

**NEI President and Chief Executive Officer Maria Korsnick's Remarks
State of the Nuclear Energy Industry
March 23, 2021**

Good afternoon. Thank you for joining me today at the start of Nuclear Innovation Week for our State of the Industry event.

Nuclear Innovation Week brings together some of the brightest minds in our industry for discussions about the path forward. I hope, and expect, that it will spark optimism about our future.

Optimism can be in short supply these days. When we talk about the future, we mostly hear about threats.

We hear about the threat of lost jobs if we can't rebuild our economy after the Covid-19 pandemic.

The threat of global instability if we can't re-establish U.S. leadership abroad.

The threat of a destroyed environment if we can't reduce carbon emissions.

Those threats are real. But I'm here to tell you that they are also opportunities—and that nuclear energy is the key to seizing them.

From good-paying jobs and carbon-free electricity to U.S. global leadership, nuclear energy is the source that can make it all work.

There is no bigger opportunity in front of us than rebuilding the world's energy system around carbon-free sources.

Over the last year, the conversation around the climate crisis has changed dramatically. There's no more debate about the need for swift action.

When we gathered last year, there was already a widespread consensus around the need to decarbonize while meeting the world's growing demand for electricity. To avoid the worst effects of climate change, we would have to bring carbon emissions from electricity generation close to zero by 2050.

Since then, utilities, state governments, and the new Biden administration have made concrete commitments for getting there even sooner, by 2035.

Fortunately, as we strive to meet those commitments, the U.S. leads the world in producing a proven, carbon-free, scalable source of electricity, that enjoys bipartisan support.

That source is nuclear energy. And there's no more serious debate: it's the key to making our climate commitments work.

NEI members know this and are among those leading the way. In fact, more than 75 percent of the 2050 carbon-reduction commitments made by utilities have been made by NEI members.

While we need to scale up every carbon-free source available, no other source can match nuclear energy's unique combination of attributes.

Nuclear plants produce the most carbon-free electricity in the country, which is why urban and rural communities count on them for clean, reliable power, around the clock. Nuclear accounts for 20 percent of our nation's total electricity and more than 50 percent of our carbon-free electricity.

The value of nuclear energy's reliability has become even more apparent over the past year.

During a slow-burning crisis like the pandemic, or a sudden one like the devastating winter storms across the southern U.S., nuclear plants have powered through unprecedented conditions.

In 2020, nuclear energy became the second-largest source of electricity in the United States overall. Our 55 power plants produced nearly 800 million megawatt-hours—surpassing coal for the first time ever.

And we are doing more with less. In 1989, it would have taken 33 additional reactors to generate the same amount of electricity that we generated in 2020.

We've done this by operating at more than 90 percent of capacity—a measure we call capacity factor—for the last 22 years. And we've done it all while making nuclear energy even more affordable.

In terms of reliability, efficiency, and affordability, that is simply remarkable.

Our ambitious climate commitments demand a reimagined energy system with our largest, most reliable, carbon-free source, at its center.

Governments, NGOs, and the private sector all agree: ambitious climate plans only work with nuclear energy.

The only question is whether we're serious about making them work.

We must be unequivocal about that reality. And we must act immediately.

Nuclear energy is the carbon-free source that will make our climate plans work. By the same token, American ingenuity and American labor are the sources that make *nuclear* work.

That should give us confidence—and a competitive advantage in the battle against the climate crisis.

Nuclear workers—from plant operators to the full supply chain—built the U.S. fleet into one of the largest sources of carbon-free energy anywhere on earth. They can make nuclear energy the core of the world’s clean-energy system.

These dedicated men and women, many of them proud union members, are absolutely essential for safely operating our current fleet and bringing the next generation of nuclear technology online.

The Vogtle 3 reactor in Georgia, which is targeted to go online this year, is a testament to their determination. At its height, the project employed 8,000 people, from electricians to engineers. Undeterred by a global pandemic, they’re getting the job done.

When completed, the two new Vogtle reactors will produce more carbon-free electricity than all 7,200 wind turbines in the state of California.

Vogtle 3 and 4 will be the first reactors of their kind in the United States—and they’re just the beginning.

