

November 20, 2017

From: Puerto Rico Energy Efficiency & Sustainability Alliance
PO Box 142812
Arecibo, PR 00614

To: Secretaría Comisión de Energía de Puerto Rico
268 Ave. Muñoz Rivera, Suite 202,
San Juan, PR 00918.

RE: “Energy for Puerto Program” - PR-EESA - Proposal for Transformation of Puerto Rico Energy System

Dear Puerto Rico Energy Commission:

My name is Jorge E Molina, founder and executive director of the Puerto Rico Energy Efficiency Alliance, a diverse & innovative non-governmental organization promoting strategic alliances to educating and promote Renewable Energy Solutions, Energy Efficiency, & Sustainability within our region. We are hereby submitting a request on behalf of various Non-governmental organizations along with owners, and managers of commercial and industrial properties in Puerto Rico.

As major employers and large electricity consumers in Puerto Rico, we write to support progress to date, and to express our support for increased and diversified renewable energy supplies in Puerto Rico. We also write to ask for an explicit legal framework allowing companies choices to procure, lease, and access renewable energy resources from the state’s utilities and from private third-party sellers.

As local and global companies providing products and services to consumers around the world from our operations in Puerto Rico, we value not only a reliable and affordable electricity supply but also a clean one. Our companies, like many other leading U.S. businesses, have set public goals to reduce carbon emissions and operate using renewable energy. Our ability to access power from renewable

resources is essential to our corporate energy and business strategies.

Major businesses often use multiple policy mechanisms to procure renewable energy depending on financing, suitability of a site, length of contract, and a variety of additional considerations that may be different for each company. States that have expanded and opened access to renewable energy are particularly attractive to businesses—offering up a diversified energy system, improved air quality, and greater long-term price stability.

We are encouraged by the progress that has been made in Puerto Rico. Renewable energy projects made possible by companies located in Puerto Rico are already delivering numerous benefits. The deals signed to date are producing tax revenue, jobs, and other economic benefits, and send a strong signal to other companies that barriers to corporate renewable procurement in Puerto Rico are not insurmountable. These projects also reflect constructive engagement by the Puerto Rico Power Authority and other key stakeholders. We see an opportunity to build upon this hard work and momentum by further expanding options for companies to procure renewable energy in the Commonwealth.

Puerto Rico would meet the needs of a wide range of companies by allowing choice—including options to pursue power purchase agreements (PPAs), negotiate direct arrangements, and opt-into cost-competitive renewable energy tariffs, subscribe to community solar, and pursue other policy mechanisms tailored to the needs of large buyers.

First, Puerto Rico should provide broader freedom for companies to enter into PPAs. Puerto Rico currently lacks the explicit legal framework to allow companies like ours to enter into renewable energy contracts with non-utility energy service providers through third-party financing or PPAs. Third-party PPAs allow companies to procure energy without making major capital expenditures up front or taking on the risk associated with operation and maintenance.

Second, Puerto Rico utilities should also offer a cost of service based renewable energy tariff for large buyers, allowing customers to opt-in to a portfolio of renewable energy generation delivered by their regulated utility. The goal of this tariff should be to provide customers with easy access to cost-effective

renewable energy with low transaction costs and a fixed energy component that provides price certainty and avoids fuel price volatility without impacting other ratepayers.

While these two changes are key to expanding our options to pursue renewable energy, it is also important that Puerto Rico's regulated utilities and the Puerto Rico Energy Commission avoid limiting companies to a fixed set of purchasing pathways. Renewable energy tariffs, third-party PPAs, and other policy mechanisms should not preclude other competitive opportunities that can drive innovation, reduce costs, and expand new renewable energy opportunities in the region.

We encourage additional robust dialogue between the Puerto Rico Power Authority, the Puerto Rico Energy Commission and their customers to identify innovative solutions for corporate renewable energy purchasing that minimize overall costs without impacting non-participating ratepayers. The Corporate Renewable Energy Buyers' Principles and the Performance Excellence in Electricity Renewal (PEER) may serve as a basis for these dialogues. PEER, or Performance Excellence in Electricity Renewal, is the first ever rating system that drives market transformation in the power and energy sectors. Modeled after the U.S. Green Building Council's (USGBC) LEED green building rating system, PEER, or Performance Excellence in Electricity Renewal, evaluates power generation, transmission and distribution systems through the lens of the customer, focusing on efficiency, quality, reliability, resiliency and the environment. GBCI will serve as the independent, third party, global certification and credentialing body for PEER.

