 talked about the people of Connecticut deserving to know the
6 facts, and the facts are that there is projected to be a
7 \$400 million additional cost. The undergrounding is a
8 significant part of that \$400.

9 But if we just use simple math of \$400 million
10 and two million ratepayers -- and I misspoke earlier. I
11 said "annually." We're talking about a one-time hit of \$200
12 per ratepayer.

13 Frankly, to the ratepayers that are in the blue,
14 if you're a blue state versus a yellow state ratepayer --

15 (Laughter.)

16 SENATOR HERLIHY: -- you're going to look at
17 that map and you're going to say, wait a minute; I've got
18 two kids in college, I've got a fledgling business, and I'm
19 going to pay an additional \$200 so the map can continue to
20 look like blue and yellow, instead of blue across? The
21 ratepayers are going to have a problem with that.

22 So when you express your disappointment, I just
23 wanted to make sure that everyone in this room understood
24 that there are people that can't afford to pay the tab,
25 paying the tab for a yellow state and a blue state.

1 MR. BOGUSLAWSKI: Senator, I appreciate your
2 comment, and I just want to add to it by saying that there
3 are people in the yellow portion of Connecticut on this map,
4 the Southwest portion, that also cannot afford the higher
5 prices, as well.

6 Unfortunately, we have a situation that when it
7 comes to siting transmission, that we have a very vocal
8 minority and a very silent majority. Those are the facts
9 that we're dealing with.

10 SENATOR HERLIHY: Thank you for your time.

11 MR. DOWNES: Mr. Blumenthal?

12 MR. BLUMENTHAL: Thank you. I'm glad we have an
13 opportunity now to ask questions of Mr. Boguslawski, as well
14 as Mr. Whitley.

15 MR. DOWNES: It was sort of a one-time offer.

16 (Laughter.)

17 MR. BLUMENTHAL: A going-out-of-business sale.

18 MR. DOWNES: I prefer not to think of it that
19 way.

20 (Laughter.)

21 MR. BLUMENTHAL: Let me first thank our guests
22 from outside Connecticut, most particularly from the FERC
23 for being here today, and also to the representatives of
24 CL&P and UI who are here. The lights are on this morning in
25 the State of Connecticut, thankfully, in spite of the bad

1 weather. We appreciate your good work, as always.

2 And to the many other guests who are here as
3 well, I just want to say that we would have had an even
4 larger representation of citizens of Connecticut, if there
5 had been an opportunity for perhaps some of our local
6 officials and some of our citizens to participate in this
7 exchange.

8 Many of them called me with substantial
9 disappointment that they would be excluded, and that the
10 subject matter would be limited to the issue that we're
11 talking about here today. I think that point is relevant to
12 this subject, because it goes back to a comment that Mr.
13 Boguslawski made.

14 And I think it's a very compelling point, that
15 what's needed is an overall energy strategy for our state
16 and for our region. We are sort of dealing, if I may put it
17 this way, the tail on the dog here, or perhaps a more
18 essential part of its anatomy, but still a part of its
19 anatomy that must be seen as a functioning segment of a
20 larger organism.

21 There are a lot of facts here that may never come
22 out in this discussion, relevant to an energy strategy that
23 is essential for our state and region.

24 We've been talking a lot. We've heard figures
25 about the load and demand. We haven't heard any figures

1 about overall generating capacity.

2 I recognize that we are forbidden to discuss
3 LICAP. I respect the reasons that Mr. Chairman Wood, you've
4 said that it might be an ex parte subject, but in terms of
5 the charges that my various team colleagues have raised
6 here, the charges per individual, there are a lot of other
7 issues here that need to be discussed -- congestion, RMR, a
8 slew of potential charges.

9 We're not going to be talking about them today,
10 perhaps rightfully, but I don't think this can be a truly
11 productive or intelligent discussion, if we are limiting it
12 in the way that we are, to simply the Phase II transmission
13 issues, whether in terms of cost or even reliability.

14 So with that very extended preface, let me just
15 ask you, Mr. Boguslawski, in terms of underground versus
16 overhead -- and forgive me. As you know from our many
17 hearings together, I'm not a technical guy. I'm just a
18 country lawyer.

19 (Laughter.)

20 MR. DOWNES: David, watch out.

21 (Laughter.)

22 MR. BLUMENTHAL: I gather that undergrounding is
23 not an extraordinary or atypical or uncommon practice when
24 there are densely populated, highly developed areas where
25 lines have to be laid.

1 MR. BOGUSLAWSKI: It's true that undergrounding
2 in cities like New York and Boston, happens all the time.
3 In fact, in our own state, when you look at New Haven, you
4 don't see transmission lines underground.

5 Undegrounding is very unique; it is very limited.
6 The population density that we have in Connecticut is
7 growing, and in the southern part of the state, in
8 particular, rights of ways are a precious commodity to build
9 the lines, but underground transmission is somewhat unique.

10 10

11 MR. BLUMENTHAL: In terms of certain areas,
12 though, it's common practice.

13 MR. BOGUSLAWSKI: In cities.

14 MR. BLUMENTHAL: And certain suburban areas.

15 MR. BOGUSLAWSKI: I can't speak to the suburban
16 areas comment. I don't have knowledge of widespread
17 undergrounding in suburban areas.

18 MR. BLUMENTHAL: Let me ask you this, because it
19 follows a point that Senator Herlihy just raised: That
20 figure for the cost of this line, would not necessarily be
21 paid in a single year; would it?

22 MR. BOGUSLAWSKI: I believe your question is
23 along the lines of, if we had to pay locally for the premium
24 of undergrounding, would it be paid in a one-time shot or
25 spread over many years?

1 MR. BLUMENTHAL: Can it be spread over a number
2 of years?

3 MR. BOGUSLAWSKI: It would be spread over many
4 years, and the total payments would be more than Senator
5 Herlihy mentioned, because it's like a mortgage. When you
6 pay a mortgage, you're paying not only the payment, but
7 you're paying the interest on the mortgage, if you will.

8 MR. BLUMENTHAL: It would be smaller, obviously,
9 if it were regionalized.

10 MR. BOGUSLAWSKI: Yes.

11 MR. BLUMENTHAL: Maybe this is a question for Mr.
12 Whitley, but if you can answer it, please do. I take it you
13 agree that the practice in New England has to been to
14 regionalize the cost of transmission facilities? That is a
15 fact, is it not?

16 MR. BOGUSLAWSKI: That is definitely a fact.
17 There are no dollars of the integrated network that are paid
18 for locally. Everything is regionalized.

19 MR. BLUMENTHAL: Thank you.

20 MR. DOWNES: Mr. van Welie?

21 MR. van WELIE: I just wanted to pick up on
22 something the Attorney General said, which I'd like to
23 reinforce, actually.

24 He mentioned that the state of Connecticut needs
25 a holistic energy plan. I think that is something that I

1 would love to see happen.

2 I know the Connecticut Energy Advisory Board has
3 been working on updating its plan, and I have had a number
4 of conversations with Chairman Downes about this. I just
5 wanted to alert everyone to the fact that we published a
6 report yesterday which is essentially an extract from our
7 Regional Transmission Expansion Plan, which focuses
8 exclusively on Connecticut.

9 And what's a little different from the Regional
10 Transmission Expansion Plan is that what we did in the back
11 end of the report, was lay out a series of recommendations -
12 - short-, medium- and long-term recommendations in the area
13 of demand response and distributed resources, transmission
14 and generation.

15 Essentially what we're trying to do here is be
16 helpful, to give input to the Connecticut Energy Advisory
17 Board, so they can go forward and develop exactly this type
18 of plan. So I think this is extremely important for
19 Connecticut to do, because you have to look at your energy
20 infrastructure, holistically.

21 Transmission is clearly required as at least one
22 element of this, but you need to look at the big picture. I
23 just wanted to reinforce that; I think it's an excellent
24 idea.

25 MR. DOWNES: Maybe I'll try and conclude this

1 with one last question, if I might. Steven, may I just ask
2 you a couple of quick ones here?

3 Going back to your slides, in Slide 10, you were
4 discussing the KEMA report. I think it's important that we
5 kind of flesh this out just a little bit more.

6 The KEMA report basically was suggesting the use
7 of a particular technology, the C-type filters used in a
8 variety of places. Now, the report wasn't really a fully
9 exhaustive report that went through many scenarios of
10 installing these filters in various places.

11 It was more really in the nature of a suggestion
12 that these filters could, in fact, be useful, but that
13 further modeling was necessary. Isn't that a fair
14 rendition?

15 MR. WHITLEY: That's not quite fair.

16 MR. DOWNES: Tell us a little more about it.

17 MR. WHITLEY: What I'll say is, it wasn't an
18 optimization study of how to design the filters, but it was
19 a study of filters that had been proposed, and then
20 extensive analysis of how well those filters worked under a
21 number of scenarios.

22 What we learned was that they may be optimized
23 for one set of conditions, but under multiple-contingency
24 events and configurations that the network is going to have
25 over the next 40 years, it actually hurt things.

1 You can optimize it for one thing, but you can't
2 make it handle everything. If our operators had to sit down
3 and figure out, should I turn this dial or that dial to re-
4 tune the thing to handle this or that, they can't operate
5 the power system.

6 They've got to be able to count on stuff to do
7 what it needs to do, and our studies demonstrated that those
8 devices don't work, and I would almost relate them to sort
9 of a research project.

10 MR. van WELIE: Steve, can I just give you a
11 simple analogy? If you think about your FM radio, what's
12 inside that thing is a filter.

13 You tune it into a specific frequency, and so
14 what you're doing in that case is, you're tuning it into a
15 specific radio station. If your system conditions actually
16 change, you end up having a different set of frequency
17 responses on your system, therefore, you then have to start
18 changing your filter.

19 So, what Steve is really referring to, then, is,
20 to use the radio analogy, as your system changes, you're
21 going to be having to constantly re-dial the right frequency
22 with your filters.

23 MR. DOWNES: Thank you. Just one other thing
24 Steve: On the next slide, you were talking about the use of
25 high-voltage DC, and as I understood this, I don't think DC

1 -- high voltage has primarily been used in situations where
2 you've got to make a long run from one point to another
3 point and there are not a lot of stops in between.

4 I think the 1385 that runs under Long Island
5 Sound, unbroken for about 18 miles or so --

6 MR. WHITLEY: The Phase II interconnection to New
7 England from Canada is DC, but, you're right, most DC
8 applications are for point-to-point contact transactions,
9 generally over long distances, or between two asynchronous
10 systems like we had with Texas in the Eastern
11 Interconnection, where you're optimizing one thing.

12 You're trying to control this thing so it can
13 maximize power flow in one direction. But what we have in
14 Southwest Connecticut is an integrated and very complex
15 network where generation has to be dispatched up and down,
16 imported into Connecticut.

17 A lot of things can change, and so a multi-
18 terminal DC connection where, again, you get into let's
19 change the dials and make it handle this situation with ten
20 terminals, is a research project.

21 MR. DOWNES: In short, then, the complexity and
22 the difficulty of operating the system, really ultimately
23 stems from having to change from DC to AC at each point
24 where there's an interconnection at the terminals at both
25 ends and at every single substation or interconnection

1 between those points. Is that a fair rendition?

