

Cowan Panel Live Sur-surrebuttal Testimony (Copied from pages 35-49 of 1/29/07 PSB Hearing Transcript)

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15 BY MR. RAUBVOGEL:

16 Q. Dave, have you reviewed the surrebuttal
17 testimony filed by the Department of Public Service's
18 witnesses Mr. Ide and Mr. Kane?

19 A. (MR. COWAN) Yes, I have.

20 Q. And have you reviewed the surrebuttal
21 testimony filed by ANR witnesses Darling and Austin?

22 A. (MR. COWAN) Yes, I have.

23 Q. In the DPS testimony, Mr. Ide and Mr. Kane
24 expressed certain opinions and make recommendations
25 concerning the turbines located in Sutton. Is that your

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1 understanding of their testimony?

2 A. (MR. COWAN) Correct.

3 Q. Does UPC have a response to that testimony?

4 A. (MR. COWAN) Yes, we do. On the one hand, we
5 feel the project still meets – the previous project still
6 meets 248 criteria; however, we are interested in
7 accommodating the comments from DPS and from their
8 witnesses and from ANR. So we have in our
9 sur-surrebuttal, we are proposing a revised project.
10 Revised project eliminates the two turbines from Sutton
11 and incorporates them into the Sheffield portion of the
12 layout.

13 So now we have 16 turbines located entirely in
14 Sheffield, and no turbines any longer located within
15 Sutton.

16 Q. Dave, if you would look behind you, for the
17 project overview map, I'm sorry. Can you – not on the
18 one that's on the board, but –

19 A. (MR. COWAN) This one here?

20 Q. Yes. If you would just hold that up for a
21 second. I'm sorry. The label on there is not completed.
22 This is CRV-SSRB-2-B. Now can you just briefly describe
23 what that exhibit is?

24 A. (MR. COWAN) Sure. This is a – this is a plan
25 view showing in very general terms the new layout, in

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1 bright colors, as it compares with the previous layout
2 which are shown in gray tones. And you can see the

3 turbines are represented by the circles, and proposed and
4 existing roads are represented by these colors and the
5 dotted lines here.

6 Q. If you would flip that over, thank you. This
7 is CRV-SSRB-2-A.

8 A. (MR. COWAN) Right. And this is an overview of
9 just the revised layout. So the project that's currently
10 proposed. And again, the access road comes in here from
11 the Duck Pond Road. This is the VELCO power line.

12 Here's the substation, we have got new roads,
13 proposed new roads shown in orange, upgrade existing roads
14 shown in this magenta, the turbines shown as green dots
15 here. And so on.

16 Q. Dave, can you briefly describe the changes
17 that were made in this revised layout?

18 A. (MR. COWAN) Sure. Well in many ways the
19 project is the same. It's got the same number of
20 turbines, the same turbines; make and model, and they are
21 arranged more or less within the same area. And in fact
22 they are essentially clustered into a portion of the
23 previous area.

24 At the same time, there are a number of very
25 positive changes that go along with that in the rate

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1 reduction of impacts. We have got a small overall
2 footprint. Like 20 percent less road length. 17 percent
3 less total clearing from the project. We have reduced our
4 impacts on black bear habitat. We had, I think, 38
5 bear-scarred beech in the previous layout that would have
6 been taken by the project, and we have got that down to
7 about 20. We reduced probably about half the total impact
8 to wetlands and streams, and incorporating the two Sutton
9 turbines over into the Sheffield side of the layout, by
10 adding those two turbines it required the layout to be
11 reoptimized. And so turbines got shifted in order to
12 avoid weight losses and such, and as a result of that we
13 have – we actually have about a 3 percent increase in
14 power output resulting for the project.

15 Q. Dave, is there an exhibit that describes the
16 -- that compares narratively the changes in the project?

17 A. (MR. COWAN) Yes. There is. There is a
18 sur-surrebuttal filing.

19 Q. Is that SSRB-1? The comparison table?

20 A. (MR. COWAN) Yes. That's what it is. So it's
21 that table. We made the correction to – at the beginning

22 of the proceeding.

