

Remarks

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Global LNG, Energy Security, and the Transition

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Good evening. Thank you to the Embassy of Japan for hosting this dinner event.

I also want to thank Lou Pugliaresi of the Energy Policy Research Foundation and Ken Koyama of the Institute of Energy Economics, Japan for the invitation to speak today and their leadership in organizing today's workshop on the challenges and opportunities of LNG in the context of energy and security and climate change. This event could not be more timely.

We have seen over the past year the crucial role that LNG plays in the global economy. Even as we struggled to recover from COVID lockdowns, supply chain bottlenecks, and inflation, Russia's brutal and unprovoked invasion of Ukraine has disrupted energy markets in ways we have not seen in half a century and threatened to reverse economic recovery from the pandemic and to destabilize governments around the world.

And in this perilous global context, U.S. natural gas has made a real difference. Nowhere is that more evident than the geostrategic role our LNG exports have played in helping our allies, including Japan and our other partners in Asia, to meet their near-term energy needs.

Energy security has risen to the top of the agenda, and one of our major responsibilities at this moment is to ensure that we sustain progress in meeting our long-term climate obligations while tackling our urgent near-term energy security challenges.

One of my chief priorities since joining the U.S. Department of Energy is reconciling the vital economic and energy security contributions of America's robust natural gas resources with a long-term strategy for achieving net-zero emissions by mid-century.

The climate goals of the Biden Administration concerning climate are profound. The most aspirational is to reach net-zero greenhouse gas emissions economywide by 2050.

And candidly, until recently, we lacked the federal policy support necessary to put our economy on track to achieve midcentury decarbonization.

But in the past three years, the U.S. has made more progress on climate policy than in the previous three decades combined.

Congressional passage of two landmark bills in particular—the Bipartisan Infrastructure Law last year and Inflation Reduction Act in August—has transformed America’s potential and capacity for climate action.

The infrastructure legislation provides \$12 billion dollars over five years on carbon management technology demonstration and infrastructure deployment, including carbon capture from industry and power generation, direct air capture of CO₂ from ambient air, conversion of captured carbon emissions into products and the transport and geologic storage of CO₂. An additional \$8 billion is being devoted to development of regional clean hydrogen hubs, at least one of which will produce hydrogen from natural gas with carbon capture and storage.

This funding will help construct carbon management demonstration projects across a wide range of technologies and industries and help build out regional CO₂ transport infrastructure that links these projects with regional sites around the country where that CO₂ can be safely and permanently stored.

And the Inflation Reduction Act provides the financial incentives for private sector investment to complement federal funding the infrastructure bill in the form of a ten-year, several hundred billion dollar clean energy and industrial tax credit package.

Of particular importance to the natural gas and LNG industry is the revamped federal 45Q tax credit, which will help incentivize the decarbonization of the natural gas supply chain through carbon capture from natural gas processing, liquefaction, power generation, industrial combustion, and production of clean hydrogen and ammonia from natural gas.

Taken together, some have compared this level of federal support for energy and climate to U.S. leadership and investment in an earlier era, such as NASA’s Apollo program or the Interstate Highway System.

By our estimates, these two pieces of legislation, taken together, help set the U.S. on a path to roughly a 40 percent reduction in emissions from 2005 levels by 2030, which is less than eight years from today.

And in terms of carbon management, the Rhodium group estimates that the combination of infrastructure bill investments with enhanced 45Q tax credits could result in 215-250 million metric tons of annual CO₂ capture and storage capacity by 2035.

That is potentially up to a quarter gigaton of additional annual carbon management by the mid-2030s.

In addition to carbon management and hydrogen production, detecting, monitoring and mitigating methane emissions is a key priority for the Department of Energy.

This year, the Office of Fossil Energy and Carbon Management announced \$31 million in funding for methane mitigation across the natural gas supply chain.

We're supporting the development of materials, sensors, and approaches to ensure that infrastructure in the U.S. and elsewhere are leak tight.

We're working on innovative solutions to reduce flaring and venting, including alternative uses for "stranded" gas, through mobile conversion technologies that can be deployed in the field.

Going forward, the Inflation Reduction Act provides the U.S. Environmental Protection Agency \$1.5 billion to invest in methane mitigation and authorizes the agency to establish a methane fee program to reduce emissions. Our Office at the Department of Energy will provide technical assistance to the EPA as the agency implements this expanded methane mitigation agenda.

Internationally, our methane team is part of a working group with Japan and other members of "The Quad" that includes India and Australia to negotiate a collective approach to managing methane.

The first workshop on Dec. 7th government officials and industry executives from the four countries to:

- Share best practices for monitoring, reporting and verification of methane emissions;
- Boost knowledge on the challenges of measurement, reporting, and verification of methane releases, including use of satellites and airplanes to measure emissions; and
- Explore potential business models for reducing those emissions.

Looking to 2023, a major focus for our natural gas team at the Department of Energy will be working with our international partners, industry, and other stakeholders to develop a global framework for measurement, monitoring, reporting and verification of the greenhouse gas intensity of natural gas across the natural gas supply chain, from upstream production and processing, through liquefaction and transport, to end uses, both domestically and internationally.

If we are to reduce methane emissions to near zero, decarbonize natural gas production and use, and transition to zero carbon hydrogen and ammonia, industry, investors, governments and key stakeholders need to have transparent information regarding lifecycle emissions.

Access to accurate, third-party-verified lifecycle emissions data will allow market participants to distinguish the relative greenhouse gas intensity of natural gas production of one country or resource basin over another, between natural gas produced by different companies, or LNG cargoes supplied by different companies. This will, in turn, inform decisions on investment, contracts, and policy and regulation, driving progress toward a net-zero emissions natural gas supply chain over time.

We at DOE look forward to partnering with Japan, the European Union, other allies, industry, NGOs and other stakeholders over the coming year to help forge broad agreement on such a measurement and MRV framework that is global, transparent and credible.

So, as you can see, a lot is going on at DOE concerning natural gas and the transition toward a net-zero world. One could argue that history is being made in terms of energy security, climate and the central role LNG will play in the 21st century.

In my official visits to European and African countries in recent months, LNG exports and our U.S. commitment to maintain and increase supply have been a focal point of discussions with my foreign counterparts.

U.S. LNG exports are roughly 12 billion cubic feet per day and growing, with production set to reach new highs next year and increase 40% from current levels to 20 billion cubic feet by the end of this decade.

And my office at DOE has already permitted export capacity four times greater than current U.S. LNG exports, or 48 billion cubic feet per day, as a number of permitted LNG projects have not yet secured a final investment decision.

As we build out this new permitted LNG export capacity, we are equally committed to ramping up deployment of carbon management infrastructure and other CO₂ emissions reduction measures, stepping up methane mitigation, and accelerating the transition to clean hydrogen and ammonia—again, all with the aim of reconciling near-term energy security commitments with our long-term climate obligations and the critical need to decarbonize by midcentury.

Thank you for your time tonight. It's been an honor to speak with you.