

TOWN OF WALLINGFORD DEPARTMENT OF FINANCE BUREAU OF PURCHASES

Request for Proposal: 02-002

		TECHNICLE			
FIRM	RAW SCORE	TECHNICAL SCORE	COST	SCORE	COMPOSITE SCORE
Blum Shapiro & Co.	59.6	31.9	\$421,730	44.9	76.8
Carlin Charron & Rosen	71	38	\$399,000	47.4	85.4
Kostin Rufskess & Co.	61.8	33.1	\$378,350	50	83.1
cvitsky & Berney	71	38	\$488,350	38.7	76.7
AcGladrey Pullen, LLP	87	46.6	\$528,100	35.8	82.4
Scully & Wolfe	93.4	50	\$509,600	37.1	87.1
Scilia Dowling & Natarelli, LLC	73.6	39.4	\$504,000	37.5	76.9

No Bids: None

14.00-

Attachment-Item

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SPECIAL TOWN COUNCIL MEETING

<u>MAY 20, 2003</u>

<u>7:30 P.M.</u>

AGENDA

Pledge of Allegiance and Roll Call

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Connecticut Light and Power Presentation Regarding the Proposed 345kv Transmission Line Route Through Wallingford

SPECIAL TOWN COUNCIL MEETING

TUESDAY, MAY 20, 2003

<u>7:30 P.M.</u>

A special meeting of the Wallingford Town Council was held on Tuesday, May 20, 2003 in the Robert Earley Auditorium of the Wallingford Town Hall and called to Order by Chairman Robert F. Parisi at 7:33 P.M. Answering present to the Roll called by Town Council Secretary Kathryn F. Zandri were Councilors Brodinsky, Doherty, Farrell, Knight, Parisi, Rys, Toman and Vumbaco. Councilwoman Papale was ill at home. Mayor William W. Dickinson, Jr. and Director of Public Utilities, Raymond F. Smith were also present.

The pledge of allegiance was given to the flag.

<u>ITEM #2</u> Connecticut Light and Power Presentation Regarding the Proposed 345 kv Transmission Line Route Through Wallingford

The following individuals were in attendance to answer questions on the subject matter:

Northeast Utilities Service Company

Anne Bartosewicz – Project Director Transmission David W. Forrest – Director – Transmission Engineering Eugene Taddeo – Manager – Transmission Planning Peter T. Brandien – Director – Transmission Operations Dorian E. Hill – Principal Engineer Russell N. Raymond – Senior Engineer

United Illuminating Company

John J. Prete – Project Director

Ms. Bartosewicz, Project Director for Northeast Utilities (NEU), thanked the Council for allowing this forum to take place and stated how the interest in the project is appreciated for it is one of the most important energy issues facing the State of Connecticut today. She went on to say how both she and John Prete, Project Director for United Illuminating (UI), have been living the project over the past year. They have been developing it and have provided the Town with a very large, eight volume, forty pound filing that appeared on the Mayor's desk on May 1st. She reminded everyone that this is the beginning of a very long process. This is essentially a part of the municipal consultation process, a sixty day process that began on May 1st when the Mayor's office received the filing.

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Ms. Bartosewicz stated, we believe the municipal consultation is a dialogue; a discussion between the company and what our filing contains and comments from the municipalities and residents in your community.

At this time a four minute video was displayed.

John Prete, Project Director, United Illuminating Company stated that UI is very happy to be in concert with NEU with regard to the framework. I feel it is important to hone in on a couple of messages contained within the video. One, the transmission system and the network that featured in the video is very important to understand. The transmission network is connected across New England and the east coast. The national reliability standards are such that they allow the network to continue when events occur, events that could be characterized as, transmission line that could fault, equipment that could fault. generators that can go down. NEU and UI got together about a year ago and we believe that the best solution for this regional type of approach was to have a common set of solutions. That is why we are here today. I urge you to think about this reliability in comparison to where and what electrical characteristics are. We talk about national reliability and know that reliability is all about having the lights on; the power has to be there when the demand is there. The characteristics of electricity is somewhat complex. I urge you to continue to ask four questions when we talk about that. The video does a good job of explaining reliability, from what is somewhat common sense, which is thermal or capacity oriented. The lines and equipment must be able to carry or have the capacity to carry that which links the generation to the load. They must be thermally-equipped to do so. The second characteristic is voltage. Every second of every day the voltage has to be in compliance to you the homeowners and all the businesses. The third is what we call fault current or short circuit current. Upon a fault of this large and integrated network there is a large inrush of power of current. Therefore all of the equipment on the system must be rated for that. If you simply look at your panel at your house, you may know that it is a 100/200 amp panel, that's what it can handle continuously day in and day out. But upon a fault it is rated for much more than that. The last characteristic I would like to offer is what we call stability. We know that our system in North America works on 60 cycles or 60 hertz, which means that every second it oscillates 60 times. When we talk about reliability, all four of those characteristics must be taken into consideration every second of the day.

A twenty minute power point presentation was given at this time to show the need for the upgrade to the transmission system and also the specifics of the Wallingford part of the project.

Mr. Prete stated, Connecticut is interconnected. On a typical summer day the demand for energy in Connecticut is between 6,200 and 6,800 megawatts of power. One megawatt of power is roughly enough power for 800-1,000 homes. Approximately one third, 2,000 megawatts, of the power that is used day in and day out by Connecticut consumers comes

in from the three states Connecticut adjoins; New York, Massachusetts and Rhode Island. We have been living this way for many, many years.

At this time Mr. Prete referred to a graphic on the video which shows where the 345 and 115 kv lines were located as well as the power plants. Arrows on the graph depict where the import of power takes place. Half of the 6,800 megawatt load is consumed in the southwest corner of the state. What is missing in that area is the 345 kv network and that is where the problem exists; the large 345 kv network and its ability to transfer power into southwest Connecticut is constrained there. As Connecticut is not an island, neither is southwest Connecticut and neither is Wallingford. The electric company that Wallingford has is independent from the point of view of its delivery. It is connected to the transmission system in Connecticut, New England and all of the east coast. A major portion of Wallingford is fed from the transmission line that feeds a large substation in Wallingford. We need to understand that the reliability standards that were set, were set in such a way that we do not want anything happening in Massachusetts, Rhode Island, Maine, New York, to affect the reliability of a something like a substation in Wallingford. That's why the reliability standards were put in place. We need only to look back into the '70s and '80s and New York City to understand what happens when reliability standards are not met and the cascading effect; the widespread outages that could occur. Wallingford's power is vulnerable to reliability in southwest Connecticut so they have to be interconnected to service the needs of the consumers in Wallingford. A new system has been put across Connecticut which is termed, "congestion cost". On March 1st ISO (Independent Systems Operator) and FERC (Federal Energy Regulatory Commission) had put in place what they are calling SMD, Standard Market Design. That resulted in the wholesale market to more localized area. CT. is now its own zone. This means that the cost of generation and the cost of inadequate generation to our consumers will be paid within the CT. borders. Specifically about southwest Connecticut, going back to that prior slide, the generation in southwest CT. is more costly than that which is surrounding that or is outside of that envelope. Consumers in southwest CT. will be paying more expensive generation than those outside that envelope. That additional cost, the cost between what competitive price to energy should be but for the transmission constraints that exist, is what is called congestion. Wallingford and all the customers in Connecticut and southwest Connecticut will pay that cost. It is not a Fairfield county problem either. Over a ten year period, roughly, Connecticut grew by approximately 27%, but the areas in southwest Connecticut, Stamford and Norwalk, are even higher than that. If we bring that down to a more localized level, we see that the population growth in Wallingford was roughly 5% but the usage has increased an astronomical 27%. That is very common across all of the 52 towns in southwest Connecticut. In fact, there is a very similar phenomenon across the country. If we look back on our own lives over the past ten years, we see the advent of computers ten years ago was something uncommon. They are a very common apparatus in everyone's house, at least one. So were color televisions, microwave ovens, DVDs, modems, etc. We classify that as lifestyle changes; the drastic usage is indicative of lifestyle changes. Air conditioning has become more the norm than the exception over the last ten years, and the size of houses and that's fine. That is what we are here to do; to

May 20, 2003

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May 20, 2003

solve that particular lifestyle by giving them and continue to give them safe, reliable and competitive energy. To help meet the energy needs over the last 10-20 years over \$600 million in conservation programs have been implemented by both United Illuminating and Northeast Utilities which has resulted in a savings of 500 megawatts. of peak or cumulative demand. Conservation has always been and will continue to be a very important slice of the pie and solution. In 2002 alone, the conservation programs which cost the state roughly \$80 million saved enough energy for roughly 31,000 homes. In the legislature right now they are talking about stopping or not funding that conservation program. That would be devastating to our continued efforts in that area. The other piece of this is generation. To get power you need capacity; capacity equals generation. Most of the power plants that exist in CT. today are actually in the area of Milford and Bridgeport. We have included over the past five to six years new plants, Bridgeport energy in Bridgeport; the Wallingford plant; Milford plant which is two years late; and a proposed plant in Oxford that has now been taken off the books. The message is that CL&P and UI do not own any generation. In the late 1990s we were told and legislatively instructed to sell our generation and we have done that. It is a private market that now trades and sells on an hourly basis. CT. now will feel that wholesale market and the congestions that are created because of the constraints of the transmission line. The liability of those units, when they are privatized, are somewhat in question. Half of the generation in southwest CT. is oil-fired, older plants. About 2,000 megawatts of generation in CT. is owned by a company called NRG who filed for bankruptcy protection last week. Once again, as we look at the picture in southwest CT., we hone in on the Town of Wallingford. The generation is very suspect from a reliability point of view. We need to be able to instruct more transmission line to import more power and fix the other problems that exist in the network in southwest CT. In review, it takes sufficient generation which could be hydropower from Canada; it could be Maine gas-fired units; it could be gas-fired units in Rhode Island, Massachusetts or New York. What is important is that we need a sufficient power line capable of making sure that the four characteristics of electricity are met every second of the day. Finally, as you get to the house, a safe and reliable network to continue to deliver that power. If any one is weak within that link, obviously the power dims or the light goes out.

At this time Northeast Utilities representative, Anne Bartosewicz, spoke about the work the two companies have done over the past year.

Ms. Bartosewicz displayed a graphic depicting the twenty-four municipalities that the Middletown to Norwalk project will potentially cut through. All twenty-four towns and cities have a say in the solution. The line stretches into Middletown, breaks apart and comes down in Haddam, comes across Durham/Middlefield into Wallingford, the Beseck substation which is being proposed. The line then goes down into Milford where it picks up the New Milford Power Plant that is not yet generating but is expected to be on line. That generating plant currently sits on the 115 kv system. The proposal here is to move it onto a 345 kv system so its power can travel along the 345 kv path.

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Ms. Bartosewicz stated, a lot of the problems that John spoke about, voltage stability, short circuit, those are a lot of the problems that we have in southwest CT., particularly in Bridgeport. The new Singer substation is being proposed to alleviate some of the problems that exist in Bridgeport at the existing Poquoneck substation. There are lines that come into Bridgeport and once through Bridgeport, we need to close that 345 kv loop into Norwalk. Over the past year we have looked very carefully at a variety of ways to get from point A to point B. A combination of a variety of loops were looked. We have to put them all together to make a path that works electrically and can be operated. The big picture is that twenty-four towns and municipalities are potentially affected and we have to get the right combination through all twenty-four municipalities to make this project work. We started evaluating the sixty-four links with a set of criteria that could be applied to all municipalities. There are five different areas that we spent a lot of time looking at:

1. Property Impact

What is the impact of this project on homeowner property; is there a visual impact; and what those affects are.

2. Environmental Impact

Wildlife; ponds; vernal pools. All of the environmental issues that are in a right-ofway we looked very carefully and there are several volumes of the application that talks about data collected along our right-of-way on the environment.

3. System Benefit

We looked at, can we operate the system in the configuration we have chosen? Will it provide the benefit that we need for southwest CT.

4. <u>Technical Feasibility</u>

We looked at whether we can actually build this.

