



Application: Boldline – P3 Cohort 1

Name of Organization Submitting Partnership: Renewables 100 Policy Institute

Full address and postal code: 1507 7th Street, Santa Monica, CA 90401

For profit or not for profit: 501c3 nonprofit

Industry affiliation (ie. Health care, aviation, energy): Education about renewable energy policies and solutions

Links to biographies of the participants or LinkedIn profiles (preferable):

Diane Moss: <http://www.renewables100.org/en/about-us/team/diane-moss/>;
<https://www.linkedin.com/in/diane-moss-07828b8/>

Angelina Galiteva: <http://www.renewables100.org/en/about-us/team/angelina-m-galiteva/>

Matthias Bank: <http://www.renewables100.org/en/about-us/team/matthias-bank/>

Has your organization partnered with the U.S. Government? Describe.

Yes. We partnered over the past year with the US Consulate General in Brazil and the State of Pernambuco on a program to transform all sectors of the energy system on the island of Fernando de Noronha, a UNESCO World Heritage Site off the coast of Recife, Brazil, to become reliant on renewable resources without developing additional hydro facilities. The island would be the first region in Brazil to transition to renewable energy and would also demonstrate that advanced, innovative energy technology solutions are profitable, sustainable, and create jobs. The ultimate goal is for the island to serve as an international model for clean energy technologies, especially in vulnerable locations like islands.

Additionally, in conjunction with this project, we partnered with the US Department of Commerce on two delegation visits over the past two years of senior energy experts and business executives to California to meet with US counterparts, and are partnering with the Department on a third visit in January 2018. The Department also partnered with us on some activities of the project.

Leading up to this project, one of our Founders, Angelina Galiteva, participated as a US Department of Energy Expert Speaker on visits to Argentina and Brazil, and there are plans being discussed for a similar visit to Asia in the coming year.

Please see this website for a more complete description and a full report on the program to date:

<http://www.renewables100.org/en/programs/leadership-education/examples/us-brazil-energy-collaboration-2017/>



What stage is your partnership business plan (new idea, existing program going to scale):

We, in coordination with our project partners, completed an intensive capacity building workshop on energy innovation in Recife with 200+ senior energy experts from Brazil and about 10 from the US government and research sectors. In addition to the U.S. Department of State's involvement via the US Consulate General in Brazil as a main partner, the U.S. Department of Commerce also partnered on a business leadership focused session, and we were honored to have the Deputy Secretary of Commerce join us to deliver a keynote address.

We also completed a visit to the island of Fernando de Noronha off the coast of Recife with Brazilian and US energy leaders that resulted in 1) an initial action plan to transition the island off of imported diesel to advanced, clean energy solutions for its energy system, integrating water and waste treatment; 2) commitments from several US companies to invest in public private partnerships to implement the plan; 3) commitments from the local, state, and federal government, along with the local utilities to advance the plan; 4) commitments from the State of Hawaii, the California Independent System Operator, and California workforce training leaders to formally partner with their counterparts in Pernambuco on collaboration and knowledge exchange.

There have also been several meetings with the project partners, and a working group of key stakeholders between these two events to plan the visit to Fernando de Noronha, and since then to focus on next steps. One of these happened at Renewables 100 Policy Institute's conference in Irvine in April 2017 – see: <http://www.renewables100.org/en/pathways-2017/speakers/>

We are now seeking funding to continue coordinating this effort's next steps, which includes facilitating 1) the commitments described above, 2) an in-depth technical feasibility study on transitioning the island to 100% renewable energy, 3) an educational campaign that ensures the lessons learned from this project are shared internationally.

Proposal Information:

Problem Statement (250 words max): *Describe the problem you are trying to solve and any relevant background information. Address the impact and innovation potential of your idea given the status quo.*

The pristine, ecologically sensitive island of Fernando de Noronha currently derives 90% of its energy from imported fossil fuels, nearly 5.5 million liters per year. Burning this emits 14,693 tons of carbon dioxide. By supporting the transition of the island's energy supply to local, abundant renewable sources, this project would display the tangible environmental and economic benefits of 21st century energy technologies for communities in need and sensitive habitats around the world. This initiative will also demonstrate that the U.S. is a reliable partner committed to advancing innovation, protecting the environment, and providing access to reliable clean energy for all.

The grant will build upon international collaborations at the federal and state levels, including the State Department's US-Brazilian Climate Partnerships Initiative, 2010 research by NREL to



update Fernando de Noronha's energy system, the California-Pernambuco partnership established over the past year by a State Department LEAP grant to the Renewables 100 Policy Institute, and the Under 2 MOU, a global partnership of subnational authorities spearheaded by the Renewables 100 Policy Institute and created by the state of California. The grant will also build on multi-stakeholder US-Brazil relationships facilitated over the past two years by the State Department and Department of Commerce in coordination with the Renewables 100 Policy Institute.

Brazil and specifically Pernambuco are strategic locations to undertake this project. As the hemisphere's second largest economy, not only are Brazil's energy needs large but the matrix Brazil pursues has important implications for sustainable growth in the region and around the world. Pernambuco, where Fernando de Noronha Island is located, is a leader in energy innovation.

