BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

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NORTHEASTERN ENERGY : DKT#AD04-5-000

INFRASTRUCTURE CONFERENCE :

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Hilton Hotel

1335 Avenue of the Americas

New York, New York

Thursday, June 3, 2004

9:00 a.m.

CHAIRMAN PAT WOOD, Presiding

P R O C E E D I N G S

MR. WOOD: Good morning.

I am Pat Wood, Chairman of the Federal Energy Regulatory Commission. I am joined here by my colleagues Joe Kelliher also at FERC, and Nora Brownwell is en route so she will be here also. I would like to, on behalf of both them, welcome you all to our eighth in a series of regional infrastructure conferences, the first of which was back when Nora and I had a small hearing, probably about one-tenth this audience, in the California Energy Commission chambers on the state of the natural gas infrastructure about three years ago this month.

Since then, the full Commission has had a number of hearings on the road to discuss the broad state of the energy infrastructure. This is our first repeat trip here in New York City. We had such a good time the last time that we decided to come back about three blocks away from where we held the first one, back in 2002.

The point of these conferences is to focus collaboratively with members of the industry, with state and federal officials, governors' offices, with ourselves and our staff and bright people

affected by the matters in the energy industry and focus on natural gas infrastructure, on electricity infrastructure, other things such as, in certain cases, coal and hydroelectricity. Now the LNG aspect of natural gas has become a much bigger issue due to the economics in that industry which we will focus on today.

And the point of today is not to approve an order or come out with some final rule, the kind of traditional things that FERC has done, but to get a broader understanding and a crisper view of the issues out in a very public forum so that the ideas, concerns, proposals, thoughts or just general musings of the people in the region are out in public for us all to talk about and perhaps move on to some further resolution.

In the past, these infrastructure conferences have led to significant understanding and improvement in the regulatory structures across the country, both at the FERC level and with actions taken at the states. So our format today is based on experience in the past of things that have worked and have made this not only an interesting day but a fruitful day.

We will start today with a presentation

from Jeff Wright from our staff. We have, as a result of the first two infrastructure conferences, set up a specific unit within the FERC that is in charge of infrastructure analysis and projects, and Jeff is head of that group. It is a great team that has been a real contributor to our understanding of the important part of our job here at FERC.

We are following that with Dr. Ed Krapels, who is the manager of gas and power at Energy Security Analysis, Inc. He will give a very, I think, informative and, in fact in a few cases, provocative overview on a number issues that will frame the discussions for the rest of the day.

In contrast to prior conferences, we are having some very large panels, and just three of them today instead of the usual five, so that we can really dig a little deeper into the issues. One of the things that has clearly become part of the FERC agenda in the past, I would say, 18 months most pronounceably is that there are a number of occurring concerns from this particular region of the country about the infrastructure, both gas and power infrastructures, that we really need to delve a lot deeper into than just maybe the more surface level that we have done in the past. So today's

panels were created with an attempt to try to get people that would allow us to go much deeper into these issues and to talk about some of the concerns and actually point out where there are issues in dispute so that we can fully understand those better.

Infrastructure, as you all know, sets a predicate for successful energy markets of all types across the entire country. That we really don't get to issues of market oversight or balanced market rules unless we have a sufficient energy infrastructure, so the focus today is on that.

I would like to add that I know that the focus today looks quite a bit like a focus on supply and supply is clearly one of the issues that is important. We don't have as much focus on the demand side issues. Those are very important to our Commission as I know they are to the industry and to the State Commissioners. But I do want to say in the opening comments, that is an assumed function, that the states and that the working wholesale markets, and the two up here, obviously, New York and New England, together with PJM have made the most progress in allowing demand response and have contributed to the overall supply and demand picture

being an important piece of the puzzle. That is not the case in the rest of the country. But because so much of FERC focuses on permitting and expansions and tariff and rates that deal with the actual physical supply side infrastructure, the focus of today's conference is primarily on that issue.

So, please, if you have issues that relate to demand issues, those are absolutely co-equal with those of supply here on the table.

With no further adieu, I would like to again welcome you all and say we hope for today to be a useful, productive day, and most of all, interesting. We have a nice long lunch break so if you want to carry some conversations on, we will do that. We will start back promptly at 1:15.

I would like to thank the nice work of the hotel, our awesome staff for the preparation of this conference. And when we come back from the lunch break I will recognize all those folks by name. I would also like to express my appreciation to my colleagues from the New York State Public Service Commission. I know chairman Flynn is on the next panel, but Judge Weiss and Neal Gavin are also here from the New York PSC, and we are always honored to have you all here, good friends and good colleagues.

Linda, I know you are on a subsequent panel as well. I appreciate you being here. And Chairman Alfonso is here from the Massachusetts Commission. Bob Walsh will be on our later panel as well, addressing our New England issues. We are always honored to have you all here. I think everybody is an honored guest, so I won't go further than that.

I will say if you were able to find this room you are the kind of intellect we want. We don't waste a lot of your federal dollars on signage. But we do spend them well on the next topic which is Jeff's presentation.

MR. WRIGHT: Good morning and welcome again. As the Chairman said, I am Jeff Wright of the Office of Energy Projects.

What I would like to do is give a presentation, basically a snapshot view of the current electric and gas infrastructure situation in the northeast. And for the purposes of this conference, we define the northeast as New York State and the six New England states.

Now, taking a quick look at some statistics comparing the northeast to the U.S. as a whole, since 1991 the northeast had lagged behind

the U.S. in terms of population growth and growth in gross state product. However, since 1991 the growth in northeast energy use has greatly surpassed the national growth rate. In EIA's most recent statistics, northeast energy comprised about 9.1 percent of total U.S. energy consumption.

From January 2000 to the present, northeast generating capacity has increased by 14 percent to over 72,000 megawatts. In the northeast, natural gas and oil are the dominant fuel sources for generation. 38 percent of the total generation is gas-fired, while 23 percent is oil-fired. Nuclear and hydro each contribute 13 percent of generation capacity and coal contributes another 10 percent.

Now, overall generating capacity in New York State has increased seven percent since the year 2000 and 90 percent of this increase is through gas-fired generation. Presently 36 percent of New York's generation is fueled by natural gas and oil fuels 24 percent. In New England gas-fired generation capacity has more than doubled since 2000.

In 2000, oil-fired generation was the dominant fuel comprising 31 percent of generation

capacity. Now gas-fired generation accounts for 40 percent of New England's generation, and oil is at 22 percent.

The historical fuel mix in the northeast from 1998 with projections to 2008 shows little has actually changed in the contributions of coal, nuclear and hydro resources. Oil-fired generation is expected to decline somewhat as aging plants are replaced with the gas-fired plants. And by 2008, over half of the region's generating capacity will be fueled by natural gas.

Looking at New York State in a little more detail, we see generation capacity in the upper Hudson zone has grown 48 percent since 2000, while New York City's and Long Island's generation capacity has increased 13 and 16 percent respectively. The remainder of New York State has grown only slightly or not at all.

This slide looks at capacity additions and retirements in New York. And I want to make a quick correction, New York City is actually represented by the yellow on this chart and the remainder of the state, upstate and Long Island are represented by red. My apologies.

From 2004 to 2008, New York State should

have 5,335 megawatts, with New York City expected to account for 38 percent of the state's growth. The spurt in building will decline in 2006 and tapers off entirely by 2008. Now, over 1,600 megawatts of capacity is expected to be retired in New York City from 2004 through 2008.

Generation capacity additions in New England total nearly 9,000 megawatts in recent years, and another 560 megawatts is expected to be put into operation in 2004. This building trend stops in 2004, given that the region will have plentiful generation resources. This new capacity greatly outweighs the 900 megawatts of expected retirements.

This slide compares generation output from 2000 to 2003. In the northeast, generation output increased 11 percent since 2000. Over this time period output from gas-fired generation increased by 34 percent, output from coal and oil-fired generation actually declined by 10 and 11 percent respectively. New England, whose output increased by 21 percent, accounted for the lion's share of the region's increase in generation output, while New York State's output increased by 3 percent.

Taking a quick look at Canada's

contribution to the northeast energy mix, you see that the northeast net imports of electricity from Canada totaled over 10,500 gigawatt hours in 2003, approximately 4 percent of the northeast's 2003 output. And this is down from imports of almost 17,000 gigawatt hours in 2002.

Turning our attention to electric transmission in the northeast, we see recently there were two merchant transmission projects involving New York, the Empire Connection or Conjunction Project and the Neptune Project. During their open seasons, Conjunction and Neptune will not be able to secure bids to capacity, and as a result, the Conjunction Project will probably not be built. This would have been a project to bring energy from the generation in the Albany area to New York City.

Neptune encountered difficulty but recently the Long Island Power Authority has contracted for their capacity. Cross Sound Cable, a merchant transmission line spanning Long Island Sound has only been able to operate under emergency orders due to regulatory conflicts.

Interstate cooperation in building transmission projects will go a long way to relieve congestion while allowing excess generation to reach

sufficient areas. The Cross Sound Project, the Cross Hudson Project, the New Scobie - Tweksbury line and the Millbury - Card line are examples of this and demonstrate the need for coordinated regional plans.

Taking a quick look at hydro generation in the northeast, you see that hydro's contribution varies greatly between states. Overall, hydro constitutes 13 percent of the region's generation capacity and 15 percent of New York State, and 11 percent of New England.

Turning to natural gas, between 1993 and 2003, the largest increase in natural gas demand in the northeast was in the power generation sector. New England accounted for the majority of this increase in electric generation's demands for gas, and New York City's demand in the commercial sector increased the most, followed by electric generation.

Now, the increase in natural gas consumption to meet power generation demand is expected to continue through 2008 in the northeast as electric generation becomes the largest gas-consuming sector. By 2008, power generation will become the dominant demand sector in New York City. It is anticipated that natural gas demand for

electric generation both in New England and New York City will be close to 40 percent total natural gas usage.

The northeast as a whole consumes about 9 percent of the natural gas produced in the U.S., but the northeast has virtually no gas production or reserves. Due to a lack of abundant underground storage capacity, New York City and New England are highly dependent on the pipeline infrastructure to transport natural gas from producing areas in the U.S. and Canada. New England also has access to LNG in Everett, Massachusetts and Boston.

Somewhat disconcerting is the northeast's dependence upon imports from Canada. Nearly one half of the northeast gas consumption is dependent upon Canadian supplies. This supply source becomes problematic as Canadian production flattens and Canadian demand increases.

The largest amount of pipeline capacity serving the northeast comes from the midwest and the southeast. While New England is dependent on pipeline infrastructure traversing New York State, New York City is largely dependent on Texas Eastern and Transcontinental Pipe Line capacity entering New York City from New Jersey. New England and New York

City also depend on the pipeline infrastructure to transport gas from Canada.

This slide shows how gas demand has approached capacity in New England and New York City and for the northeast as a whole. New York City and New England have experienced times when demand equals pipeline capacity. Short falls are met with Beach Haven and LNG supplies. However, major variations in weather as demand continues to grow could result in curtailments of service. It should be noted that any major physical failure of the pipeline supplying this region could jeopardize firm service commitments as well.

Now, the future capacity levels do not reflect any contributions from the Millennium, Islander East or Maritime expansion projects. Volumes from the Millennium and Islander East could ease any capacity pipeline constraints going into New York City, while an expansion of the Maritime system with additional gas volumes, if expanded, would help the New England area.

Ten projects have been certificated by the FERC since 2001 that would have added 2.8 Bcf per day of new capacity to the northeast if they were constructed. The Millennium and Islander East

Projects have been held up due to certification permitting problems, and these two projects would have close to 1 Bcf per day of capacity in and around the New York City area.

More ominous for the northeast, and for New England specifically, is Tennessee's vacating of its certificate at Seapoint with the Maritime system. This came as a result of Maritime's withdrawal of a major expansion of the system due to the lack of gas supply to support it.

This slide gives you an idea of the trend of Canadian imports to the U.S. and to the northeast in particular. Canadian imports to the U.S. have declined from 2002 to 2003, while Canadian imports to the northeast have actually increased since 2000 by 9 percent and by 4 percent from 2002 to 2003.

A potential source of new gas supply in the northeast is LNG. Currently the northeast does have the oldest LNG import terminal in the U.S. in its gas facility near Boston. Its certificated deliverability totals just over 1 Bcf per day. But there are eight potential LNG import terminals that could supply gas to the northeast. Three of these new terminals would be located in Canada.

An existing LNG storage terminal in

Providence, Rhode Island has proposed to convert to an LNG import terminal. The site in Fall River, Massachusetts and the conversion of the Providence storage facility are currently before the Commission. The Logan Township facility in New Jersey is currently participating in the nation's natural gas pilot program.

Of course, it is not likely that all of these LNG projects will be constructed; however, the construction of any LNG import terminal in the northeast would ease gas supply problems. Of course, substance deliveries of LNG would require infrastructure improvements necessary to accommodate the increased supply.

Turning briefly to storage, I want to highlight that all underground storage in the northeast is located in New York State. The geography of New England does not permit underground storage. Three storage projects in New York have been certificated in recent years that will have the mined deliverability of almost 1 Bcf per day.

Fuel oil, an important source of energy in the past in the northeast, has been a source not only for electric generation but also for commercial and residential sectors; however, since the late

'90s the use of fuel oil for electric generation has declined by about 73 percent. Fuel oil use for electric generation should continue to decline with the emergence of natural gas as the fuel of choice and with fuel oil serving as an alternative fuel while fuel oil sales to residential and commercial sectors still remain steady.

In conclusion, generation capacities continue to grow in the northeast and the vast majority of that generation growth is gas-fired. Growth has come at the expense of traditional methods of fuel and electric generation, oil, coal, hydro and nuclear. Oil's contribution to the generation basis declining in an absolute sense. With the large additions of generation capacity, it appears economically advantageous to have electric transmission of energy from source to load. This can be accomplished with more cooperation within and between regions.

However, the spector looming over all of this is the availability of gas supply and the necessary capacity to transport it. Without the necessary volumes of gas needed to fuel over half of the generation capacity in 2008, the northeast will face uncertainty in its energy supply.

That concludes my presentation.

Next, Dr. Edward Krapels of Energy Security Analysis, Incorporated, will present his view on the energy future in the northeast.

Thank you.

(Applause.)

DR. KRAPELS: While we are waiting for Microsoft to do its thing, Mr. Chairman, Commissioners, fellow delegates, thank you for inviting me to participate in the conference.

I speak to you in sort of two different capacities. One is I am a market adviser on energy matters to many of you. When you don't take my advice, which is very frequently, I also sometime reserve the right to incubate projects on my own, and that was the case with the Neptune Project of which I am one of the founders and principal. As such, we have had a wonderful and interesting couple of years of experience in actually getting a transmission project built.

When I look out at the audience and I see so many friends who are really more experts in commercial matters in energy than I am, I am reminded of Winston Churchill's old saying, "Don't talk to the monkey when the organ grinder is in the

room." All of you are organ grinders and I am the monkey. So I have been asked in 20 minutes to identify areas of concern following Jeff's excellent presentation on the state of the infrastructure, identify some infrastructure objectives, identify the constraints, and then perhaps look at some strategies to meet the objectives that we have.

So as quickly as possible, a few thoughts to supplement Jeff's presentation. We are today listening in the wake of the boom in capacity investment that has now come to an end. And in my view, the area of what was probably irrational exuberance, when you look at 105 percent investment in power projects, has really gone all the way to the other end, as is the fashion, where we now are in an era of irrational austerity.

The investments are not occurring today in green fuel development or transmission development unless there is old fashioned PPA and utility or other credits behind it. And I think it is fair to say that we live not in the free market that some theoreticians may have thought we would be in by now, but in something like a hybrid of market and regulation as FERC's restructuring proceeds -- I didn't know I would be so close to the Chairman when

I did this presentation -- but from the standpoint of market design to the wholesale market platform and other constructions.

But lots of things have changed, and I prepared this slide before I heard from FERC that PJM had been rejected from the northeast, so if you will forgive me, we have acquired over the last ten years three enormously competent organizations that run a very different power system than we have in the past. And I am particularly a student and admirer of the Regional Transmission Expansion Plans of PJM and New England, and I am looking forward to seeing the results of Regional Expansion process in New York.

We have achieved, with the help of these organizations, with FERC policies and encouragement, and with investment, a real increase in the efficiency of generating electricity. And what you see in this slide is a chart that shows you a very high 100,000-foot level, a decline in the implied heat rates of the electric system in generating electricity. And the decline has occurred in each of the three northeastern areas, but it has certainly occurred more in some places than in others, with PJM having the benefit of enormous base

load of coal and nuclear generation, and New York and New England relying more on natural gas, as Jeff showed us.

But this increase in efficiency that comes from the construction of a lot of natural gas plants has also increased the demand for natural gas. As Jeff has already said, we are running at the capacity sometimes of our gas infrastructure. One of the seminal events, I think, of the gas market in the last ten years is the initial enthusiasm and euphoria about eastern Canadian gas supplies. At one point we were talking about 2 Bcf per day perhaps coming into the United States, and today really much more uncertainty about whether that resource is there or not. So that's an uncertainty about gas supply. The increase in natural gas prices has led to an increase in the interest in LNG.

Those of you who are as old I am will get a sense of deja vu. We have been here before. In the 1980s some companies, as you know very well, invested a lot of money in LNG only to find that the price began to increase and that investment was stranded. Is it here to stay? Do we really have a paradigm shift in the gas market? Are we in a $4

gas environment?

We believe we are. But that's a judgment that investors will question. Does the northeast need LNG? Indeed, it does. Will the northeast get an LNG terminal? Jeff's wonderful slide showed up to 4 Bcf per day of potential gas from LNG, but we know that that's not going to happen. We may, in fact, lose a terminal in Boston. I hope not but you never know, the way events of the last few years have transpired.

I believe that our friends at Keyspan are going to develop a terminal in Rhode Island, God willing, but I don't think Maine and Massachusetts are going to allow an LNG terminal to be built. We can all argue about whether that's true or not, but I live in Massachusetts and I find it almost inconceivable that we will get one there. So I am looking at New Brunswick or Nova Scotia are going to be called upon, relied upon, for an LNG facility, which raises a lot of very interesting gas pipeline infrastructure transportation issues.

Now, in power we have three different power markets; we don't have three identical power markets. And we have a kind of titanic shift in the ability of our friends in Canada to provide us with

firm energy and capacity. Year after year, both Quebec and New Brunswick are actually buying more from in their peak season, the winter, and providing a little bit less to us in our peak season. So that's an important and significant change.

With that supplement to Jeff's presentation, what's the outlook? Where are we going?

Well, there is no new investment in generating capacity unless there is a PPA behind it. We all know that, and, therefore, we are projected to, in my firm's estimation, to lose efficiency in terms of electricity generation. We have a number of particular areas of concern which I would like to spend just a second on, southwest Connecticut and Long Island is at the top of our list, more southwest Connecticut than Long Island.

The major assets in that particular marketplace are, of course, the Cross Sound Cable, which we believe should be energized because you never know when it might not be in Connecticut, that we need the power to go the other way. We have a couple of important solutions to the southwest Connecticut/Long Island problem.

One is a northeast utilities very large

transmission project we have confidence in. We believe it is going to get built, but like all transmission projects, there is a plan and there is a reality and whether they can get it built in time is a huge and important question.

As Jeff mentioned, LIPA has chosen a potential cable connection to PJM which, of course, provides fuel diversity for this overall market and is a good investment on the part of LIPA. Ultimately, we think transmission is the main solution to this load pocket problem just because it is so incredibly difficult and costly, 2000 kilowatts, to build generation in this type of area, so here we rely on transmission development and we wish the northeast utility well.

A secondary concern, New York City. I know my friends from Canada are in the audience and we are actually not as concerned about New York City as a lot people are. Con Ed did its job, it stepped up to the plate and issued an RFP. The Commission paid 500 megawatts to CCGT. Our only concern there is the development of that plant run into what we call "Mystic style" problems where it took two years longer to build the Mystic power plant in the City of Boston than was originally envisioned and the

cost to build that plant turned out to be much larger than originally envisioned. Urban construction of power plants is a very challenging and tough business, so we are concerned about that.

NYPA has issued an RFP for another 500 megawatts. If that is awarded to CCGT, there is a significant increase in gas dependence for New York City power plants. Will we have the gas infrastructure to develop that.

There is pressure to close Indian Point. New York regulators will say that that's not going to happen, but in today's political climate, who knows. There are a number of solutions in both the generation and the transmission space that have been proposed to New York that are there and might be developed over the course of the next two or three years, so I am not that concerned about New York City because I believe there were solutions there, including the Bergen Project, PSE&G, TransEnergy Project and so forth.

NEMA. The country of NEMA, for those who don't live in Massachusetts, Northeast Massachusetts: A kingdom run by several well-serving entities that are represented on today's panel. It is well supplied for now because

it has this enormous, new power plant developed at Mystic. In addition, NStar has a very ambitious, creative and essential AC expansion project which has some of the same issues as the Northeast Utilities Project. Can you get an AC project built in an urban environment, will it come in on time?

The Mystic facility, as you may know, is in bankruptcy. I am concerned about how well the facility will be maintained and how reliable it will be over the years, so it is not inconceivable that within two or three years, NEMA will need some new capacity, either transmission or generation, who will issue the PPA stock. In New York, public authorities have stepped up and provided the PPAs. In Massachusetts, we don't have that. So the question is: Who steps up to make the commitment?

Another area of concern, liquidity. The power markets are horribly illiquid. We could not get things done in a significant marketplace. That place is gone. There are, however, some interesting indications about deals being done by private equity investors and other financial firms such as a recent deal between two counter-parties in New York City. Those leave me hope that the illiquidity problem is actually an artifact of the collapse of the merchant

system and that will slowly go to the cupboard as years go by.

Now let's ask a couple of strategic questions in conclusion: One, is the next ten years in the northeast an era of more gasification or is it an era of existing resource optimization? Those are two different strategic paradigms. We don't have a master plan to decide which of those paradigms we are going to pursue. The market is going to rely on it to an extent, but in the way we issue PPAs over the next few years and the way in which we structure our capacity regulations over the next few years, we will certainly shape the direction of the investment.

So if it's gas, if we are going to build more CCGTs, where is the gas going to come from? If it is not gas, then it is transmission. Where is the transmission investment going to come from? How much of it will be ratebased? How much of it will be merchant? The capital markets are saying no at the moment to merchant investments in either generation or transmission, but I think we are at the end of that era and over the next few years, to an extent they will say maybe, and a few years after that they will say "yes."

What are our objectives? Of course, it's $3 gas, $30 energy and reasonable capacity costs. But how do we get there? Do we ever get to some of these objectives? PPAs to generation and transmission in areas of concern are inevitable, cannot be helped. A broad FERC interpretation of what RTOs and load serving entities can ratebase in terms of transmission is already here. We've got it. FERC has said to New England, go ahead and ratebase a substantial amount of transmission. But that decision has unintended consequences. It undermines the locational value of generational load pockets.

So if you need $100 a kilowatt year payment to pay for a new generation facility, you won't get it if you build a lot of transmission into the city. These different policies are not aligned. Inevitably, I think we are going to have more structure than electric capacity payments. So wherever there is more structure than electric capacity payments, as New York has done -- you generators in the audience know a free lunch, you are getting that free but you are going to pay for it through mitigation of energy prices more aggressively than would otherwise be the case.

There are many constraints to infrastructure development. This is an old story. It's difficult, it's costly and complex. Neptune took five years to get done. Some coal, oil and capacity for nuclear plants in the northeast will be closed and capacity will become, within a few years, tight, compared with reserve requirements. We are only a few years away from that in New England and PJM and we are already there in New York.

What are the obstacles? Well, there are no entities anymore willing to be long energy in capacity. Williams, Dynegy, and those people who played such a pivotal role in getting the electric capacity built are gone and are unlikely to come back. Now, you'll say, of course the market will come back, private equity firms will step in. And they are, indeed, buying the assets, the distressed assets, but they are buying them for 40 cents on the dollar and they are not building anything new. I hope you have noticed that, they love to buy distressed assets but they don't like to build anything in the ground.

And the surviving utilities are, by and large, frozen by the fear of what the rating agencies will say. And though there is, in the

world we live in today, a kind of action spread between utilities who don't want to make investments that will make the rating agencies punish them and the private equity firms who actually are enjoying the situation because they don't care what the rating agencies say. So for them, this represents a fantastic opportunity.

A few thoughts on strategies and then I will stop. Natural gas, I don't expect much in the long-haul capacity to be built in this environment. The same folks who took long positions in gas are gone, so we are going to promote locational looping projects that link the various pipelines, and, thereby, increase capacity as much as we can.

What strategy message is there? We probably need to allow utilities, or even encourage utilities to be more flexible, to make more long-term contracts while we are in this transitional stage.

The development of LNG in the United States is full of unanticipated consequences. LNG pricing is going to be more and more important in determining national gas prices. To a degree what will happen to gas happened to oil 25 years ago. It's a process in which world events will

increasingly influence national prices.

We have estimated that by 2015 some 20 to 30 percent of the gas flowing through the hub will be imported. Nevertheless, it's a resource we need so we should promote and accelerate development of a northeast LNG terminal. State regulators have to become accustomed to LNG as a baseload resource. There is no choice. And gas utility resource planning processes might need to be more centralized than they are today. We may need an RTO for natural gas planning purposes.

Gas-fired generation strategy. If we have such deep concerns about natural gas, should our ICAP policies perhaps discriminate between fuels? Should you get a lower capacity payment if you propose to build a gas plant than if you propose to do something else? I know that is not a positive statement but what good is an ICAP payment to a plant that can't get the fuel?

In generation, we need to admit there is going to be a generation adequacy problem a few years from now and that capacity markets as they exist today are really three different things: In PJM there is a view that the market will lead to more investment. I don't agree with that, but it is

a clearly held PJM view.