5. <u>Cost</u>

The Siting Council requirements have us look at three specific factors; we must look at cost; we must look at reliability; and we must look at environmental impact.

Ms. Bartosewicz continued, after looking at all sixty-four links and weighing all of the five factors, a solution rises to the top. We have developed an Open House and Wallingford has chosen to avail us of this Open House which is scheduled for June 6th at Sheehan High School from 6:00 P.M. to 9:00 P.M. A lot of this information is in the open house. Consumer reports can be reviewed ; rights-of-ways have different characteristics. Different structures are located on them and there are different solutions for those different

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parts of Wallingford as with all the other municipalities. It is very difficult to explain how complicated this is and all the options we looked at in a thirty minute power point presentation. Everyone has the opportunity to ask questions of both CL&P and UI employees at the open house. Wallingford is assigned four different segments in the (Siting Council) filing. We have tried to provide that route which we think meets those five criteria talked about but also because some of that criteria is subjective, we looked at what other configurations might somebody prefer. Municipal consultation is all about having dialogue and getting feedback from municipalities and residents in the municipalities. For all of our towns we have developed options or alternatives so that each segment has a primary route that we are considering and it also has three options. They might be configuration options, either poles being taller or shorter. In some towns we have had the ability to provide a different route alternative but every town has some choices. In Wallingford, the structure currently in place is a 90' H-frame structure on a 275' right-ofway. One of the design criteria we tried to stick to, wherever possible, was to match existing structure heights and spans so that you don't have a zigzag approach in the rightof-way. That the structures that we add to the right-of-way look like the structure that exists today so that there is some symmetry there. The new structure for the 345 kv is also a 90' H-frame structure. The East Wallingford junction in the transmission system lies right in the center of Traditions Golf Course. There is a 57' H-frame housing a 115 kv circuit today. There is about a 200' right-of-way there and the 345 ky would be the same H-frame as we saw on the depicted as the red section (in Volume 1 of 8) which would be a 90' H-frame. The yellow or green line, today exists a 90' lattice tower structure containing two 115 kv circuits. The new H-frame would be, again, a 90' same height Hframe carrying the 345 circuit. There are routes and alternatives that we have looked at that we have dismissed. In an effort to look at everything we could look at, which would include existing rights-of-way, new rights-of-way, we looked at under sea options, we looked at highways, railroads, an investigation of all of those options. Some of them were impossible to build such as building along the existing Amtrak railways and along 191. The rights-of-way the D.O.T. has for the highway are very narrow and did not leave enough room to actually build. Also, there are many overpasses and bridges. Things cross the highway above it and below it. That makes it so that there is no contiguous section of the highway where we can put this 345 ky transmission lines. There is a tax benefit to the Town associated with the configuration proposed for Wallingford. It is estimated to be \$26 million to the Town's tax base.

At this time Ms. Bartosewicz displayed a slide which depicted different types of transmission line structures. She stated, you can see that the option two; the shaded out or grayed out structure is the existing structure on the right-of-way and the red picture is what a new structure would look like. Option two is what we call, for that red section, is termed "our primary route under consideration." It is the option that we thought met the criteria that the Siting Council laid out that Option 2A is a choice. It does show a taller pole at 108' but it does have a benefit although a "con" for this is that it is taller than one that exists today. The benefit is that you can see it is much narrower so it has a smaller footprint on the existing right-of-way which means that you would have to use less of that

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May 20, 2003

existing right-of-way. It is a choice. Option 2B is another choice. It is actually a shorter pole than 2A is, it is only 85'. That option has, as all options have pros and cons, it also have a drawback to it; in order to make that structure as short as it is, we had to take some engineering considerations into effect. You see that there is no top like that on 2A known as the shield wire. The shield wire is off to the side on 2B to allow us to be a little shorter with the pole. They also required us to tighten up that wire so that there is less sag or play in it. Therefore in Option 2B I have to use more structures than I did in 2A because the tighter the tension, the more I have to put those two structured together. The trade off between 2A and 2B is the taller pole using less right-of-way, less poles. Option 2B, shorter pole but more structures along the right-of-way. These are the kind of flexibility options that we can consider and part of the process is feedback. Is one of these options better or worse? That is kind of some of the questions through feedback that we would The Open House will allow you the opportunity to look at the like to hear from you. underground and overhead technologies. I know a big question is, how much underground, how much overhead goes into a project like this. We hope you will all attend the June 6th Open House in Wallingford. We are trying to be as flexible as technology allows. We have constraints; the system has to be able to be operated. But if we can be flexible and we can make some accommodations, that is what we are here to learn about. This is the very beginning of the process. There are many opportunities for both the municipality and residents to participate. This first sixty-day window is the first of that process. The municipality can make a recommendation to the company. That recommendation will be passed on to the CT. Siting Council, included in our application filing. Coming to the Open House and filling out a comment sheet is another way to make your comments known. Those comment sheets are then provided to the CT. Siting Council as well. The Siting Council will hold public hearings, public comment, of which municipalities can participate at the level they choose. When and if the Siting Council issues a decision to go forward with this project, there are more opportunities for the municipality to participate. The next step is the development and management plan. Ground will not be broken until that plan is developed and the detailed engineering is done. The CT. Siting Council reviews it, has tremendous municipality input because it is the blueprint for how we actually build. Thank you.

At this time Chairman Parisi invited questions from the public.

William Taylor, 490 Williams Road wanted to know if the cut lines indicated a clear cut to the edge of the right-of-way; and are the poles represented in option 2 wooden or steel?

Ms. Bartosewicz answered, with regards to the clear cut, is that for construction?

Mr. Taylor answered, to put the power lines in.

Ms. Bartosewicz replied, I would have to know what the right-of-way looks like in any given segment to answer that question.

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Chairman Parisi asked, for the benefit of the other people in the audience, please explain.

Ms. Bartosewicz explained that clear cut means, do we go down the right-of-way and take everything out. I believe we do selective clearing depending on pole location, what it looks like today. Regarding the types of poles we use, we do have some choices, the Hframes can be a laminated wood pole. The monopoles that you saw are typically steel monopoles. The existing poles today, the H-frames that exist on the right-of-way are wood today.

Mr. Taylor asked, and you are going to change that to steel?

Ms. Bartosewicz answered, no. You can use a laminated wood pole for an H-frame. If you go to a monopole, one of the options we had, you would go to a steel pole.

Mr. Taylor asked, so it wouldn't match the existing poles that are up there now?

Ms. Bartosewicz answered, if you went to the H-frame which is our primary choice, it would look very close to what is there today. If, for some reason, one of the other options was the choice and we went to a monopole, it would have to be a steel pole and it would look differently. One of the reasons why the primary route had the H-frame on it was because we tried to match what is there today so that they are in the same place along the right-of-way and they look like they do today. That is one of our goals.

Mr. Taylor asked, one requires a footing and one doesn't?

Ms. Bartosewicz answered, correct.

Mr. Taylor asked, the one you are planning to put in, does it require a footing?

Ms. Bartosewicz answered, the H-frame does not. Options 2A & 2 B do require a footing.

Mr. Taylor answered, what size footing?

Mr. Dorian Hill, Principal Engineer, Transmission Line Group, Northeast Utilities explained, the size of the foundation for the monopole would be a cylindrical, reinforced concrete foundation averaging 6' in diameter and perhaps 20' deep.

William Hutchinson, 39 Valley View Drive stated that he has a right-of-way right on his property. He asked, has there been any studies as to how much EMF (electromagnetic field) increases going from 115 kv to 345 kv?

Ms. Bartosewicz answered, yes, in the filing package and in our application, there is a study of EMF, what currently exists today and what is projected with the new line.

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Mr. Hutchinson stated, I had an EMF reading done when I purchased the house. They had actual numbers closest to the lines, farthest from the lines...

Ms. Bartosewicz answered, right, because they actually did a measurement on your rightof-way. IN our filing, if you have a chance to look at the EMF section of the filing, the existing EMF levels today were re-recorded so that the filing includes what is there today. What's there tomorrow, I can't do the actual reading because the line's not built.

Mr. Hutchinson pointed out that the company does have other 345 kv lines currently in use in southwestern Connecticut. Can't you get a reading directly under those lines?

Ms. Bartosewicz replied, what you really need to do to be accurate is, I suggest that a projection is a better estimate of what that area will look like because an EMF reading is dependent upon what else is on that right-of-way. If I go to another 345 kv line in the state somewhere, the configuration might be different than the proposed configuration. There might be other transmission lines or distribution lines on the same right-of-way which will impact that reading. It is very important to project what the exact configuration of the proposed line will be and calculate the EMF value from that.

Mr. Hutchinson asked, so they can give me a projection of what the EMF readings will be on my property, if they change to these lines?

Ms. Bartosewicz answered, yes they can.

Mr. Hutchinson asked, is there a layout on where the new poles will be placed in relationship to the property, depending on which pole they when with?

Ms. Bartosewicz answered yes we do. In volume 7 of the filing is a set of drawings called "Plan and Profile Drawings" and on those drawings we have projected where, based on information we have today, where the new pole locations will be. We have strived to make the new pole locations in the same place as the existing ones. That plan and profile drawing is part of the filing and it will be available, if you don't have access to it, at the open house. You can actually find your property and take a look. At the end of this meeting, I have it with me today if you would like to take a look.

Mr. Hutchinson asked, what are the proposed start and completion dates for the project?

Ms. Bartosewicz answered, the proposed start date of the project was May 1st which started the sixty day municipal consultation process. When we filed the application with the CT. Siting Council, the Council has up to one year to review our proposal and make a decision on it. Once that is done, the companies have to provide a detailed engineering plan on how we are going to construct that has to be approved by the (Siting) Council. If things move along a path like I have laid out, we would hope to start actual construction somewhere on the line or more than one place on the line about early 2005.

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Mr. Hutchinson stated, I know they have decided to put some lines underground in Bethel. Why is that not an option in Wallingford when they have, through the Woodlands Coalition, have negotiated to put some lines underground. I don't know why that is not an option in Wallingford.

Ms. Bartosewicz replied, it wasn't through the Woodlands Coalition that the settlement agreement came about. It was through a lot of hard work between the five towns and the company to try and come up with a solution that worked. There are differences between this project and the Bethel to Norwalk project. On the Bethel to Norwalk project the existing rights-of-way were very narrow. There would be a required taking of property. It may have impacted a few homes. On this project, there is no expansion of the right-of-way, no acquisition of property. The existing easements are sufficient to allow the upgrade so that there is no acquisition requirement. I would hope that your house is not in the right-of-way today. The right-of-way will not be expanded. The edge of the right-of-way will not change so that there is no...

Mr. Hutchinson stated, I am concerned that if you go to a higher pole then my house is even closer. God forbid if anything ever happens. A helicopter struck the lines right next to my house many years ago. My concern is, if one of my four kids is playing out in the yard and, God forbid, something like that happens again, a 110' pole comes down on my property. That is why I would rather go underground.

Ms. Bartosewicz stated, we did take a look at the 69 mile route and looked at some of the five criteria I spoke about earlier. We had to make some balance of where we needed to go underground based on that criteria. In Bridgeport, Stratford and some other towns, the right-of-way was very narrow and would have required not only acquisition of property but of houses also. When we weigh where we can go underground vs. where we have to go underground, we have to weight those factors. Before we have to acquire a house or property we strive to find a resolution in lieu of doing that. This 69 mile route has two sections of underground, an 8 mile and 15 mile section, in those areas where property acquisition and house acquisition would have been necessary. Those are the factors that I have to weigh.

Mayor Dickinson stated, I would like something clarified. Ann (Ms. Bartosewicz), you have talked about trying to put towers in the same locations. This would be a parallel line however. I don't want to leave the impression that there's now a single line of towers and there would be, in the future, a single line of towers the same size. This is a duplicate line of towers. They may be placed in the same location as the existing tower but someone could interpret this and think that we were saying that we are going to change the tower and replace it with another tower, the same thing, no. It is a duplicate line of towers.

Chairman Parisi asked, are they going to be along side of each other?

Ms. Bartosewicz answered, that is correct.

