Recommendation #8 (Approved on March 21, 2024) on Promotion of Accelerated Decarbonization with Energy Efficiency Solutions for Island Nations Globally

We recommend that the Secretary lead an inter-agency initiative to accelerate the U.S. exports and investment in clean energy in the "island nations of the world" (i.e., Atlantic Ocean, Indian Ocean, and Pacific Ocean) by facilitating timely development of a set of tools, models and framework to enable accelerated implementation of "Decarbonization of Energy Sector" plan enabling of timely investments in energy efficiency, clean energy projects and related infrastructure.

Such an initiative would foster capacity building and create the enabling environment for the following objectives:

1. Energy efficiency programs to maximize that accelerate decarbonization;
2. New financeable RE capacity building with the lowest Levelized Cost of Energy (LCOE);
3. Maximize distributed renewable energy systems to minimize the ultimate cost to consumers;
4. Choice of tailor-made portfolio of U.S. clean energy technologies use in above plan.

Sub-Committee(s): *Export Competitiveness*

Background Information:
Diverse set of global islands in terms of size (geographic and population), economic development and political institutions, share a common set of characteristics with regards to their energy markets:

1. Economy highly dependent on tourism with few exceptions such as Trinidad and Tobago;
2. Extremely high cost of levelized energy not affordable to local populations but supported by tourism
3. High dependence on fossil fuel energy with significant CO2 emissions on per capita basis
4. Frequent natural weather/climate disasters crippling local infrastructure and energy supplies that raises the importance of system resilience and rapid post disaster recovery
5. Prioritize islands most affected by CO2 related rising ocean temperatures and levels threatening the livelihood of coastal population.
6. Little or no use of energy efficiency measures.

The renewable energy deployment and increased energy efficiency to accelerate decarbonization targets for the Caribbean and Pacific islands as well as emerging countries in Indo-Pacific and Latin America region needs increased attention. Such plans with improving enabling policies will significantly increase opportunities for export of the US clean energy technologies, equipment, services, and further investments in these countries by private and public sectors.

Plans for the Decarbonization of energy sector of these island nations would involve use of a set of tools and modeling practiced in the United States such as Integrated Energy Resources Planning; managing macro energy demand through low-cost energy efficiency programs, development of

distributed renewable energy resources on and off-grid and cost-effective improvements in managing electricity grid to support optimal use of distributed renewable energy supplies to reduce overall cost to the consumers with improved resilience and accelerated disaster recovery. An example of such a plan is "Puerto Rico 100" recently completed by DOE and spearheaded by NREL.[1]

Specific Suggested Actions:

1. ITA to conduct seminars and trade missions for target countries for increased understanding of "tools" for Clean Energy Strategic Action Plan" in target countries mentioned above.
2. ITA to coordinate with relevant US agencies to identify tailor-made clean technologies that best fit the decarbonization plan for each island country needs and issues using American engineering standards for equipment and service performance.
3. Funding of capacity building for development of above-mentioned plans and its implementation for target countries by U.S. Dept of State agencies, U.S. DOE, Development Finance Corporation, MEGA, Ex-Im Bank and other US led multi-laterals such as The World Bank, IFC and Inter-American Bank.
4. For applicable cluster of islands, determine the potential for creation of an inter-island electricity grid system to optimize investment costs, reduced LCOE and improved resiliency and energy system restoration post natural disasters.
5. Reverse trade mission of public-private sector experts for specific training on accelerated energy efficiency programs, use of Demand Management and VPPs to support creation of Clean Energy Strategic Action Plan with supporting policies and governance laws.
6. Public-Private investors (e.g., DFC and clean energy funds) to lobby creation of legislations to create enabling environment to attract foreign investments for energy efficiency programs and clean energy projects in the target countries in island countries receptive to such opportunities.
7. Recruit U.S. DOE National Labs, US Independent System Operators (ISO) and state level energy regulators to offer assistance in creating viable platforms for deployment of distributed renewable energy capacities that will reduce its cost to consumers and make them financeable.

Expected Effect on U.S. Export Competitiveness:

1. Formulation of country level and inter-island integrated energy resource planning/decarbonization plan for clusters of islands will create sustainable long-term opportunity for a wide range of U.S. exports to multiple island countries.
2. Offering of the U.S. Expertise and investment in energy efficiency: Formulation and deployment of business model for faster deployment of energy efficiency programs that can achieve quickest decarbonization at the least cost. U.S. assistance to improve grid resiliency, disaster recovery and cyber security.
3. Overcoming export obstacles: Demonstration of multi-stakeholder benefits for wide scale acceptance of new Distributed RE systems tailored to each island's needs and affordability.

[1] PR100: Puerto Rico Grid Resilience and Transition to 100% Renewable Energy (nrel.gov) Pages 12-17, 20, 23-29 and 31-39

4. U.S. export receptiveness: Wide scale acceptance of U.S. energy planning tools, simulation modeling and market structure for distributed energy systems and US engineering standards for selected island nations. Constructive role for US DOE Labs to leverage their similar work within U.S. islands such as Puerto Rico.
5. Accelerated soft exports of technologies, technical and planning tools followed by export of US clean energy equipment and systems.
6. Increased opportunity for U.S. investments in above mentioned distributed clean energy projects and infrastructure.
7. Such a comprehensive and coordinated multi-year program can create long term opportunities for billions of dollars of US exports.

Specific Agencies Responsible for Implementation:
U.S. Department of Commerce; US DOE and Labs, U.S. Treasury (i.e., DFC and EX-IM Bank), U.S. Dept of State (USAID, USTDA), Dept of Agriculture, U.S .Maritime Agencies. Also, collaboration with the multi-lateral financial institutions such as The World Bank, IFC, and Inter-American Bank.

Measures of Success:
1. Increase in the number of island countries enrolling in the development of Strategic Action Plan for EE and creating demand for distributed RE and infrastructure requirements by 2026
2. Number of island nations improving enabling climate to attract US investments by 2030
3. Number of island countries creating open and competitive energy market structures with level playing government procurement process by 2030
4. Selection of United States as the partner to reduce Decarbonization of island nations their respective 100% decarbonization goals, say in 10 to 15 years.
5. Increase in U.S. export of technologies, equipment, and soft services by $ 5.0 billion to island nations by 2030.