In New York there has been an innovation in the development of a capacity demand curve that I think is the best idea in electric regulation in the last three years. That capacity demand curve is beginning to be credited by the investors that I work with as something that generates fuel revenues and something they can count on in making investment decisions. This is a very important development.

New England is trying to implement a locational capacity market with FERC's encouragement and we look forward to them doing so some time over the next six months. The capacity market model that is in PJM is an unproven model. We have never had investment in generation on the basis of a totally market-driven payment stream since the market collapsed two years ago. So in my opinion, the New York model is right now the best practices model in the area of regulation.

We need to empower utilities and RTOs to continue to find instruments that allow people to see them as long-term commitments rather than a pure market situation.

Finally, transmission strategy. If you look at transmission in three different buckets,

there is the backyard stuff that gets done routinely; there's the neighborhood link, the Northeast Utilities Project is a neighborhood project, the Neptune Project links two neighborhoods. And then there is the long distance kind of project such as the Hydro Quebec bringing hydro power hundreds and hundreds of miles.

The neighborhood and long distance projects are elective projects, and we need those elective projects if the goal of the next ten years is to optimize existing resources. What's the strategy? Well, to empower utilities, power authorities like LIPA and NYPA, and ISOs to make commitments to develop neighborhood projects. Right now the people who develop those projects need customers, they need customers, they need people to sign contracts.

So, finally, I've got a picture here. I went to the University of Chicago and R.H. Coase is one of my heroes. He is the economist who won the Nobel Prize in the early '90s for saying that a well regulated market is not an oxymoron. My favorite example of that is the New York Mercantile Exchange, the crude oil market. It's a fabulous market. It's a major invention of the U.S. economy of the last 20

years. And it is incredibly highly regulated, if you ever traded in it you know that there are all kinds of regulations on things you cannot do. So we live in a hybrid of a regulation in the market.

I give great credit to our hosts here, FERC, for being open-minded about what it takes to get things done. We are in the tail end of the development of electric market paradigms that we think are going to work. And I thank you very much for your attention.

(Applause.)

MR. MILES: Before we start with our next panel, there are some empty chairs the room, for those folks standing in the back of the room if you want to move up and have a seat before we introduce the next panel, which is scheduled to last about an hour and a half.

MR. WRIGHT: Thank you, Dr. Krapels, for that very comprehensive look at the northeast.

Our first panel is now assembling. I would like to get started with a little overview before they are ready to go.

In January 2004 the New York City Energy Policy Task Force issued a report titled, "New York City - Energy Policy and Electric Resource Roadmap."

This report found that New York City will need 3,780 megawatts of electricity resources by 2008. The report also states that 875 megawatts are currently under construction and distributed resources, including management, energy efficiency and on-sight generation resources could amount to 300 megawatts.

Netting out these numbers results in New York City needing about 2,600 megawatts of generation by 2008. Based on regulatory requirements, 8 percent of this 2,600 megawatts or about 2,080 megawatts needs to by sited in New York City and 520 megawatts came from sources outside the city. To fuel this generation in the city, an additional at least 200,000 NCF per day of natural gas will be necessary. Even more gas will be needed in the city as demand increases in other sectors, residential, commercial, and to a small extent industrial.

Our first panel will address how capacity of the LNG infrastructure in and around the city can meet this future energy demand and, hopefully, ensuing discussion will offer solutions before these issues become problems.

I would like to introduce our first panel in no particular order. We have Gil Quiniones, the

Senior Vice President of Energy with the New York City Economic Development Corporation and Chair of the task force I mentioned.

William Flynn, Chairman of the New York PSC.

Eugene McGrath, CEO of Con Ed Energy.

Carl Levander, Vice President of Regulatory Affairs and Strategic Initiatives with NiSource Pipeline.

William Museler, President and CEO of New York ISO.

Steve Zelkowitz, President of Energy Assets and Supply Group, KeySpan Energy.

Charles Fox, the Deputy Chief of Staff to Governor Pataki of New York.

Frank Cassidy, President and COO of PSE&G Power.

And Steven Greenwald, Managing Director of Global Project Finance, Credit Suisse First Boston.

I guess in our format, we are going to have strictly questions and answers, so I will start with Gil. I hope that was a fair representation, overview of the task force report. I guess my first question is, and probably others would like to address it, is it fair to think that over 2,000

megawatts of generation can be sited in New York before 2008?

MR. QUINIONES: When we put together the 2,600 megawatt need for New York City over the next five years, one thing that we really emphasize is that it has to be a combination of solutions. It's just not -- we are not talking just about power plants. So the 2,600 number includes restricted resources. It includes properly sited transmission lines, repowering of existing plants, new transmission and generating.

So it has to be a combination of things; not just generation.

MR. WRIGHT: I guess I boil it down to 2,080 for the electric generation, so you are saying besides the 300 megawatts in that advance side production, in that liberal gross number of, say, 3,700, there would be even more demand side?

MR. QUINIONES: No. The 2,600 comes from the 3,700 that you already mentioned plus what's already under construction which are the three plants. One is already fired up at the KeySpan Ravenswood plant, Con Ed's East River, and the New York Power Authority's Poletti 500 combined site. Plus, on top of that, is what we expect in power in

terms of the ongoing distributed resources program.

So if you net that one out, the net peak between now and 2008 is 2,600 megawatts, and what the task force has concluded is that to meet that 2,600 megawatts it has to come from the portfolio solutions, not just new power plants. And from that perspective we think that that is a good goal to set and to target for in the next five years.

Furthermore, there are really three things that we are trying to achieve with that number. 665 megawatts of that 2,600 is to meet our load growth and maintain reliability requirements here in the city. Another 1,000 is a planning goal for which we think will moderate energy prices and support economic development here in New York City. And another, just a little bit over 2,000 in plant retirements and a lot of what we power.

So the numbers really are to achieve three goals that we have set over the next five years.

MR. WRIGHT: Would you like to see things sited outside the city in term of dedicated transmission to the city?

MR. QUINIONES: It has to be part of the mix. You know, New York City, we have very sparse real estate, we have competing uses for whatever is

potentially available, other infrastructure uses, waterways, solid waste, transportation infrastructure.

So we would welcome projects that can be sited outside New York. But, again, it has to be a combination of things. One thing, the end in mind is to have a reliable and adequate system here in New York City because it's so crucial to our economy here in New York City and to our security.

MR. WRIGHT: Did you see the Conjunction Project as part of the solution to your problem?

MR. QUINIONES: Well, the Conjunction Project is still in the planning stages. I don't want to be picking and choosing what's in the pipeline. There are projects currently that have been certified under the state siting process. There are projects that in the certification process that we identify in the report.

We would like to see a mix, a solution here in New York City.

MR. WRIGHT: I would like to throw that down to anyone else on the panel, if they see an optimistic or their optimal way to meet this 2,600 megawatt need.

MR. FLYNN: The only thing that I would

add, and I agree with everything he said, but what I think is also an important dynamic that has come into play recently is cooperation amongst the New England states and New York. We have had some trying times, and I won't get into specifics, however, I have not been Chairman for a long time, but those people who are with the Commission have told me, and I have no reason not to believe them, that the relationships between the Commission in New York and the Commissions from the New England states and the two ISOs, the cooperation amongst those four-plus entities has never been better.

And I think that the solutions that those entities could come up with will also add to the diverse portfolio that New York City and Mayor Bloomberg is looking for.

MR. McGRATH: I think also we have to avoid this ad hoc project-by-project discussion, "Is this project right?" "Is that project right?"

I think we need to do that in a planning framework and we are working very hard on that in New York. We have to kind of step back, it seems to me, and look out far into the future when this restructuring transmission is completed, which I think is going to take 20 years or so, and we have

to kind of envision how we want this to come out at the end of the day. And there has to be a basis for a 10-year kind of planning process so that there is a holistic or integrated approach to energy infrastructure. That we just don't do it ad hoc project-by-project and have a less efficient pool at the end of the day.

We are working, all the market participants in New York are working very closely with the ISO in developing such a process. And I think that's where our energy and effort and time need to go short-term to develop it very quickly and have it in place so that people who are planning infrastructure projects have the framework in which to make that plan.

MR. WOOD: Gene, with New York City kind of being at the main for three separate ISO/RTOs, PJM, New York and New England, how do you get the greater New York City planning? I know Gil was talking about the city itself, but you have Long Island, you have southwestern Connecticut, you have northern New Jersey kind of in there as well. Who does that? Who should do that?

Because it does spill over to a lot of people that even if New York got its plan together

under the ISO, which we strongly support, how does that really kind of morph into something, to the 10-year plan you are thinking about?

MR. McGRATH: I think this begins from the street level on up, the policies, the utilities, start at the street level. They develop their long-term plans, that moves up the line to this planning process that we have done with all the market participants in the ISO. And then the ISOs, seems to me, have a regional plan. So it has to build from the bottom up.

I think we get into very serious trouble debating over a particular project in isolation or in a vacuum, without knowing the context.

MR. ZELKOWITZ: Just a comment on the ability to site plans in the city.

Yes, you can site plans. KeySpan has done it and done it successfully through an extraordinary degree of cooperation from the regulatory community, the environmental community and the local constituents as well. You can build on time and on budget in an urban area.

It is increasingly difficult, though, and we do need a balanced approach, including economic and warranted transmission solutions, man-side

solution.

One of the issues Mr. Quiniones raised was the need for 1,000 megawatts to moderate energy prices in the city. That may be a tough one to site. Reliability is one thing, convincing local constituents that we need to site new plants for the reason of moderating energy prices may be a tough one to sell.

MR. WOOD: What would you say that plan was at dollars per kilowatt?

MR. ZELKOWITZ: It's a little more than $1,500 per kilowatt.

MR. WOOD: That's CCGT?

MR. ZELKOWITZ: Yes.

MR. MUSELER: I think it is important to point out that New York has made good progress in the city generating area. Statewide there has been 3,000 megawatts built since the crisis of 2001 where, unfortunately, there had to be a state solution that was absolutely necessary to get through that summer.

But there are another 1,300 megawatts of capacity that is under construction in New York City, and beyond that, there is another 1,000 megawatts that has been approved for the siting

process, thanks to the good work of, frankly, the City and both the Public Service Commission and the State administration. That, along with the other things that Gil mentioned in terms of having a mix of energy sources or ways to deal with capacity needs, I think, does put us in pretty good shape.

I think the answer to your question about 2007 and 2008 is that there is reason for optimism at that point. The problem is right there and beyond there is when some of the retirements start to kick in. We have a little bit of flexibility on one unit, the Poletti unit could be extended another two years. But the problem is that that pipeline will be dry at that point in time because the state siting law has expired.

And for the long term, talking about having a plan that works out ten years, that siting law needs to be reinstated and it needs to be relatively stable. Obviously, the legislation may decide to change one way or the other, but it needs to be predictable; otherwise, developers will shy away and, certainly, the financing community will shy away.

MR. WOOD: Do you have any sense, I guess Charlie or Bill or anybody else on the panel have

any sesnse where that Article 10 -- I know that's been an issue since right after I got on the Commission that, I think, lapsed.

MR. FOX: It's been an issue for too long, Chairman. We are trying to find a solution to it now. The reality is, to get the law reinstated, it will take three parties negotiating in good faith, and I think the crucial time frame is the next twenty days. The State Senate is scheduled to leave town the 23rd or 24th of this month, and we feel it is imperative that we get it done in that time frame.

I don't think there is any issues in that discussion that are not resolvable, but the reality is that if Article 10 is linked to other issues, some of which seem to be intractable in the short-term, we are not going to get it done in that time frame. So if we can get folks in a room, willing to deal with this on a stand-alone basis, I think it is imminently resolvable, and we are calling for another sit-down with Senate and the Assembly in the next few days. And we are there, we are willing to negotiate on every point and I believe every issue is resolvable. But we need people to come to the table and want to get it done in order for it to

happen.

MR. WOOD: I know we don't vote, but if you look at FERC page number 6 in there it shows what the future generation for the city and the state looks like, we would love to be able to help.

MR. FOX: I will bring that chart to our three-way discussion.

MR. MUSELER: Chairman, the other question you asked about how do we get the inter-regional planning, PJM/New York/New England planning to start to work, I think Gene is exactly right, it has to start with the individual transmission owners and the individual ISOs having viable planning processes.

There is a process that I would have to categorize it as in the very early planning stages, but there is a planning process that we in New York and New England, through NPCC and PJM, are cooperating in to try to get an inter-regional planning process that will ultimately start to look at those kinds of things beyond just the local neighborhood, as someone characterized those projects.

I think that I am optimistic about that but that will take a while, we are really taking

baby steps, starting that in terms of at least coordinating the timing and how you count things and getting plans in the individual regions to be based on the same rules of how you do those plans, and then evaluate what the effect of one ISOs area on the other ISO, but that process does have a home and we are working on that with PJM, and as I said, New England and New York NCC on that.

MR. WOOD: That's good news.

Do any other panelists have thoughts on how the state siting issue could get resolved?

MR. FOX: I would just add, Chairman, that there is another piece of this that folks aren't talking about so much, and that is the Article 6 of public funds that is also about to expire, that is the planning statute. And we think just like the issues Gene McGrath mentioned with planning, we need to get the same dynamic, it's achievable and doable.

MR. FLYNN: That's very good point.

Before I came to the Commission, I was president of NYSERTA, which chaired the Article 6 Energy Planning Board with four other parties. And what we were able to do was put together a concise 200-page blueprint for an energy plan in the state

that is a four-year process. And it worked before, it could work again. It gives a great blueprint for people, developers, utilities, whoever is in the energy field, on what energy planning should look like in New York State.

It's not prescripting, but it lays out all the issues and gives people a good sense going forward, and every four years that the process is done that includes from local communities right up to utilities and stakeholders.

MR. WOOD: Is that Article 6?

MR. FLYNN: Yes, and that has always been a companion with Article 10. And Charlie raises a good point there, we should say that that, along with Article 10, have been proven to work in the past and there is no reason why they won't work going forward.

MR. WOOD: Gene?

MR. McGRATH: Back to your question about what can be done about Article 10. I think we collectively, everybody in this room and probably a lot of others, have not done a good job communicating energy infrastructure needs in a proper way.

The energy infrastructure is an enabler of

the economy. It enables us to improve our standard of living, it enables us to create the projects that create jobs, tax base, whatever. We often have the debate about energy projects, in fact, like they exist in their own right and for the purposes of the people in the room, when, in fact, they are essential to grow this economy and to create jobs and do the kinds of things that public policy wants to get done.

I think we come at it the wrong way, so when go into the debate it is all about whether we should put a wire here or a pump there or something, but it has nothing to do with what's going to happen if we don't do this, if we don't create these projects what happens to the economy of the New York World Financial Center, all these kinds of things. So we have not done a good job collectively of making that case.

MR. WOOD: That's part of what we are here today to do.

Gil?

MR. QUINIONES: Just to add to what Gene mentioned, the New York City Energy Policy Task Force, one of its key recommendations is to urge the passage of the Article 10 Bill. The Mayor has been

pushing for this, in fact, has communicated to all parties up in Albany, in a letter back in March, as a follow-up to the policy report.

So as Charlie mentioned, the next few weeks are going to be crucial and we are in support and we are urging that, hopefully, this thing gets done this session.

MR. SCHNAGL: I thought Mr. Cassidy would like to say saying something maybe from a merchant generation perspective.

MR. CASSIDY: Just a few follow-up comments on what some of the other panelists have said.

As most of you know, we are the developers of the Bergen Cross Hudson Dedicated Transmission Project which will link an existing 500 megawatt combined cycle plant in northern New Jersey to the 49th Street substation in Manhattan. That project is permanent, it's ready to go. But we have stated that we are not willing to go forward with it without PPA, so we were not the successful project with the Con Ed PPA. We will be participating in the LIPA PPA.

I think our situation emphasizes some of the comments that were made earlier. As Mr. Krapels

said, we are in an era where old fashioned PPAs and utility credit are needed to be build new facilities. I think in addition, I support what Gene McGrath said earlier, that we need to back off from looking at it on a project-by-project kind of basis, and look at an overall regime for ensuring that infrastructure is there on time.

That means a well-functioning wholesale market and I would agree that steps that have been taken in New York, New York ISOs have been good to do that. It also means a well-defined LSE procurement process that not run off from time to time but that is predictable. In New Jersey we have this basic generation service process which has been well received by both suppliers and LSEs. In other states there are well-defined LSE procurement processes based on contracts which also work.

In any case, I think something of that nature will go along way to ensure a long term infrastructure and adequacy.

MR. SCHNAGL: Long-term contracts or agreements, I think, are always necessary in terms of developing generation and/or transmission.

MR. CASSIDY: I don't think that that's necessarily so. I agree that it looks that way

today, you don't see a lot of people building one, but I put the emphasis on a well-defined LSE procurement process that developers can count on. I think that is an effective substitute for a long-term contract.

MR. WOOD: In your experience in the northeastern market, what's a good prototype to look at for that? Is there one yet?

MR. CASSIDY: Well, as I mentioned, the New Jersey basic generation service auction has been very successful over the last three years. It was well received by both suppliers and the LSE. It remains to be seen whether it is going to be an effective process for ensuring that new generation will get built when needed.

MR. TIGER: Maybe Mr. Greenwald can speak to what the nature of the PPA needs will be in the current or in the near future from the financing market perspective.

MR. GREENWALD: Okay. I would agree with everything said here regarding the need for PPAs today.

I would just make one comment and indicate that the markets are willing to take a little bit of merchant risk, and the amount of that merchant risk

will really depend on the specific area that a project is meant to serve. But no one should really think about developing a project without a PPA.

Now, as far as the type of PPA, I think tenure is very important. Make no mistake about it, the Astoria project has been referenced here several times. While we were successful in financing that, I have to tell you that I would really hope that that is not going to be used as the benchmark from which to then set other large-scale projects for financing, because I will tell you that in today's market, Astoria probably couldn't get financed. That probably got done just kind of under the wire with probably the absolute minimum conditions available to attract both equity and debt. And the conditions are not necessarily all that dissimilar between attracting third-party equity or debt.

But I would say tenure is very important. Obviously. Some sort of ICAP payments or capacity payments are important. The markets will take a certain amount of merchant risk but I would like to see tenures longer than ten years, if possible. As I said, Con Ed the contract with Astoria was ten years and, for lack of a better phrase, I would just say it barely got done, it just got done.

MR. TIGER: Mr. McGrath, and others who might care to comment, what are the financial incentives for a load serving entity to do PPAs, leaving aside the liability issues and good neighborliness and the public good and the nature of electricity, is it a long term, viable strategy to assume that LSEs will step up for PPAs?

MR. McGRATH: The conditions you are putting on my answers are pretty severe. All those things you left out are very important.

We look at it as kind of a portfolio approach. We look at it in the context that this is a market in transmission: If we went all PPA, would we develop a better marketplace? So we think our portfolio, our supply portfolio needs to have all pieces: Stock market, hedging, shorter term contracts, longer term contracts, financial hedges. It needs to have all of the above.

Now, the amount that is in any one category could vary over time, but that's basically been our approach. And we recognize now that these markets are in transition, and to kind of kick-start it, we went for the RFP.

MR. ZELKOWITZ: I agree with Gene. I don't think long term we should be relying 100

percent on PPAs to get new projects built. I think ultimately we need to look to market solutions, and I think we are into a little bit of a chicken and egg game because as LSEs let PPAs, and I understand that New York Power Authority is going to issue an RFP tomorrow for another 500 megawatt procurement looking for new capacity, that just potentially depresses the market for market capacity.

We need to find balance here and we do need to find a long-term solution, but I think what you have now is a situation where new capacity gets paid at one rate, old capacity gets paid at quite another rate because of the operation of the UCAP market in New York and the demand curve. And I don't know that that's the best long-term solution. Capacity should be paid in value on the open market and PPAs over longer term will tend to prevent that from happening.

MR. WOOD: Is this demand curve that Ed mentioned in his remarks, is this demand curve tool helpful in that regard that it might avoid having to rely 100 percent on PPAs?

MR. ZELKOWITZ: It is helpful, and maybe Bill wants to comment on this, but I don't think it is there yet. There have been lots of discussions

on the slope of the curve, the cost of new entry, but right now our view is that the curve is pretty steep and capacity prices fall off pretty quickly as capacity additions come on. So, again, PPAs, capacity additions, capacity prices fall off which discourages new entry.

MR. MUSELER: Thanks, Steve. I don't disagree we have some work to do on the main curve, but I think the fundamental concept is sound and I believe most people would agree with that.

And we have to be careful that one of the things that I think developers and the financial community really want is certainty, or at least relative certainty going forward. So as long as there is nothing fundamentally wrong with it, I think we are going to proceed very slowly.

One thing I think that we are working on, and not just in New York, but with PJM and with New England and Ontario, is to try to also work on the ICAP purchase obligation going forward. Right now it's a one year and there is a conceptual agreement that it would be helpful to extend that, to make it an 18-month or three-year obligation. And the longer that period, that obligation can be, the more certainty or the more stability it may give to that

market.

But, really, we think fundamentally the right elements are there and we want to be very cautious in terms of changing, because the one thing that everybody is telling us is, for God's sake, don't reinvent the wheel every two years so we can't predict what's going to happen.

MR. WOOD: I would also like to add for news purposes, we did late last night issue an order on the New England proposal locational ICAP, to, among many other things, adopt a demand curve. We did send that issue to hearing so that the slope and the points could be looked at in the light of empirical evidence. But we thought it was real important to synchronize that particular aspect of the market with New York's with the same tool.

I want to shift. One question we have, Carl has been sitting there patiently, but a lot of what you all were talking about with financial security has been really the basic way the pipes have gotten expanded in our country in the past several years, and because gas-fired generation has been the key customer driving the expansion or the incremental growth of gas industry, power generators have been the big customers financing the

incremental growth on the pines. So, I guess with the changes and I guess, to be nice about it, the dislocations from the financial balance sheets of the major customers of pipeline expansions, Carl, what type of issues are present now that are going to affect the ability to expand non-LNG gas supplies into the New York region in the coming years?

MR. LEVANDER: You covered most of the factual points from the beginning of my list. But I was going to interject into the conversation we have been having so far about generation siting and getting plants built. One issue that hasn't been introduced so far is the fuel supply.

As the Chairman accurately noted, I think, in looking at the pipeline infrastructure needed to serve these markets, obviously, making a large capital investment requires some security revenue screen. And whether pipeline is doing its own balance sheet and facing its own internal financial issues or whether it is an off balance sheet to satisfy the bankers, to put it bluntly, the level of capital needed to build a major pipeline expansion or a new pipeline extension simply cannot happen unless there is someone there willing to make a comment for some portion of the volume for some term

sufficient to satisfy the financial requirements.

As the Chairman noted, there have been instances where generators have been able to step up and perform that role in the past. I think perhaps going back five years, another model was having someone to step into the middle to take the merchant risk of the major marketing companies. That is obviously not there anymore. We see really two different avenues for getting these kinds of extensions done.

One is going back to the LDC markets. I think LDCs have and will continue to be a major source of the customer base for new pipeline projects. And there is a host of regulatory issues there in terms of what's the ability of the LDC to make commitments, what's the obligation of the markets and so forth. They seem to be sorting themselves out. I think the LDC as the anchor Canada pipeline expansion is going to remain a major component.

On the electric generation side, I think it is a little bit more difficult to see through because as these folks have been talking today, there are a lot of pricing issues with generation and having PPA or some other form of fixed revenue

stream. It's difficult for someone sitting in the shoes of a developer to have an assurance of revenue that would enable them to go and make a commitment to the up-stream pipeline.

We think it's critical if, to the extent that a generator is looking to serve peak day reliability kind of functions, that there needs to be a fuel supply at a level of firmness that is commensurate with the obligation. That generator has a certain market. And that means the generator needs to have some firmness of gas supply in order to fulfill that obligation. We think there does need to be some pricing signal that is generated, no pun intended, within the electric markets that enables generators to then make some form of commitment to the up-stream pipeline.

And I think the portfolio approach is a good concept. It doesn't really have to be a full load, but to the extent there needs to be a firm gas supply in some portion of the generation portfolio, there needs to be a means by which that can be made. And I think in the absence of that it will be difficult in areas like New York City to build the specific pipeline capacity needed to serve these markets.

MR. McGRATH: I would like to add one background link to that. Never before has the planning linkage between gas and electric been so critical. New York City historically has been a winter gas peaking area and a summer electric peaking area. And we built the gas pipe to supply the winter peak.

Most recently, summer and winter gas peaks have been equivalent, 1.2 billion cubic feet a day or something in that order. So from now on in history, we have to pay very close attention when planning the electric supply to make sure we have a gas supply. We had a luxury 20 years ago of having extra gas capacity in the summertime that we don't have anymore.

MR. MUSELER: There is one other important factor that goes into that same problem, and that is, historically, we have been very fortunate in New York, thanks to Con Ed and the Public Service Commission, in that we have a large amount of dual fuel units which served us very well. 27 percent of New York's generating capacity is dual fuel, mostly gas and oil. So that helps.

Unquestionably, some of the retirements that are scheduled are of those dual fuel units, and

the new in-city units are also dual fuel, I guess are required to be dual fuel. But going forward, again on the concept one thing, one particular solution doesn't solve all the problems, so one of the features that I think we need to work on in the market is people that provide a dual fuel capability, actually provide a real service, not just a reliability, but from a market standpoint.

And we don't have the answer yet, but we hope that there is a market solution to providing or incenting dual fuel capability to continue to be there and also to potentially expand if there is a value to the marketplace. What that mechanism is in the market, we don't know. It might be, not that this is a solution, but there might be an ICAP dual fuel market. I am not advocating that as a solution but there might be a way to have that as a market requirement for reliability purposes when you don't have enough gas capacity and when you need to be able to switch during periods of peak demand.