Joe Palazzi, 6 Ashley Lane stated, what we are seeing here is a proposal by NU. It is NU's most preferred routing and NU, being a publicly-held company, it is the proposal that is in the most and best interest of the shareholders of NU. I think that what we really need to talk about in Wallingford is, are there responsible alternatives that take into consideration other factors and other groups such as the Town, the residents and the environment. I do think that there are other responsible alternatives. Underground routing through the town is a possible alternative that was not depicted here, tonight. I would like to understand why that consideration was put aside. With regards to the economic impact to the Town. the one thing this doesn't consider is the depreciation of the value of the homes along the line. As Mayor Dickinson stated, this is going to double the amount of towers in lines and the width of the cutting through there. Therefore the lines become much more visible to many more homes. Based on the estimates that I have done and based on studies done on similar reduction in homeowner values along lines that have been upgraded in this fashion, we can estimate a tax loss in our base anywhere over \$20 million in the Town of Wallingford. That would mitigate any impact we would get as an extra added value from having additional poles to assess. There is a 345 kv line that comes through Wallingford and goes down to what is called the East Side Substation in New Haven. If one could run a 345 kv line from the East Side Substation to the Devon station, underground up Route 1 as the lines now go from the Devon substation to Bridgeport and on to Norwalk, it would mitigate the need for putting up additional lines through Wallingford altogether as well as most of the other towns along the route. The other alternative is co-generation, which was put aside rather quickly here, tonight. I think we need to talk about, are we doing a balanced view? If we go just transmission, why can't we look at alternatives of cogeneration to balance that out as another responsible alternative. I know that it is not an area that the party here, today, can address that's been legislated. The other thing we should be aware of is that there is proposed legislation before the State now that would force NU to reimburse owners for the loss in home values as well as to balance out the loss of tax revenues to the towns as well. There are a lot of issues to be considered. I think there are other responsible alternatives that we, as the Town of Wallingford, should look at and address as we go forward with this to the Siting Council. I am not saying there is not a need, there is a need. There has been an increase in power demand but we need to have a balanced view of this and take the most responsible view we can. The one thing we don't want to have now is to have more herbicide sprayed in the land which goes through our aquifers and watershed areas which this would in case. I think we need to take those factors into balance and view them. Why not go along the shore and connect all the power stations along the shore with another 345 kv along Route 1 where those power stations are butt up against them now?

Mr. Prete replied, both companies, in concert with ISO who is the company responsible for managing and operating the electric grid in New England, in looking at that alternative to bring it up to the same reliability standards, an additional 345 kv line would need to extend from roughly the Wallingford area to East Shore, in addition to the line from Wallingford

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to Middletown. In looking at that particular alternative, it would require additional rightof-way. That means expanding beyond the present easements that exist. That would occur in the towns between Wallingford in the New Haven area.

Chairman Parisi asked, but through Wallingford it wouldn't cause any problem?

Mr. Prete answered, I don't know the exact impact to Wallingford on that particular rightof-way, sir.

Chairman Parisi stated, that is our focus.

Mr. Prete replied, the solution is holistic in nature and I was just trying to give you an overview of what that is. In addition to that, an underground line as was suggested would have to be run under harbor, under waterways to somehow get to Milford. Additional land that would have to be acquired and the solutions that we are trying to put forward are not to acquire land, not to mention the sheer technical difficulties in trying to get an underground, under harbor-type of line from the east shore/New Haven area to Milford.

Mr. Palazzi asked, why isn't it presented as an alternative to the towns and Siting Council and then go before them and let the Siting Council decide whether to take the underground routing or the overhead routing? You have already laid down an underground route, the one that runs up Hartford Turnpike, comes across Dixwell Avenue through and up Route 68 that would be an underground routing of the lines that would then avert any need for additional poles or overhead lines or EMF exposure or additional environmental impacts to the woodlands.

Ms. Bartosewicz replied, we did look at underground throughout all twenty-four municipalities. Although it is potentially technically feasible, our initial study showed tremendous problems with putting 69 miles of 345 kv cable underground. One of the criteria on the list was, can you operate the system? It would be extremely difficult, if not impossible to operate 69 miles of underground 345 technology which is why it didn't rise to the top of our list because we knew the problems with operating a system that way.

Chairman Parisi asked, why would it be impossible to operate the cable or line?

Ms. Bartosewicz used the analogy, you're driving a car and have to go 62.4 miles per hour and you have to drive that car exactly at that speed but your speedometer only has two markings on it, 55 mph and 65 mph. The difficulty you would have in making that car go exactly 62.4 mph when you only have those two items, is a way to try and explain how difficult operating a 69 mile underground system is. It would be very difficult for someone to run that automobile that way.

Mr. Palazzi stated, in 1947 Frank Lloyd Wright was designing Taliesin West (winter home of the famous architect and his students) and he looked out over the Senora Desert and the

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U.S. Government came in and told him they were going to build a power line that was going to go from the Hoover Dam to Phoenix, above ground. Mr. Wright stated that it would destroy the entire view and destroy the environment. Mr. Wright developed a proposal that would be a working solution to put that line underground from Hoover Dam to Phoenix. If, in 1947, a man like Mr. Wright can develop that, why can't we have that technology today? That is not an answer that I have heard here, tonight.

(Applause)

Chairman Parisi stated, that's a good question. Is there any answer to that? Why can't we do that?

Eugene Taddeo, Manager, Transmission Planning for Northeast Utilities stated, if you are thinking that New York and Boston have underground utilities, why can't that be done here? They have very different systems. Regarding the technology that Ms. Bartosewicz was describing, what you would have to do is put in very long cables which have a charging to them. They want to increase voltage. You would then have to try and temper that with some offsetting devices. All of these offsetting devices would have to have lots of precision to them to try and operate the system under all of the scenarios. What we would have is an extremely difficult situation of trying to operate this. I don't believe that Ms. Bartosewicz said that it was technically not feasible – it is technically feasible but a long way from, is it operationally feasible in a mode that we would like to operate our system in.

Chairman Parisi stated, that didn't do an awful lot for me, I'm sorry. How far is it from Clinton across the Sound, what's the mileage?

Someone answered, 20 miles.

Chairman Parisi stated, someone wants to run a cable there but there's no problem with that?

David W. Forrest, Director of Transmission Engineering for Northeast Utilities explained, I happen to be a member of the Electric Power Research Institute and was a member of the Underground Transmission Task Force. The reason Northeast Utilities has joined that group and supports the underground transmission is because we want to utilize underground transmission and have it become economic and reliable. The state-of-the-art though is, that at 115-120 kv in the U.S. and Europe , underground transmission is very reliable. When you get up to 230 kv or 345 kv, you put extra electrical stress on the cable and more on the splices and it is a much less reliable system. I was at a presentation today, we had ABB flew in some of their cable experts from Sweden and they talked about cable technology. In Sweden they use 400 kv and they talked about the long experience they have had with 400 kv cable. Their long experience has been six years and in Europe they have been doing it but they put it in tunnels. We are going to put it in under the street, a



14

May 20, 2003

lot different system. Frankly, the underground technology is a technology that is much riskier, reliability-wise. Also, what Eugene Taddeo was trying to explain is that cable is a lot different than overhead conductor. If you have a hose, when you turn on the faucet it takes quite a while, if you have a long hose, before the water comes out the other end, you have to charge the hose. Cable has a characteristic called capacitance which you have to charge the cable. This capacitance or charge in this cable when you have generators go out of service or other transmission lines go out of service creates problems on the system. It creates high voltage and is very difficult to operate. We do very sophisticated studies with very high powered computers to study cable systems, especially if you go underground and overhead and underground and overhead. You can get situations where you can have bad frequencies get through the system and get into homes and customers. There is a lot of complicated and technical reasons why the underground cable system is hard to operate, plus it is not a mature technology at 345 kv and we are not comfortable that it is reliable. There is no place in the world that have a 40 mile underground transmission system cable at 345 kv and that is what we would be talking about building from Middletown to East Devon. We would be double the length of any 345 kv cable in this country. The longest ConEd (Con Edison, New York) has is 22 miles. Someone will do it someday and we are also looking at super conducting cable and some day we will be doing that, too.

Paula Taylor, 490 Williams Road stated, my husband, my daughter and I own 25 acres that is dissected by the power lines. It will now be dissected by a double set of power lines. I realize that CT. is not an island, however, it is also not a superhighway to bring cheap Canadian power to the wealthy in Stamford and Long Island. I just wonder if there isn't some way that we can't put the power plants where the power is needed, which is basically southwestern CT. instead of ramming it through beautiful, rural Wallingford. One of the first things you see when you come south on I-91 is "Welcome to Wallingford" and "Watershed Area". The clear cutting that is going to be done and, trust me, it is going to be clear cut, I have lines through my property presently, it is clear cut and will remain clear cut. The secondary lines will be clear cut as well. This is going to have one heck of an impact on our silt problems and watershed.

George Murray, 39 Cliffside Drive stated, my entire view out of the back of my house is of the beautiful Middlefield ridge, swathed by two 100' wide clear cut section of the mountain with a big H-frame in the middle of it and I want to thank Mayor Dickinson for pointing out the fact because the public relations team here did a wonderful job of hiding that I would now have two of these H-frames, side by side, so there would be wider cutting. Is that what I am to understand?

Ms. Bartosewicz replied, the proposal is to add a 345 H-frame, that is correct, so there will be two. One of the pictures I showed you was the existing H-frame and the new H-frame.

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Mr. Murray replied, you clearly stated several times "we would be replacing this with that", that's why Mayor Dickinson made the point of making it clear to us that it is not a replacement but an addition to.

Ms. Bartosewicz stated, I apologize, that was not my intent.

Mr. Murray stated, it makes a huge difference to all of us who are impacted by it because some are going to be underneath it now, just close to it.

Chairman Parisi asked, the H-frames will be side by side but you will still be in the rightof-way, but expand the cut area?

Ms. Bartosewicz answered, true, but it is going to depend on what's there today, how open it is today, how clear it is today. You do need, for safety clearances, between ground and the wire.

Mr. Murray asked, in the proposal, is there an environmental impact on the Middlefield Ridge there? That's an environmentally-sensitive area and I am very concerned. The clear cut area that is there is unstable off of the back side of that mountain and there is also nesting sites along that entire area. Has that all been clearly stated out in there?

Ms. Bartosewicz answered, a full inventory of the existing environmental areas along the right-of-ways contained in the filing that we made. Volumes 2 & 3 contain the environmental studies that were done. It should be in there.

Mr. Murry stated, the proposal talks about these two lines, one coming along the shore and there's one coming from inland down to the Norwalk area. Is there anything in there that talks about how much of that power you are going to be transmitting through those lines is going to be consumed by CT. residents or going through the line into Long Island? How much of that is going to be exported into Long Island?

Ms. Bartosewicz answered, I am not sure I know how you are exporting it to Long Island today. This upgrade is needed for reliability in CT. The existing cable that comes out of Norwalk that crosses Long Island Sound is a cable that is currently under repair and it will be replaced. That cable is used as a safety relief valve when a region has a crises or severe problem, it can act either way and it has, many times, saved CT. by importing power from Long Island. This project is for CT. and not for Long Island.

Mr. Murray stated, it was mentioned that the longest stretch of underground cable is 20 miles. The longest point in Wallingford is only 18 miles so it falls well within that criteria.

Mayor Dickinson stated, a number of questions have dealt with the issue of the right-ofway and the clear cut. I am assuming that the existing right-of-way is not maintained.

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16

Vegetation is not removed, cut down to the full extent of the exiting right-of-way, would that be a correct assumption?

Ms. Bartosewicz replied, that is correct.

Mayor Dickinson stated, for people to understand, is there any possibility for the limits of the right-of-way to be established, the exact dimension as it moves through the town, because for someone to look now, it will be perhaps impossible to know exactly where the boundaries of the right-of-way exist. For people to understand what the change will be, it is...

Ms. Bartosewicz answered, it is hard to think of where this information is contained at the moment. The boundary of the right-of-way is shown in the drawings of volume 7. What it does not show is, there is not a mile by mile inventory of what would have to be removed on the right-of-way for the new structure to be put in place. That is dependent on what is there today and will the structure be in that location when the Siting Council makes its determination on the path of the project because they have the final say at this point.

