UNITED STATES OF AMERICA

FEDERAL ENERGY REGULATORY COMMISSION

PROMOTING REGIONAL TRANSMISSION : Docket No. AD05-3-000

FACILITATE FUEL DIVERSITY :

INCLUDING EXPANDED USES OF :

COAL-FIRED RESOURCES :

Salon D-F
Charleston Marriott Town Center
200 Lee Street East
Charleston, West Virginia
Friday, May 13, 2005

The above-entitled matter came on for technical conference, pursuant to notice, at 8:40 a.m.

PRESIDING: Chairman Pat Wood, III
CHAIRMAN WOOD: Good morning, everybody. I'm Pat Wood, Chairman of the Federal Energy Regulatory Commission, and my colleague, Nora Brownell, and I would like to welcome all of y'all to our conference on coal, officially called the Conference on Promoting Regional Transmission Planning and Expansion to Facilitate Fuel Diversity, Including Expanded Uses of Coal-Fired Resources.

That is actually our largest official conference title of any conference we have ever had.

(Laughter.)

CHAIRMAN WOOD: That means that we've got a lot to cover today, and I appreciate y'all coming to Charleston and coming out here to this nice hotel. I appreciate the help from the folks at Marriott here, to make this a good, productive day for us.

Over the past year, the Commission has had a series of conferences to explore what regulatory actions we can take to increase the production of electric energy, from intermittent energy resources such as wind and potential solutions to impediments in investment in electric transmission infrastructure.

The goal of today's technical conference is to explore possible policy changes that would better
accommodate, in particular, the increased participation of coal-fired energy in the wholesale markets of our country.

We have a full day of informative discussions in store for you, and, particularly, for us. David, our transcriber, is here to make sure we have an official record upon which we can base future policies at our Commission, so if he needs to interrupt you to get a word corrected or a name spelling, please accommodate him on that.

So, we look forward to looking at clean coal technology, all the way to regional planning in the afternoon, but to start it off, we're honored to have a special guest here, as we have had on so many of our infrastructure conferences across the country for the past four years, the Chief Executive and Governor of the State of West Virginia.

Governor Manchin is the 34th Governor of the State, and he was born and raised in the coal town of Farmington, West Virginia, and I should add, Governor, that two of our top agency staffers, Mr. Larcamp -- where are you, Dan? Dan, who you met coming through the door, Dan is from St. Albans right across the River, and so is the Chief of our Infrastructure Division, Mark Robinson.

And in the other coal country, I've got my Chief of Staff, Susan Court, who is from Kentucky, so it's a real duke out between where we would do the coal conference in
Kentucky, or do we do it here in Charleston, and Mr. Larcamp is the largest of those three people, so he wins.

(Laughter.)

CHAIRMAN WOOD: As he usually does around the Commission, so we're thrilled to be in your home state.

The Governor attended West Virginia University on a scholarship, and served on -- on a football scholarship, I should say -- I think they just grow them all big down here in West Virginia.

(Laughter.)

CHAIRMAN WOOD: He was a member of the House of Delegates in the State Senate and was elected earlier this year, after serving as Secretary of State here in the State of West Virginia. He is as popular in West Virginia as the Commission is unpopular in California, and that is a wonderful, wonderful honor to have, Governor, and we're pleased and honored to have you here, and welcome you to the podium.

(Applause.)

GOVERNOR MANCHIN: Thank you. Thank you so much, thank you.

First of all, Pat, we want to thank you for choosing West Virginia. We think that you should be making your decisions based on the percentage of your economy that really deals around coal. Since there's not really many
portions of our state that are not affected by the coal industry, and Billy Jack will tell you that, that we think it's befitting that you do come to West Virginia, even though he might be larger than the other ones around.

(Laughter.)

GOVERNOR MANCHIN: And also, we would like for you to know that we have a nice mall across the street.

CHAIRMAN WOOD: We saw it last night.

GOVERNOR MANCHIN: And we have another entertainment center up on the corridor, going down towards Huntington, that you might enjoy, if you like to watch dogs and you're into pets.

(Laughter.)

GOVERNOR MANCHIN: And whatever you do, please spend as much as you can while you're here; we appreciate it.

(Laughter.)

GOVERNOR MANCHIN: It's certainly befitting that we talk about coal-fired energy. I had a chance to go to the National Governors Association meeting, my first, that I attended in February.

And with that, I had the chance to talk on the Energy Committee, and, of course, the Governor of Alaska gave me a chance to make a presentation. And I'm trying to urge all of them to look at coal and at the new technologies
that we can use with coal to make coal a viable energy for
the future.

Like most states, in West Virginia, we're looking
to put together a long-term plan for our energy, and I'm
hoping that this country does the same also. Coal plays a
vital part. We still have an awful lot of reserves in West
Virginia, and we believe that we can play a vital part in
supplying a lot of the Northeast with the energy that it
really needs, and do it in a safe environment, and also one
that's going to be long-lasting for the State of West
Virginia, economically.

The coal industry -- and I've told them and we've
watched the dips and valleys and the high points on the
mountain, but basically we go through this cyclical era with
coal, because of the nature of the market.

What is happening -- and I told -- and when I
said to the NGA, I said, we better be looking at how do we
stabilize this industry, because we are not able to produce
the workers that will be able to produce the coal. We don't
have people going into this profession because their parents
have been in it and seen the highs and the lows, and they
said, hey, I don't want you to go into that profession.

Now we have a demand for the product, and we
can't get it out of the ground because we don't have the
people. We have a hard time meeting that, and, with that, I
think the Federal Government needs to get its basically
direction on what we're going to do with the coal industry,
how we're going to work with it and how we're going to make
it a premier energy that we have, as far as resources for
the future.

Clean coal technology -- I see my good friend
Dana White over here from AEP, and we're working with coal
gasification. Of course, they have on the a design table
right now, maybe a plan or two that they're talking about,
that is going to catapult, I think, into the next phase.

I had a chance to go to the Gridiron Dinner. I
don't know if you've ever been to the Gridiron Dinner, but
it's really something. The President was sitting there. I
had met him earlier, so I went to talk to him. I said, Mr.
President, you need to build that future plant in West
Virginia. It's truly the only place it should be. I said,
we can do it all.

He said, well, you go over and tell Carl Rove
that that's where it needs to be. I said, hey, Carl, the
President told me to come tell you that --

(Laughter.)

GOVERNOR MANCHIN: You know, I took him serious.
So I'm on and going on and going on and going on, and
everything, and then Jim Knaughten I have become fairly good
friends, and we've worked together on some issues, but we're
moving ahead.

I want you to know, I want all of you from around your respective areas to know that West Virginia is proud of its heritage. We're proud of who we are; we're proud of what part we've played in the development of this country. Coal has been in then forefront, every time. I always tell people, I say, we come from a little state that's probably one of the most patriotic states in the nation. We have more veterans, on a per capita basis, than most other states. We fought in the World Wars and conflicts, shed more blood, lost more lives for the cause of freedom, than most other states have had to endure.

We also mined the coal to make the steel to build the buildings, the guns and ships, even today. So we've been to the forefront every time, but we're proud of our coal heritage.

There's not a person of the 1,800,000 of us that hasn't benefitted by the coal industry in West Virginia, either through our education and extracurricular activity, whatever it may be, or our jobs in life, the coal industry has been good to us.

We need to find a way to kind of blend it more and harmonize it more with our economy, to where it's more acceptable. We look to you all for the answers that we need to make this happen.
We basically look for the new technology that's needed to make it more acceptable. We need to get New York and some of the Northeastern states to quit suing us and taking us to task, every time they get a little bit of puff of smoke coming their way. But they sure do like that switch. They like to flip that switch on and off all the time.

They need to find out how do we all start working and learning in harmony. And that's what we're trying to do.

I'm just going -- I'm a big promoter of this. I believe in it; I believe in the technology that we can do, the fuels that we can do, and also not only just to light our homes or heat our homes, but also the fuel that we can, with the technology, move into the next realm to where we can power our automobiles, our transportation systems, everything, and I think we need to start looking that far down.

So, I just wanted to say thank you for choosing West Virginia. I think you're going to find a very, very friendly environment that welcomes you here, that really appreciates you making the effort and commitment to come to West Virginia.

Hopefully, we can show you a little bit of our southern hospitality. We can go either way. We're Mason-
Dixon. You see, if you like that northern, Yankee draw, we can give you that, and we can come back to that southern draw, so we're pretty flexible here.

But I do thank you all for coming, and I hope you enjoy your stay, and we appreciate your choosing West Virginia and Charleston. Thank you.

(Applause.)

CHAIRMAN WOOD: While the Governor is leaving, I wanted to mention that we had a chance to visit with the head of the West Virginia Institute of Technology last night, Dr. Bayless. Is Dr. Bayless in here yet?

(No response.)

CHAIRMAN WOOD: He might be here. He's on a panel later today. He was talking about the need for training. This is one I see when I go to my alma mater, Texas A&M, how many of the young students are not participating in the programs that we're going to need for energy development for the coming generation.

And I was really pleased that Dr. Bayless and the Governor and the Legislature here are considering, in the way of more educational opportunities for young students to pursue energy development careers. That is where you've got to start. If you don't have people, as we saw in the Wall Street Journal this week -- there's a big article about the future shortage of coal workers.
In a state like this and in Kentucky and Wyoming and some of the other states where this happens, that's a critical need that we're all going to have. So, talking about the coal in the ground is great, but it's got to get out and it's got to get into a machine and that machine's got to use the new technologies and be clean to do it, which will be our first panel.

But before we do that, I want to introduce some special guests, our colleagues at the state level. We can't make this happen as a country, without the close cooperation between the Federal Government and all of its many Cabinets and Departments and our colleagues at the state level.

We're pleased to have here, the Chairman of the Commission here in West Virginia, Chairman Ed Staats. Ed's right here next to Nora. I'm glad you're here, Ed. Thank you.

MR. STAATS: Thank you.

CHAIRMAN WOOD: And our two colleagues from north of the border, Mark David Goss, Chairman of the Kentucky Public Service Commission, and Greg Ross from the Kentucky PUC.

I will introduce our staff later in the day, but as we all know, it's easy to stand up here and be the face guy, but we can't make stuff work without a good, smart
staff, and this is really kind of what we do around here, is
make sure that we come together and try to get the facts and
understand the policies and the implications for customers,
implications for business, and try to make policy as a
result.

This conference, as I mentioned prior to the
Governor's remarks, is part of our strategic plan to
increase transmission infrastructure and maintain a reliable
transmission system that will permit the lowest cost
supplies of electricity to reach customers all over the
country.

Certain regions of the country are highly
dependent upon natural gas as the fuel source for electric
generation, and this gas is getting pretty expensive. The
ability to build additional coal generation and to transfer
more coal-generated electricity, can mitigate the reliance
that our country has had on natural gas as a fuel for power.

This effort will complement the Administration's
efforts, those pursued by Congress, and the National
Governors Association, to expand the utilization of domestic
energy resources.

And the benefits from expanding transmission for
this region include the following: Improved access for
utilities to lower-cost power; local economic benefits to
the developing regions such as this one, through job
creation and property tax income; improved reliability for
the overall grid; and helping states to increase the use of
alternative resources like wind and solar. The transmission
grid is a facilitator for all of these.

As far as the expected outcome of the conference,
we hope to learn about whether there are any revisions to
regional planning processes that we can make, that will help
more transmission get built. As you know, transmission is
sited by the states, and so, again, that's a strong reason
for collaboration here, that we've got to make this work as
a team.

Looking to come away with some ideas to which the
Commission can assist in promoting the regional planning
process to integrate electric resources that are hard to
locate closest to customers. These coal plants, the future
coil plants in our country, and the existing coal plants,
tend to be located relatively remotely from where they're
being used, at least in part, and so to enable that power to
get from where it's generated to where it's consumed, it's
important to have a strong and robust delivery system.

This conference, I think, will be a success, if
we can identify a few transmission bottlenecks in the
eastern and western -- we are also looking at western issues
here today, as well -- interconnections, which are the two
large electric grids in our continent, and agree to
concentrate our resources on building the needed
transmission to eliminate those bottlenecks.

We can get upgrades done. Look at the Path 15
upgrade, which was pursued in California. We also support
the four-state collaboration that we heard about at our
workshop in Washington about three weeks ago, that is being
pursued by four Governors in the West -- Wyoming, Utah,
Nevada, and California Governors -- to build the Frontier
Line from Wyoming to take a clean-coal resources and also
wind resources combined with that, move those over very
large facilities throughout the West.

This project is exactly what the West needs, and
I've asked our Commission Staff to work very hard to assist
in getting that line built. So, with no further ado, I'd
like to start first with an initiatives presentation on
clean coal itself.

Our presenters here are going to talk about the
federal and private initiatives regarding the development of
clean coal, which is kind of the catch-word that we all
know, but we wanted to really start the conference, before
we did our overview from Jeff Wright on our Staff, wanted to
start the conference with really crisper understanding and
better definition of what we mean by "clean coal."

And I've got three speakers here, and I'll
introduce them all now, and let them go in sequence here to
come up. Would y'all like to speak from here or walk up here? I'm easy.

That's fine, okay, great. First we've got Ken Markel, who is Director of the Office of Major Demonstration Projects at NETL, which is the National Energy Technology Laboratory, a very important R&D arm of the Department of Energy of the United States Government; Dan Fessler, an old friend of ours from the California days, is Of-Counsel to Holland & Knight, LLP, and Managing Principal of Clear Energy Solutions, Inc., and has been in the energy industry, Dan, for?

MR. FESSLER: More years than you'd like to know.

CHAIRMAN WOOD: More years than I'd like to know, as he can only say. Finally, there's Roy Palk, who is President and CEO of the East Kentucky Power Cooperative, who we know at the Commission, and who is a developer of resources here in the region.

So we'll start, Mr. Markel, with you.

MR. MARKEL: Thank you. I appreciate the opportunity to talk with you this morning. Energy production and its use, are important topics to this region, to West Virginia, and to the nation as a whole.

This morning, I'm going to give a very brief introduction to the development of clean-coal technology that's being done by the Department of Energy's Office of
Fossil Energy, Coal Research and Development and Demonstration Programs.

Consistent with maintaining a fuel diversity on a national basis, this program's purpose is to develop clean, efficient ways to produce electricity from coal.

The work is done in cooperation with, and with the participation of industry, academia, and nonprofit research organizations. Funding for the work is cost-shared between the Department of Energy and the companies and organizations participating in specific projects, so it's a joint venture, not just a government-driven program.

In Fiscal Year 2005, to give you a sense of the size, approximately $365 million federal dollars were allocated to the program. The activities are managed by the National Energy Technology Laboratory about it as NETL. NETL gets a little prickly for us.

(Laughter.)

MR. MARKEL: The program has over 500 activities, ranging in size and scope from system studies and laboratory work, to full-scale commercial demonstration projects. It includes a wide range of technologies that have application timeframes that span from the near term to 2020 and beyond.

Listed in a rough ordering from near commercialization, to a long ways off, the technologies being developed include those which target NOX control, fine
particulate control, utilization of coal byproducts, mercury
control, coal gasification, water management, oxygen
production, fuel cells, CO2, fuel separation, hydrogen
production, and even carbon sequestration.

Work sponsored by the program has been important
to the commercial deployment of technologies currently in
wide use throughout the coal industry. NOX controls systems
is one example.

The work being done now, addresses what is
anticipated to be a more restrictive regulatory environment,
and offers significant efficiency improvements over what is
currently available. In other cases, the technology is
actually widely deployed, but not in the coal power
industry.

Gasification, for example, is often used in the
chemical and refining industries, but the significant risks,
both technical and financial, of integrating it into a power
plant, have limited its commercialization in the utility
industry.

With that background, I'm going to focus on one
specific area -- coal gasification. Coal gasification
produces a combustible mixture of gases by reacting coal,
oxygen, and steam at high temperatures and pressures. In an
integrated gasification, combined-cycle power plant,
efficiency and fuel flexibility gains are achieved by
combining the coal gasification process with a high-
efficiency combustion turbine and a steam turbine to produce
electricity.

Before it is burned in the gas turbine, the
combustion gas is cleaned of particulates and sulfur
compounds. This is much more easily accomplished as a fuel
gas, because it constitutes a very small volume, compared to
that which is in a flue gas from a conventional combustion
system.

It is also much more reactive. Oxides of
nitrogen are controlled by a combination of gas turbine
combustion modifications and downstream reactors. DOE has
sponsored two completed commercial IGCC demonstration
plants, the Wabash River and Tampa Electric Projects.

Both were constructed in the early 1990s, and
both produce about 250 megawatts of power. The Wabash
project re-powered an existing steam boiler at a
conventional power plant, using an E-Gas or now Conoco
Phillips gasifier; Tampa was constructed on a Green Field
site, using a Texaco gasifier. At 98-percent sulfur removal
and a 90-percent NOX removal, both projects demonstrated
extremely good environmental performance compared to the
current fleet average that generated 92 percent less sulfur
and 85 percent less NOX.

Last Fall, two new IGCC projects were selected
under the second round of the Department's Clean-Coal Power
Initiative. The Southern Company Project will build a 285
megawatt commercial IGCC plant near Orlando, Florida. It's
based on an air-blown transport reactor.

Compared to the earlier projects, it will
eliminate the oxygen plant, have a much smaller footprint,
and operate at a lower temperature, all of which will reduce
costs.

The Excelsior Project is the second generation of
the Conoco Phillips technology used at Wabash River. The
530 megawatt plant will be located in Minnesota.

Its design is based on lessons learned from that
earlier project, incorporating changes to improve
efficiency, operations, and reduce capital costs. Both
plants are expected to perform better environmentally than
these earlier projects.

As a response to a comment earlier, you should
note that both the Orlando and the Tampa projects, are
located near high-population metropolitan areas in Southern
Florida.

Negotiations for both of the new projects will be
completed this year, and once that's done, permitting,
design, and construction of the plants will take
approximately six years.

Based on the work to date, when compared to
conventional scrub pulverized coal plants, IGCCs have
greater fuel flexibility, and if designed to do so, can
actually produce liquid fuel or chemical feedstocks, in
addition to electricity.

They are also more efficient, and, on an apples-
to-apples comparison, perform better environmentally.
Coupled with fuel cells or advanced membrane gas separation
technologies, they have the potential of actually
approaching zero emissions and 60-percent-plus efficiencies.

Currently, at the 300 megawatt size, IGCC plants
are estimated to be of somewhat higher capital costs than
pulverized coal plants. Economics for the 600-megawatt
size, however, appear to be more favorable.

As with environmental performance, new
technologies will also significantly impact capital costs.
For example, the production of oxygen, using membrane
separation technology, rather than a conventional cryogenic
technology, is projected to significantly lower the cost of
this important component for many IGCC designs.

Outside of the Department programs, the past year
has seen some significant business developments that could
have an impact on the commercialization of IGCCs. On the
equipment supplier side, General Electric purchased the
Texaco gasifier design.

This brings together under one corporate
umbrella, two elements of the IGCC which require close
design and operational integration -- the gasifier and the
combustion turbine.

This represents a significant commercial
commitment, given GE's technical and financial clout. On
the utility side, AEP, Southern Company, Cynergy and others,
have announced plans to actively pursue the design,
construction, and operation of IGCC plants within the next
ten years.

In closing, I invite you to learn more about the
DOE Coal Research and Development and Demonstration Program
through the NETL website. There you'll find exhaustive
descriptions on all of these technologies, including the
economics, the technology, and the prognosis for future
applications. The best way to find it, Google it, NETL.

I appreciate the opportunity to talk to you, and
look forward to the rest of the comments.

CHAIRMAN WOOD: Thanks, Dr. Markel. Mr. Fessler,
welcome.

MR. FESSLER: Thank you very much. I'd like to
take three remarks that I jotted down from the Governor, and
use them sort of as the text for the thoughts I'd like to
share with you.

The Governor indicated that it was important that
the energy needs of the nation really be addressed. At
another point in his brief remarks, he said that it was critical to make it -- the reference to coal -- more acceptable.

And toward the conclusion of his remarks, he noted that it was important to look, quote, "that far down the road, to make fuels out of coal."

The thoughts I'd like to share with you this morning are that in the proper location, making fuels out of coal, is not that far down the road. It is dependent upon finding areas where this can be done with economics that return a significant return to the private sector, and, therefore, incent the investment process.

It is critical that we do so, if we go back to the Governor's first point, that the energy needs of this nation really need to be addressed. I very much appreciate the Chairman and Commissioner Brownell's tolerance of the presence of some remarks that are not directly in the deepwater channel of this conference, which is concern about the critical infrastructure, which is our high-voltage transmission grid enabling coal-fired generation.

I'm going to talk about that, but I'm going to talk about it in the context of trying to make coal more acceptable, because if coal can be made truly acceptable, then transmission will come to coal. But until the acceptability issue is resolved, it is going to be
problematic, at least in my part of the world, which is that I come from the state of Wyoming, but I have led my adult life in the state of California.

It is going to be difficult to build the Frontier Project, because no one is going to spend $4 billion on a transmission project in the hope that in Wyoming, we will have an acceptable coal industry that will require, along with wind and other renewable energies that can be firm, that will require that type of infrastructure.

The key, the Governor has already laid before us. It is to reconfigure our thought about the economics of coal gasification by simply noting that we can gasify coal for the purpose of producing a far more environmentally acceptable solution at the point of production, and that it can be made a profitable enterprise right now, not something which has to wait five, ten, or 15 years into the future, if we note that coal gasification also sets the stage for the production of something this country desperately needs, which is synthetic fuel.

Several months ago, the President gave his State of the Union Address, and I wondered how many of you were struck by what I found as the discontinuity in the outline of that address. The President pointed to the critical need that we have as a nation to reduce our dependence upon foreign petroleum and immediately followed that by
indicating that he called on Congress to pass an energy bill that would do two things: a) revive the nuclear industry, and, b) make a common-sense rationalization and enhanced efficiency out of the high-voltage transmission grid.

I support both of those initiatives. They are critically needed, but neither has anything to do with our dependence upon the importation of foreign oil.

We do not in this country, import foreign oil or use domestic oil reserves as a significant means of generating electricity. Now, the impact of our dependence upon foreign petroleum, has been stated by the NRDC, and I will use their figures.

It costs the American economy, $300,000 a minute to support what is our national equivalent of a cocaine habit in the importation of foreign fuels. That money leaves the country, bleeding our economy to the point of anemia, and it does not come back.

The other consequences of our dependence upon foreign oils are read about every morning with regard to the impact on foreign relations and our defense obligations. Coal can be a significant answer to playing the hand that God gave us in terms of resolving our problem.

We can, using proven technology, which will surely be enhanced, but which can work today, produce synthetic fuel out of coal in a manner that will begin to
resolve two problems that we have: the dependence on foreign oil, for every barrel of synthetic fuel is a barrel of foreign oil that we did not need to bring in, and also the major glut that we have -- or bottleneck, to use the Chairman's term, in refinery capacity in this country.

We have not built a new refinery in nearly two generations, and none are planned. Coal refineries produce a synthetic product that needs no further industrial application before it can be placed in any compression engine as a substitute for No. 2 Diesel fuel.

And that brings us to a third problem we have in this country, because the current formulation of No. 2 Fuel as a byproduct of petroleum, is presenting us with a sulfur issue that the EPA is attempting to resolve in 2006, 2008, and 2010, dates that are immediately around the corner.

The object is to move from the current 500 parts per million of permitted sulfur, down to 15 parts per million. We have several large refineries announcing that they cannot, or, as an economic decision, will not do this, but already we are consciously aware of something that has crept up on us with little attention in the media.

Each of us as an adult, grew up in a world in which No. 2 Diesel Fuel sold at a substantial discount, 87 octane gas. Today, in virtually all markets in the country, it sells at a premium, premium gas, signalling that we have
an acute shortage of a critical transportation infrastructure resource.

Fuel that we can produce from coal, has zero parts per million of sulfur. It is the in-state move in an attempt to control the tailpipe emissions. By a simple fuel substitution, we can transform every stationary and local compression engine in this country, from one of the leading sources of NOX, SOX, and particulate matter criteria, into ultra-low-emission vehicles.

In my state of California, in order to keep an attempt to address the extreme nonattainment of air quality, we have entities like the Los Angeles education system, faced with the need to replace thousands of school buses that are perfectly serviceable, to convert them to natural gas.

If we use coal that produces synthetic fuel, every one of those buses could be retained as an ultra-low emission vehicle, freeing the resources for textbooks, classroom size reduction, and decent salaries for teachers. That's one indication of what we might do, if we took coal and made use of it today.

To make use of it today, you need the location that satisfies the environmental community. Ken has already indicated all the things that can be done with coal gasification.
There is one further issues that environmentals point to and that's CO2 emissions. If we use the further industrial step of producing synthetic fuels, we can capture and then sequester those CO2 emissions. But before we sequester them, they would be a third source of income for projects, which would be selling fuel, electricity, and CO2 for tertiary oil recovery and the release of coal bed methane reserves.

Just in my native state of Wyoming, the University of Wyoming indicates that there's 1.5 billion barrels of oil within 20 miles of Casper, Wyoming, awaiting tertiary oil recovery. It requires CO2. Why don't we do it? Thank you.

CHAIRMAN WOOD: Thank you, Dan, thank you very much. And now we'd like to have our final speaker from Kentucky, Mr. Palk.

MR. PALK: Thank you, Mr. Chairman. Good morning, ladies and gentlemen. My name is Roy Palk. I'm President and CEO of East Kentucky Power. I want to speak to you this morning about who is East Kentucky Power?

We are a generation and transmission cooperative. We're headquartered in Winchester, Kentucky, which is about 15 minutes east of Lexington. We serve 16 electric distribution cooperatives, all located in Kentucky, and soon we'll serve a 17th over in Bolling Green, Kentucky, which is
leaving TVA and coming with our supply system in April of 08.

What drives our construction program, really, is growth. East Kentucky Power is growing at twice the rate of the national average. We're growing at about a five-percent growth rate per year, and that's in all customer classes.

Because of that, we are having to add new facilities, both generation and transmission, to our system.

The reason that we are going with circulating fluidized bed, for the time being, rather than IGCC, is simply a matter of time. Both Ken and Daniel have mentioned the time necessary to bring IGCC into commercial status, and we certainly support IGCC as a technology that needs to be developed for all of the reason that have already been mentioned here this morning, and perhaps many others.

In fact, we signed a contract with a private developer about four years ago, to develop and put on our lines, an IGCC plant. And we signed the contract, a 20-year contract approved by the Kentucky Public Service Commission for the total purchase of that output.

Unfortunately, that plant has not been able to be developed, and we are in the process now of moving forward with other technologies, those being circulating fluidized bed. We have just brought online, our first circulating fluidized bed plant in Maysville, Kentucky, a 268 megawatt
We have in the works, on the drawing board, if you will, a 278 megawatt plant that we hope to get a permit for this Summer, and then in 06, a third circulating fluidized bed plant that we'll be bringing on, and those are the baseload plants that -- I'm not going to talk about the peakers, but those baseload plants that we'll be adding to our fleet.

That will give us a baseload generation total capacity of somewhere around 3,000 megawatts within the next five to six years, and so our growth is pretty fast. The long-term need for power in our case, is driven by the forecasts that are given to us by the member cooperatives.

We go ahead and actually sit down with our member cooperatives and ask them what their growth projections are. We do some econometric models on those numbers, and then we go out for RFP to go to the market, if you will, and see what resources are available before we select a way to supply the next increment of power.

Then that selection is put before our Public Service Commission and we make our case, hoping to achieve a Certificate of Convenience and Necessity, or in normal terms, a building permit to build this power plant. And so that's the process that we go through to get increments of power supply, and why we are choosing CFB.
CFB, we think, provides, at least in the time that we need the power, some of the benefits that these gentlemen have already mentioned. For example, it gives us fuel flexibility.

CFB will burn a wide variety of coal. It will burn high-quality coal; it will burn low-quality coal, high-Btu coal, and as low a Btu coal as 8,000 Btu. In mining terms, it will even burn the gob pile.

Now, the gob pile is the washings that come off of the coal, that normally are waste products, either because they are too high in ash, they're too low in Btu, they're just not marketable.

From the standpoint of economics, this technology gives greater economics to the coal market, because it creates a sale for coal that wasn't heretofore, sellable.

The second thing it does, we think is really neat in terms of the environment. And I want to come back and talk about a theory that I have of how technology really does impact transmission, here in just a few minutes, so follow me along here for just a minute.

Anyway, as far as the environment goes, sulfur content of the coal, as I said, can be as much as 4.5 percent. The boiler can also burn other forms of fuel. We can burn up to ten percent, for example, of supplemental feedstock.
Those can be biomass; they can be wood; they even be tires. We do have the Gilbert plant, one that just came on and we have it permitted to burn up to five percent of rubber tires, so we can use that as a means of taking an eyesore, if you will, a problem, and converting it, through technology, into a usable product that makes our lights burn and keeps us cool and powers our industry.

Even petroleum coke can be used. We have no plans to burn petroleum coke, but I'm telling you that this boiler, the CFB boiler, does have a wide variety of capabilities.

In terms of environmental performance, the Gilbert unit achieves very low emissions of sulfur dioxide, of NOX, and carbon monoxide and particulates. The sulfur dioxide is removed at a low-cost per ton; the majority of the sulfur dioxide and the NOX emission levels are obtained by in-furnace technology, actually injecting limestone into the boiler.

The post-combustion or the back-end cleanup equipment, only further reduces the sulfur dioxide and the NOX. The efficiency -- the Gilbert unit is designed at a heat rate of about 9570 Btus per kilowatt hour. The operating cost is very, very competitive and provides us not only the technological advantages that I've just described, but also provides us a good, low-cost, competitive price of
power.

And so that's why we went to CFB. That's why we're continuing to build the CFB. We support the IGCC technology and I've already described that.

Now, how does technology affect transmission? Let's look at the plant location issue from an environmental standpoint. If you look at the state of Kentucky, there are only a few locations where you, because of emission levels, can locate a power plant.

So, that affects, one, what kind of technology you choose, because of emission levels. In other words, you want to say under your caps.

The other thing it does, it affects transmission because you have to get the power into the market. You've got to get the power to the plant. The plant is located, on a limited basis, because of emissions levels that are already in the air, both stationary and mobile, and so technology and transmission do have, pardon the pun, a connection between each other, if you look at it from the standpoint of the emissions that are already in the air.