23 Q. Thank you. The – if you would also just –
24 let me ask you one more exhibit. Do you have the Ralph
25 Nelson – you do have it over there?

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1 A. (MR. COWAN) The detailed plans.

2 Q. Yes. That is SSRB-3-A. First of all, how
3 many sheets are there?

4 A. (MR. COWAN) I've got 3 sheets.

5 Q. Okay. And what are those plans?

6 A. (MR. COWAN) Okay. Well sheet one of three is
7 kind of another overview, but it's got more engineering
8 detail, it shows the 10 foot topographic contours and it
9 shows the project in its entirety. Here on the left side.
10 On the right side we have got a detailed view of the
11 vicinity of the proposed substation, VELCO power line, and
12 the lower access roads of the project.

13 You can see wetlands are shown in bright
14 green, and that serves to orient you to the – this
15 left-hand side serves to orient you to the other two
16 sheets. And so sheets two and three are more detailed
17 engineering, still preliminary engineering drawings, but
18 more detailed drawings of the project.

19 Here on sheet 2 you see the Duck Pond Road
20 entrance, but the VELCO power line, you see the proposed
21 new access road running roughly east/west, you see its
22 intersection with the new proposed road running up Libby
23 Hill, which then connects to this string of 5 turbines
24 which comprise the southern portion of the project. Again
25 wetlands shown in bright green and then any place where a

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1 wetland impact is anticipated, we highlight that in bright
2 pink.

3 Q. So Dave, the sheet 2 shows if you were looking
4 at the overview map, what would be described as the
5 western cluster of the turbines; is that right?

6 A. (MR. COWAN) Yes. Southern and western. Yeah.
7 And this is the more northeasterly cluster shown here on
8 sheet 3. Again, the symbols are used, in this case I'll
9 point out a few other things.

10 The turbines heads themselves, roughly
11 triangular shapes, they vary in shape from pad to pad in
12 an effort to minimize impacts. Also shown are – which
13 may be hard to see from where you are – little red

14 circles representing the actual bear-scarred beech that
15 were individually mapped and located by survey throughout
16 the project area.

17 Q. Dave, can I stop you there. How many
18 bear-scarred beech were mapped?

19 A. (MR. COWAN) I think it's on the order of about
20 1,400.

21 Q. And how many bear-scarred beech would be
22 directly impacted by the revised layout?

23 A. (MR. COWAN) We are on the order of about 20
24 at this point.

25 Q. Thank you. Is there anything else you wanted

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1 to say about sheet 3?

2 A. (MR. COWAN) No. I don't think so.

3 Q. Okay. Dave, in your opinion given your
4 background on environmental issues, do you think that this
5 revised layout has the potential to present significant
6 negative impacts under any of the environmental criteria
7 under Section 248?

8 A. (MR. COWAN) I do not.

9 Q. Thank you. Dave, you mentioned that you did
10 review the testimony of Austin and Darling; is that right?

11 A. (MR. COWAN) Yes, I did.

12 Q. Are you familiar with the recommendations that
13 they made in their surrebuttal testimony concerning post
14 CPG recommendations on bear and bird and bat issues?

15 A. (MR. COWAN) Yes, I am.

16 Q. Do you have a response to those
17 recommendations?

18 A. (MR. COWAN) Yes, I do. Throughout the process
19 we have had very close ongoing discussions with ANR staff
20 on these particular issues. And I think they have been
21 very positive and very productive. And we have made
22 steady progress in coming to an agreement. At this point
23 I believe we are actually very close to having resolved
24 those issues with them and to having an agreement worked
25 out. Specifically to address those issues, impacts to

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1 black bear, bear-scarred beech, specifically with regard
2 to potential impacts for birds and bats from the turbines,
3 and with regard to monitoring those potential impacts
4 during operations and potential mitigation should any be
5 needed.