But we are riding past, the advantages have passed on that and we have to make sure that we maintain that and potentially increase it. Hopefully, using some market mechanism.

MR. McGRATH: There are some very serious

operational considerations that go along with our dependence on gas. There are periods of time when all of our gas-burning units in town are up at peak loads where we have to plan for the loss of gas supply. If we were to lose a gas pipe or gas supply at a critical time, we could lose half the generation in a city like that. So we actually back down gas generation and switch over to oil during certain peak load levels. So it is not just fuel diversity from a planning and price perspective, but there are operational considerations.

MR. QUINIONES: Since we are talking about fuel diversity, I think it's important that we touch upon the proceeding that is going on at the Commission right now which is the renewable portfolio standard. I think if we are going to talk about fuel diversity in this state that renewables have to be in the mix.

It is a proceeding that has been going on for over a year. The governor called upon it a year and a half or so ago in the state of the state, and we have had 140 participants in this proceeding to try to identify those renewable fuel sources that could be put into this mix and into the equation that we are talking about over here. That should be

culminating in the near future.

Right now renewables are 17, 18 percent and we are trying to get to a goal of 25 percent within ten years. So, going forward, I think we always in these type of conversations, renewables should be part of it.

MR. SCHNAGL: Just going briefly back to dual fuel, what is a practical amount of time or what is the limit amount time that a unit can burn something other than gas, due to environmental restrictions? How much coverage would you have if a large pipeline went down and you had to go to, say, oil?

MR. ZELKOWITZ: Well, for some of the installed units, the existing units, it's considerable. Obviously, there are environmental rules that we have to adhere to, but many of those units do run on economic dispatch, they'll run oil when it's cheaper than gas and they'll run gas when it's cheaper than oil, consistent with the reliability requirements.

For new units, though, the oil burn and it is usually white oil or kerosene, it is usually a 30 day back-up supply and that's about it. So we can assume that new base load units coming on in the

city will be almost exclusively gas, putting an additional strain on the delivery system into the city. And in addition to the summer peaking issue we have seen on gas that Gene identified, we are now seeing winter peaks for electricity that we haven't seen before that we have saw this past January.

MR. SCHNAGL: Bill?

MR. MUSELER: Yes, there are various environmental permit requirements, some of them as low as $200. So it's a mix. And the regulations, there is a series of new regulations that are coming in over the period of the next year or so that are going to ratchet that down some more. So I think it's likely to be there but it is not going to be something that, for example, we wouldn't be able to sustain without an environmental okay, like two months of switching all these units over to oil. We would have to get permission from the DEC to exceed some of the permit requirements to do that.

MR. LEVANDER: If I could just comment on the dual fuel issue from a slightly different perspective.

I think we are talking about a diversity and reliability, which are important and a good thing. But if thing we are trying to protect

against is a physical failure in a pipeline facility, that's not something that happens all that frequently, frankly.

If we are talking about an interruption of supply to the generator because the nature of service that they have is subordinate to other services, that, obviously, is a potential that they are going to operate under. The only issue I will make on dual fuel is, it is not necessarily the nature of the fuel at the plant, it is the security of the fuel source. If you have oil in the tank outside the generator, you have a secure source supply to fall back on.

I would simply suggest, if you are looking at gas supply, similar consideration needs to be given to the nature of the service on the up-stream pipeline and the nature of the supply in terms of how reliable that is. That should be considered.

MR. SCHNAGL: On the subject of dual fuel, in the New York City area, is there any minimum amount of time that is required in terms of having a back-up fuel supply if you are a dual fuel unit? A minimum of three days, five days, 30 days?

MR. LEVANDER: It used to be 60 days back in the old days.

Terry says it now is down 5 day. We are require to have that much fuel.

MR. MUSELER: And I think that is driven by the environmental permitting.

MR. SCHNAGL: To follow-up on the environmental permitting aspect, have you had generation units that have not been able to operate under critical times because of their air quality permits?

And you mentioned that those permits were going to be become more stringent in the near future. Do you foresee problems in terms of running into permit limits, especially during the summer periods?

MR. MUSELER: The answer to your first question is, generally, no, we have not had a problem getting the units to operate on dual fuel when they needed to be.

The numbers, and we have looked at this every year for the last three years now, the numbers are in the range of 900 to 1,000 megawatts that could not operate when we would have liked them to operate in the wintertime, but our winter peak is only 25,000 megawatts, whereas our summer peak is 32,000 megawatts. And I forget what the exact

number is, but it's in the range of 7 or 8,000 megawatts of dual fuel units that were able to operate and have been able consistently for the last three years.

So, basically, they have been able to operate when we needed them to operate. We have had a couple of instances where we have asked for a waiver from the DEC for short periods of time, the blackout being one of them. And the DEC has granted those waivers so that we were able to operate them longer than we would have been able to normally. So the Public Service Commission and the DEC have been very good about making sure, as long as it was an emergency that has not been a problem.

Going forward, I think what we are looking at is we are running into tighter and tighter operating bans, and not just total hours, but daily "NOTS" and "SOTS" requirements that just have to be met. So I guess we think, based on what we know, that we will still be able to depend on much of what we have. The problem would be if it were extended need to depend on it, particularly in the summertime when the environmental requirements are a little different than the rest of the year.

Then there are the totals, the annual

totals keep getting ratcheted down. But so far we haven't run up against those.

MR. WRIGHT: I wanted to touch back on the planning aspect, a few minutes ago we talked about maybe a planning group that would involve New Jersey, New York, Long Island, various communities in and around New York City and New York. And we are talking more about electric.

Do you see any benefit to combining regional planning in this geographic New York City regional area, combining electric and gas planning at the same time, and maybe not only on an LDC basis but also on an interstate pipeline basis?

That's thrown open to anyone.

MR. LEVANDER: I think it's essential. The linkage is so tight now.

MR. FOX: I concur with that. I think a good way to look at it is not so much as Connecticut, New York and New Jersey, but as the metropolitan area is really interdependent on each other. And Gene just talked a little about how gas and electricity are so interdependent.

The fact about losing gas supply and having half the generation in the city go down is one of the more frightening things I have heard in a

while. I think it is a great idea and I know we have a couple more contentious examples in interstate issues in the neighborhood now that I think a multistate planning process would be a fantastic way to resolve it.

MR. WRIGHT: Is there a way for it to happen, though?

MR. FOX: I might shoot the question right back at you. I mean, it's really difficult for us in the State of New York to convene an interstate group like that. Folks are going to ask where our authority to do that comes from.

MR. LEVANDER: If I might add a different perspective to that, I think the notion of having regional planning in terms of looking at the electric infrastructure needs, the location of generators, and the facilitating getting all that done, I think, is clearly a good idea.

I think from an interstate pipeline perspective, interstate pipelines would love the ability to know where the real customers are and how to go about the process facilitating structuring facility improvements to meet that market. I think there is a little bit of a difference in planning process between the gas and electric markets;

however, in that the gas markets are essentially driven by bilateral contracts and done at the individual company basis.

And I think this has worked well to the extent that it has given pipelines a chance to come in and compete with us and look for the lowest possible way to bring gas supplies or capacity into a region. And I would encourage not to try to get away from that. I think the level of competiveness that goes on in a pipeline grid is seeking serve growing markets is fundamentally a good thing. I think that could be done, however, within the context of some broader regional planning effort that would fit into something on the electric side.

I don't know that you want to get to the point of having the type of approach of looking at well, it is better if it passes down this route versus down that route. Because I think at the end of the day the question is going to be, which is the most economic and where can a customer be found who is willing to step up and sign a contract for that to fulfill the bilateral nature of the obligation and support the financing for the infrastructure.

MR. ZELKOWITZ: On the LDC side in the New York City downstate area, we have been

attempting to cooperate with KeySpan and some of our neighboring utilities to look at the needs of the downstate region holistically. But it is kind of an ad hoc effort and I certainly agree that a coordinated approach to looking at gas and electric issues would be helpful.

MR. QUINIONES: From the City's perspective, we think it is crucial, and I want to loop back to what Gene mentioned, that it has to be from the ground up. When the Mayor put the task force together, one of the goals and his goal and the message of that task force is this is an energy system. And it reverberates, when you do one thing it reverberates towards the other parts of the system.

When we did our task force work, we, by design, we just did not just look at the energy supply situation, but we also look at the grid, the electric, natural gas and steam grid here in New York City, as well as distributed resources. So we have to look at all the links in the energy chain to really do what is necessary to ensure adequacy and reliability.

MR. WRIGHT: I get the impression from the task force report, that's the grassroots effort

or that is the bottom phase level.

Now, what's the next step or has there been a next step in terms of regional planning?

MR. FLYNN: I am not going to answer that question, but let's assume that down the road that that does exist and that it is created. My one guiding principle would be flexibility. I think because of the state specific needs, the ISO specific needs, that flexibility should guide that regional planning process. So that's the only comment I wanted to make.

MR. MUSELER: I think in New York, we started later than the other ISOs in trying to put together a comprehensive planning process. And, obviously, we would like to be further along, but we have also had the benefit of seeing how the PJM process evolved and how they changed it, and the New England process also has provided good models for various elements of it.

And one of things I think we are finding is that from the bottom up, and not just from transmission owners, but from all the players in the market, from the whole group of market participants is that you've got to build in the balance between -- absent reliability. Reliability, I think, is not

going to be a problem in developing these projects and many of them will have reliability, I mean, will have regulated solutions. But the balance of how we are going to upgrade the infrastructure and not disadvantage market participants who have made investments already and who are planning to make investments in all the elements, whether it's generation projects or transmission conversion or otherwise transmission projects, or even the gas pipelines.

That has to be looked at and all of the players have to have a say in how that plan gets put together so they can come up with something that doesn't just, say, solve the transmission problem but does real damage to the overall markets. Again, this gets back to the certainty and predictability portion of it. And I think we are very close to being able to make the first filing with FERC, we hope to in August on reliability projects and actually the entire planning process, and follow it up by filing on how we are going to try to attempt to deal with economic projects.

But I think one thing we are learning is after seeing how it evolved in New England and PJM is that we have to look at the effect of the markets

as well as of individual transmission and generation needs and the system needs going forward.

MR. FLYNN: Jeff, if I could be so bold, it seems as though FERC is the entity to pull these things together. Since I have been on the Commission, and not to put her on the spot, but with Commissioner Brownwell, at any meeting that I am at with ISOs and/or Commission, if it is not the first thing she talks about, it is at least in the top three, and it is regional planning. Planning, period, and then regional planning.

So the fact that you are asking the question, the fact that Commissioner Brownwell and the Chairman want to discuss it for at least the last year and a half, I can only imagine a couple of filings that I would ask the FERC that maybe somehow pulling together the top players in this area, and I am sure others can name those people, put them in a room, give them a task. Nora is very good at it. And to come back with a suggestion. Maybe that's an outgrowth of what we are doing here today anyway, so maybe it is not tomorrow, but I think it's something we should keep our eye on and something that I think FERC could be very helpful in coordinating.

MR. WOOD: We did get a copy of the

initial planning process report, Bill, and these are from the ISO. And we get periodic reports at the Commission just about three weeks ago or a month ago from the market monitor from each of the areas. And we had market monitor from New York and he basically quantified the value of the new transmission that decreasing generation costs by some 600 million per year. Whether you call it congestion or just better economics, I don't care what we call it, but that was the 2003 number from your market monitor. That's customer money we are talking about.

So I would like to re-emphasize and re-urge, and, I guess, Bill, buttress your efforts to get the parties to draw a consensus on a robust planning process that you got in your neighbor to the south and your neighbors to the east because it really is the missing piece in the northeast, to have New York looking at planning not just from utilities and the roll-up, which I think is important.

But looking at the benefits to both reliability, and I should say, to the ultimate bill to the customer of having a systemwide look at the commerce between utility service areas, and then ultimately between the RTOs and ISOs themselves, so

that that economic rationalization, that is not going to happen unless a larger, more regional view is taken, is, in fact, undertaken by a process such as the one you all are doing.

MR. MUSELER: I couldn't agree with you more, Chairman Wood. And as far as the New York planning process is concerned, we are going to make that schedule. Both because it's the right thing to do, and also I really don't want to get that phone call from Commissioner Brownwell about why we didn't make it.

And on the larger line, as I said, what I call the inter-regional group, PJM, New England, ourselves and Ontario, and the other players in the NPCC. We are moving but we probably are not moving as fast as we could. We are working on it. We want to accelerate that process and it may be we need to convene something to kick-start that process.

One of the things I think that is difficult but I think needs to be part of that process is there is a real fear and it's a legitimate fear but there is a real fear of even talking about larger projects across regions, whether they would be the right thing to do, what we used to call the interstate highway system of

electric transmission.

There is a fear of even talking about it because of the concern that someone may come in and Big Foot a project that will really upset the market and undo people's positions and basically devalue the value of investments. And that's a legitimate fear. But I think if we never talk about those kinds of things, we will never get to them. And it is not just because we talk about various options on the infrastructure side, doesn't mean that they will be necessarily implemented in an incorrect manner when it is going to destabilize the market and devalue people's investments.

But I think in the process that we were just discussing in terms of really getting something moving between the larger control areas, PJM, New York, New England and Ontario, that we have to have a forum where people can at least talk about those possibilities without creating an irrational fear that something is going to be done that is really detrimental to the market or people's positions going forward. But I think unless you talk in the picture at some point, you are never going to get there.

MS. BROWNELL: Can I just add, actually,

my own family don't like to get those, what they call the Mommy Nora phone calls, but that's okay.

But it works because as Bill Flynn has confirmed, about an hour and a half later I asked him to meet with his colleague in New England and work on these regional issues, and in a very short period of time it got fixed. So we would be happen to convene that, because, in fact, Bill, I think you are right, we somehow have to look at that larger picture and get beyond the "my fuel interests."

It is all about the customer and we need to start focusing on that. And the contentious issues, I think, that Charlie Fox referred to between the states have to get resolved. This is just so counter-productive for everyone in the region. So we will work with you to figure out a way to do this.

And I would like to go back to a point that Bill made, and maybe Bill and Charlie can talk a little about this, and that is the state's commitment to having renewable energy as an integral part of the market, because the planning process often proceeds on one track and so new policy such as the policy for renewable energy is often on a separate track and they don't ever meet, and then

you find yourself dealing with some issues that you can't implement the policy.

So maybe, Bill and Charlie, you want to talk a little bit more about what that policy, and I think Executive Directive 35, if I remember correctly.

MR. FOX: Executive Order 111.

MR. FLYNN: I gave you a copy of it.

MR. FOX: I will just start by saying probably the greatest part of the motivation behind the governor's commitment is not so much from the environmental side of the ledger, which I think everybody knows his strong record and dedication to, but it is really more about fuel diversity and energy independence.

The state has what I consider to be a relatively diverse portfolio and a good chunk of that is hydroelectricity made in New York, and we have seen the value of that both in terms of prices, it is the cheapest power in New York, it is renewable and it is indigenous. So the motivation behind the commitment is more than just environmental, but I think it is crucial that folks like Bill Museler and everyone at the ISO be involved in that process because we certainly don't

want to make a commitment like that and then prove that it doesn't work in the real world.

It is imperative that if we are going to achieve the objective that the Governor set out for us that first we understand how much it is going to cost and what it is going to do reliability in the system. And it is not going to happen if it can't be done in a way that maintains reliability. So that process is going on.

I believe Bill can talk a little more about imminent steps in the process that will be happening in the next day or two, but it is just a step in the process. There is a long way to go and over the next few months, maybe even longer than that, we are going to be confirming that this regime can be undertaken, can be achieved while still maintaining reliability. And that's obviously paramount. It was paramount before August and every since the blackout, everybody knows reliability is job number one.

MR. FLYNN: One other piece, I believe, is another "E" that I call it, and that is economic development, which at times gets lost on the conversation. But I think we have a wonderful opportunity that will be a byproduct of the

portfolio standard is economic development.

The advancement of technologies in the global area have the ability and promise to bring in the jobs, manufacturing, right into New York State and into the New England area. So economic development should also be in the equation.

The next step in the process that Charlie has referred to is the recommended decision which will be handed up to the Commission soon by the Administrative Law Judge, at which time the Commission will have an opportunity to read her recommended, and I express recommended decision. And then we will embark on another phase of going out to the public and seeking their input into this recommended decision, which is a final decision by the Commission down the road.

MR. KELLIHER: Does everyone agree with that recommendation? Everyone agrees that there is a need for transmission projects to increase import capability into the city?

MR. QUINIONES: Part of the recommendations of the task force, and all of the groups that participated in the task force agreed with that, the message is really that transmission has to be part of the mix of solutions, not the sole

solution in meeting our capacity need.

If I recall, in the report we said that it should come from areas like PJM. Again, the message that we tried to send were twofold. One, we like to encourage that the rules of the road around transmission be put together on an accelerated basis because there is a lot of uncertainty in that area relative to other type of resources. So that was really the context of that report.

MR. MUSELER: I think the answer, unfortunately, is it depends. If a lot more generation were built within the city limits, I think your reliability objectives could be met either way.

From an operational standpoint and a reliability standpoint, those of us who are operators, would certainly like to see more transmission into the city, because right now the city's overall capacity requirement is to have 80 percent of the city requirements actually located in the city. Would it be better to have 100 percent of those requirements in the city? You can debate that, but if it were 100 percent you wouldn't need as much transmission capacity. If you have 100 percent generating capacity located in New York, you

would still need the reserve but would you need more transmission than is in New York today to meet the reliability objectives? And I think the answer to might be no.

Now, having said that, I think, not wanting to get into individual projects too much, but things like the Bergen Project, which actually did both things to some extent, and that is it is actually just like having a generator in Manhattan. It's isolated from the PJM system, provides a little bit of both. But I don't think you can say, well, I am not in favor of strengthening the transmission infrastructure. I don't think you can reach specific conclusions unless you look at what is happening on both sides of the equation, both the generation side and the transmission side.

And, Gene, that is your baby.

MR. McGRATH: I think as an operator we kind of look at it the other way. We look at the loss that you run. You run a new 2,000 megawatt line into New York City, that's wonderful. But as an operator, I have to be sure that when that line shuts down, which it will for sure at some point in time, we don't lose the city. So what that means is I have to support the city infrastructure in such a

way that it could handle the loss of that 2,000 megawatt line at peak. And that requires a whole lot of infrastructure to be built in the city to support that new line.

We also have to be able to handle faults on the system. We have a very tight electrical grid. We have a fault in Westchester, we feel it down in lower Manhattan, and the switches that have to interrupt the power flow of that fault have to be able to interrupt that or else we melt the system. And the ability of these breakers to open is a very significant issue.

And there are the other unintended consequences. You run a 2,000 megawatt line into New York City, does it cause some of the in-city plants to be uneconomical and shut down and, therefore, take away that in-city source that is very reliable and cause a loss of transmission. So it is a very complex part of this planning process that has to go on to look at it holistically, not just in an ad hoc project by project basis.

MR. CASSIDY: I agree with everything that has been said here. It's intuitive, though, I think that in an area that has the highest land scarcity that transmission solutions, as Gil

mentioned, have to be part of the mix.

We have always been believers that the customers interests are best served by development of a fully functioning competitive market. And I think part of that market is a regimen where generation, transmission and demand side management all compete on equal footing and then you get the best balances of all those pieces of the solution.

MR. MUSELER: The problem with that is that transmission can't compete on the same playing field as the other resources right now.

I think we have seen with DC lines and controllable lines, when there is a long-term contract behind them, it looks like they can get sited and provide value. But the AC system is another matter completely. And absent reliability needs, which I think will be taken care of, I think our process will allow that to go forward, but on the AC system, we -- and when I say "we," really the country -- has not found the model yet in terms of how AC transmission would be priced or how it will recover its investment with some risk taking in that equation.

Originally folks know that if you work with TCCs that actually works against the value

proposition for a particular facility, and that's something that we need to work on, or at some point conclude that it's just not going to work that way. In other words, AC merchant transmission, how they can recover their reasonable costs but still do it from a market standpoint and take the risk; otherwise, it's a just a regular solution. I think is something we really need to work on.

So when we say that folks should compete, I don't think anybody disagrees that they should, but I think on the AC side, right now, AC transmission can't compete unless there is a new mechanism.

MR. CASSIDY: We haven't found that mechanism yet. I am not sure that's to say there isn't one.

MR. MUSELER: No, no. I am not giving up on it. I am just saying that's a real piece of unfinished business from the market standpoint on the transmissions.

MR. KELLIHER: I want to follow up on what Gene said, I just want it to be clear, does Con Ed agree with the transport recommendation, that there should be some transition project to increase imports?

MR. McGRATH: Con Ed agrees that we should look at all the opportunities we have to secure a reliable supply for the City of New York, and transmission is a component of that.

But we also caution against focusing on one aspect without considering the implications.

MR. KELLIHER: Another question on transmission. If you look at, if the issue is increasing the city's import capability, are there advantages with respect to economics and reliability to increasing that import capability from upstate, New Jersey or Connecticut?

MR. McGRATH: I think there is advantages to doing it from all of the above. Again, it is diversity. Wherever we can promote diversity from multiple sources, from different locations, that's what we have to do.

MR. KELLIHER: Is Dr. Krapels still here?

If Dr. Krapels or any of the panelists want to comment on that, are all three of those routes or imports equally good or do any of the panelists think one is better than the other?

DR. KRAPELS: From a distance standpoint, I think the closest transmission solution that actually would bring 600 megawatts into New York

City is the Bergen Project. I thought that eight mile interconnection, the size matters issue, I think is hugely important, to focus on what Brad said, that 2,000 megawatts, the contingency planning around the size of a project that size is a huge problem.

So we have learned in developing our project that size does matter and small is better than really big. We try pick sizes that fit both the technology and the market. 600 megawatts is a good size, 300 megawatts is a good size. Distance, 70 miles is the Neptune distance from New Jersey to Long Island, that's reasonable.

The Conjunction Project was such a big project and such a big distance it had such a strong undermining effect on the locational capacity markets of New York City, that it was just a tough sell.

MR. MUSELER: Also, on size side of it, that would change the generation capacity requirements because of the contingency that Gene mentioned, not just from an operational standpoint, but it would change the reserve requirements.

Right now, we are operating reserve, our target is 1,200 megawatts. If it were single 2,000

megawatt line, that would become the controlling factor and that has huge implications in terms of getting under that target.

MR. MUSELER: Just one other point, the large what I call home run projects like Conjunction, is the cost, just simply the project cost of projects that are that big and that expensive, if you look at what it would cost to carry that project and then factor it into the energy bids. And I am not commenting on the economics of that particular project, I don't know them, but it was a hugely expensive project, and whether or not the economics would even work, even with upstate and PJM power being significantly less expensive than downstate power. The tag-on to carry that project which would have to be added on to all those bids and markers, we think, would be very much.

I think you have to look, I agree with Dr. Krapels, unfortunately, the economics of those projects go towards making them as big as you can, but the ability of those projects to compete in the marketplace, then the size works against them, I think.

MR. MILES: Please step up to the

microphone and state your name.

AUDIENCE MEMBER: Thank you. I am sorry to interrupt.

I am the CEO of Conjunction LLC, and, normally, of course I am not on the panel but I do think it is appropriate for me to just comment on a couple of things.

The New York Independent System Operator approved our system reliability impact study in March without opposition as to two separate 1,000 megawatt servers. So I would not have interrupted if I did not hear the assertion that it's a single 2,000 megawatt contingency. The ISO did evaluate that it is two individual 1,000 megawatt facilities that are completely independent. So I did want to clear up that point.

And then just two other brief points. One is, it is a little longer distance from upstate to New York City. Our circuit one is 125 miles, it's a little long distance. But our estimated capital expenditure cost for that is $400 per KW. I understand that the New Jersey AC project is on the order of $200 per KW. There is a difference but to say that it's uneconomic, I just wanted to get some numbers out.

Thirdly, on or approximately June 30th, we will be filing a supplement to our Article 7 application. And in that supplement, I might as well say I heard a couple of comments, we will file for moving forward and provide information and request certification for circuit one only, which is 1,000 megawatts.

So I know that we originally had proposed 2,000 megawatts. We are reconsidering some important factors of circuit two, especially in terms of environmental compatibility. But I wouldn't want everyone in this room to come away thinking that Empire Connection is either 2,000 megawatts or nothing. And I'm sorry to interrupt.

MR. MILES: Thank you.

MR. TIGER: I have a question for Mr. Greenwald or others who might want to answer.

A lot of the question which people haven't mentioned is, is it merchant or is it going to cost of service? Is there a question of whether even merchant transmission could get financed in today's market, given its value destroying permit capacity, it destroys its own value, depending on the structure, or is it that people are waiting for it to get rolling on a rate base?

MR. GREENWALD: I tend to think that a 100 percent merchant facility to get financed would be a bit of a stretch, to say the least. It seems to us there are variations between having long-term contracts and being a merchant.

For example, in working with the folks at Conjunction, which some of my colleagues have spent a fair amount of time on, we felt that there was a market to support a line such as Conjunction's with a meaningful amount of at least intermediate term contracts and the debt and equity investors who would look at such a facility would evaluate the view as to the market, a cannibalization that might occur or might not occur, and that a meaningful amount of capital probably could be raised for a line that had at least some amount of through put guaranteed, of revenue stream guaranteed to be able to pay down debt to a level such that the merchant's tail, if you will, would be manageable from a lender's and/or equity investor's perspective.

I don't think that investors looking at a line such as Conjunction, if they could make a return that met their hurdle rates, would not make that investment owing to possible cannibalization. I think they would look at this investment in its on

right and evaluate the investment decision, just as it would evaluate investment anywhere in the country or across the globe for that matter.