Mayor Dickinson asked, there's no plan to mark that boundary? It would be helpful for people to be able to see what that line is; what the total width of the boundary is and what could be at issue.

Ms. Bartosewicz stated, typically, that level of detail is done in the development and management plan. It is not part of this filing.

William Hutchinson asked, does that mean that they don't know exactly where these lines are going to go in relationship with people's property until it gets okayed?

Ms. Bartosewicz answered, no. It means that to determine essentially tree by tree at this point in time is typically....on a case by case basis we could work with you and get those answers for you. I would have to send someone out to the property.

Bruce Anesi 91, High Hill Road stated, I am probably one of the closest property owners to the power lines, they are directly behind my yard. If, in fact, we know that cable is a riskier approach to power transmission, is it not possible for us to manage those risks thereby making the system feasible? Does all 69 miles of the project have to be underground? Would it not be a possibility that certain sections of it where we have housing and families nearby, could certain sections of the 69 miles be underground and another solution found above ground where you are not quite as near to houses? Mr. Forrest eluded to the level of risk associated with the undergrounding of the 345 line. If NU was able to assess the risks, can that risk be managed in such a way that the system becomes feasible?

17

Ms. Bartosewicz replied, a lot of the reason why we say that it is difficult to operate all 69 miles underground takes into account that undergrounding is less reliable and more risky. Part of that evaluation includes all of the equipment that would have to be installed to get it to the point that it is possibly feasible. The amount of equipment you would need to control that underground cable is quite extensive and that goes into the factor in the analysis and it still makes it a more risky, less reliable system.

Mr. Anesi replied, so you would prefer to take that risk over reducing risk to residents and family members in our community? I would rather put a piece of equipment at risk than anyone in my family.

Ms. Bartosewicz explained, the balancing act that the CT. Siting Council does is, we are tasked with providing the Siting Council with the most reliable, most economic, balanced approach with environmental impacts. That is what the statutes require of the company. The CT. Siting Council takes all of those factors and all of your factors into consideration when it makes a decision on which portion of this project goes where; does it go overhead; does it go underground. All of these facts, including your concerns, are issues that should come up in the Siting Council process. They get to make the determination on what this final project looks like. We provide them with information to the best of our ability. We have a lot of experience in transmission and we provide them the best expertise we can. We bring in experts in their fields to testify and the Siting Council weighs all of that information and makes a decision.

Mr. Anesi stated, one of the five criteria mentioned was property values. I did not hear any expansion on that topic in terms of what your findings were, relative to property values along the transmission lines.

Ms. Bartosewicz answered, one of the criteria is, not necessarily property values. The definition of property values in that context is, is there acquisition of property that is necessary, first; is there acquisition of homes necessary, first. Then you go to other property impacts as visual impacts; aesthetic impacts. We looked at all of the alternatives and we rate them based on that factor. If we are having to acquire a home, that's the worst possible. If we have to acquire property, that's second. If we're having a visual view or changing the height of the pole, that becomes tertiary criteria.

Mr. Anesi asked if the estimated property value change to the homeowner whose property is along theses right-of-ways is not considered in your assessment?

Ms. Bartosewicz answered, in that evaluation it is not. When we don't have to acquire new property and the existing easements are suitable for the project, that is one factor. The other factor is that the company has to abide by existing laws and those laws don't allow us to compensate a property owner for a perceived or real change in their property value, based on no change in property rights.

18

May 20, 2003

Mike Podlisny, 5 Schweky Court stated, the company's poles are roughly on center in the right-of-way. If you were to put the parallel pole to that, now that new pole can't go on the far side because there is a ridge there and you would never blast out the rock to do it, it would come on our side. That will bring the poles within 25-30' of the edge of the right-of-way. Is there a safety setback from that pole to the edge of your right-of-way so that these things are not right in my backyard?

Ms. Bartosewicz answered, when transmission engineers designed pole placement structures on a right-of-way, national electric safety codes are followed and those codes include how far the wire can be to the ground; how far a wire can be to the edge of the right-of-way so that when you design a pole structure, you have to look at width and height and you design it with national electric safety code criteria. You cannot propose to put a pole on a right-of-way and say there is no additional property acquisition needed if it weren't.

Mr. Podlisny asked if the existing poles will be relocated to re-center the entire structure on the right-of-way or will the company put it where it wants to because they can?

Ms. Bartosewicz answered, you have to design structures in the right-of-way so that the structures are both under the following codes and your specific property would have to be looked at to tell you more.

Mr. Podlisny stated, currently vegetation spraying occurs every Spring or every other Spring. Naturally this is going to increase because now you have a bigger area for foliation spraying. We all have well water. Are you going to do periodic percolation tests of our well waters to ensure you are not contaminating them?

Ms. Bartosewicz did not have the answer to Mr. Podlisny's question but vowed to get an answer and get back to him with it.

Chairman Parisi asked Ms. Bartosewicz, are you getting all of the names and addresses of those speakers who have questions that you need to get back to?

Ms. Bartosewicz answered, that (speaker) was the first one.

Paula Taylor, 490 Williams Road stated, with all due respect, the last meeting we had, my neighbors and myself who are directly under the power line gave our names and addresses and never heard anything.

Ms. Bartosewicz replied, I apologize for that.

Chairman Parisi stated, let's take our time to make sure that when we say we are going to answer a question, we are going to stop and make sure that somebody gets the name,

address and phone number. I think that is extremely important, that people are responded to. I am sure you want to do that.

Ms. Bartosewicz answered, I do.

John Carr, 27 Overlook Drive asked, with respect to the existing lines, you must have a map on file someplace that shows where the pole are in relationship to the right-of-way that exists. It would be nice if that were made available on June 6th so we could review it as our individual property pertains to it.

Ms. Bartosewicz answered, it is and it is available at the open house.

Peter Foster, Whirlwind Hill asked, is it generally true that the existing power line probably in the center of the right-of-way or was it placed along one side so that a future power line could be added to that same right-of-way?

Ms. Bartosewicz answered, it depends on the actual portion of the right-of-way. It varies along the existing right-of-way so I would have to know a little more information before I could tell you why it was placed where it was placed potentially.

Mr. Foster stated, it was mentioned earlier that, in some cases, you would have to move the existing poles to one side in order to allow room for both of them. Is that true?

Ms. Bartosewicz answered, that is not the case in Wallingford.

Mr. Foster asked, so you know that there is enough room between where the existing power line is and the edge of the right-of-way for another line?

Ms. Bartosewicz answered, that is correct.

Mr. Foster stated, earlier it was stated that it was your desire to match the existing type of structure which it seems to mean that you assume the existing type of structure was o.k. and therefore it was o.k. to have two of them just like it. That might not necessarily be true.

Ms. Bartosewicz answered, you are correct. That is why our options showed different types of structures so that we can get some feedback on preference.

Mr. Foster stated, it is true that if there are homes along side of the right-of-way, the new pole line may very well be much closer to their house than the existing structure.

Ms. Bartosewicz replied, that's correct, than the existing structure, but within the existing right-of-way.

20

Mr. Foster commented, it seems almost ridiculous to have two identically powered 345 kv lines parallel with each other. I think of running two extension cords across my living room to power two different appliances when one would do it and I would use a two-way plug at the end. Why put up two lines when you have one that has the same amount of power? I understand they may not be in phase because one is operated by one utility and one could be operated by another. Is it something along that line? Why can't you use the existing 345 kv line for the new requirement?

Ms. Bartosewicz replied, that is not correct. We are using the existing 345 kv line for the old requirements.

Mr. Foster asked, are you up to capacity?

Ms. Bartosewicz continued, the object of the project is to increase the transfer capacity. In other words, have another path crossing the southwest CT. interface. That is one of the purposes of the project is to increase the import into southwest CT. and to do that you have a new path across the interface, that imaginary electrical line called southwest CT.; increase the number of megawatts that can come through the interface.

Mr. Foster asked, there is not enough capacity on the existing line to carry the requirement, is that correct?

Ms. Bartosewicz explained, the added amount of capacity that is needed, that's correct.

Mr. Foster asked, are the five criteria, as stated, in the proper priority order or is it in reverse priority order where cost comes first and the effect on property comes last?

Ms. Bartosewicz answered, they are actually in no order. I take that back. If I were to order them, I would have to place a very high emphasis on two of the factors; technical feasibility is tremendously important; can I build it; can I operate it? Once I go there, I go to property impact next. Am I acquiring a house? Am I having to acquire property?

Mr. Foster stated, that's because of cost, really.

Ms. Bartosewicz disagreed stating, it is not because of cost. It is because that is a huge impact to a resident, when I am having to acquire a home or their property.

Mr. Foster answered, you may be doing them a favor to get them away from the power line.

Ms. Bartosewicz answered, that is a perspective.

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Mr. Foster was not sure why the I-91 option didn't work, which would seem to be an ideal one.



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Ms. Bartosewicz explained that the technical feasibility factor ruled it out; the ability to actually build the project with the way that I-91 is currently laid out. Both I-91 and I-95 were looked at as well as Route 15.

Richard Gordon, 93 High Hill Road was trying to understand why a property owner, who has property bordering on the towers would want another tower parallel to the existing line that is 18' taller than what is presently there.

Ms. Bartosewicz explained, the fact that it is taller means that the configuration actually has a smaller footprint on the right-of-way. We would be physically using a much smaller portion of the right-of-way; 25-30' less. The H-frame has three holes in the ground where the monopole has just one.

Mr. Gordon asked, if you went with that option, we currently have a 90' tower and would also then have a parallel 108' tower next to it?

Ms. Bartosewicz answered, that would be one option, to go with a 108' monopole structure next to the H-frame. That was option 2A presented. Option 2B would give you a lower, shorter structure but I would have to put more structures in to accommodate the height of that structure, that is the trade-off.

Mr. Gordon asked, is it an option for a homeowner to have someone from the company come out to check their property for the clear cut issue and where the proposed new line and how far, if it all, might come into where the existing tree line is right now?

Ms. Bartosewicz answered, you can give your name to Mr. Borne tonight and we will get back to you.

Mr. Gordon asked, is there any issue with these 345 lines; noise-related issues that come into play that we should be concerned about?

Mr. Prete replied, the noise is caused by electric fields and the design of the lines presently under configuration shows a bundle conductor, almost like a figure eight. It is done in that manner because the electric noise is caused by a sharp or sharpening edge of the metal or the conductor themselves. What we try to do and have done is model the electric noise associated with this now larger conductor which, in turn, will reduce and mitigate noise to a level that is less than that which exists today.

Mr. Gordon asked, with the two lines, is it going to be equal to or less than the amount of noise that we have today? It can't be less.

Mr. Prete answered, it will be no more than what you have today.

22

May 20, 2003

Raymond F. Smith, Director of Public Utilities stated, in reference to Mr. Gordon's last question, I didn't know if he was referring to electrical noise or physical noise; a hum or something like that. There are two different types of noise; the kind you pick up on an AM radio or something like that and, of course, if you are near a substation sometimes you hear noise, a hum, from a transformer so I didn't know which one he was referring to and Mr. Prete answered in the forum of but not the latter.

Mr. Gordon asked for a clarification on Mr. Prete's answers.

Mr. Prete explained, the question that I had answered was associated with the line.

Mr. Smith stated, normally you don't hear these lines if you are just walking in the vicinity. You could pick up some static on the radio and that is also called, "noise" in the utility business. I am not sure whether he is referring to an actual or street level noise that he might pick up in the vicinity.

Mr. Gordon stated from the audience that the lines "crackle" at times, especially in dewy weather. He wanted to know if there will be an increased amount of "chatter" from the electrical lines.

Mr. Prete replied, corona noise is the technical term for the crackling that was occurring or what the residents say they hear.

