

RESEARCH COLLABORATION MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING (hereinafter "MOU") by and between Public Utility Research Center, with offices located at 205 Matherly, University of Florida, Gainesville, FL 32611-7142, (hereinafter "PURC") and Florida Power & Light Company, Duke Energy Florida, LLC, Tampa Electric Company, Gulf Power Company, Florida Public Utilities Company, Lee County Electric Cooperative, Florida Municipal Electric Association (FMEA) and Florida Electric Cooperatives Association, Inc. (FECA) (hereinafter collectively referred to as "Research Collaboration Partners") is effective this 1st day of January, 2019 .

WITNESSETH

WHEREAS, the Florida Public Service Commission ("the Commission") issued Order No. PSC-06-0351-PAA-EI on April 25, 2006 ("Order 06-0351") directing each investor-owned electric utility to establish a plan that increases collaborative research, establishes continuing collaboration, identifies objectives, promotes cost sharing, and funds necessary work to further the development of storm resilient electric utility infrastructure and technologies that reduce storm restoration costs and outages to customers.

WHEREAS, Order 06-0351 directed investor-owned electric utilities to solicit participation from municipal electric utilities and rural electric cooperatives in addition to available educational and research organizations.

WHEREAS, PURC and the Research Collaboration Partners are signatories and parties to a Memorandum of Understanding ("MOU") entered into and effective January 1, 2010; and

WHEREAS, the term of that MOU (referred to as the "Research Collaboration Period") was January 1, 2010 through December 31, 2011; and

WHEREAS, PURC and the Research Collaboration Partners extended the duration of the MOU for a period of two years commencing January 1, 2012 and extending through December 31, 2013 by the execution of the First Extension of the MOU; and

WHEREAS, PURC and the Research Collaboration Partners extended the duration for an additional period of two years commencing January 1, 2014 and extending through December 31, 2015 by the execution of the Second Extension of the MOU; and

WHEREAS, PURC and the Research Collaboration Partners extended the duration of the MOU for an additional period of three years commencing January 1, 2016 and extending through December 31, 2018; and

WHEREAS, PURC and the Research Collaboration Partners intend for this MOU to take effect immediately after the December 31, 2018 expiration of the third extension of the earlier January 1, 2016 MOU; and

WHEREAS, though the research requirements in Order 06-0351 are not applicable to municipal electric utilities ("the municipals") or electric cooperative utilities ("the cooperatives"), the municipals and cooperatives will voluntarily participate in research collaboration pursuant to this MOU; and

WHEREAS, this MOU is intended to facilitate continuing compliance with the Commission's directives in Order 06-0351, and

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WHEREAS, the research coordination program contemplated by this MOU is of mutual interest and benefit to PURC and the Research Collaboration Partners, will further the instructional and research objectives of the University of Florida in a manner consistent with its status as a non-profit, tax-exempt, educational institution, and may result in benefits for both PURC and the Research Collaboration Partners through inventions, improvements and/or discoveries;

NOW, THEREFORE, in consideration of the foregoing, PURC and the Research Collaboration Partners state as follows:

Article 1 - Definitions

As used herein, the following terms shall have the following meanings:

- 1.1 "Research Collaboration" means the research, coordination, planning, administration and other activities to be undertaken by the Research Collaboration Partners as directed by the Steering Committee and PURC as provided in Section 4.1 and Section 4.3 below, under the direction of Ted Kury as principal investigator ("University Project Director").
- 1.2 "Research Collaboration Period" shall have an initial term of two years from the effective date of this MOU and shall automatically extend for successive two year terms on an evergreen basis until such time as PURC and the Research Collaboration Partners agree in writing to the termination of this MOU at the end of the two year term in which such termination agreement is executed, or at an earlier date specified in the termination agreement.
- 1.3 "Steering Committee" means a management and oversight group comprised of one member designated by each of the Research Collaboration Partners . Each Research Collaboration Partner will promptly notify PURC and the other Research Collaboration Partners of its initial designated representative and of any subsequent changes to the designated representative. The role of the Steering Committee is defined in Article 4 below.

Article 2 – Workshop and Research

- 2.1 PURC will commence the performance of the Research Collaboration promptly after the effective date of this MOU, and will perform Research Collaboration substantially in accordance with the terms and conditions of this MOU.
- 2.2 In the event that the University Project Director becomes unable or unwilling to continue Research Collaboration , and a mutually acceptable substitute is not available, PURC and/or the Research Collaboration Partners shall have the option to terminate this MOU.

Article 3 – Role of PURC

- 3.1 PURC will perform the administrative function for Research Collaboration, including financial management, logistics, production and distribution of documents, and produce reports. Prior to

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performing any administrative function work, PURC will provide the Steering Committee with a proposed budget covering that work.

- 3.2 PURC will also coordinate and perform research as may be agreed upon with the Steering Committee . In performing this function, PURC will facilitate the exchange of information from the Research Collaboration Partners to individuals conducting the identified research projects and will facilitate the progress of each research project.