As more governments and utilities make nuclear part of their future clean energy plans, nuclear workers are poised to deliver. But to meet this moment, we need all the talent we can get.

That’s why NEI, and the industry as a whole, are emphasizing diversity, equity, and inclusion in our ranks.

A more inclusive nuclear industry, is a stronger nuclear industry. To that end, NEI is bringing together organizations like U.S. Women in Nuclear and North American Young Generation in Nuclear to recruit and support a diverse, talented workforce.

We’re having conversations along the same lines with Gender Champions in Nuclear Policy and the American Nuclear Society.

This is a journey. I’ll be the first to acknowledge that we’ve only taken our first steps.

NEI is committed to this effort because we need the top-flight talent to make nuclear work for all of us.

To meet the challenge before us, we need to move the next generation of nuclear rapidly from design to demonstration to build. Across the country, talented innovators are making that happen.

Spurred by commitments from utilities, private investment, and government support, the next generation of nuclear is poised to come online.

Technologies such as small modular reactors, micro-reactors, and other advanced designs will make nuclear even more efficient, even more affordable, and even more versatile.

These reactors will come in different sizes and designs. They will be able to change their output, pairing perfectly with more variable sources such as wind and solar.

And they can bring clean electricity to hard-to-reach places where traditional reactors just don't make sense. These communities generally rely on expensive, carbon-emitting sources.

From Alaska and Puerto Rico to parts of the developing world, nuclear can be a gamechanger.

Our members are working hard to deploy these technologies. There are a number of tangible examples of real progress being made:

NuScale has received NRC staff approval for their design and will partner with Utah Associated Power systems to build small modular reactors in Idaho.

Holtec is pressing forward with their SMR-160. Oklo has an advanced fission reactor under review—the first license application from an advanced reactor developer.

In Canada, Ontario Power Generation is evaluating small modular reactor designs, and entered a joint venture with Ultra Safe Nuclear to build a micro modular reactor.

The fuel for the nuclear fleet of the future is already under development to deliver enhanced fuels not only for the current fleet, but also for advanced designs that require different fuel.

We often talk about the path to new technologies as development to demonstration to deployment. For the past few years, our attention has been on the development of new reactor designs.

Last year, we turned the page. Perhaps one of the most significant advances in 2020 were the awards under the Department of Energy's Advanced Reactor Demonstration Program. With these awards, U.S. companies are able to actually build advanced reactors.

These are exciting steps towards getting the next generation of nuclear online before the end of the decade.

Right now, TerraPower and X-Energy are finalizing contracts with DoE for these kinds of demonstrations. Kairos Power and Southern Company Services are finalizing contracts with DoE on risk-reduction projects. General Atomics, MIT, and Advanced Reactor Concepts are all delivering their own conceptual designs.

Elsewhere in the federal government, the Defense Department is moving forward with its own micro-reactor demonstration program to improve national security and address some of the largest threats to our armed forces.

The move to demonstration is significant. These new technologies will be cost-competitive, especially with carbon-emitting sources. The next generation of nuclear can not only make a decarbonized energy system work—it can make it affordable.

With the continued progress and the right investments and policy choices, these designs can be online before this decade is out, providing us with new technologies to reach our carbon goals.

To form the core of our clean-energy system, these technologies have to be successfully commercialized—moving that final step from demonstration to deployment.

Decisionmakers understand the vital role of these technologies in meeting clean-energy pledges. Utilities including Dominion, Duke, Energy Northwest, Southern, and Xcel Energy have shown interest in using the next generation of nuclear to meet their carbon-reduction goals.

Now we have to move beyond understanding and interest to *action*. Today, I'm calling on policymakers and executives to back up their pledges by making commitments to advanced reactors as part of their energy plans.

Nuclear energy also works because of hard-earned, bipartisan support.

In an era of continued polarization, that support is only growing stronger. Policymakers on both sides of the aisle value the jobs, carbon-free electricity, and partnerships abroad that nuclear produces.

We're building an unparalleled coalition for making nuclear energy the core of our clean energy system.

In 2020, House and Senate climate reports both highlighted the role of nuclear energy.

Congress significantly increased appropriations to accelerate research, development and, as I just mentioned, demonstration of new technologies.

