

**Remarks for John Rowe, Exelon Corporation CEO
Nuclear Energy Assembly
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As chairman of NEI's Board of Directors, it is my responsibility to report to you on the state of the nuclear power industry.

Audiences generally expect a pep talk at times like these – sunny skies, smooth seas and a following breeze.

Those of you who know me recognize that cheerleading is not my thing, particularly in matters of business.

I believe we are best served by cold-blooded analysis, and I fear that we place ourselves at risk if we start believing our own press releases.

Many people – in the political world, in the policy community, especially within our own industry – have great expectations for nuclear power.

Let me be clear – so do I.

I firmly believe that we will need 20 – 30 new plants by 2030 if we are to have any hope of addressing climate change and ensuring our future energy security.

But we must keep these hopes harnessed to fact.

On the one hand, the outlook for nuclear energy is definitely growing brighter.

Our plants are operating well – better than ever, better than other types of power plants in the United States, and among the best nuclear power fleets anywhere in the world.

Our plants are reliable – turning in an average fleet capacity factor of around 90 percent, year in, year out. Our best plants run at an astounding 95 percent capacity factor.

They are safe, measured by the industry's performance indicators and the NRC's Reactor Oversight Process.

They are economic and profitable. In fact, one of the great success stories over the last five or six years has been our ability to hold operating costs relatively stable, even as we have invested heavily in new security enhancements and new steam generators and other major components necessary to enable safe and reliable operation for 60 years, not just 40.

License renewal has become a routine undertaking.

Three-quarters of our operating plants have renewed their licenses or indicated formally to the NRC that they intend to do so.

License extension will enable us to extract value for our customers and earnings for our shareholders far in excess of what we imagined 10 or 15 years ago.

We have also added 3,000 megawatts of capacity through power uprates, and we'll add another 2,500 megawatts in the next several years.

It is little short of remarkable that nuclear power represented approximately 20 percent of U.S. electricity supply in the early 1990s, and still represents approximately 20 percent of U.S. electricity supply today ...

Even though U.S. electricity demand has increased by 25 percent in that time, and even though we have fewer plants operating today than we did back then.

I can think of no higher tribute to the officers and employees who run our nuclear fleets.

I ask you all to savor that thought.

And we are at long last moving to a time when generating companies will make business decisions to build new nuclear plants.

In fact, sixteen companies and consortia are already developing license applications for as many as 30 new plants, representing approximately 40,000 megawatts of new capacity.

The NRC has approved early site permits for Clinton and Grand Gulf and will, shortly, for North Anna.

New designs, including the long awaited "passive safety systems" have been certified or are undergoing certification review.

Generating companies are ordering long-lead materials – forgings and components.

U.S. manufacturers are gearing up to meet expected demand for vessels and valves, pumps and steam generators, pipe and electrical components, and enriched fuel.

And uranium producers are developing new properties.

Our timing couldn't be better, for the world is changing.

Fossil fuel prices, oil, natural gas and even coal, continue to be volatile in response to unprecedented worldwide demand.

Domestic oil and gas production has plateaued.

We are increasingly dependent upon foreign regimes – often hostile regimes – to heat and light our homes.

We have young men and women fighting and dying in Iraq.

And we are increasingly concerned about the pressing reality of global climate change – an issue that is very real – politically and scientifically, and painfully real economically.

In a moment Skip will give you a very thoughtful assessment of how climate change and national security actually coalesce, and the critical role that nuclear energy can play in addressing both.

But the hand of progress is not the whole story.

Despite our demonstrated performance, and despite the demonstrated need, significant regulatory, financial and infrastructure challenges stand between where we are, and where we need to be.

First, we all know that the federal government has failed to meet its obligations under the Nuclear Waste Policy Act.

Over the past 30 years, the American people have paid almost \$30 billion to develop a permanent repository for spent fuel.

And sadly, we are not much further along today than we were 10 years ago.

Rather than engaging in continued accusations and recriminations, it's time for both government and industry to acknowledge political reality.

We must accept that the operation of a permanent disposal facility at Yucca Mountain will not happen soon – certainly not by the 2017 date currently advertised by the Department of Energy.

An alternative must be found if we truly believe that nuclear is essential not only to achieve meaningful reductions in carbon emissions, but also to enhance our national energy security.

I support NEI's position that long-term interim storage must be that alternative.

We must establish a process under which the federal government takes title to spent fuel, and moves it from reactor sites to one or more federal locations for consolidated interim storage.

Long-term interim storage would demonstrate that the government is capable of meeting its statutory obligation to remove spent fuel from our reactor sites.

It decouples the decision to build new nuclear power plants from the operation of a permanent disposal facility for used fuel or the waste by-products of nuclear fission.

And it gives us time to complete the technology development to close the nuclear fuel cycle, which will dictate the type of waste by-product that will require long-term disposal.

While permanent disposal at Yucca Mountain or a similar facility remains a long-term imperative, the industry can proceed if the operational date slips to 2025 or 2035 or even some later date.

But we risk losing everything if we cannot tell our friends and neighbors, with confidence, that the federal government is meeting its commitment to safely store spent fuel.

Second, we need to come to grips with the substantial financial challenge of building new units.

There is a myth that EPACT 2005 provided the nuclear power industry everything it needed – and perhaps more than it deserved – to finance the construction of new nuclear plants.