Having said that, it is our perception that of the one difficulties that Conjunction did run into in its auction was fear of some perspective purchasers of capacity. Actually, their own fear for themselves to step up and purchase that capacity on the line for fear of cannibalizing their other investments. But having said that, I don't think the debt or equity investors contrasted for a moment to the purchase of capacity would look at cannibalization of rates as a reason not to invest in the project.

I don't know if I have answered the question or not.

MR. TIGER: It's helpful, thank you.

Is there some -- we didn't get into the details of the regional planning itself, but there seems a potential tension between how long that process allows for market solutions before market solutions are not expected to provide what could ultimately be a reliability issues solution.

Maybe you could speak a little about that.

MR. MUSELER: Yes. Again, I think the

New England process and the PJM process is instructed in that. But while we haven't filed with you all yet, we really have to set time periods to try to allow market solutions to occur, but still have built into the overall time frame, starting from the time now to a time when the reliability need must be satisfied, such that, for example, you may allow six months or whatever to allow market solutions to emerge. And then, hopefully, if they do, you have built in the time to permit them and to get those done.

But you also have to assume that the market solution may not occur during that time frame. And at that point, you then need to have built in enough time for the regulatory process, both the federal and the state regulatory processes, to still solve the problem. So I think we are building those time frames into our process and it will not be the same for -- it really needs to be problem specific, because if you are talking about needing to build either a short transmission line or something that solves a relatively small problem, as opposed to something that would require a very large project, one of the things that just being completed now, Con Ed, and, Gene, this is probably in your

construction, it is a couple of years going on short circuit upgrades.

That's a project to upgrade, to be able handle not just a load but all new generation in the city, the city's transmission system, particularly the breakers are having to be upgraded. And, if in the future, that were to be a merchant solution were to emerge, you would still have to allow on the back end, probably counting permitting and substation modifications, it is probably a three-year process for the TO to get it done if no merchant solution emerged.

So all of that has to be built in, but it has to depend on the individual problem you are trying to solve, but all those time frames have to be built in so you don't get to, oh, my God, the merchant solution didn't emerge, now we are stuck. That has to be part of the whole process.

MR. ZELKOWITZ: Another issue we are going to have to confront in order for an interstate regional planing process to be successful, and what I call successful is that facilities will get built where they need to get built, when they need to get built, is we have to confront the issue of who is the final arbiter of whether those facilities get

built from a permitting standpoint. Is it the federal government or is it the states?

Obviously, this is an issue that is close to home for me because we have seen instances in this region where a state acting on delegated authority from the federal government has essentially frustrated the construction of certificated interstate facilities. That I think is go to require a congressional solution. So your help, this Commission's help will be certainly needed. But ultimately in order for the planning process to work and to work well, I think we are going to need some congressional attention.

MR. KELLIHER: I would like to follow-up on a question that Sebastian had.

If transmission upgrades are built, who would build them, will it be merchants or the utilities? FERC, since 2000, has approved eight merchant transmission projects. Of those eight, one has been terminated, six are approved but on hold with no construction activity occurring, and one was operating until a month ago when there was an emergency order. So, so far it has not been a great track record.

Do you think that if merchant

transmissions would work anywhere, it would be here, and maybe if it can't work here it can't work anywhere, to paraphrase the song? But should it be utility projects, these merchant projects have been approved but have not been built? How long should we wait? Is it better or worse to have the transmission upgrades be utility projects?

MR. MUSELER: As far as DC projects are concerned, I am actually optimistic that the merchant projects combined with long-term contracts as LIPA just announced are progressing. I think the danger is on any of those that are interstate is what Steve mentioned, and that's got to be fixed; otherwise, I really would despair of any of the interstate projects. Because the political will in an individual state, I just don't think will be there. So that has to be, but I guess I am optimistic that that will go forward.

On AC reliability projects, again, because we don't have the pricing value proposition figured out yet, it's more likely, until we do that, I think for reliability required projects, I think it's very likely that transmission owners under regulated solutions are going to be the constructors of those project. And I think the PJM process and the New

England process goes along the same lines in that regard. So I don't think you are going to see in the short term the AC reliability projects be built by anyone else.

But I think if we can get by this business of any state or even part of the state of being able to frustrate the projects. The same thing in gas, the Islander East Project, which is your jurisdiction, is being frustrated. I think unless something breaks at large, we are going to almost revert to being self-dependent and the markets will become less and less important. And I think that's a really loss for the consumers. But I also think Congress has to do something about that.

MR. KELLIHER: Let me follow-up on that.

Who do you think should site transmission projects? Should they be sited at the state level or the federal level? Should it be like natural gas pipelines?

MR. MUSELER: I guess I have gone on record as part of the Secretary's Energy Task Force, on interstate transmission projects, my personal belief is that you need a federal back stop. And I think the way it was outlined in the Secretary of Energy's projects or project reports and in the

legislation in terms of having federal back stop authority where you don't subvert the states. The state processes move forward but there is some time limit and there is an appeal to the federal government.

I personally think that that's something that, if something like that doesn't happen, then I think it's going to be very, very problematical, certainly on getting any significant interstate projects ever built on the electric transmission side.

MR. WRIGHT: Just to kind of flip it back to gas, and maybe get Carl in on this, having experienced some difficulty, how do you get gas to New York?

I mean, we are talking a substantial load that needs to be served, increasing demand, what needs to be done to get gas to New York?

MR. LEVANDER: I like the phrase "some difficulty." I will use that one later.

Clearly, as was alluded here a moment ago, I think we have issues in the gas transmission business in that we are faced with multijurisdictional and multilayer reviews of getting infrastructure built. We have delegated

authority, as Steve was alluding to, and other statutes. We have to run through, obviously, not only multi federal agencies, but certain state levels even down below that, and certain permitting issues. And that has been, obviously, one of the factors in play in both Millennium and Islander East in trying to get capacity built into New York City.

I think the solutions that are out there, and they are not mine, are going back to looking at things like getting FERC designated as the lead agency for doing gas pipeline projects. I think one of the things that would be very helpful would be if you are going through the NEMA process for a gas pipeline, there is an extensive environmental record being developed at FERC as part of that process. I think that some kind of requirement, be it through an agreement of jurisdictional authorities or some sort of regional planning process, or through some statutory change if necessary, that would simply say we are all going to use the same record to evaluate the project.

To the extent different people have different statutory obligations to fulfill, that's fine, but let's use the same record and let's do it in a common time frame. I think issue we see now is

you get a record developed for FERC, you go through certain steps, FERC does what it needs to do. You know, it is a separate time frame that may be sequential, but some things may not start until the FERC process is completed. And then perhaps there is a de novo review or an attempt to take a look at things through a new light.

I think simply looking at common time frames and common records would be an improvement. And whether that is by some agreement of the parties or if the Energy Bill had some helpful language in it, I think that would be a step forward.

MR. ZELKOWITZ: There is a distinction between state's acting on delegated authority where there is a federal appeal, CCMA determinations, for example. The question there I recall may be timeliness of that review process and making sure the review is done timely and properly so that projects know that they can be get built or not get built.

And states acting on delegated authority where ther is no federal right of review, that's what we have right now.

MR. FOX: Can I jump in here?

I think it is important that we avoid an

assumption that the state review process, and I am not necessarily talking about Millennium in particular, but the CCMA process, these objections are not based on legitimate grounds. There are serious issues, I think that with respect to Millennium that are resolvable, but I don't think that folks have emphasized enough what the substance of some of those issues were.

The objections from the Secretary of State of New York on that particular project, one had to do with the fact that New York City DEP felt that the crossing of part of its water supply system was too dangerous and basically risked the water supply for 14 million people. The point at which the pipe was intended to cross is known as the Grimar site (Sic), and is, according to New York City, the single-most crucial element of the New York City water supply system.

Now, there is an engineering solution to that, but I think that's a very good example of something that shows that there are many instances where states stepping in is based on very legitimate and very reasonable grounds. And I think it's important that we do not necessarily dismiss the state's role, but we should hold the states

accountable to wielding that authority in a way that has legitimate grounds.

I think some of the other problems that we are trying not to talk about, frankly, is sometimes you run the risk of upsetting the balance between the federal government and the states. And I think that risk is heightened greatly when states utilize their environmental review authority in a way that doesn't necessarily stand up to close examination, and may well be motivated by factors other than environmental concerns.

All that being said, I am just basically making a case that state review and siting of state facilities is important. It is very important that it be used in a responsible way. And I would like to think that's how we do things in New York, we recognize the importance of gas supply. I think today's discussion reinforces that for everybody. It's one thing to allow yourself to become increasingly dependent on gas, but it is downright irresponsible to allow ourselves become dependent on gas that we can't deliver. And we are not going to allow that to happen.

And so, there is a discussion going on with respect to the Millennium Project. I believe

it's resolvable. We will try to facilitate that discussion but I would hate for that to be used as an example for why state authority to review interstate projects should be eliminated, because I don't think that's accurate. It is a question of how you use that authority.

MR. LEVANDER: If I could respond, I agree with what Charlie said. I think there are different agencies that are acting under different statutory obligations, and, frankly, are required to look at different aspects. That's going to lead to a need to review and emphasize certain factors over and above others.

So I do think that where authority has been delegated to states there is a process that has to play out and factors such as those Charlie's raised need to be fully vetted as part of the approval process. I am more concerned with the timeliness of the process within which that type of review can take place.

MR. WRIGHT: Probably this question will go to Charles. Let's talk alternate gas supplies and something I saw very recently about New York was considering siting LNG again in the city.

A little far a fetch maybe, but it is in

the press and I am just curious what is the thinking at the state level?

MR. FOX: Well, the state is under a legislative requirement to promulgate regulations for siting LNG facilities and we are going to be coming out with some regulations in the near term, probably the next month or so, that layout a framework on how to site LNG facilities in the state.

I think, from an energy perspective, LNG is a great idea. It allows us to access the world market and play different regions off against each other and get great prices for gas. I foresee incredible siting problems. If we have this much trouble laying electric cable, I can only imagine what would happen if were trying to site LNG terminals.

I am certainly not going to stake out a position today on any particular project. I do think it's an alternative that the economics demand we take a very, very serious look at. We certainly cannot close the door to it.

MR. SCHNAGL: Flipping over to some time lines that were discussed earlier by Gil Quiniones and his task force in setting some goals and some

benchmarks for people to shoot for. Yet, it's obvious that constructing gas pipelines in New York City and electric transmission lines are challenging tasks ahead of us, and the time line for actually planning and implementing those new infrastructure entities has been protracted at least over the last few years.

Gil, can you comment on whether anything can be constructed in terms of new gas pipelines to fire the in-city generation facilities that you propose or a new electric transmission line coming into the city between now and 2008?

MR. QUINIONES: Let me start with some encouraging news.

Since we issued our report to the Mayor KeySpan in March fired up their 250 megawatt addition in Ravenswood, Con Ed is underway to complete the East River Repowering Plant, which is going to add a net of 125 megawatts. Following that, the New York Power Authority with their new combined plant, that's about 500 megawatts. As we speak, Astoria Energy SES are doing site preparation for their project in Queens. The New York Power Authority in collaboration actually with city and other governmental customers here in New York City,

are jointly and collaboratively putting out this RFP tomorrow. That load is to serve our city buildings and state buildings here in New York City. And we are working with the Power Authority to do that.

This is encouraging news that are going to add incremental in-city capacity and buttress the reliability in New York City. As Charlie had mentioned, we are very encouraged that there is a path to resolving whatever outstanding issues there are in the Millennium Project. We hope the issues with Islander East can be resolved as well. That's on the gas side.

On the electric transmission side, the Mayor, the task force, we are encouraging and with the help of FERC to really accelerate, and I know the ISO is doing this right now, to accelerate the development of the rules of the road and how projects can get paid so that investors and developers will actually proceed with the project.

We have a transmission project that is currently approved, PSE&G's Cross Hudson, and we expect them to be one of the respondents to the Power Authority and the city's bid. So there are encouraging news. There are things we have done both on the gas and electric side in terms of

creating more regulatory certainty, and we are urging all the agencies, both at the state and the federal level, we all want to work together to really make the rules of the road clear so that these projects can be built.

MR. SCHNAGL: That was helpful, but at the same time you've identified some power generation facilities that are being constructed, how about the natural gas pipelines necessary to fuel those facilities? Are they being constructed? Is the capacity available at this point in time?

You also mentioned a transmission line that has been approved. Do you have any idea what the time line for construction, if they are successful with the bid, would be? And do they have an identified path into the city?

MR. QUINIONES: Let me start with the transmission, and then I am sure Frank Cassidy can add to it.

The transmission line has been approved in terms of Article 7 and they have a path into the 49th Street Substation, I think he mentioned that earlier. One also important thing to note, there was a recent project completed, Iroquois Gas Connection into northern Manhattan which added gas

capacity for the city. So things are moving.

There are things that have yet to be done. Charlie Fox has mentioned that there is a path, we are resolving certain issues and we just encourage that you move the ball forward on those things.

MR. CASSIDY: If we made the decision to move forward today, the project would be in service in 20066.

MR. MILES: We have about nine minutes left before we break for lunch. Is there anybody in the audience that would like to make an observation or ask the panel a question?

If so, walk up to the microphone. Please state your name and who you represent. I should also note that we do have a court reporter here so that comments being made today are going to put into a transcript which will be filed with the Commission under this docket.

MR. CONLEY: My name is Gerry Conley, and I represent the International Brotherhood of Boilermakers.

There is some concern, you discussed the Article 10 process, and people like Con Edison and KeySpan, they fought valiantly and hard to get those projects approved. But there is still a number of

projects hanging out in the balance for New York right now.

There are 750 megawatts in Norristown, New York that will probably never get built. It's approved, but there is no money. You also have a project that was supposed to have a decision made tomorrow, Transgas Energy, 1,000 megawatts for New York City. That's been delayed a month. Unfortunately, the City of New York is against that project. They don't feel it's the proper place to put it. That is last project under the Article 10 process that can be sited. So these deadlines of 2008 are really unrealistic.

The SES project has been in the works for four and a half years, we are still waiting to put a shovel in the ground. It's a big problem in New York to site. You have people in Albany that are actively trying to prevent the RFP process from being approved simply because the process worked. We were successful in siting a number of plants. One is completed, two are in the process, but I can't foresee, and I have been involved in every siting project in New York City for the past 20 years, I find it difficult to believe at this time that we are going to able to move forward and allow

ourselves to have the access to the capacity that we need under the presence circumstances.

Within 20 days, the Assembly and the Senate have to come to an agreement over the Article 10 process. They haven't even come to an agreement over the budget yet. This is a serious issue in New York. There is some good interplay between the federal and the state regulators, and that probably federal government has to play a bigger role in getting these facilities sited in these large cities like New York, because left to our own devices, we are going to fractionate into different groups that have different things that they want done. We are never going to be able to come to a consensus.

So this Article 10 process, I believe, is a very big stumbling block over the next couple of years to getting anything accomplished, particularly in the power generation area. This is something the federal government has to work with the utilities and with the state government to get done because we are relying on very old, very inefficient and very unreliable equipment in New York. I can tell you, my guys are in there and we are needed 24 hours a day, 365 days a year.

Utilities operate under very severe

restrictions in New York. They do their best to make sure the power is supplies. But without some regulatory relief and without opposing sides coming together and making good decisions, we are going to have this constant friction between what we need to do, the oil economy, and how do we protect our environment. And I hope you can take all that into consideration.

MR. WOOD: I am just curious, I want to ask the dumb out-of-town question: What is the organized political opposition to well-sited energy infrastructure.

MR. CONLEY: Well, I believe, this is my own opinion, Article 10 is the first time in a quarter of a century that we have been able to move forward in New York State to get projects done like this. There were a number of projects over the years that were proposed but the system developing the siting of these projects was always such that it was very difficult to get through all the regulatory nightmares.

Article 10 became the way to do it. It became obvious to people who don't want these facilities in New York, that were facilities that were going to be sited and that were going to be

built. So that, in itself, is enough for certain members, I believe, of our elected officials in this city and upstate in Albany to drag their feet.

MR. WOOD: Are there that many people that are off the grid here in New York, that they are okay without power?

MR. CONLEY: I don't think anybody is okay without power, sir, that's the problem. We have come close to that on numerous occasions. And it's becoming more difficult and more difficult for the people that supply this commodity to meet their because of all the strings financially, regulatorily. It's very, very difficult to operate in this environment when you are trying to get things done and move ahead.

These old facilities, they can't go on forever. 42 of our facilities are over 45 years old. It can't go on like that.

MR. FLYNN: Pat, if I may.

I think a lot of what is really going on with this is the devil is in the details. There are certain details in the Article 10 legislation that carried a lot of these projects forward, and when at sunset there was an opportunity to revisit the details again, and I think that's what's under

discussion.

And it is not so much that people are opposed, generally. I think it is that they are in the details of the process, of reviewing these applications, under what level, under what environmental standards, et cetera, et cetera. And those details in the bill, then those stakeholders, interest groups engage. And I am not involved in those discussions. Charlie and others are, but I believe from what I see, from where I sit, that that's those are the issues.

MR. WOOD: Can you repower existing plant without going through Article 10?

MR. FOX: Clearly you can't, but we are actually trying to expedite the process for repowering, make the time frames quicker for that kind of a project under the Article 10.

MR. WOOD: At existing sites, if they are converted to a cleaner that is not as noisy, that is usually met favorably.

MR. FOX: Can I react to the comment over here for a moment?

I think it is fantastic that the Boilermakers are making that argument. You guys are crucial players, and I would argue probably the most

crucial players over the next couple of weeks. We need your help and we need your support in making the argument that you just made very coherently here at the microphone.

I think it is kind of lost on people very often that, simply stated, building power plants is good for the environment. We're just displacing all the plants. It is a fact and I don't know if I can get a showing to agree with me here, but I think building power plants is good for the environment. It is good for labor and it is clearly good for the economy.

I am going to second your question, Mr. Chairman, I don't know who it is or why is this opposition to getting Article 10 done again. And I will amplify what Bill Flynn said, he mentioned the devil is in the details. I happen to think the devil is in the desire. And I don't understand why there is not more of a desire to do this, to break it out from the larger picture of the budget and just get it done, because the details are not all that complicated and they are not all that controversial.

There is a wide range of interest groups that need to get this legislation done, the Governor

wants to get it done, and I think it is doable. We've got a few weeks to do it and if we can some help from guys like you, we can get it done.

MR. MILES: Okay, why don't we break for lunch.

MR. WOOD: I just want to say, before we do that, this panel sets a high bar for the New Englanders, so let the series continue.

MR. MILES: We will come back at 1:15.

Thank you, panel.

(Lunch recess taken.)

A F T E R N O O N S E S S I O N

MR. MILES: If you could take your seat, please, we can get started. Just a reminder, if you have a cell phone, please turn it off.

MR. WOOD: Before we see if the Red Socks outscore the Yankees, I know some New Englanders don't like the Red Socks, I would like to take this time to recognize the FERC staff that worked really hard on this conference in making it successful.

I mentioned Jeff Wright earlier today. Also with him as the team leader was Carol Conners. I would like to also recognize John Schnagl and Tiger Sebastian who are also up here on the panel. Morris Carvellus, Carmela Ung, Raymond James, Rich Miles who has been our able moderator for the day, Gwenn Cobb, Sayita Shalon and Sasha Mendez who have been coordinating the program. I want to thank you all again.

MR. SCHNAGL: Good afternoon and welcome back.

This afternoon's first panel will focus on energy infrastructure in New England. Some of the topics to be discussed include natural gas and electric transmission constraints, LNG siting and storage, and improving collaboration between the

electric and gas industry, among many other topics.

It is my pleasure to introduce our distinguished panelists. Robert Keating, Commissioner, Massachusetts Department of Telecommunications and Energy. Beth Nagusky, Director of Energy Independence and Security, Governor's office, State of Maine. James Daly, Director of Electric, Gas and Supply at NStar Electric and Gas Corporation. Gordon van Welie, President and Chief Executive Officer ISO New England. Dennis Welch, Director, President and Chief Operating Officer of Yankee Energy Systems, and Chairman of the Northeast Gas Association. Richard Grant, President and Chief Executive Officer, Tractebel LNG North America. Linda Kelly, Commissioner, Connecticut Department of Public Utility Control. Rob Turner, Senior Partner, ArcLight Capital Partners. And Steve Corneli, Vice President of Regulatory Affairs NRG Energy Incorporated.

Let me start out with a lead question to Gordon van Welie, but I am guessing that virtually all of you will want to follow-up on this question. This past winter New England came very close to not being able keep its lights on during a severe cold

snap. What infrastructure are taking place or need to take place to help ensure that the lights are kept on should a similar cold snap reoccur this winter?

MR. VAN WELIE: I should have suspected that would be the question.

It was interesting listening to the New York panel earlier on describe some of the linkages between the electricity marketplace and the gas marketplace. I think that situation is also true in New England, except we are even more vulnerable, I think, than New York is. Obviously, during the week of January 14th, we experienced severe availability problems with gas-fired generation. And what it did was expose a vulnerability to us that we had recognized in part but did not understand the severity of the linkages.

And I don't want to get into the details of the report that is being put out there. There is a very detailed report analyzing what happened during that week, you can find it on our website. It is about 190 pages, so knock yourself out, a lot of bedtime reading. There are a number of conclusions and recommendations in the report.

From my perspective, I think all of those

are good avenues for exploration and we need to follow through on what was put in the report from a conclusion and recommendation point of view, but as I look toward next winter, which is our near term concern, there are three areas that we want to focus on immediately.

The first is our operational coordination with the gas industry. And we have reached out to the Northeast Gas Association and to various pipeline companies. And our chief operation officer will ben engaging in a series discussions to really define how we operationalize, formally operationalize our interaction with the gas industry. Given that 40 percent of our generation is gas-fired, we have no option but to make sure that we improve the coordination between the two industries.

The other thing that became evident to us, and we had been doing some studies as part of our regional expansion planning process, was there are transportation constraints for gas coming into New England. That's something we need to take a hard look at again and update. Clearly, if one looks out into the future, this is an issue that I think really does shape the region as a whole. I see the

regional state committee starting to play a role in this discussion both from a resource adequacy perspective as well as the whole issue of dual fuel, which is the next point I wanted to make.

If you look at the availability of gas-fired generators during that cold snap period, those units that had dual fuel capability showed a very, very much lower loss of availability to us. So if you look at the gas-fired generation, there was almost 30 percent loss of availability on those units. And so one of the physical solutions, the operational issues we want to sort out our coordination with the gas industry, but the physical issue is to have fuel diversity, and, in particular, what I would like to see us do is ensure that the dual fuel units that we do have are available, have got fuel, and that we also address the permitting requirements.

What we have discovered as a result of our analysis is that there is a wide range of air permitting requirements in the various states. In at least one state, as I understand it, I have not read it myself, but physically you have to be in a situation where there aren't gas molecules in the pipe before you can actually switch to oil. And in

other situations, the air permitting requirements are fairly rigorous and really prevent us from being able to use dual fuel capability.

In our outreach to New England stakeholders, we have also engaged the regulators in this area and they are working with us and I am sure we will come up with a solution before the end of next winter. The Governor is anxious to see us address this issue as well so there is a lot of impetus on this one.

The last issue, and I am really calling them the top three issues as we perceive them, there is a long list of about 20 of them. But the last issue is better synchronization between the wholesale electricity market time line and the gas time line. New York has a market time line structure where they clearly are way ahead of the electricity market, ahead of the gas market. And that's a timing issue that we are looking to see whether we can change it in the New England context.

And the issue becomes one of how do we do it. Do we make it seasonal, in other words, in January and February when we have the greatest need. So I think that's an issue that needs to be dealt with. And the basic philosophy there is if you can

give the generators enough forewarning, which means having gone through the full unit process before the gasline closes, you are giving them the best opportunity to essentially make sure that they get fuel.

The other part of it is we need to make sure that generators are kept whole. Of course, as we saw in January, the prices of gas shot up because of constraints in the system, and what we saw was that the electricity markets weren't valuing the conversion of gas to electricity the way that they should have. So that is an issue there that we have to address in terms of market design. And that's another issue we need to be working on.

Let me pause there and get a reaction.

MR. KEATING: Thank you.

First of all, I want to compliment both the gas and electric industries, because they got us through that January cold snap, which was very severe. For those of us in New England, we know it. For those who weren't there, believe me, you don't want to be around when the wind chill is 30 below zero. It's tough.

But there needs to be much more coordination that has to go on, and I do know both

the Northeast Gas Association and the ISO are working on that, and I commend them and encourage them to do so. But the point I want to make is I still remain very concerned about the potential for some problems, some significant problems with regard to the winter peak. We often talk about the summer peak in New England but we have a summer peaking system. I know Gordon has the specific numbers, but I think the summer peak number is about 26,000 megawatts, give or take a few, and the winter peak number is 22, 23,000, give or take a few. So there is a 10 percent difference there.

But my concern is that in the wintertime, we are, as you heard before in New England, we are the end of the energy pipeline, we are a constraint system when it comes to natural gas and when it comes to natural gas capacity. And the commitment on the gas industry has been tremendous. They deliver on firm transportation requirements. But as most of us are aware, firm transportation is really not an item that most merchant generators invest in. They may invest in it for the short haul, but for the long haul the market isn't there.

And so the issue comes up when one has an extreme cold period, what kind of situation will we

find ourselves in the future? Now, this past year we found, as Gordon mentioned, a number older of the plants, the dual fuel plants which are becoming fewer and far in between, but those are also plants that are owned by companies when you get into the electric side of the discussion, that aren't making the money on the capital side. They are selling power, they are making money on energy, but the capitalization effort is suffering.

We have been hearing quite a bit of that. If it is suffering, you can only suspect that the type of money that needs to go into maintenance and should go into maintenance is not going into maintenance. Because you don't do what you don't have. So if we are going to be depending on this whole plan, while we have a constrained pipeline situation and the maintenance issues of the old plants are in question, then I am concerned and I would remain concerned that we could see a problem if we have the type of cold weather that we don't want to see. So I just put that out as a piece of my view.