And lawmakers from both sides of the aisle signed on to legislation that recognizes nuclear's contributions to today's economy and our clean energy future.

Most notably, the CLEAN Future Act, first introduced last year, would set standards that would put the country on a path to a carbon-free energy system. The legislation would create powerful incentives to build new nuclear plants. This is an important proposal that we hope to see advance into law.

This kind of comprehensive legislation will take time to pass and implement. In the meantime, we need complementary policies to make sure the plants that we have, stay online.

The American Nuclear Infrastructure Act, approved by the Senate Environment and Public Works Committee last year, with bipartisan support, is a good example. It would create an incentive program for plants at risk of closure until a federal clean energy standard that properly values them is in place.

We're also asking Congress to make nuclear energy a part of any broader infrastructure bill. Legislation designed to boost investment in carbon-free technologies, or boost the market for carbon-free energy, HAS to include nuclear.

Finally, as our economy transitions from fossil fuels to carbon-free energy, Congress can use nuclear energy to turn the threat of unemployment into badly needed, high-paying jobs.

We understand the pain that plant closures cause, whether they are nuclear or some other source. Investment in nuclear energy—targeted in communities that have long relied on fossil fuels—can not only avert job losses but take advantage of existing talent from the fossil fuel industry.

Workers from across energy sources built today's nuclear fleet. Workers from those same energy sources can help build the fleet of the 21st century.

Many of the skills required, like operating a steam turbine, are highly transferable. I know that firsthand.

When I worked at a nuclear plant in Maryland and later managed one in New York, workers from fossil-fuel plants would come work hand-in-hand with us for our scheduled refueling outages.

A special incentive for advanced reactor construction in coal country would keep jobs in communities that badly need them. And it would make good on the Biden administration's promises to empower workers who can build our clean-energy future.

The Biden administration is already showing that it supports the key role of nuclear energy alongside other carbon-free sources. They're making ambitious commitments and have rejoined the Paris Climate Accord: a crucial step toward a clean, reliable, and affordable energy system.

The administration's pledge to "build back better" *has* to mean preserving and building up our nuclear capacity.

Top officials have indicated that it will. Special Presidential Envoy for Climate John Kerry has stated his support for nuclear energy, and especially for U.S. nuclear exports.

Jennifer Granholm, the newly sworn-in secretary of energy, has argued that we need to be "energy secure" to reach net-zero carbon emissions. She has stated her commitment to all "emission-free technologies, which explicitly include "advanced nuclear technology."

These remarks fit within the Biden administration's "whole of government" approach to combatting the climate crisis, making it clear that every part of the federal government must do its part.

That includes our industry's regulator, the NRC.

As nuclear technology becomes more advanced, so should our regulatory infrastructure. The NRC must continue to update its processes, allowing us to safely bring innovations to the public, just as soon as they are ready.

Under its new chairman, Christopher Hanson, we expect the NRC to move forward prudently but efficiently to license new technologies.

They're on the right path. In 2020, the NRC staff recommended the first-ever approval for a new, small modular reactor design. The commission also accepted the first-ever license application for an advanced reactor.

NRC also approved several topical reports on key aspects of GE-Hitachi's small reactor design. And they approved four Second License Renewals—landmark decisions that will extend the operating life of nuclear plants and keep our carbon-reduction goals in play.

In 2021, six more applications are under review, and we expect additional renewals. We also expect that the regulatory process will reflect advancements in areas like environmental reviews, digital updates, siting, emergency preparedness, and security.

Finally, to put nuclear to work, we expect the Biden administration to pursue new trade agreements and increase support for nuclear exports.

Our ability to create and take advantage of opportunities abroad has enormous implications for jobs, carbon reduction, and national security.

A recent study estimated that U.S. export revenues from nuclear could total as much as \$1.9 trillion through 2050. That would support hundreds of thousands of high-paying jobs, many of them unionized.

Maintaining that robust supply chain is crucial. The next generation of nuclear will only work if we have the supply chain to build, operate, and maintain new reactors at home and abroad.

Nuclear development abroad is also a key to reducing global carbon emissions. The U.S. has set ambitious goals, and it is essential that we meet them.