2 MR. WHITLEY: That's correct. And you have to
3 have a controlled system that's able to do that in real
4 time.

5 MR. DOWNES: Meaning, literally, instantaneously?

6 MR. WHITLEY: Which has never been designed. And
7 then you have to make sure you don't have a single point of
8 failure in that system, because if you do, you've just wiped
9 out the entire network in Connecticut, not just one line --
10 the whole network. So it's very complex, very risky. We
11 would not support it.

12 MR. DOWNES: I thank you, sir; I appreciate it.

13 MS. MCKINLEY: Thank you. We will now move on to
14 John Prete from United Illuminating Company, who will
15 present the solutions that are now before the Siting
16 Council.

17 (Slides.)

18 MR. PRETE: Good morning. Thank you very much.
19 On behalf of UI, I'd also like to thank the distinguished
20 dias for attending today. This is a very important subject.
21 I'd like to thank the members of the audience as well.

22 I'm here to talk about the solutions in detail.
23 As Dave had noted and Steve, we have three solutions that
24 meet one of the goals of the October meeting, which is to
25 provide a reliable solution that maximizes underground.

1 I'll do that by way of about a half dozen slides,
2 and what I'd like to do is accent some of the slides through
3 a pointer, to get some further insight into the solutions.

4 The frist slide is very similar to Steve
5 Whitley's. It's done more in a process manner. What the
6 teams, what the ROC Group did, was, formed, as best we
7 could, experts from around the world, in as a wheel in a
8 spoke sort of manner, the ROC Group in the middle, assigned
9 many, many tasks on a daily basis, to these worldwide
10 experts as you go around the circle.

11 And the whole deal here that was very important
12 is, on a daily basis, through phone calls or face-to-face
13 meetings, things changed, and we endeavored, we endeavored
14 to maximize underground, so as conditions change -- and
15 conditions, as we probably we probably use it more
16 uniformly, are conditions of load, which changes daily,
17 changes hourly. What type of generation is on? What lines
18 are going down?

19 And, as the Attorney General said, none today,
20 and that's very good. But these are all conditions that the
21 operators must be able to anticipate and the system
22 anticipate so that it's reliable all of those times.

23 So the whole message here is that hundreds and
24 hundreds of configurations, thousands of studies were
25 performed in a two-month timeframe. Two months was a

1 challenge, nonetheless.

2 The challenge was competing criteria. The more
3 underground you do, the less reliable in a system that is
4 weak, so it was definitely a balancing act that we had.

5 And very quickly, as an overview, this particular
6 chart here deals with the three solutions that were in the
7 ROC Group. These are the three solutions that will reliably
8 fix the problem in Southwest Connecticut on the Middletown-
9 to-Norwalk Project.

10 On the left are the solutions names. There are
11 three of them, and although not created names, what we tried
12 to do was to pick the amount of underground that is
13 associated with those. So, as we look for the four-mile
14 case, indeed, that's four miles of underground.

15 As we go across the chart, I'd like to highlight
16 some of the special conditions. In the four-mile case --
17 and we'll get into very, very detailed route looks through
18 the towns -- what that does, it requires right of way
19 expansions in many, many miles of the overhead route, and,
20 indeed, the acquisition of 29 homes.

21 As we then looked to the 13-mile case, similarly,
22 the amount of overhead goes down and the amount of
23 underground goes up. We believe that from a pure
24 reliability point of view -- pure reliability -- this was
25 the best case in a balance of the things that we must do as

1 the Siting Council, which are environmental, social factors,
2 as well, public safety and public health.

3 We believe, from the ROC Group's consensus, this
4 would be our number one choice. But for the Connecticut
5 wall that took place, maximizing undergrounding, we did,
6 indeed, take it further.

7 In the case that we have identified as maximum
8 underground, you can see that that's the 24 miles we've been
9 talking about, lesser amount of overhead. Again, we believe
10 that this is the maximum, and that this does, indeed, meet
11 the spirit of the law, in detail.

12 What I'd like to do here is walk through three of
13 these, each of these depicting the exact route, and I'd like
14 to give you a little bit of framework.

15 What we've done here is, here are the towns.
16 There are 20 towns that the right of ways and the routes,
17 particularly, take. You can see that they are color-coded,
18 and they're color-coded for a very specific reason.

19 Each of the segments, as we call them, have
20 uniqueness, whether the right of way is unique, or whether
21 or not they actually terminate at what we call a substation
22 or a switching station.

23 So, very quickly, walking through this particular
24 route, we know that this particular max overhead has four
25 miles of underground. That's located down here in the City

1 of Bridgeport.

2 So, if I walk kind of up in the North area in the
3 Middletown area, we can see in red here, segments, and the
4 green segment. And what's unique here is that the rights of
5 way, the rights of way are sufficiently wide enough to
6 substantiate the rebuilding of the 115 as well as the 345,
7 except for a small two-mile segment in the Middletown area,
8 of which CL&P owns the majority of the right of way
9 expansion we need to take place.

10 So that's very unique, and you'll see on the
11 other two that this doesn't change. However, as you get to
12 Milford, there is a substation where one of the more recent
13 gas-fired power plants we've put onto that 345 to relieve
14 the 115, and other concerns -- we then go overhead through
15 yellow and blue, to Norwalk.

16 What you need here is that entire right of way,
17 being about 80 feet in width, unlike the other right of way,
18 which is 165, thereabouts or even greater, we have to expand
19 this entire right of way to accommodate the 345 line.

20 In accommodating that right of way, we'd have to
21 expand roughly 45 feet. That 45 feet then results in the
22 acquisition of 29 homes, roughly in the Stratford-Trumbull
23 area, and then again 45 feet along there, and that's
24 hundreds of acres that would have to be acquired, as well as
25 built upon.

1 And then as you see a T-tap, so to speak, we
2 actually, from the substation in Milford, go to another
3 substation in Bridgeport where the gas-fired plant there
4 will be taken off the 115 system and put on the 345, and
5 then that will be connected to Norwalk.

6 So, again, from a technically sound reliability
7 manner, this particular option does meet those goals.

8 Jumping to the 13-mile case, again, the same
9 graphic. And I would just again mention that the right of
10 way and the overhead line in this 45-some-odd miles, doesn't
11 change. The only expansion that's needed is two and a half
12 miles in the Middletown area. The rest of the right of way
13 is sufficiently adequate to sustain the reconstruction of
14 the 115, as well as the 345.

15 As you get then into Milford, again, that's where
16 the substation and the power plant -- we then go underground
17 through some dense area of Stratford, onto Bridgeport, with
18 XLPE, from Bridgeport, about a five-mile line to a
19 transition station, as we call it, upon the same right of
20 way as I explained before, through and to Norwalk.

21 Again, the issue here is that the entire right of
22 way at this location would have to be widened 45 feet to
23 accommodate the reconstruction. And as I said before, from
24 the ROC Group's perspective, operated from a reliability,
25 strictly reliability manner, the best. Again, it will not

1 require any expansion of the existing right of way in this
2 area of the right of way.

3 So that really brings us to what we call the max
4 underground case. What I'd like to do is to put into some
5 more detail, some of the data that both Steve Whitley and
6 Dave Boguslawski mentioned.

7 To get the 24 miles to work, significant changes
8 needed to take place. As we said before, much of the
9 underground is related to what we call capacitance.
10 Capacitance in a weak system is what causes reliability
11 concerns.

12 So, to reduce that capacitance, we have shifted
13 from a technology called high-pressure, fluid-filled, to
14 XLPE. Further to that, Steve had mentioned that significant
15 and unprecedented upgrades to existing substations needs to
16 take place.

17 And I'd like to just accent some of those
18 numbers. What we have done in the sophisticated studies
19 that were performed, transient network analysis, TNAs, what
20 they do is, they produce, on contingency situations,
21 voltages, voltage spikes.

22 They occur for roughly two cycles or more. A
23 cycle is 1/60th of a second.

24 In determining whether or not the existing system
25 can handle this additional underground, we have come to the

1 conclusion that we'd have to go through roughly 50 percent
2 of the CL&P substations, all of the UI substations, to
3 replace some rather significant equipment.

4 You see a number of 122 surge arresters,
5 lightening arresters that would have to be replaced, in
6 addition to some upgrading of some breakers. So that's
7 rather significant and that's unprecedented, but the right
8 thing to do to maximize underground.

9 Secondly, we would have to buy, in the new
10 substations, particularly in the Bridgeport area, as well as
11 the Milford area, 500 KV class equipment, rather than 345,
12 again, a significant change, but one that we're willing to
13 do to maximize underground.

14 The third bullet there talks about local, and our
15 definition of "local," is substation-oriented. Although
16 "substation," we throw around like other people know, a
17 substation feeds portions of towns, much like the breakers
18 and panels in your house.

19 We have to do some local remediation. This one
20 identifies a substation in the Northeast Utilities/CL&P area
21 of Rocky River, so, yet again, another major, significant
22 change to take place.

23 Finally, we'd have operational restrictions.
24 Steve talked a lot about operations. What you can't strap
25 the operators with, are conditions that are unpredictable

1 and happen often.

2 This particular one here is one that we're
3 willing to accommodate. During the light-load conditions,
4 we'd have to remove some of this capacitance off the system.
5 To do so, one of the parallel high-pressure, fluid-filled
6 lines in the Bethel-to-Norwalk, would have to be taken out
7 of service. That's an operational restriction, going
8 forward.

9 So, with these significant upgrades and changes,
10 we then produced a solution that we believe meets the law
11 and does satisfy many of the concerns that the ROC Group had
12 before it.

13 I'd like to just point out very quickly, what
14 changes here: Again, the overhead portion of the 45-miles
15 stays the same, and although this should be dotted and it's
16 hard to see, this 24 miles does stand the same underground
17 between Milford and Bridgeport, and then 15 more miles,
18 equalling 24, from the Bridgeport line to the Norwalk line.

19 So, in conclusion, on this particular site,
20 although there are increases in reliability risks -- and
21 there are -- we believe that the ROC Group consensus and the
22 consultants's consensus is that it's manageable.

23 CHAIRMAN WOOD: John, just a quick one your last
24 point, the last one on the prior side: Under light and
25 moderate demand conditions, the Bethel-to-Norwalk Project,

1 which is the Phase I project, would have to be operating
2 with just one of its cables in service. Does that reduce
3 the transfer capability of that line from Northwestern
4 Connecticut to Southwestern Connecticut?

5 MR. PRETE: Yes, it does.

6 CHAIRMAN WOOD: So, if the point of all of this
7 transmission is to get more import capability into
8 Southwestern Connecticut, what's the net effect of taking
9 one of those Phase I lines out of service?

10 MR. PRETE: There is no negative net effect,
11 because at this particular condition, what's accented here
12 is light load.

13 CHAIRMAN WOOD: So you wouldn't be stressing it
14 anyway.

15 MR. WHITLEY: Right, we would have margin.

16 CHAIRMAN WOOD: Would that deprive the customers
17 here of access to any part of the market, or is that just
18 redistributed on a different electrical path?

19 MR. PRETE: It would not adversely affect the
20 customers in Southwest Connecticut, because, again, you're
21 talking about a load condition that could be 60 percent of
22 peak. So, much of the thermal load flows are done on peak,
23 to understand why we need the project, so in that reduced
24 load, having that line out of service does not deprive.