One other thing that I do want to mention is that, I know Dr. Krapels mentioned the Everett plant this morning, I know Rich Grant is here, he

can speak for his facility. But when we mention the Everett plant, if I heard correctly, the suggestion is that it might go away. Well, it better not go away in a hurry because we can't get along without it. And that plant provides, you heard the folks mention Mystic 8 and 9 plants in Everett which are very closely, physically close to the district gas plant.

They are fired solely by LNG, 1,550 megawatts. It is the largest facility within the NEMA area and without that plant we are in danger of facing some potential serious problems. So we need that facility. And if people have plans to do away that facility, they better have plans to have something else in place because it is not an automatic thing.

I will calm down now and let somebody else speak.

MR. WRIGHT: Just a second, Mr. Keating, you mentioned about maintenance of older plans. I know that's the problem. Do you have any solution about what should happen with the maintenance of these plants?

MR. KEATING: The issue with the maintenance is it comes down to money. Right now

what we are seeing in New England anyway with regard to our energy situation, we know what the price of gas is. You mentioned $4 gas, I would love to see $4 gas again. We are seeing $6-plus gas right now.

But if people are pretty much selling energy at what is approaching the cost fuel, then they have very little money left for capitalization. And if they have very little money left for capitalization, I can only assume that that has to impact itself in some manner. I would presume or I would assume that one of those manners would be maybe you don't as much maintenance or as timely maintenance.

And the other issue is a number of our facilities on the merchant generators in particular are owned by, in some cases owned by the banks. They are owned by people whose interest is to make money on their investment, they want to bring as much of the financial resources out of that situation. So we have, I think, a delicate situation with regard to cost of capitalization and how it is getting paid for and how one has to adjust for that.

MR. CORNELI: If I might jump in on this issue, I think part of the question is about there

not being enough money for existing plants. And I can certainly go on and on about that issue from NRG's perspective, but I think there is a bigger issue behind that, which is the trend towards gas and away from multiple fuel generating plants in New England.

The dual fuel capability, like Gordon said, was very helpful in terms of keeping the power plants running and I think probably helpful in keeping the price reasonable during the cold snap. But like Gordon said, that's drying up. But the rush towards gas, which from a development perspective is very rationale, it is the easiest to site, it is the easiest to build, it is the easiest to permit, it is the easiest to deliver. If you hook up to a pipeline, you hope it will have some gas in it.

What that really is doing is putting more and more of our eggs in one basket in terms of ability to keep plants running during periods of extreme demand and tight supply in the gas market. A lot of what we are talking about here today is beefing up that basket. Making there be more gas available through LNG terminals, importing gas like we import oil now, through pipeline expansions,

better access and storage.

But the underlying question of fuel diversity for you, on top of the existing plants, I think something that the Commission needs to grapple with and address. If you look at the charts that you presented this morning, you can see that there is massive growth gas projected, but no growth whatsoever in fuels that are in abundant supply like coal. Obviously, coal is almost impossible, I would say, to site and permit but that's probably because it is not clean enough under the existing technology.

I think what this boils down to at the very bottom is providing reliability in terms of fuel supply and enhancing diversity. And enhancing diversity means willing to spend more money. It would probably cost more money to build a clean coal plant than it does to maintain an aging oil or gas plant. And that is something the market needs to be able to provide, that kind of diversity and security to exist.

MS. KELLY: I agree with that point. I think that fuel diversity is something that we have to take very, very seriously. Within Connecticut about 22 percent of our merchant plants are fired

with natural gas. We expect that to approach 40 percent in less than ten years. So, yes, we need to look very carefully at fuel diversity. And this is what involves long-range planning.

Some of the issues that we talked about earlier, and I think what would be a common theme throughout, is one of communication, regional planning, working issues out among all of the divergent parties. I think that a very different environment now with the number of privately owned companies, we no longer have the vertically integrated utilities where the regulators say this is how much we want to produce, this is how much capacity we want you to have. They need it, they pay for it, and, therefore, we comply.

But we have some competing interests now so we have to deal with the public, public concerns, with private industry and its profit motive, regional issues, statewide issues, federal issues. So there are a number of parties that need to come together to work on these matters that are currently before us and we have to take the long-range view. And while, yes, we do talk about issues in terms of what happened in New England in January and how to resolve that and the short term solutions that

Gordon discussed, and I know that he goes beyond that in his report, those need to be done, taken care of prior to next winter.

But there are a number of longer term issues that we need to be concerned about as well. Steve mentioned coal as a fuel, some people mentioned nuclear as a fuel. Clearly, renewables, we can't forget that as being part of the mix. So we need to increase the mix as well.

But back to the natural gas issue and the problem that occurred in New England. We have still have the issue of firm versus non-firm contracts. During that time, those who had firm contracts, there was no issue in terms of their getting the supply that was required. But, of course, again, with the privately owned companies they have to be assured that they will recover if they enter into long-term contracts, these firm contracts.

That goes back to, perhaps in our region, the ISO. They have to receive the proper market signals if they commit to a certain amount of natural gas that they will be dispatched. So the market rules need to be reviewed, and I believe that ISO has agreed that that is one of the issues. The economic outage is just one technical aspect of it,

but it seems to have been a major issue at least as one we are concerned about in New England during the time of the outage also needs to be looked at, because my concern from a regulatory standpoint had to do with whether or not taking an economic outage is legal and appropriate under the rules, from one side of the issue. But from a regulatory standpoint, regardless of the rules, my point is we must always have safe, secure, reliable energy. And so, the rules somehow need to be adjusted to assure that public can always have access to the energy we need.

MR. VAN WELIE: I would like to jump in here, I should have raised this earlier on, what I spoke to right in the beginning in terms of short-term action, your question on what needs to be done about infrastructure. I think Linda and Bob both raised some interesting issues, as did Steve. And one of the core missing pieces, I think, in the marketplace is the very interesting difference between the gas markets and the electricity markets which was highlighted by the January events.

The gas markets, the LDCs have an obligation to serve, they negotiate firm contracts all the way back to the supply point. Because of

that, because of those long-term contracts behind all of that infrastructure, supply is taken care of. Of course, they have a different design philosophy in the sense that they don't deal with the peak load the way we have to in the electricity industry. It's okay in the gas world to basically shed your interruptible customers in dealing with peak in that fashion.

On the electricity side, we have the situation where we don't have that luxury. We can't just black people out, enter into rotating feeder outages in order to curtail our peak. That wouldn't be well tolerated, I don't think. But you don't have any of that long-term contracting out. So you have a situation where the capacity markets aren't paying much to -- something makes me want to say who is going to say the LICAP word first.

I think FERC has done the right thing by getting LICAP on quickly, but it will only go part of the way to solving the problem. The issue becomes really down at the retail level, what disappeared with deregulation and restructuring was a sense of ownership and obligation to serve by somebody down at that level. So the issue becomes how does one reestablish that and also reestablish

the long-term contracting that will go with that.

And when, I think, you reestablish that paradigm, you address a number of things. You address the firm contracts to get the firm fuel supply which will have a long-term effect in terms of the building of the infrastructure from the gas pipeline incentive. You deal with some of the maintenance issues that Bob was talking about. And if we are smart enough, we can probably differentiate somewhat the payment structure in order to incent dual fuel units to incur the additional costs because there are additional costs in bringing duel fuel.

And I think there is a combination of things that needs to be done here. One is short-term spot market fixes, which is what LICAP does, but it is not going to do it on its own. We need to have something that drives through the incentive so somebody can actually contract in the long term for retail.

MR. WOOD: Gordon, to follow that up, we heard from Bill Museler on the first panel, the LSE has an obligation to get ICAP and LICAP, or whatever cap, to come in. Should we then weave into the LICAP obligation a level of firmness or

commitability, whether that be firm contract or fuel switchability if it's a gas unit, to get the LICAP payment?

Is that too simplistic?

MR. VAN WELIE: I think that whole concept needs to be explored.

It is not too simplistic, the only reason I pause is that I don't think one necessarily jumps to firm gas being the answer all the time. If you were to try and put into place firm gas, 5,000 megawatts of new gas-fired generation in New England, you would get an overbuild on the gas infrastructure. You don't need to build that much gas infrastructure. You need some percentage on that.

So the issue then becomes, how do you solve that problem? One of the ways you solve the problem is with dual fuel. So maybe the incentive needs to be put on the dual fuel to ride through the situation in a gas constrained world.

The other thought that I put to the gas industry, but I don't think this is something that they can really do in the short term, but in the long term, is there some kind of intermediate product that they can collectively offer to deal

with peak need situations. So we have a black and white situation, you are a firm, you get served; you are interruptible and you get knocked off. Is there something where when we look at the electricity supply situation in New England and they can provide some intermediate service with a limited duration of service where we get ourselves in a situation we were in.

MR. WELCH: There are a few points that I would like to make. And Linda could not have been more correct, in New England during January 14th to 16th, not one customer that was a firm customer that we are required to serve, had a capacity issue. The issue was the firm versus non-firm. And I agree that we need fuel diversity in our generation.

We most have it but I would question whether in that fuel diversity any of the power plants would expect to go and buy coal or oil that day to burn, or the day before. There is a coal pile and an oil tank. But in the gas industry, it is expected that we can get it the day before and it will be there. So there is a conflict in the way the industry interprets gas supply. The gas will be there, but we need to get Islander East and Millennium and these projects approved and moving on

so that the infrastructure is there.

Going back to the original question, which was what have we done differently. Well, Gordon and I have become friends. What happened during that time frame is the gas industry, including the pipelines, the LNG, and the LDCs, we had an infrastructure that has been going on for years that we have conference calls with including Commissioners to see what's going on that day, can we help each other out.

We have now had ISO join us and we are joining them. We are doing cross-training of each other controllers to make sure we all understand each other's business. We are looking at changing the electric day, making it closer to the gas day, I believe that's an issue. But somewhere the price signals have to be made that these power plants need to be able to take some level of firm capacity if they expect it to be there. It just has to be.

It doesn't have to be everything that they want, but the price signals coming out to the merchant plants, they are not going to bath for that. But they do have coal piles and they do have oil tanks. And in New England we have a unique situation that I don't know how we are going to get

around. We are a non-attainment area for air quality. People are not going to let us burn the stuff that doesn't meet the standards necessary. So there is a cost to that as well.

Those are my key points, we need LNG, those terminals.

MR. DALY: As a load-serving entity, I would like to speak to some of those issues. We have the benefit of being able to receive both power and natural gas as a load-serving entity to retail customers. And we have mostly firm customers and we also some interruptible customers that buy that kind of service and expect it to be interrupted.

One of the themes my colleagues have been putting out on the table, and I believe it's the correct one to be looking at is, in this market, what is the level of commitment that is being made, whether in firm capacity or in firm supply or in firm commitments to load. And what we are seeing, one of the issues we are grappling with in our industry today, and this applies both to natural gas at retail and to power, is that the utilities with most load-serving responsibility are moving to shorter term commitments, not longer. It is a major dynamic in the business.

On the natural gas side, which is a market which that has been deregulated a good number of years now, over ten years, the discussions when you are into resource planning will say that ten-year commitments are harder to justify than five years or three years. And there is discussions and restructuring groups that say, well, should we get the utility out of any commitment and move all that to competitive supply?

Competitive suppliers tend to, and I don't want to paint them all with one brush, to be focused more shorter term on commitments to their customers at retail and not ten years. People may want to speak to that.

On the power side of things, in Massachusetts which is almost half the load of New England, we have major uncertainties in power. We have the end of standard offer service coming the first quarter of next year, and that was a transitional service. With it coming to an end, there is people wanting to revamp the power business again and a major underpinning of that is let's get the utilities entirely out of the business. So we contract today for firm contracts for one year to certain classes of customers, but this would cause

us not to be in business at all.

So there is some dynamics that we are dealing with in our business and in trying to maintain supply to customers, and the firmness of that supply is going in exactly the opposite direction of where people would like us to go in terms of long-term commitment to get infrastructure deals. So I think there is some major dynamics that we have to deal with.

MR. GRANT: I would like to be a little bit of Paul Harvey and do the rest of the story.

I think it's important to remember that the gas system did work in New England. And thank you for your comments, Commissioner Keating, as well. We actually met the requirements of both our firm and our interruptible customers entirely. And I think it's good to digress a little bit.

The difference in New England in particular is there are 46 LNG tanks. Almost half of the gas that goes out on a peak day comes out of LNG facilities. There is about 18 and a half Bcf equivalent of storage in those tanks throughout New England. We are the end of the pipeline system, about as far from the producing regions of the United States as you can get. So that's the

infrastructure that you have there.

The other thing, to address something that Commissioner Kelly said, she was talking about this disconnect in ownership. We are the only merchant infrastructure provider in New England. We are a closed access terminal and a merchant facility, and as the Commissioner knows, in the last couple of years we have doubled the capacity of that system. So this winter the things we were able to do in conjunction with our customers and basically the system that was operating there is from December 1th through the end of March, we average a half Bcf a day of send out.

We have our top 10 send out records during a 30-day period in the middle of the winter. We were able to speed ships up to bring those in during the time that we knew cold weather was coming in. We did a peak day of well over 600,000 and that didn't including the trucking, at the same time that we filled those LNG facilities that were vaporizing. Those are the things, the land-based terminals, the things the Commission is looking at, we need more LNG in New England to make those things happen.

We understand all not in my backyard type of things, the infrastructure issues and things like

that, but you have so many benefits. The Mystic 8 and 9 plant ran during that period of time. As Gordon would say, there was never a problem getting gas. Our interruptible customer got gas. The other thing that is just as important is we were able to put it physically into the market. And the deliveries that went into 8 and 9 didn't reduce the pipeline capacity that was available for other customers. It went directly into them. Deliveries into KeySpan.

Other things that we can do, we deliver to all the different pipelines. Those are the benefits. We can change our hourly flows. We can change our daily flows. We have peaking times at different times. A lot of this flexibility comes, and it is the same thing the LDCs use in their LSU facilities as well. They may not run it all day, they may run it for three or four hours during the peak season. Those type of things.

But, again, 20 percent of the gas in New England comes through our facility, and on a peak day, out of the LNG tanks in New England you have almost half your gas going out. So that did work. And when you look at the infrastructure change, the slide you saw this morning, you go over Bcf capacity

of the terminal within a couple of years trying to build that as long haul pipeline infrastructure, I don't even know how you would pay for that or how you would build that type of infrastructure.

But it still gives the power generators what they need. It gives the customers what they need. So there was good news to the way system worked this winter as well as a lot of coordination between the companies to make it work.

MR. WRIGHT: I would just like to clarify one thing. Do you think we need more core terminals or satellite storage or both?

MR. GRANT: I think you need both.

I think that Dennis's company and other people looking at different projects out there. As you grow the infrastructure, if you are adding 30 or 40,000 residential customers a year, I think most people know, I grew up in the midwest our market saturation was 99 percent gas customers for heating. New England is oil. So when you are adding more gas customers, you are adding to the peak needs which relates to the land base type of satellite terminals, but also the ability to bring more energy into the region.

And you know with the number of potential

sites, as the Commission is well aware of potential facilities, and I think we need to use a common sense approach to those things as we are going forward. I also think it is very clear that there is an awful lot of things being said about the LNG business that are, frankly, not true.

MR. VAN WELIE: I would like to ask a question, because something that concerns us, given the dependency we have on the gas industry, which is, what I would like to see us do in a much more visible way publicly is something like regional transmission expansion planning process with the gas industry.

We have been doing it on the side from an ISO perspective, although we are not experts and we end up having to hire an outside consultant to do this. But it came up in the earlier panel in the New York discussion, and I think the notion that we have some systemic way for continuing on an annual basis reviewing what our needs are, projecting forward what those needs are going to look like, and exposing essentially the situation to the marketplace so that people can start responding.

One of the tools of the market process is to actually expose the needs to the marketplace so

that it can respond. And I see a situation where we need to work more closely with you in this area, but the question is really is this something the gas industry should be doing? Is it something you see ISO doing in cooperation with the gas industry? To me that is an issue that is unresolved at the moment and is probably something we ought deal with.

MR. WELCH: I guess two points, I think that the gas industry does plan. Everything that we do has to have a plan and we have to have a customer at the other end to receive plan. What we don't do because we can't earn on that, as people say, is build pipes to nowhere.

So we do plan. As far as a group, I can only speak for Connecticut, we going on year three now have had an energy planning group that has created, and this is my opinion and may not be the opinion of anyone else, but we have a moratorium on any projects going through the Sound. It was supposed to be one year, then it was two years, now it's three years. And I think bureaucracy sometimes gets in the way and makes people say let's not get into that kind of planning because look what it did.

And maybe Connecticut is unique -- did I hear people laugh about that? So I think we do

plan, but it does not hurt and I think we will see the gas industry doing a lot more with the ISOs so that we do think this through better. And I can tell you we are encouraged about the working relationship that has happened.

MR. SCHNAGL: Shifting to the State of Maine, Beth, do you have a comment?

MS. NAGUSKY: Yes, thank you.

First, I want to claim the bragging rights to the cold being from the State of Maine. In the middle of January I think we got the prize for the coldest temperatures. And like the rest of New England, Maine has become very dependent on natural gas in the electric generation sector.

In fact, in the last five years we have gone from zero percent to almost 40 percent. 60 percent of our energy is generated by gas-fired plants, so we are also concerned with it.

I think that the answer to the big picture question here is that there is no silver bullet and that this is going to be a combination of common sense approaches, both supply side and demand side. On the supply side, as you know, there was an LNG terminal rejected in southern coastal Maine this past spring. But following that, the Governor

committed to working with communities and with state officials, other state officials, environmental groups, labor and others, to site an LNG facility in Maine.

And at this point, I think it's fair to say that we are optimistic that working from this bottom up approach of working with communities, developers working with communities, we think there is going to be a marriage in the next couple of months that we will be able to come forward with. We think that's a win-win strategy, this bottom up approach.

And we think that one of the things we need to do is, to address the chairman's earlier point, we haven't done a good enough job educating the people as to why LNG is even being talked about. So what happened in Maine is the fear factor got ahead of the big public policy debate. If we are going to keep the lights on New England, we have choices we have to make. This is one of the best choices that we have, because Maine knows all too well the health an environmental impacts of burning dirtier fuels. We have some of the highest asthma rates in the country as well as some of the most contaminated waters with mercury. So we are

suffering the consequences of burning coal in the midwest and other parts of New England. So I think LNG is one part of the answer.

I think that co-equal with that is renewables. Maine was one of the leaders in the country during the last oil crisis in the '70s to implement a policy that resulted in 40 to 50 percent of our electricity coming from bio mass, hydro and municipal solid waste. So when it comes to energy independence and security, in that light we did pretty well. Now we paid a price for that, and we are reminded of that all the time and it may not have been the perfect model but it did serve the job of reducing our dependence. At that time the issue was reducing our dependence on oil.

Maine just permitted a 50 megawatt wind project this week. And while we may not be the Saudi Arabia of wind, we think that we are a strong contender and that there a lot of good wind sites in the State of Maine that developers are looking at that are very permittable.

One of the problems that we have, as you know, is the transmission infrastructure to get that power out of Maine to NEPOOL and to New Brunswick, and those are the things that we need to work on

because some of the best wind sites are places that don't have strong transmission connections. So I think that's a second leg.

And the third, which I think has gotten probably less attention today than it deserves, is conservation and energy efficiency. The State of Maine takes this very seriously. State government is becoming a leader in the state in terms of its own energy practices in areas of conservation and efficiency and renewable power. And we would like to be a model for the rest of the state. I think that one of the issues that hasn't come up is a very fundamental difference between financing of efficiency and financing LNG projects.

And, frankly, when it comes to LNG projects that's someone else's money, and when it comes to efficiency, that's ratepayer's money. And when people have gone to the legislature to enact a system benefit charge to fund energy efficiency the response has always been that we are not willing to raise rates in the short term, even if it means long-term bill reduction. So there is a real political disconnect between the two, and because of that, the playing field really isn't level.

So while it is not easy, as all the other

panelists have said, to do the supply side, I think it is more difficult to do get the demand side the same amount of attention and focus.

MR. SCHNAGL: Just to follow-up on the conservation issue, during the cold snap in January, the ISO requested the public conserve energy, I was wondering if there is any follow-up on that in terms identifying actually what level of conservation was implemented or whether that was any way measurable or any attempt was made to measure that?

MR. VAN WELIE: We did go to Plan B. We went into emergency procedures, we did get some response. Off the top of my head, I can't remember exactly what it was. It wasn't a big number, though.

MR. WELCH: From the gas side, which we have a totally different view. We had the gas. We only make money three, four months of the year, so we wanted to burn.

And I know that's not what you wanted to hear, but when ISO rightfully went out and put the conservation message out on energy, we saw a distinct drop in gas usage, which we didn't want because we had the fuel and that is the only time we earn money. So we did see it. It did help as far

as the electricity somewhat, but we could see the needle go down on the gas use.

MR. SCHNAGL: Dennis, any attempt to measure that?

MR. WELCH: I would be taking a wild guess and I don't want to do that.

MS. KELLY: But, again, that approach was a voluntary, short-term conservation request and compliance. But I believe what Ms. Nagusky is talking about, and I agree that conservation is important, is something that is more ingrained and more long term. And it is an area that we need to look at.

We have a very aggressive conservation management program in Connecticut and ratepayers pay for it. We need to, I believe, address conservation on the gas side as well. Energy efficient equipment that may be gas-fired that customers could use.

Education was mentioned, it occurs in everything that we do. I think educating the public on the need for conservation as a way of life is important because we are looking at ways to increase the infrastructure to accommodate this increase in demand, we should also take notice of the fact that we should take action to reduce that demand where we

can.

MR. KEATING: Just a point of clarification on the conservation side which is extremely important and needs to be done, but when you have a situation as we did January 14th to 16th, with a wind chill factor approaching 50 below zero, you want to go on limited conservation because if people turn down their thermostats too much, then they have a freeze off and then we really have some problems.

So you have to take a common sense approach when the situation gets as extreme as that.

MR. TIGER: Did firms deal commensurately with some level of excess capacity in the energy markets and the electricity markets having a reserve margin and it gets to the question of who really is at the end of the pipe? Or who is responsible?

If I might open it to the panel, given our current regulatory structure, who should be making the call about how much firm capacity on the pipe is necessary or how much excess reserve margins are necessary and how does that translate? What type of capacity markets do you need in the energy markets? What level of prices would be necessary to translate into firm capacity along the pipeline? And is that

something that is possible given the excess generation at least that we have today in a lot of New England?

MR. DALY: On the natural gas side, as an LDC we are required to have firm capacity for our firm customers, so we have an obligation to secure enough capacity.

Now we also have in the northeast, unless you have firm capacity in wintertime, you are going to get interrupted, that is the nature of the market, so the obligation to serve customers means you have to contract firm capacity. There is a debate in the industry as to when you open up those markets for retail competition, if those customers want to move to a competitive supplier do they need to take capacity that you have signed for with them?

I think the debate on that has settled, at least in Massachusetts has settled on, yes, you need to take that capacity because it needs to be in the marketplace. And I think what we saw in January was that benefitted the marketplace a lot. That commitment was made by somebody to have capacity there for firm customers and the way to allocate that capacity then to somebody else who wanted to serve the same customer, that there was a mechanism

to do it.

MR. TIGER: But the power markets --

MR. DALY: I am translating it across to the power markets. You know, the new thing we added in New England last winter was the amount of generation, 10,000 megawatts or so. So this was a new thing, and (A) everybody knew that the merchants didn't contract for capacity firm all year round, that's the nature of the risk they undertook and the obligations that they sold on the other side. And everybody understood that.

I think what the surprise was that there was so much of it, and we needed it, and the coordination, as Gordon said, between the markets wasn't as good as it could be, so there are improvements to be made there. But I agree with some of the panelists' comments that we don't need 10,000 megawatts firm, it would be too expensive. But we do need a certain amount of firm, especially if you are going to rely on it to be there on the coldest day. You need to have a way to ensure that it is going to be there.

Somebody has to contract for it. Somebody has to make the commitment. The gas industry regarded January very well because it works like it

does every winter, the interruptible customers got interrupted. No big surprise.

MR. TURNER: I think I have something to say here, I am the only financial guy up here, I think.

Sebastian, I think one tricky part about your question is that in this region specifically most of the entities that are swing factors on the interruptible are not credit-worthy entities right now. And it's very difficult, if you are looking at a gas infrastructure investment in this particular region, it is not clear who you are going to go to get that contract to have it built. And it's unique to this region relative to a lot of the other regions, because in this region most of the additional megawatts that are on the market right now are owned, as somebody said earlier, by banks or people that are in Chapter 11 right now.

MR. VAN WELIE: I was going to say that structure is this huge difference. As I thought about the problem of how do we solve this. In the marketplace you have someone, and probably ISO, taking responsibility for essentially procuring the reserve margin. That same structure doesn't exist in the gas industry, and we didn't need to because

gas wasn't such a dominant fuel source historically.

You can look at the electricity system now becoming a conversion process for the gas industry. It's becoming more so. And so the question that was behind my comment earlier on, are there alternative products possibly that can be offered? We spoke to the gas folks during the cold snap, and they said we have gas in the system, just tell us where you want it and we will get it to you and we will get it to the right place.

And the other thing they said is, also if you want us to be there on a regular basis, somebody has to pay for it. So those are the two issues. Operationally, it's complex. This is not a simple problem to solve. And then the other issue is financially somebody has to be on the other end of contract committing funds to make sure the capacity is there when you need it.

MR. KEATING: I would like to follow-up on several of the points that were made.

Sebastian, your point and also to a point the Chairman earlier made on ICAP. And I would like to do this, probably a little bit dangerously but thinking out loud, I can see my Chairman saying don't do it.