Brad Chvisuk, 317 Williams Road asked, do you want a 15%, 10% or 5% pay cut or possibly a 10% raise? The 10% raise is a "risky" raise because it costs your company slightly more money which makes it risky for job security now that costs are going up. I am using an analogy. Which choice would you (utility representatives) pick? My point is, the risk is, they are really dealing with cost. They don't want to pay to bury the lines underneath the ground so let's get the truth out here and what's the price difference between burying the line and adding another pole?

Mr. Prete answered, I don't think your analogy was that far off base. What Ann was trying to suggest is that no solution that we could come up is going to be indifferent to who it affects. If we go to the east shore, it will affect the towns in that area. What we are trying to do is get as much information in front of everyone so that in the open house and during the next year, we can have a dialogue and we can hopefully do a better job. We have done a poor job explaining to you the technical feasibility of all underground. I admit that. Hopefully, Friday (June 6th) when you have an opportunity, we can get into a lot more details. The fact of the matter is, if we have the situation we have in southwest CT. which is very serious, if you talked about reliability from its purest sense, as a resident, I can understand. A short power outage is not that concerning. As we met the first elected officials of the town, you start to talk about businesses and those impacts are extremely devastating. The business community, and in Wallingford you have a lot of high-tech, it cannot withstand an hour or half a day's worth of an outage. That is kind of what is on the

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other side. I understand from the meeting in this room and the folks that have right-of-way now are the ones that are, quite frankly, being asked to sacrifice. The effects on the other side is if it's not the business community it is public health and safety. An outage of that extended time would play havoc with our public safety and not to mention our health. We are not at all against undergrounding. I think just by the very nature of 24 miles out of 69 miles going underground shows that. We need to convey to you the difficulties in adding on and adding on and when you do that it eliminates or shortens the number of solutions that you can bring to bear; to bring what we need to bring, which is a reliable solution. That is where we are at and we need to do a better job in convincing you and we have not.

Mr. Chvisuk stated, we have three bad choices. We should have the option of undergrounding and no one is talking about that because of the inherent risk but I am sure it can be done if we have a large enough voice to get it done. Is it true that the other towns that you are proposing this project to is also against the additional towers and are requesting that the cable be placed underground also?

Mr. Prete answered, I think that would be a very true sentiment.

Marie Montano, 11 Schweky Court asked, who makes the decision as to what type of poles will be put in? Your company?

Mr. Prete answered, we hope, in coming before you today and giving as much detail as we physically can sitting here, but more importantly, the open house here next Friday, we hope the sentiment of the town will determine what style pole to the extent that we can manage the flexibility about where it exists, what color it is, will be yours.

Ms. Montano stated, we are a six year young neighborhood with wells and I have had them cease doing the herbicide spraying because of the risk factors with high cancer rates near the pole lines. There have been three cancers in our neighborhood, two of which have passed away; seven in another neighborhood on the other side of town that run along the power lines. No one has really discussed the cancer issue; the increase. What is the installation timeframe for each of these poles? Say you went with the monopole or another H-frame pole? In addition to the devastation to the area with the deer and the land, the noise level. I understand a monopole takes a minimum of ten (10) cement trucks to fill that 20' deep hole you will be digging. I can probably be promised a year of traffic through my back yard.

Mr. Prete stated, constructing a transmission line involves a series of steps. Typically, construction proceeds at about 1 mile per month but it is not a constant 1 month period that you will see activity. It will be activity in blocks of several days at a time over the course of a couple of months.

Bruce Anesi, High Hill Road stated, during the course of the presentation, everywhere in the state, it looked as though you were showing us that there is just a 345 kv line that

24

connects everything. Can you tell me then why we need a 345 kv line plus a 115 kv line going through Wallingford? Why are there two lines in the proposal here when everywhere else I think it is just a 345 kv line? Did I misunderstand something?

Ms. Bartosewicz answered, the 115 kv lines that are in Wallingford are here to stay. They actually connect Wallingford with the rest of the transmission system.

Mr. Anesi asked, replacing them with a 345 kv line like the rest of the grid or network is not an option? Has it even been considered? It sounds like it is overkill through Wallingford if I am understanding what you are proposing correctly.

Mr. Prete answered, the graphic that was put up in the presentation showed the 345 kv line and only the 115 kv in southwest CT. What is not on there and I would be happy to show you is over 1,200 - 1,400 miles of 115 kv throughout the rest of the state. If you were to look at the transmission network and similar if we look at it from a Wallingford perspective, the substations are fed by 115 kv. They have transformers and equipment that then will transform that down to a useable voltage that we see on our street. You need the 115 kv network to interconnect as it does today, the substations that feed the majority of towns. The 345 kv line is being proposed as it is throughout New England and CT. as a source or highway to better efficiently take the generation that now exists and throw it out a higher voltage and put the 345 kv line to allow for the capacity that needs to transfer between that and the load.

Mayor Dickinson asked, is it possible to have one structure with all of the lines, the existing and new lines on one structure?

Ms. Bartosewicz answered, for reliability reasons, we don't plan to have two 345 kv lines or circuits on the same structure. If you were to lose one of those poles with two lines on it you would be losing both of your 345 kv sources. The section that has a 345 kv segment today remains separated from the new 345 kv line. There are reliability reasons why you don't design transmission lines with two 345 kv circuits on the same structure.

Mr. Prete added, two sections of right-of-way that you have each has a 115 kv line on it and there is possibilities to arrange the 345 kv and the 115 kv on one pole structure. What we tried to do is eliminate or reduce the height. You build a phase facing horizontal that eliminates the height of the pole. If we were to construct the 115 kv and 345 kv on the same pole, you would essentially have to build them vertically up and down and you could house both a 345 kv and a 115 kv on one structure. The structure would be taller. On an H-frame pole three phase power hangs from the horizontal part of the "H" running left to right. The 345 kv is roughly 20-25' apart. That what is 90' today in your right-of-way at 345 kv and roughly 60' at 115 kv. If you can imagine now that you need that phase spacing for safety reasons according to safety code. If you were to then put another 345 kv line on top of it, you would have to build in such a way to add clearances on top.

Bob Stewart, 72 Marriott Circle asked, when you come to clear the trees down, I think your line runs within about 30' of my house. I have 65-70' oaks back there. Are you going to take all of those down? If you have to take them down, are you going to contract this out to another company? Are they going to come in on Pond Hill Road? No one is going to come in from Marriott Circle and go across my lawn using the shortest way to take those trees down. I don't want everything torn up that I have worked a long time for. I would like to know when a company is going to come to do all of this work. I would like to know what they can and cannot do because you are not going to be around to be a watchdog over them.

Brad Chvisuk asked, what do we need to do if we don't want this second pole being erected? Is it petitions that we need? How many people do we need to sign it? Do we need a lawyer? I want to know what we can do. I am feeling helpless here, looking at three bad scenarios. I don't like any of them.

Mayor Dickinson stated, the first step is to go to the open house. There will be an ability to make known your thoughts and what you feel should happen; what is in the best interest of your property and what you feel the future should be. The next step is, the Town of Wallingford, and probably all of you do as well as individuals, has an opportunity to participate in the Siting Council. I believe that we will take a position and provide comments to the Siting Council and then it will take a route from there. The development and management facet, that has to be approved. Is that after the filing?

Ms. Bartosewicz answered, it gets filed and approved only when the Siting Council makes a determination on our application, on the route to build and how to build. that is the last step before construction would begin. The Siting Council has to approve the D&M plan. Because those plans are plans of construction, they are very closely developed with each municipality and the Siting Council has another proceeding in which the parties may participate before the Siting Council approves or approves with conditions a D&M plan.

Mayor Dickinson asked, so there will be significant opportunities for the Town as well as individuals to participate in it and I believe the Town will be participating. We have an Electric Division that has some interest and there is also interest beyond that as far as what has been done elsewhere and what may be the best circumstance for Wallingford after weighing all aspects of it. The first thing is; take advantage of the open house. Make sure comments are recorded there. Everyone should inform themselves and we will take it one step at a time. My belief is that the Town will be filing comments with the Siting Council as of July 1st.

Chairman Parisi asked, does the legislature have any role in this anymore or are they out of it?

Mr. Prete answered, not that we are aware of. The Siting Council process is about a year long process prior to the D&M. If we were to sketch out time, our application on or about

26

August 1st this year, it would take a year long process and you would have input along that whole year.

Chairman Parisi asked, so it is the Siting Council only that will determine the final outcome?

Mr. Smith answered, yes, the Siting Council has been designated by the legislature as the ruling body in these matters. Public Hearings will be held in Wallingford, whether they use this facility or some larger capacity facility to make sure that the public has a chance to comment on this. That will come down the line somewhere between August and some time next year, depending on how long the Siting Council takes on this. They could take anywhere from six months to a year.

Chairman Parisi stated, Mr. Farrell raises the point that the legislature can talk to the Siting Council.

Mr. Smith answered, no doubt about it. I didn't mean to say that they were exempted from the process.

Chairman Parisi stated, people can still contact there representative.

Tony Pascale, 52 Marriott Circle asked, how far are the proposed lines going to be from the existing lines? Are the poles going to be 10,15, 20' away from the existing poles?

Mr. Prete answered, there are three different sections with three different right-of-ways. If we can pin down which one you are in, we can tell you tonight and then further detail that with a home visit.

Mr. Smith stated, Mr. Pascale is in section 2, east-west. It goes west from the Traditions (Golf Course).

Mr. Prete stated, the center placement of the H-frame, or at least that option, is approximately 75' from the center of the existing 115 kv line. It will be approximately 60-75' from the right-of-way line.

Mr. Pascale also stated, like others, that he would like to see the line undergrounded. Why can't the line be put underground in the right-of-way from Route 5 to I-91?

Mr. Prete explained, there are two types of technology: one is called high-pressure fluidfilled which is a cable that is 3-3.5 inches or more in diameter. Three of those are put inside a 10" steel pipe which is then put in the ground in a trench that is roughly 6' X 4' and then every 1,800 feet, because you cannot ship any more than that on one cable reel, you would then have to put in what we call our splicing chamber. The chamber is roughly 8' wide, 8' high and 18' long. Those would have to be buried every 1,800 feet. The

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overhead dissipates heat when the line heats up. Unlike that, the underground line dissipates through earth. You receive the same amount of current-carrying or power transfer capability, you would have to put two of these lines in adjacent to each other and, again, splice 1,800 feet. The other technology we had talked about, generally speaking, is called XLPE which is a solid plastic, so to speak, insulation. Again, that cable is roughly 3-4" in diameter each and would have to be put into duct banks, buried in a trench, 6' X 4' and every 1, 800 feet those would have to be spliced as well. The technology at 345 ky is quite unique. The solid insulation, which has advantages, not having the fluid which I had forgotten to mention in the other technology, has been around for roughly 3-4 years at 345 kv. It has not been spliced in this country and we are very concerned about being the first on such a long and needed line for reliability. The other technology I mentioned prior. which is high-pressure fluid-filled is very mature. It has been in the ground in ConEd and Boston and many urban areas for thirty years and has operated quite well. The down side to that is that it has potential leak characteristics. As the name suggests, this particular pipe-type cable is filled with a mineral oil for electrical properties and for heat dissipation. There are occasions, and it will happen that it will either leak through dig-ins that are quite frankly unstoppable or they will leak through corrosion. When you then take this underground line and rise to overhead, aerially, you need to have what is called a transition station. You need to take this high voltage, underground line and put equipment and other devices so that you can make the proper transition. It would include reactors for compensation, switches, insulators, and the plot of land that you would need to come up and make the transition is roughly 2-4 acres, every time you go up and every time you go down. As we begin to explore whether or not that is a feasible option in Wallingford, the open house hopefully will have a great deal of information on a lot of these type of things. The long and short of it is, the options we have inside of this filing, have potential underground between Middletown and Devon. It has characteristics that we highlight so that we can share with you the problems that exist and would be willing to do that.

Mr. Rys asked if the ultimate decision is made by the Siting Council?

Mr. Prete answered, yes.

Mr. Rys stated, the Town can make a presentation along with the public also but that (Siting Council) is the authority. It is like the case of cell towers. Now the Siting Council has the only authority, is that correct?

Mr. Prete nodded his head yes.

Mr. Rys asked, what are we getting out of this (345 kv) line?

