Remarks as Prepared for Delivery by
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State of the Industry Address
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Good morning, everyone. It's good to be with you today to take stock, together, of what our industry has accomplished, what we've weathered, and where we're heading in the days to come.

As some of you know, I started my career as an engineer and an operator.

Before serving as a chief nuclear officer, where I was responsible for five reactors – and long before I led the Nuclear Energy Institute – I worked in a control room.

My station in those days was a sea of dials, buttons, and screens. My mission was to ensure that our reactor ran properly and safely.

So when I sat down recently at NuScale's simulator in Corvallis, it all felt somewhat familiar.

Then they tripped the reactor. The alarms rang, and my training kicked in. I felt myself sitting up at attention. I was ready to follow the playbook, meet the protocols, and protect the reactor.

I thought to myself, Which screen should I look at first? What button should I push?

And as I was thinking all of this, the simulator's manager said, "Don't do anything."

Don't do anything? That's the last thing an engineer thinks to do with an alarm blaring in her ears.

But then I saw it.

Without any operator action, the digital system responded. It adjusted automatically. Everything worked exactly as it was designed to. It was a beautiful thing to behold.

NuScale's innovations are just one example. Westinghouse, TerraPower, Oklo, and Kairos are all making significant progress toward the next generation of nuclear technology. So are X-energy, Terrestrial Energy, General Atomics – and the list goes on.

Our industry's innovations have come a long way in a short period of time. It's one of the reasons I'm so proud to work in nuclear and so passionate about our future.

It's a future that matters not just to those of us in this room and those of you watching online – those of us who work around the clock to preserve, sustain, innovate and ensure the nuclear energy industry thrives. It matters to everyone's everyday lives.

Because of nuclear, scientists are developing and powering new cancer treatments.

Because of nuclear, communities can keep the lights on through a natural disaster.

Because of nuclear, our space crafts and satellites are exploring distant planets.

And nuclear generates most of our country's emissions-free energy, helping to combat the dangerous effects of climate change.

We're making our air cleaner. We're making our planet safer for ourselves and our kids.

Nuclear has long been a reliable, efficient, safe, job-creating, and carbon-free source. And the smart technology that I witnessed in that simulator is just one example of how fast we're moving forward.

But that progress isn't inevitable or automatic. It won't happen without all of us pushing, together.

When you're sitting in the digital simulator of a tripped nuclear reactor, you can be excused for not doing anything.

When you're standing up for the nuclear industry – for the communities, the competitiveness, and the carbon-free future that it secures – we simply don't have that luxury. We need nuclear, and we need it now.

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There's a simple reason that we're able to advocate so confidently for nuclear: it's never been better.

Thanks to so many of you – engineers, policymakers, investors, and communicators – our industry in the United States is the world's largest, best operated, and safest nuclear fleet in the world.

There's also a simple reason that we have to keep fighting for nuclear: it's never been more needed to protect our energy, economy, and environment.

Today I'd like to talk about where we've been, where we are, and why we have no choice but to ensure that nuclear is part of our future.

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Last year was a great year for nuclear. Our capacity factor and generation has never been higher and our operation costs have not been this low since 2004. Average total generating costs have dropped by a staggering 25 percent since 2012. The grid is the most diverse it's ever been and our safety record remains consistently superior.

It's one thing for a company or two to lower their costs. But when we see this trend across our industry, we have to pause and appreciate it for the significant promise and progress it represents.

We've made it easier for members to share cost-saving information with each other and I'm proud to say that together, we've been successful. We've found strength in our unity.

Nuclear is also more efficient than ever and it's getting more so every day. Today, we operate at more than 92 percent capacity. A generation ago, we were at only 63 percent. And what's even more remarkable is that it now takes only 98 nuclear reactors to produce what a few decades ago would have taken 130.

Nuclear is responsible for a fifth of this nation's total electricity. It represents more than 55 percent of our emissions-free energy. Which is even more

impressive when you consider that out of the 8,000 power plants connected to the grid, less than one percent of them are nuclear plants. So I'd say that we're punching way above our weight.