As some of the largest electricity consumers in Puerto Rico, we support increasing the supply of renewable energy available through utilities and from third parties. We want utilities to provide their customers with affordable, reliable, and clean energy, and we believe this is possible with policies that increase Puerto Rico's profile as a place to do business. All Puerto Ricans will benefit through new investments, tax revenue, jobs, and infrastructure upgrades that accompany the resulting advanced energy growth. This makes Puerto Rico a more attractive place to do business for the growing list of companies that have

set greenhouse gas reduction and renewable energy commitments.

We invite the state's utility, third party providers, and policymakers to collaborate with us on opportunities to meet our mutual objective of increasing the cost-effective supply of renewable energy in Puerto Rico.

Sincerely,



Jorge E Molina

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Jesus A Garay - EIT, LEED AP

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USGBC Puerto Rico Chapter
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Attachments:

- **Glossary of Terms** - PR-EESA - Proposal for Transformation of Puerto Rico Energy System
- **News:** Impulsan la eficiencia energética | El Nuevo Día
- **News:** Impulsan guías de excelencia para transformar el sistema eléctrico | El Nuevo Día
- **Signatures List** (to be delivered at a later time)

About Petitioners:

Jorge E Molina, Founder & Executive Director, PR-EESA - The Puerto Rico Energy Efficiency & Sustainability Alliance (PR-EESA) is a diverse & innovative non-governmental organization promoting strategic alliances to educating and promote Renewable Energy Solutions, Energy Efficiency, & Sustainability within our region. La Batalla de los Edificios challenge facilitate technical information and tools to organizations and consumers in search for Energy-Efficient solutions and best management practices. Tools promoted through are program are based on the **EPA, DOE, USGBC, and ASHRAE** program tools.

Jesus A Garay, President, Executive Director, USGBC Puerto Rico Chapter - The U.S. Green Building Council (USGBC) is committed to a prosperous and sustainable future through cost-efficient and energy-saving green buildings. USGBC's mission is "to transform the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves the quality of life." USGBC builds on this vision through the development and improvement of the LEED rating system, the LEED professional credentials, robust educational offerings, an international network of local community leaders and USGBC member organizations, the annual Greenbuild International Conference & Expo, the Center for Green Schools and other USGBC initiatives, as well as through advocacy and outreach that encourages and enables green buildings and communities.

ASHRAE Puerto Rico Chapter - ASHRAE, founded in 1894, is a global society advancing human well-being through sustainable technology for the built environment. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry. Through research, standards writing, publishing and continuing education, ASHRAE shapes tomorrow's built environment today. The ASHRAE PR Team seeks to building relationships between the chapter and all levels of government and with the appropriate international community representatives to: Facilitate the transfer of technical counsel and assistance on matters affecting the public, engineering profession, and ASHRAE professional community, collect, digest

and disseminate to members and staff relevant information regarding current or anticipated government actions, pursue technology transfer and government funding opportunities independently or jointly with other appropriate organizations.

PR-EESA's Website: <http://pr-eesa.org>

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Glossary of Terms:

ANSI/ASHRAE/IES Standard 90.1-2016 -- Energy Standard for Buildings Except Low-Rise Residential Buildings, Standard which provides the minimum requirements for energy-efficient design of most buildings, except low-rise residential buildings. It offers, in detail, the minimum energy-efficient requirements for design and construction of new buildings and their systems, new portions of buildings and their systems, and new systems and equipment in existing buildings, as well as criteria for determining compliance with these requirements. It is an indispensable reference for engineers and other professionals involved in design of buildings and building systems.

Community Solar Project, sometimes referred to as a solar garden or shared renewable energy plant is a solar power plant whose electricity is shared by more than one household. 'Community solar' can refer to both 'community-owned' projects as well as third party-owned plants whose electricity is shared by a community.

Demand Response is a change in the power consumption of an electric utility customer to better match the demand for power with the supply.