Mr. Prete answered, the 345 kv line that is proposed is actually a loop that will essentially connect Middletown to Milford, Milford to Bridgeport, Bridgeport to Norwalk, and Norwalk to Bethel. In our graphic, it ties into the existing 345 kv system that has been present in Connecticut for many years. If we go back to one of the slides that shows the

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28

345 line, there is a great deal of capacity by way of generation that exists or the ability to import more power from other states, more competitive, more reliable power. Wallingford gets the reliability of the network that we try to convey is interconnected. Just because a line goes through one town or the other, the entire grid in New England is tied together such that the reliability, a fault or current somewhere else, can be picked up and the reliability of Wallingford is intact.

Mr. Rys asked, Wallingford depends on this 345 kv line?

Mr. Prete answered, all of the towns in southwest Connecticut does and Wallingford is one of those, sir.

Mr. Rys asked where the line is going to tie into the grid?

Mr. Prete explained, the line will go from Middletown to Milford, tying into Milford because there are fault current problems at Milford, severe fault current problems. We need to take one of the generations there, it happens to be Milford power that hasn't yet been generating and put that on the 345 kv network. We then need to leave Milford, connect that to Bridgeport, very similarly as you have a substation in Wallingford, there are major substations in Bridgeport. We need to relieve the fault current in that particular substation and raise the existing generation there on the 345 kv line and finally, we need to connect Bridgeport to Norwalk.

Mr. Rys asked, will this power line or grid serve Connecticut only?

Mr. Prete answered, yes sir.

Mr. Toman stated, obviously, the people of Wallingford want underground lines. If five towns downstate are going to get underground lines, what you have tried to explain to us are not as reliable but they are going to get underground lines because they kicked up enough dust. I know they are going to get underground lines because there are more people down there and all of that but I want to go back to where they are being used right now in Europe. I thought I heard that Sweden was using these underground lines. Which of these underground lines that we talked about is being used by Sweden which has a terrific record for their infrastructure? They have been using underground lines to throw around 400 kv and have been using it for over half a decade. Obviously, their reliability is pretty good. What is the problem with reliability if Sweden and perhaps other countries in Europe, too, are converting and using this and throwing around more power, what's the problem? Why can't we have underground lines?

Ms. Bartosewicz answered, only 1% of the world's transmission is underground today. The bulk of the transmission system throughout the world is not underground but overhead.

Mr. Toman replied, that doesn't mean that there can't be more underground. It is a cost thing. Obviously, a country like Sweden, which throws a lot of its money into infrastructure; I have been there and seen it, it would knock your eyes out; that's what we are talking about, the cost. It is not because it is not reliable, it is just that it costs a lot of money to do it and eat into your profits but, so what? Wallingford wants underground lines. I hope, Mr. Mayor, when you present the position of Wallingford to the Siting Council, that you use that as one of your main positions, that we should have an underground system here and obviously people are using it in places like Sweden. I have a lot of respect for the Swedes and I wouldn't do things unless they are reliable. I think we are hearing a lot of malarkey about underground lines when five towns down they have underground lines and we don't. What's the matter? Do we have porous dirt or something that we can't put in underground lines that are reliable here? Just because only 1% of the world is using it, that doesn't mean anything to me.

Mayor Dickinson stated, the Council will have a hand in providing a position for the Town so I didn't want to leave an impression that...

Chairman Parisi stated, that you're going to do it all?

Mayor Dickinson answered, right. We will all be discussing it.

Ms. Doherty asked, this is volume one; are there eight volumes?

Ms. Bartosewicz answered, yes.

Ms. Doherty asked, are the rest (of the volumes) available? The other seven volumes?

Ms. Bartosewicz answered, the Mayor has two full sets of the eight volumes. We are endeavoring to put all eight volumes on the internet for access to everyone. If you do need another set of volumes, I am sure we can provide that for you.

Ms. Doherty stated, we really didn't get into the issue of the electromagnetic fields and the impact it has. Mr. Hutchinson brought up a little bit about that. I am curious with a 345 kv in addition to the 115 kv, what those figures are going to be. I know you said you had projections an they varied according to whether the lines were there but, do you have any type of statistics (on EMF levels) pertaining solely to Wallingford?

Ms. Bartosewicz answered, in Volume 4 of this filing, for all of the towns, the current EMF readings are available and the projected based on the primary route under consideration, based on that configuration in that particular area, EMF levels are projected and are included in Volume 4.

Ms. Doherty asked, are the safety levels also included in there? There are safe levels (of EMF) are there not?

30

May 20, 2003

Ms. Bartosewicz answered, we are all concerned and the employees of both of our companies work in substations and on these lines so EMF is an issue that we are all concerned about. The scientific community does quite a bit of research on this and state and federal governments monitor what the scientific community results are and they made federal/state guidelines which the companies comply to. Those specific guidelines, I don't believe are identified and listed in Volume 4 but we do not do anything against regulations so we are always following those regulations. We also design to EMF best practice. When our engineers try and design a line, they take into consideration and try to mitigate any EMF levels that there are.

Ms. Doherty asked, what you are saying is that in Volume 4 you have figures as to what the EMF levels would be but you are not including what the federal guidelines are or state? What the acceptable levels are?

Ms. Bartosewicz answered, my EMF expert is telling me that the state and federal government monitors states but they have not issued actual federal guidelines on EMF levels.

Ms. Doherty asked, so there are not recommended levels? There has to be some level.

Russell Raymond, Senior Engineer for Northeast Utilities stated, I presently with Ann and cover the EMF subject. At present, there are no federal or state guidelines indicating what should be emitted and what should not. This is dictated by the results of scientific evidence. IN the State of CT., the CT. Siting Council has the best practices which we have to consider in any new designs to reduce the emissions of electric and magnetic fields. We have done that in this project.

Ms. Doherty asked, how much time have you committed to invest in this area as far as EMF is concerned? Are you at all involved in any research in this field?

Ms. Bartosewicz answered, we do support research in this field. We are not the scientists who study EMF. We do, for this particular project, the calculation of the projected EMF levels. It was done by an expert who is an expert on EMF issues and follows the scientific research. We fund research.

Mayor Dickinson asked, you indicated that there are projections. If the reality differs from the projections, if there is a higher level, is the company committed to mitigating that and bringing it to what the projected level would be?

Ms. Bartosewicz answered, I believe I would have to say no. We project based on what we think; it is a value and if you were to go out and measure it at any given time, even today, that value might change on an existing right-of-way depending on factors like how much generation is being put through those wires at any given moment so that EMF levels



31

today, on existing rights-of-way vary with time of year, season, temperature, how much energy is flowing through those lines. We give a projection based on a scenario of average loading on those lines.

Mr. Smith stated, to go back to Lois' (Doherty) first comment, two sets of these documents have been received by the Town through the Mayor's Office. I think he sent one down to the Town Clerk's Office. It is available for anyone. A set was sent to me. If you want to read Volume 4, it is certainly tedious but it is available. We have a full set in our office and I am sure that we can impose upon NU to provide at least that section of Wallingford that we are concerned about in a small volume prepared for the Council.

Chairman Parisi stated, I was going to suggest that perhaps you get us a set for the Council office. Would that be possible; a full set?

Ms. Bartosewicz answered, absolutely.

Mr. Knight stated, a lot of the concern we heard from the community this evening concerned the proximity of this new line to their homes and the clear cutting. That seemed to be the two major issues. I know that when a company came to Wallingford a few years ago and wanted to build a power plant, one of the things that they did which we found very useful was to superimpose their plant on the existing landscape or topography of the town. I think, on June 6th, you should make a special effort to try and do a lot of that for the people over on the east side, the people who are affected.

Ms. Bartosewicz stated, it will be there on June 6th. They will be able to see that.

Mr. Knight continued, they have got to be able to picture what change is anticipated, what you are advocating in terms of their environment.

Ms. Bartosewicz stated, for each of the segments where the existing structure, configuration changes, each of those four segments will be shown in a "before" and "after" mode. They will be able to see what's there today (before) and what it will look like with the "after" superimposed upon it for each segment.

Mr. Knight stated, as you can see tonight, as this discussion developed and more things came out that weren't available to them immediately, those are the concerns that I think people really had. It is going to affect their lives and they want to know how.

Ms. Bartosewicz stated, that is why the open house is very pictorial in nature. There are a lot of exhibits that you can physically see. There will be transition stations where you will be able to see actually what it looks like; what the cable looks like; what the fluid looks like. There are pictures of and dimensions for each of the structures and then there are actual photographs that we had taken along the right-of-way today, superimposed upon it what it would look like tomorrow.

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32

May 20, 2003

Mr. Knight asked if the pictures will be of actual locations in Wallingford and not photos of somewhere else in east nowhere?

Ms. Bartosewicz answered, the pictures will be of actual locations in Wallingford for actual, physical structures in Wallingford. I will be able to tell them exactly where the photograph was taken from.

Mr. Farrell stated, if you look at a map of the State of CT. and you look at the area that you have described to us that you needed to serve and traverse with these lines, you can't help but notice the fact that Route 15 seems to be the most logical cut through this. I don't want to beat the underground dead horse any more than it has but, to me, it would seem that undergrounding using Route 15 would be quite logical. Someone asked you that question and you dismissed it saying that it is an historical road and you are quite right about that but, can you tell me what discussions you have had with D.O.T. and Merritt Parkway Conservancy? If you look at the plan that the D.O.T. has for Route 15 over the long term, they talk about significant cutting of the vegetation along the highway. They talk about significant construction that occurs on Route 15 to restore it to the way that the parkway was in the 1930s and '40s. Have you had those discussions with D.O.T.?

Ms. Bartosewicz responded, we have had discussions with D.O.T. generally about the use of D.O.T. right-of-way. One of the problems with Route 15 on top of it being an historically-designated highway, is the stone bridges that cross. I understand that each bridge is unique. That creates some technical difficulties in constructing a transmission path. Certainly overhead would be inappropriate to span those bridges at those lengths. Underground would have to go under those bridges. There is an issue of how much property D.O.T. owns and whether or not we could actually use the historic designated highway for this construction. The conversations with D.O.T. have been less than fruitful.

Mr. Farrell's microphone experienced technical difficulties at this time and failed to record a fair amount of his comments. Upon restoration of power to his microphone his comments continued as follows:...if, in effect, you are undergrounding it there and undergrounding at least where the bridges connect in the roadway itself, I don't see an impact. The bridges can't be touched but the rest of it is and the rest of it is going to be significantly touched over the next couple of years.

Ms. Bartosewicz answered, we will continue our conversations with D.O.T. but they have very specifically requested that we not build transmission within their corridors above or below.

Mr. Farrell replied, Peter Zabo might be a good person to speak to at the time that Emil Frankel was Commissioner of Transportation, he was his executive assistant. Since Emil left for Washington, Peter has sort of carried the ball on a lot of these issues. He knows all

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of the people in D.O.T. and sometimes can get some movement. He is with the Merritt Parkway Conservancy. I don't know how to spell Zabo, you're on your own.

Ms. Bartosewicz answered, we will find it.

Mr. Vumbaco stated, I agree with some of my fellow councilors - I was happy to see the turnout. What, exactly, is the need in southwest Connecticut that we are supposedly so concerned about; the power? What percentage of this kv line's capacity is going to be used to provide that need? There have been conflicting reports that this is overkill.