Thank you very much.

CHAIRMAN WOOD: Thank you, Roy. I've got a couple of questions. The fuel issue is an interesting one that, Dan, you raised on the motor fuels issue. Where in the country is the development of this type of alternative
motor fuel going on? Is it western development? Are there companies out there or agencies that are involved in this? Is it going on in other countries anywhere?

MR. MARKEL: I have to apologize to the group. I'm sitting here thinking about this, I put this little bit together, and forgot a major project that we have, which is actually production of diesel fuel. We call it the WMPI Project in western Pennsylvania.

It is a project that uses anthracite coal to produce electricity and 5,000 barrels of diesel fuel on a daily basis. So, it's actually a project that talks very much to what Dan was referring to.

It's a demonstration project that uses coal gasification. It uses a waste product as a fuel source, and we're in the process of negotiating that, as well.

So that's one example that I am personally familiar with.

CHAIRMAN WOOD: Great.

MR. FESSLER: The best example, Mr. Chairman, of large scale industrial production of synthetic fuels is in South Africa where they produce 166,000 barrels a day of synthetic substitute for diesel fuel from domestic coal resources.

They are using a technology that was actually invented in Germany prior to the Second World War. The
technology has an unpleasant political paternity, but in point of fact, it is a proven industrial process that has been functioning seven days a week, 24 hours a day in South Africa for now nearly 30 years.

In the United States, we have a number of companies that, on a small-scale basis, have shown that we, too, can produce synthetic fuels, and we have the support for this important project in Pennsylvania.

What I am seeking to suggest is that in certain areas of the country and in my native state of Wyoming, particularly, all of the factors seem to point toward the ability to site, not a demonstration project, but an industry in Wyoming now, because of the existence of the Powder River Basin infrastructure, the ability to select coal from five major producers of coal, the capacity to utilize the CO2 emissions for tertiary oil recovery and coal bed methane release.

The one major factor that stands between that and helping to work on the West's electricity infrastructure, is the question of transmission. The Frontier Project would be very, very useful.

In order to have the near-zero emission plant, using today's technology, one would only be able to co-generate electricity, and, from a 25,000 barrel a day facility, that would be about 300 megawatts of net
exportable electricity that each of these plants could do.

But there would be sufficient coal reserves in Wyoming to support several hundred of these plants, and they could make a significant -- Ken has talked about some of the other interesting technology issues. If you could substitute a membrane for the cryogenic oxygen process in isolating oxygen, if you could reduce the temperature and pressure under which you produce the synthetic fuels, you would enhance the efficiency of the existing technology.

But the point is that today, with $50 a barrel oil, one could make a great deal of money with existing technology. I've had many people come to me and say I'd love to finance the third, fourth, or fifth of these plants, because they will begin to have these major breakthroughs in cost production and efficiency enhancement.

It becomes rather obvious that there is no third, fourth, or fifth plant, unless there's a first and second. Wyoming, I think, offers a set of circumstances that is unique.

There are many wonderful technologies, including the technology that Lloyd speaks of, and so, given the broad pattern of resources we have in this country and the areas, the different geographies offer us in terms of opportunity, this is one opportunity that I would like to see pursued, and that's what I'm suggesting.
CHAIRMAN WOOD: That's an interesting suggestion. I gave a speech and started off with statistics about, you know, how much oil we import. It's just a big -- 25 billion Btus going to 40 by 2020.

MR. FESSLER: Mr. Chairman, in California, we use nearly 285,000 barrels of No. 2 Diesel fuel every single day. It is the largest source of pollution left in our area.

If it were replaced by 285,000 barrels of synthetic diesel, we would do more to clean up the air in California, not just in our cities, but in our great agricultural valleys, than any single thing that could be posed, and we would do it by removing a demand for 285,000 barrels a day on the infrastructure fuel resources of this country by taking the domestic resource and solving a refinery shortage.

CHAIRMAN WOOD: You'd solve a political problem, an economic problem, and an environmental problem at the same time.

Let me talk with the three of you all about the economics. In a $50-barrel oil scenario, which translates roughly -- of course, it's not directly related that closely -- to -- we've got now $6 gas and, say, $40 a megawatt hour power, on average.

How do the economics of the three technologies
that we've talked about, the original pulverized coal, the fluidized bed technology, and the IGCC? Kind of put some dollars and comparables next to that, so that we kind of understand what the economic opportunities are for these three types of coal.

MR. PALK: Let me give you one illustration, Mr. Chairman. We have been buying a lot of purchased power from the market. We started buying purchased power from the market to grow our load several years ago, and then bringing plants on behind them, and avoiding the capital investment until the load was built.

We could buy power from the market, as you well know, at 1.5 cents, 1.7 cents. Now, power prices are four cents, five cents and even in peaking times, we have seen up to eight cents a kilowatt hour.

The point I'm making is that by bringing the plant on now, we have already seen our fuel adjustment clause in the last three months, drop by about 30 percent, because we are taking ourselves out of the market. We are generating a lot cheaper than we can buy on the market, and we're stabilizing the price for the consumer.

CHAIRMAN WOOD: So, a ball park price then, yours is CFB, the kind of all-in price that you reflect in your customers' rates, would be how many cents a kilowatt hour?

MR. PALK: It's going to be a little less than
four cents a kilowatt hour. What that means is, that is for
fuel for generation, for transmission, for distribution
substations, and our customers, our member coops, take their
delivery at the low side of the substation.

CHAIRMAN WOOD: That's the delivered price, four,
a little under four.

MR. PALK: For billing and administration.

CHAIRMAN WOOD: As to IGCC, Ken, you kind of
mentioned a few things pretty quick. You might have
mentioned this, but I wasn't writing fast enough. What are
the economic -- I think you said the 600 megawatt plant size
--

MR. MARKEL: Based on the studies we've done thus
far, in a 600-megawatt size, the economics are comparable to
a pulverized coal system with similar performance, or
circulating fluid bed.

I think the important question is not which
technology is the best, but which technology fits the site
the best. It's a combination of coal, location,
transportation, transmission, and the level of comfort with
risk that the utility has, all come together to really
decide what is the best technology for that particular
location.

The issue, in my mind -- and this is Ken Markel
speaking -- is not one of is it too expensive, but am I
willing to live through the cost of getting it online, being
the first one there?

Penguins have this habit of all bunching up
before they all jump in. They kind of push and push and
push and push to get one of them to jump in, to make sure
there's no tiger sharks down there eating anybody.

Utilities tend to have that same kind of
conservative nature. Cost is an issue, yes, but, to me,
it's the larger one of convincing the market boys that the
technology is ready to go.

And that's the Department's objective with their
demonstration project, with the one in Tampa, with the one
in Orlando, with the Wabash technology, with the one in
Gilbert, trying to get things in on the ground so that
people can come in and kick the tires.

The plant in Tampa, I just visited two weeks ago.
Interestingly, the things that keep it offline, that have
caused it the biggest problems since it started up, were not
the gasification systems, were not the cleanup systems. It
happened to be that they chose one of the first 57 new gas
turbines that GE produced.

That has caused more problems than the
gasification, the cleanup technology, the coal handling
system, anything else. There were some problems with the
rotor; there were cracks in the rotor, and it's gone down to
be replaced.

Gasification technology runs pretty much like clockwork. Since the first plant turned on, they run it all the time. It's a very, very profitable operation.

CHAIRMAN WOOD: Dan, what's -- it's sounds like there's a win/win setup there for Wyoming. What are the obstacles to making that happen there?

MR. FESSLER: One of the biggest obstacles is that the economy of Wyoming, if it were to be relied upon to consume the fuel output and the electrical output of the first plant, it's going to be a close fit.

I think the case can be made that the burden is on those of us who believe in it, to do it. But since you asked a question about basic economics, for a plant that is designed to produce 25,000 barrels of synthetic fuel and 300 megawatts of export electricity, the cost of that plant is going to be -- the first plant -- about $1.6 to $1.8 billion. It depends on the degree to which you have to take ownership and responsibility for the infrastructure to deal with CO2 emissions in a responsible way, so that you can look people in the eye and say we are sequestering the CO2 emissions at the end of the day.

Now, that plant can return an 18-percent ROR to its investors, if you assume two things: That you can sell the electricity at the bus bar, at 3.5 cents a kilowatt
hour, an eminently doable thing in the western part of the United States today, and that you could deliver the synthetic fuel for what's known as the rack or wholesale price in Los Angeles, at $34 a barrel.

I do not know what the wholesale price for No. 2 Diesel fuel, a fuel that will be illegal in its current formulation in Los Angeles in less than 18 months, as it will be here. I do not know what the current price is today, but I do know that last week, it was over $60 a barrel.

So, that suggests that if such a plant were operating, it would simply add to the total number of mints in the United States as far as the return to its investors would be concerned. But, as Roy said, it's a question of getting the plant online, and, as Ken said, I've never heard the penguin analogy, but it is a useful one.

(Laughter.)

CHAIRMAN WOOD: I would love to have you here all day, but we have a schedule. I thank you for kicking it off, and I want to again thank you for your participation in framing, really, the fuel, because I think, quite frankly, that we've been a Commission, because of our regulatory enterprise that deals a lot with natural gas, and the construction of plants in the last ten years has been almost exclusively natural gas, so we haven't had to think about
coal.

Price makes you think about things again, which I think all of you -- there certainly sound like there are a lot of opportunities there, and I know that our sister agencies in government are working very closely on the environmental implications of coal development, as well.

It sounds like, certainly from some of the reading material we had here in preparation for the conference, that the new technologies, including the full sequestration technology, not only addressed the current EPA standards, but go beyond and talk about the global gas initiative issues, which I know are important to a lot of people in the country.

So, thank you all for kicking off our panel. I appreciate your being here today.

Before we go further, I'd like to -- as Jeff Wright, who is the Director of our Infrastructure Division in the Office of Energy Projects does, as he always does for every one of our infrastructure conferences, of which we've had about a dozen since I've been on the Commission, starts off with some facts and background for us and for the audience and for the record.

I would like to introduce our Staff who are here today. Some of them will be asking questions on and off through the day. Please feel free to get to know them, as
you do us, but Chris Thomas, right here next to Commissioner Kochler, John Yakobitis from our Office of Markets, Tariffs, and Rates; Jignasa Gadani is from our Office of General Counsel; Joe McClellan is the new Director -- not new, he's been here awhile, but he's Director of our Reliability Division, which was a new mandate from Congress that we got last year, and Joe's doing a great job getting the reliability issues teed up; Mike McLaughlin, who is one of the key Directors in our Agency over this region of the country; Connie Caldwell from our Market and Oversight shop; Mark Whittington, from our Office of External Affairs. We talked about Big Dan Larcamp, hometown boy, back in the back there.

There is Susan Court, our Chief of Staff for the Agency, and a Kentucky native; Sarah McKinley, who organizes the conference and is out front taking care of logistics, and, of course, Jeff Wright, to whom I will now turn it over.

MR. WRIGHT: Good morning. Again, I'm Jeff Wright. I work in the Office of Energy Projects at the FERC. Dan Larcamp approached me, given my gas background, to come here and talk about liquified natural gas.

(Laughter.)

MR. WRIGHT: Now, I told Dan, I can't do that. This is a coal conference with some transmission issues, and
I'm going to stick to that and I'm going to stay away from LNG. So that's the last time I'll talk about LNG today.

(Laughter.)

(Slides.)

MR. WRIGHT: Really, my purpose here is, in order to set up the panels for the remainder of the day, I'm going to take a look at coal in the U.S. and its contribution to electric generation, along with its potential in the generation fuel mix.

Also, I'd like to take a look at how more electric transmission will allow the U.S. to realize a greater contribution from coal-fired generation. In 2003, the U.S. produced about 1.07 billion tons of coal.

Approximately 70 percent of all U.S. coal production was produced in Appalachia and in the Powder River Basin of Wyoming, and in 2004, it is estimated that the U.S. production was 1.1 billion tons, an increase of 2.8 percent over 2003.

Electric generation has been the largest consuming sector for coal. In each of 2002, 2003, and 2004, the electric power sector consumed 92 percent of the U.S. coal supply.

This slide shows the weekly coal and natural gas prices from 2002 to the present on an equivalent-Mmbtu basis, comparing coal prices from Appalachia and the Powder
River Basin in Wyoming, with the Henry Hub gas price. Even when prices were closer in 2002, coal sold at a large discount to gas prices. As gas has become more volatile in the last few years, this differential has grown. There has been some increase in the Appalachian price, due to increased demand, but still, the difference is great. Of course, the price of the commodity alone, does not determine whether to use one fuel or another. According to Jerry Eyster's study of the PA Consulting Group, new combined-cycle plants are cheaper than new coal plants at gas prices less than $4 per Mmbtu. Between $4 and $7, either gas or coal plants could be cheaper, based on the type of coal plant being built, however, according to Mr. Eyster, once gas prices exceed $7 per Mmbtu, then even expensive coal plants will produce electricity cheaper.

I would also like to point out that the Henry Hub spot price averaged over $7.30 per Mmbtu during April 2005. And as the graph shows, coal prices, with the exception of a slight rise in the Appalachian coal prices, have remained low.

Currently, coal-fired power generation capacity comprises 34 percent or 314 gigawatts of the total U.S. power generation capacity of 933 gigawatts. The SERC has the largest generation capacity of any NERC region at 170
gigawatts, 74 gigawatts of which are coal-fired.

The coal-fired generation capacity of the ECAR region is 69 gigawatts, or 63 percent of its generation capacity. The ECAR region constitutes the highest concentration of coal-fired generation in the U.S.

Coal-fired generation capacity in ECAR and SERC, comprised about half of the nation's capacity in 2005, and when the WECC's coal-fired capacity of 33 gigawatts is added in, these three regions, SERC, ECAR, and the WECC, account for over 55 percent of the nation's coal-fired generation capacity.

While coal-fired generation is 34 percent of total U.S. capacity, it comprises 50 percent of the total U.S. electricity output. Eighty-five percent of ECAR's generation output is coal-fired, which is over 26 percent of the total U.S. coal-fired generation. Again, the top three coal-fired generation regions, SERC, ECAR, and WECC, account for almost 65 percent of the nation's coal-fired generation output of about 1.8 million gigawatt hours.

Now, the next two slides give an idea of the source of the coal that's burned in these plants. In 1993, the majority of coal purchased by electric generation plants east of the Mississippi, was from the Appalachian and Illinois Basins.

Powder River Basin coal reached plants located in
the West, the Midwest, that is, West of the Mississippi, and
Southeast. Purchases in the West also included coal from
the Rockies and from Washington State.

From 1993 through 2003, Powder River Basin coal
use has increased in the Midwest and Southeast regions, and
the spread of Powder River Basin coal probably is due to its
low sulfur and ash content.

Taking a look at new construction, over 3400
megawatts of coal-fired power plants are under construction
and are expected to be online by 2009. A third of this
total will be in the SERC region.

Another 7700 megawatts of coal-fired generation
are in the advanced development stage. Most of this
capacity is scheduled to come online between 2008 and 2010.
For all fuels, over 52,000 megawatts are under construction
or in advanced development, so coal-fired generation
represents about 22 percent of the new generation load that
will be coming online.

This is actually a large proportional increase in
coil-fired generation. In each of the years of 2001 through
2004, gas-fired generation represented over 90 percent of
the generation load that came online.

On a regional basis and looking at the long-term
future, by 2015, total generation capacity is expected to be
1,023 gigawatts, 329 gigawatts of which will be coal-fired.
This is actually an annual growth rate of less than one-half percent in coal-fired generation, but by 20205, total generation capacity is expected to exceed 1185 gigawatts, and 36 percent or 431 gigawatts will be gas-fired.

This represents a growth of over 2.8 percent per year between the years 2015 and 2025. I think I misspoke there. We're talking gigawatts, not megawatts here.

Going back the regional basis, coal-fired electric generation capacity is expected to increase from 2005 to 2015 in all of the NERC regions, except in the Northeast and in ERCOT. By 2025, though, coal-fired generation capacity is expected to increase in all the NERC regions, and the regions that will experience the largest capacity, as you might expect, are ECAR and SERC.

Electric generation output is projected to increase in all of the NERC regions through the year 2025. The West and Southeast regions will have the largest demand for electric generation.

While gas-fired generation will be the fastest growing fuel source to produce power, coal will still produce the majority of electricity in the United States. In 2004, coal-fired generation produced 54 percent of the country's power, while gas only accounted for 14 percent.

By 2025, coal-fired generation is expected to produce 53 percent of the power, while gas-fired
generation's contribution is expected to increase to 24 percent.

This slide shows those counties that are designated nonattainment areas for sulfur dioxide, particulate matter, and ozone. Air quality may limit coal-fired electric generation development in these nonattainment areas, however, the nonattainment areas, for the most part, do not overlap coal production areas.

This lends credence to the idea of constructing more mine-mouth generation plants and transporting that energy to where it is needed.

This gives you brief idea of where the mine-mouth generation is in the U.S., and mine-mouth generation, as we're defining it, is the cost of transportation and shipping of about a dollar.

However, the planned addition of new western power plants in the proximity of existing mine-mouth plants, may be problematic, since already congested transmission lines will not have sufficient capacity for the increased generation.

Now, our current transmission system is under stress. We have a growing population that is increasingly dependent on electric technology. The majority of the largest U.S. cities are located in highly-congested areas of the bulk power, bulk electric transmission system.
The lack of investment in new transmission lines, combined with growing demand for power that could be met with coal-fired generation, will lead not only to increased reliability problems, but also difficulty in serving new load.

In 2002, the Department of Energy conducted the National Transmission Grid Study. The study showed that there was significant congestion and transmission constraints across the United States. The arrows in this map represent the most congested transmission paths in the U.S., as identified by the Department of Energy.

I will note that we did take Path 15 off the maps, since that was relieved.

In order to improve grid reliability and to transport needed, increased energy needs, additional transmission needs to be built across the U.S. Otherwise, congestion costs will increase.

FERC calculated during the Summer of 2000, that over $800 million of congestion costs occurred over 16 well known constrained paths.

In the last ten years, generation capacity has increased nationwide by 2.4 percent per year, and net generation by 1.8 percent per year. However, high-voltage electric transmission miles -- that's 230 kilovolts or higher -- had increased at an annual rate of only .6
percent, and, even worse, transmission mileage has actually declined over this same time period in the Northeast United States.

As mentioned earlier, there are coal-fired plants under construction and in development across the country. In order for that new generation to reach the large load centers, new transmission lines need to be built from those generation sites, as represented on this map.

Of course, there are several impediments to developing new transmission. It's difficult to determine need and cost allocation for new transmission lines, because criteria to measure the regional benefits, are unclear, inconsistent, and ineffective, and achieving consensus in integrated networks is contentious.

Also, customers have difficulty securing long-term transmission rights at predictable prices. Further, it is also difficult, without some form of regional planning body, to deal with the regional infrastructure needs.

Stakeholder concerns adversely affect the ability to successfully site and construct needed transmission lines in a timely manner, and, finally, the lack of an effective forum or policy for coordinating multistate processes or resulting multistate disagreements around siting, is a barrier.

This slide crystallizes the timing mismatch
between building a coal-fired plant and siting and building a bulk transmission line to transport the energy. As the slide shows, it can take almost three times as long to construct a bulk transmission line, than it is to build a new coal-fired generation plant.

In conclusion, the realization of new coal-fired electric generation will depend on the cost differential between coal-fired electric generation and the cost of natural gas to fuel electric generation. That differential is becoming increasingly favorable for coal-fired generation, however, to realize this, new transmission lines will need to traverse multiple states, and planning and construction must be expedited through more efficient planning and a more rational approach to siting.

That concludes my presentation, and I hope I've kind of teed it up for the panels that will complete the rest of today's program. Thank you.

CHAIRMAN WOOD: Thank you, Jeff. The members of our first panel are welcome to stay up here, but you're also welcome to go get a more comfortable seat, as well. I want to thank you all for your participation.

While we're doing that, I want to just add a couple of rules here. There's not scheduled breaks here. We have always run these very informally. We leave the doors open on purpose, so, if you need to wander in and out
to make a call or to go to the men's or ladies' room, please feel free to just do so. We'll have a one-hour lunch break. We have no structured lunch plans, but I think you heard the nice advertisement from the Governor that there are, not only within the hotel, but across the street, some food options for those of you who would like to get something to eat.

And I think we will have time at the end of the day, for those who would like -- and we have a setup here as well -- for anybody in the audience to ask questions of the panelists at the end of the next panel and of the afternoon panel, as well, and then also make any general comments you'd like.

So, if you have something that you would really like to say, please hold on and we will be glad to visit with you toward the end of the afternoon.

At this time, I'd like to introduce our major morning panel, which discusses regional transmission planning, the current initiatives and what we might do to improve those. I'll introduce all of the members right now.

They're listed in the handout here, but I would like to thank they again for being here, coming this distance today. We have Jim Torgerson, who is the President and CEO of the Midwest Independent Transmission System Operator. MISO is one was the first RTO designated by our
Commission, and has done a good job throughout the Midwest, which is a big coal region, as well.

Karl Pfirrmann is President of the PJM Interconnection, Western Region. PJM is another large RTO that, together with the MISO, works together to really cover the entire central/eastern part of the country with oversight of the transmission grid under federal auspices, with a lot of state cooperation, as well. We're glad to have both of you here.

Bruce Rew is from the Southwest Power Pool, and is Director of Engineering. The Southwest Power Pool is another RTO that's a little bit to the south. These three really comprise really the largest coal producing and consuming regions for power in the eastern half of our country, the West, of course, being as well, on here.

Paul Halas is the Senior Vice President of Business Development for National Grid, USA. National Grid owns a lot of transmission in our country, and, as well, its corporate parent owns the National Grid of the United Kingdom, and they have a lot of experience with transmission. We're glad to have you here, as well, Paul.

Steve Waddington is Executive Director of the Wyoming Infrastructure Authority, which is an authority created under Governor Friedenthal, and has done a lot of initiatives to build transmission out West, including the
one that Steve is going to talk a little bit about, which is
the Rocky Mountain Area Transmission Study.

And Bob Smith is the Transmission Planning
Manager from the Arizona Public Service Company, another
large and growing region of the country with transmission
needs, and he will be here to visit with us about what's
going on out there.

And our friend, Charles Bayless, Dr. Bayless, is
the President of West Virginia University Institute of
Technology right here in Charleston, and has had experience,
not only in education and academia, but, importantly, in two
large utilities, Illinois Power and Tucson Electric, in his
earlier career.

So, we're glad to have you all here, and we'd
like to start, Jim, with you, and we'll go on down the row.

MR. TORGERSON: Thank you, Mr. Chairman. I
really appreciate the opportunity to return to the state
where I spent a lot of my time in the early '80s when I was
with Diamond Shamrock and involved in the Company's West
Virginia and Kentucky coal operations.

As a result of that, I have a pretty deep
appreciation for the value of coal as a fuel resource and
for the challenges involved in the extraction and
transportation of it. Recent events have underscored the
need to maintain a balance of fuel resources used for the
generation of electricity.

The increases in fuel costs dramatically affect the economics of power plant operations and the optimal dispatch of generation resources. In order to maximize the efficient production of electricity, it is essential that regional grids be planned and operated in a manner that provides market access to a broad array of generating facilities.

The Midwest ISO issued its first regional transmission expansion plan in June of 2003. That plan evaluated the impacts of regional transmission expansion on the energy costs to the consumer.

Overall, we considered nearly a dozen regional plans that would easily pay for themselves when the reductions in overall production costs were considered. An important part of our planning process is to ensure that the transmission opportunities provided to new resources, don't curtail transmission access to existing resources.

Since then, we have continued to work with stakeholders on some of the more promising of these plans, particularly in the northwest part of the Midwest ISO where we have seen significant collaborative interests on the part of developers, industrial groups, transmission owners, state regulatory authorities and other state interests, and this would be for both lignite and for wind.
We also take the opportunity in our expansion plan to float ideas that would provide for economic development and expansions and entirely new projects. One idea that we're toying with right now, is to run multiple lines underground along the interstate highways with access to the coal and lignite basins in the corridor where wind generation is going on.

We expect to be able to recommend specific plans and to identify principal beneficiaries for all the plans by the completion of our next regional plan in 2006. We'll also be looking much more closely over that timeframe, at other key areas farther to the East, in southern Illinois, Indiana, Ohio, and Kentucky, that have significant coal development plans, in an effort to define the regionally beneficial transmission in those areas.

In our 2005 plan, which is coming up in a month, we've identified the top 24 constraints as identified by previous TLR events, and 21 are included in this plan. We've been fortunate to have input from the OMS, the Organization of Midwest ISO States, in developing a regional transmission pricing policy.

The Midwest ISO has been engaged in a dialogue with the OMS and other stakeholders on the development of a comprehensive cost allocation policy for both reliability and economic or regionally beneficial projects. We expect
to be filing tariff revisions to establish protocols for
cost sharing of reliability projects within in a few months,
with additional work expected to continue for about another
year or two, to address economic projects.

The tough questions that the stakeholders are
wrestling with are, first, the best measure of benefits that
are both reasonable and yet can be implemented without
endless debate; two, the distance over which the benefits of
transmission extend in a very large RTO; and, three, the
degree to which different parts of the system have been
similarly planned historically, such that one area does not
subsidize another in bringing all areas to similar
standards.

One concept that has some momentum in these
discussions is the so-called rough justice approach to cost
allocation. This concept seems to recognize that it's
sometimes difficult to target benefits of major transmission
additions for which the aggregate benefits to customers as a
whole, can be more easily demonstrated.

This cost allocation approach blends elements
that will recognize a wider area of benefits with more
localized effect, and also sets some upper bounds to shared
costs as a means to encourage efficiency and address the
regional differences that may exist.

The result is a proposal to allocate the projects
as a blend as part postage-stamp, part subregional, and part local, once a project passes certain threshold criteria for needed cost sharing. Whatever policy results from these continuing discussions, it will be crucial for the State Committee to continue to shape the discussions along the lines that are generally considered reasonable and equitable, so that transmission owners can have a reasonable expectation of recovering costs they incur for these needed regional projects.

The second aspect of our transmission planning is to promote the free flow of electricity between RTOs and other transmission providers. To this end, we've entered into joint operating agreements with PJM and the Southwest Power Pool, and have in place, a memorandum of understanding with TVA.

Both of the JOAs include detailed provisions that will promote the identification of cross-border facilities that will reduce the need to invoke transmission loading relief orders, manage loop flow, and enhance the interregional power flows.

The JOAs also include cost allocation procedures that are designed to ensure that participants in one RTO are not asked to unfairly subsidize facilities that predominantly benefit customers in another. Having adopted objective rules of the road, up front, we hope to avoid the
uncertainty of cost recovery that has plagued multiregional transmission projects in the past.

While we intend that the inter-RTO planning process be robust, we also intend to look, in the first instance, to market solutions to transmission constraints. With compatible markets in both PJM and the MISO, we expect price signals to identify the transmission corridors in which transmission enhancements will be most valuable and will permit resources to flow naturally, according to their value in the market.

Finally, it's worthwhile to keep in mind in a discussion of transmission pricing policies, that the transmission component of the customer's electric bill, is generally less than ten percent.

We need to get on with the prudent development of the transmission grid that will enable a competitive energy market to help reduce the other 90 percent of the electricity costs. Certainly, transmission planning and pricing that enables coal-based resources to participate in a competitive market, must be a fundamental part of that policy. Thank you.

CHAIRMAN WOOD: Thank you, Jim. Karl?

MR. PFIRRMANN: Good morning, Commissioners. PJM is pleased to have the opportunity to participate today in your efforts to focus on the regional transmission planning
process and the role that it plays in facilitating fuel
diversity, as well as the use of coal resources.

PJM is certainly proud of what has been
accomplished to date to open up markets to coal, but there
is much more that we and others in this region can do to
further enhance that use of coal.

It is for this reason that, today, PJM is setting
out by example, a new initiative which we have labeled
Project Mountaineer -- appropriately titled for the state
that we're in -- to utilize our regional transmission
expansion planning process to explore ways to further
develop an efficient transmission super highway, if you
will, to deliver the low-cost coal resources in this region
of the country, to market.

RTOs have and will continue to bring benefits to
this region. PJM has a proven, transparent regional
planning process that has already identified over a billion
dollars of transmission improvements, all designed to
improve the reliability and economics of power flows in this
region.

This is further been exemplified recently by the
announcement by Exelon and PSE&G to contribute an additional
$25 million towards construction of projects identified
through our regional planning process.

Additionally, PJM and the Midwest ISO, as Jim
just mentioned, are working together to undertake regional planning for their 27-state footprint. Through our historic joint operating agreement and our joint regional coordination agreement just signed with TVA, we are working to further coordinate both planning and operational activities to bring down many of the barriers that stood in the way of past interregional coordination.

In short, PJM, the Midwest ISO, and TVA, are not just talking the talk, but, I believe, we are, in fact, walking the walk. As a result of the expansion of PJM, we have seen a dramatic increase in the amount of power flowing from this region to the Mid-Atlantic region of PJM, and much of that comes from coal-based generation.

The trend of these flows is illustrated in Exhibit A, which is attached to my testimony, and I sure hope a number of you have been able to pick up a copy of that.

These off-system sales represent generation over and above that needed for native load. It's available to serve other regional demands, at a cost far less that what would be otherwise possible.

Many of the constraints that serve to adversely affect or impact power flows, have now been internalized within PJM and within MISO, and redispatch of generation in response to locational marginal pricing has been used to
manage congestion on transmission lines, rather than by simply curtailing otherwise economic transactions.

Also and perhaps most notably, the FERC has eliminated the through- and out-rates between individual transmission-owning companies and, indeed, between the Midwest ISO and PJM regions, as a whole. These through- and out-rates serve as a significant barrier to economical flow of coal-based generation in the past. The Commission should be applauded for taking this groundbreaking step.

Today, the Commission has properly asked, what are the present impediments to additional interregional agreements? Again, we are today illustrating, by way of our example, the proposed Project Mountaineer, as a way of doing that.

Our goal is to demonstrate the possibilities that could result from the targeted cooperative effort to identify additional transmission that could be built in this region, and to identify new ways to facilitate fuel diversity and improve options for economic, coal-based generation.

