Florida Power & Light and Florida International University (FIU) have been partners in developing the Florida region for research, education and community engagement for a many decades. To involve next generation of students, workforce and community both (FPL and FIU) formalized this partnership with multiple contracts.

There is a long-term (10-20 years) partnership between largest MSI degree provider (FIU), Energy Power Sustainability & Intelligence (EPSi) and the largest renewable energy portfolio company NextEra/FPL. NextEra/FPL and FIU has long term infrastructure, land and research contracts on the following efforts, and one of the major outcomes of this joint effort is that in the last 5 years alone, more than 85 students were hired by FPL, many of whom coming from disadvantaged communities.

The major contracts are

I.) **"Artificial Intelligence based Renewable Microgrid (AIR)", (AWD # 0032011055)**– 10 year contract till 2029, could be extended to 20 years.

This has been an ongoing effort since 2016. The FIU Artificial Intelligence Renewable (AIR) Microgrid facility at the FIU Engineering Center (EC) campus is equipped with the following core facilities: 1) 3 MW-9 MWHr Storage, 3.35 MVA grid forming (GFM) inverter, 1.4 MW grid-tied PV array, multiple other generators 2) 1 MW dynamic load for testing and trials 3) Proactive ANalytics and Data-Oriented Research on Availability & Security (PANDORAS) command and control center with GE industrial-grade Advanced Distribution Management System (ADMS) 4)The system is integrated Data Acquisition (SCADA) software, advanced Distribution Management System (DMS), Energy Management System (EMS), and Outage Management System (OMS), all under one 5) More than 15 feeders direct access, 46 PV inverters with bi-directional control 6) GENIE - Real time simulation lab with SynerGEE distribution modeling and planning software with a capability to analyze up to 30,000 nodes, 7) Edge computing platform, and 8) Weather/grid reliability data, spanning over 10 years.

Major goals are: i) Real-time monitoring and reporting for the 1.4 MW PV power plant located at FIU Engineering Center and using data from 4 other similar and larger sites across the entire territory of the local utility partner to conduct efficient predictive modeling and performance analyses. ii) Use the weather and grid data in addition to the data from the distributed PV systems to conduct descriptive, diagnostic, predictive, prescriptive, and cognitive analytics. iii) Intuitive and scalable visualization of high-dimensional grid and PV data to conduct real-time distribution operations and planning. iv) The collection, management, and processing of data of the orders of several terabytes.

II.) "Advanced research on Integrating Emerging and Existing Systems",(AWD# 0032012328)#): Working on EMS, DMS, OMS, DERMS system to integrate all platforms and different resources across the FPL territory including Gulf power. Ongoing effort since 2016.

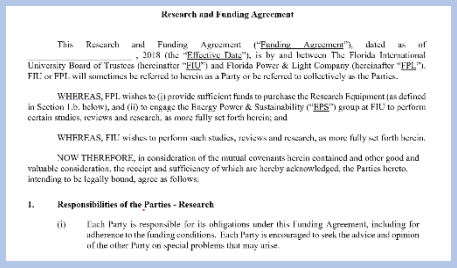
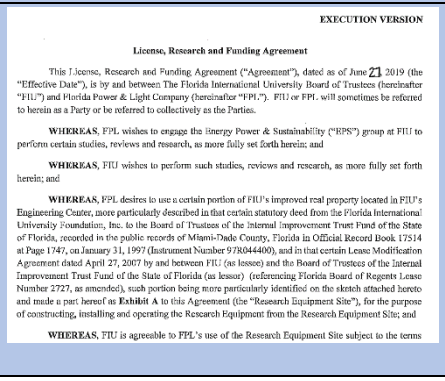
Major goals were: i) The capability of performing simulation and verification of cutting-edge, adaptive protection schemes. ii). The capability of Fault Isolation and Service Restoration (FISR): Through the use of software and automated switches/reclosers on the grid, FISR generates switching plans that isolates the fault to one area of the feeder between remote switches, restore power from upstream of the isolated section, and restore power from downstream of the isolated section. iii) The Automated Feeder Reconfiguration (AFR) software is designed for situations other

than fault restoration. This includes reducing overloads and violations, load shedding returning topology to normal.

