Duke Energy Florida's
Request for Renewables - RFR

I Request for Renewables, (RFR)

Duke Energy Florida's RFR is an open request to continuously solicit cost effective renewable resources and partnerships in Florida as we responsibly pursue renewable generation for our Florida energy portfolio.

II Purpose

As part of our ongoing efforts, Duke Energy Florida is continuing to actively seek renewable energy capacity and energy. Duke Energy Florida leads the state's utilities in using cost-effective, environmentally sensitive renewable energy sources within Florida. In our on-going effort to identify and deploy cost-competitive renewable energy sources which will reduce our dependence on fossil fuels, we are requesting information, contacts, questions, and potential contracts from such sources.

III Request Details

A. Power Purchase Contracts

Duke Energy Florida is looking to offset the need for new power plants by contracting with projects that are:

1. **Renewable.** The project must utilize as its primary energy one or more of the following sources: hydrogen produced from sources other than fossil fuels, biomass, solar energy, geothermal energy, wind energy, ocean energy, hydroelectric power or waste heat from a commercial or industrial manufacturing process.
2. **Cost-effective.** The project must be able to sell its electrical output to Duke Energy Florida at a cost equal to or below the cost to build new generation.
3. **Reliable.** The technologies need to operate in a predictable and reliable manner.
4. **Florida-based.** The project must generate electricity in Florida.
5. **Timely.** The project must be fully operational by June 1, 2024.
6. **Able to offset the need for new power plants.** Preferably the project will be capable of producing at least 1 MW of electric capacity.

If potential renewable energy providers have questions regarding these items or have projects that may not meet some of these items, Duke Energy

Florida encourages such producers to contact us and provide us with information details on potential projects and opportunities.

Duke Energy Florida has two types of renewable energy contracts that have been pre-approved by the Florida Public Service Commission – An As-Available contract or a Standard Offer contract.

As-Available Contract – this contract contains no obligation to deliver energy to Duke Energy Florida and the energy payments are based on the fuel savings that Duke Energy Florida realizes due to these types of purchases.

Standard Offer Contract – this contract does contain an obligation to deliver energy to Duke Energy Florida on a reliable basis. The payments for this contract are based on the cost of the power plant, or part thereof, that Duke Energy Florida avoids building due to this purchase. Accordingly, there is a capacity (capital cost) and an energy (fuel cost) payment in this contract. The standard offer contract has a number of options that can be chosen by the renewable supplier. They include:

1. A term length between 10 and 35 years.
2. Customizing the capacity payment stream.
3. Fixing a portion of the energy payments.

In addition, Duke Energy Florida is willing to negotiate an agreement with renewable suppliers in the event that the pre-approved as-available or standard offer contract is not satisfactory.

Negotiated Contract Provisions

Negotiated contracts must contain the following provisions, but also provide flexibility beyond the terms of the standard offer contract or as-available contract:

1. The project must utilize as its primary energy one or more of the following sources: hydrogen produced from sources other than fossil fuels, biomass, solar energy, solar thermal storage, geothermal energy, wind energy, ocean energy, hydroelectric power or waste heat from a commercial or industrial manufacturing process. The project must also obtain qualifying facility status from either the Federal Energy Regulatory Commission or the Florida Public Service Commission.
2. To ensure cost-effectiveness, the total payments to the renewable supplier must be at or below the avoided cost contained in the standard offer contract.

3. The renewable project must be fully operational by June 1, 2024.
4. Preferably the project will be capable of producing at least 1 MW of electric capacity.
5. The technologies need to operate in a predictable and reliable manner.
6. The renewable supplier must obtain firm transmission service in a separate agreement with the transmission provider to whom the project is interconnected.
7. The renewable supplier must obtain and maintain at least $5 million in liability insurance for the duration of the agreement.
8. A completion/performance security deposit will be required in an amount to be determined by the renewable project's size and credit rating.
9. In the event that capacity payments are scheduled to be paid to the renewable supplier earlier than the normal capacity payment stream as defined the standard offer contract, then the early portion of those payments must be secured.
10. The renewable project is responsible for obtaining all necessary permits and licenses required to construct, operate, and sell electricity from the facility.
11. Ownership of any renewable energy credits and/or carbon credits generated by the renewable facility is to be negotiated.