Mr. Prete explained, if I was going to take you through a very similar slide that the first power point had and we lived in southwest Connecticut, you would be able to supply the load two ways: one is inherent generation that exists in southwest Connecticut, and one is through those import lines. We can import roughly 1,850 megawatts today through the 115 kv that exists at the inter-phase where the 345 kv (line) is. In the capacity that exists, the generation that exists in southwest Connecticut is roughly 2,100. If you add that up it is roughly 4,000. If, on the other side, you look at the demands that we have experienced and what ISO projects for this year, peak demand in southwest Connecticut was roughly 3,300 megawatts in 2002. They project a peak this year of between 3, 500 and 3,800 megawatts in southwest Connecticut. What you have a supply capacity of approximately 4,000 megawatts and a peak load that could reach 3,800 megawatts so you essentially 200 megawatts difference. National liability standards says that at all times you must be able to withstand two contingent outages; two events. The reason that those reliability standards are in place is, generation is similar in a lot of ways to commodities like oil and water and gas insofar as they are consumed and energy-related. The major difference with electricity as opposed to oil or gas is that you can't store it. The minute or the second that you generate or supply load, you must use it. The national liability standards are put in place so that you can withstand the two contingent outages. If you look at southwest Connecticut on that basis and you then draw the two numbers, you lose a large generator that is 500 megawatts and you lose a transmission line which is 300 megawatts that makes your supply, instead of 4,000, roughly 3,200. You could have a potential deficit of between 500 & 600 megawatts.

Mr. Vumbaco stated, that is a long, blown-out answer and you really didn't answer my question. What is the need, in southeast Connecticut now, versus what we can provide? Currently we can provide 4,000 mw and their peak need is 3,800 mw without this upgrade? Is that what you just said or is it with this upgrade you are going to 4,000?

Mr. Prete answered, without the upgrade.

Mr. Vumbaco asked, right now, without doing anything, we can meet the peak need of southeast Connecticut, forgetting your liability standards for a minute. What will you be able to provide them when you add this line in?

34

Mr. Prete answered, we will upgrade the import capability roughly 1,200 megawatts.

Mr. Vumbaco asked, what is your projected need over the next ten years for southeast Connecticut? I am hoping that you at least did a projected need since you are saying that this is the reason for doing this, is because you are going to run out of power down there?

Mr. Prete answered, that is correct. If we were to take the projection of 3,500-3,800 in southwest Connecticut today, by the time this line is built which is roughly 2007, the need is well over 4,000.

Mr. Vumbaco stated, we are going to have well over 4,000 but we are still going to be able to have the capacity to bill them for 5,200?

Mr. Prete answered, if all the generation that have a forced outage rate of roughly 9% during the summer of last year, that's correct.

Mr. Vumbaco asked, is the Milford plant that is coming on board factored into your 4,000 now or is it in addition to? That's a 500+ megawatt full generating plant isn't it?

Mr. Prete answered, it is in addition to that. At the time the plant was anticipated, it was a 580 megawatt plant but because of technical difficulties, it is under 500 megawatt.

Mr. Vumbaco stated, now we are up to 4,500 megawatts without doing any kind of an upgrade. Wouldn't that 4,500 carry your 500 down in the example that you just used?

Mr. Prete answered, that would be correct if we didn't the scenario out a little further. In Devon, in this projection, there are five units at 200 mw where NRG, the owners of those companies, wanted to shut them down 2 years ago. They have entered into "must run" contracts with FERC and ISO which are over and above costs of generation that the consumers of Connecticut would have to pay upon the activation of Milford power, those will be shut down.

Mr. Vumbaco stated, my concern as a citizen, because I do border the High Hill Road area and I have a lot of people on my street that have a concern, and as a member of this community as a councilperson is, you are coming through this town, I think, to overkill a need down in southeast Connecticut which I believe strictly business is going to dictate that once you have the power for capacity to provide, you are going to be selling it across the sound. I am not willing, as a member of this community, to take this kind of issue to the public, that they to put up with additional poles, right-of-way – all the issues that the people have tonight for the utility companies to be able to sell across to Long Island. I didn't hear any guarantee from any of the representatives saying that the power is going to stay in Connecticut. You are asking us to take the brunt of the aggravation and the issue. Are you going to guarantee all the citizens in all of the communities along that 69 mile line

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or disruption that the power is definitely stay in Connecticut and provide power only to Connecticut.

Mr. Prete answered, we are sitting in front of you to try and provide a solution to a situation that, we are in front of you as companies but we are not the agency that has come up with the need. ISO of New England who is independent system operator, in concert with FERC (Federal Energy Regulatory Commission) who are responsible for reliability of the network throughout New England in the wholesale market are the ones who have determined the need. What they have told us is, what they need to have done is the connections that I had walked through prior to this and that is what we are trying to do.

Mr. Vumbaco asked, because they told you they want 5,200 megawatts to come through?

Mr. Prete answered, they told us they wanted a transfer capability increase of 1,200 megawatts, yes sir. There are a lot of public documents on their website that are as difficult to read as perhaps our volumes, if not more so.

Mr. Vumbaco stated, I guarantee you that in three years there will be power being sold by your organization once this done across the (Long Island) Sound. I just don't buy the argument. If, in fact, there is such a need down there, why isn't a power plant being built? I think most of us up here who believe in the free enterprise system, if there is such a need, the old saying is, "if you build it, they will come." If the need is there, someone will build a power plant.

Mr. Prete replied, generation, as you are well aware, is a competitive market, yet no one has stepped to the plate to build those units.

Mr. Vumbaco replied, if the need is there, I don't understand why they haven't. Maybe there isn't such a need.

Mr. Brodinsky asked, did you go underground in any part of Phase I?

Ms. Bartosewicz answered, correct.

Mr. Brodinsky asked, how long a stretch did you go underground?

Ms. Bartosewicz answered, ten miles. It is the proposal that is currently in front of the Siting Council. There was a compromise settlement reached with the five towns.

Mr. Brodinsky asked, before you came to that agreement, when you were in the more adversarial stage, did you raise the same arguments against going underground that you are raising here, tonight?

Ms. Bartosewicz answered, I believe so.

36

May 20, 2003

Mr. Brodinsky asked, how did you resolve it in your own minds for that ten miles?

Ms. Bartosewicz explained, let's look at the underground that we are proposing here and there is a difference between the type of underground in Bethel to Norwalk and the type of underground that is actually in the Middletown to Norwalk proposal. From Singer substation in Bridgeport to Norwalk we have about 15 miles of underground that goes from substation to substation. Two separate circuits that can be switched independently of each. It makes a tremendous in how you operate a system.

Mr. Brodinsky asked, is that a euphemism for cost?

Ms. Bartosewicz answered, no. The eight miles between Milford substation and Singer substation are, again, substation to substation, they will be two independent circuits again, they can be switched separately. Therefore we were able to go to two sections underground where we did. When you switch technologies and go from overhead to underground and back to overhead again, that situation is essentially treated as one circuit and cannot be switched separately so that there are differences depending on the configuration that you are proposing, the strength of the transmission system at the location that you are proposing it and these factors make a difference on what you can propose and operate reliably.

Mr. Brodinsky asked, how important is it that there were two substations there? Is that what sort of drove that?

Ms. Bartosewicz answered, the fact that we have substations in Milford and Bridgeport is an important factor in that we can connect them, there is no transition from technology. There is no overhead technology to underground technology from substation to substation.

Mr. Brodinsky asked, if there were two substations in Wallingford about ten miles apart, that would be more equal to the situation you face in Phase I?

Ms. Bartosewicz answered, if we were to go form Beseck substation which is the one that we are proposing in Wallingford to Milford, which is the East Devon substation, there is about 30 miles. If we were to go underground for this section, we would have to add to the system, several substations along the way to help compensate for the fact that we're underground.

Mr. Brodinsky asked, what does a substation cost?

Ms. Bartosewicz answered, \$30 million.

Mayor Dickinson asked, some of the undergrounding in Phase I is not Milford and Bridgeport, it is Bethel and that area. That isn't the substation issue in Bethel and Redding in that area?

Ms. Bartosewicz answered, no. There is ten miles in that area and when we look at the whole system now, we have to take into account where the underground currently would be today. WE have to factor into our analysis the fact that there is 10 miles of underground from Bethel to Norwalk as we do studies to figure out how much underground we may do from Middletown to Norwalk.

Mayor Dickinson stated, in your response to Mr. Brodinsky, I was getting the impression that between Milford and Bridgeport were substations that allowed undergrounding there.

Ms. Bartosewicz replied, I was trying to explain the difference between the type of undergrounding we're proposing here and the type being proposed in the Bethel to Norwalk project. The configurations are different and we are actually able to go longer underground in Middletown to Norwalk because of the substation locations.

Mayor Dickinson commented, it does not deal with the porpoiseing issue in the Bethel area, is that right?

Ms. Bartosewicz answered, the configuration for Bethel to Norwalk is more difficult than some of the configurations that we are providing in the Middletown to Norwalk filing.

Mayor Dickinson stated, I just want to make clear on this record that the substations, Milford to Bridgeport really don't address the issue of going underground in components of the Bethel to Norwalk.

Ms. Bartosewicz answered, that is correct. I was explaining the difference between the types because there are many factors that go into analyzing a system for underground and those happen to be factors.

Mayor Dickinson stated, this issue deals with generation and I understand that is not now the issue or responsibility of CL&P or U.I. however, my question is, could we, in Wallingford; consumers, businesses; could we experience brown-outs and black-outs even though Phase II is constructed as a result of generation inadequacies in Connecticut?

Ms. Bartosewicz answered, this upgrade hopefully upgrades the system reliability for the next 20-30 years. Can outages occur? Yes. Your specific example would have to be more specific so I could figure out...this provides an avenue to import more generation into southwest Connecticut from other areas. It could come from Rhode Island, Massachusetts, New York, any of the systems that surround us because we are all connected. By having this new source come into southwest Connecticut, we are increasing the amount of generation that we can bring in to southwest CT. by 1,200 megawatts.

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Mayor Dickinson stated, I am not aware of upgrades for the connections to Rhode Island, Massachusetts or New York. The Siting Council's projections for the future show a constant of 2,000 megawatts coming into the state, importing power. That isn't being improved. In the past, 1996-97, we had threatened brown-outs and black-outs because there was not enough generating capacity in CT. and the ability to import was restricted and, at that time the nuclear plants were down and a variety of circumstances occurred. AS we are talking to the public here, my concern is that there is going to be an impression that this will solve energy needs when, in fact, this is one component of the energy needs, the transmission system, but the generating capability is not necessarily being improved. We can have some plants go down, in fact, some are going to be retired, and end up with lack of generation. Even though we have the new highways for transmission, we won't have enough electricity potentially to run along those lines. Is that possible?

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38

Mr. Prete answered, it is possible. ISO New England, as they do every year, look at the region, New England, to find out where capacity and load is and what the line limitations are. At this point in time I am not sure if they have upgrades planned for Rhode Island, Massachusetts or New York to assure your answer.

Chairman Parisi stated, with all due respect, this has gotten so confusing that I am going to speak bluntly because I am not even going to bother asking you anymore questions but I am going to tell you my impression right now. This is like playing a shell game and we are looking for the pea. Every time we ask a question we lose and we start the game all over again. First, underground is good but only good in certain places; then there is certain requirements and then there is this and then there's that. It just boils down to that we are not going to and we can t have underground cable in Wallingford for any number of reasons All of the councilors have asked excellent questions but it is the pea, game. It just keeps moving around. We want to hear smaight talk, at least I do and L don't think I am hearing any straight talk about this. It looks to me like you can generate an awful lot of power, you are going to have power left over and no one in America today has anything left over, it goes somewhere and it goes somewhere for a price. If you are going to sell it down the street, at least tell people that that's what you are going to do. But I am sorry, with all due respect and I know you are doing your job and I do respect that, I just can't tell you that I can buy what I have heard tonight, I'm sorry. I wish I was in a position to really affect the outcome of this, but I don't feel that I am. I think this is sort of a massage thing for the public but we all feally know where we are going. With that I will continue the question.

Mr. Rys asked, how much EMF is created by buried cable?

Mr. Prete answered, EMF is caused by current flowing through lines. The closer you can put the lines, the closer they have a cancellation effect. They will be less on an underground line than an overhead. I can't say how much less, but I can say that they are significant, though.



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May 20, 2003



39

Mr. Brodinsky asked, in your trials and tribulations in Phase I, was there any discussion, research, data, arguments, evidence raised about the amount abutting properties were devalued?

Ms. Bartosewicz answered, I was not present at the Phase I hearings and didn't testify there. I am sure that property values was discussed and is on the record for the Phase I records. I cannot tell you the answer here, I don't know it.

