Our Solar Energy Business
Based in Juno Beach, Florida, NextEra Energy Resources, LLC, is the competitive energy subsidiary of NextEra Energy, Inc., a Fortune 200 company and one of the nation’s largest clean energy providers with consolidated revenues of approximately $16.2 billion in 2016.

NextEra Energy Resources is primarily a wholesale power generator, operating power plants and selling the output to utilities, retail electricity providers, power cooperatives, municipal electric providers and large industrial companies. Nationally recognized as a leading clean energy provider, NextEra Energy Resources has a portfolio of facilities, totaling more than 19,800 net megawatts (MW) of generating capacity in the United States and Canada. More than 95 percent of our electricity is derived from clean or renewable sources, including wind, solar, natural gas and nuclear energy.

NextEra Energy Resources’ operations are diversified not only by fuel sources, but by geographic regions. This helps us manage our power generation business more efficiently and economically, especially in today’s volatile energy markets.
NextEra Energy Resources has established a strong reputation based on outstanding performance at every level. We continue to solidify our position as one of the nation’s leading energy providers by focusing on:

**Development, construction and operation**
NextEra Energy Resources is a world leader in the development, construction and operation of wind energy centers. Standardized processes, best practices and superior execution have earned us the top position in the field.

We are also experienced in other areas of power generation, including solar, nuclear energy and fossil fuels. Given our experience in these areas, NextEra Energy Resources is uniquely suited to continue developing and acquiring power plants to meet the nation’s growing energy needs.

**Transmission facilities**
Power plants alone are only part of the energy equation. As additional power generation facilities become operational, we need to move this power from the generation sites to where it is needed. To do that, the electric transmission system must be improved, and NextEra Energy Resources is doing its part. Although we own various transmission lines across the country, we are pursuing additional large-scale opportunities to develop, build and operate new transmission facilities through an affiliate company, NextEra Energy Transmission.

**Renewable energy expertise at WindLogics**
WindLogics, one of our subsidiaries based in St. Paul, Minnesota, provides renewable energy consulting services, using industry-leading scientific analysis for planning, siting and forecasting renewable energy projects. Besides being the lead wind and solar advisor to NextEra Energy Resources, WindLogics also serves the renewable energy and electric utility industries throughout North America and around the globe. The company employs meteorologists, computing experts and other industry specialists.

**Power marketing**
NextEra Energy Marketing, LLC, a NextEra Energy Resources’ subsidiary, is one of the top ten marketers of power in the nation. NEM buys and sells wholesale energy commodities, such as natural gas, oil and electricity; manages all the fuel needs of the NextEra Energy Resources’ power generation fleet; and markets the output to customers across the country.

**Renewable energy market**
NEM markets the largest renewable energy portfolio in the country. NEM provides custom renewable energy solutions for customers with specific needs, from meeting regulatory mandates associated with a renewable portfolio standard to working with businesses to meet their goals on renewable energy generation or carbon emissions management.

**Distributed or private generation**
Our Distributed Generation (DG) team tailors solar solutions that enable customers to generate clean, reliable energy from their rooftops, parking structures and open land. DG develops, builds, finances and operates the systems for commercial, institutional, utility and public power customers, helping them to control costs and make a meaningful impact on their renewable energy goals.

**Retail market**
NextEra Energy Resources entered the retail market in 2005. NextEra Energy Services and Gexa Energy serve customers in numerous U.S. retail markets and manage the related billing, customer service, collections and remittance services to residential and commercial customers.

**Energy storage**
Our team of specialists have spent years researching energy storage technologies. Today, we have approximately 90 MW of operational energy storage and a pipeline of development projects across the U.S. and Canada. With our best-in-class development skills, we are positioned to be a leader in the energy storage market.
Long before clean energy became a popular choice in the United States, NextEra Energy Resources had been leading the way in using clean fuels to produce electricity that is environmentally friendly.

Our renewable or clean energy mix includes:

**Wind**

NextEra Energy Resources remains the world’s largest generator of U.S. wind generating facilities. We have more than 115 wind facilities in operation in North America capable of producing more than 13,800 MW of electricity.

NextEra Energy Resources’ wind facilities have enabled our customers who have purchased the renewable attributes to reduce 2016 emissions that would have otherwise been released into the atmosphere from other sources of power generation, including:

» More than 29.1 million tons of carbon dioxide
» More than 27,300 tons of sulfur dioxide
» More than 23,000 tons of nitrogen oxide

In the coming years, NextEra Energy Resources plans to continue the aggressive expansion of its wind business.

**Solar**

NextEra Energy Resources is also the world’s largest generator of solar energy. We generate solar energy at nine sites in California, as well as sites in Alabama, Georgia, Minnesota, New Jersey, New Mexico, Nevada and Canada. In all, the company operates approximately 2,200 MW of solar generation.

**Natural gas**

We have incorporated the cleanest burning fossil fuel into our portfolio with natural gas-fired facilities in three states. We often install combined-cycle technology that uses waste heat to drive an additional power generator for increased energy efficiency and lower emissions than conventional fossil-fueled units. This type of plant is about 30 percent more efficient than a traditional steam plant.