25 CHAIRMAN WOOD: Again, the engineering reason why

1 that line would come out of service, is to support the
2 capacitance effects of the additional undergrounding?

3 MR. PRETE: It is actually to manage the
4 capacitance effect of the system, in other words, taking
5 capacitance off the system will allow us to survive the
6 temporary over-voltages at a level that our equipment can
7 handle. If you left the line in, the studies show that the
8 temporary over-voltages would be over the equipment
9 strength.

10 CHAIRMAN WOOD: Do we have experience with that
11 type of condition elsewhere in the New England grid?

12 MR. PRETE: I'd have to defer that to Steve.

13 MR. WHITLEY: There are times when we have to
14 take some cables out around Boston.

15 CHAIRMAN WOOD: Okay. Thanks, John.

16 MR. DOWNES: Let me just follow up where my
17 friend, the Chairman, was going here. John, you've been
18 talking about the capacitance here, and I think it's
19 important that the public and our viewers and our
20 participants here understand this.

21 This comes from a certain phenomenon of
22 electricity itself. As a general proposition, when you
23 transmit high voltages across overhead lines, you tend to
24 lose voltage over distance.

25 By contrast, when you transmit power through

1 underground cables, configured the way we're talking about
2 here, as a minimum proposition, they tend to gain voltage
3 over distance. Are those reasonably fair observations?

4 MR. PRETE: The results are fair.

5 MR. DOWNES: So the capacitance that you're
6 really referring to here is the result of pushing this
7 voltage through these underground cables and having them
8 essentially generating more voltage and hence the need to
9 keep that voltage within the proper levels. This is what
10 you're referring to as the capacitance situation; is that a
11 fair way of putting it?

12 MR. PRETE: Very much so. In particular, the
13 cable itself holds a voltage charge upon de-energizing. The
14 instant either of those cables goes out of service, the
15 generation in the area goes out of service, it actually
16 sends a spike, because the cable itself had been charged,
17 unlike overhead wires, where that does not occur.

18 MR. DOWNES: Thank you, sir. I appreciate that.

19 19

20 MR. BLUMENTHAL: Again, thank you for being here,
21 John.

22 MR. PRETE: Thank you for your nice compliment.

23 (Laughter.)

24 MR. BLUMENTHAL: The right of way that you need
25 for 345 KV lines is what, exactly? How much?

1 MR. PRETE: It would depend on the configuration,
2 but, in general, it's 125 feet.

3 MR. BLUMENTHAL: Is it 200 in some areas? I've
4 heard that figure.

5 MR. PRETE: Yes, indeed.

6 MR. BLUMENTHAL: That, in turn, is a determinant
7 of what the cost is of putting the line in; is that right?

8 MR. PRETE: Yes.

9 MR. BLUMENTHAL: In other words, the amount of
10 right of way, if you have to acquire land or existing
11 buildings?

12 MR. PRETE: Most definitely.

13 MR. BLUMENTHAL: At this point, how did you --
14 have you done a comparison? I know that we are going to get
15 to the cost comparisons, but in terms of your calculating
16 the rights of way and those 29 houses, what basis was used
17 for calculating the additional land that would be needed?

18 MR. PRETE: It was twofold: There were
19 appraisals done on those 29 houses. We can talk about those
20 in detail. Equally important was the 45 feet along the
21 entire right of way from the Bridgeport area, and/or from
22 the Milford area, the Norwalk. They're done the same way.

23 Realizing your country upbringing, the real
24 estate in that area is not cheap.

25 (Laughter.)

1 MR. BLUMENTHAL: And getting less cheap every
2 day.

3 (Laughter.)

4 MR. PRETE: I'm afraid so.

5 MR. BLUMENTHAL: Let me just ask a general
6 question: Without meaning to ask for too technical a
7 response, the premise that the Southwestern Connecticut
8 system is a weak one, I've heard that term used repeatedly
9 this morning. Will it remain weak, even after the 345 KV
10 line is installed between Bethel and Norwalk, and the line
11 that's contemplated from Norwalk to Stamford?

12 MR. PRETE: In comparison to what it is today, it
13 will be significantly stronger. In comparison to a 345
14 system elsewhere in New England, it would still be
15 considered weak.

16 MR. BLUMENTHAL: Compared to, for example, what
17 system?

18 MR. PRETE: The Boston area. The rationale is
19 that we're essentially right in the corner of the state
20 where you don't have any other 345 or other high-voltage
21 connections from the Long Island side or from the Western
22 side.

23 You just really have it on one or two sides, and
24 when you lose one of those particular feeds, that's what
25 drives the weakness.

1 MR. BLUMENTHAL: You mean the existing
2 connections from Long Island haven't solved our energy
3 problems in the state of Connecticut?

4 MR. PRETE: I'm sure that was a rhetorical
5 question.

6 (Laughter.)

7 MR. BLUMENTHAL: Thank you.

8 MR. PRETE: You're welcome.

9 MR. EARLEY: Mr. Chairman, before we leave John's
10 and go on to Ann's presentation, I just want to make sure
11 that we're reinforcing the context for which we're here.

12 The State's consumers have to pay some of the
13 highest electric rates in the country, yet we have one of
14 the worst transmission systems and one of the worst
15 generation infrastructures as well.

16 The Attorney General said earlier that we need to
17 look at this in terms of a holistic approach, and this is
18 really starting with the tail. I would submit that no other
19 issue that faces consumers now, from an energy perspective,
20 is more important than addressing this transmission issue,
21 and that the costs that are going to directly impact
22 consumers over the next three years, are very, very
23 significant, and we can't ignore that, as we have, for the
24 remainder of this program.

25 I would also say and submit, as the State's

1 Conservation Chair for the Energy Conservation Load
2 Management Board, that we're not going to get it done with
3 just conservation. The time has come, the plan is
4 important, and looking at reports is important, but we need
5 results and we need to start building things.

6 Finally, in that same conservation perspective,
7 as we move into the next month and look at the 12(c)
8 proceeding, it's my understanding that Connecticut is the
9 only state whose consumers have actually contributed to ISO
10 New England's demand response program.

11 We have tried, I think. Over the last few years,
12 we've put almost \$400 million into our usage patterns to be
13 addressing our problems on the demand side. I hope that's
14 taken into account when we look at the responsibility of
15 socializing the infrastructure.

16 MR. PRETE: I would agree wholeheartedly with
17 your statements. I would also note that early on in these
18 proceedings, one of the requirements of the applicants to
19 the need of a reliability solution -- we were tasked with
20 looking at DFM, looking at conservation, looking at
21 generation to find out if that, indeed, could solve it.

22 And there are volumes and volumes of studies that
23 prove that you need the infrastructure first to allow that
24 to happen. And I would urge those who need to, to look into
25 the procedure.

1 MR. DOWNES: Commissioner Harrington?

2 COMMISSIONER HARRINGTON: Just a quick question
3 with regard to the three options: Let's, for a second,
4 assume that there is no law in Connecticut that requires you
5 to maximize underground cable. Which of the three options
6 would be the overall choice, if there was no law?

7 MR. PRETE: I believe, as stated with the ROC
8 Group -- and, again, our task, which I'm sure is true in
9 other states -- is that we need to find a solution that best
10 balances environmental, social, public health, public
11 safety, as well as economics.

12 That would be what we call the 13-mile solution.
13 That would be addressing everything but the legislative
14 requirement to maximize underground.

15 COMMISSIONER HARRINGTON: You would choose the
16 13-mile option?

17 MR. PRETE: In the applicants' mind, that's
18 correct.

19 MR. DOWNES: Roger?

20 MR. ZAKLUKIEWICZ: Thank you, Mr. Chairman. With
21 regard to Attorney General Blumenthal's question regarding
22 the width of the system, we all need to recognize that the
23 transmission system, although, as Mr. Prete described it,
24 would still leave relatively a weak system, the 345 KV
25 system being proposed would allow the interconnection of

1 additional generation onto the system, which today is not
2 possible.

3 The 115 kilovolt system is so overloaded today,
4 you could not install additional large baseload generation
5 in Southwest Connecticut. That's what makes the system
6 extremely weak.

7 The 345 solution, as proposed, allows then for
8 the interconnection, and, as John described, the existing
9 Milford generating plant would be placed up onto the 345;
10 the Bridgeport Energy Project, which is 550 megawatts, would
11 be placed on the 345 KV system.

12 Additional generation now would also be allowed
13 to be interconnected onto the 345 kilovolt transmission
14 system, and the combination of the new transmission and the
15 ability to interconnect new economic, large baseload
16 generation together, collectively, will significantly
17 strengthen the system and bring it to a point like more of
18 what we have in other parts of the United States.

19 MR. DOWNES: Mr. Blumenthal, then Mr. van Welie.

20 20

21 MR. BLUMENTHAL: Just a question: Do you know
22 what the total capacity in the New England system is, in
23 terms of megawatts, as compared to the load overall?

24 MR. ZAKLUKIEWICZ: Are you speaking of
25 generation?

1 MR. BLUMENTHAL: Yes, I was talking about
2 generation, but I didn't mean to put you in the witness
3 chair, so to speak, but I'll ask it of whoever wants to
4 answer it.

5 MR. PRETE: I'm not sure I can answer for New
6 England.

7 MR. ZAKLUKIEWICZ: Approximately 31,000 megawatts
8 of generation in New England, and the peak load would be
9 between 25,000 and 26,000.

10 MR. BLUMENTHAL: So that's 31 versus 25. How
11 about for Connecticut?

12 MR. ZAKLUKIEWICZ: Seven thousand load and
13 approximately, I think, subject to check, somewhere around
14 5500 in generation. I want to respond to a point that was
15 raised earlier by Mr. Earley.

16 Just so you understand, I agree with you, as you
17 may know from my public comments, about the priority that we
18 need to place on transmission. I mentioned the tail-of-the-
19 dog context in terms of charges.

20 You know well, from having sat through the recent
21 DPUC proceedings on the rate increase that we're going to
22 see and we are seeing now, that much of our rate increase is
23 the result of federally-mandated charges.

24 In that context, I was talking about federal
25 policies that we are not discussing today. I don't want to

1 use the forbidden word here, but one of the problems with
2 some of the federal policies, in my view, with all due
3 respect, is that they fail to place the priority on
4 transmission that I think we need before we provide proposed
5 incentives for generation.

6 So I agree with you very heartily on the point
7 that you made. Thank you. I didn't want you to
8 misunderstand, or anyone else.

9 MR. DOWNES: Mr. van Welie?

10 MR. van WELIE: I just wanted to reinforce
11 something Roger said. It's a very important point, and I'll
12 tie this back to my statement about the fact that
13 Connecticut needs an energy plan.

14 This transmission line we're talking about, will
15 go into service, earliest, around 2009, and every year
16 between now and then, the load is going to continue to grow.

17 17

18 We also know that in terms of the generation
19 resources within the state, that they're deficient,
20 particularly down in Southwest Connecticut. Those resources
21 are old and inefficient.

22 The state cannot afford just to focus on
23 transmission. They need to focus on the supply side of the
24 picture as well. I think that's where we need that energy
25 plan. We need to tackle both of these issues.