III.) "Technical Training on Smart Grid System-Task 1", AWD# 0032012394): Smart Grid System testing and verification with internship on site- Students' Pathway from Internship to Jobs - ongoing efforts since 2014, FPL-FIU Engineering Partnership. More than 12 internship students hired by FPL in the last 2 years.
Major goals were: i) Offer research and training opportunities for students to make them industry ready. ii) To develop a pipeline of mature, intelligent, industry-ready students at all academic levels and specifically in the graduate realm.

IV.) "S-HR Training- FIU Training Online Course Framework", (AWDt# 0032012584); " S-HR Trainin-FIU Engineering (AWD #0032013152): Workforce Retooling, A Complete Online Framework course for journeyman, electrician etc.- Ongoing effort since 2014, more than 30 journeymen, electrician were certified in last year.
Major goals were: i) Aim to retain and promotion of workforce through continuous learning. ii) Keeping up-to-date with latest technological advancements. iii). To offer specialized courses to cater to different interests and needs of the participants.

V.) FPL Smart Grid System MTC Lab Cooperation (AWD # 003207167): Testing and validation of all kinds of new devices onto the smart grid system. This includes internship for students at MTC. Most of the students working at MTC got hired through the process.
Major Goal: Testing reliability and validation of modern equipment's, internship

Research Contract: EPSi at FIU is the research partner to conduct Distributed Energy Resources (DER), resiliency, reliability and many more long term studies on Hybrid power plants and their distribution network.	 **Research and Funding Agreement** This Research and Funding Agreement ("Funding Agreement"), dated as of , 2018 (the "Effective Date"), is by and between The Florida International University Board of Trustees (hereinafter "FIU") and Florida Power & Light Company (hereinafter "FPL"). FIU or FPL will sometimes be referred to herein as a Party or be referred to collectively as the Parties. WHEREAS, FPL wishes to (i) provide sufficient funds to purchase the Research Equipment (as defined in Section 1.b. below), and (ii) to engage the Energy Power & Sustainability ("EPS") group at FIU to perform certain studies, reviews and research, as more fully set forth herein; and WHEREAS, FIU wishes to perform such studies, reviews and research, as more fully set forth herein. NOW THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto, intending to be legally bound, agree as follows: 1. **Responsibilities of the Parties - Research** (i) Each Party is responsible for its obligations under this Funding Agreement, including for adherence to the funding conditions. Each Party is encouraged to seek the advice and opinion of the other Party on special problems that may arise.
Land Usage Contract: Portion of FIU's improved real property located in FIU's Engineering Center campus, more particularly described in that certain statutory deed from the Florida International University Foundation, Inc.	 **EXECUTION VERSION** **License, Research and Funding Agreement** This License, Research and Funding Agreement ("Agreement"), dated as of June 21 2019 (the "Effective Date"), is by and between The Florida International University Board of Trustees (hereinafter "FIU") and Florida Power & Light Company (hereinafter "FPL"). FIU or FPL will sometimes be referred to herein as a Party or be referred to collectively as the Parties. **WHEREAS**, FPL wishes to engage the Energy Power & Sustainability ("EPS") group at FIU to perform certain studies, reviews and research, as more fully set forth herein; and **WHEREAS**, FIU wishes to perform such studies, reviews and research, as more fully set forth herein; and **WHEREAS**, FPL desires to use a certain portion of FIU's improved real property located in FIU's Engineering Center, more particularly described in that certain statutory deed from the Florida International University Foundation, Inc. to the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida, recorded in the public records of Miami-Dade County, Florida in Official Record Book 17514 at Page 1747, on January 31, 1997 (Instrument Number 97R044400), and in that certain Lease Modification Agreement dated April 27, 2007 by and between FIU (as lessee) and the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (as lessor) (referencing Florida Board of Regents Lease Number 2727, as amended), such portion being more particularly identified on the sketch attached hereto and made a part hereof as **Exhibit A** to this Agreement (the "Research Equipment Site"), for the purpose of constructing, installing and operating the Research Equipment from the Research Equipment Site; and **WHEREAS**, FIU is agreeable to FPL's use of the Research Equipment Site subject to the terms