But at the end of the day, climate change is a global threat. If the U.S. decarbonizes but other countries deploy carbon-emitting sources to meet their growing demand, the consequences will affect all of us.

The U.S. industry can offer unparalleled expertise and technological capabilities to countries that choose nuclear energy.

We also offer the world's highest safety standards and safeguards and a promise to enhance—not lessen—our partners' energy independence as they reduce emissions.

State-owned enterprises in Russia and China, which are the primary alternatives, do not offer the same. They play by a different set of rules. That's true of the economic tools they use and how they leverage energy development as a tool for geopolitical influence.

When nations work together on nuclear development, the process forges deep economic and security ties that can last for 100 years. The choice of partner matters a great deal. And it's not easily undone.

Simply put, the world is safer when the United States is the preferred partner for nuclear energy development.

To be that partner, we need a holistic approach that leverages the ingenuity of the U.S. industry. We need to continue to invest in advanced nuclear technologies and support exports, using every tool available.

A landmark policy change last year at the Development Finance Corporation allowed support for nuclear exports.

This year, expanding financing for nuclear exports should be a priority across the government.

If we do that, nuclear energy can accelerate job growth at home, reduce carbon emissions around the world, and bolster U.S. leadership.

Our climate plans can't work if we go backwards by shuttering our nuclear plants.

But that is exactly the possibility we face. This year, four reactors are under threat of closure in Illinois alone. In that state, they produce twice as much clean electricity as wind and solar *combined*.

If they shut down, carbon-emitting sources will likely fill the gap. In 2020, our lost generation from coal was replaced almost entirely with natural gas.

If the nuclear plants under threat this year shut down, the lost carbon-free generation would be equivalent to all the renewables we deployed in 2019 across the *entire country*.

That isn't decarbonizing. As the threat of climate change intensifies, we can't afford to give away years of progress.

If we do, we would sacrifice reliability. Our plants have been operating over a 90 percent capacity factor since the turn of the century—a mark no other source can match.

We would sacrifice affordability. Study after study has shown that the only affordable paths to a decarbonized electricity system, includes nuclear.

A recent study commissioned by Energy Northwest found that in a complete decarbonization scenario, the Pacific Northwest could save more than \$8 billion every year by including nuclear—existing and new generation—in their clean-energy mix.

To avoid going backwards, we need to keep the reactors that we have, online. To prevent future shut-downs, we need technology-neutral policies that put nuclear on an even playing field with other carbon-free sources like wind and solar.

Many of these decisions are made at the state level. States like Washington and Virginia, which have already passed clean energy standards, now have to build out their plans to reach net-zero. States like Illinois and Minnesota, where clean energy debates have been sidelined by COVID, have now picked them back up.

We're seeing dozens of state bills that support nuclear: tax incentives in Nebraska, a small modular reactor study in Montana, and funding for SMR manufacturing in Washington.

We're seeing movement because these states are realizing an obvious truth: We can't talk about the urgency of decarbonizing while sacrificing our most reliable source of carbon-free electricity. We can't celebrate bold plans while conceding defeat against the climate crisis.

Either we're serious about building a better energy future, or we aren't.

Action on nuclear energy will show our true priorities.

Nuclear energy is the power source that can make it all work. It can turn some of the biggest threats we face into opportunities.

Our industry can create good-paying jobs across the United States, aiding economic recovery as we emerge from the pandemic.

We can improve public health, bringing reliable electricity to communities that currently rely on outdated, harmful sources.

We can amplify U.S. leadership on the global stage, ensuring that nuclear development happens safely and fosters energy independence.

And we can reduce carbon emissions dramatically, making ambitious goals possible and averting the worst effects of a changing climate.

Nuclear energy makes it all work. That's why we *all* have a stake in the nuclear industry's success.

If you care about economic recovery, you care about nuclear energy.

If you care about public health, you care about nuclear energy.

If you care about national security, you care about nuclear energy.

And of course, if you care about the climate crisis—the existential threat of our time—you *have* to care about nuclear energy.

Now is the time to get to work. Now is the time to make nuclear energy the carbon-free core of our clean energy system.

Thank you.