Maybe I will turn it on to FERC and ask then what their views are, but we talked initially about obligation to serve. Quite frankly, as a regulator, I regulate the discos, the only obligation I have is to hook up your wires. They then buy the power from a competitive market which don't have the obligation to serve that we have in a restructured environment. Then you leave that to the next thing which is reliability.

My question is: Whose responsibility is reliability in the restructured environment? I think that's what you were suggesting, if you want reliability, which we all want, somebody has to pay for it. But in our market system, how are we going to cover that cost?

Right now the energy cost that we talked about, especially at today's fuel prices, isn't providing reliability in some form or infrastructure, whether its plants or making long-term contracts so people can put pipe in the ground and so forth. So I think we need to look at the reliability component, as maybe a special area, whether it's a vote of support -- I am probably making James get nervous now -- but it's a question, James. Can we design an equitable market solution

and, if we do, do we vest it in the LEC? Do they provide long-term contract support?

And if we do that, are we moving our potential backs on the restructured piece? Are we now coming and moving off that restructured piece in order to make the reliability component viable by making sure there is long term contracts there, by making sure there is some money so that the people can invest in the capital, so forth and so on.

So the basic issue is we need to figure out a way to recover the capital piece to allow the energy behind it to work the way it's working, and some of that is through ICAP, and I mean this in all sincerity, it is brain trust you folks at FERC, what do you say?

What's your answer?

MR. WOOD: Let's take the infrastructure reliability because that part of the industry is still regulated. We still have to grapple with what exactly what the reliability standards are, that's an ongoing discussion between FERC and the electric industry, to get those crisp and enforceable so it can be binding on everybody.

On the capacity reliability side, which is the harder one you are talking about, I think

because it is in a competitive marketplace, I have to say, as a market guy, I don't have a problem with that being regulated. I like the quote I heard earlier, even the most widely competitive markets are structured with some rules. Most likely, we have in drivers insurance, everybody is supposed to be insured in the state so if you have a wreck you are covered and it socializes the risk. Yes, it is government regulation coming back into the market but I am not sure that it should have ever left the market.

So, philosophically, I don't have a big opposition to there being some obligation on the part of the person serving the ultimate customer to have a capacity obligation. And I think we have long grappled with ICAP, UCAP, LICAP, all the cap family. Pick the right one that we want to debate. Philosophically, we believe that all ought to be part of the restructured marketplace.

We just have to get the mechanism but I think we have crossed the philosophical bridge tying to get one that works, asking questions of investors, regulators, of public officials, of the industry as to what works best to balance out the risk. That is what changed from the old world to

the new, is the risk got shifted a little bit but it didn't disappear.

So that's kind of the long, incomplete answer, but I am telling you, we are philosophically there and we are working on the details.

MR. DALY: In response to that, we agree with that philosophical approach. We think we need to solve the reserves market pretty fast because time is going to catch up with us between growth and retirements and whatnot. So we need to move here very fast and figure a way to get the operating reserves market working so we keep reliability in the system. Whatever about the rest of the capacity market, we see the reserve side.

MR. WOOD: What needs doing in New England?

MR. DALY: Everything that has been built in New England has been combined cycle. We don't have anything on the upper end, and Gordon can speak to it, but it has to be very difficult to operate a system with very little features added to it and you have a preponderance of combined cyclers running on the same fuel. That's not a very flexible system. And the ability to get that new fast-start peaker system in place is just not there.

We just don't have people who is going to sign contract, as a utility, we say we are paying off a whole lot of long-term contracts that we signed for PERCA and those are still in the bills. New people on the block don't see, though, the millions of dollars we have to collect from customers every year. So we see those bills and we have to make a case for recovery of those, so those are a concern to us.

In the interest of full disclosure to Bob, I said if we were to go into long-term contracts again we would have to a very firm and visible mechanism for recovery and be convinced that this is the appropriate way to do it. That there aren't better market mechanisms to do it.

Although, to your point, maybe some regulation, if you were to introduce some regulated product to this area to satisfy reserves and reliability, maybe this is the place to start. But that whole process needs to get going fairly fast.

MR. CORNELI: I would like to jump in on that, because it's a concern looking up at the slide here. The impression is that generation isn't an issue in New England. There's too much of it, 25 percent reserve market, but there is not enough of

those things on the other side, or there is too many impediments, I guess. That's really, I think, a little inaccurate.

Following up on what Paul said, the constraint areas, especially Connecticut. Not just southwest Connecticut, but particularly southwest Connecticut, are in potential trouble right now. The RFP that the ISO had helps a bit. I don't think it helps as much as the ISO wanted it to help in as much as the FERC standards need to be helped done.

There is transmission constraints that keep people from building what's needed. There's pricing constraints that keep people from building what's needed. There is the lack of incentives and inability to contract that keep people from building what is needed. And that stuff really needs to be built quickly. That really probably can't wait for phase one and phase two of the transmission expansion and it probably can't wait for full maturation of the LICAP market. Although we are hopeful that the new order will be that maturation is only a year and a half away if not longer than that.

So that's an issue that I think is critical right now in terms of reliability and it is

only going to get more critical with every year that passes. Because that 25 percent reserve margin, which again is POOL wide, there is actually a return deficit in southwest Connecticut, that reserve margin is going to get chewed up very quickly with demand growth. And by the time that the issues over on the right begin to resolve themselves, if we are lucky, if we work real hard together, that reserve margin will be so low as to require more investment after the more investment that is needed for peakers right now.

So we've got some problems in terms of the generation side of this as well as the other side of it. That the period of irrational austerity, I think, is compounding, but what we need is irrationally austere focus on the generation side right now, we need some clear market signals and some clear institutional means to get together to say how do we plug needed generation into a system that also has all those challenges over on the right side? How do we do that quickly in a way that can be done competitively rather than just centralize the planning. And it can be done with market incentives rather than regulatory rates.

And I don't think we are there yet and I

don't think we should count on waiting a couple of years to get there.

MR. SCHNAGL: I have a follow-up question after Beth is done.

MS. NAGUSKY: Would you like to go first?

MR. SCHNAGL: No, please, go ahead.

MS. NAGUSKY: We are looking forward to the creation of the regional state committee that was approved last summer at the New England Governor's Conference in Maine, which I think there will be filing very soon to FERC on. I think we are getting pretty close on that.

One of their top priorities is to address the issue of resource adequacy which includes environmental concerns, fuel diversity concerns, many of the other concerns that we have been talking about. So we are hopeful that that will serve as a vehicle to address this issue. And I know that Chairman Tom Welsh of the Maine Utilities Commission has circulated ideas on service adequacy proposals and I know that those and others have been discussed. And I think it is an issue that is clearly a concern as we become so dependent on one fuel type, that we do need to resolve this. And we see the impact of the very short-term market

approach with very little long-term obligations occurring.

One of the problems that we have with wind power is they, obviously, have the same problem of getting long-term contracts that anyone else has, somewhat helped by having renewable portfolio standards. But the Maine legislature did authorize the Public Utilities Commission to act to sign contracts with renewable generators under certain circumstances to try get over that hurdle, if they are competitively priced and reduce the risk of price volatility, which I think would be right now a fairly easy finding to make.

MR. SCHNAGL: Sounds good.

One quick question, Dennis, I am going to ask you to put your Yankee Energy hat on for just a second. You have proposed one of the few, as far as I can tell, LNG storage facilities at Waterbury. Can you tell us a little about that facility and why it appears that you folks are proposing to build LNG storage and nobody else in New England seems to be building any?

We have identified LNG storage as one of the short-term solutions in terms of natural gas capacity problems, so can you tell us a little about

why you are headed in that direction and why other people aren't?

MR. WELCH: I don't know that other people don't want to, I think they are afraid to because of the NIMBY approach of issues.

But we have headed down that path because as a supplier of last resort requirement company, we saw coming out in the future a shortfall on our supply stuff. We also saw that there was an opportunity with LNG to save our customers money. In two days this past winter, if we would have had the facility in place, we would have saved $2.4 million to our customers, not through our rates but through what the added fuel costs is.

We went to our Commission and showed them this, and we have a tough but fair Commission that listened and they have said that it's in the best interest of the state to do that.

The other two LDCs in the State of Connecticut do have LNG storage the same as ours. What I think was a key point in getting it approved as far as the City of Waterbury, was that what we did before we even proposed it, we went to the community. We personally spent many, many nights with all the community groups, educating them,

sitting with them, listening to their issues. We sent the Waterbury Fire Department to LNG training school at the Northeast Gas Association and the fire department became our biggest advocate at these public meetings, which neutralized many issues as far as the Not In My Backyard.

It did not hurt that we owned the property already and that the City of Waterbury was in bankruptcy. It's $3 million in taxes a year to the City of Waterbury. That's just a minor point.

MR. VAN WELIE: Gordon, if you don't mind, I would like to change topics back to what it says on the sign, which is ample electric generation capacity.

My concern about that statement is that it is mathematically correct when you have the generation installed and there is peak demand and so forth. But it can lead one to complacency, and so what I want to do is pull that apart a little bit to understands what's going on in New England.

Relatively speaking we have a fairly weak transmission infrastructure running off the Sound and we have two big load pockets in Northeast Massachusetts, Boston and Connecticut. The situation in Connecticut today is that we are

deficient by about 400 megawatts in Connecticut today, so we don't have ample electricity generation capacity in Connecticut.

The situation in Boston is that we are okay today but two to three years from now, we will be in a situation that if we don't take action we will also be approaching a capacity deficient situation in Boston.

To further complicate matters, you've got a situation where number of, a fairly large portion of the generation capacity is financially distressed and/or has other risk factors associated with it. Environmentally stressed, people are tightening up, rationing, the environmental regulations. That is true in Connecticut, Boston and elsewhere in the region. And many of these units that are presently running on contracts are 40 years old, and quite frankly, will be shut down and repowered.

If I use Connecticut as a bit of a case study for a moment, we've got a situation there where there is some transmission infrastructure that has to be built, absolutely, positively has to be built, and it's very slow and tedious process to get that through the siting process in the Connecticut situation. Once that's transmission is built, you

have a very small window of opportunity in which to connect and repower some of that existing 40-year old generation.

And one of the things that I would like to highlight is I don't think the market is going to produce that result. Somebody in the State of Connecticut is going to have to step up and say we want to have the following facility repowered in some formal fashion, because siting is going to be limited to a finite set of sites in terms of where one has connection with generation. So the real conundrum we have is that markets assume in reverse infrastructure, and to the extent that you don't have the reverse infrastructure you start getting marvelous results.

So now we have to do two things. Get the price signals right, but for some period of time you also have to have some form of intervention. The demand curve in terms of LICAP is a form of intervention in terms of trying to stabilize the capacity payments. But there is another type of intervention that I think we ought to consider which goes back to the long-term contracting issue, which is given that your physical infrastructure is what it is, somebody is going to have take responsibility

to step up and say we need to take that unit out of service between the years 2005 and 2006, repower it, so that by the time we get back in again it's there in time to meet the low growth.

And that's part of the complexity we will be dealing with in the very highly constrained areas. So I just wanted to get that message out there, because what we have found is that, yes, the yellow statement on the left is absolutely true but it leads people to think that we are okay and we don't have to worry about ensuring adequate resources. And that is not the case at all.

MR. GRANT: Can I ask one more question. I was going to stay out of this until Gordon made the comment that Boston is okay.

Clearly, if the market signals are right, then there is a solution because if you look at the Mystic plants, and Commissioner Keating was talking about the adjacent yard facility. You have 1,550 megawatts that can come on right now in Boston. You've got the gas capacity to serve them and you didn't have to expand the pipeline infrastructure to do that because you did it through the existing LNG facility. So there are solutions.

And, obviously, we are at risk for those

same things. We are a merchant facility, we took the risk. The site took the risk when they built the power plant and it's there. So if the market signals are right, it will happen.

MR. DALY: I agree with Gordon, in terms of ample capacity, yes, there is ample capacity in the NEMA or Boston area as long as we keep those market rule contracts there. The owners of those units say we want to retire them. We have a market rule that says you can't retire until we get transmission built or we figure out this new reserves market and get some new reserves into the area or get enough transmission that we can allow those units to be retired.

So Gordon is right, that statement is somewhat bland and doesn't apply to all pockets accurately. But we see that as the emerging piece of the market. I think where we differ with ISOs in approach is that we see a need to go and fix that reserves market piece first because it's the most urgent. You know, if there is an overhang capacity in the market because of over investment and people are not paying money, that's regrettable, but maybe that can be approached later. In terms of staging this, we think the reserve market is clearly an

emerging one.

MR. WRIGHT: Can I just jump in with kind of a simplistic take on things. What I am hearing is that there is a 25 percent reserve margin. It is a numerical calculation. It kind of hides the issue. What I am hearing is more peaking is needed, more transmission is needed.

Whose going to make these decisions?

MR. VAN WELIE: Jim mentioned reserve markets a couple of times. Our view is that the implementation of reserve markets, both in terms of the reserve markets and actually the energy market, the real-time energy markets as well as the occasional aspects for reserve markets are high priority items for us in terms of our market design initiatives. It is the number one. If you look at the list of market design improvements, it's in the top three, if not the number one item that has to be dealt with.

I guess the issue, though, is that I don't see that you have to sequence these things. That has to be taken care of. Clearly, we need more capacity, and I think the obligation on the ISO is to make sure that the market rules are in place to incent that capacity in the right places, which is

would we need the locational aspects of this.

On the other side, you do have to deal with the fact that the capacity market has to be viable as well. And that's a difference of opinion between the ISO and NStar, but I think one has to deal with those two simultaneously. Hence, the NStar order that came out yesterday is very important because it helps us deal with those issues. LICAP will deal with capacity markets, and we will, in parallel, have to deal with putting in reserve markets.

MR. TURNER: Maybe one addition to that, if you get a system in place -- you are talking about peaking, if you get a system in place where ancillary services are freely traded, the marketers will come back into this market. They will start trading, there will be liquidity in those ancillary services within six months. That will help you get the peaking plans built again because they will take longer term contracts to help get peaking plants built.

MR. VAN WELIE: Part of the problem is, you got the market signal right but the other part is people won't make investments until they see there is a stable signal and they have a high degree

of confidence that they are going to get their money back. And, typically, that also dates back to the whole contracting issue again.

The one thing that is unique in New England, and probably the only other region I am aware that is close to us is New York, is the degree of the messenger of the generation. It is very high in New England.

Also when you look at another statistic, probably 40 percent of the generation have some kind of credit rating problem. So these are not people that can get out and make the investments or buy the firm gas, for example, or necessarily are taking all the right steps, I think, in terms of maintaining their existing facilities. There is short-term thinking going on.

So I keep pushing the point, you have to solve the issue of the long-term contract here.

MR. CORNELI: On that point, since NRG owns a lot of those 40-year old plants that Gordon is talking about and is very interested in finding ways to convert that technology or sites to something that fits into tomorrow's marketplace in New England and helps provides services and products that are needed and earns a competitive return in so

doing, we think the contracting issue is critical. And I don't think any investment firm wants to build new stuff as opposed to buying old distressed stuff, as Dr. Krapels pointed out earlier, is really going to do that at all without a long-term contract.

I think you have heard that again and again from the financial industry and from the generation and supply sector and from the academic community. So I think that's a given.

There needs to be incentives for both sides of the market to enter into those contracts. And the one area I might differ from some of the previous comments is, sure, market certainty is really important, regulatory certainty is really important, and one of the big challenges facing you over on that side of the room is figuring out how to give us on this side of the room the certainty that we need.

But I think we could ask for too much certainty. It seems to me what's really important is for buyers in the marketplace to realize that they face risk of high prices associated with capacity and energy in places where reserves are short. They might not know if it is going to come in a LICAP rate of $9 a kilowatt month, or $7, or

whether it is going to have $5 and $4 reserve price on top. They might not know which of those it is going to be, but they have to know that something like that is coming.

And we on the other side have to know that if there is an oversupply, prices are going to be low. And that gives both sides an incentive to get together, shake hands, and come up with a contract that will hedge the risk on both sides, even without complete certainty as to what market design is going to be. And it will allow us to turn over those deals to the financial markets who will resell as the markets get more liquid the risks and the opportunities that are associated with those deals.

I think that has to come right away. And I think that the signal has to be almost a signal of regulatory philosophy and regulatory plans, like we are going to make this happen, we are going to make it so that when that reserve margin is at 18 percent, where it should be, every deficient investment in that marketplace is profitable. We are going to make that happen.

If you give that message, people will get the point. If you say if the reserve is shorter than that, there is going to be scarcity that is

generated that will make people wealthy who own assets. Folks will get the message, and if you say if there is oversupply, prices are going to go low, so that investments will not earn return, people will get the message. And that will create strong incentives for contracting.

And that's a message that I think will benefit the industry as a whole in New England and throughout the rest of the country.

MR. WELCH: Mr. Chairman, I would like to go back to a question asked and left on the table, if that is okay with you. Gordon asked the question should there be something in the gas industry similar to ISO and would that be helpful?

I think a very important point to make, and understand Gordon is saying that is important in the electric industry, what people in many areas and everyone in this room understands, I am sure, the gas industry cannot afford to have an organization do that. Every day we compete in the market against propane and oil, and we are losing customers as gas gets close to 6 and $7. And if we put something on top of that that would be a socialized cost, the LDCs would be hurt severely.

That's my belief and I think it's the

industry's belief. It's different than electric, everyone has it have electric, but every customer in New England has a choice as far as fuel, whether it be gas, oil, electric or propane. So it's a very important difference, I think, than the electric market.

MR. WRIGHT: Our time is running short, I want to go back to LNG very quickly. We have representatives from Massachusetts, Maine and Connecticut here.

We see a very troubling pattern in terms of siting and I know, obviously, you do. We get applications in, we try to process them as we can. But we see a very dire gas supply situation, we alluded to it in the first panel this morning.

I guess at your level, what would be done in terms of siting? Can we do something? Is it really going to congressional legislation to strengthen siting? Just some opinions real quick.

MS. NAGUSKY: I go back to my earlier comment, I think this has to be a bottoms up approach where you involve the communities and the developers, working together with the state, with the federal government, if necessary, but not in first instance, and with environmental groups that

support LNG and recognize the need for LNG.

We need to build a coalition of interest that will come only from the bottom up. And I think through community involvement, through showing the benefits to communities that it will work. I think that the top down approach is going to be a very difficult way of getting LNG terminals.

MR. WRIGHT: So you are something suggesting different than the Hartswell approach?

MS. NAGUSKY: No, I don't think the Hartswell approach was the wrong approach, but maybe we need some more education, some more lead time, some more working together with the community, doing some more exploration before you get to the ultimate decision.

And as I said, I am optimistic based on what we are hearing and seeing that it is going to happen in Maine.

MS. KELLY: For Connecticut, I don't believe we have any LNG applications terminal pending for the state, but just in terms of siting in general, in terms of the approach that was just mentioned, I would add to that.

In the states there generally exists more than one agency that has responsibility for siting,

so as we have sat here today and talked about communicationally a large basis between industries and public/private, we also need to improve the coordination and communication among entities within a state that have similar responsibilities and that can help the process.

And I can say there is an attempt being made currently in Connecticut, a board that was formed recently in Stamford that the DEC plays a major roll in. It has brought together all of the agencies in the state that would have an interest.

MR. KEATING: First of all, I agree with both of my colleagues. The education has to be done, that's always key. But I think we also need to do a lot more education in the broad, national sense and in a regional sense also.

In New England, if you look at LNG from the scale and scope New England has shown for decades that extensive use of LNG works effectively. We have been the one region that's had it for 34 years. With regard to safety and security, we have seen that it is has been managed in a safe and a secure manner and there are multiple safeguards; yet, the sensationalism that appears in the newspapers gets attention, and that's what is

educating local people who are, in my judgment, sometimes miseducating them. So there has to be a better education as to the myths and the reality.

And you have talked about the storage. Clearly, for a region like New England and for other parts of the country with a geography maybe similar to New England, it's a significant storage opportunity and can address many of the infrastructure issues. That's on local level.

From a national level, I think the message has to get out, and I won't give you the entire National Petroleum and Gas study because I know you are familiar with it, but the bottom line in that study, which, to me, I am really amazed that the message hasn't gotten out further, is that North America can only meet about 75 percent of its natural gas needs on a going-forward basis.

This is a study that literally had thousand of man and woman hours in it, millions and millions of dollars, took close to 24 months. It's in great detail so that any student can go down and go through whether they want to take the 80 page summary, the 300 page integrated report or the 1,200 page in appendices, but the bottom line is we are drilling the tour basins, the fundamentals of the

supply picture in this country has changed. We need to do something.

We need to be able access new gas resources, whether it is in the Rocky Mountain region. And it is not only this, Alaska LNG, we need to look at fuel diversification because natural gas is not going to be the panacea. I say that, as you know, I Chair the gas committee but it is not a panacea for everything. There has to be mix of other opportunities, of other fuels to combine.

There has to be a strong push on energy efficiency. And one of the things, if you look at this study, the NPG study assumes five trillion cubic feet of energy efficiency. That's one of the most aggressive energy efficiency concentration approaches. Without that, we are in a deeper hole. So that message has to get out to people. You know, it was said to me many years ago when I was going off to college, my father said to me, "Good luck when you go to school. It's a wonderful country, you can have anything you want." Then I got this sting in the back of my neck. I said, "What's that for?" He said, "I just want to remind you, you have to make some choices because you can't have everything you want."

And the message has stuck with me, but I see this issue, we are dealing with the major wind site down in Cape Cod, 400 megawatts, and people don't want it. They don't LNGs. They want the coal plant shut down. Well, what would you like and here are your options. And that education has to be done. If people want to make those tough choices, then we have to push more of a balanced approach that has come out of the NPC studies and the reactive part.

The reactive part, we are just going to react to prices. We are going to have a lot of meetings like this. This is wonderful but we would like to get to some solutions some day.

MR. GRANT: If I could add, the reality is we can't have new records every time this goes to another agency because you create an environment where you stop things just by time.

I think the Commissioner made some very good points. One on my staff people put this in, to quote Robert Stevenson, "We Americans want it all, endless secure energy supplies, low prices, no pollution, less global warming, no new power plants or oil or gas drilling. There are people with pristine p laces. This is a wonderful wish list.

It's only shortcoming is the minor inconvenience of massive inconsistency." So I think that kind of sums it up.

MR. MILES: I would like to thank the panel very much. We are going to take a short break and we will reconvene at 3:05.

(Recess taken.)

MR. MILES: If you could take your seat, please. Thank you all.

MR. WRIGHT: Our final panel today is going to take a look at regional supply and transport availability to not only the New England area and New York City area, but kind of a regional overview.

The availability, as we talk about sufficient natural gas supply in the northeast appears to be in decline. At the same time, transmission capacity from outside the region is also in decline. Especially when you consider the amount of gas-fired generation we are talking extensively about in addition to capacity constraints in the northeast between New York and New England regions.

Now, attempts to provide supplies have been thwarted and what this all translates to

eventually is a supply crunch, and we think efforts must be made to get theses supplies and energy not only into the region but between the subregions in the northeast. Here today on the panel to speak to these issues are Stephen Whitley, Senior Vice President of ISO New England; John McCarthy, Business Leader in Commodities, National Energy Board, Canada; Jeff Scott, Chief Operating Officer, U.S. Transmission, National Grid; Rich Bolbrock, Vice President Power Markets, Long Island Power Authority; and we have Skip Horvath, who is President, Natural Gas Supply Association; Yves Filion, President, Hydro-Quebec TransEnergie; Gregory Rizzo, Group Vice President of Duke Energy Gas Transmission; Hal Kvisle, President and Chief Operating Officer of TransCanada; and Dave Boguslawski, Vice President, Transmission Business, Northeast Utilities.

To start with, we will touch on gas first, and since we have some guests from Canada here, we will start with John and maybe Hal. Let's talk a little about how gas supplies go into the northeast. I guess I can involve Greg in this because he has the Maritimes pipeline as well.

John, would you like address any issues

that we haven't covered today about the Canadian gas supply to the northeast?

MR. McCARTHY: Thanks, Jeff. I think you did an excellent job at the front end outlining some of the data.

I put together a little publication, it really does duplicate a lot of the material you have, I guess to characterize what we see now in production is really a mature base. Rates are up but production is pretty flat and we are expecting that on about a two year overview. Two years out, looking over the year is what we do, and, again, there is really no change there.

Looking at the east coast, one of the slides in that area, there is a slight decline in production in the east coast production area. And it's caused the reserve perhaps aren't as great as once estimated. They have limited success with respect to finding new explorations; however, we still believe that the potential in that area is still quite high, but certainly is not going to be produced in the near term.

And the only thing that is out there is we have another project proposed, which is about another 400 million a day which was the way it was

originally developed. They have taken the protect off the regulatory process and are in the process of rescoping it and replanning it and looking at it again. We will probably see that back, whether it comes to the same number or not, we don't know. But, again, you will see an increase in production from that area, but not significant. So I think that your summary on the front end, again, was quite good, quite adequate.

MR. WRIGHT: Hal, would you like to address the western Canadian supply vis-a-vis TransCanada?

MR. KVISLE: Sure.

From TransCanada's perspective, western Canada's supply is pretty much going to be what it is today. I would agree with John's comments that flat production is the outlook in the west. It's around 17 Bcf a day right now, and we can foresee it going up or down by 1 Bcf a day, but when that occurs, I would not people to think that is the start of a new trend. All of the analyses, all of the prospects and things like that would indicate that we are in that long, extended flat line. We bring on three and a half Bcf a day of new gas every year in western Canada just to offset decline. And

that keeps the sector busy there.

The other factor that I think was most important from the northeast perspective is that there is an awful lot of gas that gets consumed between western Canada and the northeast. And the appetite for gas in the Canadian prairies, particularly in Alberta, in the U.S. midwest, notably the Chicago market, the Pacific northwest and, of course, Ontario and Quebec, the demand is all growing. So the amount of gas that is available at the far end of the pipe will, I believe, continue to decline or be relatively hard to get as western Canadian prosecution stays flat.