If potential renewable energy providers have questions regarding these items or projects that may not meet some of these criteria, Duke Energy Florida encourages such producers to contact us and provide us with information details on potential projects and opportunities.

Procedures

A copy of this request for renewable capacity and energy, the as-available contract, the standard offer contract are all posted on the Duke Energy website.

The link to this request for renewable energy is: https://www.progress-energy.com/assets/www/docs/commitment/pef-request-for-renewables.pdf

The link to the as-available contract is: http://www.duke-energy.com/pdfs/pe-rates-tariffasavailable.pdf

Currently Duke Energy Florida has a standard offer contracts available for renewable generators. It is based on a natural gas-fired combustion turbine unit.

The link to the combustion turbine based standard offer contracts is: http://www.duke-energy.com/pdfs/FirmPurchaseSOC-CombinedCycle.pdf

Written responses to this request for renewable capacity and energy must be sent to the e-mail address below. Upon receipt of a response, Duke Energy Florida will contact the respondent as soon as possible, normally within one (1) week. The Duke Energy Florida representative will review the project with the respondent and answer any questions that the renewable supplier may have. Also, questions, general information and other submissions can be sent to the e-mail or street address listed below. Oral inquires can be made at the telephone number listed below. In addition, several helpful and informative links can be found on Duke Energy's website at the following address: https://www.duke-energy.com/environment/default.asp

B. Interconnection

Net Metering Interconnections

In March of 2008, the Florida Public Service Commission (PSC) adopted net metering interconnection rules for renewable-energy systems up to 2 megawatts (MW) in capacity.

Qualifications:

Eligible only to a customer of a state's investor owned utility.

1. Customer –owned renewable generation must have a gross power rating that does not exceed 90% of the customer's utility distribution service rating.

2. Must fall within one of three Florida Interconnection Tiers (details provided in below referenced link)

3. Customers' renewable generation system must meet all applicable safety and performance standards established by the National Electric Code (NEC), the Institute of Electrical and Electronics Engineers (IEEE) and Underwriters Laboratories (UL).

4. System must be inspected and approved by local code officials prior to interconnection to ensure compliance with applicable local codes.

   Additional detailed information available: https://www.progress-energy.com/florida/business/renewable-energy/net-meter.page

All Other Interconnections

All interconnections that are not for net metering applications should refer to the Duke Energy Open Access Transmission Tariff.
http://www.oatioasis.com/FPC/