6 Q. Thank you. Steve, have you reviewed the
7 surrebuttal testimony of Robert Ide with respect to the
8 sale of power from the project?
9 A. (MR. VAVRIK) Yes, I have.
10 Q. Do you have any – do you have a response to
11 that testimony?
12 A. (MR. VAVRIK) May I review that testimony?
13 Q. Mr. Ide's?
14 A. (MR. VAVRIK) This is the surrebuttal filed in
15 December.
16 Q. Right. And I guess my – maybe I can give a
17 more specific question. Mr. Ide expressed concerns about
18 wanting more details regarding the sale of power and the
19 type of power contracts that were being contemplated.
20 A. (MR. VAVRIK) Certainly. Let me start with
21 that. At the moment we have agreements in principle with
22 3 Vermont utilities; Washington Electric Co-op, Vermont
23 Electric Co-op and Central Vermont Public Service. For
24 the sale of all of our physical power. Vermont Electric
25 Co-op recently had a board meeting where they approved the

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1 general terms of our agreement, and we are working to
2 memorialize that in a power purchase agreement soon.
3 In general, they will take our physical power
4 for half of the project, 20 megawatts worth for 20 years,
5 and the price terms of market price less a discount.
6 Central Vermont Public Service is also interested in a
7 similar term, similar pricing, and Washington Electric
8 Co-op we pre-agreed general terms for up to 6 megawatts.
9 The first two megawatts are a substantial discount to
10 market prices, remaining four at a discount that's similar
11 to the other utilities.
12 Q. Thank you. Do you have any specific response
13 to Mr. Ide's testimony concerning the desirability of
14 fixed price contracts?
15 A. (MR. VAVRIK) Yes. As an owner and developer,
16 we too would prefer fixed price contracts. And when we
17 began negotiations with the utilities, that was our
18 initial offer. The utilities were hesitant to enter into
19 fixed price contracts at price levels that would be
20 economic for the project. In other words, price levels
21 that we would need to attract the financing, the capital
22 required to build the project, both from lenders and
23 equity investors.
24 In addition, they expressed some hesitation in

25 entering into fixed priced contracts of any term. After

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1 discussions back and forth, we realized that the best way
2 forward was linking it to a market price, spot market
3 price of power, but with a discount so there would always
4 be a benefit to them instead of buying power from the spot
5 market.

6 Q. Thank you. Steve, does the revised project
7 that's being presented now raise the potential for
8 significant impacts on the need for power from the project
9 under criterion B-2?

10 A. (MR. VAVRIK) Speaking about adverse impacts?

11 Q. Yes.

12 A. (MR. VAVRIK) No.

13 Q. Does the revised project have the potential
14 for significant negative economic impacts due to the
15 project?

16 A. (MR. VAVRIK) No.

17 Q. Scott, have you reviewed – first have you
18 reviewed the surrebuttal testimony filed by the Department
19 of Public Service in this case?

20 A. (MR. ROWLAND) Yes, I have.

21 Q. And you're familiar with the revised project
22 that's being presented here today?

23 A. (MR. ROWLAND) Yes, I am.

24 Q. In your opinion does the revised layout have
25 the potential for significant negative impacts on system

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1 stability and reliability?

2 A. (MR. ROWLAND) No, it does not.

3 Q. Does the revised project have the potential
4 for significant negative impacts on transmission
5 facilities under criterion B-10?

6 A. (MR. ROWLAND) No, it does not.

7 Q. Have you specifically reviewed the testimony
8 of Mr. Litkovitz in this case?

9 A. (MR. ROWLAND) Yes, I have.

10 Q. Mr. Litkovitz stated in his surrebuttal
11 testimony that because the ISO study was not yet – was
12 under revision, he could not express an opinion on whether
13 the project met 248(B)(3) and (B)(10). Do you have a
14 response to that testimony?

15 A. (MR. ROWLAND) Yes, I do. While I understand
16 the Department's position that absent a final study it's

17 hard for them to make an affirmative finding, there is a
18 couple of fundamental realities that would – we need to
19 be aware of. Number one, the PSB nor the DPS controls
20 interconnection to the utility system. And VELCO and ISO
21 New England will not allow an interconnection of any
22 project until they are satisfied with the results of
23 system stability and reliability. So you know, it's
24 certainly a process that will be completed, it's just a
25 matter of timing that DPS cannot do a final study at this

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1 point in time.