On top of the 100,000 good-paying jobs in our industry, nuclear is also indirectly responsible for nearly half a million jobs and half a billion dollars in economic activity each year.

Our plants don't just generate power; they act as economic engines for the communities they serve.

To fully appreciate how important nuclear is to this country, you have to understand how it stacks up. We produced over 800 million megawatt hours of nuclear energy last year – that's the most ever.

It might be hard to visualize a number that big, but picture this: if you wanted to match nuclear's production with utility solar, you couldn't just double or triple the number of solar panels. You couldn't even quadruple it. You'd have to multiply last year's solar output by twelve.

And if you wanted to match nuclear's production with wind, you'd need three times as many turbines.

This is the catch: the sun doesn't always shine. The wind doesn't always blow. But nuclear feeds the grid around the clock. It's firm. It's dispatchable. It's constant. And it's carbon-free.

I know what it takes to operate an electric grid. You need to balance supply and demand at all times. You need all of these sources, working together.

So it's clear: we need nuclear.

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Our first new plant in 30 years is under construction right now in Georgia. Over the past week, I had the opportunity to visit Plant Vogtle twice. As I am every time I visit Vogtle, I was blown away by what I saw.

It looks like they're building a city. There's a skyline of seven or eight cranes. There are 7,000 workers on site, slamming hammers, raising new structures, demonstrating new technologies. It's a sight to see.

It's the nation's only four-unit nuclear facility and the largest jobs-producing construction project in the state. When the work is complete, it will bring 800 permanent jobs to Georgia, and the new reactors will produce enough carbon-free electricity to power a half million homes and businesses.

But my visit last Friday was truly special. I was proud to join Secretary Perry; Governor Kemp; and Sean McGarvey, president of North America's Building Trades for the placement of the containment cap on Vogtle 3. It was truly amazing to see a 1.5 million pound cap – weighing more than two fully loaded jumbo jets – hoisted to the top. It was amazing to see the look of pride in the faces of the men and women who are working tirelessly to bring the reactor online. There was such energy at the site when the cap rested safely on top of the containment vessel. That's exciting for the industry, the workers, and our nuclear future. It's exciting for the state and even more so for our country.

Massive infrastructure projects are always messy. They don't always go as planned. But Southern Company is accelerating as it builds Vogtle. The facility is testimony that the nuclear industry is moving forward in the United

States. It’s the realization of a new era in nuclear technology. An era built on innovations big and small.

These advances aren’t reserved only for brand new plants. Thanks to the ingenuity of a new generation of entrepreneurs who are stewarding digital technology, 3D printers, big-data analytics, and artificial intelligence, we will be able to take plants built 40 years ago and upgrade them with today’s technology.

This time next year, the first-ever second license renewal applications could be approved for another 20 years – extending a plant's lifespan to 80 years.

Over time, our plants have been updated to ensure that they operate with speed, precision, and the highest safety standards.

Our nuclear fleet will continue to be the foundation of a clean electric grid.

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So where do we go from here? The future of nuclear – and with it, the future of so much else in our communities, our country, and our climate – relies on the decisions we make in two areas: technology and policy.

There is a lot to look forward to in terms of innovation. There is a lot to examine closely in terms of policy. But the bottom line is this: even the best-designed nuclear technology won’t reach its potential if it’s held back by poorly designed regulations. And no matter how serious we say we are about reducing emissions and meeting the needs of a growing economy, it won’t happen without nuclear.

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First, let's talk innovation. Some of the biggest news in nuclear is in the smallest reactors. Small modular reactors, like those coming out of partnerships between NuScale in Oregon and UAMPS in Utah, are making nuclear possible in all kinds of places where larger plants simply can't meet communities' needs.

This is something I often hear about from leaders like Senator Lisa Murkowski of Alaska. She knows better than most how challenging it can be to meet the electricity needs of people in remote areas.

In the future, micro reactors can even replace diesel – and improve our health in the process. Not just in Alaska, but everywhere people need it.

Micro-reactors make our nation safer. The Department of Defense is always looking for alternatives to diesel generators or coal boilers, energy sources that need frequent refueling. Nuclear micro reactors don't have this problem. They can operate independent of the power grid, they run clean, and they are reliable and secure. And they would help our nation's military bases better protect themselves from a potential attack on the grid.