At this early stage, Project Mountaineer should not be considered a proposal for any specific line; rather, it reflects our commitment to utilize our regional transmission expansion planning process to involve the states, to involve the FERC, to involve the transmission
owners in this region, and, in fact, all affected
stakeholders, to explore new transmission opportunities, to
improve reliability, and, again, enhanced access to the
markets.

And because the process is undertaken by PJM in
the context of our approved, independent regional planning
process, we view this effort as one where the facts and
figures will carry the day, as opposed to concern over which
stakeholder is getting the benefit of a particular new
project.

Presently, there are several notable impediments
to West-to-East trade, and although West-East power flows
have increased by approximately 35 percent since the
completion of the integration of electric companies, there
remains certain physical constraints on the transmission
system that have further limited flows of coal-based
resources to markets in the East.

These constraints are depicted on Exhibit B of my
testimony, and principally exist at three different
locations: On the western side, the first one is the Wiley
Ridge Substation and the transformers at Wiley Ridge, as
well as the Samas to Wiley Ridge transmission line that
forms the AEP-Allegheny-First Energy interface. This
particular substation is located in the northern panhandle
of West Virginia.
The second is the Beddington-Black Oak 500 KV transmission line, thoroughly embedded in the Allegheny system, and located in the eastern panhandle of West Virginia and the western part of Maryland.

Finally, the third is the PJM Eastern Interface along the Delaware River, separating eastern Pennsylvania and New Jersey.

Any new additions to the transmission system, must address or minimize or eliminate the effects of these constraints.

So, what is Project Mountaineer? PJM has undertaken a preliminary delineation of the magnitude of transmission improvements that are needed to enhance West-to-East power flows by up to 5,000 megawatts.

As Exhibit C illustrates -- and, again, take a look at the back of the testimony to see Exhibit C -- to meet this increased power flow, two or more new backbone 500 KV or 765 KV transmission paths of approximately 500 to 900 circuit miles in length, will need to be constructed from the Kentucky, Ohio, and West Virginia areas to eastern load centers stretching from Washington, D.C., to northern New Jersey.

PJM estimates that the cost of these new transmission facilities will range from between $3.3 to $3.9 billion, and although this is very clearly a costly
undertaking, it's worth noting that one recent study estimated that $4 billion in new transmission investment, would equate to 1 mil per kilowatt hour of a typical residential bill, if those costs were spread over the entire PJM footprint.

Of course, there remain considerable challenges to construction of transmission of this magnitude. My raising of these challenges does not indicate that the project is not worth undertaking, but, rather, to make sure that we all have a realistic assessment of the challenges before us on a regional basis.

The first of those challenges -- and I believe this was previously mentioned by Jeff Wright -- is siting, siting of these new transmission facilities. The high-voltage transmission line running from Ohio or Kentucky or West Virginia to the eastern seaboard, will require the siting approval of anywhere from three to six states.

For the siting process to be successful, it's critical that these states work together to look at not just the individual state facts, but also the benefits to the region as a whole in the strengthening of the interstate electric system.

In order to ensure an orderly approach to this, we envision that PJM's regional transmission expansion planning process, again, to provide a forum for states to
come together to understand the need for these transmission facilities, and to help craft multistate solutions.

Each state's sovereignty over the siting process, will be respected in this process, but critical information, as Jeff called for, a forum for the development of regional solutions, will be available to all states within the PJM footprint.

The second area is in regard to environmental issues. We need to be especially proactive to address the land-use challenges that will arise with construction of this magnitude.

We need to collectively find routes that are the least damaging to the environment in this region. In short, we just need to build out this process as wisely as we can, with considerable planning and foresight, including consideration of advanced technology options that could help mitigate the environmental side of the impacts.

In terms of cost recovery, one of the first issues that's always raised is, who is going to pay for this? Fortunately, in resolving this issue, in PJM we have the benefit of a fairly long history of how to solve cost recovery issues.

Again, through our regional transmission process and with FERC's oversight, we have addressed the appropriate rules necessary for allocating costs, both for economic and
reliability upgrades to the system.

Finally, coordination among transmission owners: Historically, transmission planning has occurred or has been characterized by individual utility planning efforts, with limited regional coordination.

The existence of an entity such as an RTO, changes that dynamic and opens new opportunities for cooperative approaches to ownership of transmission. PJM is presently proposing a consortium approach among transmission owners to address aging infrastructure issues.

There's no reason why a similar consortium approach could not be used and explored under the umbrella of Project Mountaineer. For example, public power entities who have long expressed interest in ownership of transmission facilities, can now be partners in such a project.

States interested in financing major construction projects, could now become partners in such a project. Again, the PJM planning process will provide a forum for exploring these consortium approaches.

So, what are our next steps? The hallmark of PJM has been to use an open stakeholder process to address issues which defy individual solutions, and we believe that the PJM stakeholder process, as well as good dialogue with the newly formed organization of PJM states, could provide
excellent vehicles for further exploration and development of Project Mountaineer.

Our collective efforts should not end there. We pledge to work with each of the state's economic development entities, as well as utilities in this area that are committed to significant new investment in coal-based generation for this region.

All these efforts, of course, will be continually reported to all the Commissions, so that you can monitor progress.

A regional transmission organization with the size and institutional history of PJM, has already brought significant benefits to this region by enhancing reliability, by increasing utilization of coal-based resources, and by internalizing its strengths.

We stand ready to take our regional planning efforts to the next level, working with the states in the PJM region, working with the Midwest ISO, working with our stakeholders and the Commissions to roll up our sleeves and focus on ensuring adequate transmission infrastructure for the future.

We ask you to join us in these efforts; in fact, we ask you to become part of Project Mountaineer. Thank you.

CHAIRMAN WOOD: Thank you, Karl. Bruce, from
Southwest Power Pool.

MR. REW: Good morning, Mr. Chairman, Commissioners, and Staff. I'm Bruce Rew, Director of Engineering for Southwest Power Pool.

Today we'll present a brief update on the current transmission planning and expansion activities at SPP. SPP believes that its recent activities related to cost allocation, aggregate processing of long-term requests, and transmission planning, will provide enhanced opportunities to expand the transmission system to meet short-term and long-term transmission delivery demands.

Last month, SPP received FERC approval of its RTO cost allocation provisions. These provisions, developed by the regional state committee, through an extensive stakeholder process, including state commission representatives, provides for certainty in the cost allocation of reliability and economic transmission upgrades needed in the region.

SPP has a license plate or zonal rate design with differing rates in each pricing zone. Reliability upgrades, which are those upgrades necessary to serve existing obligations, one-third of an upgrade's cost will be allocated on a region-wide basis, with two-thirds of the cost allocated to pricing zones deemed to benefit from the upgrade.
Reliability upgrades for new and changing network resources, will be included, as long as the resources are designated for at least five years in length, and the resources designated, in total, do not exceed 125 percent of the customer's projected load responsibility.

The inclusion of new network resources such as additional coal resources and regional cost sharing plans will be of particular interest today. Economic upgrades will be funded on a voluntary basis and will be eligible for revenue credits provided from new point-to-point and network transmission service or significant new facilities.

Revenue-crediting will also be similarly available for upgrades required for requested service and generation interconnection network service.

Last year, SPP was approved as an RTO. In anticipation of that approval, we initiated our regional planning process. That process consists of two parts:

First, it is focused on reliability upgrades, and, the second, economic upgrades. SPP has completed the reliability part of its planning process, and identified approximately $550 million in needed transmission upgrades.

We are preparing for our next transmission settlement to determine potential regional economic projects. This settlement will be held in the first week of June.
Our work will lead to identification of transmission facilities that will provide regional economic benefits, allowing customers the opportunity to voluntarily fund those projects.

SPP will complete its first transmission expansion plan, including both reliability and economic upgrades, later this year.

SPP has also implemented an aggregate study process for long-term requests. There will be three open seasons each year, during which time customers will submit requests for long-term service.

All requests will be done simultaneously, in order to determine the least-cost transmission expansion necessary to accommodate the request. This new study process will provide for cost-sharing of transmission upgrades on a pro rata basis, as well as transmission revenue credits for charges in excess of a base rate.

This cost-sharing should facilitate greater transmission expansion in the region. Additionally, we initiated, on an experimental basis, a provision that allows for customers to pre-pay for transmission services. These prepaid funds are used to upgrade constraints limiting the availability of short-term transmission service.

This experimental program has resulted in funding of upgrades to ten facilities, resulting in expansion of
transmission capacity in the short-term market. These recent efforts of SPP and its regional states committee, will improve the availability of incremental transmission service and provide greater market opportunities in the region.

Thank you for offering me the opportunity to participate in today's discussion. I'll be happy any questions.

CHAIRMAN WOOD: We'll have some, too. Thanks, Bruce. Paul?

MR. HALAS: Thank you, Mr. Chairman. I'm grateful for the opportunity to my views with you in this technical conference. As I walked into the room today, I saw a lot of familiar faces. That's when I remembered the first of these technical conferences at which I spoke. I believe it was one of your first ones, Mr. Chairman, the so-called "Slice-and-Dice Conference" about the delineation of functionality among RTOs, ITCs.

Jim, and my friend and colleague, Nick Windsor, went on one panel. You could call it the "Big Muddy" panel, and I think Karl and myself were on another panel, all with different hats on at that time.

A few things have changed since then; some haven't. Those guys are all still tough acts to follow, but we're all still here trying to bring the benefits of a
robust transmission system to a robust energy market, and
the things that we can bring in terms of economic efficiency
and reliability to the nation's consumers.

Today's discussion obviously centers on one
particular, very abundant potential fuel supply, which is
c coal. I think it's probably safe to assume that in the
footprint of a traditional utility, there has been low-
priced coal and a reasonable amount of load that the utility
has sorted out with its commission, how to get that
particular coal power to those particular consumers.

I think that what we're really focusing on today
is more the regional aspects of getting coal power to cross
over various boundaries, including utility boundaries and
potentially RTO boundaries. I should note in that regard,
that when we're talking about coal power sources and the
transmission system that will hopefully bring those
electrons to market, but the transmission system is kind of
indifferent as to what electrons it brings.

If you think that coal might be in remote
centers, the transmission lines are likely to either gather
energy from or across sectors that have other diverse fuel
sources like renewables, you have to transport renewables by
rail; you can get the electrons to market by wire.

Just as you get the coal-fired electrons, you may
find that coal-initiated generation and transmission also
bring to market, renewables where they might not have been
cost-justified, and that's important, particularly as we
talk about things that might happen in the West.

Steve's going to talk in great depth about things
that are going on in the Wyoming and Montana area that would
have those dual benefits.

This is a little bit of an advertisement, but I
think that National Grid is particularly well suited to
discuss this topic. For pretty much its entire existence in
the UK, it's had both the ability and the responsibility to
plan and implement plans on a regional basis.

It also has grown up in basically a coal-by-wire
environment. National Grid's system in the UK, in England
and in Wales, is bringing coal-fired electricity from the
Midlands, down to the load centers in southern England, but
it has also had the versatility to shift that transmission
system as its uses in fuel sources have shifted, including
to the North Sea gas and wind projects. It's also had the
benefit, as I say, of being independent from generation,
which has allowed it to align itself with the interests of
consumers wherever it's located, and would also have the
flexibility of moving to new, lower-cost generation sources,
as the need suggests.

The question is, obviously, what is preventing
it? If coal is an obvious solution, or renewables are an
obvious solution, what's preventing it from coming to market in a real, cost-efficient way?

In this regard, although I'm not going to try to follow Nick's act, I will try to repeat some of the things he mentioned at the transmission conference a couple of weeks ago. In that regard, with regard to our followup comments and our testimony in that conference, one thing that's fairly obvious, is fragmentation of ownership.

If you postulate three different utilities and call them A, B, and C, and A happens to have potential coal generation and C has load needs, and B is in between them, geographically, there's no incentive for B to build transmission to transport A's power to C.

If you couple that with the lack of a rational cost allocation for transmission, you might actually find that the consumers in B's territory, have to bear the costs of delivering A's power to C, so that's actually a disincentive in respect to the consumers in the area, and, obviously, to the regulators, as well.

If you think then about uncoupling that with a vertically-integrated system where B might itself own generation, there's an actual disincentive to produce or build that transmission. If the company -- one of its two main objectives is to enhance its shareholder welfare, then by competing with its own generation, it's actually
diminishing shareholder welfare, so there's a fiduciary
obligation in the utility, not to build or to contest things
that are built.

Those things are very difficult, and the other
side of it is, in the current environment, there's
uncertainty as to whether, if transmission is built, whether
generation will actually follow.

Dan talked about the other way, will transmission
follow if generation is built? There is a cyclical
development to the extent that if transmission investment
would be made, but not have certainty of recovery if
generation didn't follow. That's a greater level of risk
than ought to be borne, we think.

So, what's needed? I think the ideal situation
is the transmission companies owning large patches of
generation that would be available on a regional basis, and
they would internalize those flows, they'd internalize the
costs, they'd internalize the benefits, and they'd have much
less of the contention that exists today.

That's nirvana, certainly, from National Grid's
point of view. What's really necessary in the near term, is
certainly a robust regional transmission process with
responsibility for, we think, taking into account, both
reliability and economics in the same sorts of analyses.

Every transmission investment will have impacts
on both reliability and economic efficiency. A system that
bifurcates that analysis, we think, doesn't really give full
credit, and there may be some additional costs along the
way.

We think independence in that planning process is
essential. It allows the planning body, whether it's an RTO
or an independent transmission company or a group of states
that want to get together and plan something, to align
themselves with consumers, not necessarily with the
generation interests.

RTOs, are they the answer? We think they're a
good first step, and they provide a great platform for the
debate. My view is that they're neither necessary nor
sufficient in their current aspects to a robust regional
planning process.

If you look at things like the Wyoming
Infrastructure Authority or the Western Governors
Association, or the recently announced Frontier Project, no
RTO in place, but where there's a demonstrated need and
demonstrated resources, people of like mind, not even of
like mind, but people with a regional view, have come
together and started, anyway, the process that will bring
the right kind of resources to bear.

In looking at the benefits in proportion to the
use of the power and generation of the power, there is a
mind out in the West these days, that the beneficiaries will actually formulate and pay for the Frontier line.

That's unusual. We think it's very healthy, and we look forward to working with those states, with Steve and the Infrastructure Authority, with the Frontier Steering Committee, to capitalize on that momentum, capitalize on an economic drive to get that project put forward, and also, to the extent that the utilities have resource percentage requirements with respect to renewables, this may be a way to get that done, as well.

We think the RTOs, to the extent that they have undertaken it, are doing a great job on reliability. We encourage all the RTOs to take the next step and really look at economics.

I think Karl and Bruce both indicated that PJM is going to move forward with planning in the economic area and we certainly applaud that. We think it's necessary, and we applaud the leadership that they have taken in that role.

Jim's got the same thing going on in the Midwest ISO, certainly with respect to reliability and there is acceptance within the Midwest ISO. I think there are still some uncertainties as to whether economic planning will really be accepted, and there are some huge concerns over cost allocation.

We've been there fighting that battle with you
for the last couple of years, Jim, and whether or not we'll be there to see if the rate issues are at least brought up. Clearly, RTOs are doing a great job in terms of making it all on an equal basis, that transmission capacity that is available.

I think the next step in development is to actually actively take steps to make more transmission capacity available in all times, both near-term and long-term.

What can the Commission do to help that? I would suggest that the Commission has done a great job, at least in the RTO areas where they've focused on getting companies into RTOs. But I would urge the Commission not to be comfortable with mere RTO membership, and to continue to improve the model, increasing the independence of transmission service, and continuing to encourage the RTOs to take steps in the near term, the medium term, and the long term, to make more transmission capacity available.

We think that the goal of the Commission has been and ought to continue to be increasing separation of transmission ownership and operation from the vertically-integrated model. We think that's healthy for the economy in the long run, and think that that long-term objective ought to be borne in mind in the medium-term policy initiatives.
We think the Commission ought to require a reward for both the regional planning process, and continue to encourage PJM and other RTOs to continue to improve their infrastructures.

We think the fundamental nature of RTO structure and governance may not be the ideal vehicle, but that's what we have now. Let's drive that forward to at least make the low-hanging fruit, the necessary improvements, if we can.

We think there are some biases in here. Many of the protocols for the drive for merchant generation or so-called participant funding, we think those biases ought to be removed.

One particular aspect that is troubling in terms of transmission concerns, is the abandoned plant penalty, if you will. A transmission project, even if approved, might only be able to cover 50 percent of the costs, should the generation not follow it.

I think that's a particular policy that ought to be looked at again, and we think that the Commission ought to encourage an independent participation, particularly in some of these long-haul projects, as they may offer an elegant solution to some of the regional or statewide contentions that naturally follow the current configuration of a footprint.
CHAIRMAN WOOD: Thank you, Paul.

Steve.

MR. WADDINGTON: Good morning, Mr. Chairman, Commissioners, and staff. I am delighted to be here this morning.

My involvement in RMATS, the Rocky Mountain Area Transmission Study, began in its inception when I was serving as its energy policy advisor.

Governor Friedenthal founded the joint Wyoming infrastructure authority. I'm looking forward to continuing my involvement in the RMATS efforts and the unfinished business of getting transmission developed in the Rocky Mountain subregion of the Western interconnect.

Phase one of ARMATS provides some important lessons and illustrates how transmission planning can be both a positive process and a useful forum for stakeholders who have hopes and concerns about the future of the grid.

ARMATS is moving into a second phase. As our efforts are beginning to bring specific transmission expansion ideas into detailed study for commercial viability, ARMATS has met some significant challenges. I'll touch on those at the end. And I'll be echoing a lot of what we've already heard from other panelists.

As many know, ARMATS was driven by widespread appreciation of the economics of low-cost supply that is
bottled up by a lack of transmission in Wyoming and Montana and the corresponding need for power in centers throughout the West.

Our recent experience, as the chairman mentioned, with high and volatile natural gas prices has heightened concern with increasing over-reliance on combustion turbines located close to the load centers.

The question of the outset of ARMATS is whether low cost, clean coal and wind resources in Wyoming and Montana could provide an economic alternative to the growing loads and power needs.

An ARMATS phase one study made a compelling case that the economics of clean coal and wind, including the costs for necessary transmission, would provide consumers throughout the West with significant benefits compared to the business as usual reliance on gas fired generation.

The ARMATS screening study also recommended specific transmission expansions for further study and development both within the Rocky Mountain footprint and long distance 500 KV scenarios for moving power from the region to California and the Pacific Northwest.

The ARMATS report also examines cost allocation and cost recovery issues and concludes the regulatory uncertainty is the key obstacle that needs to be overcome in the West. As a first, ARMATS recommended further work on
possible solutions by the state's utility commissions and agencies reporting to the governors that are sponsoring ARMATS.

This multi-state committee has been working now for about six months. A draft report has recently become available that's ultimately contemplated as an MOU among the state commissions and would filed at FERC.

Another direct consequence of ARMATS has been the recently announced frontier line, which represents a partnership between four Western governors spanning across Wyoming, Utah, Nevada, and California.

The frontier line MOU stems directly from the economic potential that was demonstrated in ARMATS and diversified reliance on low-cost Rocky Mountain resources with transmission expansion and manifests the beginning of a serious effort to bring this opportunity to commercial viability.

As the phase two efforts are beginning to advance the ARMATS recommendations, major challenges are in front of us. I'll touch on three of these. And I think we've heard about all three already this morning.

First, the Western interconnect does not have an RTO. We lack a regionwide body that can comprehensively plan or potentially would be able to broadly allocate the costs of needed transmission upgrades.
In the West it may be necessary to explore alternative voluntary or regulatory means for a broad-based recovery of transmission costs, especially if it can be legitimately demonstrated that facilities would provide benefits across a wide geographic area.

The ARMATS projects and the frontier line may be candidates for exploring more innovative, cooperative rate-making solutions.

Second, the integrated resource planning and RFP requirements and processes of many load-serving entities present us with a challenge. While ARMATS was never to do a regional transmission and generation plan, utilities generally plan only for their own parochial requirements.

Regional transmission-dependent solutions can get short thrift in RIP's and ORP's due to long lead time associated with transmission in coal plants and their convention assumption for assigning of transmission costs directly and exclusively on dependent generation when doing least cost or competitive bid comparisons.

A third major challenge I think we all recognize will be in the siting and permitting arenas. ARMATS illustrates the importance of gaining political legitimacy for transmission planning and expansion.

My view is that garnishing strong support up front from governors and others across the necessary
corridors will be a plus when we get to siting and permitting issues. We also have in the West a transmission siting protocol that was promulgated by the Western Governors Association a few years ago on the shelf ready to be tested on a multi-state siting effort. Those are comments on ARMATS. Thank you very much for the opportunity to be here. And I look forward to our discussion.

CHAIRMAN WOOD: Thank you, Steve.

Bob.

MR. SMITH: Good morning, Chairman, Commission, and staff. I am Bob Smith. I manage the transmission planning group at Arizona Public Service, one of the major transmission providers in Arizona. And I really appreciate the opportunity to be here today to share some thoughts with you.

This is my first opportunity to be on a panel at a FERC technical conference. And Chairman Wood, as I heard you introduce the folks on the panel with me and I looked through the agenda, a couple of things came to mind. One, I'm either in some really good company here or, two, I need a promotion.

(Laughter.)

MR. SMITH: I think both are probably true.
I'd like to talk with you a little bit this morning about the status of transmission planning efforts in the Southwest. When I refer to the Southwest, I'm talking about visuals. We're talking about an area from basically Albuquerque and El Paso on east over to San Diego, Los Angeles, and California and really including areas of northern Mexico to the south and up to Las Vegas and southern Colorado to the north.

So if you can just picture that. And trust me, it's all a long ways from Charleston, West Virginia.

I also want to talk a little bit about the successes of these planning groups that we've put together in the Southwest and talk a little bit about the challenges. And I think a lot of you have already heard we can reinforce those.

And finally, some opportunities for improvement. The transmission providers in the Southwest have put together two regional or subregional planning groups, if you will -- the Southwest Transmission Expansion Plan Group, or STEP, is chiefly concerned with getting additional transmission capacity into California. So when I make reference to STEP, it's transmission into California.

The second group is the Southwest Area Transmission Planning Group or SWAT. This is chiefly planning within the Arizona, New Mexico, and surrounding
area footprint. So when I refer to SWAT, think of Arizona
and New Mexico. And I'll leave the more specific visuals up
to you folks.

Both of these groups coordinate with the seams
steering group of the Western interconnection or SIGWI. I
think a lot of you have heard of this group. APS has an
active leadership role in both the subregional planning
groups and in working with SIGWI. In fact, we cochair the
STEP along with the California ISO.

I'll talk a little bit about the STEP in more
detail. First, it involves an area of western Arizona,
southern California, southern Nevada, and northern New
Mexico.

The chief objective of this group is to identify
transmission plants to increase the transmission capability
from western Arizona into California mainly so that the
California market can access the new gas-fired independent
power producers that have built generation in the Paloverde
area in western Arizona.

The group has put together a four-part
transmission plan. There are two plans to upgrade the
existing transmission system from Arizona into southern New
Mexico and southern California. There is the plan to build
a new 500 KV line from the Paloverde market hub area into
the LA basin -- the second Paloverde Dever's line.
The group has developed two options for a new 500 KV line into San Diego to increase reliability and aid in the economics of the San Diego area.

All together this will increase the transfer capability from western Arizona into southern Nevada and southern California by roughly 3,000 megawatts.

Turning to the SWAT group now. This is a planning group that looks at a footprint consisting of Arizona, New Mexico, the Las Vegas area of southern Nevada, the Imperial Valley area of southeastern California, and the El Paso area of West Texas.

This group is really coordinating existing plans that the individual transmission providers may have already developed according to this group and also coordinating needs assessments so their coordinated plans can be developed by multiple entities and participate in projects that might arise from the plans.

One of the subgroups -- we have several other technical subgroups within this area which further subdivides planning into the various regions. One of these, the Central Arizona Transmission Study Group, or CATS, has actually put together several 500 KV. One of these is actually undergoing permitting today. These are multiple-participant, joint-owned projects.

There are numerous transmission projects planned
in the Arizona area in particular. You hear a lot of folks say no one is building transmission. I can assure you this is not true in Arizona. It's another area of large load growth.

APS alone has a 10-year transmission improvement plan that has committed us to spending over $1 billion in new transmission improvements. The other transmission providers, the Salt River Project and Arizona Electric, have similar extensive plans for the next 10 years.

One of the things we've done in Arizona in the last couple of years -- the Arizona Corporation Commission every two years performs an assessment of the 10-year plans of the transmission providers referred to as the "biennial transmission assessment."

What it does it determine the adequacy of the existing and the planned transmission system to reliably meet the electrical needs of Arizona. I should point out that both SWAT and STEP are voluntary, open stakeholder organizations. I think this is one of the things that contributes to the success of these groups.

So I'll talk in a little bit more detail about some of these successes at these organizations. Again, the open stakeholder process allows for the development of study plans with all the participants having input into that so you can get input on how the study is going to be run.
And as progress of the studies occurs, you can report back through the open stakeholder process feedback on adjustments that might be made. And finally the results are presented in these forums.

It's been a very, very good forum for transmission providers to perform and present the required studies of the local regulatory community.

I know in Arizona as a result of the biannual transmission assessment for the past couple of years transmission providers are required to perform reliability must run analysis within congested load pockets. This provides an open forum for all the stakeholders to be involved in those studies.

Another success is the involvement of the state regulatory community. It really helps when you go to turn in a project if the local regulators have already helped you identify a need for a project and in fact have helped you pick the best alternative of several of the projects.

There have been a number of projects that have come out of these forums, as I've discussed. They all have multiple participants. In California, again, a lot of this involved upgrades or expansion of the existing transmission system from Arizona into California.

And within the SWAT what we're doing is coordinating plans to adequately serve load growth and
improve reliability of the area.

Finally, one of, I think, the most important successes of these planning groups are the generation developers who are engaged in the process. We have a developer, specifically a coal developer in the Four Corners area, that has been working with the SWAT group for several years now and, in fact, has filed an interconnection request with APS on behalf of the other owners.

At the Four Corners switch station we've had numerous coal and renewable developers that have been a part of this process both within the Southwest and larger involvement in the Western interconnection in general through SIGWI and ARMATS, specifically in the eastern Arizona area. The man we had up here earlier showing the planned coal development.

There is plant expansion -- at a coal plant in central eastern Arizona called the Springerville Generating Station 800 megawatts of planned upgrade coal. And there are transmission upgrades planned to accommodate this expansion.

I'd like to shift some of the challenges that we have seen within these organizations. While I ended up the successes with the fact that the generation developers are engaged, actually one of the largest challenges that we have is getting good generation planning information to use in
making our transmission planning decisions.

As you've heard, these transmission projects take years to plan, permit, and build. They are very, very expensive. The risk management of a project without a guaranteed usage of that is something that I just don't see how we overcome.

Another issue that we have is that historically the transmission system in the Southwest -- and this is true for a large part throughout the West -- has been jointly owned. So a number of transmission providers go in together to build a large EAB project, so they could all benefit with incremental gains without the unnecessary capacity of the whole project themselves.

Historically this has been joint ownership by both FERC jurisdictional entities and nonjurisdictional public power participants. Today what we see is that at least in California we have an RTO that to date it's been difficult to try and put together joint projects where you can have true ownership rights of non-ISO participants.

The tariff tends to favor the member transmission providers building and owning 100 percent of the facilities and turning all those facilities over to the ISO.

It's the different requirements of the FERC jurisdictional entities. A lot of the nonjurisdictional entities are becoming wary of participating in projects
because of at least the perceived possibility of being brought more under FERC rules. Obviously the financial responsibility questions of who would be required to build projects, cost recovery issues.

Finally, even though I think we've made a lot of progress in the economic study tools and modeling, there are still a lot of challenges in modelling hydropower gas prices, transmission charges that may be levied on the grid, and bilateral contracts.

The last thing I want to mention are what I consider some opportunities for improvement within these groups. And I think in the industry overall recognizing that both the SWAT and STEP are totally voluntary. And I think they may be one of the reasons we've had the success we have had so far.

We also understand that to really get where we need to be in terms of developing transmission, we do need to enhance the structure, have some kind of governance, and ultimately an authority and responsibility of the planning groups.

This is going to allow us to keep the momentum that we've already had to date. We do need to get greater accuracy and have a longer horizon for generation planning information.

Finally, the determination of beneficiaries of
transmission projects and enhanced cost recovery mechanisms need to be developed.

So in summary, the transmission providers in the Southwest have put together two planning groups -- voluntary open stakeholder forums. We have a number of plant projects. And we look forward to working further with the FERC in improving the processes -- specifically, I think, the increased structure and governance of these organizations in the future.

CHAIRMAN WOOD: Thank you.

Charley, we'll end with you.

MR. BAYLESS: Thank you, Mr. Chairman. I know many of the people in the room. And I've got a couple of comments.

As many of you know, I was the CEO of Tuscon Electric and Illinois Power. But for the last two months or so I've been a university president. I suddenly came home to my alma mater, West Virginia University Institute of Technology, and I have to admit until Bob said it, I had not heard the words "reliability must run" for two months.

(Laughter.)

MR. BAYLESS: I apologize for being late. At a university you have to get your tuition and fees. Does this sound familiar? You have to get your tuition and fees approved by the Higher Education Policy Commission. So
today rather than being at the FERC I was at the ATPC doing a rate case getting the tuition and fees approved. We managed to do that.

I can also tell you a difference. One of the people when I took the job told me, look, you've got to realize half the faculty is going to believe that they can do the job better than you can. The other half of the faculty will believe that anyone can do the job better than you can.

(Laughter.)

MR. BAYLESS: So far that hasn't been the case. When I talked to Chris about this -- I grew up just a few miles from here. I went to high school and college in West Virginia.

We talked about this. And I said, "Look, I've been in the transmission pricing debate. I've spent more time that I care to think of with Kevin Kelly arguing this point or that point. Not an argument. Just discussing transmission pricing."

And I said, "I want to talk about the inevitability of coal." Being from West Virginia, that I think is my duty. But regardless, we are in the United States. About 3 percent of the world's population -- 3 percent -- will use almost 30 percent of the energy in the world.
Think about that -- 29.6 percent in 2003. When you look at what we're using in natural gas, according to the EIA in 2003, there was 5,300 TCF in the world trading under the Ts. We had in the U.S. 193 Ts. We have less than 4 percent of the gas in the world here, yet look what we're using.