Distributed Generation, also distributed energy, on-site generation (OSG) or district/decentralized energy is electrical generation and storage performed by a variety of small, grid-connected devices referred to as distributed energy resources (DER).

Energy Efficiency, is the goal to reduce the amount of energy required to provide products and services.

Energy Storage is a collection of methods used to store electrical energy on an electrical power grid, or off it.

Feed-in Tariff (FIT, FiT, standard offer contract, advanced renewable tariff, or renewable energy payments) is a policy mechanism designed to accelerate investment in renewable energy technologies. It achieves this by offering long-term contracts to renewable energy producers, typically based on the cost of generation of each technology.

LEED, or Leadership in Energy and Environmental Design, is the most widely used green

building rating system in the world. Available for virtually all building, community and home project types, LEED provides a framework to create healthy, highly efficient and cost-saving green buildings. LEED certification is a globally recognized symbol of sustainability achievement.

Microgrid is a localized grouping of electricity sources and loads that normally operates connected to and synchronous with the traditional centralized electrical grid (macrogrid), but can disconnect and function autonomously as physical and/or economic conditions dictate.[1] By this way, it paves a way to effectively integrate various sources of distributed generation (DG), especially Renewable Energy Sources (RES). It also provides a good solution for supplying power in case of an emergency by having the ability to change between islanded mode and grid-connected mode. On the other hand, control and protection are big challenges in this type of network configuration,[2] which is generally treated as a hierarchical control.

Net Metering (or net energy metering, NEM) allows consumers who generate some or all of their own electricity to use that electricity anytime, instead of when it is generated.

On-bill financing allows the utility to incur the cost of the clean energy upgrade, which is then repaid on the utility bill.

On-bill repayment options require the customer to repay the investment through a charge on their monthly utility bill as well, but with this option, the upfront capital is provided by a third party, not the utility. Additionally, on-bill repayment allows for a streamlined process as utilities already have a billing relationship with their customers, as well as access to information about their energy usage patterns and payment history. In some on-bill repayment programs, the loan is transferable to the next owner of the home or building.

PEER, or Performance Excellence in Electricity Renewal, is the first ever rating system that drives market transformation in the power and energy sectors. Modeled after the U.S. Green Building Council's (USGBC) LEED green building rating system, PEER, or Performance Excellence in Electricity Renewal, evaluates power generation, transmission and distribution systems through the lens of the customer, focusing on efficiency, quality, reliability, resiliency and the environment. GBCI will serve as the independent, third party, global certification and credentialing body for PEER.

Power Purchase Agreement (PPA), or electricity power agreement, is a contract between two parties, one which generates electricity (the seller) and one which is looking to purchase electricity (the buyer). The PPA defines all of the commercial terms for the sale of electricity between the two parties, including when the project will begin commercial operation, schedule for delivery of electricity, penalties for under delivery, payment terms, and termination. A PPA is the principal agreement that defines the revenue and credit quality of a generating project and is thus a key instrument of project finance. There are many forms of PPA in use today and they vary according to the needs of buyer, seller, and financing counterparties.[1][2]

Renewable Energy is energy that is collected from renewable resources, which are naturally replenished on a human timescale, such as sunlight, wind, rain, tides, waves, and geothermal heat.

Renewable Energy Tariffs, a new program and rate option being offered by some utilities to large customers, are quickly attracting attention in the renewable energy world as a way to do this. These tariffs allow a high energy usage customer to pay a slight premium in order to obtain all or a portion of their electricity from renewable sources.

Resiliency is the ability to overcome challenges of all kinds—trauma, tragedy, personal crises, plain ‘ole’ life problems—and bounce back stronger, wiser, and more personally powerful.

Smart Grid is an electrical grid which includes a variety of operational and energy measures including smart meters, smart appliances, renewable energy resources, and energy efficient resources. Electronic power conditioning and control of the production and distribution of electricity are important aspects of the smart grid.

Sustainability is based on a simple principle: Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. To pursue sustainability is to create and maintain the conditions under which humans and nature can exist in productive harmony to support present and future generations.