Mr. Brodinsky asked, does anyone in your cadre, you have 7-8 people here, did any of them come across any arguments, evidence, debates, data presented by either side concerning the amount by which property values were devalued? I have to tell you that, off the grapevine, we heard a lot of this buzz that some public officials were saying that their Assessors provided them with projections as to how much their grand list would go down. I am sure as a matter of argument; I would be shocked if it wasn't communicated to someone, maybe not you personally, but you have a lot of folks out there. Has anyone heard about any of this data?

There was no answer forthcoming.

Mr. Brodinsky responded, that's great, we'll be the first. This is terrific. This will be new material for all the others.

Peter Brandien, Director of Transmission Operations replied, I was a witness for the company in the Phase I project. The towns or one of the interveners did present some information on property values. I was not a witness for the company in that part of the project and I don't remember what it was, but, they showed properties being devalued. It is on the record for Phase I. Interveners did have information from their Assessors to show the properties devalued and I think he had a range anywhere between 15 - 40% for properties that the lines actually traversed the property, not abutting the property. He had some other statistics for other information. It is on the record for Phase I, I just don't remember all of the data.

Mr. Brodinsky stated, I think the way we can leave it is that there is some evidence in the record concerning the amount by which properties were devalued, not just properties over which your lines went but properties within the line of sight; properties that abutted; properties that were close by. All of this was presented by somebody? Do you remember which town? Was it Weston?

Mr. Brandien replied, I am not sure whether or not it was the town's experts or whether it was the woodlands or one of the other interveners. We can find out which intervener presented that information for you.

Mr. Brodinsky asked that he be contacted with the information.

Ms. Bartosewicz added, we will go back into the record and send you the relevant sections.

Mr. Knight commented, I think more than anything else what people in Wallingford and probably anywhere else this project is impacting, just want straight talk. I don't disagree that the market for electricity in the northeastern United States is critical and that we are not an island unto ourselves and so forth and so on. Yes, we have to look at the big picture. I grew up in a family, three generations of utility people so I have an inclination to take what you say mostly on face value. Having said that, I hope on June 6th the people who are here and the people who are affected get a real straight talk from you guys. That is all they are asking for; they want to know what is going to happen to them and they want to know the whole truth and nothing but. You would do yourselves a great deal of good for your project by presenting it that way. I understand that a lot of the issues are very technical and go over our head very quickly in terms of some of the more technical engineering sort of issues. From what we are seeing from this perspective, what we are seeing down the road is, some of our residents are being asked to make a sacrifice as Mike is leaning on, that there may be a financial sacrifice, not just an environmental sacrifice that they are being asked to make so that people in Fairfield county can fire up the old TV. and people resent that. Everyone wants a fair share. Everybody takes a little pain but what we are seeing on a map on page 4 here, what we are seeing is that the pain is going to be borne by the people east of Stratford. The people on the gold coast are going to say, "we got our way again" and people here resent that. If you can't overcome that resentment, then you are going to have a lot of opposition from a lot of people that would otherwise be willing to support this because of the long term benefits the State of CT. If you look at page 4 and look at that map and watch it all of a sudden go underground when it gets to Stratford. On June 6th be ready, because there is a lot of that here. Long Island has come up; feel the same way about Long Island... They turned down the opportunity to have a plant just like one that was proposed here and I went down to a hearing in Long Island and I testified for PP&L to the good management and building practices that took place here, in Wallingford. I testified for PP&L. They were hysterical and they don't have that plant today but yet the people in Wallingford are going to end up with these big poles in their backyard so the folks in Long Island can have it sent over there from Lord knows where. Those are issues. Please understand.

Mr. Vumbaco asked, what is the current pole height on High Hill Road behind Bristol Myers? They are the H-frames with 115 kv lines.

Ms. Bartosewicz answered, 57 feet.

Mr. Vumbaco asked, are you saying that you are not going to go any higher than that with the existing one next to it?

Ms. Bartosewicz answered, that section is the same H-frame as the rest of it which, for an H-frame is 90 feet.



May 20, 2003

40

Mr. Vumbaco stated, I was under the impression that you were not going to go any higher than the height of the existing structures.

Ms. Bartosewicz answered, I said that our goal was, when designing this, was to, wherever possible, we made the poles as low as possible. We tried to design to make the structure similar and in the same place along the right-of-way.

Mr. Smith stated, I think a mistake has been made. That is a 345 ky line, not 115 ky.

Ms. Bartosewicz stated, if it is a 345 kv line on High Hill Road then it currently has a 345 kv H-frame at 90 feet and the new line would be the same.

Mr. Brodinsky stated, in one of the booklets that you gave us, you had little profiles of poles and the vegetation and the near vegetation and the far vegetation. Do you know the plan I am referring to?

Ms. Bartosewicz answered, yes, the plan of profiles.

Mr. Brodinsky stated, I am wondering if the pole height is shown on any of those pages?

Ms. Bartosewicz answered, yes it is. When we talk about poles heights today, we talk about average pole heights because they vary; even today, what exists there. There are some letters and numbers above the vegetation and the picture.

Mr. Brodinsky stated, by way of example, I am on sheet 10 or 46 where it comes over the Trap Rock Ridge and it shows, by golly, it shows my house but it also shows Valley View Drive, Cliffside Drive, I don't know why I picked that one; I don't know.

(laughter)

Mr. Brodinsky continued, but it may illustrate my point. There is a pole right on top of the Trap Rock Ridge and, according to the document that you gave us, how high is that pole according to this document?

Ms. Bartosewicz answered, 107'.

Mr. Brodinsky stated, and the next one down is 127'; the next one down 142'; the next one down 107'?

Ms. Bartosewicz answered, correct.

Mr. Brodinsky asked, when we get over to High Hill Road, it looks like the pole heights are 90', 90', 95', 100', 95', 95' & 100', so they are taller.

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Ms. Bartosewicz answered, because when we quote today, even today they are taller than the 90' that we quote and some are shorter because when we talk about pole heights, we talk about average pole heights and based on topography, based on mountains or hills, based on valleys, pole heights do change.

42

May 20, 2003

Mr. Brodinsky stated, I am going by information you provided. Pole heights seem to be, in some cases, considerably more than what is existing and there is a general statement you made that pole heights wouldn't increase. Then we got down to averages but, it will increase.

Ms. Bartosewicz replied, pole heights today are probably close to that. If they are in the same location, they are probably close to that height today.

Mr. Brodinsky referred to sheet #16 of 46 which shows Williams Road, Malchiodi Drive, etc. I am going to pick the tallest pole which appears to be 110' and there are a couple of them. What is the height of the existing pole that would be side by side to that pole (pole #26)?

Ms. Bartosewicz did not have the information.

Mr. Brodinsky thought for sure a representative of the company present in the audience would have the information.

No one was aware of the exact height.

Mr. Brodinsky stated, by your experience, by inference is that a 90' pole, the existing pole? You have diagrams and mock ups and H-frame things and average heights. Aren't you saying representing that the average height is 90'?

Ms. Bartosewicz replied, correct and as an example there is a pole on the same page that is only 85' tall.

Mr. Brodinsky stated, I am drawing your attention to 110' pole which might be 20' higher than a 90' pole which is probably there.

Ms. Bartosewicz answered, I would have to go back and look at existing pole height and we can provide you with that information.

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Mr. Brodinsky stated, in interpreting the same document, you seem to be giving like a profile of the power lines as they would be above the tree line, which is very helpful.

Ms. Bartosewicz answered, it is actually an aerial profile. They look from the side so that they can tell how tall the vegetation is regarding....the different color is the near vegetation or the far vegetation.

Mr. Brodinsky asked, from what vantage point? Would that be someone on the street looking towards these power lines and, if so, what street so that they would see the pole in relation to the vegetation?

Ms. Bartosewicz answered, it is aerial photography so it is based on...it is from a vantage point of someone looking at the profiles across the right-of-way. The line would be in front of you so the trees would be either higher or lower and you would be looking toward the line.

Mr. Brodinsky asked, so it would be like an artist's rendition if you were standing right on the edge of the right-of-way looking into the right-of-way?

Ms. Bartosewicz answered, yes.

Mr. Brodinsky asked, does the cut lines mean the area that you would clear cut to get your poles and lines in? Is that what cut line means?

Ms. Bartosewicz answered, the cut line is actually the edge of the right-of-way.

Mr. Brodinsky asked, is there any significance to the word, "cut"? Because you could have said, edge of right-of-way, or right-of-way line, but you used the word, "cut" so I thought things might be cut.

Ms. Bartosewicz was not sure since they were aerial photos.

Mr. Brodinsky asked, you're saying that the cut line doesn't have anything to do with what might be cut, it is just a right-of-way boundary?

Ms. Bartosewicz answered, it is the right-of-way boundary. Changes on the existing rightof-way would depend on what is there today, where they would have to put a new structure and that would be evaluated.

Mr. Brodinsky stated, in some neighborhoods the lines will go over lawns; the lines will go over shrubs, trees, decorative trees, etc. Some of those appear within the cut line. Could those trees and vegetation and shrubs and hedges be saved or would you knock them down because they are within the boundaries of the cut line?

Ms. Bartosewicz answered, they could possibly be saved but it depends on where the tree is; where the structure location actually goes. It is very dependent upon a specific parcel. Some rights-of-way are fairly open; some are less open.

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44

May 20, 2003

Mr. Brodinsky asked, on June 6th, you will be able to tell property owners which trees will be saved probably?

Ms. Bartosewicz answered, I don't think my folks would not be able to tell you exactly which tree will be saved. To answer some of the homeowner questions we hear today, it will require sending someone into the field to talk and look individually at the right-ofway.

Mr. Brodinsky asked, you have some numbers in Volume 4 or 7 regarding EMF. Share with us what you anticipate to be the increase in the numerical values?

Ms. Bartosewicz answered, I don't have the book in front of me.

Mr. Brodinsky answered, it is not a tough question.

Russell Raymond, Senior Engineer stated, I am the EMF person for Northeast Utilities. The increase can be as large as 8.3 milligauss at the edge of the right-of-way.

Mr. Brodinsky asked, on a percentage basis, how does that translate. Is it up 10%, 20%?

Mr. Prete stated, on section 5, the existing is 5.6 on one side of the right-of-way and 23.4. The proposed on that same right-of-way is 10.5 versus 24.4.

Mr. Brodinsky asked, so at one point it might double or come close to doubling?

Mr. Prete answered, correct. On section 6, it is roughly .9 and 6 (is current reading) and 8.5 and 3.2 (new or increased proposed reading).

Mr. Brodinsky asked for one more.

Mr. Prete stated, in section 7 where you have the lattice tower today, .3 and 9.5 is the old and 10.8 and 14.6 is the new (reading).

There were no further questions at this time.

Chairman Parisi stated, I think the audience did a fine job. There were some very good questions. I commend you, too, I think you made a fine presentation, maintained your calm, as you were supposed to. This is important and I know you know they are and sometimes it's a comfort level for the public and, as Mr. Knight eluded to, people are very concerned about their property and their "castle" if you will. I think they are just looking for answers to make this more palatable if, in fact, it has to happen. I think there had better be some good answers at the open house because I think there is still going to be some yeary pointed questions.

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45

May 20, 2003

Mr. Prete thanked the Council for their time. He stated, I would like to sum up that, if in our answers you get the indication that we are trying to swim or dodge or do anything other than answer them honestly, I personally apologize. I do not run my business or our business that way. It is a complex issue and we will do our damedest to try to make sure we put it in terms so that you don't get that type of opinion.

Mr. Parisi stated, I guess I was just a little frustrated with perhaps my lack of understanding of your technical answers and I don't know that that's anyone's fault. You have to talk your language and I am stuck with mine and so be it.

Motion was made by Mr. Farrell to Adjourn the Meeting, seconded by Mr. Rys.

VOTE: Papale was absent; all ayes; motion duly carried.

There being no further business the meeting adjourned at 10:53 P.M.

Meeting recorded and transcribed by:

Kathryn F. Zandi Town Council Secretar

Approved by:

(by RR. Robert F. Parisi, Chairman

semary A. Rascati, Town Cler

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Date

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