1 MR. DOWNES: I should just point out -- I'm
2 sorry, excuse me, sir. Senator?

3 COMMISSIONER HARRINGTON: Thank you, Mr.
4 Chairman. I have just a very quick followup, because a
5 concern has just been raised while I've been listening to
6 Gordon.

7 The estimate for federally-mandated charges for
8 2004, this past year, was roughly \$100 million. ISO is
9 estimating the 2005 figure to be \$300 million.

10 Gordon has just indicated that the line will not
11 be complete until 2009. Should we expect a continuous
12 trending of costs as we see between 2004 and 2005? We're
13 going to go from \$100 million to \$300 million in 2005, to
14 \$500 million in 2006, to \$700 million in 07/08?

15 Is it going to continue along that trend? Are
16 you in a position, John, to answer that question?

17 MR. PRETE: I think Gordon is.

18 (Laughter.)

19 MR. van WELIE: If you look at the slide that
20 Steve Whitley put up, where he broke down the \$306 million,
21 there are four different components:

22 The first component shows these RMR agreements.
23 That's the area that's going to show the biggest increase.
24 We've seen, from a New England perspective, we've seen that
25 double in terms of the forecasts just in the last few

1 months.

2 Basically what's happening is that generators are
3 having to apply to the ISO and to the FERC for these things
4 called reliability contracts, and those are expensive, and
5 you end up having to pay rates equivalent to what were being
6 paid under the normal or previous cost-of-service paradigm.

7 That's what's driving the cost. You're going to
8 see many more of those applications. We have seen many
9 more, just in the last several months, and we know that we
10 will see many more in the future, so that's probably going
11 to be the biggest cost driver that you're going to see.

12 You're going to still see some of these other
13 charges, as well. The GAP RFP could grow, and the longer we
14 delay building the transmission line, the more we're going
15 to have to plug our finger into the dike with these
16 emergency RFP resources.

17 So I think your assumption is correct. You're
18 going to see these costs grow significantly over time.

19 SENATOR HERLIHY: First of all, Gordon, thank you
20 for answering. So then, whereas I suggested earlier that
21 for the fixed-income senior residential who is paying
22 somewhere between \$100 and \$200 more a year for federally-
23 mandated costs or penalty costs, if you will, or the
24 business that's struggling to stay afloat, \$150 to \$200,
25 you're suggesting that it's not only going to be that amount

1 per year, but potentially more than that amount per year, at
2 least through 2009.

3 MR. van WELIE: Correct.

4 SENATOR HERLIHY: Thank you.

5 CHAIRMAN WOOD: Listening to the questions here,
6 I appreciate, as a former state regulator, the desire to
7 label something as being in the other guy's pot, but I
8 should say that kind of the core principle of good
9 ratemaking is that the incurrer of the cost is the one who
10 pays the costs. Cost incurrence follows cost
11 responsibility, so if -- and we're good guys, so we're glad
12 to have the name federally-imposed charges be done, if
13 that's what it takes to navigate the political shoals of
14 Connecticut, but I think that the customer ought to know
15 that the cost of RMR agreements are for generators in
16 Connecticut to serve customers in Connecticut at a cost-
17 based rate, that the GAP RFP is the ISO New England coming
18 in to get demand-side projects to serve -- to pay to reduce
19 the demand in Connecticut for a system that can't handle it;
20 that the congestion or the charges that are imposed on the
21 transmission customers, that there is insufficient
22 transmission to serve because it's congested.

23 And those are the customers here in Connecticut
24 paying for that, and that the running of uneconomic
25 generators is because we don't have new generators, for the

1 reasons we've talked about today, in Connecticut, to serve
2 the customers of Connecticut.

3 So we're happy to be called federally-imposed
4 charges, but please know that they are meant to serve the
5 customers of Connecticut for Connecticut's needs.

6 MR. DOWNES: I'm particularly glad to have you
7 take responsibility for those. Thank you.

8 (Laughter.)

9 MR. DOWNES: But in fairness, I guess I should
10 point out, just so everybody realizes what the equation is
11 here, if LICAP didn't exist, if RMRs didn't exist, if LMP
12 didn't exist, there still would be substantial costs in the
13 actual cost of generating and moving energy, whether these
14 federal charges exist or not, and you can see it in the
15 contracts we just went out to bid for.

16 Connecticut Light and Power just went out to get
17 the contracts for the 05 year, and we saw a dramatic
18 increase. And that dramatic increase came from, in part,
19 increases in fuel, but also came from the uncertainty in the
20 market over their obligations to serve here and what
21 obstacles and costs they might run into in actually
22 delivering power here, never mind LMP or any of the other
23 charges.

24 So, before we all kind of get in the mode of,
25 well, all we've got to do is just get rid of all the FMCCs

1 and everything will be great, I think we need to get a
2 little more dose of reality here and realize that a lot of
3 these costs are built into the actual cost of generating and
4 delivering energy, whether the FMCCs existed or not. Thank
5 you.

6 MS. MCKINLEY: Now that we're talking about costs
7 --

8 MR. PRETE: I have one more slide to conclude.
9 (Laughter.)

10 MS. MCKINLEY: Sorry, John.

11 MR. PRETE: It's okay. I've been standing here
12 for awhile. It's actually just a recap, and I won't go
13 through it in detail.

14 (Slide.)

15 MR. PRETE: Certainly one of the goals that we
16 had before us in October, was to come forward with solutions
17 that meet the reliability needs in Southwest Connecticut.
18 Indeed, we did. You can see that it doesn't impact the
19 reliability of the grid. That's very important. It has a
20 good chance of flying through what we call Z18-4.

21 And Dave talked about the good news/bad news, so
22 I won't reiterate that. Certainly one of the things that we
23 had hoped for was additional underground, since, as a
24 company that gains its revenue and income from more
25 construction, we would have liked that.

1 So, thank you very much.

2 MS. MCKINLEY: Thank you, and now we'll hear from
3 Ann Bartosewicz. I would caution the folks on the dias that
4 if you turn the lights off on your microphones, you'll be
5 able to hear her better. That's the way the system works
6 here.

7 (Slides.)

8 MS. BARTOSEWICZ: Good afternoon. As someone who
9 has been on the forefront of this project every day since
10 its inception, I appreciate FERC and the DPUC for their
11 attention and participation in this matter.

12 I'm here to talk about costs. I'm going to start
13 with some assumptions on cost.

14 Based on the ROC report, what we did was, the
15 three solutions that were put forward, were essentially re-
16 estimated, and these are our major assumptions: A 2009
17 inservice date; that they are done in 2004 dollars; that
18 they include the changes needed to make the 24 miles work in
19 the ROC report solution; that includes the change to a
20 cross-linked poly cable from the fluid-filled cable and it
21 includes substation equipment, the new substation equipment
22 we'll need to make that work.

23 It also includes some variability for costs
24 associated with unknown factors. We need to remember that
25 at this stage, these projects are conceptual in nature.

1 They need to do final design. We need firm bids on
2 construction, and we don't know exactly what we're going to
3 encounter as we go down 24 miles of Route 1.

4 So here are the numbers. You can see that we
5 have provided estimate ranges, and those ranges are really
6 based on those cost variability items that I just talked
7 about.

8 So in the 24-mile case, you see the range of 837
9 to 993; you see that when you reduce the number of miles of
10 underground, you reduce the total price of the project, so
11 the 13-mile case shows you that 811 million estimate to 947
12 million, and in the four-mile underground case, that range
13 is 754 to 864.

14 Now, back when CL&P and United Illuminating filed
15 the application for this project, that was back in early
16 2003 when we prepared our initial estimates.

17 So, what I've tried to do in this slide is to
18 explain how things have changed since then. And you can see
19 the initial estimate is at 603 million, and the changes that
20 I talked about in the assumptions, are some of the reasons
21 why these costs have increased.

22 You see delay and scope changes are the major
23 reasons. So when you look at a two-year inservice date
24 change -- our original hope was to get this project in
25 service by 2007 -- you add two years on because of project

1 delays, and we're assuming we can do this by 2009, as long
2 as we can move forward expeditiously. Maybe we can do it a
3 little sooner than that, but a two-year schedule change
4 accounts for about \$100 million worth of additional costs.

5 You go from the schedule change to our scope
6 change and the price of cross-linked poly cable compared to
7 HPPF cable. It's significantly more expensive.

8 In addition, as John talked about, we have
9 additional substation equipment, and going to 500 KV
10 substation equipment from 345 KV substation equipment has a
11 price tag, so about \$100 million of this delta is due to
12 changes in the scope to make the 24-mile case work reliably.

13 I should tell you that these numbers are now on
14 the 24-mile case, which is the proposal that's currently in
15 front of the Siting Council.

16 Going from the \$813 million number up to the low
17 end of our proposed range, there have been some changes in
18 assumptions. We, for example, have a change in a sales tax
19 rate that we've accounted for.

20 We've also had the changes in the variability,
21 particularly along Route 1. The amount of rock and
22 contaminated soil is questioned as to how much we're going
23 to actually run into, so there are some assumptions in here
24 for percentage of what we will incur as we do construction.

25 Talking about the variability component, it's a

1 large component of the change in price, and these are some
2 examples of those items that we anticipate potentially
3 changing. Commodity costs: Right now, we know that, for
4 example, the price of steel has increased 50 percent since
5 2003. We could expect these prices, as commodity costs, to
6 increase by the time this project is constructed.

7 Although the Bethel-to-Norwalk Project has gotten
8 very close to signing agreements with the Connecticut
9 Department of Transportation, we have not yet begun those
10 efforts. We have to go through a variety of environmental
11 permits with the DEP, Army Corps of Engineers.

12 Permit requirements that they may impose on us,
13 are unknown at this time. An example is potentially putting
14 a cable vault in the street, versus moving the cable vault
15 to the side of the street. There is a cost in doing that.

16 The third bullet on this slide talks about the
17 variations in equipment specifications. We have not done
18 detailed design, and as we go through the process, once we
19 hope this project is approved by the Siting Council, we go
20 through a process called development and management plans.

21 In these plans, the Companies will do the
22 detailed engineering, and as that engineering is completed,
23 we will know more exactly, the equipment specification
24 requirements.

25 The last bullet on this slide, again, shows the

1 factors for rock and contaminated soil. We expect, along
2 Route 1, to run into a variety of unknowns. These are two
3 of the greatest unknowns. So, as we heard this morning,
4 the cost of doing nothing is expensive. What we've tried to
5 do on these next couple of slides, is to bring these costs
6 down, the total project costs down to a lower level,
7 essentially.

8 So, we've done some revenue requirement
9 calculations to figure out for a \$900 million illustrative
10 price tag of a project, what would it cost the State of
11 Connecticut customers? So, if we assume \$900 million is the
12 cost, and none of these costs were socialized throughout New
13 England and Connecticut paid the entire tab, you would be
14 looking at a \$126 million cost per year.

15 If the cost is then socialized throughout all of
16 New England, Connecticut's portion of that is approximately
17 27 percent, so this is a simple math example here, and 27
18 percent of \$126 million is \$34 million on an annual basis.

19 We heard earlier, Steve Whitley talk about the
20 cost of essentially doing nothing, the costs Connecticut
21 customers are paying for an inefficient transmission system
22 at about \$308 million.