Wheeling is the transportation of electric energy (megawatt-hours) from within an electrical grid to an electrical load outside the grid boundaries. Two types of wheeling are 1) a wheel-through, where the electrical power generation and the load are both outside the boundaries of the transmission system and 2) a wheel-out, where the generation resource is inside the boundaries of the transmission system but the load is outside. Wheeling often refers to the scheduling of the energy transfer from one Balancing Authority to another. Since the wheeling of electric energy requires use of a transmission system, there is often an associated fee which goes to the transmission owners. In a simpler sense, it refers to the process of transmission of electricity through the transmission lines.



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LOCALES

Impulsan la eficiencia energética

Alianza propone aprovechar la situación tras el paso del huracán María para hacer uso adecuado del recurso

domingo, 15 de octubre de 2017 - 12:00 AM

Por Gerardo E. Alvarado León





La Alianza propone que se acuñe el concepto de microrredes, que consiste en la creación de unidades más pequeñas de generación en toda la isla. (Archivo / GFR Media)

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El mensaje es sencillo: cualquier estrategia de reconstrucción de Puerto Rico tras el paso del huracán María debe incluir como “elemento esencial” la eficiencia energética.

El mensajero es la Alianza de Eficiencia Energética y Sustentabilidad de Puerto Rico (AEES-PR), que se ha dado a la tarea de educar a la ciudadanía, comercios e industrias sobre cómo aprovechar la coyuntura actual para impulsar la eficiencia y, de paso, conseguir ahorros de cara a la futura recuperación del sistema eléctrico.

“Tras el paso del huracán María, todo el mundo se ha dado cuenta de la necesidad de salvaguardar los recursos que tenemos, incluyendo la energía”, dijo el fundador y director ejecutivo de la Alianza, Jorge E. Molina.

Se refirió a que, si bien la falta de electricidad provoca malestar e incomodidad, también puede servir para “concienciar” sobre el buen uso del recurso. Precisamente, la eficiencia energética se define como el uso de la menor cantidad de energía para obtener el resultado deseado.

“A la fuerza”

De acuerdo con Molina, la concienciación energética ha llegado “a la fuerza” y el reto ahora consiste en mantenerla.

“Hemos podido entender, a la fuerza, la importancia de conservar. Y no se trata de apagar las luces y mantener todo a oscuras por las noches, sino de saber qué luces y equipos son los que verdaderamente hay que dejar encendidos”, expuso.

Añadió que la Alianza promueve el análisis o evaluación de cuánto consume una propiedad y, a base de métricas internacionales preestablecidas, calcula cuánto puede hacerse en términos de eficiencia. Las acciones van desde sustitución de equipos hasta instalación de sistemas renovables.

El elemento más importante, sin embargo, son los patrones o hábitos de consumo.

“Si a raíz de esta situación me doy cuenta de que puedo correr mi residencia, comercio o industria con 30% menos energía de lo que usaba antes, ¿por qué voy a malgastar? Eso es dinero que puedo ahorrar o usar para otras necesidades. Hay que crear una cultura de no desperdiciar dinero en energía”, dijo Molina, quien es ingeniero industrial.

Beneficios

Cuestionado sobre los beneficios de las acciones que la Alianza impulsa, Molina destacó, por ejemplo, que una residencia, comercio o industria que reduzca su consumo energético, necesitará menos combustible para sus generadores o generadores más pequeños.

“Cada dólar que se invierte en eficiencia energética equivale a \$3 en ahorros en el costo de la instalación de sistemas de energía alterna”, explicó, tras insistir en la necesidad de llevar a cabo un “perfil energético” antes de erigir un sistema solar o eólico en una propiedad.

Molina, entretanto, dijo que la Autoridad de Energía Eléctrica (AEE) –y el gobierno, en general– debe acuñar el concepto de microrredes, que consiste en la creación de unidades más pequeñas de generación en toda la isla. Al momento, el sistema eléctrico es altamente centralizado, tanto en generación como en consumo, lo que aumenta su vulnerabilidad.

Según el ingeniero, las microrredes permiten darles impulso a las fuentes renovables, a través de diseños “sustentables y resilientes”. Evitan, asimismo, que el país completo se quede a oscuras en caso de averías, porque cada sistema sería independiente.