Idea (250 words max): *What is the core concept for the partnership? How will working in a partnership obtain the outcome that is required? How does this align to U.S. interests?*

A US-Brazil partnership between the US Consulate General in Recife, the Pernambuco Secretary of Environment and Sustainability, and the Renewables 100 Policy Institute has been forged to advance knowledge exchange on innovative energy best practices, as well as to lay the groundwork to demonstrate lessons learned on the island of Fernando de Noronha, a World Heritage Site off the coast of Pernambuco, Brazil. The partnership seeks to implement the initial action plan it has created over the past year for showcasing innovative clean technology solutions and transforming the island into a model for transitioning to a self-reliant, advanced, clean energy system across sectors, including electricity generation, transportation fuels, water desalination and treatment, and waste management.

This proposal aligns with U.S. interests by:

- Supporting DOS Strategic Goal #3 - Promote the transition to a low emission, climate-resilient world while expanding global access to sustainable energy.
- Advancing SDG goal #7 – Ensure access to affordable, reliable, sustainable, and modern energy for all and; #13 – Take urgent action to combat climate change and its impacts; and #17 – Strengthen the means of implementation and revitalize the global partnership for sustainable development.
- Furthering Mission Brazil's ICS Goal 2.3: Promote Brazil's Development of Reliable, Efficient, Environmentally Sound Energy Sources to Promote Sustainable Economic Development" and its sub-objective, "Expand opportunities for policy exchange on - and U.S. private sector participation in - renewable and clean energy sectors in Brazil.")

Resource Requirements (250 words max): *Describe what is needed to implement your idea (resources, stakeholder buy-in, legal requirements, etc.). Address the feasibility of your idea.*



The project has already obtained buy-in over the past year from key stakeholders (see Partners section below, e.g.), including

- Pledges by several entities at the local level (e.g. Celpe, the University of Pernambuco and the Administration of Fernando de Noronha)
- The State of Hawaii and the State of Pernambuco agreed to formalize an agreement to collaborate at the government and business-to-business levels on advancing clean energy technologies.
- Commitment to U.S.-Brazil collaboration and knowledge exchange on grid operations involving the California Independent System Operator (CAISO, EPE and others)
- Commitment to U.S.-Brazil collaborative professional training program for the work force of the future to support the rapid growth of renewable energy technologies.
- Public-private partnerships with various US companies to develop relevant projects on the island of Fernando de Noronha.

Specific policy and regulatory adjustments to accelerate the project specific proposals were recommended by the project participants over the past year, which the Pernambuco Secretary of Sustainability and Environment committed advance with the relevant local, state, and federal government authorities. An additional outcome of the project so far is that the Fernando De Noronha City Hall and Pernambuco Ministry of Environment and Sustainability committed to work together on developing policies that are adaptable by other cities. Resources going forward are primarily needed to fund continued facilitation of the process to ensure these commitments are followed through on and that opportunities to broadly share lessons learned are realized. Renewables 100 Policy Institute is actively seeking these funds. Also needed is an in-depth technical study on transforming the island's energy system to local, clean, economical resources, which has received initial pledges of funding support by the Pernambuco government and both local research institutions.

Best Potential Partners (250 words max): *Describe ideal partners (from 2-10) or types of partners that would make for a successful partnership.*

This project seeks to build upon successful partnerships already forged, which include:

Core Partners

- **Renewables 100 Policy Institute** – Main facilitating organization
- **The U.S. Consul General in Recife** – Main U.S. government partner
- **The Pernambuco Secretariat of Sustainability and Environment** – Main Brazilian government partner

Other Primary Partners

- **National Renewable Energy Laboratory** – has expressed interest in continuing to provide research support.



- **SENAI** (one of Brazil's leading training organizations) - pledged \$70,000 in-kind value of initial feasibility study
- **University of Pernambuco** – hosted expert visits in Recife, and recently conducted a visit to California to follow up with experts (e.g. at UCLA, UC Irvine)
- **State of Hawaii** – The Governor of Hawaii and the Pernambuco Secretary of Sustainability and the Environment have committed to signing a formal agreement with to collaborate on Fernando de Noronha's energy transformation and exchange knowledge on promoting energy resiliency on islands.
- **Grid operators** – The California Independent System Operator has pledged to knowledge transfer with EPE and others on advanced solutions to grid resiliency and reliability.
- **Public-private partnerships** with various US companies, such as Solar City, Tesla, and GE, who are among the companies that participated in the project working group on the island of Fernando de Noronha and expressed support, to develop relevant projects on the island of Fernando de Noronha.
- **Under 2 MOU**- The Under 2 MOU staff are eager to partner on this proposal since it provides them with a deliverable. They will likely contribute by organizing additional online webinars between the State of Pernambuco and other Under 2 MOU signatories to be able to share lessons learned and best practices.

Ideal End State (150 words max): *Describe what success will look like with the implementation of your idea. Address the impact of your idea and its innovation potential.*

Over the past year, this project brought US-Brazil collaboration on advanced energy solutions for the first time from dialogue into action, with tangible outcomes including the largest energy-related capacity building event in Recife's history and a groundbreaking action plan created by top experts to make the island of Fernando de Noronha the first region in Brazil, and among the first in Latin America, energy self-sufficient with local, clean resources. To fully realize the project vision, there must now be implementation. The initial energy plan for Fernando de Noronha must be refined and realized, and best practices and lessons learned from this success must be translated into a regional and international educational model that is widely disseminated. Such an effort has the potential to support jobs both locally in Brazil and the US, with participation of US companies, and to improve resilience not only on the island of Fernando de Noronha, but also in the surrounding region, which is eager to learn from the island's experience, and in other vulnerable regions in the US and around the world that either similarly depend on expensive diesel fuel imports and/or need to modernize their energy system to mitigate impacts of hurricanes, drought and other extreme events.