If you look at gas and you say, well, the current usage rates that we're using -- how long is it till we go through the known reserves?

The answer is about nine and a half years. That's all we've got left. Look at the decline curves in the wells. For those that are in the gas business we can find new reserves. I know that. But we're punching more and more holes in the ground. We're getting less and less out with every hole.

Additionally, in 2003 we used about 24 T's in the U.S. 5.2 of that was electric generation. Most of that, as we all know, was shut down.

If gas prices fall to probably $3.50 or $4.00, that electric is going to come right back on. And that 5 T's is going to go right back up.

People talk about LNG. There was an article in the paper this morning in USA Today -- I can't remember which one -- about the exporting nations. And they're now sort of forming an OPEC to make sure that the prices don't
fall too much because, as you know, you've got to have about
$4.00 -- the point being, I believe, gas is going to stay
high. Right now it's $7.00 a million BTU's.

You look at oil. It's the same thing. We have
three or four percent of the oil in the world here. And on
a dollar per million BTU basis oil is about 5.8 million
BTU's a barrel.

Oil is about $10 a million BTU's. You've got gas
at 7, oil at 10. What's happening?

The basic premise I think that is going to cause
a fundamental shift in our economy is that the foreign
nations are making the same transition from a labor economy
to an energy economy that we made 100 years ago.

When you're making that transition, you have
economic terms at different elasticity than we would in this
room. And I'm going to try to put you in the labor economy.

You are now on an interstate in your favorite town. But
it's got to be north. You're three miles from any exit.

There's a blizzard. You're out of gas.

You're now firmly in the labor economy. How do
you like that? What are you going to pay for gasoline to
make that transition to get you back into the energy
economy?

The answer is a lot. If you're a farmer behind
oxen in India or China -- or I don't care where it is --
your standard of living, your family's standard of living,
your take home can triple, quadruple, quintuple, et cetera
if you could get gasoline at $6 or $7 or $10 a gallon and a
used tractor.

They have the same view of energy as we do when
we're stranded alongside the road. To make that transition
from a labor economy to an energy economy is worth so much
to them they are going to continue to make that jump in all
of those countries.

High prices. People say, well, high prices will
slow demand down. And it will in the U.S. And it actually
will slow it down. It won't be as high as it would have
been in China and the other places. But given the fact that
they are making that leap, they are going to go ahead and
make it.

And you'll say, well, can you make that leap at
$10 a gallon? Well, Europe has run for years at $5 a
gallon. When we made the transition in the United States
from a labor economy to an energy economy, we started with
whale oil. Oil was way over $100 a barrel and we couldn't
buy tractors and cars and lightbulbs. We had to invent
them.

We made the transition. I would submit it's much
easier to make the transition.

So here we sit with 3 percent of the world's
population using 30 percent of the energy. I would submit the rest of the world is going to catch up. They are going to catch up fast. And that is going to put continued upward pressure on oil and natural gas.

Now, let's look at coal. When you switch to coal, the story is different. If you look at oil, we have about 12 years of production -- reserve to production ratio.

If you look at coal, given your view of reserves, it depends on what you view as economic. We have about 250 years of coal left in the United States. We have 25 percent of the known coal reserves in the world here.

We have as much coal as OPEC has oil on a BTU basis. Whereas oil is $10 a million, gas is 7, coal is 2 or 3. My view is that we are going to switch increasingly to coal.

Our industry -- Bob mentioned this. When I was at Tuscon Electric we completed that and now we're building more. You think about how many units we've built in the last 10 years and I'll give you a number that's going to shock you. I think we've built 60,000 to 100,000 megawatts of new coal units in the last 10 years.

Everybody in the room says Charlie has just gone off the deep end. You can almost name them on a couple of hands. You can start down.

My view -- I'm on the board of Dynegy. We've
increased the capacity factor of our coal units from the 60s. And last year if you look at our 10 K, it was 90. Coal plants -- big coal plants, cyclone units. The Baldwin unit, 4,000 megawatts of coal at 90 percent.
MR. BAYLESS: What we've done as an industry in the last few years, we've raised the capacity factor of our units from the '60s to the '80s. I submit that's the same as building about 60 to 100,000 megawatts new coal plants.

We really haven't had to build anything in the last 10 years. There has been a few units started like Springerville, because Arizona, in Tucson, there was an article in the Arizona Republic a year or so ago that said the dessert is disappearing around Phoenix at the rate of one acre an hour to development.

We've got it build up there, there is just no way, but I believe that given the price of coal, I think we're going to shift massively to coal units in the United States. I think nuclear will come back also, but I foresee coal is going to happen.

I also believe we're going to hit heavily on coal gasification. I understand Mike was here talking about the unit they're building. But you look at a gas plant, you can get efficiencies of 60, 65%. Now it takes a lot of energy to gasify the coal, but you can still get a coal unit. You want a startling statistic? In 2003, according to the EIA, we put 39.5 quadrillion BTUs into electric production. Coming out the other end, 39.5 in 13 out.

The other 26 quads were conversional losses. That's a lot of BTUs. We can't afford that. We put a whole
accounting around $20 oil, $2 gas, $10 to $20 coal. We've
got to restructure our economy, and you're in a place right
now that's really -- if you drove up and down the Kanawha
valley, you'd see petrol chemical plants that are losing
jobs left and right to foreign competition because gas has
gone to $7 an mcf, and abroad you can get it for $0.50 and
$1.00.

The premise I have is that we're going to switch
to coal, we're going to need massive amounts of transmission
from West Virginia going otherwheres. I think that it's
cheaper to build the plants here. We're going to see a lot
of coal gas and clean coal technologies. We have to worry
about the environment. I give a lot of speeches on global
warning. I happen to be a fanatic believer in that and I
think it's already here.

But we've got to take care of the environment. I
think it's inevitable that we're going to start building
coal plants and we've got to build the transmission and the
infrastructure and the rules and regulations to cope with
it. Thank you very much.

CHAIRMAN WOOD: That brings it all back home,
doesn't it. How are we going to get it to the people, and
the transmission issues? It certainly is the general focus.
Nora.

COMMISSIONER BROWNELL: I'm delighted and
interested to hear all the great planning efforts going on
but we had a conference a couple of weeks ago in which some
pretty stark statistics were given about how little we
actually invest in our transmission system, compared to
almost any other part of the developed world.

The consistent theme I hear is, we need to deal
with economic planning and we need to deal with cost
allocation. We've been needing that now in RTOs and outside
of RTOs. What's missing? What is it going to take to get
there? We've heard from the states their frustration, that
we can't get there. We've heard from people who want to
invest huge amounts of capital, yet we've got a planning
process that's largely dominated by the current providers
who do have some perverse incentives, if you really look at
it.

So, what is it going to take to get from here to
there in a short period of time? Jim, why don't we start
with you? What's missing in the planning process? How do
we bite the bullet on cost allocation, understanding that
the whole beneficiary issue changes? It's a dynamic issue
and so we can't get that perfect timing.

MR. TORGERSON: The first one is the cost
allocation, that has to be figured out who the beneficiaries
are and people stepping up and saying, okay, we acknowledge
this, we'll share the cost, we'll share the benefits, and it
involves all those states.

The other aspect, I mean, we've done some planning processes, not looking at economics. We did some in our 2003 plan. We're doing more in our 2005 plan, identifying where transmission lines can go in and open up these regions, and I'm not talking about improving the reliability.

We have 24 different spots where this proposal gets addressed and it's going to take a few years, but those will be address. They haven't getting addressed from our previous plan. It's the economic ones that have to get, and getting people to lead the charge at this point we believe we're going to have to be some of the ones to do it. Get some groups together that actually will push through Congress.

We have some ideas on putting underground volts that would carry, you know, large transmission lines from the areas where you have lignite or coal and other areas and move that so you're not stringing the wires up above, and maybe you run them along the interstate highways, but that would take Congress to allow that to occur.

So we're going to have to start pushing it. We're going to have to get some groups who want to actually build. We hear the money is available, but I haven't seen anybody step up and say, yes, let's take on that project and
start doing it.

I've heard groups that want to do it. The ICCs, the Transco, I think there is a number of them who want to. So we need some leadership. That's exactly what the RTOs are going to have to do rather than just plan. They're going to have to lead.

COMMISSIONER BROWNELL: I'm sure we're going to hear from Paul about the willingness of an independent transmission company to come in. What candidly we hear is that the processes are not as independent and open as they might be, so new players haven't actually been welcomed.

KARL: You talked about a consortium, you mentioned public power, who does want to built. We don't see any ITCs and PJM. Would they in fact be welcome at the table?

MR. PFIRRMANN: Certainly they would. If I look back over my 32 years in this industry, most of which were spent out on the construction end of the business, early on in the process, we built transmission as we built new generation. They went hand in hand.

The only way you built a new transmission plant is if you, in fact, had a significant amount of transmission to take that generation load. It was transmission that was built to basically server a fairly local need.

Later, during the 90s, I think what happened was,
that there was a reluctance to build anything because it was so difficult to site a project. It was so difficult to get to a consensus position on the need for a project and how to best go about doing it, to actually share the benefits.

RTOs have stepped in to answer a lot of those questions. I think the regional planning process that RTOs bring, brings that independent view of the need and can co a better job of assessing that need and convincing all the stakeholders that we are addressing needs in a very independent basis.

Certainly, by getting multiple parties to be involved in a consortium approach is a way to get around some of the concerns about one particular group of stakeholders benefiting more than others.

When you open the process to ITCs, to Coops, Munics, virtually any group that would like to get involved in the transmission process, I think you step across that boundary of trying to find the natural opposition to the project and instead find some natural consensus about the project.

COMMISSIONER BROWNELL: So better assessment is one of the things and a more consortium approach would be something that would add value to the existing process today?

MR. PFIRRMANN: Absolutely.
MR. REW: With respect to Southwest Power Pool, I mentioned in the opening comments, we received approval of our cost allocation proposal developed by the Regional State Committee, so I think what we need is some experience in implementing that to make sure it's effective. Is it a perfect cost allocation? I'm sure it's not. I'm sure we'll have to tweak it a little bit as we get into it but it gives us good experience and as part of that, we have economic planning.

The first week of June we're going to have a planning summit group preventing four DHV project, which the SPP has identified can provide potential economic benefit to the region. It will be a matter of entities agreeing with those results and stepping up and funding the process.

COMMISSIONER BROWNELL: Paul.

MR. HALAS: A couple of reactions. In defense of the existing RTOs, they still are at the stage that I would call basic. I don't think any of the RTOs are at the stage that everybody in the room thought they would be in the year 2000 or 2001.

A lot of the last three or four years has been spent basically getting the footprints of the RTOs settled. The RTOs had to get that right. They had to get that settled and get reliability settled down before taking what has to be the next step.
The next steps involved regional builds of transmission, not just interconnections, builds that actually enhance the reliability of the overall footprint and bring the longer power sources to bear.

Those will have natural resistance in the virtual integrated model of fragmented ownership. Some force would need to be brought to bear to overcome that. Considering the economic reality is starting to overcome that, less than the absence of the RTO. Perhaps those forces will have effect in the east as well and the more and more transparent prices becomes the more likely that becomes.

Whether there is a way to jumpstart it is a fair question. I would encourage FERC to continue to push the RTOs to take whatever steps are available to make more transmission capacity available.

Whether it's a more enforceable planning process, whether it's an RTO taking the steps that yes, this line will be built, and giving these common owners the right of first refusal to build it in their territory. If not, someone else comes in and builds it.

Those are again steps. They're incremental. In the long term, we do believe that the country will best be served if there are market operators that provide all the information and provide the market mechanisms that give transparent signals large transmission owners that are
independent of generation interests, then the very
competitive generation and supply markets.

    As I indicated, it's taking longer than anybody
thought. I know Mr. Chairman, you and I talked about this
about two or three years ago. We thought maybe three years,
maybe five. Maybe it's more like 10 or 15, but I think the
industry is on the way to getting there.

    One aspect, with respect to state regulators, who
are obviously essential to all this, it's incumbent on the
industry to give the regulators reassurance that long term,
their state would benefit from a free trade economy. A
state with low cost power, that lines ought to be built to
take that low cost power out of state because the prices
will go up in their state for some period of time. It's a
difficult road to hoe, if you will.

    Laws of comparative advantage indicates, over
time, that that state would be much better off, but the laws
of comparative advantage generally take longer to take
effect than anybody is likely to turn out. So we need a
long-term steady hand at the helm here. You guys have the
best shot at it.

    MR. WADDINGTON: In the Rocky Mountain area of
the Western Interconnect, as we all know, we don't have an
RTO. We don't have an institution that can be used to plan
broadly across the west or socialize the costs for economic
What we're trying to do with RMATS is forge ahead on some specific projects that hopefully will gain sufficient multi-state collaboration and agreement for either a voluntary or regulatory cost allocation scheme to emerge.

There may be other tools that FERC and the States have. I think Path 15 is an interesting example. I see that success being enabled by at least three elements.

First, it was an upgrade that was strongly supported and recognized as being needed and economically valuable, with strong political support coming from you all.

Second, there is a great deal of regulatory uncertainty, pre-approvals, accelerated depreciation. If developers knew going in that they would get their costs recovered, I think for the jurisdictional utilities or the incumbent utilities, if they are going to be involved building transmission, that's a critical piece. The uncertainty just keeps them from moving forward, I believe.

The third enabler on Path 15 was, because a lot of its involvement, there is an expected siting and permitting process. All three of those are the kind of environment I'm hoping RMATS will create around the specific projects, whether it's within the Rocky Mountain footprint, where the cost could be allocated between three or four
states, or more challengingly, the frontier line.

I think we've got to get to a broad based
recovery mechanism in the west. For the near future, that's
going to have to be a voluntary approach.

COMMISSIONER BROWNELL: You've made a lot of
progress, so we're okay.

MR. SMITH: In the Southwest, I think we're
really in the same place that Steve mentioned the Rocky
Mountain area. I guess I could offer that I think, once the
economic benefits are clearly shown of transmission
projects, that we have evidence from the upgrades that are
really in progress right now as far as they're related to
California, that there are folks that will step up to the
plate and build transmission.

You just have to clearly show who is benefiting
and have these people be able to enter into long-term
agreements with the resources that they want to access.
It's probably a lot easier to do that with gas generation, a
lot of which is built relatively locally and I think where
we're at right now is sort of struggling with attempting to
integrate the planned coal resources in the Four Corners
area with a transmission project, which we'll hear more
about, I think, this afternoon.

It just seems to center around financing, risk
management, and lack of certainty on various parties to be
able to make money in the long term.

I can assure you that the transmission providers in Arizona, APS, who is working on transmission interconnection request for this coal plant and other owners, specifically the Navajo Transmission System, that have entertained a number of presentations of this proposed transmission project.

We don't have an interconnection request yet into our transmission system, but we are certainly prepared to process those things.

We have done pretty much everything we can to accommodate study efforts. APS has actually expressed an interest to participate in this transmission line. The investors preferred that they would own the line and we would contract long-term transmission from them.

But again, I would think the interests and the institutions are there, it's a matter of just a little more certainty in the results of economic studies and somehow we have to manage to get the folks who want to sell this energy, together with the folks that can buy it and once you have some long-term arrangements.

Even though you had a graph up there earlier today that showed transmission takes maybe two to three times as long as it does to develop a coal plant, I'm not sure I would agree with that, especially in the Southwestern
CHAIRMAN WOOD: While we're talking about that, Bob, on question I have, I guess a troubling little story I saw in yesterday's Trade Press. The local Siting Authority in Arizona had some trouble. I don't know exactly how to it was represented, but didn't want a one-way line to California from Paloverde, and I guess that line -- they worked with you guys on this. Is that going to be a problem when you've got, really, in your state or any of these states. Is that going to be the ABC problem that I think has been laid out?

You've got APS building a line that's going to primarily have the customer being in another state than California. We could talk about California is willing to pay it, but will the Siting Authority in Arizona actually approve that line to go through the Arizona territory?

MR. SMITH: First of all, if I could predict what the Siting Authority in Arizona would do, I would probably have that promotion already.

(Laughter.)

MR. SMITH: Second, APS will not be building the Paloverde Devers line. Southern California Edison will come to Arizona some time in early '06 and request permission to build that line. They'll request a permit. It's been, I guess, some issues surrounding the willingness of the
builder of the line, Southern California Edison, to entertain certain options or interconnections or joint ownership of that project.

That could have benefit to some customers in Arizona, particularly Western Arizona, along the river, and I think there are just some issues that we need to continue to work out along those lines, and I think that's what the regulatory authority in Arizona is more concerned with.

Not that they are unwilling to allow California additional access to the market that has been built in terms of generation in Arizona, because it's important to send a signal to the wholesale market that we're not going to try and do anything, to somehow restrict that market, but I think they just want some assurance that the California entities that are building this line through Arizona are also looking out for the interests of Arizona entities and people that they work with. I think it's something we can work out.

MR. BAYLESS: I'd just like to make two comments. I think the first one, I'm now in an engineering school and I can make this with more authority.

One of my all time favorite comments is the only known violation of this that involve thermodynamics is that one it runs uphill to money. I believe FERC has got together to push market pricing. We've got to get pricing
more towards long run marginal cost and then people will build new lines because pricing anything below that causes too much transmission to be used and I think decreases the reliability.

The other thing I would suggest, the Commission has for years advocated, we need more FERC authority. Somebody has got to have the ability to go in and order the line built.

If you go to Ohio and say, let's take West Virginia and say, boy we really need to do a $30 million investment to help Synergy, you're going to get people looking at your rather funny. Why do we need to do that here? The point is, we do.

I think one way around that may be something like the EPA. The EPA has the power to regulate but they concede that power to the state with compacts, saying to the states, if you guys form a regulatory compact that's within the footprint of the RTO, you want to go to PJM Western for them to give that authority the right to have them in a domain and to order transmission lines and say this line needs to be built, fine.

But if you don't do that within five years, the power receipts back to FERC, and to have people have that, I think some states will be able to do that. But we clearly need some authority larger than a single state, having the
ability to say, we need this line.

CHAIRMAN WOOD: I will say, Karl, this is a switch to you but certainly your project that you laid you here, the Mountaineer project, would be a true test of the existing siting system.

Let me ask you some questions. What would the timeframe be for this? I know there is a new announcement today, but just kind of ball park what are we talking about here as to when these lines have to be energized?

MR. PFIRRMANN: It's certainly a long term project. If you go on recent history about building a project of that length, it's certainly in the 10-year timeframe, I believe. It's not an immediate solution.

CHAIRMAN WOOD: In the meantime, do you go ahead and do the Blackhoe line on its own?

MR. PFIRRMANN: Certainly, reliability, Jim indicated on a routine basis, PJM as well as the Midwest ISO will look at reliability issues and issue plan with projects to address those reliability issues.

Certainly, for example, at Wiley Ridge, just in the last 12 months, Allegheny has put in special protection schemes of Allegheny for Wiley Ridge to help address some of the issues at that substation.

It certainly would be the integration between the Midwest ISO and PJM. We've been able to in some re-dispatch
solutions with the first energy units at Samos. So there are some short-term solutions to some of the problems.

But really what we're talking about, the focus of this conference is, how do we move large quantities of energy from this region of the country to the places where it's needed. That is not something that can be solved through some localized short-term solutions. It certainly is a long-term kind of project.

CHAIRMAN WOOD: Let me ask this of you, and also of Jim. The other two RTOs but run through that process, kind of take it down to a level of detail for me. Say the planning process comes up with something like this, some significantly large amount. I've seen Jim, in your RTEP, and the MYISO as well. Very significant project. How do you take that form the concept stage in the RTO planning to actually getting it built?

Do you direct that entity to build it? Do you give them a chance to build it? What if it doesn't have the financial wherewithal to invest in a big project like this? Do you let somebody come in as Arizona apparently would allow and other states utilities to come into another state? How does that work in your region?

MR. PFIRRMANN: There are several options here. Clearly, right now in the PJM region, individual transmission owners, on a reliability project have pretty
much the first right of refusal to build that project or
responsibility to build that project.

But on a project like this, of this magnitude, I
think the first step is really to reach out and find those
who are interested in participating. People who perhaps
wouldn't normally be part of the mix.

Obviously, you go back to the transmission owners
as your first step. Clearly, there are others who have
interest. There have been some states who have indicated
interest and are willing to finance large projects like
this.

Clearly there are independent power issues and
the ITC folks would like to be involved in projects such as
this. You reach out to those folks nevertheless. The
opponents to those kinds of projects just to find out if
there is some common ground around regional development,
regional assessment of need, regional assessment of how best
to accomplish the project.

CHAIRMAN WOOD: When you talked about your
consortium issues, Aubrey mentioned that at our last
conference where PJM in Washington. Would the consortium
just be whoever is interested in being a financial
participant here and also perhaps an operational
participant?

MR. PFIRRMANN: I think those are two of the
participants in that consortium. But I think as well, the environmental interests need to be part of that effort. Clearly the state regulatory and federal regulatory folks need to be part of that interest as well. We need to come up with joint ways of resolving many of these issues that I'm identifying today before we move forward on a project like this.

CHAIRMAN WOOD: Would it be PJM in the driver's seat on these things? Is that what's different about this proposal here, is that PJM has actually kind of taken ownership and proposing to tell them, you handle it from here?

MR. PFIRRMANN: We believe that the regional planning process that we have is a good place to start with this. We certainly we the work we're doing with the organization of PJM states is again another place to start with this where we can bring these folks together.

Within the stakeholders of PJM or any other RTO, we begin to look at how we can best resolve the issue.

CHAIRMAN WOOD: I guess I'm trying to figure out, how does it move from this is a great idea to, we're going to make it happen.

MR. PFIRRMANN: I think you're right. I think it does fall back to an RTO. PJM or the Midwest ISO to perhaps maybe call that first meeting to get those people together.
to begin to flush out what interest there is and what
commitment there might be to constructing such a project.

CHAIRMAN WOOD: Jim.

MR. TORGERSON: Well, as you know, we don't have
to order anything. We're about reliability and reliability
would be in the case where the system is threatened, then we
can order it to be built directly to the TO, and if they
can't do it, solicit others or we can actually do it in the
end.

We certainly look at economic projects. That's
what things were pointing to. That's why I was mentioning
before, maybe there is time for the RTOs to lead it. You
still have issues that have to be overcome. In our states,
you have to be in order to construct these facilities and be
part of the transmission group. So you have to be a utility
in the state, in some states.

You still have to work with the states to get it
done. The TOs who are in the states where we will be going,
many of them believe they have, we'll call it the right of
first refusal, whether they do or not, some believe they do.

If I wanted to get with Paul McCoy's group and
get them to participate in it, there will be some
challenges. I'm not saying we can't overcome that, that's
what I would thing.
Maybe it's time for the RTOs to start leading it. Karl was saying the same thing, get those parties to the table. If it's an economic project, work with the states. The State Commission, the OMS has been supportive of this but get them together, get those who wish to build it and then find someone who actually can get the project built.

And also, you have to overcome who is going to pay for it and how are the costs going to get divided, and who shares these benefits. Those could be worked out and they can be worked out with the RTO facilitating it.

The RTO, I don't think is going to be the one who is building it, our role I think is one of facilitation.

CHAIRMAN WOOD: Bruce, the cost allocation plan that you put before the Commission, your state regulators were all involved in that. How that worked in the planning process on that? I watched it personally for like two years.

In responding to the things we were just talking about with Karl and Jim, what's SPP's approach is going to be?

MR. REW: Chairman Wood, our approach is that the RTO will perform the economic analysis for the region to determine the beneficiaries. We will put that out in a public forum such as what we are going to represent, the economic benefits of four EHP projects.
It's at that point where the stakeholders will make a business decision on whether or not they agree to invest in that project. If they make the decision to do that and you get sufficient investors to make the project go, they can do that and SPP's cost allocation has a mechanism for them in place to get their cost recovery back on an investment in the economic upgrades.

CHAIRMAN WOOD: That date is when again?

MR. REW: June 1st is our Transmission Summit meeting in Dallas.

CHAIRMAN WOOD: Chris.

MR. WRIGHT: We were down here kind of discussing a couple of things. Cost allocation and planning are big issues. Doesn't it ultimately come down to siting? Isn't that the big specter that scares a lot off? I want to point out just one thing.

The first interconnection between Alberta and Montana, the Montana Alberta tie, a couple of hundred mile line. On their website they said they have to get 134 separate permits to be able to operate. It's kind of my slant on things. It's siting. Always cost allocation, always planning are problems, but siting always seems to be back there squashing people from coming ahead and proposing projects. Any takes on that?

MR. TORGERSON: What we've seen, while you're
right, siting is an issue, but the State Commissions typically get things sited pretty quickly or get the approvals pretty quickly, or it gets bogged down, as in the local jurisdictions at times if they have authority or you wind up with lawsuits or people want it to go through a certain area.

It's not at the state level typically that we see the issues, it really becomes local and you're right, it's getting it sited. That's why you start having to look at, are there other ways we can approach this.

Running it along highways, you know, where you already have a path and doing things that way, rather than trying to go through peoples' farms, through developments or whatever, we ought to start looking at ways to minimize the siting aspect of it.

MR. PFIRRMANN: I think this is always where technology can step in. I believe there are technologies that are out there that start minimize some of the apparent effects of transmission on property owners.

To the degree we can employ those technologies, I think that would help us by that process a bit. The other approach though, again going to the consortium idea, is to try to get the folks that are most likely to be opposed to the line, to the table early enough so they understand the need for the line and the regional focus of that need.
In the past, clearly the result of proposed projects by transmission owners has usually been a local property owner choosing a position of saying, it's my property rights versus the interest of that particular transmission owner.

It's never the perspective of what's going on and what's best for the region, from an overall social perspective. That's why you need to do this planning process that we're talking about in a broad, open stakeholder process, such as the ones the RTOs provide. And then, bring about those various disparate groups into the consortium concept so we can openly discuss resolution of those issues as early as possible. Will we get rid of all of them? Certainly not.

About the only answer to that would be some sort of federal siting law that would basically overcome local property rights. I think that's a huge battle that none of us want to undertake.

MR. REW: I agree in general with Jim and Karl. To my knowledge, any way, siting has not prevented the transmission line from being built. It's working with our regional state committees. We think from a state level, that we can get the necessary approvals but it gets down to, not in my back yard at the local level.

Even though SPP may not have mountainous terrain,
a lot of people there do value their view and don't want a transmission line in the backyard.

MR. HALAS: I might just add a little to that. Siting is clearly a huge issue but we don't expect that it will be a dispositive issue. It will certainly be an issue of timing and expense. My guess is Karl, we haven't looked at the mountaineer line, but my guess is, in your 10-year estimate, two to three to four years of that was in getting permits and siting.

We have looked hard at the Frontier project and we estimate that's a 10-year project. A couple of years to get it roughly developed, three to four years to get permitting and siting done, and then four to five years to construct.

It owes an awful lot to the bill. In the U.K. National Grid was able to transfer flows 50%, moving it from coal to gas to London without involving a new line. So our technologies and improvements that can be made in our existing rights of way ought to be looked at first.

They may not answer all the questions with respect to remote coal, there will be some big siting issues with regard to that, but it really is, we think, more of a cost issue than a no go issue.

MR. MCCLELLAND: Let me follow up with that. This is an important point and I think we need to spend a
little time on it. Karl, you mentioned the Mountaineer project. How many states does the project cross?

MR. PFIRRMANN: Anywhere from three to six states.

MR. MCCLELLAND: Let's hold the number to say three. I have an example in front of me. American Electric Power, 765 kv project, between West Virginia and Virginia. A simple two-state project that from the time it was announced in 1991, it was about 14 years down the path to get that project constructed. That's just between two states and I have actually the details from our colleagues in DOE.

David Byer worked on the specific example. But it seems to me, even a decade, considering just the two-state line. Isn't a decade on the optimistic side?

MR. PFIRRMANN: I'm always an optimistic.

(Laughter.)

MR. PFIRRMANN: Actually, I think our friends from AEP may take issue with that being a simple line. I don't want to speak for you, but I'm sure --

MR. MCCLELLAND: It was relative to six states.

MR. PFIRRMANN: Let's put it this way. There was some young people at AEP I knew at one point in time that are now a little bit further alone in their careers, but nonetheless, I'm thinking in my 10 year estimate is based
upon being successful with this consortium idea, generally.

I think we need to get to the point again. That it gets beyond the impression that projects like this are being built for the sole benefit of a particular stakeholder. That's the key I think.

MR. MCCLELLAND: Also, I guess too, it wouldn't be fair Karl. I wouldn't expect you to know the specifics about the line, but there are also one, two, three, I see at least three federal agencies involved in that decision and as those federal agencies step in and represent their particular jurisdiction perspectives, they cause adjustments to the line path itself.

Although the states in this particular case have been rather responsive, the states have need to do adjust and go back and reconsider, proposed and alternative routes for the lines themselves.

So to move further alone, I think in the Mountaineer project, the commissions try to encourage infrastructure investments, were pleased to see the initiative.

I think it will be a difficult process to construct and site in a decade and at least, I believe, Karl, based on some of the examples that are before the Commission now, it may be optimistic and it helps to
illustrate the issue, the problem in moving towards a
national energy plan that incorporates more coal fired
units. Would you agree with that?

MR. PFIRRMANN: Absolutely. It certainly would
be the last project of my career.

(Laughter.)

MR. PFIRRMANN: That's a pretty easy statement
for me to make.

CHAIRMAN WOOD: We're a little over time. I do
want to offer anybody in the audience. Yes sir, Mr. Harris.

MR. HARRIS: Thank you Mr. Chair. Phil Harris,
Chairman and President and CEO of PJM. I've been listening
to the dialogue on the consortium in the market project.

We've been given some extraordinarily serious
thought to a number of things that have happened, creating a
changing circumstances. Certainly Mr. Bayless gives some
very eloquent arguments for the use of coal and the value
that coal is to our region.