“Todo esto es eficiencia energética, y puede ser un motor para impulsar la economía. Disminuye la demanda, disminuye los costos operacionales de los negocios y los riesgos asociados a un huracán. También reduce la dependencia de comprar combustibles fósiles al exterior”, aseveró.

Molina insistió en que lograr la eficiencia energética “no tiene que ser costoso”, siempre y cuando el proceso se rija por profesionales cualificados.

Recaudan fondos

Por otro lado, Molina informó que la Alianza lanzó este mes la campaña de recaudación de fondos titulada “Energía para Puerto Rico”.

El 60% de los ingresos se destinará a la compra y distribución de alimentos y artículos médicos para las víctimas del huracán María en toda la isla. El 40% restante se usará para campañas educativas y un programa de asistencia técnica en eficiencia energética.

Las personas interesadas en aportar pueden hacerlo a través de gofundme.com/energyforpuertorico. Con su donativo, recibirán a cambio una camiseta, una pulsera o ambas.

La Alianza también identificó a unas 100 compañías privadas a las que les preparará “paquetes especiales” para que participen de la campaña con sus empleados, dijo Molina.

Hay más información en Facebook ([Puerto Rico Energy Efficiency & Sustainability Alliance](#)) y Twitter ([@PR_EESA](#)), y en el teléfono [\(939\) 219-0550](tel:(939)219-0550).

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Gobierno muestra evidencia de que pidió ayuda a FEMA a tiempo



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Impulsan guías de excelencia para transformar el sistema eléctrico

La Green Building Council apoyará a sus afiliados en la isla para promover que los proyectos que se desarrollen estén enmarcados en los nuevos parámetros para sistemas energéticos limpios y confiables

sábado, 11 de noviembre de 2017 - 11:30 PM





Un grupo de puertorriqueños diseñó un plan de trabajo que promueva aquí la creación de sistemas energéticos de vanguardia y descentralizados. (Suministrada)

Por Sandra Ivelisse Villerrael / Especial ELNUEVODIA.COM

Boston, Massachusetts - Puerto Rico cuenta con el respaldo de la organización que lidera a nivel mundial las guías de construcción y energía sostenibles, para transformar el arcaico sistema energético fulminado por el huracán María en uno robusto y adaptable.

Green Building Council de Estados Unidos (USGBC), que reúne a representantes del sector de la construcción para transformar el mercado hacia edificaciones asequibles, adaptables y amigables con el ambiente, dará apoyo a sus afiliados en Puerto Rico para promover aquí que los proyectos que se desarrollen estén enmarcados en los nuevos parámetros para sistemas energéticos limpios y confiables.

La iniciativa del Green Building Council de Puerto Rico, liderado por el ingeniero Jesús Andrés Garay, propone adoptar el sistema de medición Performance Excellence in Electricity Renewal (PEER), que viene a ser una versión del ya común sistema LEED, Leadership in Energy and Environmental Design, también diseñada por los GBC. LEED enmarca la construcción de las llamadas edificaciones verdes, es decir, saludables y eficientes.

“La prosperidad duradera de Puerto Rico puede mejorar con una visión de edificaciones verdes y comunidades resilientes para todas las personas en la Isla”, dijo Ryan Snow, director de Desarrollo de Comunidad Global del USGBC. “LEED así como otros sistemas de medición, como SITES (Sustainable Sites Initiative), PEER y RELi (programa de diseño resiliente) son componentes críticos en los esfuerzos de reconstrucción”, añadió Snow.

PEER provee un sistema de certificación basado en metas de resiliencia, transmisión de electricidad sostenible y reducción de impacto ambiental. Las métricas, utilizadas internacionalmente, procuran responder y adaptarse a los cambios climáticos. PEER evalúa el desempeño de los sistemas a base de cuatro categorías: confiabilidad y resiliencia; operaciones, seguridad y mantenimiento; eficiencia energética y ambiente; y servicios de las redes eléctricas.

“PEER pretende que las redes, desde su diseño, antes de que se construyan, ya vayan certificándose como que son unas redes robustas y resilientes y que pueden adaptarse a cualquier cambio climático e integrar energía renovable en esa red”, dijo Garay en un aparte durante el primer día del Greenbuild International Conference and Expo. Este evento cumbre de la organización tuvo lugar en Boston la semana pasada.

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