IV Communications

For Power Purchase Agreements

By E-Mail:
RenewableResponse@duke-energy.com

By Telephone:
David Gammon
(727) 820-4597

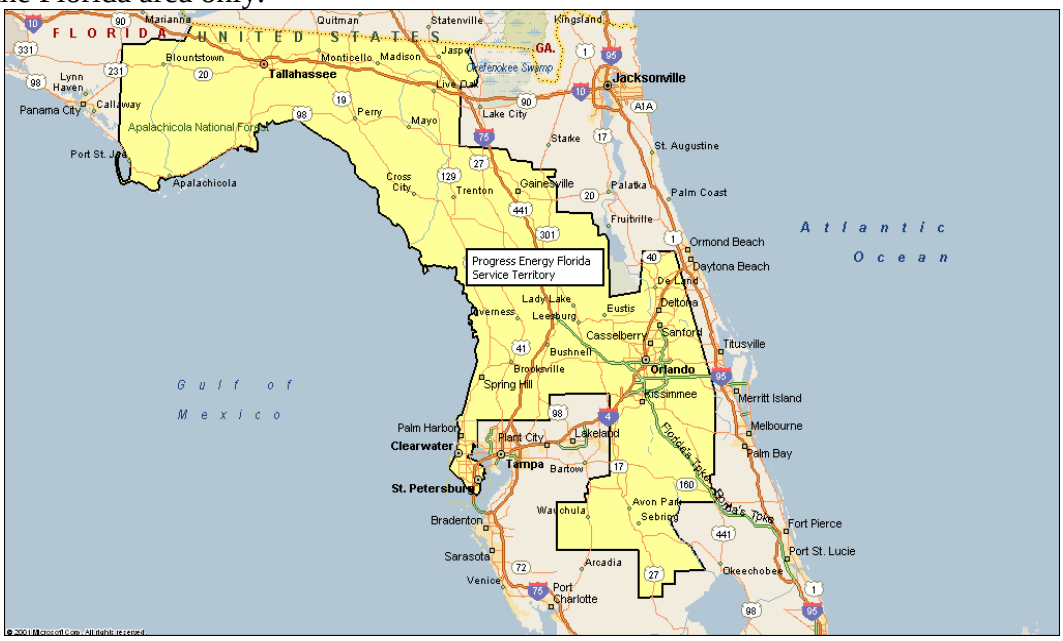
For Net Metering

By E-Mail:
customerownedgeneration@duke-energy.com

V FAQs

General Questions

What part of Florida does Duke Energy Florida serve?
Duke Energy (NYSE: DUK), provides electricity and related services to more than 1.7 million customers in Florida. The company's Florida headquarters are in St. Petersburg, Fla., and serves a territory encompassing over 20,000 square miles including the cities of St. Petersburg, Clearwater, as well as the central Florida area surrounding Orlando. The map below outlines Duke Energy's service territory for the Florida area only.



Is Duke Energy Florida currently purchasing from renewable energy suppliers?
Yes. Duke Energy Florida is currently purchasing from municipal solid waste facilities in Pinellas, Pasco, Lake and Metro-Dade Counties. Duke Energy Florida is also purchasing from Ridge Generating Station near Auburndale, Florida and Florida Power Development. Ridge Generating Station is fueled by wood waste, tires and landfill gas and Florida Power Development is fueled by wood waste.

Has Duke Energy Florida executed contracts with any renewable energy suppliers that are still being developed?
Yes. Duke Energy Florida is proud to have executed a recent biomass contract with US EcoGen. We also have as-available-type contracts for solar energy with National Solar.

Why does Duke Energy Florida require the renewable energy supplier to be located in Florida?
Duke Energy Florida supports the economic development of the state. The requirement is in place to ensure that our customers and the rest of the residents of Florida will gain the most benefit.

These contracts are rather lengthy and I'm not a lawyer. Can someone help me understand these contracts?
Simply send an email to the address above and someone will help with a basic understanding of the contracts. As is the case with any contract, it is advisable to contact an attorney and have them review the contract before you sign it.

Duke Energy Florida has stated its preference for projects that are at least 1 MW of capacity. What is 1 MW of capacity?
One megawatt is equivalent to 1,000 kilowatts (kW). Capacity is considered firm or dispatchable electrical energy produced and sold by a renewable energy generator in a reliable, dependable and continuous manner pursuant to a DEF's standard offer contract or a negotiated contract and are subject to contractual commitments as to the quantity, time, and reliability of delivery.

My project is less than 1 MW. Is Duke Energy Florida interested in my project?
It is very likely. If your project is a customer owned renewable energy system, the Florida (PSC) has recently passed interconnection and net-metering rules that may apply. Please contact customerownedgeneration@duke-energy.com

Does Duke Energy Florida have any information on renewable generator technology and its application in Florida?
The U. S. Department of Energy has a very good website that discusses various renewable technologies and their applications in different regions of the country. The site address is: http://www.energy.gov/science-innovation/energy-sources/renewable-energy

This is all good information and I want to help but I am not interested in operating a generator. Are there any Duke Energy Florida programs that I can participate in as a customer that help the environment?
Definitely yes! Energy efficiency, like renewable energy is a cornerstone in Duke Energy Florida's Balance Solution. Duke Energy Florida offers a wide variety of programs for its customers that are interested in the environment. These programs are described at the following website: https://www.progress-energy.com/florida/home/save-energy-money/index.page, where you can learn:

- How to save energy. The website provides simple, low-cost ways for customers to reduce energy use and save money at home.
- More about Home Energy Checks and how they can save you money.
- Customer rebates available for home efficiency improvements.
- How to measure your energy savings and your carbon footprints.