We now have the organization of PJM states. We
had a wonderful meeting with most of them over the past two
or three days. I did not hear from any state that the value
and the need for transmission that could have value for the
citizens of this country should not be enforced. What we've
seen and looked at in this industry, we've been doing this
for quite a while now.
But if you look at evolving and changing, look at the aerospace industry. This is a changing industry over time. The aerospace industry, for a long time, each individual company built their own airplanes. We got into out of space and you couldn't do that. You form consortium groups that got together from profit and nonprofit, academic, developed the shuttle, developed the space station. They accomplished great things.

More meaningfully, the Alaskan oil pipeline. One of the most wonderful engineering constructions. You go to the Smithsonian. You talk about how a consortium got together, built a pipeline under a certain project manager. Exxon, they got the line built and look at the value the proposition has brought in today.

It is time for a vision. It is time to dream and I think looking at these scales of these projects, if we're truly going to solve some of these massive energy dislocations, we have to be able to think and deal with that, and I think we're getting a perfect storm in the right direction.

We have the states saying this needs to be done. We have the federal government saying this needs to be pursued. We have a regional planning process, which we've never had and I'll tell you, I'm delighted with something I read recently from Excelon. In the filing they made the
document they made said that they are willing to build and construct transmission on anything that will enhance a competitive marketplace.

I heard in our annual meeting last week some of the transmission owners who said we're going to step up, build and construct to move forward. So I think what we're seeing is everyone that has a vested interest, even APPA has been saying publicly, we want to buy into this thing.

I think our job is just to simply provide a form and some leadership for those that want to be in the business. Just put the things together, put the plans out and see if we can move forward. Is 10 years too long? I don't think so. We put a man on the moon in 10 years and now we have a lot of people saying, let's do something and our recommendation is, from our consortium idea, let's pull together all these brilliant public policy leaders such as you have in the states that are stepping up with Mr. Bayless with his ideas. Let's put this together in a way that we can truly solve something that is extraordinarily difficult and look at the ways we have in the past.

Peter Drucker in his wonderful book, Management Challenges of the 21st Century, said that the 21st Century will require much higher degrees of sophistication to deal with our differences, and I think it's up to us to step up with that sophistication, deal with the differences and
make things happen, and that's our idea of what a consortium
is.

Just get together, look at it, deal with it and
put everybody in there so we're all on the same team. Thank
you.

CHAIRMAN WOOD: Thank you Phil. On that note, I
think it's time to eat. Hold on we've got a very important
announcement first.

COMMISSIONER BROWNELL: I now many of you have
been waiting for the details of the Dan Larcamp historical
tour. When we're done today, we'll meet the bus outside and
we'll start at Noreen's house. Noreen was Dan's longest
living girlfriend. Mom by the way did not like her, Dan,
not one bit.

(Laughter.)

COMMISSIONER BROWNELL: She is one of 12 children
and by the way, she is still not married. If anybody wants
to join us and take a look at that that would be a good
thing and then we're going to go to Becky Campbell's house.
Becky was the date for the senior prom. It was a short-
lived romance, but an interesting one.

Then we are going to see Patti's house. Patti
was the girl Dan took to his first dance. Patti was about
half his size and spent half the night dancing with his
navel. That too was a short-lived romance.
We did visit the first house last night on Sunset Drive where Dan moved up into the world. But we're going to visit the other two and then the football field where he got his first concussion and we love him anyway, but there were a few more concussions and when you have a long conversation with Dan, you can see that outcome.

(Laughter.)

COMMISSIONER BROWNELL: And Dan is also buying dinner at the end of the tour.

(Appause.)

(Whereupon, at 11:40 a.m., the technical conference was recessed, to reconvene at 12:50 p.m., this same day.)
AFTERNOON SESSION

(12:50 p.m.)

CHAIRMAN WOOD: Nora will get here but I'm going to go ahead and get us started so we don't get too far behind. We wanted to talk, building on this morning's conversation in the afternoon. Now you all had a chance to be nourished a little bit, we wanted to talk about the views on regional planning from the regional NERC reliability councils and from state representatives, who will look at it more from the public side of the post than from the industry and RTO side.

We've got here a great panel to talk about the current initiatives going on and across the panoply here, I want to introduce those folks briefly. We've got the second panel here too, right? I'll introduce you all. Stay where you are. If you want to leave and walk around it's fine, but I want to keep my focus here on the five we've got.

Bob Dintelman is the COO of the Western Electric Coordinating Council, the big section of NERC that oversees the many utilities in the west.

William Reinke is the Executive Director of the SERC, the large region that covers the southeastern United States. Again, these are the electrical reliability council regions.

Jerry Lein is from the North Dakota Public
Service Commission, a State I've had the pleasure to visit three times in my term here on the Commission. We've got Larry Chaset, a last minute volunteer, who is from the California Public Utility Commission. He will also speak on some western issues and western concerns, and Gayle Mayo who is Executive VP and COO of the Indiana Municipal Power Agency.

We've had the pleasure to have you at FERC conferences in Washington. We're glad you can join us out there in Charleston. We'll start here Bob with you and we'll just go down the line and we'll have some Q&A afterwards.

MR. DINTELMAN: Thank you Mr. Chairman. Bob Dintelman, Chief Operating Officer, Western Electricity Coordinating Council.

WECC is one of ten regional reliability councils that comprise the North American Electric Reliability Council. We're also one of three interconnections that comprise the electric grid in North America.

WECC is a member-driven organization. We have the ability to take on the tasks and functions that our members feel would best meet the needs of the western interconnection. That would include an expanded role in the area of transmission planning, to the extent that our members identify such a role, and for us to take on an
expanded role, it may require modification or fine-tuning of our mission and goals.

We have a process that's outlined in our bylaws that would accommodate such a change. In fact, our bylaws require that we apply that process every five years.

A number of years go, our Council, then known as the Western Systems Coordinating Council, developed and implemented a regional planning process. That process is very much in use within the western interconnection for the planning of projects that are of regional significance.

I want to just take a minute to highlight some of the key elements of this process and also let you know that the entire process can be found on our website, if you wish to take a look at it in more detail.

But, the purpose of the process is to foster the development of a broad regional or sub-regional planning perspective among all stakeholders in the process. Promote and encourage a more efficient use and development of the region or sub regions, existing and future facilities, to enhance interconnected system operation.

Ensuring that all relevant regional or sub-regional planning issues are considered during the planning of transmission projects with regional or sub-regional significance.

Provide procedures and guidelines for coordinated
regional and sub regional planning. Involve member representatives, regulators, existing planning bodies, environmental groups, land use groups, and other non-utility interest groups in the process. And I might just mention at this point, that we are actively involved in forms that include the Western Governors Association the Committee on Regional Electric Cooperation, the SEAMS Steering Group Western Interconnection that you heard about this morning, SIGWI, and the sub regional planning groups in administering this process for the Western Interconnection.

The process allows stakeholders to identify opportunities for improved regional transmission efficiencies and make recommendations to achieve them. The process also calls for a voluntary dispute resolution process.

In addition to these purposes in our regional planning guidelines, the guidelines also include 11 regional planning guidelines and I'm not going to go through all of those.

I would like to just indicate several of them to give you an example of the types of guidelines that we're looking at. Take multiple project needs and plans into account, including identifying utilities and non-utilities future needs.

Environmental and other stakeholder interests,
cooperate with others to look beyond specific endpoints of the sponsor's project. To identify broader regional and subregional needs or opportunities. And then I think, particularly pertinent to the conference today, dealing with transmission planning and the integration of coal resources. Identify and show how the project improves the efficient use or impacts existing and planned resources of the region. And we would look at both benefits and impacts, transmission constraining mitigation and then the final example is, identify transmission, physical and operational constraints resulting from the project or that are removed by the project.

In this context within our region, there is current discussion going on about an expanded role for the Regional Council with respect to transmission planning. There is a group called the Western Assessment group that has put together a White Paper that identifies this as one of the elements that we're looking at and some possible expanded transmission planning roles for our Council would include data collection and management, coordination and integration of subregional transmission planning studies. You heard a number of subregional study efforts that are going on within the western interconnection in the earlier panel.

Identification of the benefits of the projects.
Then the last item, which is very important, is development of principles to promote project implementation.

Our track record has been pretty good with respect to planning projects, especially to address reliability concerns, but the next step is getting those projects built. That's an important principle that we need to review.

With that Mr. Chairman, I'll conclude my remarks and look forward to the discussion.

CHAIRMAN WOOD: Thank you very much. Mr. Reinke.

MR. REINKE: Thank you Mr. Chairman, Commissioner Brownell, State Commissioners, staff. It's a pleasure to be here today. My remarks will provide a number of statistics about the southeast region. I feel after I finish that you'll find that I think we have addressed most, if not all of the questions that you are posing to the panel.

I'd offer on the second question, in the panel list of questions, where you talk about increased transmission reliability. I want to be sure we don't confuse reliability and adequacy.

I did hear a number of adequacy issues this morning. I don't know that I heard reliability issues, but they are different and I think that we need to make sure we segment the difference between reliability and adequacy.

Talking about SERC. SERC was established in 1970
as Bob said, it's one of the ten regional councils that are members of NERC. We include portions of 13 southeastern states in the United States and have 38 regular members covering an area of about 464,000 square miles.

Since our inception in 1970, our members have entered into a number of reliability agreements to engage in joint planning within the region. These agreements require that among other things, members conduct joint studies and investigations of the performance of the bulk power supply facilities under normal emergency conditions.

They also require coordination of voltage levels, reactive interchange, as well as exchange of information within the region related to the magnitude and characteristics of loads, modifications to bulk power supply facilities.

On the load and generation side, you'll find this interesting, I think. In 2005, our systems anticipate a peak load of more than 165,000 megawatts and the capacity resources available to meet that load exceed 186,500 megawatts which compete to our reserve margin of about 16 percent after we take into account demands side and load management programs.

The fuel mix in the region is such that we have 40% coal -- this is the capacity side, 40% coal, 18% nuclear, 16% gas, 13% is dual fuel, hydro is 7%, pump and
storage 4% and we have some oil, 2%.

Clearly, the kilowatt hours produced in the region are predominantly by the coal and nuclear facilities. The other facilities come into intermediate or peaking mode. We count the uncommitted resources that are already in the region, that is the generation installed and available, but not committed.

If to meet regional load, the reserve margin this summer would be nearly 43%. Most of this uncommitted generation uncommitted to our load is gas fired.

Capacity additions that are planned to meet the expected 2% load growth in the region through 2009 includes 16% would be steam, and that could be any number of fuel sources for that, 5% nuclear, which is typically upgrades to existing plants, 17% combustion turbine, 11% combined cycle, and again, you would guess they were gas fired, 8% pump storage, again which are upgrades to existing facilities, and 42% other.

You'd ask, what's this other? What are the systems doing? We feel that the other category really is likely to be made up of purchased power from facilities that are already on the ground in the region and/or adjacent to the region from the merchant bank capacity. We think that's going to happen.

One of our members this week made an announcement
that it plans to install additional coal fired capacity in the region as early as 2010. So within five years, there is the expectation of additional coal fired capacity in the region.

On the transmission side, member transition at 161 kv and above is about 42,400 circuit miles. Planned additions through 2009 include an additional 1250 miles. The interesting statistic here is that the expenditures for transmission in the region that would be at all voltage levels for transmission, there is no distribution, will exceed $1.1 billion per year for the next five or six years and it has been over $1 billion the last couple of years.

So our member systems are committed to, and are installing more than 25% of the transmission that's being installed in the United States for the foreseeable future. Less than 5% of these transmission expenditures are for generation interconnections. So 95% of the transmission expenditures are for load growth and reliability purposes.

In some way, the systems in the southeastern United States have been and continue to be engaged in joint planning. We have a fleet of resources that have a diverse fuel mix and we continue to make transmission investments to accommodate load growth and enhance reliability. Thank you.

CHAIRMAN WOOD: Thank you. Larry.

MR. CHASET: Thank you. I was asked to speak at
the last minute, but I'm afraid my remarks are going to be a little bit impromptu. But I'll do the best I can.

I'm an advisor to our new Commissioner, Commissioner Dian Grunick. I hope that what I'm going to tell you today reflects her thinking. California, as you know, prides itself on being different and special but I think we have a lot of the same problems that we see in the rest of the country.

You may have heard that we are potentially experiencing some supply shortages in southern California this summer. We're doing everything we can to increase energy efficiency, trying to get some new units on line to make sure that the lights do not go out, that's very important.

In California, we have a very strong resource adequacy planning process that our Commission has put into effect in the last couple of years to assure that we do not have a repeat of what happened in 2000 and 2001.

We have 115% of peak demand resource adequacy planning criteria that our utilities are supposed to implement in 2006, by the end of 2006, so I would hope that by 2007, all our utilities will have signed up enough capacity to make sure that this is going to be met all the time.

But California, being the nice place that it is,
continues to grow, and electricity demands continue to grow
and our utilities do show the need for new capacity, both in
the short-term and the medium-term, and particularly in the
long-term.

We have a lot of old gas fired units that are pretty efficient. Some of them are going to be repowered. Some of them are going to be replaced by other capacity options. Believe it or not, we do believe in fuel diversity in California and just burning natural gas is probably not optimal, for a lot of the reasons you heard this morning.

We are very actively pursuing renewables. We have a renewable portfolio standard that by law requires 20% of all energy to be obtained from renewable sources by 2017 as a matter of policy.

Both the Governor and our two energy-related Commissions, the Public Utility Commission, that I work for, and the California Energy Commission, are committed to meet that 20% standard by the year 2010.

We are hoping to see a 33% RPX by 2020 that could come in legislation as soon as this year. And, of course, California is known for its strong environmental commitment. We are very concerned about climate change, we are very concerned about air quality.

I think one of the maps you saw this morning showed a lot of that bad air in the non-attainment areas,
where in California not just the urban areas in southern California, but also the whole central valley, a very large area, growing fact and power demand is growing fast there as well.

Given this mix of policy concerns that we've got, where do we stand on coal? Our view is, Commissioner Grunick view is, and I hope it reflects the view of our whole Commission, we think that coal power can be used to meet California's needs, so long as it's burned as cleanly as natural gas.

I think you heard some things this morning, in particular from Dan Fessler that leads us to believe this can happen and that this can hopefully happen sooner rather than later.

I think in California, to the extent that we can bring all of our stakeholders together in the state, both on the regulatory level to meet our Public Utilities Commission, the Energy Commission, California's EPA, the Air Resources Board, the Governor's Office, our resources agency and in fact a team is being pulled together to attract how to facilitate the development of some of these fuel diversity alternatives, including coal.

However, one thing we do know is that western Coal is a little bit different than eastern coal. We appreciate all the research efforts that are going on in
Pennsylvania and Florida and what not on technologies like IGCC, carbon sequestration.

We'd like to see some research done on western coal, which is to make it a lot easier for us to implement the kind of advanced clean coal technologies in the west. We would encourage a meeting of the sort we're holding here today in Charleston, to take place in the west as well, so that decision makers in the west can be brought up to speed more easily on where we are heading with the development of coal.

I would certainly like to have our Commission be more actively educated on the availability of coal technology that can meet these environmental standards that we've got.

But I think maybe it's fair to say we've got a little bit of a chicken and egg problem, which is, to the extent we can develop in Wyoming super clean coal projects that have multiple benefits, I think from what we heard this morning, we can not only develop electricity from coal that is environmentally as good or better than the electricity generated from natural gas, we can get super clean diesel fuel out of it and we can use the carbon to enhance recovery oil and gas.

That is something that I'm not sure where the money is going to come form. Someone has got to find it.
somewhere but we need to find some consortium, if you will, of stakeholders to put together the resources to get that kind of project going.

If we can demonstrate the feasibility of that project then we need to get the money on board to get the project going, the first of these projects going. It may require investments from the utilities, it may require some federal dollars. It may require some venture capital, but once we have one of these projects going, I like the penguin analogy we heard this morning as well.

Once someone jumps off the brink and goes and sees who can build one of these projects, get the power to market and get the fuel into the California marketplace where it will be consumed and you can burn coal cleanly with minimal impact on the climate, you will see I think, eventually a critical mass develop in favor of these kinds of advanced alternative.

I think in California, we would love to see that kind of evolution but I think we are going to have to work like a very well oiled crew team. All the stakeholder groups are going to have to be pulling their oars in the same direction. And I have to say, looking back in the past, that hasn't always happened in California.

We're hoping to moving in a new direction where we do see that. We hope we can work very collaboratively
with FERC to move in that direction. All that being said, I would like to talk about the questions that are on the session, a little bit about regional planning involving NERC and the Reliability Council.

Commissioner Grunick has taken a very active interest in the work of the Committee for Regional Energy Planning and Cooperation. I think that's what the acronym stands for.

One of the very interesting things that CREPSI is doing is doing a west-wide resource planning. It's called WRAT, the Westwide Resource Adequacy Team. Mr. Reinke was right, we won't want to confuse reliability and adequacy.

The Reliability Council is obviously focused on reliability, but adequacy is very important. We are looking for the least cost best fit options, not only for California, but Westwide.

To the extent that least cost best fit, it's going to involve being high quality, very clean coal power, maybe mixed with wind power down from the northern rocky mountain stains, into the major load pockets of the southwest. We want to do the analysis that shows that that is least cost best fit.

That we are in fact providing resources that are economical, that are efficient, that are clean, that meet the multifarious and complex policy goals that we have,
certainly in California, but also elsewhere in the more populated regions of the west.

I just want to touch briefly on a couple of the things that are being done on the resource adequacy side to the extent that we can take all of these regional transmission planning efforts. You heard about a couple of them this morning, RMATS and SWAT and STEP, and there are a number of others.

If we can knit all that together with our resource adequacy component that's also being worked on. I'm just going to read through a couple of bullets there where this might take us in the end.

First thing, WECC staff would prepare a single multi-year western power supply assessment for review by the WECC board and CREPSI in an annual meeting that should hopefully happen within the next year or so.

This adequacy evaluation would apply a number of metrics and associated targets and benchmarks and would be conducted at a meaningful level of geographic granularity. There is a discussion on transmission bubbles, you know, within the western interconnection.

We've got some areas that are quite transmission constraint and you need to redo this resource adequacy analysis within these transmission bubbles and identify the constraints that need to be fixed.
The WECC Board would approve the power supply assessment, forward it to NERC and would direct WECC staff to ensure any other assessments provided to NERC are consistent with the approved western power supply assessment.

And here is the important part where the State Commissions come in. State and provincial regulators because British Columbia and Alberta are part of our planning region, would require a load serving entity under their jurisdiction to compare, contrast, and here is the knob, justify any differences between their own integrated resource planning analyses and the mission to their control area, or to WECC.

Then the regional load serving entities and the regulators would be expected to apply voluntary targets as basic thresholds for integrated resource planning and analyses with the expectation that the linkage between these analyses and load serving entities, specific resource procurement, would take place where the regulators and utilities believe that action was appropriate.

Finally, the regulators could impose greater resource procurement standards on utilities under their jurisdiction if they believed a higher level of reliability was appropriate.

I think it's great that in the western
interconnection, which is certainly more than a third of the Continental United States, on an area basis, that we're really trying to know together all of these transmission planning efforts that have been taking place to add a resource adequacy component to that so that we can really come up with, hopefully, the best fit, least cost electricity system that minimizes constraints so that we've got as good a system as planners and regulators and private entities working together can come up with.

I'm sure that the Commission supports this kind of planning effort. We certainly want the Commission's input to make sure we're heading in the direction that's consistent with your policy. I hope that's where we're heading. Thank you.
CHAIRMAN WOOD: As do I. You did good for impromptu.

Jerry?

MR. LEIN: Thank you, Mr. Chairman. My name is Jerry Lein. I'm an analyst with the North Dakota Public Service Commission. My primary responsibilities there mainly around electricity, though I end up doing a little bit of everything. We have a pretty small staff. It is good to be here, but it took a while though.

(Laughter.)

MR. LEIN: Especially, after waiting at the Bismarck Airport runway to get deiced.

(Laughter.)

MR. LEIN: You might see some humor in that, but I think it's sad.

(Laughter.)

MR. LEIN: We usually don't have to be deiced in May, but there's been some strange weather here the last week or so. Anyway, I'm going to talk a little bit about North Dakota transmission strategies.

North Dakota has a vast lignite coal reserve. Studies indicate that our present consumption rate, which is about 30 million tons per year, that we have enough lignite in the coal fields of central North Dakota to last about 300 years. Unfortunately, that coal has high moisture and low
BTU content, both of which hinder its marketability. So our marketing solutions so far has been primarily the development of about 4000 megawatts of electric generating capability, mostly from mine mouth lignite plants.

North Dakota also has an exceptional wind resource. There have been national studies indicating that North Dakota leads the nation in wind energy potential. Many areas are classified as having Class 5, which is excellent or even Class 6, outstanding wind resource potential. So far, wind energy development in North Dakota has been limited to turbine improvements and federal tax incentives are driving the costs down and we are starting to see some significant wind interest.

North Dakota is also a rural state. We lack the population and load growth needed to drive energy development, instead we rely on transmission export capability to out-of-state load centers located mostly to the south and to the east. Our present export capability is limited to about 200,000 megawatts. That is mostly fully subscribed. About two-thirds of the energy now produced in North Dakota is exported primarily into Minnesota. Some of that goes to Minneapolis over a D.C. line. Others of it goes through a D.C. line to the Duluth area. The rest of it is pretty much on the A.C. system.

There are thermal limitations, of course, but
Additionally, the North Dakota transmission system operates under stability and voltage constraints caused by large amounts of generation caused by locating the load long distances from the generation. Resolving these constraints to significantly increase North Dakota export limits will require some major new multi-state transmission lines.

We're looking at maybe $520 million worth of new transmission in order to build a new 500-megawatt coal plant.

During the 1980s and '90s substantial increases to North Dakota export capability were not economically feasible. There were excess generation capabilities in the MAPP pool and the cost needed for transmission expansion would have rendered any new projects non-competitive. Now MAPP capacity markets are tightening, natural gas prices are high and North Dakota has begun an effort to expand its share of regional energy markets.

In 2001, the North Dakota Industrial Commission's lignite research development and marketing program launched its Vision 21 project. Vision 21 provided up to $10 million in matching funds toward utility feasibility studies for new lignite-fired plants in North Dakota. At this time it appears that two projects could go forward from that effort. There is more information on the lignite Vision 21 project on the North Dakota Industrial Commission's homepage. If
you search on that, you'll find it on the web.

Then in 2003, the Upper Great Plains Transmission Coalition was formed. Its purpose was to enable coal and wind interests to work together towards resolving transmission export constraints. The Coalition is now working with the Midwest Independence System Operator, MISO, on a northwest exploratory study. Jim, I think, mentioned that earlier.

This study is exploring transmission option for an addition 2000 megawatts of new coal and wind generation in the Dakotas. MISO included the Northwest exploratory study as a regionally beneficial project in its transmission expansion plan. MISO may also help in financial arrangements as its regional economics criteria and benefits taskforce is now working to develop cost-sharing mechanisms for transmission upgrades within the MISO footprint.

This past month H.R. 1169 was enacted. That established the North Dakota Transmission Authority, which operates under the North Dakota Industrial Commission. The Authority may finance, develop or own transmission. The Authority's intent is to partner with investors and transmission providers, but it can serve as a builder of last resort if others do not come forward. A public interest finding is necessary before it can build. Financing is limited to revenue bonds. State ownership is
limited to transmission facilities and must include an exit plan. The Authority will contract out its construction operation and maintenance operations. The projects are subject to PSC sighting permit requirements. The Authority must also participate in regional transmission planning. The Authority transmission rates cannot be challenged before the PSC. They set their own rates and there's no recourse for anybody that doesn't like them.

It was initially patterned after the Wyoming Infrastructure Authority and think there are some changes that were put into place as the bills evolved. The bills didn't pass unanimously from the House and the Senate. At this point, we're looking forward to see what are the best ways to use this new authority.

In summary, the North Dakota strategy for resource development has been an evolving one. There are many barriers to getting new transmission and many challenges ahead. Hopefully, bringing the right people together and giving them the right tools will bring success. Thank you.

CHAIRMAN WOOD: Thank you, Jerry.

Galye?

MS. MAYO: Thank you Chairman Wood, Commissioners, staff. I appreciate the opportunity to be here today. My name is Gayle Mayo. I'm executive vice
president and chief operating officer of the Indiana Municipal Power agency. We're a municipal joint action agency serving the cities, towns and State of Indiana, also active participants in APPA and STEP. Our goal is to provide low-cost, reliable and environmentally responsible power to our members and retail customers. We believe we can do that through a diverse portfolio of resources with all types of capacity and fuels, all types of plants, and we think coal is an important component of that.

We also think a robust or adequate, not just reliable, but adequate transmission grid is essential for an economic and reliable supply, especially for base load capacity, which is not as likely as gas-fired capacity to be located near the load. I actually maybe somewhat out of place on this panel. We do participate in regional and reliability councils and in NERR, but I'm not here representing them. We are a political subdivision of the State of Indiana, but I don't represent the state regulators. In fact, in Indiana there is no state transmission commission. There's no required political process, but I think that I am in a good position to speak on the need for transmission and the concerns about games between RTOs and states and the net impact on transmission.

IMPA is a joint owner of the transmission system in Indiana -- the publicly owned transmission system in
Indiana with investor-owned utilities and electric cooperatives. The transmission covers about two-thirds of the State of Indiana, and we believe that the joint ownership model is a good model that can address many of the investment and cost allocation issues that have been discussed today. We're a transmission-owning member of the Midwest ISO. We're also partially transmission dependent on the Midwest ISO. We actually operate within five separate control areas of the Midwest ISO and we are a transmission-dependent member of PJM. We have a load for generation and a load for MISO and PJM.

We are encouraged by what we've heard today and what we've seen in the various processes about long-term transmission planning, but we feel there's still a long way to go. Our interest in coal plants has been very, very strong. We are currently joint owners of two coal plants. First of all, as organization we can't really develop our own coal plants. We own them jointly with other people. We're currently joint owners of coal plants in Indiana and Kentucky. Those coal plants were developed in a time where we could get long-term transmission rights for the life of the plant to guarantee delivery of power from those plants to our load.

We have also recently committed to becoming a joint owner of two new coal plants -- one in Kentucky and
one in Illinois, both remotely sighted from our loads. But we are very concerned that transmission will be an impediment to the development of both of these plants. Certainly, there are other impediments to coal-fire generation. Transmission is really one of the major ones.

For coal plants, the economies of scale are extremely important. They need to be located close to the coal mines or close to rail or river transportation. That means they're usually not located near loads. So without transmission they simply won't be built. One of this morning's panelist indicated that there was a need to have a load-serving entity make a commitment to the resources in order to get the transmission built. I agree with that, but there is also a need to have the commitment for the capability of long-term transmission rights for those load-serving entities to be willing to commit to the coal-fired resources.

Currently, I've been very encouraged just recently with the comments by PJM that they are looking at long-term, firm transmission rights in an RTO context. Currently, there are no long-term firm transmission rights available for RTOs. There are no long-term firm transmission rights in L&P marketplaces. It is very difficult for someone like our organization that is willing to make huge capital investments to make those capital
investments in both generation and transmission without the assurance that we will have the deliverability of the low-cost energy to our load.

Without that, even though we have committed to plants, we are hearing from the rating agencies -- from Moody's, Standard & Poors that it may be very difficult for us to get financing unless we can demonstrate that we will have a long-term transmission right to get the low-cost energy to our load. So that is probably our primary concern.

Now there are some secondary concerns. We're located on a seam between RTOs. Frankly, those seams are creating problems. We see the need to expedite and improve the joint common market between the RTOs. We right now have a coal plant that has been in service for 15 years. It's physically located in MISO. It has historically served load in PJM. We will most likely start serving load in MISO with that plant with the advent of RTOs in LMP marketplaces, it is no longer economically feasible to continue to move that plant across RTO boundaries right now. That is a problem.

We also see some state impediments. Some states are more receptive than others to out-of-state ownership and you can bring power from a coal plant from one state to serve load in another state. That is something we also need to be addressing. We're not quite sure what the form is for
addressing that. Those are my main concerns about coal-fire
generation.

We are very much interested in seeing this
development. We think it is the way to assure long-term,
low-cost reliable power to our members, but we must resolve
some of the problems that exist in order to be able to do
that. Thank you.

CHAIRMAN WOOD: Gayle, let me just follow-up on
one of your final points there about being on the same line
with the elimination, I guess, rate pancake would not be
enough?

MS. MAYO: The rate pancake would help some, but
when you're on the boundary for the first the timing is
different, scheduling is different in each RTO. There's
pancaking of RTO costs themselves, so we're playing twice
for every kilowatt hour that we generate in one RTO and sink
in another RTO. Again, the joint common market may help to
solve that, but right now it is not in our interest. It's
not here now.

CHAIRMAN WOOD: Okay. Let me take the West first
on this one. One of our, I guess, issues has always been
the kind of multiplicity of folks out there who come into
the planning role. The inability for them to be sure of
what happened last month was the four governors getting
together and saying that we want this to happen, how there's
nothing there hat's actually something of an action-forcing character.

Certainly, we suggested the RTO model, but is there something else out there that would be a good way to put into action the plans that we've heard about a little bit from the morning panel out in Arizona as well as from Steve talking about RMATS. Is there a way of thinking outside the structures, if you like, that we've got today? Is there some way to actually force these things to happen? Is there someone who will look at the broad public that this has got to happen to make sure we minimize the costs, take care of environmental issues.

MR. DINTELMAN: That's a good question. Our organization does not have the capability to force things to happen. What I'm observing relates to some remarks that Phil Harris made. We are seeing definite interest in getting transmission built. The subregional plans that are taking place, the western assessment group that I mentioned, they're talking about how can we promote a transmission planning role in the West. What are some alternatives that we have for seeing that getting addressed? And in my remarks I mentioned some of these expanded planning roles involving a data collection and management.

Our board is interested in having our council take on the development and maintenance of a regional
planning data base that we would make available to our
members that would require our staff to get the tools that
are needed for that and we would make that data base
available to our members to help facilitate regional
transmission planning and our Planning Coordination
Committee would be in the role of coordinating with the
subregional planning groups, getting their information and
determining how can we integrate these plans. But,
ultimately, we have to, I think, identify the impediments to
getting the transmission built.

We also need to focus on the successes we've had.
If you look at Path 15, that is a success story -- getting
the transmission built. Let's learn from that. Let's apply
that to other projects going forward.