With our rigorous standards and culture of innovation, the United States leads the world in advancing nuclear technology. Last fall, Senators Whitehouse and Crapo led the charge to improve nuclear research through new public-private partnerships. Thanks to their vision, Congress passed and the president signed a law to move us toward a new generation of clean, advanced nuclear power.

With continued conviction, and with a collective effort to make tough choices and changes, we will remain the global leaders.

But if our leaders don't implement the right regulations to get these technologies to market, all of these benefits might pass us by. We can't let that happen because there is no responsible solution without nuclear.

I'm confident that our regulators, including the NRC commissioners, are working to modernize our industry. They're tough. They have high standards, as they should. That's something we have in common.

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Which brings me to the second area on which our future depends: competitiveness.

When America leads, we help set the global standards for safety and for preventing proliferation. We also create thousands of American jobs.

But if costs creep higher, if opportunities to build new plants abroad gets harder, Russia and China win. As it stands, nearly two out of every three reactors being built around the world are built by one of these two competitors. They are making massive investments, expanding their domestic fleet, and developing new technologies. Their efforts to promote nuclear power internationally are core parts of their foreign policy – including 100-year relationships with some nations – and America is falling behind.

Other countries, from Poland to the Czech Republic to Jordan, are also planning to build or expand nuclear – and we need to be at the front of the pack.

We need to catch up. But to stay competitive will take major changes. Unlike projects in other sectors, international nuclear projects are not funded solely through commercial financing.

First, export financing is a critical priority. Without a fully functioning Export-Import Bank, U.S. nuclear suppliers can't even compete in a global market on international tenders. This year, we hope the Senate confirms a quorum on the bank's board and we hope Congress will reauthorize the bank itself.

Second, the forthcoming U.S. International Development Finance Corporation must be allowed to support nuclear energy projects. We need significant investment and bold policy here at home to maintain our position as a world leader in nuclear safety, technology, and operations. I am grateful that Secretary Perry and the entire administration are committed to ensuring that America is energy dominant.

Third, we applaud the State Department's efforts to engage cooperatively with the longer-term nuclear energy markets where Russia and China have been active. As our diplomats have said, we can pursue nonproliferation and competitively export civil nuclear power at the same time. They're independent and mutually reinforcing.

When American nuclear energy is strong, our local economies are strong, our national security is strong, and we're better prepared to tackle the most difficult challenges of our energy future.

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Of course, our competitiveness isn't defined only by what happens abroad. For too long, here at home, we have had to answer to a false choice: clean or reliable, one source of energy or another.

Picking between solar, wind, and natural gas is a false choice. But it's also false to claim we can ever get to a solution without nuclear.

Failing to protect the existing nuclear fleet means we are at best replacing carbon-free nuclear with a different carbon-free source. At worst, we are giving ground to carbon-emitting resources. That doesn't make sense. We need to preserve and grow all clean generating sources of electricity. They all work in their own way – and as experts from MIT to the NEA and from Google to the government have said, no realistic combination works without nuclear.

In the absence of a comprehensive federal policy, states are taking a leadership role. More and more are recognizing that in order to meet their goals of reducing carbon and making our air cleaner, they need to protect all zero-emissions energy sources like nuclear, wind, and solar.

Every carbon-free energy source should be considered. Today, more than half of the states have adopted renewable portfolio standards that limit their carbon-free technologies to wind and solar alone. They ignore nuclear, and that's shortsighted.

The most important considerations in drawing these standards should be our shared goal – lower emissions. Any technology that gets the job done should get the chance.

There is good news. New York, Illinois, Connecticut, and New Jersey have taken steps to preserve nuclear power in order to meet their climate goals. And now plants in Pennsylvania and Ohio are on the chopping block. At this moment, state policymakers are deciding their fate – in fact, the

Pennsylvania legislature is debating a critical bill right now to add nuclear power to the state's Alternative Energy Portfolio Standards.