23 Now, we do know that the Middletown-to-Norwalk
24 Project is a reliability project. However, this project
25 will go a long way to reducing these annual costs of doing

1 nothing, so as cost pressures increase going forward for the
2 RMR contracts and all those other items, projects like this
3 will reduce those costs going forward.

4 We took it down to a lower level, which I know
5 there's a lot of interest in, based on the questions we
6 heard this morning. So we took this illustrative example of
7 \$900 million in project cost and, in Connecticut, we've
8 estimated the types of customers we have -- residential,
9 commercial, industrial -- their average current monthly
10 bill, as it would be today, and we did a calculation to
11 determine what would the impact on a customer bill be?

12 This is the monthly impact on each bill, so if
13 the costs -- if Connecticut paid 27 percent of the total,
14 meaning the entire of the project was socialized throughout
15 New England, the cost, if regionalized, that column, is the
16 impact to a customer's bill on a monthly basis.

17 If the cost of the entire project were borne
18 solely by the state of Connecticut, the column that has the
19 \$126 million line, would be the monthly price, the monthly
20 addition to the bill for customers in Connecticut for the
21 various types of customers.

22 And what we did is compare that to the cost of
23 doing nothing. If we took the same calculation for the \$308
24 million that we heard about this morning, and looked at what
25 might be the cost to a customer's bill in Connecticut, you

1 see that that third column would be illustrative costs of
2 the \$308 million on a monthly basis, per customer.

3 What you can see here is that the cost of doing
4 nothing is about ten percent higher on a residential bill,
5 and the cost of the project, as you can see, based on how
6 costs get allocated in New England, how they change.

7 I believe that is the end. I'd be happy to take
8 questions.

9 MS. MCKINLEY: Any questions? Commissioner
10 Harrington?

11 COMMISSIONER HARRINGTON: Thank you. I just want
12 to get straight on these costs. In your slide there, are
13 you making the assumption that putting in the two new
14 cables, when they become operational in 2009, will totally
15 mitigate the \$308 million charge that's estimated for 2005
16 and estimated to get higher in the future? So those lines
17 will go to zero?

18 MS. BARTOSEWICZ: No. What we're saying is that
19 building this project will go a long way into reducing the
20 costs, that \$308 million cost, but it will not completely --

21

22 COMMISSIONER HARRINGTON: So when you look at
23 these costs, the regionalized costs, the costs locally,
24 there is also going to be another column that you have to
25 add in, which is the remaining cost of doing nothing,

1 whatever is left in the four factors that were there.

2 So, in fact, there's an additional charge that
3 has to be added on, regardless.

4 MS. BARTOSEWICZ: Yes, that is correct.

5 COMMISSIONER HARRINGTON: Do you have any idea
6 how much that will be, or is it possible to even make an
7 estimate?

8 COMMISSIONER BROWNELL: If I could, as we heard
9 earlier, the penalty for having a weak transmission system,
10 will grow over time. And we don't know exactly how rapidly
11 it's going to grow, but it we believe it's going to head
12 north of \$300 million per year.

13 What the transmission grid does is, it not only
14 enables reduction of some of those \$300 million in charges,
15 it mitigates some of the growth of those charges, and
16 probably as importantly, it enables the addition of
17 generation to the system in Connecticut, which will
18 dramatically or should dramatically help mitigate the growth
19 of those charges.

20 So, really, transmission is the ticket. In
21 trying to do a precise forecast of the numbers, really, you
22 can get a lot of variability, based on the assumptions you
23 make.

24 But conceptually, I tried to lay out a framework
25 to at least think about it.

1 COMMISSIONER HARRINGTON: Okay, I just think
2 that's kind of a big issue that's going to have to be
3 addressed somehow, because we're really not able to come up
4 with a net savings on this net cost, because that's a major
5 variable. If we're talking numbers of \$500 to \$600 million
6 annually and you're mitigating 50 percent of it, that still
7 leaves \$200 or \$300 million a year, possibly, there, and I
8 just think that's something we need to know the answer to.

9 MS. BARTOSEWICZ: Correct. Just to emphasize
10 again, this project is a reliability project. That's its
11 first purpose.

12 MR. LeCOMPTE: Ann, could you clarify the cost
13 projections on your slide? Using a \$900 million project and
14 the regionalization, what portion of those costs are you
15 talking about in that?

16 MS. BARTOSEWICZ: On this slide, if you look at
17 the \$126 million, that assumes 100 percent of the costs paid
18 by Connecticut customers. It's just illustrative, so that
19 the second number, the \$34 million is if 100 percent is
20 being socialized throughout New England and that is
21 Connecticut's 27 percent.

22 MR. LeCOMPTE: Have you done an analysis of the
23 Connecticut undergrounding, you know, just the, if you will,
24 the changes and the regionalization of the, if you will, the
25 project, without the undergrounding upgrades?

1 MS. BARTOSEWICZ: If I go back to this slide, one
2 of the things the ROC report solution was, was a threefold
3 solution. The four-mile case is essentially the overhead
4 solution, so if one was looking at a comparison, you could
5 compare the estimate for the four-mile case to the 24-mile
6 case, to see the difference.

7 MR. LeCOMPTE: And so in the numbers that you're
8 presenting, it is not the increment from the overhead to the
9 underground, but the local cost recovery is for the entire
10 project in the numbers that you have?

11 MS. BARTOSEWICZ: On this slide, it's total
12 project cost, so if the 24-mile case includes 24 miles of
13 underground, the total price is shown there. The third
14 column essentially is an overhead case, and so the
15 difference between the estimated ranges for the 24-mile case
16 and the four-mile case, is essentially the additional cost
17 of cable, substation equipment required to make the 24 miles
18 work.

19 MR. LeCOMPTE: And so, in -- maybe I'll try to be
20 -- and so have you done a regionalized cost recovery of the
21 overhead case and a localized cost recovery of the increment
22 from the overhead case recovered locally?

23 MS. BARTOSEWICZ: In the illustrative example, we
24 have not done those calculations.

25 MR. LeCOMPTE: Thanks.

1 MS. MCKINLEY: Senator?

2 SENATOR HERLIHY: Thank you, Chairman, and, Ann,
3 thanks for being here. Ann, I guess I'm struggling with, if
4 -- well, I'm struggling with a few things, but we're going
5 to use a \$900 million estimate, even though it could very
6 well be higher than that. It's a fair estimate.

7 Now, the concern that I have is, as you do these
8 cost projections, it almost appears as though you've taken
9 27 percent of \$900 million or \$126 million. I'm not using a
10 calculator; I'm just guessing that maybe that's why I don't
11 understand this.

12 But if Connecticut is paying the total cost of
13 \$900 million -- now, you mention that on that page 23. Now,
14 when you say an annual cost of the project, you don't mean
15 that we're going to be dealing with that cost on an annual
16 basis; you mean that's the total cost of the project; is
17 that correct, Ann?

18 MS. BARTOSEWICZ: This is a revenue requirements
19 calculation, so, for the first year, when the entire cost of
20 the project is put into service, it's essentially put into
21 rate base. And to figure out what the revenue requirements
22 on that would be for the first year, this is the cost.

23 Now, when a facility goes into rate base, it is
24 amortized over its life, so, for every year following, this
25 number will slowly reduce.

1 SENATOR HERLIHY: Steve Whitley, earlier, was
2 kind enough to answer some questions of mine. I was
3 assuming that our growth from a \$600 million project to what
4 I expect to be a billion dollar project by the time we're
5 done with it, I was utilizing a \$400 million example.

6 And in my conversation with Steve, I was assuming
7 that, you know, the two million ratepayers that make up
8 these three classes -- residential, commercial, and
9 industrial -- that they were only going to be hit with, you
10 know -- not -- in my simple example, I'm using the \$400
11 million difference, divided by two million ratepayers, so
12 \$200 a bang for each ratepayer in the state of Connecticut.

13 Now, simple me was assuming that was a one-time
14 bang. You're suggesting here that this is an increase that
15 they are going to sustain through -- and when I hear
16 "amortization," I'm thinking 20 or 30 years.

17 MS. BARTOSEWICZ: It's like buying your house
18 with the mortgage and taxes. You pay that down over the
19 life of that loan, essentially.

20 When an asset goes into utility rate base, a
21 company earns a return on that, its 40-year life.

22 SENATOR HERLIHY: So this, Phase I and Phase --
23 this estimate is only for a portion of the improvement in
24 Southwest Connecticut, and it's been determined that this
25 improvement, as was spelled out by a member of FERC, I

1 believe, is not even going to completely address the problem
2 in Connecticut, and will simply not -- and will not make the
3 \$300 million of what I call federally mandated -- because
4 everyone else does -- penalty cost is what it is.

5 (Laughter.)

6 SENATOR HERLIHY: It's not even going to make all
7 of it disappear, but a portion of it disappear, because
8 instead of being the worst constriction problem in New
9 England, we're going to be better than that after we spend -
10 - and you're telling me that people are essentially paying
11 \$900 million a year?

12 MS. BARTOSEWICZ: The \$900 million is the cost of
13 the project, the capital cost of the project.

14 SENATOR HERLIHY: And it will be amortized --

15 MS. BARTOSEWICZ: Over a 40-year life.

16 SENATOR HERLIHY: Okay. Now, how do you get from
17 the \$900 million, Ann, down to a hundred? Connecticut is
18 paying the total cost?

19 MS. BARTOSEWICZ: Correct.

20 SENATOR HERLIHY: Why the jump down from \$900
21 million down to \$126 million?

22 MS. BARTOSEWICZ: What \$126 million and \$34
23 million would be --

24 SENATOR HERLIHY: No, just the \$126.

25 MS. BARTOSEWICZ: The \$126, that would be --

1 let's use our 40-year amortization example. It would be
2 your first year, would be what the cost to Connecticut
3 customers would be, if Connecticut paid the entire -- had to
4 pay the entire cost of the project.

5 SENATOR HERLIHY: Okay, so we can either pay lump
6 sum, \$200, at two million -- I'm looking at the -- I'm going
7 back to my example of 400. We can either pay this lump sum
8 or we can burn it over how many years?

9 MS. BARTOSEWICZ: It's going to be a 40-year
10 life, amortization life of the asset.

11 SENATOR HERLIHY: Okay.

12 MR. DOWNES: Senator, part of what may help here
13 is that the rate treatment of this would work in such a way
14 that the highest cost would be paid in the first year. By
15 the time you get out to the 40th year, the number that would
16 be paid in the 40th year would be a very small fraction of
17 the 126.

18 What I'm driving at is, you can't take 40 times
19 126 and say, well, that's what the cost is.

20 SENATOR HERLIHY: Right.

21 MR. DOWNES: You're actually -- and I have no
22 idea how quickly it drops, but it drops by X-number of
23 million dollars per year, for each year that you go through
24 the 40-year cycle. By the time you get to the other end of
25 the 40-year cycle, the 38th, 39th and 40th years are

1 probably very, very small numbers. Is that a fair
2 rendition?

3 SENATOR HERLIHY: Mr. Chairman, I appreciate
4 that, and I think I'm getting a better understanding. But
5 we all understand the value of money, and if we were paying
6 cash, we'd be paying \$900 million, and it's going to end up
7 being that \$900 million plus the interest, because we're
8 going to spread it over X-number of years.