CHAIRMAN WOOD: That would certainly build some
of the collaboration that could make this frontier line.
For example, I hope we don't have that transmission project
become common dinner table talk for the average citizen
before we actually take care of it. That was certainly what
Path 15 did. That took a lot of interest I think.

Gayle, let me go back to you a second. I was
thinking about what we heard this morning about this
consortium approach -- what PJM was talking about and some
more public power-oriented participants in the markets that
they would have. Is that the type of thing that the smaller
public power agencies that may not want to go out and build
a complete line by themselves could participate in the
fraction of the project that serves power? Is that the kind
of the investment vehicle that your folks are interested in?
Is there some aspect of that that ought to be emphasized
over others?

MS. MAYO: I think that makes a lot of sense. In
Indiana, we have a joint transmission system that is jointly
owned by ENS Energy and Wabash Valley. That's been in place
since the early '80s. We have mechanisms in place for
planning, allocation of costs for a return on those
investments. It has worked very, very well. I think
something similar to that, whether it's a formal joint
ownership or whether it comes from a consortium approach,
makes a lot of sense for transmission. I know the public
power entities have money they're willing to invest.

CHAIRMAN WOOD: Mr. Reinke, we've got a kind of
mixture of ownership in the South -- investor-owned, but
also public power. I think there's a unique arrangement in
Georgia where you've got interconnected. How do you get
from the planning phase? I know that you're focused on
reliability planning is certainly intended for economic-type
planning, but how do you get from the planning phase to the
construction phase.

MR. REINKE: Keep in mind that we are organized
into four subregions. Three of those four subregions are large corporate entities in and of themselves. The energy subregion, which is basically corporate Entergy. They have some smaller systems there, but basically they're doing the planning for that subregion.

Similarly, in the Southern and TVA subregions, there is some corporate planning going on. Specifically, as you mentioned, the Georgia Integrated Transmission System requires joint planning with those others. You've got Georgia Transmission, Georgia System Operations, the other owners of the system as well as the other smaller public entities in the Southern subregion. That planning effort is going on within those subregions, but it's a little more complicated really than the one you illustrated. The one in ECAR where you have five or six large, but really separate entities.

I know in North Carolina the Commission has initiated a collaborative to deal with some issues that the public entities had, vis-a-vis, transmission planning. Those efforts are going on, but we are coordinating between and among the subregions themselves. I'm not sure if that got to your question.

CHAIRMAN WOOD: How then does the planning go to execution?

MR. REINKE: I think that the fact that the
systems in SERC spending a million dollars a year, I think, answers that question. The planning is being done and it is being put into action and construction is going on. We've seen it the last couple of years, and we're seeing it through '09.

CHAIRMAN WOOD: You mentioned, I think, 5 percent of that money was spent for generation upgrades.

MR. REINKE: Generation interconnection. The rest of it is not.

CHAIRMAN WOOD: It would be reliability upgrades?

MR. REINKE: Reliability and load growth.

CHAIRMAN WOOD: There were three categories of transmission generally. We look at firm FERC Form 1 cost. We talked about this with the EEI folks a few weeks ago for those two categories as well as the third category -- the expansion of the interregional transfer capability, say, between TVA, Southern and the current TVA and ECAR.

MR. REINKE: A partial answer to that is there isn't necessarily a need to increase the wires between TVA and Southern. In many cases you'll find constraints are within the subregions or within the systems. So you find that as the systems -- as we're spending the billion dollars a year, some of those are going to correct and alleviate loading internal to the subregions, which then, in fact, de facto, increases the transfer capability because its
relieving some strains that were not on the borders.

CHAIRMAN WOOD: The last time you looked was
there capability to move power into SERC from outside SERC
from a lower-cost coal region?

MR. REINKE: There's capability to go both
directions.

CHAIRMAN WOOD: Who would be the entity that
those border needs within SERC itself? It sounds like you
have got kind of that process.

MR. REINKE: The reliability agreements we have
in place, and all the joint planning efforts we have with
our neighbors to the north -- the joint planning studies and
models are in place, so those sorts of things happen.

CHAIRMAN WOOD: You would have a planning
arrangement with, I guess -- with VACAR?

MR. REINKE: We do with ECAR, TVA. We have it
with the folks further east with ECAR, PJAM and the VACAR
Group. So we have all those regions in place and they're
active.

COMMISSIONER BROWNELL: Can I just follow-up on
that. We saw a study, I think, three or four years ago when
they were looking at the potential for markets and other
opportunities in the Southeast. You saw some major
opportunity to import into the Southeast some of that cheap
Midwest coal, but we haven't actually seen much transmission
get built in order to effect that. Does SERC just really
look at keeping the lights on and they're not really looking
at that broader picture of opportunities to reduce costs to
customers? I know that's not within your mandate, is it?

MR. REINKE: It's not.

COMMISSIONER BROWNELL: Thank you.

MR. THOMAS: Just a couple of things, Mr. Chairman. This is probably going to go to both Mr.
Dintelman and Mr. Reinke. I understand NERC itself -- all the groups have been focusing their efforts on reevaluating the role of the regional councils, which will include regional planning standards. I want to know -- Mr. Dintelman, your discussion went to just WECC versus overall, and I wanted to know if you could tell us what NERC overall is doing in accomplishing that, where's it's going and maybe some of the topics that were being discussed right now.

MR. DINTELMAN: Much of the role of the region's discussion that has been going on with NERC had to do with establishing whether the regions were ready to take on the responsibilities with the passage of reliability legislation. For example, what type of governance structure did the councils have? The other aspect of that initiative was to look at consolidation of some of the regional councils in the East. I'll let Bill comment more on that since that's outside of our interconnection. Just another
initiative that NERC has put together that's outside of this role of the region's evaluation. It was not too long ago that a report was approved that had recommendations for the reliability councils to adopt regional adequacy standards.

In our region, we have given that consideration. A number of years ago, we had what is called a power supply design criterion. Our members were expected to have resources sufficient to meet at least one of the three criteria in that document. With the changes in the industry, that document was set aside and we adopted the approach of performing power supply assessments that one of the panelists referred to earlier. But, right at the moment, we don't have a yard stick to measure adequacy, but we are working on developing guidelines for adequacy for the western interconnection. And the publication that I referred to that NERC produced also addressed transmission adequacy. That's a reliability element that goes right to the heart of our mission in terms of making sure that we've got the transmission needed to maintain the reliability of the operation of the Western connection.

MR. REINKE: Picking up on the role of the regions' efforts, there were five initiatives in that analysis. The last one had to do with, and this applies really to the Eastern interconnection and I think it goes to your question. Since we have eight regions in the East, we
were interested, as we look at compliance issues, compliance with standards and how we manage the compliance program. We were interested in the common look and feel, not necessarily identical, but a common look and feel within the Eastern interconnection so that an entity that is operating in more than one region wouldn't have completely different objectives and completely different standards and/or methodologies to deal with. So we are driving to a more or less common-looking field. Again, as Bob said, looking toward the day when legislation will pass.

MR. THOMAS: So, would that kind of evaluation help, as the Chairman is talking about, the subregional pacts within the service areas you just mentioned? Would that be something that would help open that up to having TVA, if it has constraints within the Southeast, being more open to creating cross interchanges?

MR. REINKE: Except that, if the constraints happen to be for non-firm transactions, then you get into what we could have paid for -- the upgrades and the state commissions have to have some approval mechanism if it's non-firm, and it's non-firm that's causing the TLRs and you end up saying, well, do I need to build so that I continue to accommodate non-firm on a case-by-case? The question is, how do I justify that and who's going to pay for it because it may not be a reliability issue, but it's a market issue.
MR. THOMAS: I just have another quick question for Mr. Dintelman regarding the WAG study or the process of working through that. When you mentioned the coordination management of the subregional studies, what exactly does that mean? Will you have a role in saying how they're going to study that -- whether it's a reliability study only? Are you sticking with that or are you going to say the study should be looked at in a different view -- economic aspects of that study as well?

MR. DINTELMAN: What I really meant by that -- the subregional groups are performing studies and those studies' summaries and information regarding the studies are disseminated within the council, and what I was looking at is a potential increased role to more actively integrate all of those subregional plans into a plan for the entire Western interconnection. In other words, instead of being -- and I'm not saying this exist, but just to illustrate the point, you could do a better job by integration of the plans and simply taking each subregional plan and slapping them together and saying that's the Western interconnection plan. The council could have a role in looking at the integration of all those plans and is that a good fit for the entire Western interconnection?

MR. THOMAS: Thank you.

MR. McCLELLAND: From 1982, from my friends for
DOE, the transmission expenditures and the decline. The first question I have is for Bill from SERC. You represented that SERC has invested a billion per year in transmission investments. Five percent of which would be, say, due to generator interconnects, so the 95 percent of system improvements. We used to use rule of thumb of about a million dollars per mile as far as transmission investments, and would be, say, roughly 950 miles in SERC. Would that be a good rule of thumb? How many miles would that represent?

MR. REINKE: Remember we're talking here about transformers, so some of the expenditures are for transmission -- for transformation. Then you may be rehabilitating or rebuilding on existing rights-of-way, so a million dollars a mile might be adequate and appropriate for new construction. It may not be for rehabilitation or reconfiguring existing transmission.

MR. McCLELLAND: In fact, with the bulk power supply transformers, they're rather expensive. If you put those in the mix, it may be less than 950 miles. Do you have any idea how that equates as far as the national average because SERC is one of the regions that we track? We do have statistics about and I'm not picking on SERC. SERC is not immune from this decline and it's an alarming decline across the country as far as investment and
infrastructure. Do you know if that's reversed trends? Do you folks say now, prior to the declining years, which was 1992, there's been a significant decline for almost 25 years. We've seen a continuing decline in transmission investments.

MR. REINKE: When I was in that business, one of the things that we did implement as management suggested that maybe we ought to squeeze more the current assets.

MR. McCLELLAND: Which reduces capacity.

MR. REINKE: You re-rate the facility. You take another look at how are you rating your facilities. What's your emergency rating? Can you load it higher, check your stats to make sure that you don't have anything underbuilt that shouldn't be there. So, for a while -- and all systems do this -- you squeeze more out of the existing assets before you begin to add new infrastructure. So you saw a part of that in the late '80s, early '90s, when that was going on. But you've run out of that. Now you go back and the next thing you do is deal with existing rights-of-way, expand the substations and you get into new transmission. So it's really hard to quantify where the decline might have stopped. I don't know that we see a decline in our region now because the statistics we've been doing with this transmission survey now for a few years, it's fairly consistent and it's right at a billion, a billion one, a
billion two.

MR. McCLELLAND: Thank you. The objective or the
determinant that's pretty objective is a DOE determinant.
That's a million dollars per mile of transmission, so it's
pretty easy to compare it to megawatts. You may not have
this. How about you, Bob, as far as WECC? Have you seen a
continuation of the decline in transmission investment or do
you think WECC's turned the corner? Has there been any
change?

MR. DINTELMAN: This is a subjective point of
view. It's been my observation that we've gone through a
period of time where there has not been significant
transmission added in the Western interconnection. My
perception now is that we are turning the corner. We're
seeing increased interest, and the signals that make me say
that the Western Governors Associations, the RMATS project,
the subregional study groups that we talked about, the Path
15 project, the Paloverde-Devers No. 2 project. It looks to
me like we've turned the corner. Time will tell.

As I said earlier, we really, I think, need to
focus on what are the impediments to getting transmission
built to make sure those are clearly identified and then
look at our successes. How can we learn from the successes
to overcome the impediments -- the historical impediments
that we had? It's already mentioned -- the cost recovery is
an issue, but also overlapping jurisdictions is a factor. The "not in my backyard" syndrome is a factor. You've got federal agencies, state agencies, private landowners. If we can look at successes that we've had in overcoming those obstacles and apply those to additional transmission going forward, that ought to be our strategy.

MR. McCLELLAND: One short follow-up question for Gayle. You mentioned FTRs are very important, at least for participation in coal-fired power plant projects. What would you consider a sufficient FTR level to incent, say, your group or municipality to participate in the coal-power project?

MS. MAYO: It's going to be somewhat interactive because the rating agencies are going to have a lot to say about that. They're the ones who will determine what our ratings are, and how the bond issues do, the financing, the whole thing. It may not need to be 100 percent, but it needs to be close and it needs to be for a substantial period of time all with renewability capability.

MR. McCLELLAND: Would that be, say, for the projected life of the plan?

MS. MAYO: That would be ideal. That may also come with a commitment that you're going to, in fact, use that transmission during the life of the plan. That the pattern of usage is going to be the same. Yes, I think you
do need that.

MR. McCLELLAND: Thank you.

MR. THOMAS: Just one final one. Larry, real quick. You mentioned you really support state/federal collaboration. I was wondering if you'd give us some ideas on how we can get to that approach? What ideas do you think we could use to do that?

MR. CHASET: I understand Chairman Wood and Commissioner Brownell are coming out to California in three weeks or so. For us to get together and meet is the No. 1 thing that encourages and enhances cooperation. I think on the big policy issues nowadays my commission and your commission have a lot of common values, common policies. The question then becomes what are the obstacles to implementing those policies? I think one of the biggest obstacles is money, and I don't think that's something that either of our commissions necessarily have a lot of control over. So we need to start building coalitions and constituencies for the kinds of projects that we all think are needed. The kind of transmission upgrades that are going to create the robust systems that I think we are all looking for can be made.

We do not have the authority to tell our utilities that shall build this particular transmission upgrade. They come to us and say we want to build this. To
the extent, that we're dealing with multi-state projects, I think -- I don't know what kind of legislation Congress might pass here. The last version of the Energy bill that I saw did give FERC some backstop jurisdiction over these multi-state projects.

Just speaking for myself, and not for my commission, that sort of backstop jurisdiction on multi-state projects might be necessary. But I would certainly hope that the kind of collaborative effort that we've heard talked about by a number of speakers today will get us a long distance of the way there without FERC having to step in and say "build this."

CHAIRMAN WOOD: Let me ask a question. One that was raise, I think, as we went through this. Jerry, you mentioned in your comments about North Dakota as well. That there are some D.C. ties. It's kind of an unusual attribute in the current grid, although I think we knew the grid of the future will have a lot more D.C. What is the background on those North Carolina -- I think you said Duluth? What is the background? Do you know where they came from, how they were D.C., who built them and who's paying for them?

MR. LEIN: I believe they both came about during the '70s. They were as a result of a project to deliver power from the lignite fields into Minnesota. They were built specifically for power plants. One is a 400 KV line
that runs to the Minneapolis area. It is owned by Great River Energies. They are a G&T cooperative, I believe -- formerly a CPA. That line is a big line. It can move about a thousand megawatts. It comes out of their Coal Creek Station, which is about 40 miles north of Bismarck -- a new state-of-the-art station that is really a nice generating station.

The other one -- I believe that one's been around a little bit longer. I'm thinking it's a 250 KV line and it runs out to the Duluth area and delivers power up there out of the Minkota System -- they're also a G&T Cooperative. Basically, the member coops pay the rates. I think they found it easier to build D.C. than A.C. because it missed the stability problems that they would have with the A.C. system. They weren't getting into the problems. We have some problems up there in the area trying to decide who owns what capacity and what flowgates and things like that, so it kind of misses all that.

CHAIRMAN WOOD: Mr. Morris, we'll let you pipe in here.

MR. MORRIS: Pat, I hate to show my age, but I happened to work on the environmental studies for those projects. The reason they were direct current was through the line loss issue as well as the routing through the pothole regions of North Dakota, which is a very, very
difficult place to walk through with a transmission line. And they were, as pointed out by Jerry, power cooperatives back then. The Overland Power Cooperatives, OPC, built them, I think, with black hills power out in Bismarck that worked on those. It was really quite an undertaking to go direct current because the theory, again, was line loss, less steel and all of the environmental impacts of those lines because of their distance and how far they were going to move the power to market.

CHAIRMAN WOOD: It is pretty much a one-way flow out of North Dakota on those? So is it the customers in Minnesota who are really on the hook for paying for that or have been on the hook over time? It's not included in some North Carolina rates, is it? Do you know?

MR. LEIN: North Dakota?

(Laughter.)

CHAIRMAN WOOD: I'm sorry. North Dakota rates. I'm thinking about barbecue. Okay.

(Laughter.)

MR. LEIN: No, Mankota does have some members in North Dakota and I really don't know who's paying what. For the most part, yes, it's Minnesota customers that are paying it. I don't know that it was a bad investment. I think that as the years went on, compared to what their options are now, that they're getting pretty reasonable power prices
out of it.

CHAIRMAN WOOD: We've got other ones on the MAPP in the West. And Bob, I think you've got one or two big ones coming into the LA area and the other SP 15 area.

MR. DINELMAN: That's right. We've got the Salinas DC line from the Pacific Northwest to Southern California, and we've got the Intermountain DC line from the Intermountain power plant into Southern California. Then we've got a number of back-to-back DC ties that separate the Western interconnection from the Eastern interconnection. So there are advantages and disadvantages of DC. Basically, DC is a good application to ship large blocks of power from one point on the network to the other over long distances. It's an economic situation.

The disadvantage is it's expensive if you want to tap off the line to get the power to other parts of the network. That would require an additional converter station. They're quite expensive. At the convertor stations, there's also the need to support the voltage. That has to do with shipping large blocks of power over long distances. Sometimes DC works well.

The other thing about back-to-back DC ties -- due to the nature of the Western interconnection and the Eastern interconnection, large inertial power systems would require very strong AC ties between the two to keep them
synchronized. The DC ties -- back-to-back DC ties enable
the flow of power between east and west without getting into
the problems that you would have with the synchronized AC
ties.

CHAIRMAN WOOD: I learned those well in my ERCOT
days, too. From all of you all -- I don't want to dwell on
the DC thing too long, but it is one of these -- people talk
about the grid of the future. It's very likely that there
will be a lot more use of DC to move blocks of power form
long distances, and since the theme of the conference here
is focusing on coal and those tend to be, though aren't
necessarily, one of the larger plants that can utilize the
resources in coal-rich states. It might be cheaper to move
by wire than by train. Is this a feasible way to move power
from this region of the country because we don't have any DC
here? We have some large AC. Is there any reason to think
that DC would be -- when we were talking about transmission
expansion here in the Eastern interconnection, is it likely
that would be AC or could it be DC?

MR. REINKE: It could be both. Showing my age, I
was on a taskforce when Governor Moore was governor of West
Virginia and Governor Sununu was in New England. Governor
Moore's objective was to build power plants in West Virginia
and ship it. We quickly discovered or came to the
conclusion that if the lines were going to go into New
England, they had to cross Pennsylvania and New York. Therein was the problem -- raping and pillaging the land and not dropping off some of that power would be an impediment and so the project never really went very far. But you run into those sorts of problems that were already talked about earlier on the four-corner situation of Paloverde into Southern California. So you end up with the jurisdictional issues -- what's in it for me rather than giving up some land and taking the forest land. So, yes, it's certainly feasible. You have to get through the jurisdictional and the land use issues, and have something to benefit the states that you're going through not dropping off the power.

CHAIRMAN WOOD: Anybody from the audience while we've got this panel here? Anything you want to speak about or ask questions about?

(No response.)

CHAIRMAN WOOD: If no, we'll thank this panel. We appreciate you all coming.

(Applause.)

CHAIRMAN WOOD: If you all want to step away -- why don't we ask Mike and you all to maybe slide down a few spots, take your name cards with you and we'll make this a little bit more spread out.

While they're doing that, I want to again thank our last panel for looking at regional planning issues from
a different perspective than we did this morning, and
introduce our last panel.

Welcome Mike Morris, President, Chairman and CEO
of American Electric Power. We're glad to have Mike here
from Columbus. You all serve this area too, right?

MR. MORRIS: Yes, sir.

CHAIRMAN WOOD: Jacob Williams is VP for
Generation Development at Peabody Energy. He's been at FERC
before talking about some of these transmission issues.
He's with really one of the world's largest coal developers
and is also a big participant in the U.S. market as well.

Jerry Vaninetti is the management consultant of the Coal
Project Development. Again, the focus of this panel is
regional planning perspectives from the perspective of the
coal industry. Jerry, we appreciate your being here.

Diane Leopold, VP Business Planning and Market
Analysis for Dominion Resources, which is a large utility
that serves Virginia and North Carolina. And Dough MacCourt
is an attorney for the D&A Power Authority, which has an
interesting perspective on developments from Native American
tribal group perspectives in the West.

Mr. Morris?

MR. MORRIS: Thank you very much Chairman Wood,
Commissioner Brownell, other commissioners and staff people.
We really appreciate the opportunity to be here to share
with you some ideas about what we think is a very critical
topic and a great time to have this conversation.

I know this morning that the newly-elected and
extremely energetic Governor Manchin welcomed you to West
Virginia. I'd like to extend that same welcome to our
service territory. Chairman Wood, if I'm correct, this is
Appalachian Power, a proud power of the AEP System, which
has been serving this area since the early 1900s, and you
might remember from the early legal days because it used to
be called Blue Field. So the Blue Field and Oak cases for
reasonable return on equity were created right here.

Over the years, I've had an opportunity to
participate in any one of a number of these kinds of events,
and one of the biggest issues for those who put the event
together is to see to it that we speak or stay on task. I'm
going to try to do that, and it was also suggested that we
speak no longer than about five minutes so that all the
panelists can get their views heard and then we can get to
the meaningful Q&A from the panel to our right.

In that regard, those of you who know me that's
probably the most difficult task I have today -- to say what
I have to say in that short period of time. I've tried to
group the questions that were asked of us in some subgroup
so they would make sense.

If you have the brochure that brought us here or
the papers that brought us here, we're the panel at page 5. 1
The very sub-bullet talks about joint ventures and suggest 2
what opportunities exist for coal from joint ventures in a 3
generation planning perspective. I would suggest to my 4
friend at the immediate left, who is a very large supplier 5
of ours, is that what we really look for in a coal supplier 6
is someone who's willing to join us a longer term contract 7
period. Someone who's willing to take some price 8
flexibility and some price increases and decreases, as time 9
goes forward, to look at our power plant as maybe an anchor 10
-- tenet, if you will, if you're going to develop a mall. 11
So we have a longer term working relationship that doesn't 12
go through the kinds of things we're seeing the near term 13
like what I'd call price majeure, but the coal supplier 14
calls forest majeure.

(Laughter.)

MR. MORRIS: Those are the kinds of things we 17
have to battle against as we go forward. That's the kind of 18
joint venture partner I want because, quite honestly, when 19
we look at new coal facilities; particularly, large volume, 20
large megawatt, clean coal facilities, we believe they need 21
to be a regulated asset.

We believe very strongly that they need to be a 23
regulated asset at the state level, and I hope we'll have an 24
opportunity to talk about that as we go forward. I just 25

26
can't see an environment where anyone is willing to build a billion, five hundred million dollar merchant power plant. Those are the kinds of joint ventures that we look at, and I really believe that that's a state regulated issue and a state's right issue that ought to be taken care of at the state level, not the FERC level.

The second question is, what do we power plant owners think about regional planning and how can regional planning bodies help us? Let me group those two bullets together and say that we think that regional planning is an excellent idea without question. I think some of the ideas that we have tried or you have tried to create during your chairmanship, and those who were before you, on the notion of taking a look at these thing through an RTO lens, taking a look at these things through the regional state compacts that we've tried to put together makes a tremendous amount of sense because it lends credibility to what you're trying to do.

Having spent seven years in the ISO New England, now RTO. Even though I'm not there any more, I'm really thankful for doing that. We were worried that we were too small to be an RTO, but it's good that we are. We would make a determination of what needed to be built, then the end footprint utility had the right to build it if they had the capital and the desire to so do. If they didn't, then
it was an open territory for others to come forward and build, if needed -- not unlike Path 15.

I've always thought that the regional planning endeavor makes a lot of sense. What I would also say is that it's critical important that the FERC be the sole certificate of public convenience and necessity provider. That the FERC have sole regulatory authority, ratemaking power over those interstate facilities and that they have primary, not backup but primary eminent domain authority once it's determined the asset is needed and here's how the rate structure is going to be built.

I would submit to you that the panelists who have gone before us, and I'm sure you heard this morning, that 14 years it took us to get approval for the Jackson's Ferry to Wyoming project between West Virginia and Virginia that would clear up so much of the issue.

Mr. Chairman, again, I'm so happy to read on occasion you're saying that it's primary jurisdiction. I know Commissioner Brownell has join you, as have others, in that regard. About a month ago I got so excited that the President was in Columbus standing in front of an audience talking about energy. He said we need to have an infrastructure upgrade for the electric transmission grid and we need to have federal authority not unlike the State Highway System, not unlike the Interstate Gas System, not
unlike the Interstate Oil System and I really got excited. Then we checked with the White House and it seems as though he misspoke himself. He was talking about backup authority, not primary authority, which was a little heartbreak.

When I look at the regional transmission view, and I look at the FERC's authority over that, it would be wrong for me not to bellyache about applications that we have in front of you. You've heard this from me many times before. I think it's essential that we create a rate structure that is regional in nature to cover a regional transmission operation rather than a license plate rate, rather than a postage stamp rate. That's a debate that we need to continue to have, but we can get the ratemaking right. I'm absolutely convinced of that as we go forward.
The next two bullets have a lot to do with clean coal. The question really is what other clean coal initiatives do we need to go through? What else can we do in an initiative sense to ensure that clean coal comes forward? I hope you know that American Electric Power has announced its intention to build one, if not three, integrated gas combined cycle facilities. We have asked PJM to characterize three sites for us, one in the State of Ohio, one in the State of West Virginia, and one in the Commonwealth of Kentucky.

We believe very strongly in the notion of going forward with integrated gas combined cycle, because it is the next technological step. I think that it's going to make a tremendous amount of sense for us to do that. We don't need initiatives. What we need is a clear rate of return path from the in state regulator that may or may not require in state legislation to support that same kind of approach. We feel very comfortable that that's achievable. We think that's near at hand in West Virginia. We think it's near at hand in Kentucky and we think that it's near at hand in Ohio.

Given that path, we will go forward. We are convinced that the General Electric people are dedicated to the technology of the gasifier -- which is a real paradigm shift, if you will, from where we were before when the
technology was owned by major oil. They would give you the manual and they would show you how to build it, then they would wish you luck.

What General Electric is going to do, as they would do with any facility that they build, is they'll give you a warranty that it will work and, if it doesn't work, they'll fix it until it in fact does work. We're not worried about the power block. We know the power plant. We're sure that it will work.

That's what needs to happen. We're taking those steps forward, as are others, and we feel very strongly that that's an appropriate approach to take.

The last issues -- and I'll take the last three bullets and try to loop them together, and I really call them siting issues: what are the cost impacts and locational differences? What advantages can be gained by mine mouth and transportation costs of coal by wire would be better than coal by rail. That's a pretty easy question to answer in the railroads. The railroads -- God bless them, we need them, but they figured out how to milk all the money out of the delivery of a ton of coal, that's for sure.

But at any rate, at American Electric Power back in the 1940s, a predecessor of mine who was a giant in the industry at that time, Philip Sporn, began the process of building coal mines -- not necessarily mine mouth, but coal
production area power plans. That was the genesis of the
incredible 765 system that American Electric Power built to
take that coal by wire, quite honestly, to the various
service pockets that we had, which was a shift from the
paradigm then which was to build your plant near the city to
serve the load and haul the fuel to that facility.

We believe that that process is an excellent
process going forward. Again, the siting issue there is
much easier because you have an indigenous supply of the
fuel. Typically these are economically-depressed zones of
the states wherein the mines are to be found. Putting a
facility there is usually something that's supported by the
local folks, by the economic development people in the
state, and we believe very strongly that that's the
appropriate way to go.

In fact, each of the three states that we have
asked the PJM to characterize for our IGCC plant are all
along a river. They will have multiple means of fuel
delivery. Because, as you know, and you helped us all
understand through an open access grid, there's no question
of having delivery by rail and delivery by barge keeps
everybody price competitive. Those are the kinds of things
that we will strive for as we go forward.

I know that Governor Manchin and others here in
West Virginia are working hard trying to get back to having
coal by truck be a viable option. So that it isn't coal by Tonka truck, they have to be large enough to make the delivery meaningful as we go forward and they continue to work on that.

Let me try to bring these comments to a close simply by saying that this is an exciting time to be in this business. I don't think there's any question that additional facilities need to be built. We are strong proponents of fuel diversity at American Electric Power and our diversity is going to be clean coal. It will continue to be renewables. It will continue to be hydro where we can. It will be demand side management. It will be all of those kinds of things.

I do believe that natural gas has a place in that equation, but clearly not as a base power plant fuel.

Regulation of the power plants and rate treatment at the state level rather than the FERC level and an absolute open access transmission grid regulated by the FERC both as to rate and pass-through recovery from the states.

And remember what we're talking about in the bundled kilowatt-hour. The T rate is usually a penny or less, on an average 7 or 8 cent rate: about 3 for the fuel on the power plant, about 3 for the distribution, and about a penny for the T. Let the FERC be the primary regulator of the pass-through opportunity in doing that. Reliability
control -- something the Chairman and I have had a great deal of time to work on -- NERC and FERC working together, like NPO and the NRC, to ensure that we all live up to real requirements and if we don't, a penalty is made against us, is an important thing to do.

And lastly, planning for these facilities by regional transmission groups, by the regional state compacts; doing it on a regional basis makes a tremendous amount of sense. But include the transmission player as well. Whether it's an investor-owned utility, whether it's a muni co-op, whether it's a G&T player, even if it's an independent transmission company like the folks who've succeeded in interest to the Detroit Edison grid, those things make a lot of sense to us.

I appreciate the opportunity to share some ideas with you and I really look forward to the Q&A. Thank you.

CHAIRMAN WOOD: Thank you for being here, Mike. We appreciate it.

Jacob?

(Slides.)

MR. WILLIAMS: Thank you very much, Chairman Wood and Commissioner Brownell for hosting this conference and taking the leadership on the issue of coal and its role in the electric market and transmission. We like to say at Peabody coal is the reason we have affordable electricity in
this country, and we say it early and often.

Peabody is the world's largest coal company and also the largest coal producer in the United States and we have a unique position in that we have major operations in all the major coal basins in this country, with the exception of the lignite fields in North Dakota and Texas. I'll let Jerry, who knows a lot more about those two basins, speak on that. But we have a unique understanding of the cost drivers in that region. That gives us perspective.