**Nuclear energy**

NextEra Energy Resources also incorporates clean nuclear energy into the fuel mix through Seabrook Station in New Hampshire, Duane Arnold Energy Center in Iowa and Point Beach Nuclear Plant in Wisconsin. Nuclear power plants produce virtually no air emissions during operation, representing a responsible energy choice for the future as global warming and climate change concerns intensify. All three NextEra Energy Resources’ nuclear power plants have excellent safety records and are focused on reliable operation.
**Bringing Solar Energy to Market**

**Solar energy benefits**

While no energy source is perfect, we believe the benefits of solar energy far outweigh the negatives. For example, solar plants operate when energy consumption needs are at their highest, effectively matching energy supply and demand.

The other benefits of NextEra Energy Resources’ photovoltaic (PV) solar portfolio are considerable, including:

» creates no greenhouse gases or other air pollutants;
» uses no water resources to generate electricity;
» provides a renewable fuel supply;
» creates no waste by-products for disposal;
» results in no hazardous cleanup at the end of a project’s productive life; and
» is a completely silent operation.

**Our solar expertise**

NextEra Energy Resources entered the solar generation business in 1989 through its interest in Solar Electric Generating System (SEGS), one of seven solar thermal projects sited in Kramer Junction and Harper Lake, Calif.

Since then, the company has significantly expanded its solar development to approximately 2,200 MW of operating assets with 1,100 MW of assets brought into service in 2016 alone.

**Vital landowner relationships**

PV solar facilities require a large area for development. Our general rule of thumb is that each MW of power will require five to eight acres of land to support the solar equipment as well as easements for power line infrastructure. For example, a 20 MW facility will require about 100 to 160 acres.

We generally aim to site a project as close as possible to existing electrical transmission or distribution infrastructure. We try to avoid too much land variation, extreme terrain and trees when siting a project because such characteristics can cause shading, reducing the project’s electrical production.

A solar PV project only requires water during construction for dust control as well as infrequent panel cleaning during operations.

If an area is promising after our initial assessment, NextEra Energy Resources will enter into a purchase or lease option agreement with landowners, which provides additional time for further evaluation of the property.

Landowners receive option payments based upon the final agreed dollar per acre value of the property. Throughout the option period, landowners are able to continue to conduct business as usual on their land. Landowners are not the only beneficiaries. Their decision to help develop a solar project in their community brings additional jobs to the area, increased tax revenue and our purchases of local goods and services.

**Environmental stewardship**

» NextEra Energy Resources works closely with federal, state and local environmental organizations.
» Environmental assessments determine suitability of prospective solar sites.
» Land and wildlife are respected and protected during construction and operations.
» Land is restored after construction.

Workers discuss the construction of the White Pine Solar Energy Center in Georgia.
Crews are Experienced in Construction

Construction is carefully planned

NextEra Energy Resources’ construction team is experienced in building solar PV plants. When all approvals are in place and landowners have signed their contracts, construction can begin. Our construction managers and engineers oversee and are responsible for all work and all contractors at a construction site. They, and often their families, live in the community during construction.

Approximately 90 to 120 contractors can be involved in a typical solar construction project. Our goal is to hire as many workers from the area as possible, including heavy equipment operators, electricians, laborers, security and others.

Construction typically takes between six and 12 months. Our construction manager and staff stay in close contact not only with landowners, but also with local government, to keep interested parties apprised of progress and to ensure adherence to all local building code requirements.

Some of the major steps involved include:

» erecting a fence for safety;
» laying high-quality gravel roads to accommodate heavy equipment;
» constructing a substation and possibly an operations and maintenance building;
» installing the solar arrays, which are typically about six to eight feet tall and are erected on steel posts driven into the ground; and
» testing and commissioning the completed arrays.

When construction is complete and the plant has begun commercial operation, the site is turned over to our operations staff who operate and maintain the solar plant.

How a photovoltaic solar plant works

As sunlight hits the solar panels, the photovoltaic energy is converted into direct current electricity (DC). The direct current flows from the panels through inverters and is converted into alternating current (AC). Finally, the electricity travels through transformers, and the voltage is boosted for delivery onto the transmission lines, so the local electric utility can distribute the electricity to homes and businesses.
NextEra Energy Resources is the world’s leader in generating solar energy. Lower solar panel costs have greatly improved the economics of solar power, and the benefits are significant. For local communities, it means clean, home-grown energy that also provides much-needed tax income to rural communities -- to schools, libraries and other public services, benefiting the entire community.

Highlights of solar operations

» We have 28 solar projects with approximately 2,200 MW of owned solar generation.
» Thousands more megawatts are in the development pipeline for future construction and operation
» Solar generation does not use water for power generation.
» Solar power generation is emissions free.

A Diversified Portfolio
Total Net Megawatts: 19,882
Updated January 1, 2017

*Includes megawatts associated with noncontrolling interests related to NextEra Energy Partners, LP