16th Hawai‘i Okinawa Task Force Meeting
Capitol Modern: The Hawai‘i State Art Museum

August 29, 2025

Denise Eby Konan

Keynote address

[Opening]

Aloha mai kākou, and konnichiwa.

It is an honor to join you today for the 16th Hawai‘i–Okinawa Taskforce Meeting. I want to thank our colleagues from the Hawai‘i State Energy Office, the Okinawa Prefectural Government, and our many partners across government, industry, and academia who have nurtured this unique collaboration for well over a decade.

[Setting the Global Context]

We gather at a time of profound global transition. Across the Asia-Pacific, energy demand is growing faster than anywhere else in the world.

Geopolitical uncertainty—from conflicts in Ukraine and the Middle East to tensions in the South China Sea—has heightened volatility in global oil markets. At the same time, the urgency of climate change presses upon us all, reminding us that we cannot afford to delay in advancing clean and resilient energy systems.

It is in this context that the Hawai‘i–Okinawa partnership carries such significance—not only for our two island regions, but also for the United States, Japan, and the global community.

Small islands like ours face some of the highest energy costs and greatest vulnerabilities to external shocks. Yet, by turning vulnerability into innovation, Hawai‘i and Okinawa have become living laboratories for energy transition—pioneering solutions that can be scaled and adapted worldwide.

[Why the Collaboration Matters for the USA, Japan, and the World]

For the United States, Hawai‘i’s leadership demonstrates that ambitious clean energy goals are possible even in complex energy systems, and that lessons learned here can inform continental strategies. Hawai‘i was the first U.S. state to legally commit to achieving 100% renewable electricity by 2045 (House Bill 623, signed by Governor David Ige in 2015). This was groundbreaking nationally.

California followed in 2018, passing Senate Bill 100, which requires 100% clean electricity by 2045 – explicitly modeled on Hawai‘i’s example. Since 2015, more than 20 states, plus Washington DC and Puerto Rico, have adopted 100% clean/renewable electricity targets (California, New Mexico, New York, Virginia, Washington State, Colorado, etc).

Hawai‘i has more rooftop solar installed per capita than any other US state, with nearly 1 in 3 homes, contributing to about 17% of total electricity generation (compared to 4% nationally). In our role, we have also been reshaping how rooftop solar feeds into the grid.

- Hawai‘i was the first to reform Net Energy Metering (NEM) in 2015, with programs like “Customer Grid-Supply.” California later followed Hawai‘i’s example.
- Hawai‘i is the national leader in pairing batteries with rooftop solar. By 2023-24, 96% of new rooftop systems include storage. California and others are moving in this direction, but Hawai‘i is the early testbed.
- Hawai‘i was the first state to legislatively ban coal for electricity generation, and effective September 2022 closed the AES coal plant on O‘ahu. Several states, including Colorado and New Mexico, later adopted laws mandating coal phaseouts – but Hawai‘i set the precedent.

From all this, I hope that you can see that Hawai‘i has often been the place where bold ideas are tested first – and then adopted across the United States.

From my understanding, Okinawa has also served as a national testbed for Japan in terms as a demonstration and innovation site for new technologies. Here are two areas that I want to highlight:

#1. Okinawa is a global leader in ocean energy innovations, a field where Hawai‘i is also experimenting.

- In 2013 (Kumejima Island): Okinawa opened the world's first 100kW Ocean Thermal Energy Conversion (OTEC) plant connected to the grid. Operated by Saga University in partnership with Okinawa Prefectural Government.
- Okinawa is exploring seawater air conditioning and desalination – applications that are very rare, and that we have explored for downtown and Waikīkī. I have personally studied the economic and environmental aspects of SWAC in Waikīkī and would be very excited by collaborations in this area!

#2. Smart Grid demonstrations

- Miyakojima Smart Community Project (2011-15) was the first large-scale smart-grid demonstration in Japan, and integrated solar PV, wind, EVs, energy storage, and demand response into a single island system.

In all these efforts, Okinawa Institute of Science & Technology (OIST) is a hub for research leadership, especially digital energy systems and grid operations. The University of Hawai‘i is similarly a research leader, with its Renewable Energy and Island Sustainability initiative as well as the Hawai‘i Natural Energy Institute.

Our Hawai‘i -- Okinawa partnership is uniquely powerful – as we are both small islands at the frontier of energy innovation for our two nations Japan and the USA.

And together, by aligning our efforts, Hawai‘i and Okinawa project a message to the world: that local leadership and international cooperation can advance the Sustainable Development Goals, even amid shifting national policies and economic headwinds.

In short, the Hawai‘i–Okinawa partnership has not only advanced clean energy locally—it has built a bridge across the Pacific, connecting U.S. and Japanese innovation to a global dialogue on sustainable development. As we renew our Memorandum of Cooperation for the next five years, our work will matter not only for our islands, but for every community grappling with the challenges of climate change, energy security, and economic resilience

2. Global Forces Shaping Sustainable Development

"We cannot consider our energy future in isolation. It is shaped by global currents — economic, geopolitical, and environmental — that connect Hawai'i and Okinawa directly to the wider Asia-Pacific region and beyond."

