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Contact: Eliot Brenner, 301-415-8200

“Investing in Safety: The Importance of Effective Regulation”

Prepared Remarks of Chairman Allison M. Macfarlane

U.S. Nuclear Regulatory Commission

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Good morning. It’s my pleasure to be here to offer a regulatory perspective in these important discussions on nuclear power. As regulators, we’re not in the business of predicting the future of the nuclear industry. But it’s clear that this is a dynamic time – we’re seeing new builds, power plant shutdowns, and the potential for new technologies on the horizon. Because of all of this, regulatory effectiveness is, and must continue to be, a critically important consideration for nuclear energy.

From the NRC’s standpoint, there are two parts to this discussion: how we’re upholding our domestic obligations to ensure the safe and secure operation of current and future licensed facilities – and how we’re partnering with regulatory counterparts around the world to cultivate a robust global nuclear safety community.

Today, I’d like to reflect on what regulatory effectiveness really means and why it’s so important, for countries with active nuclear power programs, for those considering nuclear power, and for vendors and investors making business decisions about potential nuclear power expansion.

But before I do that, let me address why regulation is important in the first place.

Like many technologies, the use of nuclear material comes with risks. It must be handled safely to avoid worker overexposures and harm to the public and the environment. It must also be properly secured so it doesn’t pose an unreasonable risk due to radiological sabotage.

An integrated regulatory framework helps ensure that a nation can safely and securely get maximum benefit out of nuclear technology. In addition, confidence in the quality and independence of the regulator is essential in order for the public to trust that nuclear power plants operate safely. Through oversight, regulators ensure that nuclear power plants are constructed in accordance with quality assurance standards, operate safely and securely once they’re brought online, and are safely decommissioned. Rigorous inspection, incident reporting obligations, and fitness-for-duty and training requirements are some of a regulator’s most important oversight responsibilities. Operators must foster a safety culture within their workforces that reflects a strict commitment to protect the public in carrying out their day-to-day responsibilities.

The Fukushima Dai-ichi accident nearly three years ago sharpened worldwide focus on nuclear safety. Here in the U.S., we've made substantial progress addressing lessons learned from the accident and implementing safety enhancements.

While Fukushima was a catalyst for some countries' decisions to cease nuclear power operations or abandon pursuit of a future nuclear program, quite a few countries are moving forward with their plans – and many of these are new players. Future development of small modular reactors may create a nuclear power option for additional countries that may not have the ability to support larger plants. Many of these countries lack basic critical infrastructure – from a sufficient power grid to the laws necessary to underpin a program's safe operation.

It's also important to acknowledge that there may be considerable political pressure to establish a nuclear power program. Whether the program would bring much-needed electricity, water desalination, regional or domestic prestige, or other benefits, some countries have put nuclear power on a fast track.

But any scenario in which hasty plant construction takes precedence over careful development of a robust domestic safety infrastructure is of great concern. An effective, independent regulator is essential – and should be established at the outset – before any decisions are made about sites or reactor designs. The IAEA's guidance for countries considering nuclear power stipulates that an independent regulatory infrastructure must be in place, along with other critical infrastructure, before bids are invited.

In my view, the existence of an effective regulator should be an important consideration in business decisions. From a business standpoint, defining "success" for the nuclear industry must go beyond whether a project is on time or on budget. The vendor and investment communities should be evaluating the presence of an effective regulator as a significant factor in determining the attractiveness of potential investments.

Simply put, a nuclear power plant's success cannot be assured if it's not safe and secure. As Fukushima reminded us, accidents have global consequences. With substantial capital required up front for a nuclear investment, recouping that investment in the event of an incident or lengthy, safety-related delay is challenging at best. Ensuring nuclear safety and security is a collective responsibility – regulators, vendors, operators and investors all have a role to play.

It's easy to talk about independence or effectiveness in the abstract. But what factors should be considered in determining if a regulator is effective?

The regulator must be free to make safety-related decisions, unencumbered by political or promotional influences. And while independence is a critical consideration, it's only one aspect of a regulator's effectiveness. The regulator must be well-funded. You need enough funds to attract and retain highly qualified staff and conduct necessary inspections and analyses. And that staff needs to be large enough to manage its responsibilities and ensure robust oversight. The regulatory body should operate openly and transparently, offering opportunities for public involvement and providing ample documentation of its decision-making to the public.

Let me note that, although “openness” and “transparency” are often used interchangeably, there is an important distinction: transparency focuses on providing the public access to documents and information that reflect how decisions are made. Openness is allowing opportunities for meaningful, two-way dialogue with the public to help ensure that their views are heard and considered.

Perhaps most importantly, in having independent decision-making authority, a regulator must have confidence that its decisions won’t be overturned for political reasons. Backing from the highest levels of government ensures that the regulator has the authority to halt construction or operation if safety concerns are identified.

Fukushima has been an impetus for broadening the discussion on the importance of effective regulation in protecting nuclear safety. More and more, we’re hearing the financial community list regulatory effectiveness among its business considerations. To me, this is one heartening outcome of a tragic event. But this momentum must continue in order to ensure that this essential, broad focus on safety endures as time goes by.