I have put out some information on the back table. I'm going to quickly run through a few of these because it sets the view for how the coal industry views the transmission planning. There's some on the back table back there for those who don't have it.

Flip to slide two. It's just a grid of low-cost states, the yellow states being the low-cost states, other than hydro, which the Northwest is blessed with. If you look at the APL states, you'll notice an interesting characteristic: six of those states have more than 92 percent of their electricity from coal. Very clearly, coal is the reason we have affordable electricity.

Flip to slide three real quick. It's an interesting slide that was pulled together here recently which shows which states are the exporters of electricity in this country and which are the importers. The green states
are those that export. The red states are those that import. The dark green are the major exporters.

If you look at the dark green states, out of the 11 dark green states, nine of them are major coal-producing states. It's not coincidental. They happen to -- several of them -- to be the low cost states as well. The only two states that are not heavy coal states are the State of Washington, obviously a hydro state, and Alabama. But the other nine states are major coal-producing states in the U.S.

If you look in the eastern half -- and most of my comments are actually going to be dealt with in the eastern half, even though we supply coal to all over -- but if you look in the eastern half and you look at Pennsylvania, Illinois, West Virginia, they are the three largest exporters of electricity and they're all in the eastern half and it, along with Indiana, represents where the low cost power is going to come out of to the other states. That's the way it works right now. They're the ones that are shipping a bunch of coal power into the east end of the South. That's where fortunately the AEP grid was built and it uses that very, very robust AEP grid to move that power. We thank those predecessors of AEP for doing that.

In the West, essentially you ship coal-based power from the Western Rockies to California. That's what
that does. It forces it to back up with the data -- I won't
go through that at all.

Let's move to slide five. In the East, where is
there extra power in the grid today? It's in the main area,
especially Illinois and PJM, essentially Western
Pennsylvania and ECAR, essentially West Virginia and Indiana
have the excess coal sitting there on the ground, the
capacity factor, the coal units in those three units is
under 70 percent. They can produce more power if the wires
are there to move it. The fact of the matter is
unfortunately in the middle of the night not all of these
have more wires to move it.

Move to page six. You get the map of the eastern
U.S. Coal-based generation is essentially in the Ohio
Valley area -- it's kind of a Nike swoosh, I like to call it
-- the Ohio Valley and to the north and west. Out of that
region, there are only 10 high-voltage transmission lines
from Lake Erie down to Virginia, the Carolinas, and all the
way to Western Arkansas. That's almost 1400 miles, if I did
my math right. Only 10 high-voltage lines that come out of
there. In the states of Indiana and Ohio in the robust AEP
system, there are 10 high-voltage transmission lines across
Indiana and Ohio, just in the states. You have a 1400 mile
path where there's only 10. And you see that the coal-based
power that's existing on the ground is trapped there and
cannot serve load in the middle of the night. During the
day, those plants are full load. But if you go around to
some of the major producers, like Mr. Morris, he'd say at
night the full units back down. It's simply a function of
economics.

That's the existing. What about the future? If
you flip over to slide seven, this is the DOE's relatively
recent announcement. I'm not going to verify it's all
right. I'm not here to say which places are going to be
built, et cetera. But you do notice in slide seven that the
majority -- or a major part of the coal plants that are
announced in this country sit in Illinois and Kentucky,
along with Ohio, Pennsylvania, and even Wisconsin. Again,
more coal plants are going to show up inside what I call the
middle U.S. coal box, further constraining, or further
putting pressure on, the transmission system. Why is that
the case? And it goes to the coal basin itself, slide
eight.

If you go to slide eight, you look and you say
why is that the case? If you look at the basins -- and I'll
characterize them in general very quickly: the Central
Appalachian Basin that we're in unfortunately is a high-cost
basin. It is a depleting reserve basin. And it's a good
transportation, it can transport coal out of here because
it's higher BTU and it's got the river system to do it. But
it is not one that is necessarily geared around mine mouth
generation because the reserves are depleted.

If you look to the Northern Appalachian Basin,
essentially up in Wheeling and into Pennsylvania, that
reserve basin actually is a little better off. There are
some much larger blocks of reserves. It's a medium-cost
basin. And it's very transportable. It's got very high
Btu, which means it's fairly affordable to move on the
rails.

But now we go back to the Illinois Basin, in
orange. That basin is a medium-cost basin -- in fact, it
could be on the lower end of that. It is a very abundant
reserve basin. It is the second-largest coal reserve in the
United States. The State of Illinois has more coal than any
other state, with the exception of Montana. It has got very
abundant reserves. That basin also covers Western Kentucky
and Southwestern Indiana.

The problem with that basin is it does not
transport very well because it's a lower Btu. A few of the
mines near the river you can go to; otherwise, you
essentially need to have the plants on the mine. No
coincidence why Illinois has so many mine mouth plants
proposed for it.

I'll leave the west essentially to different
analysts. The only thing I will point out is that the
Powder River Basin is very cost effective, as we all know, in bringing coal to the midwest as well as now to the east and all the way into New York and things like that, all because it's low cost to mine. Therefore -- and it's an extremely abundant reserve.

The eastern plants that you see, I would propose to you that much of them are going to be developed around the river system. It is the lower-cost system to deliver coal, the Ohio River system in particular, and the Illinois Basin going forward.

What does that mean if you look at a transmission system? You've got abundance of resources there during the day. The new plants are going to be built there because the fuel is lower cost. That's where the bottlenecks are going to be. I ran the math on pages nine and 10 about what makes sense. I won't bore you taking you through it but the fact of the matter is it's far cheaper to put coal on the wires than it is to move it by rail.

I will note that the Illinois Basin -- if you think about it from a load center -- if you look at the Illinois Basin and the Ohio River Valley, let's take the Illinois Basin for a moment. You look at the number of major cities that are within 400 miles of that basin, if you extend it up the Ohio River Valley, you get the entire East Coast as well. That is where the new plants are going to be
built. That is where AEP is looking essentially is along the Ohio River Valley.

With that said, we talked about the lack of transmission that's been built. I would also point out that if you're looking at renewables and wind in the Eastern U.S., it's going to come from the western part of that middle U.S. basin. It's not going to be built in the mountain areas here. Again, you need those same wires to move power to the east if you're going to have renewables in the eastern half and make a meaningful difference.

The other piece I will point out on the planning system -- and again, it really takes us to the planning issues -- is that one of the open criticisms I have about the electric planning process is it does not take into account the benefits of natural gas prices to the natural gas consumer. Every electric study that I've participated in -- and I've participated in a lot of them up in Wisconsin -- you look at electricity ratepayer benefits.

Today, what if you took one Tcf of gas demand off because you just displaced gas generation with coal. What if you took 50 cents a million out of the price of natural gas just because of that. That's $10 billion to the U.S. consumer. We don't factor any of that in. And to say that knocking off a half or one Tcf annually because it's displacing gas can't happen, it can. We can have a debate
about whether it's a 50 cent drop in price or a quarter, we can debate that, but the fact is we put zero value on it today and there is a huge value. In fact, I could argue there's probably more value there than there is on the electric side.

So what needs to happen on the planning side, and I'll spend my last few minutes on the planning side, to get the wires in place? It starts with having a planning process that takes the consumer part of you. Sometimes I've participated in it and I don't always see that. In that process, can we define who are the beneficiaries of these wires?

The second, and I think the real flaw in the process today or the thing we've got to be careful of, is historically if gas is $2, you didn't need transmission lines because you put gas plants at load, it was fine. That's not the world we're in now. We know that. Gas at $7 will justify a lot of lines.

Problem. A lot of our transmission -- there's not a single transmission study that I've seen that actually even gets to $7 as its benchmark. What you see typically is a high gas case over the last few years at $4 or $4.50 -- and unfortunately the DOE's long-term curves have always been meager, burning back to $4 or $4.50, so you never get the true value of the transmission line in the analysis you
use.

I would argue that you need to do a bit more planning like we do on the reliability side. In reliability, you run the transmission. In a reliability plan, you assume the first contingency already occurred. Then you see if you can serve load. Why not assume the first contingency of high gas prices and then let's see what the value of the transmission is? I think you could justify a lot more transmission.

Finally -- and I've sat through enough public hearings. If you would lay out the value of these lines to parties in a clear economic story, it's a lot easier for regulators, state and local politicians to get behind them. But if all we do is waive the reliability flag, you know. But for a blackout it's hard to get people excited about it. But if you say we are going to save X amount in general because this line is going to be built and, oh, by the way, it may help reduce gas prices as well, I think you have a far better story to tell. And I think the RTOs, no matter what the price issue, need to say hey, we've seen $7 gas three of the last four years. I think it's reality, that we ought to try to plan around that contingency, much like we can plan around in one contingency.

We also want to look forward in our planning process. There are going to be new coal plants built now.
Let's put the new coal plants into those models, where you think they're logically going to show up. I realize we don't have contracts in place and all those things yet, but it takes the transmission lines longer than, frankly, it may take some of the plants to get built. And you know the general regions they're going to show up is along the Ohio River Valley and in the Illinois Basin in the east and in the west it's going to happen in the Rocky Mountains where the coal is. Go ahead and put those in and you're going to see a greater need. But if you don't add any of the coal plants, it may not show the need that's going to show up there.

And then finally once that happens we need to pull everyone together -- and FERC can take the leadership and essentially create in some cases a national transmission bottleneck group. Here are the three major projects. We are going to solve these together. We're going to pull everyone together and work that out. The states will allow those costs to get rolled into the ratebase, you'll have the documentation that says who's going to be the beneficiary. If you want to do some sharing mechanism, that can be worked out. But I think it starts with justifying it economically first. I haven't seen good studies out there that do that.

Finally, a question that was asked, can there be partnerships between regulated and unregulated entities to
built coal plants? Absolutely. We and AEP are venturing
into a partnership called FutureGen, if that comes about.
That is one such thing. We've talked to a number of
utilities about partnering and two of our mine mouth
projects -- one way to take some of the bounce out of the
coil price, Mr. Morris, is to come in and join us in the
mine ownership itself, and then you share all the risks with
us.

(Laughter.)

MR. WILLIAMS: Finally, I guess, I see on the
environmental front. I won't address that. There's a
couple of slides at the back. The technology is there that
meets the laws that are out there and go well beyond the
current care regulations that are out there. The technology
is in place, not only IGCC, CFP is available. And as
opposed to mandating a certain technology, you should let
the market ultimately short out. If GE and company can
deliver the performance and all the guarantees, ultimately
gasification will be the winner, if they can deliver. But
we don't start by mandating which technology and then hoping
it actually delivers the economics.

With that, I've probably run over, and I
apologize.

CHAIRMAN WOOD: You all are okay. You're the
last panel. You can all overrun.
(Laughter.)

CHAIRMAN WOOD: Jerry?

(Slides.)

MR. VANINETTI: Thank you. Glad to be here today. I think a lot of my comments are going to be like preaching to the choir when you're following the Billy Graham of the coal-fired transmission industry here.

(Laughter.)

MR. VANINETTI: I largely agree with Jacob, I do believe in regional planning. I think blackouts are also an important aspect of getting transmission built, so please, more blackouts, okay?

(Laughter.)

MR. VANINETTI: I'm a management consultant that specializes in coal project development and building on my recent experience as principal of RDI's coal consolidation practice throughout the 1990s, and the last five years I've served as president of Great Northern Power Development in power development and power project development activities. Great Northern is the nation's private coal landowner and most of the reserves are in lignite. Jacob referred to lignite. That stuff is purely mine mouth because it doesn't make any economic sense to load it in rail cars. Mine mouth dictates that you have some transmission, so I've been confronted with transmission challenges, both in MAPP in the
North Dakota region and in Montana, as well as the WECC. Most recently in the last six months my clients have included the Wyoming Infrastructure Authority -- where until recently I served as its interim executive director. I've watched the RMATS process, the evolution of the frontier line -- I think that's a positive development. With my experience and my perspectives on the transmission challenges of coal project development, it's based on hands-on experience.

I commend FERC and the Commissioners and FERC Staff for bringing us all together. From the perspective of us poor old developers out here dealing with these disconnects between coal projects and the transmission that go along with them -- or more often, doesn't go along with them. I, like Mike, have tried to organize my comments in response to questions posed to this panel regarding coal project development with regard to a regional transmission plan.

The personal comments that I will provide today do not necessarily reflect the views of any particular developer, project, or segment of the industry. These are my personal hard-earned views. I've got four major areas I'd like to touch on. I'd like to talk about regional planning. I'd like to talk about the deficiencies of the open access regulations in place. I'd like to talk about
clean coal and talk about the trade-offs of mine mouth
versus near load. Then I'll wrap it up with some thoughts
on what can be done.

First of all, with regard to regional planning, two points: regional planning is an essential component of
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lacking in most regions of the country.

Secondly, I'd like to touch on the OATT open access process and how it influences coal project development. The open access process is well suited to distributing and administering the incremental capacity that remains in a given transmission system, although there are considerable differences between each transmission provider's system and their administrative requirements. However, the open access process is completely unsuited for aggregating load and expanding transmission capacity to serve coal projects. It is largely seen for coal developers as a deterrent to coal project development.

My experience in Montana and North Dakota, with rate pancaking you have a number of different entities involved in the transmission system. Going through the OATT process, in our case, with Great Northern, involved different applications to six different entities, some requiring deposits, some not requiring deposits. Trying to coordinate that and put that all together is effectively an impossible way to go when you're doing long-distance transport of coal energy. So open access just doesn't work for transmission expansion.

Alternate methods outside the open access process need to be developed to facilitate transmission expansion. Options include DOE's proposed NIECB process and the third-
party financing concept that has been batted around in the
last couple of years worth of energy.

We have some successful Western precedents along
these lines. First and foremost is Path 15, a
public/private partnership involving WAPA and TransElect.
It's really the open process out there to bypass the OATT
process. And hopefully the Frontier line, which is proposed
to take coal power and wind from Wyoming to California and
drop it off in Utah and Nevada as well.

Next, I want to talk about clean coal. There's a
perception out there in public -- maybe not in this room --
that somehow the industry has the option of either putting
clean coal on or putting dirty, nasty coal on. That's not
the case. Make no mistake, any new coal project is
required, underscored, to use clean coal technology,
including the repowering of existing coal-fired power
plants. There are no options here. You've got to go
forward with best available control technology.

There are two primary commercial alternatives
that exist. One is advanced pulverized coal that's been
talked about here this morning. Roy from the East Kentucky
Power Cooperative talked about circulating fluidized bit, or
CFB, technologies. Both of these are proven technologies,
they offer state of the art emission profiles and
efficiencies using proven commercial technology. Pulverized
coal generally comes in increments of 500 megawatts or 
larger to give it economies of scale. CFB, the largest 
built thus far is 300 megawatts in the U.S. So if you're 
adding small increments, CFB makes sense. But if you're 
given to economies of scale, like Jacob is looking at doing 
with Peabody in Western Kentucky in Illinois, you look at, 
what, a 750 megawatt pulverized coal unit.

Next IGCC, that's clearly the future for coal-
fired generation but it has not yet been commercialized. 
It's being considered for a handful of installations in 
regulated states if the local PUC's can be convinced to pass 
on risk and the higher cost to ratepayers. Folks have gone 
down this path in a couple of places in Wisconsin and 
Arizona; in both cases, the PUC's there have not seen fit to 
saddle ratepayers up with these risks and uncertainties. 
We've talked in a number of cases today about penguins 
standing on the edge of the cliff, and I think the first 
speaker mentioned that there might be a shark in the water. 
Well who wants to go off a cliff first and find out if 
there's a shark there or if there's a whole mess of sharks 
there. There will be some people forced off the cliff, some 
of them will go willingly, but I think there are some sharks 
in the water, too. We've got to proceed carefully. Just so 
long as it's not my penguin going off the cliff.

Lastly let's talk about mine mouth generation.
Jake's touched on that somewhat already but I've got a lot of experience in mine mouth projects. From my perspective, they offer low fuel costs largely insulated from markets and price fallouts. You don't have the railroads in the middle taking all they can out of the markets.

A mine mouth operation can be set up for a long-term captive situation and provide a lot of insulation from these market risk issues and also provide economic stimulus in thinly-populated regions where coal is generally found and where they are supportive of developing new coal-fired power plants.

All of these issues are moot if you can't put the transmission together. Most mine mouth projects are at greenfield sites. That's a challenge, because you have to develop the infrastructure, i.e., transmission. Examples abound in the West and the Midwest, particularly Peabody, Great Northern's got a couple of projects in combination with Keawitt. Black Hills has got a couple of projects with the North American Power group in Wyoming and Sipe-Dine down in the Four Corners region. There are a number of others, but these are all greenfields operations at mine mouth.

Now near load projects, they trade the elimination of transmission uncertainties for greater exposure to coal market and rail transportation risks, provided that the local airshed will allow generation.
emissions. Most near load projects are in brownfield situations; they might have been built 20 or 30 years ago. It needs to be retrofitted with modern pollution control facilities. It's probably an easier circumstance to develop a brownfields site, despite the fact that you're exposing yourself now to coal market price risks, price volatility, and getting worked over by the railroads.

Western examples include XL's Comanche plant, looking at retrofitting and adding an additional unit, and Pueblo, Colorado, the tri-state G&T's operation at Springerville and Arizona. There are a number of other examples. Duke just announced a couple of similar facilities in their service territory. Upgrading existing old facilities creates some airshed and creates generating by retrofitting with larger facilities.

While the economics of mine mouth generation tend to be substantially more favorable than near load generation, transmission uncertainties and the difficulties in expanding the transmission grid tend to force the higher cost option of near load coal-fired generation, because you can't put the transmission together, that means ratepayers pay more. That's an unfortunate situation, so what can be done?

I've got a David Letterman list of the top 10. I'm not quite sure what the order is. But first and
foremost, regional planning is important for both generation
and transmission, particularly in regions that aren't
covered by RTO's.

Secondly, the open access process has got to be worked over or just bypassed; it just doesn't work for coal-fired generation where you're adding big chunks of additional generation to the transmission grid where there isn't any capacity. You need consistent open access procedures to the extent you've got to use it. Some companies, some transmission providers require deposits up front, others don't. They've got different ways of handling their system planning and their feasibility studies. When you're doing multi-state work through three or four pancakes, you know -- if you knew you were up against this when you were starting to develop a coal project, you'd just go home, put your money in the bank or invest it internationally or something.

Other alternatives to third-party financing should be considered. It's interesting to see a number of states, particularly those in the West, have jumped into the void left by the problems of transmission by forming state transmission authorities. The Wyoming Infrastructure Authority has taken the lead there. They're the first organization out of the chute to create a transmission authority. They've got a billion dollars in bonding
authority. Steve's got a budget this year of $6.6 million
to spend to effectively do development in the void left by
vertically-integrated utilities jumping into that void.
That's a positive development. Wyoming started it. Montana
has given it some thought. North and South Dakota, the path
there. Kansas got there. I think New Mexico is in the
process of creating one as well, and there are some other
places in the country that that's going on. So I view that
as a process of development in the absence of complete
transmission regulatory reform.

I would echo some comments about giving FERC
back-stop citing authority for transmission projects
involving multi-state corridors. Another important one is
the elimination of the jurisdictional issues between public
and private entities.

Next on the shopping list is helping develop some
new transmission products that more fully utilize existing
capacity. I'm talking about priority firm or contingent
firm and priority non-firm transmission products that will
help not only wind but some of the other generation
resources. We ought to get the best uses we can out of our
existing transmission system before we've got to go out and
throw money at inventing new transmission.

Next on the list is coal and wind. Chairman
Wood, that's probably where you remember me. I've been the
coal and wind guy up in North Dakota. We had coal, we got wind, and we think there's an element where the two fit together.

I think one of the previous speakers touched on the fact that these intermittent resources can justify their own transmission, so we're in a situation here where coal is effectively creating the transmission path that wouldn't otherwise be available to wind. Coal is wind's golden goose.

Regional standards for cost recovery so the financing can proceed; that's probably number one on the list.

Then last is provide incentives for independent entities to develop transmission. There are at least three independent transmission companies that have come forward: TransElect, National Grid, and ITC have all gone out there, they've all bought transmission companies. Only TransElect has gone ahead and done a greenfield project on Path 15. I think they're all poised to be able to do something, but the stars have to be aligned.

And I'll leave you with a final thought: it is that transportation is required to move our nation's vast and cost-effective energy resources, any resource, from remote regions where these resources are generally located to domestic customers located in population centers. The
hurdles of transporting natural gas, oil, and coal have been largely overcome as the siting and construction of pipelines and railroads is a relatively uncomplicated project-driven process, it just requires money. However, the most cost-effective energy transportation mode of all, transmission, has not been expanded due to the void left in regional transmission planning resulting from the mid-1990s efforts of utility deregulation.

Consequently I would encourage FERC and the state utility commissioners to stay the course in your efforts to facilitate regional transmission planning and to complete transmission policy reform.

Thank you.

CHAIRMAN WOOD: Thank you, Jerry, for all those good concrete suggestions. I think that's fertile ground for us to work on.

Diane?

(Slides.)

MS. LEOPOLD: Thank you, Mr. Chairman.

Fuel diversity is an important factor in promoting overall system reliability. The generation market design and the transmission planning processes both can play important roles in facilitating this goal. The ability to permit and construct a new coal-fired facility is very difficult and gets more challenging. For certain loads,
economies of scale normally dictate that a developer build a larger plant. However, the ability to interconnect large new generation in the right place is challenging. Transmission interconnections are often 5 to 10 percent of the total plant capital cost.

I'll try to give an appreciation for a few of the issues faced when choosing between different sites. First, closer to load. The ability to obtain required air permits is normally more difficult and it's more likely to be in non-attainment or severe non-attainment areas. Public opposition is often higher. Traffic is higher, being closer to population. There are likely fewer coal delivery options and transportation is much more expensive to the load area on a delivered-price basis. There's greater difficulty getting land access for transmission and rail interconnections. The plan design itself is often much more costly. Land costs, space issues -- including ash and scrubber byproduct disposal costs, labor costs, and noise control are just a few examples. Access to water is usually much more difficult. However, the plant is more likely to have a minimal or positive effect on the transmission system with less costly upgrades and the value of the plant from an LMP perspective is likely to be much higher closer to load.

Closer to mine mouth, siting issues are far more likely to be with the transmission than the plant. There's
often greater than 50 miles of transmission needed to get onto the high-voltage system and obtaining the needed rights-of-way can be difficult. Multi-state route permits, as we've heard already today, are more likely to be required with related potential for schedule delays. Additional reinforcements will likely be required on the high-voltage system in order for the generation to be able to serve the desired load area. Mines are often located in mountainous terrain, leading to high transmission construction costs. However, fuel transportation, of course, should be less. A plant owner can eliminate at least one wheel of transportation costs, and the likelihood of interruption from transportation is less.

On the other side, the plant owner may have a risk of being the sole supplier. An issue in the mine that the plant is dependent upon can shut down the entire plant. Higher electrical losses are generally incurred when the generation is located remote from load. This may mean greater overall fuel usage and plant emissions for each kilowatt-hour generated. Reactive power is generally provided more effectively close to load, so remote generation may have less value in this respect. The value of the plant being sited far away from load can be considerably diminished. Like any power plant development project, choosing a site is a function of minimizing the
capital costs and maximizing the long-term plant value and flexibility, and this can be a very complex process.

Clear and open regional transmission planning procedures are key benefits of RTOs. Without proper market signals and a properly-planned transmission system, generation will not be built at the right time where it is needed. RTOs see the big picture and can determine which upgrades contribute the most adequate reliable and economic expansion plan to reduce congestion and improve reliability for the entire region. Since an RTO has its regional view, it is able to provide a comprehensive independent generation interconnection process that is integrated with the overall regional plan.

Regardless of the economic justification for the new generation built, a strong transmission expansion planning process can enhance access to existing coal-fired generation and improve fuel diversity. However, better aligning the generation market design and transmission planning processes would help promote future fuel diversity. The transmission planning process, quite understandably, is focused on reliability issues on the grid rather than issues of generation and fuel diversity normally. New generation normally directs what the transmission provider -- through a queue request for a specific plant, interconnection of new facilities is typically sufficient to access the grid in a
reliable fashion but may not serve to truly improve access of the transmission grid to load.

Capacity markets and the RTEP processes are in many ways similar but are not necessarily sufficiently linked. Both processes are looking to find the most efficient way to meet reliability needs through transmission generation or load solutions. Real-time operation of wholesale markets and the transmission system depend upon development of a necessary infrastructure in advance.

There's a great deal of uncertainty in building new coal-fired power plants, including future environmental and capital risks. Meanwhile, we have yet to see a clear path to recover the costs. In addition, it remains very hard to predict nodal price. A plant owner must be willing to take merchant risk with a substantial amount of uncertainty surrounding when and where congestion on the transmission system may change over time.

We support the continued evolution of capacity and energy markets as a means to provide signals for generation, but longer-term forward signals would allow for more certainty regarding the long-term high-capital commitment to a power plant. Current proposals are a step in the right direction but need to be strengthened over time.

Thank you.
CHAIRMAN WOOD: I guess I'll hold that thought before I'll comment, but the current proposals --

MS. LEOPOLD: On the capacity market design, LICAP, RPM, as they relate to some of these.

CHAIRMAN WOOD: Thank you, Diane.

Last, but certainly not least, Mr. MacCourt.

MR. MAC COURT: Thank you.

First of all, Chairman Wood, Commissioner Brownell, thank you for inviting the Dine Power Authority, a Navajo Nation enterprise, to this meeting to discuss the critical role of Indian tribes in the United States -- in particular, the Navajo Nation -- in meeting the needs of our nation's high-voltage transmission infrastructure to facilitate fuel diversity and, in particular, clean coal development.

Before I get going, just a couple of notes. Our general manager, Stephen Begay, sends his regrets that he was not able to be here today. His daughter is graduating from Northern Arizona State University and asked me should he be in West Virginia or in Flagstaff, and I said be in Flagstaff, for sure. But he doesn't express any lack of interest.

A couple of notes on some of the comments that our panel dealt with, then we'll dive into really the subject that I want to talk about, and that is some projects
from Indian country that I think both answer many of your
questions and demonstrate how a partner like an Indian tribe
can help meet both of these needs, infrastructure that will
facilitate development.

Jacob talked a little bit about modeling and I
can't underscore that point enough. Modeling that doesn't
track actual current conditions can sometimes be worse than
no modeling at all. It's something that shows up in so many
different regulatory processes that it's critical that we
keep our eye on how to keep track of what current conditions
are. That's not to say that today's spot prices are going
to reflect what happens next year, but we have to have a
balance between the probable models and the deterministic
models.

Partnerships are happening out there, public and
private, and a variety of different mixes in all of that.
Hopefully today you'll learn about one between Indian
country and the private sector. Somebody else remarked, and
I apologize, I can't remember who it was, but building on
successes is probably one of the best ways to influence
regional planning. I couldn't agree with that more.

Lastly, just a note about penguins. If we're
talking about penguins in the Pacific Northwest, I'd just
modify the metaphor a little bit. If you jump off the
iceberg, you'd be eaten by a killer whale instead of a
shark. But, you know, when you've giving that talk, use that appropriately.

CHAIRMAN WOOD: Didn't even catch it.

MR. MAC COURT: I think in the southern hemisphere there's a lot of sharks.

Okay. We've heard a lot today about the potential benefits of the Frontier project and the limitations of that project from costs, time permitting, and regulatory hurdles. Dine Power Authority has launched what is known as the Navajo Transmission Project, which brings the benefits from a policy perspective like Frontier without the hurdles. And I'm going to go through some of that first, then get into a little bit broader perspective briefly about why Indian country can bring these benefits to the transmission and generation system of coal.

The Navajo Transmission Project is a 470-mile, 500 KV alternating current line from Northern New Mexico to Southern Nevada to first serve the Southwest, not only the fastest growing region in the United States, but two of the fastest growing demand centers in the United States, Phoenix and Las Vegas -- basically a pipeline into Southern California.

The Navajo Transmission Project is already permitted, it's closer to market, and has spurred the development of a 1500 megawatt mine mouth coal-fired
generation project known as Desert Rock, which was mentioned here earlier. Dine Power Authority is partnered with Sipe Global to build the Desert Rock project. Desert Rock received administrative completeness for its air permit from EPA Region 9 one year ago. Desert Rock will be the cleanest coal project permitted in the United States to date, using existing proven technology to reduce emission of sulphur and nox particulates, mercury, and greenhouse gases.

An important point here -- we can get into this more if we want later: several people on the earlier panel talked about using proven technology, and I can't underscore that more. This is not CFP, this is not IGCC, this is basically stacking existing proven pollution control technology, including limestone injection, selective catalytic reduction, flue gas reduction and desulphurization -- excuse me -- combining that with something the Europeans have done for decades, primarily because they can't afford to burn fuel like we can afford to burn fuel in this country, and that is use supercritical boilers. Stacking the traditional pollution control technology in a smart way with high-efficiency boilers. We are producing 3,000 tons of SO2 per year on a 1500 megawatt plant. That's roughly 10 percent of what the existing plants in the Four Corners are currently producing.

Now I don't want to make that sound like I'm
knocking them because for the last 15 years they've been reducing the SO2 dramatically. We were at a meeting two weeks ago with the National Park Service air quality folks at Fort Collins and they admitted that they are actually seeing the difference in the Grand Canyon because of those reductions. That is really, really important.

Wind developers are asking to utilize the NTP. The EPA is working with-- and I said the EPA a little quickly -- our Dine Power Authority is working with the Western Governors Association to integrate the Navajo Transmission Project into WGA's planning for renewables.

I would be remiss if I didn't point out one other thing, which is somewhat unique to Indian country but it gets lost in the shuffle a bit. When we talk about power projects, and it really does apply really in all of our communities. I think the Governor really hit on it best this morning for the State of West Virginia. Navajo Transmission Project and Desert Rock have the added benefit of promoting significant economic development to the Navajo Nation. A few statistics here I think are important.

In 2004, 48 percent of the population on the Navajo reservation was unemployed. 43 percent of the total population was living below the poverty level, compared with 18 percent below the poverty level in New Mexico. And in 2004 the per capital income on the Navajo Nation is $7,412.
Desert Rock has projected alone to generate approximately one-third of the Navajo Nation's currently declining budget from projected operations commencement in 2009 through the year 2033.

