

## 海外情報連絡会セッション

International Nuclear Information Network (ININ) Session

最近の米国エネルギー政策と原子力

Current Energy Policy and Nuclear Energy in U.S.A.

## Current Energy Policy in the United States and Nuclear Power

\*Ross Matzkin-Bridger

Director, Department of Energy Japan Office

Energy Attaché, US Embassy Tokyo

The United States employs an all-of-the-above energy strategy that places importance on diversifying energy sources while prioritizing continuous innovation. This includes important roles for fossil fuels such as natural gas, oil, and coal; nuclear, and; renewables such as wind, solar and hydroelectric power. The key drivers for US energy strategy are the country's economic, security, and environmental goals, as well as a commitment to the prosperity and stability of our allies. Nuclear power will play a significant role in the future of energy, with the United States committed to leading in three main areas: innovation for next generation reactors that are on the cutting-edge of safety and cost effectiveness; maintenance and safe operation of the current generation of reactors; and responsible, efficient decommissioning of legacy reactors.

Robust and reliable energy supply is vital for the security and stability of the United States, as well as our allies. Over the last ten years, the United States has gone through a great energy transformation on several fronts. First, we have significantly increased the domestic production of oil and natural gas. These resources will continue to be important for energy security domestically as well as abroad. US natural gas in particular has been the largest source of domestic electric capacity additions over the last 15 years, having a significant impact on boosting the US economy and reducing carbon emissions. US gas is now being exported, where it can be an important component of the energy mix of many countries around the globe. Second, electric capacity from renewable energy sources has also increased significantly over the last 10 years, with similarly positive results for the economy and curbing emissions. The United States has always been an epicenter of innovation, and that will continue into the future. A key question to consider is what form that innovation will take in the energy sector moving forward.

The United States currently has 99 operating nuclear power reactors, making up just under 20% of the country's electricity generation. This makes nuclear the largest and most reliable zero-emission power source in the United States. While the high capital costs of building new nuclear power reactors is seen as a challenge to new construction, a number of companies across the country, including new startups, are working on innovative reactor designs and concepts that have the potential to be game-changers in the market. We have seen a particularly high level of excitement around the idea of small modular reactors (SMRs). As the private sector has taken the lead on developing SMRs, the government is playing a supporting role to ensure that smart, safe and cost effective technologies have a viable path into the market. Over the next year, the United States Department of Energy (DOE) plans to issue significant funding to support the development of SMR technologies. This includes funding to develop manufacturing

techniques, address regulatory issues, develop instrumentation and control systems, and other areas of need.

While the next generation of nuclear reactors continues to develop, the United States is also committed to continuing the safe and reliable operation of our current fleet of light water nuclear reactors. Many US reactors have already received 20 year extensions to their initial 40 year operation licenses, and there is an emerging technical basis for safe extensions for an additional 20 year period (total 80 years). DOE will continue to support research and development pathways for these extensions, including in the areas of materials aging and degradation, advanced instrumentation, and advanced fuels.

Finally, the United States places high importance and heavy emphasis on the efficient and cost effective decommissioning of nuclear reactors that have reached the end of their lifetime. 10 US commercial power reactors have been safely and completely decommissioned, with an additional 18 reactors currently in progress. This gives the United States more experience in decommissioning than any other country in the world, and has allowed the private sector to hone their competences and make impressive advances in efficiency and cost-effectiveness. The efficiency of decommissioning is vitally important because it greatly impacts life cycle costs and public perceptions of nuclear power.

The United States will continue to pursue an energy strategy with an eye on the future, considering economic, security, and environmental goals. Nuclear power will be an important component of the energy mix for many years to come, and there are exciting prospects for breakthrough innovation. The United States is excited to share our experience and enthusiasm with partners around the world.