We have seen the northern projects, Alaska in particular, and to a lesser extent, the McKenzie Delta, as quite important at the margin. 1 Bcf a day of gas in a 7 BP market isn't that much, but at the margin it will pull through to the northeast U.S., and a good news story for you could be if we could move ahead more quickly with the McKenzie Valley Project. So that would be my quick comment on supply.

MR. WRIGHT: Greg, how about the Maritimes?

MR. RIZZO: I agree with the comments on

Maritimes that the production has probably slowed a little bit more than we anticipated. We have a phase four on file and we are working with the producer there and looking to have it come on to production. They want more time to evaluate it. We have worked with them in keeping the filing active so they can make the determination. And at the time they were not able to make that determination so we withdrew the filing.

The flows on Maritimes have probably tapered off, the U.S. imports to about a 360 a day level, and I suspect that will be sustained but it is down significantly.

MR. WOOD: What was that number again?

MR. RIZZO: 360,000 a day, roughly.

The impact, though, I want to be clear, of the Maritime System on the northeast grid has been very positive. This past winter I think we know we really experienced a record high winter. Both the gas industry and the electric industry did a very good job in filling the requirements. Part of that, I think, came from gas from both the Tennessee and Algonquin grid. Algonquin as an example experienced 19 of its 25 peak days this winter, were able to get higher pressures than we have had in years on the

system. It hit us in the middle of our system. We didn't have put restrictions on the Algonquin system. So I think this is very critical to the infrastructure and has provided a great benefit, even at this existing 360.

MR. WRIGHT: Turning a little bit to looking at electric transmission between the regions, and this is open to anyone, we have seen problems with Cross Sound Cable, pipeline and other transmission projects that have transversed between New York, New England and PJM to New York.

What do you view, as electric transmission providers, as the main obstacles to getting transmission in place? That's open to anyone who wants to jump on it.

MR. BOLBROCK: I will take the first crack at it.

First of all, I would like to reinforce Jim McGrath said this morning. He made the point that electric generation and gas pipeline planning go hand in glove, and that's exceptionally true. Long Island Power Authority a week ago announced in response to an RFP, a 326 megawatt combined cycle plant on Long Island. Most of the analysis that we did for that was trying determine gas supply issues,

both from pipeline capacity as well as commodity availability.

And we are electrically and island and physically an island, and at one point in time we had the uncertainty of the Islander East pipeline being constructed and placed into operation. Even if it is, we have the further uncertainty as you just heard a minute ago of the availability of the commodity and deliverability issues of off-shore gas. We also know that KeySpan is a close project and we don't mitigate any of those concerns.

Regional planning, as far as your connection with the complete control areas is really the largest impediment. There is really not much consideration given, or at least it is a very low priority item in the current planning processes that are in place in PJM, the Maritime process in New England, as well as the process being developed in New York. We really don't take into account the reliability benefits of interconnections to different shell areas or the potential economic benefits.

And we can see using the Cross Sound Cable as an example where one area, in this case the State of Connecticut, has decided that they believe that

interconnection to Long Island will result in price increases. And that is the basis, after all is said and done, for their opposition to that project.

So the biggest impediment, in my view, is not financing, it is not financial, but I think we have demonstrated that the merchant projects, transmission projects are viable, at least between control areas. We also announced, as was mentioned earlier, a 660 megawatt connection between Long Island and New Jersey tying into PJM. They can be licensed. The biggest impediment is, I believe, generally speaking, is a lack of planning protocol among the regions.

MR. WOOD: Can your retail customers shop around?

MR. BOLBROCK: We have a retail choice program; however, the biggest impedient to that is that suppliers don't have the ability to bring in lower cost supply off-island. So on-island, it's exceptionally challenging to meet the LIPA rates.

We see the construction of additional off-island transmission, in this case, particularly PJM, to allow us to meet the strategic objective of fuel diversity objective, which is an objective of the state as well as LIPA in its own energy plant to

get us not as reliant on 95 percent of oil and gas on the island. Also to open up market retail exception where suppliers at least have an opportunity to be competitive.

MR. WOOD: So even though your customers aren't obligated to take service only from you, you are make that full procurement as if they were going to stay on the system?

MR. BOLBROCK: Yes. In the foreseeable future, that's the case. We put together, in fact, I was responsible for developing a retail access program. And we tried to make it as SEO friendly as possible. In fact, it is fair to say that there is some subsidy by LIPA in the program itself and we have attracted a number of SEOs and some have picked off the high load factor customers.

The residential customer program is at a stand still and it just the margins that are raiser thin and not worth the risk, generally speaking, for us.

MR. WOOD: What about high load factors, as part of your obligation do you have to do that with them or do you just allocate that to the remaining customers?

MR. BOLBROCK: They can switch back. We

set up a program where they are still paying the transmission charges and we back out the generation of the cost. They can go back and forth.

MR. WOOD: So you would treat the Neptune Project that you just announced as an up-stream transmission cost that would be borne by everybody or is it really a supply cost?

MR. BOLBROCK: It will be part of our P&E cost.

MR. SCOTT: I would like to take a step back to the northeast procurement and put it in context. We have taken significant steps towards policy objectives and meeting customers needs through reliable work, and I think that a national grid agreement could work toward that possibility, to move in that direction.

Listening to the first two panels, what concerns me is that we may have reached a position where we are starting to get into crisis in the sense of have we got the confidence to see through what we started in terms of delivering market objectives. Have we got the confidence to see through the wholesale and retail competition, and have we got the confidence to see through what we need to do in terms of reinforcing the underlying

infrastructure to provide the competition.

I listened to the discussion earlier on, it was talking about the need to enter into contracts. We have been there before. And one of the panelists earlier talked about cost increases, trying to enter into long-term contracts, capacity. Maybe we want to go back there. We were also talking earlier about the question of whether transmission competes with generation.

I don't think, when you are talking about the grid, that that is a relevant component. And arising because of a concern that in looking for competitive solutions you need to make everything that is going to be on the table, competitive. And my perspective of the program is that we are halfway through. We have got market, we've got recent funding that is starting but very much needs to a pushed forward. But we are at a stage where we need take stock of the infrastructure and recognize the benefits of that reverse transmission infrastructure, and the same is true of what both gas and electricity provides, in terms flexibility, where options are available to the ISO and options available to the suppliers and planners and provide the underlying platform, the competition would be

produced and that is what really matters.

And I think that if we took stock of, we talked about the amount of reserve generation in the region, it is certainly the case that we shouldn't be complacent about it, but if you took stock of whether all available generation can be made available to all the demand and look to addressing those issues and investments in the underlying infrastructure, you can look forward at how you can stimulate the market to generation and supply.

MR. WHITLEY: I think there are three things we need to do to get the infrastructure to develop.

First is a sound playing process, and I think we have in New England, we continually improve it and will continue to improve, but that gives us a good basis in a broad stakeholding environment to identify what the system needs are based on future studies in terms of how the system performs, can we keep the lights on?

The second key thing is, how are you going to pay for it? You can plan all day long but if nobody steps up to the plate and has a way to pay for it, nothing will get done. So we undertook that in New England about three years ago and entered

into a broad stakeholder process, and we now have approval and have a way pay for projects to benefit our region to keep the lights on.

As a result, now we have a number of major projects in the pipeline in New England to rebuild our very weak infrastructure. And they range from between one and a half and three billion dollars worth of projects that are needed. You are familiar with, many of you in southwest Connecticut, with the loop. The major cable into Boston, and the monumental new projects with interconnection in New Brunswick is in there, as well as the major east-west pipeline from across Massachusetts, Rhode Island and Connecticut, and major line in Vermont to Burlington. And all of those projects are in various stages now.

So we have gone through the two hurdles. We have gone through the planning process, we have gone through the how are we are going to pay for them. And now we are in the siting process. And at this point, we have got some projects that are going very well, some projects that are going slowly. But I will just say that the jury is still out. It's been fairly slow in Connecticut because they have stopped the process a couple of times. And now

there is big push to put everything underground in Connecticut and we are very worried that that may lead to solutions that are not technically feasible because of the amount of charging that that puts onto system.

But that's where we are. Progress is being made based on system need.

MR. WRIGHT: We will segue down to Dave.

MR. BOGUSLAWSKI: Steve, your outline is exactly the outline that I had, and not to repeat everything, the planing process, I think, works. I think we have to integrate better across the regions, as Rich said. Cost allocation, revenue stream issues, I think, New England really has figured out quite well.

Then it companies to siting, and the name of the game in siting is inside the substation fence, no problem; outside the substation fence, we've got some challenges. And the name of the game there is a lot of flexibility. And one of the challenges for the industry going forward is to find a way to do things differently than we have done in the past.

I think gone are the days where you can just put up new 345 KB line overhead without going

underground in some places. And that really becomes the challenge. So we have tried to take the approach that flexibility is the answer. We are actually constructing a 20-mile line right now with three sitings. We are in the courts with the process which will add a little of bit time. And we are in the middle of siting on a 70-mile line, a 345.

And the Connecticut Siting Council has done everything that they should have done to look at all of the options for various routes, the tested need, rolled up their sleeves, got involved in the details, worked incredibly long hours. And they are trying to help solve a very critical problem in Connecticut, and it's more than in Connecticut because without a loop in southwest Connecticut, New York, New England flows are more limited.

So they have done their job. There is a lot of agencies that get involved at the state level and the local level and the federal level. And getting through all the hurdles that each agency puts in front of you requires hard work and a lot of flexibility and some time.

MR. WRIGHT: On that issue, are you advocating more inter-regional planning, say,

between New York and New England? And, secondly, would you be advocating, say, federal authority for transmission siting?

MR. BOLBROCK: I would say that I would advocate some. There is really very little. There is an area, planning in general is an area where we need to go back to the future, although, I don't believe we will ever probably get there.

When the ISOs in the region were formed, the very first action they took was to eliminate the planning process. They changed the title from planning to something else. They sort of struck it from the records, and those of us who said this made no sense, it was a folly, we were told that we just didn't get it or we resistant to change. All of a sudden, several years later, everybody has religion again and, guess what, we need a plan, we need to have some solid plan.

The inter-regional plan I think is a bigger challenge than planning within the control areas. The larger geographic control areas is something I personally support. That would be one possible impediment to be overcome. There are the equivalent of TCCs and FDR between control areas that would assist in the planning process. Still

that parochialism that exists that we can point to. And there isn't a body, although this morning Bill Museler indicated that there is an effort underway among the ISOs to come out with some type of inter-regional planning process. He also said that it would take quite some time, and I suspect that that's measured in years, and not months, when he refers to that.

Part of it is that there is so many things on the plate that it is not really given the attention that it probably deserves. It's a low priority item, I think, among the parties that are in control. I believe that FERC could be helpful in putting pressure, maybe pressure is not the right word, but in encouraging the responsible parties to come up with some methodology that would work.

MR. TIGER: If I might ask, complicit in all these statements about planning, there hasn't been much of a discussion of the potential for merchant transmission and market base transmission. I wonder if anyone on panel, and perhaps TransEnergie would like to speak to that.

Is there still a place for it, and if there is to be, what would need to happen to have it succeed?

MR. FILION: I would like to give my comments on the planning process, if that will answer your question.

I think it is certainly very important to add access to our transmission system to support and increase the market. And we have, first of all, to have an efficient, long-term planning process. The reason for that mainly is the fact that to implement new transmission infrastructure requires a long time. Even longer than a new generation facility. You have to think about that. And personally I don't think that the market signals are sufficient for that.

We need to add the risk responsibility for long-term planning as it will be the road or the arc to New England the beginning of next year and the integrated process as being implemented in the ISO in the New York ISO. And on the other hand, I think, also that there is a potential to optimize the existing purpose of the transmission. And that is certainly, I think, more difficult to attempt.

The reason why, it is mainly because it's more difficult to establish who will pay for that. When I am talking about optimizing the existing capacity, I think about, for example, to be sure to

add the proper reserve, to increase the reactive power, and all kinds of things like that to increase the limit on the system. This is something very important, and I think that the most important problem which we're preventing to proceed on that is to clearly establish the way -- who will pay for that and the clear process to put that in place.

MR. SCOTT: I would just like to address both of those issues.

First of all, on inter-regional planning, I think anything that we can do to improve inter-regional coordination is beneficial, to Rich's point. I think, though, that if you look at the state of progress of the inter-regional planning, between the different parts of the region, it's further advanced, I think it's fair to say, between New England and New York. And there are issues in terms of constraints within the regions that we feel really ought to be addressing before we start working in between regions. Although overall, inter-regional coordination is clearly high priority.

In terms of merchant transmission, I agree that there is a limited role in merchant transmission if it's genuinely driven by people

willingly to be signing contracts to undertake the investment. If you look at the system that we have right now, and look at the many challenges in that system that we have today, the problem wouldn't exist had it been driven by merchant investment.

In terms of the transmissions, I am of the opinion that there is a limited goal in terms of transimissions. If you would insist on doing that right now, that system doesn't have today, probably it wouldn't exist -- the system exists because the infrastructure was recognized as necessary to provide the level of security and reliability which we all desire. And that basic infrastructure and development that infrastructure I think will continue to be predominantly driven by regulated investments providing the platforms for the market generation and retail supply.

I think that the areas mentioned for transmission potential are in some cases discrete connections between two adjacent markets where there isn't strong links to markets. That investors in that project can attach secure contracts with market participants and see an advantage to trading across that link. That's what merchant transmission predominantly provides and I think we see that

evidence in the difference between transmission projects within the auspices integrated regional plan currently happening.

MR. WRIGHT: Just to shift gears a little bit and talk about transmission. I wanted to ask Skip your opinion on the natural gas supplies, at least the domestic supplies, is it all doom and gloom, of or is there something that we can look forward to, and is there capacity of getting there?

MR. HORVATH: I wouldn't say gloom and doom, but the NPC study, which someone said on the previous panel, established two things, one was reactive and one was balance. To translate, we have to make modest changes and what happens happens, and that's where we are now.

And prices yesterday were in the mid $6 range, here it is early June, so technically it is a shoulder month. And that puts us in the upper end of that reactive path that the study outlined. And looking forward we have are three schools to get the gas going. First is methane, where the primary source is between rocks in the Sierras, so the intermountain west. These are not the heartlands, these re not wilderness lands, the lands that have been zoned for drilling. However it doesn't take an

attorney 30 minutes to draw up a protest to every step in a procedure for certification at the local level. It's not a FERC issue, it's local issue, to delay that process. So that's why it is slow in coming on. That is in the next six years, we see that growing for us over time.

Then we have the LNG coming in, that is six to ten years, and we predict about 14 Bcf a day, that's huge. However, again, we are stumbling on a block. We have had on a number of sites been challenged and rejected at the local level alone. I was very encouraged to hear the representatives from Maine this afternoon and say that they are hopeful that something will happen in Maine very soon. And seem very confident about that. We need a couple of things like to happen to let people know that LNG is a good thing for the community.

Beyond that, two pipelines from Alaska, as Doug has already mentioned, that's 10 to 15 years away. So zero to six years, six to 10 years, 10 to 15 years, that's how we see supplies coming in.

What we need is a diversity of supply of natural gas. We think industry is structured well to do that. We have been very impressed with the FERC has handled the infrastructure of the pipeline

to get that supply to market. Pipelines are good about responding. We don't see an issue there, the market is working. It's just a question of being patient, and allowing and encouraging local communities to get over there concern because we think we have been informed on this and how that might be done.

MR. WRIGHT: In connection with that, I would like to talk a little more about siting, I am sure Greg would like to jump in on this. How can we get, FERC acts on pipeline applications, improving our ability to approve quickly and then we have problems with certification.

Is there a remedy to that?

MR. RIZZO: Yes, there is, and what I would like to do is step back for just a minute and speak a little bit globally and speak amongst the subregions. I agree with Skip, I think natural gas supply is coming to the United States and that's going to work in the medium term. The question is getting it where it has to go.

In terms of gas supply, I heard some comments from an earlier panels about coordination and maybe some concept of a gas ISO. And I just really wanted to, just for clarity, to make sure

that all of the audience appreciate the gas supply planning that has really worked tried and true for the last 60 years.

Typically, the LDC, they are regulated by the state divisions, annual plan for reliability. At the end of that period, the pipelines then go to all the customers, both gas and electric, and say we would like to sign up for capacity. If that happens to work, we put together a project, we get the economics, we get the full environmental. At that point we take it to the FERC and they accept the application.

And, yes, you are absolutely correct, I think FERC has been very efficient in processing the applications, balancing the public need, the environmental impact. Typically, we get an order there are going to be conditions. Many of the conditions are going to be environmental conditions that FERC mitigates. And then we have mandate to go ahead and construct.

Really, from that perspective, I think FERC has really provided for the region and for the national, both reliability and integrity. You see the contracts, you see the whole project, and you get to say yes or no. And that has worked since the

inception of the natural gas cap. And has worked pretty much flawlessly I think until recently.

Recently, we have begun to see problems with siting. And once we get the public need necessities, then it has always been mandated, yes, you can go ahead and coordinate that with the state and local agencies and get the required permits, the CCN, the water quality, and then you can begin the construction process.

Recently, with a number of projects we have come to loggerheads, and that process has been frustrated. I also had prepared a little handout, and on one of the pages here, I kind of gave a time line that showed some of the impediments that have occurred on the Islander East project. That's a project that was filed three years ago, actually June three years ago, so it's exactly three years.

We went through an exhaustive process of getting certificated at the FERC, had a draft environmental impact statement, a final environmental impact statement. Went through the processing with the state, it happened to traverse two states. One state we successfully got the 401 water quality permit, we got the CZM permit, went through all of those processes.

On the other state, we were not able to do so, it was held up three successive years, a moratorium kind of banning upstate agencies from projects crossing Long Island Sound. There is a remedy for the CZM where we can appeal to the Secretary of Commerce Department, which we did. The Commerce Department recently came out with a very affirmative finding, once again finding the Islander East Project in the international interest. Yet, we still need water quality permit approval before we can do that in the State of Connecticut. That also is now held up.

We have to go through a process now with the state, possibly the state courts and possibly the federal court before we can get this project done, so as we go through this to get the infrastructure needed to make it happen, I do have a proposal. I think what it's going to require is enactment of federal legislation. I think we need to assure that the national, not the parochial interests, are going to determine that progress is in the national interest.

I think that there has to be a time limit placed on the state permitting for the federal delegated towers so that we can implement, in fact,

actually construct projects. And if either the permits are not done on a timely basis or if they are denied, there needs to be some kind of appeal to a federal agency, federal court, for a final determination to either allow you to construct the project or not. So the bottom line is basically, I think, we need the federal legislation to be enacted.

MR. WOOD: I noted with interest on the page in your handout, you also mentioned the gas and electric coordination that we heard about from the last panel a little bit. And I note -- is Ray McQuade still here?

Yes. Ray is the head of executive director of the committee on the standards board. Are you or somebody from Duke involved in that issue?

MR. RIZZO: Yes, Chairman, we are.

As a matter of fact, just last week, KeySpan made an announcement suggesting that there be an energy day. It's time that we coordinate the gas day and the electric day and consider making it an energy day, from midnight to midnight, so you don't have to worry so much about the day ahead and an electric generator possibly being started as you

are trying to figure out what prices you will get for the generation of electric and the price for gas, so to improve coordination, yes, we are involved in that.

MR. WOOD: So where do we sign?

Ray, if I could just ask you to give us a quick update on that effort because I know it has come up in our Commission a couple of times during the last year and with increasing urgency, so I was pleased to see it here in your materials.

Totally separate question. I notice the footprint of the Maritimes pipeline running into New Brunswick. How far away would you be from that St. John's LNG project if that is permitted to build?

MR. RIZZO: We are actually, there is really two potentials for LNG to be tied into Maritimes, both in Nova Scotia and in New Brunswick. I am not quite familiar with the Maritimes Canada side of that, so there is some confidentiality agreements there so I am not sure how much I can comment.

MR. WOOD: Once it gets to Maine, how full is that pipe?

MR. RIZZO: As I said, I think we have been averaging in the last few months about 360 a

day through the pipeline.

MR. WOOD: What percent of the pipeline?

MR. RIZZO: I think about as high as maybe 400, 450, so 75 percent, something like that.

MR. WOOD: So some additional looping and/or compression will be needed to handle one or both LNG?

MR. RIZZO: Yes.

The other thing that might happen if that were to occur, is actually both problems, both New Brunswick and Nova Scotia, there is available some kind of a soft storage if something like that were to occur. A project like that in conjunction with LNG might be very good safeguard.

MR. WOOD: We had site visits with our staff in New Brunswick at our agency, so it's my hope to do that in Nova Scotia as well. We will certainly have to work with our sister regulators to the north.

MS. BROWNELL: Can I just go back to ask Ray to also comment on the transition, I think, of the board to an energy board, because this issue hasn't come up a couple of times this year, it has come up once a week for the past six months.

And I know that we at FERC are really

counting on the board and the membership to kind of overcome some of those institutional biases of I am the gas guy and I am the electric guy kind, the way we did in the FERC when we restructured. Maybe you can speak to where you are in that transition right now.

MR. WRIGHT: Greg, I will start with you and others can join in. Using your Algonquin hat now, just from personal knowledge, I know you do a lot of contracting with electric generators and good contracts generally. What needs to be done? Can FERC do something?

MR. RIZZO: Your talking in terms of encouraging them to sign up for firm capacity.

MR. WRIGHT: If that's what it takes.

MR. RIZZO: A couple of points I would like to make about, though. First off, I think that there is probably about three things, and one the Chairman has hit on, I think, in terms of being able to improve the communication and coordination between gas and electric. I think stepping up the gas day goes a long way.

Second, I think, is the pricing signals. Today we heard a lot about that. What I think I heard today was a little maybe of a bias saying that

in an ISO region perhaps so reliability will value that, maybe the pricing signals should be favored to an entity or to a generator that has dual fuel. And I appreciate that argument, but what I would argue is that I think we have that and the market should value that reliability, but it shouldn't necessarily be bias towards dual fuel, just simply reliability.

In some cases there is no dual fuel project, the project has to be constructed, permitting could take two or three years and costs 20 to 30 percent of the original project cost. It may be cheaper and more efficient to have electric generators consider firming pipeline capacity and supply, maybe not for the whole power plant but for a percentage of it, 30,000 a day or some semblance like that.

My point is to come up with an incentive to value reliability that shouldn't necessarily favor oil over gas. Whatever that incentive is, it is, and the generators can take appropriate action to be more reliable. And I think that is a pricing signal that maybe needs to be improved upon.

The third one, and I think this is unique to the Commission and is kind of a change of mindset on my part, but I think it is time that maybe we

reconsider the FERC's pricing policy. Now there is the presumption for incremental pricing and I think that has worked in the past but I think some things have changed now.

Number one, I think we want to encourage the electric generators to sign up. If we have the presumption of incremental pricing, they are going to pay a price higher than the system price. If we want to encourage them to do that, perhaps we should change that so that if they sign up for capacity they can pay the system rate and not the incremental rate.

The second thing that has occurred, and I think it has been very, very successful, is the implementation of Rule 636 and, since then, 637. Now on the pipeline grid what you have is you have pretty much extreme options or segments for leisure capacity, there is new types of services, secondary firm and secondary firm within a path, outside of a path.

So what is happening is this capacity on the pipeline is becoming very, very fungible. And because of that, if we were to, say, develop an extension, an incremental extension, the incremental shipper pays the higher rate. The day he is not

using it, the system customers have access to that so they are actually getting benefit of these incremental facilities and not paying the cost, so it is somewhat of a free ride for them.

And, third, there is another set of intangible benefits you get every time you expand pipeline grid. If you are putting more infrastructure in the ground, you have more reliability. You are going to have something better, you are going to have probably better grassroots, better market reach, something else that the whole system benefits from.

And the third thing that is intangible that you probably get is if there is a market price signal saying yes, bill some more, there is probably a basis differential that says there is a reason for doing that. So the incremental customer funds that, he pays for that. But guess what, as soon as you build that facility the basis differential evaporates so the incremental shipper is funding it, but the whole system is benefitting from it.

So for those reasons, I think that we need to reconsider that presumption.

MR. WOOD: Any plans set up with your expedited time frame FERC's incremental pricing

policy, there is a lot of people that would involve in pricing that didn't find problems with the certificate market. I just want to offer those quids and pros with actually changing that policy back.

MR. RIZZO: I appreciate that, Chairman. My point is, though, that I think that as things have changed, as the market has matured and we have seen more segment and more fungible use of capacity, my point is that the rules have worked very well that FERC has established, and they have worked so well that it may be time to reconsider that pricing policy .

MR. HORVATH: I just want to add a comment to your remarks. One particular one I want to pick up on is the notion of what happened last winter in the northeast. Playing with those rules, the reaction I got from the previous panels was that something needs to be fixed up here. And I have to say on the record that what happened up here last winter is what we designed to happen.

When I say "we," I mean FERC and the industry, through 436 and 636, designed the system so that those who needed the gas the most, get it. And that's exactly what happened up here. Those who

needed it at a gas site got it, and somebody sold that gas to somebody who needed it more and that is what was supposed to happen. So playing with those rules, favoring one fuel over another, horrifies me. And I hope we don't go back and revisit the very good decisions made in the early '90s on 636.

MR. WRIGHT: Just reacting to go Greg's proposal on the incremental pricing. Is there any reaction on the electric side?

MR. WHITLEY: I think that it's an excellent idea when you think about it in general. I think that lowering the cost makes it a lot easier to get in.

MR. SCOTT: I would just make a second point, though, to add to my earlier point about evidence. Markets do behave the way that we saw markets behave, I think, at the beginning of the year. And you do need confidence to stick with it and to not go tinker with the rules.