Now I’d like to discuss what the NRC is doing domestically to abide by the tenets of effective regulation that I’ve just advocated. In particular, I want to take a minute to reflect on the issue of public confidence. In democracies worldwide, decisions about future nuclear power use depend on a number of factors, including public opinion. The regulator and the industry each have important roles to play in building and maintaining the public’s trust. Maintaining nuclear safety is, of course, paramount – but upholding or restoring public confidence after a major accident like Fukushima has been at the forefront of discussions since March 2011. In this regard, as the NRC’s Principles of Good Regulation state, “nuclear regulation is the public’s business.”

When regulatory decisions are made transparently, taking into account feedback from outside parties and clearly demonstrating the rationale behind them, we reinforce public trust in the regulator. Further, consistent, high-quality communication from the regulator helps ensure that the public has access to accurate information about issues of interest or concern. A lack of such information leaves room for misinformation to take its place and damages that trust.

It’s important to underscore that, although the NRC has been a world leader in nuclear safety and security regulation for nearly four decades, we routinely evaluate our methods and practices to ensure we are most effectively protecting public health and safety. And one of the most important components of this evaluation process is the feedback we receive from outside the agency – whether it’s industry, government officials, non-government organizations or members of the public. Just as regulation can’t be stagnant, it can’t be done in isolation. It’s critical for us to hear from those who are affected by what we’re doing. Of note in this regard, the NRC has held more than 150 public meetings about its post-Fukushima activities.

Another recent example of this is our waste confidence work. Two years ago, the DC Circuit Court of Appeals said that our “waste confidence” rule didn’t sufficiently consider the possibility that there wouldn’t be a permanent repository. This decision had broad implications for our licensing activities and other work.

We established a dedicated team to review the rule from the ground up and develop an accompanying environmental impact statement. Once they’d finished a draft, the team traveled around the country, holding 13 public meetings in 10 states to get feedback. We’ve received more than 33,000

written comments, which we're in the process of reviewing. The Commission will hold a meeting in March to discuss with staff the input they've received. The challenge will be to incorporate that input into a new decision and rule.

As I mentioned earlier, this is a dynamic time for the nuclear industry. In the United States, five nuclear reactors are under construction and five reactors have recently shut down or announced that they'll do so in the near future.

We continue to ensure that safe reactor operation is a top priority. We're working to ensure that aging plants continue to operate safely in periods of extended operation. Our resident inspectors are a constant presence at our licensed facilities, and we routinely publish data on plant performance and corrective action requirements.

At the same time, we're conducting rigorous inspections at the new plants under construction. We're also prepared to accept the first design certification applications for small modular reactors. We anticipate the first such application to arrive later this year, and we have the resources in place to review it.

We're also focusing a good deal of attention on decommissioning issues.

These are just some examples of the NRC's domestic activities. We have a broad range of regulatory responsibilities, and the NRC staff works diligently to protect public health and safety.

Finally, let me turn to the NRC's international engagement – in particular, our active regulatory development assistance program. While we don't promote the use of nuclear power, we do promote effective regulation. Working bilaterally and with the IAEA, we offer legal and technical experts, and in some cases funding, to countries seeking our advice on establishing a regulatory infrastructure.

Recognizing that there's no "one size fits all" approach to developing a nuclear power program, the NRC's assistance programs provide country-specific guidance through workshops, training, drafting legislation and other activities. But I want to be clear that this isn't a one-way street – the NRC benefits tremendously from its international engagement.

In the past year, the NRC has supported the International Regulatory Development Partnership (IRDP) in conducting bilateral workshops on developing nuclear executives in Ghana, Tunisia, South Africa, and Jordan; environmental review in Poland; codes and standards in Indonesia; construction and vendor inspection in Vietnam; and siting and construction inspection in Jordan. Regionally, in the same time frame, this program organized a construction and vendor inspection workshop for ten regulatory bodies in Africa; a workshop on regulatory fundamentals for nuclear and radiation installations for twelve countries in the Middle East; and a meeting with the IAEA on lessons learned from Fukushima.

One of the great benefits of this partnership is its "train the trainer" approach. As regulators in a particular country advance, they often partner with regulators in similar situations and base further training on our materials. So far, this approach has paid significant dividends – regulatory representatives from Armenia, Indonesia, Jordan, Thailand and Vietnam have each shared their knowledge with other countries using the approaches they learned through our program. These countries have each made substantial progress in developing domestic legislative and regulatory frameworks.

I'm often asked why we feel it's worth our time to provide assistance to countries that aren't going to build U.S.-designed nuclear power plants. Recognizing that we have a full plate of domestic obligations and limited resources at our disposal for international work, we remain committed to providing regulatory assistance to the greatest extent possible. At the ground level, common technical issues form the basis for much of the reactor licensing process. The characteristics of an effective regulator don't change based on the chosen design. To put it plainly: nuclear accidents don't discriminate based on technology.

The NRC's domestic and international work both seek to reflect our commitment to advancing nuclear safety worldwide. I firmly believe that the nuclear industry will be at its most vibrant, its most successful, if all of us share this commitment.

I appreciate the opportunity to speak to you today, and I'd be pleased to answer your questions. Thank you.