There's something really significant, you know, aside from the money. Anybody that's ever worked with Indian tribes or worked in Indian country knows that one of the things that the federal government has hoped it could get over time with its investments with Indian tribes and its trust responsibility is attracting the private sector and building on that initial seed money. That's exactly what's happening with this project. Desert Rock will create between 2- and 3,000 construction jobs at peak development on commercial operation. It will create 200 new family wage jobs at the plant and 200 new family wage jobs at the Navajo mine. That's my ad for Desert Rock and Navajo Transmission Project. It's one example of what tribes are doing that happens to have the benefit of significant land areas and significant fuel reserves. For sure, not all tribes in the United States are blessed with that, but many tribes are looking at participating in energy development.

And I have to commend FERC for its outreach most recently in the dialogue its starting to create through its program of working with tribes there. You know about the successes in renewable energy partly spurred on by the
Department of Energy in other areas, and that's great.

By the way, I have to tell you that Raleigh Wilson, your person that assigns you to the tribal dialogue, did a fantastic job out in Las Vegas last month when we had our Tribal Energy Southwest conference. She's the reason I'm here. It was very well received. It's on the tip of the iceberg of something very big and it's a dialogue the tribes understand is at the beginning, but they really, really appreciate you showing up and caring to actually engage them in conversation.

We urge FERC to support the efforts of tribes with significant transportation and generation opportunities. A couple of facts you might find interesting. The Navajo Nation is roughly the size of West Virginia, has hundreds of years worth of low-sulphur coal reserves. My technical people pick on me when I say that lower sulphur coal reserves and is in a key location to remove one of the big red arrows that Jeff Wright showed on his slide in his presentation today in the direction of Four Corners to Southern California.

Now specifically from a regional transmission planning perspective, the Navajo Transmission Project stands to improve operational flexibility and reliability of the high-voltage system to allow increased economic power transmission to sale and purchases in the region and, as we
mentioned, will facilitate additional coal-fired generation
to serve growing demand in an area that's relying and
suffers from overreliance on natural gas.

Lastly, I just think at a discussion like this
we'd be remiss if we didn't remember that the tribe -- and
we're still trying to develop a national energy policy to
which these projects fit in very well. Modernizing energy
infrastructure, increasing energy supplies and fuel
diversity, accelerating environmental protection and
increasing U.S. energy security is all of what we've been
talking about on this panel, as well as the Navajo
Transmission Project and Desert Rock.

The Western Governors Association has done a good
job in trying to take the planning process into a more
focused regional look and trying to identify where the
bottlenecks in the system are, how to understand and improve
the timing of transmission and generation projects, how to
promote fuel diversity at the state level but add kind of a
regional planning overlay to that, and how to guarantee --
or at least help guarantee long-term generation adequacy are
all again futures of these projects.

I'll end my remarks there. I want to thank you
for specifically, as I mentioned, including Indian tribes in
this discussion. We look forward to working with you and
answering your questions.
CHAIRMAN WOOD: Boy, they just get better and better. You all are a great panel.

Let's start, Mike, with you. IGCC. Certainly, Jerry, your speech to the choir kind of left a mark, and I think, Jacob, you said it too: let the market pick which technology is going to be the outcome. If the government says we want it to be this clean or cleaner, which it has recently done, that's the bogey under which you have to shoot.

I know some of your states are bundled, some are unbundled. How do these unbundled states, which do kind of go here -- not including West Virginia, but go up toward the Northeast, how in an unbundled state would a utility or even a Peabody type make a long-term investment that has some high costs up front. I'm thinking about nuclear power, too, actually.

MR. MORRIS: Pat, that's an excellent question. I don't know. Let me back up for just a minute and say I'm sorry I didn't include nuclear in my diversity of fuel, because we do believe in that, although that's not in the recipe for American Electric Power. I've had a conversation with the John Roes of the world and the other major nuclear players. Every one of them are saying is if they were -- could apply for a new station, they would do it in a jurisdiction that has rate of return. What we're asking in
our jurisdictions -- fortunately, in Kentucky it's still a bundled state. West Virginia is a bundled state. Ohio is, however, an unbundled state.

We've asked the Public Utility Commission of Ohio to step out of the box and find under the provider of last resort authority, the opportunity to approve a regulated rate of return power plant going forward. First off, in today's world, I don't think you can raise the capital for a billion dollar merchant plant. I think the capital investors, working off of a bad model of natural gas being $2 a million Btu's as far as the eye can see, went into a real heavy storm, and I don't think you'd see them repeat that performance. I don't think you'll see a major megawatt breakthrough clean coal and/or new nuclear built into a jurisdiction that does provide for that kind of regulatory treatment. That is just, I think, the reality that we all face.

I guess I say that in one sense. If you went back to PURPA and you could demonstrate through a PURPA process that you've got a contract, that really is the Wisconsin model. Wisconsin Electric Power Company is not going to be the owner of the power plant that's built there, and one of the panelists was right in that they chose not to go IGCC only because they didn't have enough data in front of them, if you listen to Wisconsin commissions. What they
are doing is building an unregulated plant with a 20 year contract that has a stairstep in the rate structure of the energy delivered from that plant.

So there are ways to do it. I just think that's the kind of assurance we're going to need. There aren't any more, I don't think, $200-, $300 million power plants that you can build and they will come. I don't think that model is there.

MR. WILLIAMS: I'd like to kick that around a bit, because Peabody will build what I call an unregulated plant; I will call it merchant. You build it and have no forward sales to support it. Peabody is partnering with an entity that represents a partner in the project. If you have load-serving entities taking ownership positions in a project, the share that Peabody will own will be forward-sold from 10 to 30 years. That will support financing with load-serving creditworthy entities. So it isn't unregulated. I divorce it from the word "merchant," which is purely speculative with no long-term contracts. That can be done.

CHAIRMAN WOOD: Those entities you're mentioning that don't have unbundled retail service, how does the retail competition model work with these?

MR. WILLIAMS: The one interesting thing is we're building a plant in Illinois -- Illinois is going through
its deregulation process and I will point out their auction
mechanism excludes any new plants like our from ever bidding
in until we're built. It's a three-year auction. How can a
plant that isn't going to come on-line for five years or
four years even bid in and help support financing? You
can't do it. The only way you can is if the industrials
underneath there look out and realize the problem that's
occurring -- and some of them are -- and say look I need to
lock in for long-term supply at a fixed price. You're not
going to have small consumers, it's going to be an
industrial customer who recognizes the energy problem this
country's facing. Otherwise, the major of consumers in
Illinois continue to buy power, whatever the gas prices
yield to them in heat rate, that's it. So you're right. It
does exclude most of the market unfortunately. But in our
case there are enough municipals and cooperatives who need
power and there are enough parties looking to lock down
long-term fixed prices and that's something we can do.

CHAIRMAN WOOD: Are there any -- you all are --
all the panels were practical but I'll say you all are the
co-developers, companies of various sorts who have certain
specific interests in this -- or Jerry, in your case,
certainly knowledge about it. What are some kind of low
hanging fruit opportunities here? I've kind of been waiting
for 10 years for us to have a national energy policy that's
actually other than an announcement of one.

(Laughter.)

CHAIRMAN WOOD: I just think we've got to start making it happen, and I do think this is what we talked about in North Dakota with a renewable coal mix perhaps. What the crowd out in the West is doing with the frontier line, which has got some state muscle in the arms of four governors behind it.

With regard to the infrastructure authority, the old mechanism, it's working against the new mechanism. The Southwest Power Pool said this is exactly how we're going to pay for it and there's this big long laundry list and not major projects, but altogether they will certainly help us reduce a lot of congestion within that system.

You've got some specific projects out there -- we heard one this morning from PJM. Wanting to drill deeper on that, I expect in the coming weeks and months, we will. But from this panel, are there any specific thoughts of things, opportunities we can start talking about with state commissioners and federal agencies that are involved or stakeholders that are going to help you pay for it, any particular things that come to mind here that anybody wants to kick out? Our last speaker did that in the Navajo region but it's one we've heard about before. What could be done?

MR. WILLIAMS: I won't be shy in terms of the
projects. I think the mountaineer concept, if you go back
to my Nike swoosh and all of that, that means solving
exactly that problem and jumping on. There's the build all
the way across Pennsylvania -- which is a big project, there
are actually small pieces from West Virginia to Virginia or
inside Virginia -- that actually attack part of that problem
immediately. It frees up existing coal plants. There's
lots of ways coal plant can be built. They're sitting in
ECAR.

CHAIRMAN WOOD: Are those the ones you referred
to, Jacob, that have the lower capacity?

MR. WILLIAMS: Absolutely. That's right. You've
got the same issue, frankly, going on. You've got the big
AEP system and the TVA system separated by about 70 miles of
low-voltage stuff that don't tie Rockport to Paradise
together, a big, big interstate waiting to be built, the
Rockport and the TVA Paradise system. It essentially
bridges the gap. There's some gap bridging that could be
done that frees up existing coal and gets them into the
other regions. So I think from a project perspective there
are some things that can be done. Whether, you know, we
have the ability to actually bring the states together to
make that happen, I don't know.

MR. MORRIS: I would argue that part of what you
heard today from the PJM is again the appropriate way to go
through this. It is the regional transmission planning concept to identify those bottlenecks that are there. And, as you really did, Pat, you and I and ISO New England with the Southern Connecticut problem, it was identified as one of the regions that had to be de-bottlenecked, as was Path 15, and people came forward to build the answer. It's taken time, because in New England everything needs to be underground. It's taken a tremendous amount of capital.

But the facts remain, you identify those places -- and again, I think it's fair for the incumbent to have an opportunity to de-bottleneck that system themselves. If the process begins through the RTO, with the FERC standing behind an application to build it, I think you're going to see a lot of people step into that space.

I know there's been almost a national fear that we've all stepped away from transmission investment for any one of a number of reasons, some nefarious, some not. I really think -- and you've heard me say this many times before, I think it's simply two things happening. One, the road map was unknowable, and so what we did for a decade is we collectively put our capital to work in environments other than the United States. And what most of us found out was that was a really bad bet and we're all now back home and eager to put capital to work to continue to build out the infrastructure because at the end of the day I really
believe that we all want this system to be open.

The beauty of an open system -- and this is
something we had before in every one of the old NERC regions
or the power pool regions, you always dispatch your lowest-
cost transfers and your highest-cost transfer and everybody
got the benefit of that. What we're trying to create and
what I think we're trying to create in the competitive
marketplace is what you get in a competitive marketplace:
General Motors needs to buy 2500 megawatts nationally.
They're going to get someone to bid into that supply process
because they know the grid's open and they can satisfy those
demands from any one of a number of points of supply. I
think we'll get there. I know maybe you and I depart on the
issue. I still don't think mom and dad at the retail level
want to buy energy for anybody but their own town utility,
and if we bid that out and we do it by auction or however we
do that as we go forward, that may be another day.

I think when you get into environments where the
provider of last resort, the average homeowner, the average
real residential retail customer would just as soon play in
that world and hope that the state regulator and those
others who play into that cycle of rate control are doing a
good job of helping to ensure that they're giving low cost
supply.

CHAIRMAN WOOD: I would respectfully disagree on
that, but my current job doesn't have to go to that level. But I think there's a lot that is left as far as low hanging fruit.

Diane, you've been a little quiet. Anything that comes to mind as far as an early achievable to try to move this agenda forward?

MS. LEOPOLD: I guess the one thing I'd observe is really in many ways it has continued to move forward. There was a very large generation build that went on at the same time that LMP markets were just starting actually to provide signals to expose congestion in a more transparent way. While everybody was focused on building new generation, I'm not sure a lot of people were focused on where is the transmission congestion, because we didn't have the signals there. Meanwhile, I do think a lot of processes were developing: RTO's were getting larger, the regional planning process is getting more robust, and now it's time with enough generation and with the LMP signals to be able to expose where the transmission issues are, to be able to have the RTO's more effectively respond to it. That's the positive. The negative side is more the long-term clear certainty of those signals to be able to respond to it in large capital investments.

CHAIRMAN WOOD: Let's take one. There is this proposal from PJM today, there's a big swath that goes
through Dominion's service area. I wonder what level of process needs to happen prior to Dominion going to the Virginia Corporation Commission and saying I want CCN to build this.

MS. LEOPOLD: From a regional transmission planning perspective, I'd like to defer to our transmission planning expert on that, if you're willing to. I'm not the regional transmission planner.

CHAIRMAN WOOD: Do you need me to repeat that, or do you have it?

MR. BAILEY: If you would, please.

CHAIRMAN WOOD: What needs to happen -- again, you're a transmission owner, the newest one in the club I think in PJM now. Congratulations on that. What does it take between like today's announcement and you guys or your company walking to the Virginia Corporation Commission to get a siting approval for a CCN to route this project across Virginia? What needs to happen, both kind of mentally as well?

MR. BAILEY: I think mentally, both for Dominion and for us to be able to express that to our state corporation commission, the siting and all that group, is what are we getting from it, what is the benefit? What is the benefit to the Virginia transmission system, what is the benefit to the Virginia customers? It's going to be proven
to ourselves first what that's going to buy, so that we'll buy into it and we can convince our own state and local communities. What is this, you've got this big expressway now coming through this area, what are my benefits from it? It looks like it's starting over here in West Virginia and it's ending over here really, more out of Virginia, but along the way what is the benefit going to be to our local area and our local economy and how are they going to help the energy prices and so forth?

CHAIRMAN WOOD: What if -- if Virginia were an incidental beneficiary but the benefits may be over across the bay in Maryland and Delaware, does that make it impossible to get approval? Say there were some benefits but maybe not -- again, the predominant benefits go outside that state.

MR. BAILEY: That's a difficult question. I don't think it would be impossible. I think it would be a very difficult question.

CHAIRMAN WOOD: I think the types of things we've talked about all day are really multi-state regional type projects that would have to be dealt with.

MR. BAILEY: Even a project like this, if it does approve the superhighway, even though it may not drop along the way, there could be some long-term benefits if it does help alleviate some of those bottlenecks that we talked
about earlier this morning. A superhighway could alleviate that, so there could be some residual impact that this facility would bring. So I think you might be able to find some benefits for something like this. Once you've convinced yourself that there was a regional impact, you could express to the stakeholders, that would help you with the signing.

CHAIRMAN WOOD: I agree. I think that's a fair response. At this stage, it's not a specific project. But, you know, I think I will just say I do remain concerned about the ability to get kind of over the finish line on some of these projects because the track record has not been really great on interregional transmission. I think all the ones we've talked about with the gentleman from SERC, those will get built, but local customers and generators, the interregional stuff, is really what is the potential economic development for this state and for Kentucky as far as the states that are producing, and there are some benefits in the states that are consuming. There may be states in the West.

MR. BAILEY: Fighting the local push-back is going to be difficult.

CHAIRMAN WOOD: But you all invested in DG for the short term.

MR. MORRIS: Again, Mr. Chairman.
CHAIRMAN WOOD: Thank you very much for coming up.

MR. MORRIS: This is going to take more time than any of us want. But that project, any one of those projects should be filed with your Commission and approved by your Commission and ultimately you move the rates through at the retail level, at the state level, if you must. If it's a single owner of that access route, you would do as we do with much of the revenues from the 765, you'd share it back as a credit to the cost of service so that the Virginia Corporation Commission could say our retail customers are getting some benefit from having done that. Set aside the benefit that as I heard this morning Governor Moore saw so many decades ago, that Governor Manchin talked about today, coal by wire out of West Virginia. And I appreciate that the model isn't there yet but I heard a great quote the other day: that is that good ideas will overcome opposition if you just hang in there long enough. These are really good ideas and it -- as you know, because we've had this conversation many times. You and I both grew up on the gas side. When you put an interstate pipeline taking gas from the Gulf of Mexico to New York City and it runs through Virginia, zero benefit, but it gets done because it's in the better interest of the coterminus 48 states.

CHAIRMAN WOOD: Since you led with that -- she
was there long before I was, I was a latecomer to the FERC primary siting jurisdiction --

MR. MORRIS: I apologize for that, Commissioner.

CHAIRMAN WOOD: All right. Other folks here on the panel, Commissioners and Staff, questions for these panelists?

MR. THOMAS: Just a couple. Mr. Vaninetti was going through a litany of 10 things that could be done. Down the path of low-hanging fruit, why don't you run through again the consistent OATT procedures? What could be done sooner rather than later if this helps move along the planning and expansion process?

MR. VANINETTI: I think you have to go away from the open access process. You've got Path 15 out there as a precedent. You've got some good discussions going on in the Congress, in the energy bill for third-party financing. You've got the NIETB process. I'd like to see any or all of those things move forward so you've got an alternative. I think that's where FERC plays a major role is in the interstate business and you have to take the big picture here. It can't be done with the individual transmission providers. You can't add up these pancakes and you can't get a decision made.

MR. THOMAS: That's what you meant by the consistent procedures between the OATT?
MR. VANINETTI: You're never going to be able to hammer that -- well, maybe you can hammer out a consistent procedure. My view is that the OATT process just isn't suited to pipelines or transmission. This is something that's in a bigger issue, truly more in the lap of FERC.

CHAIRMAN WOOD: Again that's primarily because of rate pancaking?

MR. VANINETTI: No, again, we went through 19 different applications to be able to take power from Montana to the Pacific Northwest. You've got six different entities in our case that filed on it. Each one has a different procedure, a different way of processing you through the feasibility studies, the system impact studies. And none of this stuff correlates. It's not done simultaneously; it's two steps forward, one step back and collectively you have nothing. You've spent a bunch of money putting deposit money down and you don't have a clear path for decisionmaking.

CHAIRMAN WOOD: It's the one-stop shop type of aspects that you need within the larger region. That could be done without an RTO.

MR. VANINETTI: Yes.

CHAIRMAN WOOD: That's helpful to hear that. We actually haven't heard that from the specific people who have to live, not just paying the pancakes, it's the
pancaking of procedures and applications.

MR. VANINETTI: Chairman, you're trying to divvy up whatever remaining capacity is left on the existing system. That's where I think open access fits, when you're talking about major expansion. None of that stuff should apply. But in the absence of any completely formulated transmission reform, that's what you're left with.

CHAIRMAN WOOD: I think the Commission kind of hit that brick wall in 1999. That's why they went the RTO route.

We'll open it up to the audience. Any questions for this panel here?

MR. DOUGLAS: My name is Stratford Douglas. I'm a professor of economics at West Virginia University and I at one time was on the FERC Staff, too.

Hearing the remarks of Mr. Morris and the questions you asked also, Chairman Wood, about how can we possibly leave it to state ratepayers to provide the necessary guarantees? You've got to get comfort where you can, it's a cold world out there, and these are big projects. But, you know, one of the reasons why we did this whole open access market-driven process was to try to get big plants built. I remember that as being one of the reasons why, in the wake of Public Service of New Hampshire and the fact that states can't provide the guarantees -- or
they won't -- if the project goes south. And I wonder, these are regional projects and I'm not sure if West Virginia ratepayers want to guarantee a project when we're already exporting three-quarters of our power anyway. Why should West Virginia ratepayers take on any risk to build new power plants? This is more of a regional issue and shouldn't we be thinking creatively about how many regional entities, if not national regulators, can shape a new kind of regulatory compact, which is what we talked about, I think.

CHAIRMAN WOOD: The potentials of jobs and property tax benefits from having those plants here rather than exporting the extracted coal by rail to some other place, are those not significant?

MR. DOUGLAS: They certainly are, but where do the benefits flow to. If what you're looking at is a traditional rate of return regulatory process, what you're looking at is how do we keep rates low? We've already got just a huge stock of generation here. We're producing much more than we need in the state. Why should we be building new, more expensive capital and rolling that into our rate structure? I can certainly see that I think the previous governor -- that we're saying about building power plants and sending it out by wire, actually states financing that, as I recall, I wasn't here at the time but I think that
there may be ways for states that would like to provide guarantees and certainly we're going to dig up the coal, we're going to clean it up, and we're going to burn it. We expect to do that. We know that's what's good for West Virginia business. But do you guarantee it through the traditional process or do you do it in new ways?

CHAIRMAN WOOD: Any thoughts on that?

MR. MORRIS: You really could do it a new way if that would be the choice of the state. You could take the approach that Peabody is taking, you, the State of West Virginia, would build a power plant for the benefit of mining your coal and taking your coal to market. For you to create the capital to do that, no different than anyone else, you'd have to have some contractual relationship with some creditworthy buyer so that you could get bonding or whatever done and you could get the kind of rating on it that you would need.

Having been a FERC staffer -- and I don't know how familiar you are with the way that the AEP eastern fleet operates, but a plant built in West Virginia would dispatch into the eastern pool of the AEP customer base and West Virginia-Appalachia Power would get the benefit by way of capacity credits by having capacity that they don't need to satisfy capacity that Kentucky might need or that an Ohio might need. That's how the benefit works of the way the
pool operates here as well as the assets that AEP owns in the Southwest, the same kind of pool dispatch and sharing cost arrangement. But as to your question, there is no way you could go ahead and do that, just as Peabody has done.

MR. MC CLELLAND: I think I could take a shot at that, too. I think it's a good question and I think it's a fair question but the interconnectivity of the grid itself requires that the regions cooperate and work together. Redundancy, in essence -- when you think about the capacity of the grid and the interdependency of the grid itself, half the requirements have been reduced because of that interconnectivity. If you fundamentally changed that interconnectivity to go to more of a localized basis, you'd require a significant investment in the grid itself. So some of the savings have already been reflected back to the individual entities connected to the grid.

Mr. Williams made an excellent point earlier on and it goes to the theme of the conference. As you move towards coal-fired generation, you move away from dependence on foreign oil and you also move away -- you move to a more competitive position with other fuel types, such as natural gas. I think Mr. Williams point, at least it wasn't lost on me, what would be the reflection of the reduction in natural gas prices for all consumers? Traditionally there have been other ways that utilities have benefited by interregional
transport through transmission lines. There have been utilities that have used interregional commerce for transmission of energy. And there have been premiums associated with that transmission of energy that actually reflect back to a reduction of retail rates, which benefited the players themselves.

The fundamental issue that you propose is do you want to build redundancy back into the grid, do you want to isolate the grid to the point where additional redundancy and major expenditures are then necessary in the grid itself? I think it's an interesting question, but it's certainly one that I think can be addressed and I think the economic benefits to the regional folks, not just the interregional folks, the folks on each end of the transmission line, I think it can be demonstrated -- I believe it can be demonstrated very plainly, not to mention the impact on reliability in which everyone suffers in all regions of the grid. The Northeast blackout, for instance, 50 million folks were interrupted. The cost of that interruption -- one day for some cases, up to three days for others -- the cost of industry and consumers for that one interruption was between $5- and $10 billion. You can pay for a lot of transmission investment. It's worth the cost for an interruption.

CHAIRMAN WOOD: Thank you.
I just want to, before we close out this panel, say one particular point and it's one I know the members of the Congress are interested in as they're looking at gas: how can we really offload demand on gas so that it won't fly back down the price curve?

Jacob, what you mentioned was very helpful. I haven't seen it in our forum yet. How we think it would be intellectually remiss for us going forward to not include that in cost benefit. That's for that thoughtful and correct contribution to the debate. But I think one of the things that our push for economic dispatch on behalf of the region here and the other regions in the Northeast where you do use the most efficient plants and dispatch them properly, in those gas-fired regions of the country -- including my home state and much of the South, California as well -- where we're not maybe efficiently using the gas resources, we're getting .5 to 1.5 Tcf in a given year, which sure takes a lot of steam out of $7 gas. We won't see $3 gas again, but it would be nice to force it back down the curve a little bit.

It's a good point. I appreciate your bringing it up.

MR. WILLIAMS: One thing that struck me -- and I attended all the natural gas hearings in the Senate -- no one actually pointed out by expanding coal into the
Northeast and another wire into the Pennsylvania area that knocks gas off, that would do something. We talked about LNG. We talked about drilling more and all those things are good. But at the end of the day it's our own resource and I didn't hear that. It was a bit of a shocker to me.

CHAIRMAN WOOD: We didn't. Thank you for pointing it out here.

Other items for these folks before we go to the general sum-up?

(No response.)

CHAIRMAN WOOD: I want to thank you all first.

(Applause.)

CHAIRMAN WOOD: You all have been making notes for the day, is that right? Do you want to just summarize what we've heard? Let's do that.

MR. YAKOBITIS: Thank you, Chairman Wood.

Coal is available as an economical fuel resource. Regional planning efforts will increase generation and transmission and reduce bottlenecks. I have put together a few points from the discussion at today's conference that were mentioned as necessary. When determining which technology or resource to use for electric generation, the focus needs to be what technology fits the location best. A major factor that permeates all topics is cost allocation. Cost allocation is key to assuring grid development. There
needs to be an agreement in which there is surety of cost recovery and that the beneficiary pays. Also, benefit studies need to be clear so that all parties understand the benefits of building generation and transmission from the planning stages.

ISO's and RTO's need to have more planning authority. There needs to be more governance in the structure of voluntary regional planning groups. State and federal collaboration is necessary at the early stages of the planning process to drive expansion rather than waiting for approval first. And lastly, reliability councils support and participate in regional planning efforts but need more coordination to ensure generation development and transmission expansion.

Thank you.

CHAIRMAN WOOD: Thank you, John. Again, is there anything anybody else -- not just responding to the last panel but just as a general topic of debate? This is a great time for you to volunteer any thoughts you may want to share for the public record.

Yes, sir.

MR. FESSLER: Mr. Chairman, Dan Fessler again. I have listened with great interest to the two panels this afternoon, and the last panel, particularly, penguins came in for a rather difficult time. I suggest if the penguin
jumped in the ocean it would be eaten alternatively by a
tiger shark or by a killer whale. I would point out that
the penguins live on fish, so if they all just stand there
and watch, they will all surely starve to death.

(Laughter.)

CHAIRMAN WOOD: He's been like that as long as
I've known him. He needs to be writing for this vast
cultural wasteland called television. What a gift it would
be.

I think as we kind of sum up today then, I
appreciate that we had some state folks here -- it's always
good to collaborate with them -- and we heard much today
with the need to work with states on a regional ratemaking
approach, a regional planning approach.

And I think when I get back to the shop I will
ask the Department of Energy, whom we work closely with,
we'll be meeting next week, to update their national bionic
constraint study, which the prospective legislation would
require them to do on a periodic basis, and agree that the
regional planning, which we've talked about here today,
would be for the planning model. That is something
certainly we could take a way from here.

The efforts we talked about, again in the absence
of getting a national energy strategy adopted into law, even
a mild one, the commitment to move projects forward can
resolve some of these issues. I don't think projects solve
every issue, but it's something our Commission is committed
to do, working again with the states and with the grid
operators and the utilities as well, particularly supporting
these regional processes as well with strong emphasis on the
organized market regions.

I do appreciate the type of information we get.
I don't know how many of you all got Mr. Williams' study
from Peabody. It's good to have facts and figures to base
it on and I just want to encourage, as the Commission and
Staff go forward into the future, that you really do ask
people and ask the industry to bring us facts and figures so
we can identify where things are needed, where the strengths
are and where the best expenditure of ratepayer dollars
ought to be had.

I appreciate again the thoughtfulness of the
Staff in inviting representatives of the tribes here. From
my experience of the recent tribal events in North Dakota,
there's a lot of potential -- particularly in the Western
part of the country, not so much over here but in the
Western and Southwestern parts of the country to build some
relationships with those who have significant territory and
land under their jurisdiction, as well as a strong interest
in proper utilization of our nation's natural resources.
That's good, and I appreciate that.
Siting issues, again as a former state regulator -- Mark, you're in this view now -- you know, you can't handle siting well. You're the first state regulator I've seen since I left the job in Texas. You give me hope for the future.

MR. GOSS: It's mighty interesting.

CHAIRMAN WOOD: Interesting is good, but we should get them done. That's what we get paid to do as public officials. Thanks for inspiring me there. There may be a need for some back-stop authority along the lines that the legislation has called for, quite frankly. That's what we need if the current model doesn't work, so thank you for that approach.

Generation planning and transmission planning we've heard -- is not only here today. Marry those two things up. We've heard the response from the stakeholders that are working through PJM's RPM replacement to the ICAP model. We hear this in different regions of the country. It's probably one of the toughest boundary lines regulators have between competitive generation and regulated generation. Regulated generations has overlaid the competitive ones but we've also got to fix the problem. We haven't quite figured out a fix yet. Unfortunately, we shy away from solving either problem. Marrying up the generation planning concepts with transmission planning
concepts is important here.

I really was inspired -- was it Jerry that raised this about the pancaking of the pancakes? I think that was great. I've sat here almost four years and that's the first time I've heard it's not just about the rates, it's about having to go to so many different shops and having to translate back into Chinese what it is you're trying to eat. That's tough, but I think we're looking forward to Order 888 reforms. We'll be putting out another inquiry in a few weeks on things that we want to look at to update the Order 888 by its 10th anniversary, which is the open access rulemaking. When that's done I certainly think this ought to be something in there that is a front-page item.

I just appreciate again the folks who got here, some of them from -- certainly, Mike, I think the biggest utility in the country on down to some of the more creative entrepreneurs we heard about this morning, some of those, Dan, that you represent and some of those folks who are trying to do creative things with small level cogeneration of coal.

Technology has always been our nation's savior; as an engineer, I guess I can say that with a true ring in my heart. But I do think that as we try to explore more technology for solutions here, I think it was great to have the head of the West Virginia Institute of Technology,
Charlie Bayless, and his folks here today as well. That ability to think kind of outside the box I think it an industry that will be one of the great things. We'd like to invite anybody here -- and we'll make this transcript available I guess in about five business days and we'll make that available for the public as well. We'd invite any comments, follow-up comments or advice that you folks and your companies or organizations or yourselves may have in two weeks from today. That will work -- and, of course, they're welcome any time -- actually get them closer to the document and make policies and decisions.

Nora, any thoughts?

COMMISSIONER BROWNELL: Great to be here, can't wait to get back.

MR. THOMAS: We'll be posting all the presentations that not everybody was able to get on the website as soon as we can.

CHAIRMAN WOOD: The meeting is adjourned. Thank you.

(Whereupon, at 3:55 p.m., the meeting was adjourned.)