Just from my own personal background, before I came over here, I was a UK system operator. My successor now has the challenging task of both and electricity and gas system operation. And don't worry, I am not necessarily advocating that over here, but the thing that we are experiencing in gas

and electricity interaction, was significant in the UK system in the late '90s. And the two key messages were you can't have too much information exchanged between the two industries.

And I think we saw that from the previous panel, the gas and electricity side starting to come together and exchange tasks and that's critical. I think we ought to look at what that information exchange develops before we start doing too much tinkering with the market.

Secondly, I think that the gas and electricity interaction experience I have had on this side is that you do need to establish a level of confidence in exactly what is out there in the system. If you have generators that on their face have alternative fuel capability, you need confidence in that capability and that reliability to change over. And I think if you have that level of confidence, then you can start to commit to other markets the way we designed them.

MR. WRIGHT: Hal, I am wondering in TransCanada is there any opinion on changing pricing policy and what it would to pipes?

MR. KVISLE: One perspective I would offer is that from Canada, where we have generally

run under more revolving fuel policy, and one of the things we see is that when you have that approach you do tend to encourage the construction of excess pipe capacity. And sometimes that is a very good thing, and we would look at it as local markets serving pipelines versus long-haul, cross-country pipelines.

In the long-haul case, I think you have to be very careful about building up excess server capacity, but in the regional markets certainly the pipeline, excess capacity would be very valuable to the market in difficult circumstances and should be encouraged. And I suspect, although I am not knowledgeable in this area, that the same would be true in electric transmission. That at the more local crisis level, experiencing things that we had last winter in New England, it would be useful to have more capacity. So I think the whole structure can drive to that.

But I think we have to think of it carefully and distinguish between the long-haul situation versus the markets.

MR. WRIGHT: It is comparable to establishing a reserve margin for pipeline capacity in an areas similar to generation.

MR. KVISLE: The fan just kicked in big time and I can't hear you.

MR. WRIGHT: I was just saying it is comparable almost to establishing a reserve margin for pipeline capacity in an area similar to generation capacity.

MR. KVISLE: I think the value of spare capacity in certain kinds of infrastructure has been well written up. Particularly, Jeff Curry from Goldman Sachs gave some excellent testimony about a year to the House Committee on Energy on the value of infrastructure and spare capacity in that. And, certainly, I think that's an important thing we need to focus on these days.

MR. TIGER: I have a question. It doesn't seem as though financing has been viewed as much a restriction from this panel in terms of providing for infrastructure. It seems more of a siting and a planning perspective.

Do you think that that is true generally? Are there any incentives, speaking from the U.K. perspective, it seems that there has been a lot more build in the U.K.'s electric transmission system in the last few years than has occurred in the U.S. does that speak to any financing limitations or lack

of clear financial incentives, given our sort of bifurcation of ownership and operation here in the United States?

MR. SCOTT: I don't think the difference between the U.K. and the U.S. is investment financing issues. If you look at the numbers, it assumes a sort of sense of exchange rate, and who knows what that is these days, but assuming a sense of exchange rates, the level of investment in the U.K. transmission over the past several years and looking over the next several years going forward, it is overall $10 million per kilowatt peak demand on the system.

Now, the U.S. equivalent average across the whole U.S. system in a best case scenario in the transmission investment in that comes down to a figure of $3 million per kilowatt at peak demand. So it is 3 to 1. I think the two big differences, and the systems are not massively similar in terms of the level of development to the two systems. And there are two big differences, I think.

And one is a very clear focus in the UK on transmission as a facilitator of the markets, recognizing that it is regulated platform from which capacity generates retail supplies market and can

develop and fulfill their functions. And the very singular focus on recognizing that there are both reliability and economic benefits of investing in transmission to facilitate those markets.

And the two specific differences are that in the UK, regulators anticipate and do two things. One, they explicitly recognize the requirements for investment to replace, in a sense.

And, secondly, in the U.K., transmission is explicitly better and opportunities to invest in transmission in order to relieve congestion and benefit the market. So I think those are the two main differences. I think that the things that we talked about during the course of the day in association with the benefits of the regional plan addressing those economic issues, will lead us in that direction.

If you look at the regional transmission expansion plan, they are getting close to 10 million kilowatts a day. So it can be done.

MR. FILION: Maybe for transmission. I think that financing is not really the issue but it has to be established very clearly because investment in transmission and is very high capital costs and very low corporation cost. We are two

cases.

The first one is that if the transmission asset is being recognized and being included in the transmission pocket, I think that there is no problem there. But we have to go through such a process to be that this approval will be obtained.

And the merchant transmission line, personally I don't think that that can be possible without a long-term contract, and then the risk is more related to both parties in this contract. If the credibility and solidity of both partners is valid. I think if we have this condition, I think that it is very good.

MR. RIZZO: Sebastian, I just want to make a comment here. I just want to make it clear that for the gas pipeline industry, financing is huge. And in terms of gas pipeline and I think this is all of the gas pipelines I can think of, to really do an expansion they are still undermined long-term firm contracts. You need to have that to have the financing in place to be able justify that expenditure of capital.

When I was going through my thoughts on the incremental versus the economic pricing, I was really just doing that as an incentive to get

different shippers to sign up for firm capacity so that we can fund projects to build the infrastructure. But I think that's still a bedrock principle in the gas pipeline industry. We build to firm contracts but we have to have those firm contracts to be able to get the financing, get the internal approval to receive financing, so, yes, that's a huge issue.

MR. BOGUSLAWSKI: The question was about financing issues, and I think the panel has largely covered it. Every organization has to go through capital allocations of some sort, whether it is a merchant project, generation transmission, what have you, or a regulated project. And there is absolutely no doubt that on the merchant side, you need a revenue stream that is pretty well secured with a decent return. On the regulated side, there is also no doubt that the incentives that FERC is indicating are out there and will be out there do, in fact, shift decision-making inside a company on regulated projects.

So, absolutely, incentives work. I don't think financing on the regulated side is an issue. I do think capital allocation is an issue.

MR. BOLBROCK: It doesn't appear in New

York that transmission infrastructure has had financing problems per se. But I say that on a backdrop that there really hasn't been much of a demonstrated need that additional transmission is either needed for reliability reasons or as economic benefits. And I think there is somewhat of a misperception on some people's part that more transmission is needed. Oftentimes they say more transmission is needed for reliability. Well, there is -- I can say with some certainty that for reliability purposes there has been no demonstrated ability. And for economic benefit, there hasn't been much of need.

Circling back to something that was said this morning on what is required for generation. LIPA has entered in the last couple of years, has entered into some power purchase agreements for generation that would cause to be built on the island PPAs, as short as five years. So this is a generation that was put in service just a couple of years ago, three years ago. So it can -- there are opportunities, I think, for shorter term PPAs than some of the panelists this morning had discussed.

In addition to that, in support of enhancing competition on the Island for any of the

generation contracts we enter into, any of the new generation we are causing to be built, we require a certain portion of that to be merchant. And one can argue that somehow you are paying for some portion of that. That may be true. But out of the gate, we don't want the units that we cause to be built, while LIPA signs the PPA for the majority of the revenue, there is at least a portion of it that retained by the developer. They can sell it or give it to the IS0 or whoever it wants. But that's one mechanism that we use to try to move forward in this state's goal for a competitive market, particularly on the Island where there are not competitive markets.

MR. WOOD: I just want to say that I do think the market monitor has a different view of economically justified transmission in the New York ISO.

MR. FILION: The financing is directly related to risk, and on that I would like to add one point also.

There is a problem certainly to finance future projects interstate future projects of inter-regional because there are regulatory restrictions which has not been solved, and that

certainly can be a constraint for the future if that has not been solved.

MR. SCOTT: If I can just respond to that. I think in terms of the definition of how you identify whether there is a potential investment in transmission benefit, the definition I would put forward to think about in making that judgment, is if the investment in transmission would give rise to lower energy prices as a result of access to cheaper generation than the generation that is currently available, the answer to that is, yes, the investment in transmission will benefit the region.

MR. BOLBROCK: The market monitor may have a different view, but some that view I think is formed by a definition and a calculation of congestion books. And there is some debate as to whether the numbers are cited represent the real costs of constrained areas. And I would argue that at least historically the numbers that have been published are way, way overstated of the true cost. And if you look at it from a practical sense and in the neighborhood of what I would consider a more realistic calculation of what those true costs are, it would not justify additional transmission for economic reasons.

MR. HORVATH: You mentioned LNG, and let me just comment.

LNG terminals are billions and billions of dollars each. The risk there is that the LNG world operates on long-term contracts; the U.S. national gas market operates on short-term contracts. Somebody needs to step into that reach and accept the risk of selling long-term contracts so that a series of short-term contracts will be there in the U.S.

Everybody knows the U.S. market very well and trusts it, and players are coming forward, but that's the only comment I would point out on the finance side. Otherwise, the capital is there, it is just a matter of somebody balancing out those risks.

MR. WOOD: We had invited Ray McQuade to come and speak on some of the gas and electric issues that have been raised before this panel as well as the one before us.

Ray?

MS. McQUADE: I will start with the energy day. We received a request recently from Duke Energy and KeySpan, and I believe the request was an outgrowth of an effort that we had underway for

several months, the Gas and Electric Coordination Task Force.

The Gas and Electric Coordination Task Force effort is a four-quadrant effort. It includes wholesale gas, wholesale electricity, retail gas and retail electricity. That group has come up with a number of issues, one of which is energy day or some level of coordination between gas markets and electricity markets. That request has come in, has not yet been triaged. My expectation is that both Duke and KeySpan will emphasize the importance of the request and that it needs immediate attention so that we can put it in the energy plan. I have a number of board members in the audience who all heard your remarks. If they didn't, I will make sure I have the transcripts from this session so that I can remind them what was said so we do know the importance of the request.

Now, the Gas and Electric Coordination Tasks Force should be coming out with a final report sometime within this time frame. It will have a list of items that were discussed during these meetings. This group was not a standards development group. It is more of a scoping activity. Not all of the items are items that

necessarily lend themselves to standards development. But, clearly, some of them do. Energy day would be one of those that we consider moving on.

MR. WOOD: So would you characterize energy day as one of the ways to solve the gas and electric problems, but there are others?

MS. McQUADE: There are many others.

MR. WOOD: Can you stay there and let me ask. You weighed in on behalf of energy day. Is that in response to the full panoply of things that have come out of the discussion, or not?

MR. RIZZO: Chairman, I have to say that is not totally my expertise, but that's one that I had paid particular attention to and for pushed for.

MR. WOOD: So we will see that in the report in late summer?

MS. McQUADE: Yes, and there is drafts all over the place.

And the note that Commission Brownell raised about the need for our board to act more as an energy board and let the gas board members act on the gas issues and the electric board members act on the electric issues.

We have seen a trend in our organization

over the last six months of requests coming in that are not wholesale gas and they are not wholesale electric. They are a combination of the two. It started with gas quality. We got gas quality requests that came in from a power plant. Now we have the Gas and Electric Coordination Task Force, that request came in from power plants but clearly affected the gas industry.

So with this trend that we are seeing more and more coordination, our chairman renamed our board meeting for next week to a strategic session, for the boards member to come together and determine strategically how to move the organization more to dealing with these type of coordination issues. We believe that we are just seeing the tip of the iceberg here and we will see more and more of this, just as will everybody else.

MR. WOOD: As we saw from the initial presentation Jeff did, how much of a bigger role gas is playing in this part of the country and throughout the whole sunbelt, and certainly the west as well.

Please reiterate to your board how strongly this agency has depended on their work over the last ten years to get better answers than the

regulators could ever get to ourselves. And how important an integrated approach that we all did in your name two years needs to lead to a work product and thought process because we are counting on it.

MS. McQUADE: Yes, sir.

MR. WOOD: Thank you, Ray.

Anything else?

MR. WHITLEY: Mr. Chairman, on this subject I just want to mention what we are envisioning and we are working with the gas companies to do this, but we are envisioning a weekly coordination call where the ISO does a look ahead on how the system will pass scenario and see, like on Thursday, looking into the next week, and having various pipelines do the same thing and share information. After we go through, the information sharing can be done so that each entity that has operational responsibility can see the potential problems going into the week. And then a similar process on a daily basis as things change.

So that is an operational coordination idea that we would like to get in place, really, as soon as possible. And we have reached out to the Northeast Gas Association to establish that.

MR. KELLIHER: I just want to ask an LNG

question to the panel, and also to Richard Grant if he is still here. I think he left.

I just want to ask the panel, what do they think the effect would be on LNG development if states did siting of the terminals rather than the federal government?

MR. HORVATH: Well, let me start. It would be a disaster. And I mean that in the nicest way.

FERC has the authority and the gas industry is united, I believe, in state that FERC has that authority and should use it. It is interstate commerce and that is pretty clear. If it helps the Commission to have legislation to make that crystal clear because somehow it is not as clear as it needs to be, then the industry is behind legislation to make that happen.

But I think we have seen the results when parochial views get in the way to comments on interstate issues. And the reason we have a federal-state tension, and that's a good tension to have -- for 225 years and it continues to exist. But some issues, interstate commerce is one of them, federal weight needs to come down a little heavier and that needs to continue for LNG to succeed.

Otherwise, we will not have the supply of natural gas that we would like.

MR. KVISLE: As a western Canadian that is used to having federal policies impact on us, I would have sympathy for the pro-state side, but I do agree very strongly with Skip in this particular case, it seems to be necessary that a federal perspective come to bear on it.

The LNG conundrum in the northeast is particularly interesting because no part of North America is in more need of LNG than the northeast. At the margin, all other markets in North America will be served by indigenous gas before the northeast would. So you think about the options for getting LNG to the northeast. You could bring it in through the U.S. Gulf coast and move it by pipeline, and you could bring in through Canadian parts and move it down to the south by pipeline. But in both cases you are going to have higher costs of delivered LNG.

And I think there is also a reliability issue. By backfeeding the whole grid of LNG into the market, you substantially enhance the reliability and flexibility of the regional grid. So there is a lot to be said for it. And I think

that New England has demonstrated its desire to generate electricity from natural gas rather than from nuclear or coal-fired power, so the demand is going to there and it's going to be very interesting to see what policy leaders can be brought to bear to try to prevent problems that could be much worse than we experienced last winter.

MR. RIZZO: Commissioner, just one anecdote. I don't see Rick still in the audience, but the Everett facility is talking to the Algonquin facility, the Commission just voted out an order requiring additional capacity from Algonquin, and actually in doing it, Algonquin is reversing the flow at one of its compressor stations on Long Island and will actually now be flowing gas on the system north to south. So I think it is going a long way toward increasing the reliability of the region.

That and the advent of Algonquin has directly now on the Maritimes system which is a reticulated system versus a linear system. I think that has a lot of good benefits for the region. And I forgot, I think it was mentioned the expansion costs for Algonquin is going to be quite expensive, in a linear system, I think it would be. As we are

now seeing various inputs into the Algonquin system and it is becoming more of a reticulated, I am not so sure that Algonquin is not going to be able to have some very competitive system expansions, taking into account that we are getting gas flowing north to south.

So I think that does work and it bolsters centers the whole subregion. The question now is building additional pipeline to get the gas to the market where it is needed.

MR. WOOD: Thank you.

MR. MILES: If there are no further questions or comments from the panel, we can open it up to anybody from the floor.

Is there anybody who wants to make an observation?

Please state your name and who you represent.

MR. WARREN: Philip Warren, President of the Conservation Law Foundation.

I am concerned about the discussion of the LNG terminal siting. Frankly, it has received very little attention today. There is real public concern in various local communities throughout New England, and I think there is a healthy medium

ground between saying the federal government should step in and impose a decision upon local communities and leaving the situation in its current fairly morphos state.

What is happening right now is there is a great deal of local anxiety. There are a number of different sites being proposed and I think FERC needs to give a clear signal as to what the need is. Is there need for one terminal, two terminals? What is the overall magnitude of need? At the same time respecting local concerns about public safety and the environment.

I think there can be a balance between what was referred to today as a bottom up approach in terms of consideration of the actual siting and the federal government providing some clear signals as to what is the objective needed. There are a number of environmental organizations, including our own, that recognize LNG as a very important transitional fuel. And we want to be in a position where we can weigh in knowledgably in terms of what the objective need is.

But I don't think those signals are being communicated very clearly to the public and to the states, so I would be interested in hearing what

might be feasible in terms of a clear regional assessment of the need for additional LNG terminal siting.

MR. WOOD: I just want to say that Mr. Warren has written to us in the past couple of weeks about the proposal to have more on the ground collaboration here in the region about siting. I don't know the best way to put it, but if I knew you were going to here, I would have brought a written answer for you.

Nonetheless, I think the point is valid, that characterization of the need is useful. I would say based on what we heard today and what the national report that was presented to the country by the Energy Secretary back in the fall of last year indicated, that in addition to existing LNG terminals, that one and possibly a second terminal that side of the Hudson River including the Canadian border, would be needed to meet long term gas supply needs of the region and keep prices at a reasonable rate.

I don't know since that time, I would have to get back with the data that John brought from Canada and that was discussed with the opening panel, the flattening and perhaps falling

off of supplies transported long distances across from Alberta to New England are going to impact that number and actually drive the need for LNG higher. I think there was an assumption built into both our study and the NPC study, that a fall off of the Alberta gas was, in fact, happening today. So I don't know if there has been a revision to that number from one to two extra terminals in the northeast or not, but I think that from what I heard today and looking at the numbers Jeff gave us, that number is still good.

I just want to say I think it's important to plan long term but I am not sure how effective we can be with a 16-year plan. I just want to say on behalf of our agency, to you, and any other citizen groups, we are very interested in telling the sober and thoughtful story about the broader needs for natural gas in this region. The benefits in this region that are not enjoyed by others in regards to clean air and other environmental benefits. But also a reality check that it ain't free and there is not a not whole left coming from places it used to come from.

Other than that, I don't have a specific proposal. I know a have a room of problem solvers

here; otherwise, you wouldn't have been able to navigate the escalators and find your way in, but, in particular, I just want to say what we have heard from this panel, from yourself, and from the prior panels that educational efforts are extremely important.

In fact, you heard from the first panel, don't just talk about the profits, talk about the point. And the point is to maintain a quality of life at a reasonable rate and not go bankrupt doing it. And I think the more we can tell that story and hear back from the people their concerns, as we have, on the safety issues of LNG, aesthetic issues regarding LNG, and we have heard how do you really free something at 260 degrees below zero?

So there are a lot issues about LNG that we assume, that the FERC people understand but that folks don't understand. So is there are forums, if there are discussion groups, if there are citizen open houses, what have you, that we are not doing enough of, I hope that you and others who are interested in, quite honestly, a sober assessment of this important resource, will invite the FERC and our staff and we would like to do that.

MR. HORVATH: On that point.

No one is suggesting that FERC should force any solution on a local community. The idea is that you have at the end of the day someone who is responsible for saying this is something in the national interest, that has weight over a particular parochial interest.

The notion that you would work with the community is what is being tried now. Quite frankly, I think the industry at large, and I blame all of us in this business, failed at communicating very effectively the security of LNG, why it is safe and why it is a good fuel for the future. We are going to do a better job with that.

The Center of LNG was formed very recently. We now have a quite a few members have joined and the first thing we are going to do is to get the word out. And we hope to reach out to people in the local communities to explain to people the advantages, the safety and security of LNG, and do a better job in the future. I think at the end of the day, somebody has to say that this is in the interest of the country. That doesn't mean that you can't work with people in a very clever fashion. FERC has shown a willingness to do so and we are optimistic about the future.

MR. WRIGHT: I just want to remind you that Under Section 7 of the Natural Gas Act you get eminent domain authority for pipelines.

LNG is under Section 7 and there is no eminent domain authority, and we are not shoving anything, we are not condemning any property. It's up to site owners, the land owners, and the community to decide if they want it.

MR. MILES: Any other questions?

MS. AGRISS: My name is Terry Agriss, I am with Con Ed, New York.

I would just like to mention that throughout the day today we have heard an awful lot about how projects are going to be able to be funded and be built on the basis of PPAs. And I am concerned about that from the perspective that what we haven't heard today is what that really is saying that all these projects are going to be built on the credit of the LSEs that are entering into contracts with the PPAs. Unfortunately, that credit is not unlimited.

In fact, we are every day scrutinized by our rating service and our investors looking at long-term contracts that we do have. In fact, FERC has recently entered or begun a new rule that almost

in some cases forces us to consolidate finances of some of the projects with whom we have contracts, consolidate those finances into our own financials. That is an unbelievable new rule that has gone into place that are struggling with right now and dealing with.

So I think what we really need to focus on is making sure that we get the markets right. I don't think we really went into the competitive markets with the idea that we would have bilateral contracts on all these facilities. In fact, if you look at what has been happening in the northeast, and mostly in New York, we really have been making progress. This summer, for the first time in a number of years, we actually a little bit of a margin in the supply that. We will be doing even better in the next two years as more facilities come on.

That's not saying that everything is perfect and that we do need to already be looking out to 2008 and 2009 and what projects will be coming in those years, but I think that the focus really needs to be on getting the markets right and letting the markets work. That we really cannot build all of these projects based on PPAs,

particularly, those from utilities.

And in terms of some of the gas pipeline projects that we have been talking about this afternoon, in fact, if we look at the new Iroquois pipeline extension that goes into Hunts Point that went into service in February of this year, I am very gratified to see that there are two generators that have taken small positions on that pipeline. I think that's a very good precedent and one you might look to as this really is going to be the wave of the future, that more generators will make the determination that it is in their interest to make sure that they do have pipeline capacity. But some of that is going to have to be commitments that they make as well.

Thank you.

MR. WOOD: That's certainly some real helpful comments. I just have a general question, let me back up here.

As regards the New York market, given the market rules are right, anything come to the top of the list from Con Ed's point of view?

MS. AGRISS: I think one of the things that we actually need to let happen is to let the rules that we have stay in place for a reasonable

period of time. Investors, as we have heard from a number of panelists today, are going to be concerned if you keep changing the rules. So I think that at this point New York has a reasonably well functioning market and that we shouldn't be making any major changes. And, in fact, I don't think anybody is proposing to.

MR. WOOD: Have you heard any grumblings, other than the planning process we have talked about?

MS. AGRISS: No, not at all.

In fact, the suggestion is exactly the opposite, which is, we are in reasonably good shape, let's let it alone for a while. The basis of the market is, in fact, in really pretty good shape and we should let that happen. Let the markets begin to develop the confidence that is necessary so that investors will begin to come in and make the investments necessary, even without PPAs owning 100 percent of those pipelines.

MR. WOOD: So this goes to back to what was said this morning about how our market is absolutely the PPA for everything. We want to get back down that curve and we might, in fact, be sliding back down that curve back to a more moderate

mix.

DR. KRAPELS: I agree with Terry. The capacity and demand is a big part of that. Let that work and let's see what happens over the next five years.

MR. WOOD: Thanks for that thought.

Anybody else?

MR. CORNELI: Steve Corneli, NRG. This is a comment more than a question, but maybe some people would like to react to it.

We talked today a lot about gas or, more broadly, fuel supply infrastructure, transmission infrastructure and generation infrastructure. And we haven't talked as much about what may be the most important infrastructure of all, and that goes back to Ed Krapels' last slide about the rules that are necessary to make an efficient market work. And it seems to me, following on the last comment, that probably the most important infrastructure of all of these infrastructures is the institutional market and rule infrastructure that will make all the rest of this stuff work, where we got it.

Like the person from Con Ed said, let's let it work and see what it does. Where we don't have it, let's get it. Because if there is not a

price system and a way to integrate prices into the regulated infrastructure, all the rest of this stuff is not going to have the motivation of investors, of entrepreneurs, of asset owners and asset developers to say I want to do this because I think I can build a better mousetrap and I can make some money while I am lowering the cost and increasing the efficiency of the system.

So my comment would be the most important infrastructure of all of these infrastructures is getting the market price in the system right in the entire region. And I would agree with Dr. Krapels, that the anchor as it has been implemented in New York, the location characteristics and the prices is essentially the right way to go. And that's what we really need to go to make the rest of this infrastructure and decision-making and planning work.

MR. WOOD: Since the two markets are so close, I hope you will let us know how those two harmonize as much is appropriate.

I know Tom Welsch from the Maine Commission is not a fan, so I will say for the record that there are a few dissenting voices that we ought to listen to before we get too far down the

road. I was convinced by the New York pilot, we got some good data from that experience.

Anybody else?

I give you back the rest of your day. Before we go, I thank this last panel.

As a closing thought I would like to say that I think, Jeff, I know from the work we do that we do have the confidence to see this through. We are more than halfway across the river but not quite to the other bank.

The LMP markets, RTOs, planning process have become a routine part of the preferred market design here in the country. Getting to the all important question, which I was thrilled to see Steve bring up, of how to pay for it, joined by the gentleman from New England on the cost allocation decision.

You know, these are tough decisions to be made. You've got a five-year plan, maybe even longer, how are you going to pay for the investments, and we are talking billions of dollars being invested. That's the kind of thing we are about. We appreciate the leadership from the region, both from the state commissioner levels and from the market participants in each of these

regions up here in the northeast, to really get these answers down. The real customer value is what we are supposed to be about.

And I am really excited in New England, in particular, that that planning process has a couple of years under the belt, the cost allocation process has kind of been put on the shelf, and projects are getting decided. That's what we are supposed to be about on the supply side, and I just tip my hat to you guys for getting it all done.

It has been an eventful year and a half in New England with a new market ability and big decisions being made, but I do think you will reap the benefits of that and I want to see that process get into New York ISO as soon as possible. I think it's a critical thing for us to do. We are all about that, and we are all about getting all the way to the other side of bank.

Have a good afternoon, everybody.

(Time noted: 4:50 p.m.)