9 MR. DOWNES: That's right.

10 SENATOR HERLIHY: I just wanted to make sure that
11 we hadn't taken the \$900 million cost and then divided it by
12 the 27 percent, roughly, which is Connecticut's part of the
13 region, and then once again in that second stage. Thank
14 you, ma'am.

15 MS. MCKINLEY: Do we have any other questions?

16 (No response.)

17 MS. MCKINLEY: I think we're ready for Steve to
18 talk about the process going forward for determining cost
19 allocation.

20 (Slides.)

21 MR. WHITLEY: Let me say up front that the ISO
22 cannot today, make any kind of predetermining judgment about
23 what the cost allocation is going to be. We have to see the
24 facts when they come through the process, and we have to
25 analyze what's the cost of what we might call the base case,

1 which is the case that is the lowest practical cost, best
2 engineering solution-type thing that meets the objectives of
3 the project, and then the other cost of the but for the
4 state law, the cost of that project.

5 So we'll have to see those costs. Ann has tried
6 to show us a range of what those might be for Phase II this
7 morning. We have to see the same thing on Phase I. Dave
8 talked about those numbers earlier in his presentation.

9 So I'm going to talk quickly about the process
10 that we have in New England, how it will be utilized and
11 followed. A lot of this, I actually covered at the last
12 meeting, so I'm going to go fairly quickly.

13 It is a process, and the cost allocation process
14 in New England is something that we have developed over the
15 last two or three years as LMPs were put in New England. We
16 developed a new method for cost allocation.

17 It involved a FERC filing; it involved a very
18 broad regional stakeholder process in New England to get
19 input on that. We ended up with an 80-percent support from
20 the stakeholders in the New England and the ISO support to
21 do that filing for this particular method. FERC approved
22 that in December of 03 and reaffirmed it in December of 04.

23 There were some key principles that were
24 developed. Part of the requirement that FERC asked us to do
25 was to identify what the key principles were for cost

1 allocation in our region, recognizing the unique
2 characteristics of our region, being a smaller region,
3 tightly connected, where things that happen in one state can
4 certainly affect the other states.

5 So here are some of the key principles:
6 Certainty of cost allocation and recovery is critical to
7 make sure that we can move ahead and get things built. The
8 process had to ensure that we looked at both economic and
9 reliability benefits that were region-wide, not just for a
10 local area.

11 It had to be consistent with principles of cost
12 causation and be consistent with principles of competitive
13 markets with LMPs.

14 The way the process works is driven by the
15 Regional Transmission Expansion Process that we call RTEP,
16 which will be renamed, by the way, to Regional System
17 Planning Process under the RTO, because our goal is to look
18 at much more than just transmission, to look at everything
19 dealing with reliability and efficiency.

20 But the process is based on the ISO doing a
21 review of system needs, looking down the road, five to ten
22 years down, what are our system needs to keep the lights on;
23 can we meet criteria or not. And that gets through that
24 process.

25 These are identified and ultimately projects get

1 identified to mitigate those needs, and if there are no
2 alternative market solutions, those transmission projects
3 end up working their way through a process that becomes a
4 part of the RTEP as a specific project.

5 The ISO also reviews the design of the proposed
6 transmission facility to ensure that the design is
7 compatible with the system in New England, that it does not
8 deter reliability of the New England bulk transmission
9 system.

10 Then there's a cost allocation process that we
11 have that's part of that tariff that FERC approved. It just
12 didn't identify a tariff that says if the project is good
13 for the system and provides for and meets this criteria of
14 two-way traffic and 115 KV and above, but it also has a
15 process that says if there's something in that project that
16 doesn't provide regional benefits, that piece of the cost
17 isn't regionalized; it's localized. The term we use is
18 12(c), but that's the process we're now going to go through
19 in New England to review the application for Phase I and
20 ultimately for Phase II in New England to determine what
21 portion of that project cost in each case, should be
22 regionalized versus localized.

23 It will involve a lot stakeholder input. First
24 of all, the NEPOOL Reliability Committee will be the
25 primary, according to the tariff, committee that reviews

1 these projects, and that's a longstanding process. Steve
2 Rourke is here today. He's the Chairman of the Committee.

3 We have already begun going through that process
4 on other projects before this project.

5 We also will be having a stakeholder meeting that
6 I discussed earlier, that will be open to both outside of
7 NEPOOL, to regulators and other interested parties, that the
8 ISO will be sponsoring, where the applicants will be making
9 presentations about their projects.

10 Basically, looking at the process itself, the
11 cost of upgrades that don't provide regional benefits are
12 localized. They're not passed on to regional; they're not
13 eligible for regional cost supports.

14 Instead, those localized costs are the
15 responsibility of the entity creating those costs, and that
16 will be the applicant that proposes those projects.

17 Now, the criteria that's defined in the tariff to
18 give us guidance on how to look at these costs, are listed
19 on the second bullet here for us to determine what is
20 reasonable to be regionalized.

21 The first thing would be that the cost for that
22 particular project represent good utility practice. That
23 basically means that the project meets the reliability
24 requirements of the system needs, that it's essentially the
25 lowest cost alternative that meets those needs and the other

1 objectives of the requirements to get the project in.

2 Also, a good utility practice is, you put in a
3 project that has long-term usefulness. You don't want to
4 put in a transmission project that the year it goes in, it's
5 out of head room and can't serve more load growth. So
6 that's a good utility practice, that it must provide you
7 room for growth.

8 So those are some of the things are looked at.
9 The next bullet is the engineering and design practices are
10 common to what practices are in that area or that region,
11 and so this gets at the underground versus overhead issue.

12 Is it typical to be putting underground in rural
13 areas, or is it typical to be putting underground in urban
14 areas, and what are the costs associated with those two
15 things?

16 Bullet 3: Alternative, feasible and practical
17 transmission upgrades, that basically means, is the design
18 compatible with the existing system? Is it operable? Will
19 it work?

20 The last bullet has to do with the relative cost
21 and operation. How quickly can it be put into service? How
22 efficient will it be? How will it work with the system?

23 So those are general guidance principles that we
24 have that are written specifically into the tariff. We will
25 go through a process to review each project that's proposed

1 to us, using those principles as guidelines.

2 How this process works: The ISO completes a cost
3 review and then the TO places -- does the construction, puts
4 the upgrade in service, and then the TO files its revenue
5 requirements to FERC for inclusion in those RMS rates.

6 A little background: We have had 12 requests for
7 cost socialization from New England transmission companies
8 since this new process has been put in place since January
9 04. We have over \$1 billion in total requests, excluding
10 the Phase II project.

11 Just las month, we received a very detailed cost
12 application from the applicants for Southwest Connecticut,
13 Phase I. We have a stakeholder review in February; the
14 Reliability Committee takes it up this month, right, Steve?
15 Starting next month.

16 As I said this morning, the process probably will
17 take several meetings to have the general project introduced
18 to the participants. There will be a lot of questions
19 asked, answers brought back, and it will go through an
20 iterative process that will probably take through May of 05
21 to have it resolved.

22 The next set of bullets talk about the RMS rates.
23 A lot of this pretty much echoes what Ann has just taken us
24 through.

25 We have a formula rate that establishes costs of

1 new facilities, and they are shared on a pro rata basis,
2 based on the load in each region and the amount of demand in
3 each area determines that proportional rate.

4 If consumers reduce their demand in that area,
5 that reduces their charges on transmission facilities in
6 that area. And these are the percentages that are there
7 today for that breakdown.

8 As Ann showed earlier, if a project proposed for
9 Connecticut, ended up going through this process and is
10 determined to be totally regionalized through that process,
11 then 27 percent of that would be paid by Connecticut, and
12 the rest of the states would pay these percentages.

13 That's the same process that's being used on
14 other projects that we have going on in New England right
15 now. We have 345 project going on in Vermont; we have
16 another 345 project going on in Boston; and we have a 345 KV
17 interconnection going on that's in the siting process now,
18 between us and New Brunswick in Maine.

19 So, that's the way the process will work. I
20 can't prejudge anything today. It's going to be very
21 interesting. We've got a lot of challenges before us.

22 But one thing, one of the alternatives is going
23 to be built as a line that's mostly overhead. We have an
24 estimate for that, and then we're going to build the line
25 underground, and you're likely to run into overruns when you

1 start doing some underground.

2 So we're going to have to think through, how do
3 we deal with that piece of it? We have experience in New
4 England that underground work -- looking at Boston, we've
5 seen a lot of overruns, so it's going to be interesting to
6 work through this process.

7 MS. MCKINLEY: Thank you.

8 CHAIRMAN WOOD: So, just to clarify, there was a
9 filing made last month for the Bethel-to-Norwalk Project,
10 and the total ticket on that was around?

11 MR. WHITLEY: That one was around \$350, and the
12 proposed an alternative and that one was around \$279 or so.

13 CHAIRMAN WOOD: Okay, and then you would expect -
14 - when in the process would the Phase II come to the Cost
15 Allocation Group?

16 MR. WHITLEY: The Phase II Project would be after
17 the Siting Council makes it final determination. There will
18 be some more engineering done, and then the applicants will
19 put together their application.

20 Assuming the Siting Council made a ruling, let's
21 say, in February, Dave, do you have a projection?

22 MR. BOGUSLAWSKI: If I could, one of the take-
23 aways for me from the last meeting is, there seemed to be a
24 consensus to have us try to get into the cost allocation
25 proceeding, much more quickly, much sooner in the process.

1 The difficulty with that is that the rules in the
2 cost allocation process are such that you need to have an
3 estimate that's within in ten percent of the final number.
4 Until you know what project you're building, how can you do
5 that?

6 So, what we've tried to do is frame up that more
7 undergrounding basically costs more. We've tried to ball-
8 park it.

9 If you look at the charts, you get about a \$200
10 million difference between the four-mile case and the 24-
11 mile case. I believe that the Siting Council, in its
12 decisionmaking, should recognize that that \$200 million is
13 probably at a bit of risk for localizing.

14 MR. WHITLEY: One other thing --

15 MR. BOGUSLAWSKI: I never did answer the question
16 on when to file.

17 (Laughter.)

18 MR. BOGUSLAWSKI: We are trying to find a way to
19 file a cost allocation application document sooner, under
20 the assumption that the Siting Council will order the 24-
21 mile case. If we make that assumption, we can probably file
22 that document in a couple of months, but, again, that could
23 probably wind up having us go through the process twice,
24 because we don't know, ultimately, what the Siting Council
25 is going to order.

1 MR. WHITLEY: One other feature of this process
2 that I want to mention is that on all of these major
3 projects, the ISO is retaining an outside engineering firm
4 to look at the estimates that were provided for the primary
5 proposal and the alternative proposals to ensure that
6 they're in a range of accuracy that is acceptable.

7 The ISO will be doing that and has been doing
8 that already on major projects.

9 MS. MCKINLEY: Mr. Chairman, I believe that
10 Derrick Phelps from the Siting Council is here to give an
11 update on its process.

12 MR. DOWNES: Yes, if we could move to Mr. Phelps,
13 that would be useful.

14 MR. PHELPS: Thank you very much, Chairman
15 Downes, Chairman Wood, Senators Herlihy and Fonfara,
16 Attorney General Blumenthal, thank you very much for this
17 opportunity to speak briefly before you at this important
18 conference.