Across the Asia-Pacific, energy consumption has more than tripled since 2000. The region is now responsible for nearly two-thirds of global growth in electricity demand. At the same time, we are in a highly volatile economic and political situation – and this is directly impacting both energy costs and our move to renewables. Here are a few areas of concern.

Geopolitical Uncertainty and Global Oil Price Volatility

Geopolitical instability continues to drive oil price volatility. – such as a surge greater than 10% in Brent crude following Isreali actions in Iran, and subsequent disruptions from Ukrainian drone strikes on Russian fuel infrastructure this past June 2025. Brent climbed to $68 per barrel.

Meanwhile, threats by Iran to block the Strait of Hormuz—through which nearly 20% of global oil and LNG exports transit—have injected fresh uncertainty. Market models warn that a closure could catapult prices toward $100–$150 per barrel, matching or exceeding the 2007–2008 record highs. MarketWatch+3Zero Carbon Analytics+3Wikipedia+3

Also, Russia, via its proximity and energy infrastructure maintains a direct influence on energy flows to Japan and Northeast Asia. I'm thinking here of the Esso pipeline (Eastern Siberia–Pacific Ocean pipeline) and potential vulnerabilities.

It is also worth being aware of China in this context. China is now the world's largest energy consumer – bypassing the U.S. and EU combined. China is aggressively expanding renewables and aims to reduce reliance on inputs.

China is still heavily depended on oil imports, especially through chokepoints like the Strait of Malacca, through which 80 % of its crude flows (the 'Malacca Dilemma'). In response, China is investing in pipelines and a maritime infrastructure under its Belt and Road initiative.

It is worth pointing out that 90% of Japan's imported oil flows through the sea lanes of the South China Sea. Any conflict involving Taiwan or other maritime escalations could impact shipping lanes and offshore energy projects.

For Hawai'i and Japan, these global forces are immediate and direct.

In Hawai'i, over two-thirds of our electricity still comes from imported oil, and our prices are directly related to global price swings.

In Okinawa, the grid is not connected to mainland Japan, and all energy must be delivered by ships across contested sea lanes. Reliance on imported petroleum leaves Okinawa highly exposed to shipping and other geopolitical disruptions.

We have a strong incentive to turn these vulnerabilities into innovation.

And yet, while these global dynamics frame our energy realities, national policy in the U.S. has introduced another layer of turbulence…

3. U.S. Policy Shifts and their Ripple Effects

"While global forces shape the environment in which we operate, national policies — particularly those of the United States — also exert powerful influence. These policies can accelerate our progress toward sustainability, or they can slow and complicate the transition."

Rollback of U.S. Commitments

Over the last decade, the Inflation Reduction Act — the IRA — was widely regarded as the most ambitious clean energy investment in U.S. history. It include $738 billion investment in energy and climate change. We were anticipating production and investment tax credits including for solar power, wind, and grid energy storage. There were opportunities for hydrogen, and electric vehicles as well. According to several independent analyses, IRA was projected to reduce 2030 GHG emissions to 40% below 2005 levels.

But the current administration has moved quickly to roll back many of these provisions. Tax credits for clean energy, including EVs, solar and wind energy, have been scaled back and phased out. The House's revised tax-and-spending bill accelerates the expiration of residential solar and battery incentives to 2025, instead of 2031. For utility-scale renewable projects, eligibility for tax credits is now limited to those starting before 2026, with commissioning by 2027 – a drastic shortening of previous timelines.

The most immediate impact is high uncertainty and disruption. Clean energy developers, utilities, and consumers who once relied on stable federal incentives now face a shifting policy landscape. This uncertainty is raising costs and forcing investors and companies to recalculate whether large-scale renewable projects will be viable.

Expansion of Fossil-Fuel Support

At the same time, federal policies are tilting more strongly toward fossil fuels. Oil and gas leasing on federal lands has expanded. Export approvals for LNG projects have accelerated. Subsidies and regulatory approvals for pipelines and drilling have grown.

In the short term, these measures may lower domestic energy prices. But in the longer term, they risk locking in fossil infrastructure for decades — infrastructure that is out

of step with the Paris Agreement and the Sustainable Development Goals. This will also leave us vulnerable to geopolitical pressures and oil price volatility.

Withdrawal from Climate Leadership

The U.S. has also stepped back from international leadership. Instead of pressing forward on climate finance, technology-sharing, and multilateral agreements, Washington's current stance signals retreat. This vacuum leaves space for others — China, the European Union, even smaller nations — to shape the rules of the global energy transition. The U.S. risks losing its competitive edge in clean technology and ceding leadership in industries of the future.

Indirect Impacts: The Tariff Wars

Layered onto these shifts is a second disruptive force: trade policy.