What they can't afford to forget is that nuclear not only generates nearly 90 percent of the clean energy in those two states, it also supports more than 20,000 jobs there. Both Pennsylvania and Ohio need to do the right thing immediately and the clock is ticking.

Let me be clear: Saving nuclear plants is not a bailout. It is not a subsidy. It's helping to right wrongs in an increasingly distorted energy market. It is a recognition that we must value nuclear energy in the same way we value other zero-carbon generation. And it is a necessary part of any responsible plan to build a clean energy future.

Right now, 12 nuclear reactors are slated to close nationwide. If that happens, we would be taking offline the amount of electricity used to power 8.6 million American homes. That's more homes than in all of New York, or all of Florida – and a massive amount of clean, carbon-free energy. And remember: once a nuclear plant is shut down, it can't be put back online. It's lost for good.

Now is not the time to shun or shut down nuclear plants. To keep today's reactors running, we must pursue policy that gives innovators and investors confidence that there will be a market for their new nuclear technologies.

This isn't a partisan issue. People on the left, like Massachusetts Senator Ed Markey, who hasn't always loved nuclear, now acknowledge that it has to be on the table. People on the right, like Ohio Governor Mike DeWine, has said that if we don't save nuclear plants, we're "throwing up our hands and saying we just don't care about [carbon] anymore."

It’s a simple fact that when nuclear plants close, states are forced to turn to dirtier sources for their energy, and emissions go up. Even as coal plants closed last year at a record pace, carbon emissions increased more than three percent, the second-largest increase in two decades. The answer to the climate crisis won’t be as simple as replacing carbon with renewables and batteries. The answer must include nuclear or it’s no answer at all.

As the climate changes, so do opinions. The Union of Concerned Scientists, which hasn’t always been so sympathetic to nuclear, now agrees that keeping today’s nuclear reactors running is vital to the emissions fight.

The Intergovernmental Panel on Climate Change, which is the world expert on that topic; The Nature Conservancy, which is the world’s largest environmental organization; and Google, which is, of course, one of the world’s largest energy consumers, all now agree that we need emissions-free sources like nuclear if we’re going to make a dent in cutting carbon.

History is our guide here. We already know the dire consequences of being too dependent on oil and gas. When supplies shrink, prices spike. But nuclear is protected from those kinds of fluctuations.

We also have already felt the impact of weather emergencies like a polar vortex, severe heat wave, or debilitating hurricane. In every recent such event, nuclear reactors were a primary source of energy keeping the lights on.

The math is simple, really. If we want to stop the surge of polluting emissions, we have to start investing more in making our most reliable energy option even better. Protecting our energy, economy and environment means that nuclear isn’t optional at all.

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As nuclear technology improves, becomes more agile, and comes in smaller sizes, we will open new markets for its success around the globe.

We're creating a whole new suite of options that will also help us partner with renewables like wind and solar.

This isn't in the distant future. This is right around the corner. Just over a year from now, we will have a small nuclear reactor with an approved design certification. We'll also likely have the first approval of a second license renewal. Shortly after that, Vogtle 3 will be online, and a year after that, Vogtle 4 will be operating, too. In the following year, the Pentagon could be funding pilot projects of micro reactors across the country. We also see on the horizon accident-tolerant fuel that has the promise to make nuclear energy even safer and more economical than it is today.

But getting there isn't automatic. This challenge won't correct itself.

Now is the time to act. Now is the time to reach out to legislators, encourage influential groups, motivate constituents to engage, and educate the media. Every one of us has a role to play.

Now is the time for federal and state policy that values nuclear, that recognizes it for the reliable, resilient, and emissions-free source of energy that it is.

Now is the time to finance advanced technologies and international exports.

To keep innovating, to keep investing.

To preserve existing fleets.

Now is the time to save and create jobs.

Now is the time to lead.

Now is the time.

I'm so passionate about nuclear because it has so many advantages. One of them is that, unlike nearly every other source of energy, nuclear is online 24/7/365.

In other words, nuclear doesn't stop.

To build the future we want, neither can we.

The future we need can't happen without nuclear. And it can't happen without you.

Thank you very much.