19 I'm going to rehash some very minor remarks that
20 I said at the outset of my presentation in October,
21 describing, again, in the event that anybody can benefit
22 from it, about what the Siting Council is and our role, and,
23 again, provide a brief update and summary about where the
24 Docket 272 proceeding stands as of today.

25 As mentioned, my name is Derek Phelps. I'm the

1 Executive Director of the Connecticut Siting Council. The
2 Council has jurisdiction to objectively balance the
3 Connecticut statewide public need for adequate and reliable
4 services at the lowest reasonable cost to consumers, with
5 the need to protect the environment and the ecology of the
6 state.

7 The Council, an Executive Branch agency of the
8 Connecticut state government, exercises jurisdiction
9 provided by state statutes in certain narrowly defined areas
10 involving the siting and developing of specified facilities.
11 Such facilities include power generation and electric
12 transmission infrastructure.

13 With regard to the Docket 272 proceeding known as
14 the Middletown-to-Norwalk Project or Phase II project, many
15 of the audience members here today will recall that I
16 provided the October 13th Technical Conference with a
17 summary review fo the progress of the Phase II Middletown-
18 to-Norwalk Project.

19 In that report, I explained the general facts
20 related to when the Siting Council first received the
21 general application, which was October 9th of 03, and with
22 reference to the testimony of ISO New England of June 7th of
23 04 that focused on the question of the reliability of the
24 design proposal by the applicants and explained that the
25 Reliability and Operability Committee, or ROC Group, had

1 been formed as a result of that testimony by the ISO.

2 I also explained that the independent counsel
3 hired by the Council, KEMA, had completed a harmonic
4 resonance impedance study to explore how much underground
5 construction was potentially feasible within the context of
6 that criteria. I described the preliminary results of that
7 study, which stated that KEMA concluded that ten to 20 miles
8 of additional underground construction was potentially
9 feasible on the basis of their findings.

10 I finished my remarks by saying that the Council
11 was awaiting receipt of a report from the ROC Group that
12 would indicate what transmission line design is proposed for
13 review and consideration by the Council. It was not clear
14 when such a report was to be provided, although we had heard
15 that the report was likely to be provided in mid- to late
16 December.

17 The Council received the ROC report on Monday,
18 December 20 of 04. The report indicated that 24 miles of
19 cable from the Norwalk substation in Norwalk, to the East
20 Devon substation in Milford, can be installed underground,
21 without risking the reliability, safety, or operability of
22 the electric transmission grid in Southwestern Connecticut.

23 The report effectively said that only the
24 original 24 miles planned to be underground, can remain
25 underground, and nothing further. The report further

1 concluded that additional underground construction, quote,
2 "introduces unacceptable risks to the integrity and
3 reliability of the grid."

4 The specific design configuration notably called
5 for in the ROC report, involves a different technology and
6 hardware installations than was originally proposed, as
7 described earlier this morning.

8 The Council currently had evidentiary hearings on
9 this proceeding scheduled through January 20th of this
10 month, however, several parties and Intervenors in the
11 proceeding have expressed due process concerns over the
12 receipt of a ROC report solely in the proceeding.

13 The Council respects these concerns, thus, at a
14 hearing held yesterday, Chairman Katz requested that various
15 parties who desire further time to review the ROC report and
16 desire time to now conduct studies of their own, communicate
17 with the Council about these matters by noontime, January
18 18th.

19 Specifically, the Council asked that parties and
20 Intervenors, identify what additional discovery work,
21 including studies they wish to perform, and how much time
22 they estimate would be required for completing those
23 studies.

24 Chairman Katz announced that the Chairman will
25 consider how to respond to the information received on

1 January 20th, the last date currently scheduled for
2 evidentiary hearings.

3 The Council is committed to rendering a decision
4 on this important transmission line, in 2005. I think that
5 statement bears emphasis.

6 The Council remains committed to rendering a
7 decision on this important transmission line, in 2005.

8 Chairman Downes and Chairman Wood, if you have
9 any brief questions for me, I'd be happy to take them. I'll
10 ask that you restate the obvious, which is that I cannot
11 discuss much about the merits of the case.

12 CHAIRMAN WOOD: I appreciate that. We all live
13 in that world. I guess I have a question about the how the
14 Council works.

15 With the introduction of the undergrounding
16 requirement into state law recently, is that really the sole
17 determinant, in addition to compliance with environmental
18 laws or whatever? Is there a balancing required still, or
19 did you just chuck the balancing?

20 I guess that what I'm getting at is, would the
21 Council actually look at the cost issue and kind of do a
22 balancing act there as well? Or will they just look at the
23 statute as having changed?

24 MR. PHELPS: There is a balance charge that is
25 clearly called for in our proceeding. We have taken in some

1 evidence to date, relative to those concerns.

2 Mr. Chairman, I would point out two things: In
3 the Legislative Finding and Purpose of the state statutes
4 that provide for Connecticut's Siting Council and its
5 operations, there is reference to the lowest reasonable cost
6 to consumers.

7 That language is right in the opening section of
8 our statutes. I made reference to it again when I
9 introduced our agency here in these remarks.

10 However, Public Act 02446, which is the
11 legislation that passed during this last calendar year,
12 provides for this new requirement that applications be
13 deemed to not be consistent with the requirements for
14 certification, unless the applications are proposed to be
15 underground, next to certain select and specifically
16 delineated, or, you could say, sensitive, areas, residences,
17 playgrounds, and so on.

18 But that is a presumption that can be rebutted by
19 the applicants, if they choose to do so, by demonstrating
20 that the project and its underground construction, would not
21 be technological feasible.

22 And what we've been seeing thus far in this
23 application, has been, and recently -- and I think the ROC
24 report serves to do that -- is an attempt to achieve that
25 demonstration. It bears mentioning that, you know, that

1 legislation passed last session. It was signed into law --
2 I want to say -- June 3rd, by the Governor. Maybe it was
3 August 3rd, but it was mid-year.

4 And this application with regard to Docket 272, I
5 think it bears mentioning, was, for all intents and
6 purposes, on track for certification within the 12-month
7 timeframe that is also called for within our statutory
8 process. I'll remind you that it was filed with the
9 Siting Council on October 9th of 03.

10 There has been this pause in the process, a
11 substantial pause in the process, that was sparked or
12 spurred on by the events in June that arose when the ISO
13 spoke about its concerns about the reliability of the design
14 that was initially brought forward.

15 Then, to be fair, the underground presumption was
16 also something that, of course, the ROC Group had to wrestle
17 with during the time that they were involved in their
18 efforts to try to bring about an application that maximized
19 underground.

20 But all that aside, there's been what plenty of
21 folks might describe as substantial delay in our
22 adjudication of this proceeding from June to December 20th,
23 so I think the record would show that 17 days ago, we had an
24 application brought before us that is now described by the
25 applicants, UI, NU, and ISO New England, jointly, as being

1 reliable and technologically feasible.

2 I hope that doesn't over-answer your question.

3 CHAIRMAN WOOD: It answered a couple of them. So
4 the way the statute is constructed and the Siting Council's
5 charge is to go underground to the maximum extent possible,
6 and that can only be rebutted if there is a technical
7 feasibility issue, not an economic cost issue.

8 MR. PHELPS: That's correct, sir. It speaks
9 directly about technological feasibility.

10 CHAIRMAN WOOD: So it's an engineering question
11 and not economics, and nowhere along the line, is the
12 economic consideration?

13 MR. PHELPS: Apart from what I described earlier
14 with lowest reasonable cost, that's true, yes, sir.

15 CHAIRMAN WOOD: With the lowest reasonable cost
16 to consumers, then that would actually overlay -- I'm just
17 trying to think.

18 MR. PHELPS: I will tell you that what you're
19 getting to is a question that is the subject of some debate
20 among the various attorneys involved in our proceedings.
21 There are a great many parties and Intervenors, and I have
22 to tell you --

23 CHAIRMAN WOOD: And we'll be making new law.

24 MR. PHELPS: Inasmuch as I'm not an attorney and
25 I don't play one on TV, there are questions about whether or

1 not the degree to which the economic issues play a role, but
2 I can tell you that the Council construes, understands,
3 respects, and fully intends to abide by the spirit of the
4 Legislature's intent relative to Public Act 04-246, within
5 the body of that language which calls for the undergrounding
6 presumption, and only an option as a rebuttable presumption
7 on the basis of technological feasibility. That language is
8 absent any reference to economic issues.

9 CHAIRMAN WOOD: Got it. Thank you.

10 MR. DOWNES: Any questions for Derek?

11 COMMISSIONER HARRINGTON: Actually, the question
12 is for Ann. It had to do with costs.

13 What we just heard is that it could be as late as
14 the end of the year -- I'm going to assume December 31st --
15 before this approval is given. Will that have an effect on
16 your schedule, if that approval doesn't come out of this
17 Council by the last day of the year?

18 MS. BARTOSEWICZ: Yes, it can. We're doing
19 everything we can to design and try to construct this in as
20 expeditious a manner as possible, but delay will certainly
21 delay the schedule.

22 COMMISSIONER HARRINGTON: And the second one: On
23 page 22 of the handout, when you're talking about unknowns
24 could push the costs up to the high end of the range, at the
25 very bottom of that page, there's a note that says the cost

1 estimates do not include the \$68 to \$80 million estimated
2 incremental costs of constructed low-EMF designs.

3 Why is that not in there? Can you elaborate a
4 little bit more as to what the low-EMF design mandates? Is
5 this something different that we don't have associated with
6 existing 345 transmission lines?

7 MS. BARTOSEWICZ: In the course of Docket 272,
8 which is the Siting Council proceeding on this case, issues
9 on electric and magnetic fields have arisen throughout the
10 process. Actually, one of the requirements in Public Act
11 04-246 is something called a buffer zone.

12 The intent, as I understand it, is a safety zone.
13 What the Council has done through discovery, is ask
14 questions on how can the applicants reduce magnetic fields
15 on the overhead portions of their system right of way of the
16 proposed design.

17 What we have done, what our engineers have done
18 is, they have tried to redesign overhead transmission line
19 structures in an effort to minimize magnetic fields. To do
20 that, there is a dollar impact, and in Segments 1 and 2 on
21 the charts that John Prete showed you, the overhead
22 segments, we had designed alternative structures and
23 essentially bypassed around sensitive areas to a cost of
24 between \$68 and \$80 million.

25 COMMISSIONER HARRINGTON: Those are not included

1 in those figures, then?

2 MS. BARTOSEWICZ: They are not, because, at this
3 point in time, the applicants do not know what the decision
4 of the Siting Council will be, whether or not these will be
5 included or not, in a final decision from the Siting
6 Council. So we have provided them to the Council separately
7 for their evaluation.

8 COMMISSIONER HARRINGTON: Just so I can clarify
9 this in my mind -- and I may be wrong in this, but please
10 let me know if I am -- but it appears that this is another
11 \$68 to \$80 million being added on to the cost, as a result
12 of this Public Act 04-246

13 In fact, the low-EMF design is not in place in
14 the existing 345 KV lines, say, in New Hampshire, for
15 example.

16 MS. BARTOSEWICZ: That's correct.

17 COMMISSIONER HARRINGTON: Thank you.

18 MR. DOWNES: Senator Herlihy.

19 SENATOR HERLIHY: Thank you, Mr. Chairman.

20 Derek, may I ask you a question, please?

21 Would you remind repeating the phrase that
22 related to the fact that the Siting Council was allowed to
23 be aware of the cost borne by the consumer?