In recent months, the U.S. has escalated tariffs on clean energy imports. Solar modules and cells from Southeast Asia now face tariffs that in some cases exceed 3,000%. A national security investigation has been opened into imported wind turbine components. Steel and aluminum tariffs have raised the costs of building energy infrastructure.

For renewable developers, these tariffs translate into higher project costs and supply chain uncertainty. The U.S. solar industry has already reported delays and cancellations. And because Hawai‘i depends on imported equipment for nearly all of its renewable projects, these effects are magnified in our islands.

For Okinawa, too, tariff volatility has implications. While Japan is not the target of most U.S. tariffs, its clean energy industries — from batteries to hydrogen technologies — depend on stable trade flows across Asia. Disruption in these supply chains adds cost and risk for small island systems that rely on imports for every megawatt of renewable capacity.

Ripple Effects on Hawai‘i and Okinawa

What does all of this mean for us?

- **In Hawai‘i**, reduced subsidies and higher import costs raise the price of new solar, storage, and wind projects. Oil remains the backup, leaving our economy exposed to volatile global markets. Yet Hawai‘i’s aggressive renewable policies keep it on course, even in the face of federal headwinds.
- **In Okinawa**, tariff uncertainty reinforces the value of local innovation — OTEC, smart microgrids, and digital grid management. The more Okinawa can produce reliable power from local resources, the less it must depend on fragile global supply lines.

In short, the U.S. policy shifts of today create turbulence not only for the continental economy, but also for island regions like Hawai‘i and Okinawa. These forces are a setback our clean energy pathway.

We must overcome increased costs, weaken investor confidence, and heighten dependence on imported fuels. Yet this turbulence also underscores the importance of our collaboration. By investing in local resilience, and by strengthening ties across the Pacific, we can chart a course that is less dependent on shifting political winds, and more firmly grounded in innovation, cooperation, and sustainable development.

4. Opportunities in Uncertainty

Even in turbulent times, uncertainty creates opportunity. Islands like ours have always had to innovate — and today, Hawai‘i and Okinawa can lead the way as global testbeds for the clean energy transition.

Testbeds for Island Transitions

Because our grids are small, our costs are high, and our vulnerabilities are immediate, Hawai‘i and Okinawa are the ideal laboratories for innovation. What works here can inform solutions for islands across the Pacific, the Caribbean, and even for remote communities in larger nations.

Innovation Pathways

- **Microgrids:** Both Hawai‘i and Okinawa are pioneering microgrids that keep critical facilities powered through outages and reduce reliance on imported fuels. From Pearl Harbor–Hickam in Hawai‘i to Miyakojima in Okinawa, we are showing what resilience looks like in practice.
- **Geothermal & Offshore Wind:** Hawai‘i’s geothermal expansion on the Big Island and emerging offshore wind projects off O‘ahu, together with Japan’s offshore wind ambitions, provide complementary areas for shared research and investment.
- **OTEC & Ocean Energy:** Okinawa’s Kumejima OTEC plant and Hawai‘i’s Makai Ocean Engineering project are global firsts. By scaling ocean energy, our islands can show the world how to unlock a nearly limitless renewable resource.
- **Hydrogen:** Both nations are investing in hydrogen as a storage medium and as a shipping fuel. Hawai‘i and Okinawa can be demonstration hubs for hydrogen in island grids and transport.
- **Sea Water Air Conditioning (SWAC):** A utilities approach to HVAC in tourism destinations like Waikīkī are so promising and appropriate for islands!

Regional Collaboration

Even as tariff wars and national politics create uncertainty, regional collaboration can build resilience. Hawai‘i and Okinawa can deepen ties not only with each other, but also with Japan, Korea, and Pacific Island nations — co-developing technologies, sharing lessons, and attracting investment from partners committed to long-term sustainability.

Role of Universities and Research Institutes

Universities anchor this effort. In Hawai‘i, UHERO and HNEI provide critical analysis on costs, technologies, and policies. In Okinawa, OIST leads research into digital energy systems and renewable integration. Together, our institutions supply the evidence base that policymakers and investors need to make smart, forward-looking choices.

“Uncertainty may raise costs and complicate planning. But it also strengthens our resolve to innovate, to cooperate, and to lead.”

---

5. Closing

“Let me close by returning to the central theme of this meeting.”

Yes, U.S. policy shifts and global volatility create turbulence. Yes, they increase costs and weaken investor confidence. But they do not derail Hawai‘i and Okinawa’s clean energy trajectory.

What remains decisive is **our local commitment and our international collaboration**. By standing together, by sharing solutions, and by committing to innovation, Hawai‘i and Okinawa can chart a course that is resilient to politics, resistant to volatility, and rooted in sustainability.

As we renew our Memorandum of Cooperation for the next five years, let us send a message: that small islands can lead, and that through partnership we can inspire solutions far beyond our shores.

And with that, I am delighted to pass the stage to my colleague, Professor Nori Tarui, who will offer a more detailed analysis of the Hawai‘i-specific economic impacts of today’s energy policies.