It will take courage to tell the politicians that it just isn't so.

The production tax credit marginally improves the financial attractiveness of a project after it's in commercial operation. But it provides no help during construction, which is our major challenge.

The standby support is limited. It covers debt service up to certain limits for a limited period of time, but would not cover other substantial costs borne by a nuclear plant subject to a delay in commercial operation.

And two years after passage, we still do not have final regulations to implement the loan guarantee program. While the Department recently issued a proposed rulemaking, it falls short of meeting the needs of industry and Wall Street. We have several allies on this issue in Congress, and energy legislation in both the House and Senate attempts to provide the Department with additional guidance to improve the program. At the same time, DOE has yet to fully staff the loan guarantee office, and neither the Congress nor the White House have provided sufficient loan authorization to support even one new nuclear plant.

But it will take even greater courage to admit to ourselves that the federal government cannot and will not be the financier of first or even last resort.

While the federal government must play a role in providing the initial incentives to restart the industry, including most particularly a robust and workable loan guarantee program . . .

Over the long term, both state regulators and the industry will have to step up if we are to successfully build the nuclear capacity the nation needs.

I have a great concern that none of the current state regulatory models, be it rate base, integrated resource management or competition, will support the level of expenditure necessary to construct the next generation of plants.

Can my friends at Southern and Duke actually rely on the rate base regulation that prevails in most of their jurisdictions to support new construction?

Based upon my experience in New England in the 80's, only if every plant comes in at the right time and the right cost.

Remember that after tax write-offs of nuclear construction costs during the last great construction effort under rate base totaled \$17.6 billion

Can the Exelon companies rely on competitive markets to support new investment?

I'm sure many of you have been following developments in Illinois, where the state legislature is seriously considering reinstating a 9-year rate freeze after the fact

It may surprise you to know that the issue in Illinois isn't really about price increases to customers.

In reality, the rates that ComEd is now charging are less than the rates it charged 12 years ago under state regulation.

They're right at the national average.

They're less than the average for other large metropolitan areas

They're less than in New England, or Pennsylvania, or Texas, the other regions where Exelon does business.

The real issue is the presumed profitability of Exelon's existing nuclear plants

Now that market prices are up, regulators want to return to cost based rates

Only nine years ago the story was very different

And even the higher market price is well short of what we would need to see to invest in new nuclear facilities

Will state governments maintain any regulatory bargain, no matter how explicit, in a volatile market?

Sadly, my experience over the past 23 years does not give me confidence.

Yet they will have to if we are to succeed.

And then the industry itself must be prepared to confront new risks and financial challenges

New nuclear plants are extremely large capital investments – probably on the order of \$5 billion in today's dollars.

I have seen estimates ranging from \$2000 to \$4000/kw.

Capital projects of this magnitude are typically undertaken by companies with market values many times larger than that of even the largest US electric power company.

If we are to successfully build new nuclear facilities, we must be prepared to employ the same discipline, and many of the same techniques, that have enabled us to dramatically improve the performance of our existing fleet.

We will have to exercise rigid financial management and discipline.

We will have to work together in consortia and through NEI.

And ultimately, we will have to consolidate the industry into larger and larger generating companies for which nuclear power is a core business.

Third, and finally, we must address infrastructure.

It is no secret that the intellectual and manufacturing infrastructure that once supported this industry has atrophied over the past 20 years.

Hard to imagine it wouldn't, given the lack of construction over the period.

And although we have seen recent encouraging signs that it can be revived, such as TVA's successful effort to restart Unit 1 at Brown's Ferry

We cannot assume that the infrastructure we need will be there UNLESS we take steps to ensure that it is.

Unlike the spent fuel issue, and unlike the financial issue, infrastructure is first and foremost an industry responsibility.

Although there is renewed interest in the US manufacturing sector, we have no domestic forging capability even on the drawing board

Current estimates are that existing worldwide capacity for heavy forgings can support a build of only 5-6 reactors a year.

We will not be able avoid forging bottlenecks in Japan and France.

Our domestic fabrication capability is likewise limited, as is the US supply chain for safety related valves, pumps and motors.

NEI estimates that today we have only 10% of the qualified nuclear-grade component suppliers that we had in the 1970s.

And baby boomer demographics are impacting the availability of required talent.

You've all seen the age curves for engineers and designers, and qualified craft . . .

We need to rapidly refurbish development pipelines for all of these disciplines.

And our construction management capability must be revitalized, with an infusion of Asian 'new build' experience.

Japan has proven it can build a new reactor in 40 months.

That compares with the 10 – 12 years that was typical in the US during the 1980's.

On balance, of course, all these problems are solvable

But they do suggest that the nuclear Renaissance in the US is still in its earliest stages

More early Renaissance Art than High Renaissance Science

More Giotto at Assisi in the 1300's than Michelangelo or DaVinci in Rome 150 to 200 years later

In sum, the industry is getting better

As long as we remain clear-eyed, as long as we are not too dazzled by our triumphs or too worn down by our difficulties, we will endure and we will prosper.

I have every confidence that we will build the next generation of nuclear power plants in America ...

Partly because we are committed to that end

Partly because the American people need and want what nuclear plants deliver – large amounts of clean, reliable, safe electricity, day in and day out, sun or no sun, wind or no wind

And mainly because it has been my long experience that what the American people need and want, the American people generally get