24 MR. PHELPS: Sure. "The Council's jurisdiction
25 is to objectively balance the statewide public need for

1 adequate and reliable services at the lowest reasonable cost
2 to consumers, with the need to protect the environment and
3 ecology of the state."

4 SENATOR HERLIHY: Lowest reasonable cost to the
5 consumers, and that's part of your charge.

6 MR. PHELPS: It is. It's found in the opening
7 section of the Legislative Finding and Purpose. Farther
8 down in our statutes, it breaks down the processes by which
9 we decide and certificate on different types of facilities
10 when you get to electric energy, power generation, and
11 electric transmission facilities.

12 SENATOR HERLIHY: Thank you. That appears to be
13 the inherent part of your obligation, what you just read to
14 us, in terms of serving the people of Connecticut; is that
15 correct?

16 MR. PHELPS: Certainly it's an active portion of
17 it. Any adverse environmental effect, is also an active
18 portion.

19 SENATOR HERLIHY: Why would a legislative act
20 trump that inherent obligation? Why does "lowest reasonable
21 cost to consumers" go out the window because of the passage
22 of -- I don't know the number, but the bill last year.

23 MR. PHELPS: With due respect, Senator, I'm going
24 to decline to comment on that. In all seriousness, that
25 actually is something that is, as I would say in the Navy,

1 above my pay grade.

2 There are questions about that very question that
3 are being discussed between the Attorney General's Office
4 and the attorneys representing the applicants, and whether
5 or not one takes precedence over the other, is probably not
6 appropriate for me to comment on right now, given that
7 there's an active docket pending.

8 SENATOR HERLIHY: Derek, in your estimation, is
9 the Siting Council allowed to be aware that a delay of every
10 week, month, and potentially another year, has costs to the
11 average consumer, whether it be a residential consumer or an
12 industrial consumer? That is based on the conversation
13 today. That is appearing to be well over \$300 million when
14 you add in some of the other costs to what was projected
15 here today, and potentially even more than that for years
16 further out.

17 Adding to that, the fact that as years go by, the
18 chance of more and more of the costs to actually build the
19 line are perhaps going to be less and less likely to be
20 socialized, is that something that the Siting Council is
21 allowed to be conscious of as they determine, do we nail
22 this thing next month or in 11 months?

23 MR. PHELPS: I think the short answer is, yes, to
24 the extent that these jurisdictional references in our
25 statutes allow for that kind of participation or evaluation

1 or consideration of evidence.

2 That kind of information, to the extent that it
3 is properly entered into the record, following rules of
4 evidence procedures -- I think there are a number of
5 participants in the proceeding who have been commenting
6 about that very concern already.

7 SENATOR HERLIHY: I admire what the Siting
8 Council does. I think they're in a tremendously difficult
9 and challenging position. I just wanted to make sure that
10 cost continues to be something that they are conscious of.
11 Thank you.

12 MR. PHELPS: Thank you, Senator.

13 MR. BLUMENTHAL: Just so we understand the timing
14 here, Mr. Phelps, when did the Siting Council receive the
15 ROC report?

16 MR. PHELPS: December 20th, sir, of last year.

17 MR. BLUMENTHAL: Literally a couple of weeks ago.
18 As far as you know, the Siting Council has an independent
19 responsibility, which it takes very seriously, to scrutinize
20 and evaluate the ROC report, as it does other consultants
21 whom it may retain to aid it in that task; does it not?

22 MR. PHELPS: That's correct, and we're doing so,
23 sir.

24 MR. BLUMENTHAL: Was the reliability concern with
25 undergrounding, something that was raised early in this

1 process, or was it something that was introduced later?

2 MR. PHELPS: The reliability concern, at least
3 with regard to ISO New England, was specifically and
4 strenuously spoken about on June 20th of last year. Prior
5 to that time, I think the Council was acting on the
6 assumption that we had an application before us that was
7 deemed to be acceptable by ISO New England.

8 We learned on January 20th that that wasn't so,
9 and that spawned the ROC Group process.

10 MR. BLUMENTHAL: In fact, the ROC Group process
11 took that intervening time, six months from June to
12 December, did it not, to complete its work?

13 MR. PHELPS: I think that's correct, sir, yes.

14 MR. BLUMENTHAL: And prior to that time, June of
15 last year, the Siting Council had before it, an application
16 that included 24 miles of undergrounding, did it not?

17 MR. PHELPS: That's correct, sir.

18 MR. BLUMENTHAL: In effect, it was alerted fairly
19 late in this process to those reliability concerns; is that
20 fair to say?

21 MR. PHELPS: I'll avoid using the
22 characterization that you've used, but I will report
23 factually that that was the schedule.

24 MR. BLUMENTHAL: Thank you very much.

25 MR. PHELPS: Thank you, sir.

1 MR. DOWNES: Mr. Earley?

2 MR. EARLEY: Just real quickly, maybe as a
3 compromise, would there be a way to supplement the Siting
4 Council's annual load forecast report, now that we're going
5 to begin a process where we really can find out what the
6 specifics are for the proposed cost of project for Phase II.

7 We do seem to have some clarity of what the cost
8 is going to be on an annual basis, I believe. Do you think
9 that's a number that we can now incorporate into the Siting
10 Council's report to the state? I think that would be
11 helpful.

12 Maybe as the Legislature begins to look at in the
13 coming year, policy issues that concern energy --

14 MR. PHELPS: I think I understand your question
15 and I think the best response that I can or should give to
16 it is that that's something that the parties and Intervenors
17 in the process can decide for themselves.

18 I don't mean to be avoiding the question, but I
19 think it really gets to the question of how people feel
20 their cases should be made.

21 MR. DOWNES: Mr. Prete?

22 MR. PRETE: Just to go back to the dialogue
23 between Attorney Blumenthal and Derek, the application that
24 was put forward, in the spirit of completeness, actually had
25 three solutions back in October.

1 It had the one with 24 miles, 13 miles of
2 underground, and four miles, so even though in June, I
3 believe, the ISO did, indeed, express concern about the 24,
4 they did not express concern about the reliability of the
5 solutions with 13 and four miles.

6 But the presumption in the law that was put in
7 place in June, did.

8 MR. PHELPS: I would not contradict that in any
9 way.

10 MR. DOWNES: Thank you.

11 MS. MCKINLEY: If there are no further questions,
12 I would like to have Dave Boguslawski summarize for us, very
13 briefly.

14 MR. BOGUSLAWSKI: Very briefly, thank you again.
15 I just want to thank everyone for being here today. The
16 consensus, as I said in the last meeting, is that there is a
17 need for transmission. It's urgent, it's desperate.

18 We committed to come back with the technical
19 studies; we've done that. We committed to come back with
20 new cost estimates; we've done that, and there has been some
21 discussion on cost allocation.

22 Those were the charges set out for us. The
23 application that we filed, as John said, in October of 03,
24 had three possible solutions in it -- four miles, 13, and
25 24. That allowed the Siting Council to do its work, to look

1 at the environmental impacts.

2 It doesn't matter whether they build the 24 miles
3 one way or the other underground, the environmental impacts
4 generally are the same.

5 As far as costs go, the longer we wait, the more
6 the costs rise. This project has been delayed. We've seen
7 fuel prices rise, which affects cost. We've seen commodity
8 prices rise, which affects costs.

9 We now have a tsunami event, which who knows what
10 that's going to do to the worldwide economy. We've got more
11 transmission construction; we've got more building going on
12 in the country. Who knows what that's going to do to the
13 cost, ultimately.

14 We've got to get on with this. The Siting
15 Council has an incredibly difficult job that's been made
16 more difficult by the law change during the process.

17 The law required an unprecedented effort of
18 pulling together a technical analysis that shows the maximum
19 amount of undergrounding. Eight consultants from around the
20 world have gotten together and reached consensus -- eight
21 consultants.

22 For those who are arguing that the record is not
23 complete, I look forward to the reports that you're going to
24 give to the Siting Council, because you've got a tough case
25 to make. We stand ready, two companies, United Illuminating

1 and Connecticut Light and Power, to build this desperately
2 needed project, however it's ordered, however it's decided,
3 but we've got to get on with the solution.

4 The longer we wait, the more it costs everybody
5 in the state of Connecticut. Again, thank you all for being
6 here.

7 MS. MCKINLEY: Thank you.

8 COMMISSIONER HARRINGTON: I just wanted to make
9 one final comment on this. After listening to this, I do
10 feel that there is a good case made that this cable or
11 cables are obviously needed for the transmission to get into
12 Southwest Connecticut.

13 But I am a little concerned that it looks at
14 almost \$300 million in additional costs associated with
15 PA04-246, and I think it would be a very hard case to sell
16 to the people in New Hampshire, that we have to pay an
17 additional -- well, nine percent of the \$200 million would
18 be \$18 million to improve the view in Connecticut or to
19 reduce EMF to levels that are below the EMF in the line that
20 runs, say, a mile from my house.

21 So I hope whoever is going to be making --
22 looking into that, takes that into their concern. There's
23 no desire for us to pay in New Hampshire to make the view
24 better in Connecticut. Thank you.

25 CHAIRMAN WOOD: Any other comments before we

1 close?

2 (No response.)

3 CHAIRMAN WOOD: Mr. Downes, I'll let you have the
4 final word. On behalf of my colleague, Nora, and our staff
5 here at the hearing from FERC, we want to thank again, the
6 Committee on Legislative Management for the reservation of
7 this facility. We didn't plan this around the snowstorm; we
8 planned it around when they told us we could have this room
9 because it was such a great room to use the last time. It
10 allowed the public to come in and out, allowed for the
11 broadcast of this to what I expect are a few snowbound home
12 customers that I hoped learned, as I did, a lot more about
13 the issues that we broached at the first part of this
14 meeting in October.

15 Thanks to the hard work of a lot of folks through
16 and including the holiday period, we've answered all the
17 outstanding issues that we've got. I do, as I mentioned in
18 my opening statement, recognize that this really is in the
19 lap of the state Siting Council. I appreciate, Derek, your
20 being here. Give our best regards to the Chair and the
21 Committee.

22 But as you have heard, even from our last speaker
23 here, there are multi-state, federal implications to this
24 very important facility for the electrical infrastructure in
25 New England. I appreciate that, and we will watch avidly

1 and interestedly, but won't promise to come back, because
2 there will probably be -- well, I don't want to say what
3 weather event would come that way if we come back, so we'll
4 watch from afar. We'll state engaged as we continue to
5 address this issue and all the many other issues that come
6 our way, as they come from the New England states.

7 Thank you, Don, as always, for your hospitality
8 and your good colleagues and old friends of ours and new
9 friends, and, Mr. Attorney General, it's always a pleasure,
10 and I thank our colleagues from the sister states up here.
11 It's always a pleasure to work with you all. Thanks.

12 MR. DOWNES: We thank you all, and this
13 proceeding is concluded.

14 (Whereupon, at 1:15 p.m., the technical
15 conference was concluded.)
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