2 The second thing that's important to point out
3 is that a revised study has been issued by the ISO New
4 England subsequent to the testimony in question, the
5 original draft impact study was issued on August 1. After
6 the modifications of the project done in September. The
7 turbine technology changed, the turbine arrangement
8 changed and the overall name plate capacity for the
9 project changed. A revised study was initiated with VELCO
10 and ISO New England based on, I believe it was December
11 20, December 21, somewhere in that range.

12 Q. Is that Exhibit CRV-SSRB-4 that you're
13 referring to?

14 A. (MR. ROWLAND) Yes, it is, and the results of
15 that study while still in draft form, are very clear, that
16 there are no adverse impacts to system reliability or
17 stability.

18 Q. Does that study raise any issues that require
19 further review?

20 A. (MR. ROWLAND) There was one over-voltage
21 contingency on an N minus two configuration. That means
22 if there are two failures concurrently, two specific
23 failures rather concurrently in the existing transmission
24 system, there is one voltage case that runs about one
25 percent outside of the guidelines. From an engineering

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1 standpoint, that checks the box that there is a violation.
2 From a practical standpoint, further study is required to
3 determine whether or not that actually exists. It shows
4 up in a computer model.

5 It actually happened in the field, and to the
6 extent it does exist, it's fairly easy to fix at the
7 capacitor bank either at the point of occurrence at new
8 Berlin, New Hampshire or at the project site. Either of

9 those would be UPC's financial responsibility.
10 Q. Does UPC have a witness who can answer further
11 technical questions concerning that report?
12 A. (MR. ROWLAND) Yes, we do. Yes. I should
13 point out Dave Estey with E-Pro is certainly more
14 technically conversant on these issues than I.
15 Q. Thank you. Scott, have you reviewed the
16 surrebuttal testimony filed by Sutton witness Ken
17 Kaliski?
18 A. (MR. ROWLAND) Yes, I have.
19 Q. Mr. Kaliski states that UPC's noise experts
20 should have performed their sound modeling using the sound
21 levels claimed in Clipper sound warranty of 107 dB plus or
22 minus 2 dB rather than the actual sound data provided by
23 Clipper. Mr. Kaliski further states if UPC wants to rely
24 on the Clipper data, UPC or Clipper should quote
25 "guarantee that the sound levels will not exceed that

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1 level."
2 Does UPC have a response to that testimony?
3 A. (MR. ROWLAND) Yes. We do. As with the prior
4 inquiry there is certain technical subject matter experts
5 scheduled with the Board later in the week that can speak
6 much more eloquently to the science and analysis behind
7 that. I guess I would say in summary, number one, the
8 sound modeling that's been performed to date indicates
9 very convincingly that even with utilization of the higher
10 input level of noise, as referenced in the warranty
11 figure, which I think was 107 or up to 109 compared to 103
12 in the most recent tests, the applicable guidelines are
13 the sound generation receptors is still below the
14 applicable guidelines for the project.
15 Second, and probably most importantly from an
16 engineering standpoint, you model based on what is
17 expected to occur. Not contractual risk allegation
18 decisions. It's done by Federal Highway Administration
19 for noise modeling for highways, and any number of other
20 applications. So we believe that the most accurate
21 modeling of noise is utilizing the test data collected
22 from actual operating turbine of this type, make and
23 manufacture. To artificially model based on a higher
24 input, is kind of nonsensical in our view from an
25 engineering standpoint.

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1 And finally I would just speak to the
2 differentiation between the actual modeled data or the
3 test data of 103 dB versus the warranty level of 109. I
4 would like to point out that the warranty in question
5 that's under discussion or the warranty terms under
6 discussion, were formulated in August of '06. The most
7 recent sound testing data was conducted and completed
8 later this fall. So there is obviously a difference in
9 time that may or may not represent some basis of the
10 conservatism of warranty.