Information on the site is updated frequently, so you are encouraged to visit often to learn more ways to reduce energy use and save money.

Purchase Power Contract Questions

I notice that the price in the As-Available Contract varies hourly. How is that hourly price determined?
That price is determined in accordance with Florida Public Service Commission rule and it approximates Duke Energy Florida's hourly marginal energy cost. In other words, the price is based on Duke Energy Florida's highest cost for fuel for any hour.

Can I get a history of the As-Available prices?
Yes, contact Duke Energy Florida at the addresses above and someone will be glad to provide those prices.

The Standard Offer Contract refers to an "avoided unit". What is an avoided unit?
The avoided unit is the generator that Duke Energy Florida "avoids" building because it has purchased capacity and energy instead.

The Standard Offer Contract contains capacity and energy payments. What is a capacity payment and how is it determined?
One way to think of a capacity payment is that it is a payment for the cost of constructing the avoided unit. It is determined by calculating the value of deferring the constructing of the avoided unit. It should be noted that the capacity payment is made monthly based upon the renewable supplier's history of reliable operation over the last 12 months.

How reliable does my generation need to be to receive a capacity payment?
To receive the maximum payment, a supplier must deliver its full output at least 95% percent of the time over the last year. If the supplier makes deliveries less than 95% of the time the capacity payment will be reduced. If the supplier makes deliveries less than 75% of the time at full output then no capacity payment will be made.

The table of capacity payments in Duke Energy Florida's "STANDARD OFFER CONTRACT FORTHE PURCHASE OF FIRM CAPACITY AND ENERGY FROM A RENEWABLE ENERGY PRODUCER" on Sheet No. 9.455 shows the payments starting in 2022 or 2024. What if my project would like its payments to begin in 2023? What if my project would like to receive capacity payments after 2034?
Contact Duke Energy Florida at the addresses above and we will be glad to calculate that payment stream for you.

How is the energy payment in the Standard Offer Contract calculated?
For every hour in a given month, the amount of energy delivered is multiplied by the energy payment rate. The energy payment rate is the hourly as-available rate capped at the avoided unit's energy cost.

How is the avoided unit's energy cost determined?
The avoided unit's energy cost is determined by multiplying the avoided unit heat rate times the cost of natural gas and then adding a variable operations and maintenance cost component. The avoided unit heat rate is a measure of how much fuel the avoided unit would have used to generate one megawatt hour of electricity.

All this seems really complicated. Can you give me a simple payment?
Duke Energy Florida does have the ability to simplify the payments at a negotiated rate. Such a payment stream would have to be approved by the Florida Public Service Commission and comply with their rules. A negotiated payment rate cannot exceed the payment rate in the Standard Offer Contract.

Are there costs that a renewable supplier will have to pay?
Yes. One of the largest costs is likely to be the cost to interconnect with Duke Energy Florida. As a renewable supplier, you will have to pay for the cost of any equipment that Duke Energy Florida incurs to construct and maintain the interconnection. Duke Energy Florida may also need to perform an interconnection study to determine any new equipment or upgrades required to accept energy at the interconnection point. The cost of the study is also the responsibility of the renewable supplier.

Are there other contract costs?
Yes. There is a completion/performance security deposit required and that amount is determined by the size of the project and owner's credit rating. Additionally, the renewable supplier must maintain at least $1 million of insurance. Finally, the renewable supplier is responsible for the cost of the electricity it uses when its generating equipment is not in use.