Article 4 – Role of the Steering Committee

- 4.1 The Steering Committee has the sole authority and responsibility to change the scope of Research Collaboration, by mutual agreement with PURC. Decisions by the Steering Committee will be by majority vote of the Steering Committee. All Research Collaboration Partners will be promptly notified of any research projects approved by the Steering Committee. No research project may be initiated until notice of the project has been given to all Research Collaboration Partners and the 30-day withdrawal notification period specified in Section 7.3 below has expired.
- 4.2 The Steering Committee will work with PURC to identify research that the Steering Committee desires to be facilitated by PURC, approve budgets, organize financing, and provide PURC with feedback on PURC’s work in this project.
- 4.3 The Steering Committee will periodically meet to coordinate research activities and will review the progress and results of any research it has authorized PURC to facilitate or conduct, and communicate with PURC at times mutually agreed upon to discuss the progress and results, as well as ongoing plans, or changes therein, of any projects to be performed.

Article 5 - Costs, Billings and Other Support

- 5.1 It is agreed to and understood by PURC and the Research Collaboration Partners that the total costs to the Research Collaboration Partners hereunder will be the amounts agreed upon. Each Research Collaboration Partner agrees to pay PURC its share of costs approved by the Steering Committee pursuant to Section 4.1 above, in accordance with the percentages set forth in Appendix A and its amendments. PURC shall render regular and timely invoices to each Research Collaboration Partner for their share of the costs.
- 5.2 Any notice given pursuant to this MOU shall be given by United States Mail to the following addresses:

If to PURC:

Attn: Ted Kury
Public Utility Research Center
University of Florida
P.O. Box 117142
Gainesville, FL 32611-7142

If to Research Collaboration Partners: as shown on Appendix B

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Article 6 – Intellectual Property

6.1 Intellectual property issues, if any, shall be addressed on a case by case basis for each project.

Article 7 – Miscellaneous

7.1 This MOU shall take the place of the original MOU and the first, second and third extension thereof, effective January 1, 2019.

7.2 The term of the MOU is the Research Collaboration Period defined in Section 1.2 above.

7.3 Any Research Collaboration Partner may withdraw from the MOU at any time by giving 30 days notice to PURC and the other Research Collaboration Partners at the addresses specified in Section 5.2 above; provided, however, that a withdrawing Research Collaboration Participant will be responsible to pay its share of the costs for any research or other activities undertaken or committed to pursuant to this MOU up to the point of withdrawal.

7.4 The parties' understanding with respect to the subject matter of the MOU is fully set forth herein. The MOU may not be amended except by a written agreement signed by all parties.

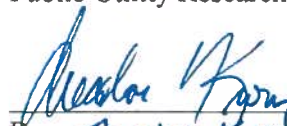
7.5 The MOU may be executed in counterpart originals, and a facsimile transmission of an original signature will be deemed to be an original signature.

IN WITNESS WHEREOF, the parties have caused these presents to be executed as of the day and year first above written, utilizing separate signature pages for each of the parties hereto.

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Signature Page to Memorandum of Understanding Effective January 1, 2019 by and between Public Utility Research Center, Florida Power & Light Company, Duke Energy Florida, LLC, Tampa Electric Company, Gulf Power Company, Florida Public Utilities Company, Lee County Electric Cooperative, Florida Municipal Electric Association and Florida Electric Cooperatives Association.

Public Utility Research Center



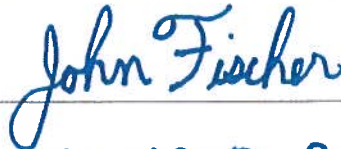
By: Theodore Kunj

Title: Director of Energy Studies

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Florida Power & Light Company

A handwritten signature in blue ink that reads "John Fischer". The signature is written in a cursive style and is positioned above a horizontal line.

By:


Title:

**MANAGER - RELIABILITY ASSURANCE
CENTER
POWER DELIVERY**

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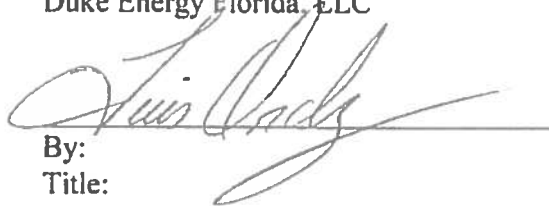
Florida Public Utilities Company

By: 
Title: Vice President

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Duke Energy Florida, LLC

A handwritten signature in black ink, appearing to read "Timothy", is written over a horizontal line. The signature is fluid and cursive.


By:

Title:

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Gulf Power Company

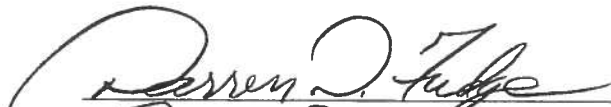

By: Adrienne Collins
Title: Vice President

Attest: 
Tracy G. Clark, Assistant Secretary

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Tampa Electric Company

A handwritten signature in black ink, reading "Darren D. Fudge". The signature is written in a cursive style with a large, looping initial "D".

By: *Darren D. Fudge*

Title: *Manager Distribution Services*

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Lee County Electric Cooperative

CM Swanson

By: Charise Swanson

Title: Director of Regulatory & Governmental Relations
Chief Compliance Officer

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Florida Electric Cooperatives Association

A handwritten signature in blue ink that reads "Mike Bjorklund". The signature is written in a cursive style with a large, looped "M" and "B".

By: MIKE BJORKLUND

Title: EVP & GM

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Florida Municipal Electric Association



By: Amy Zubaly

Title: Executive Director

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Appendix A

Allocation of Research Collaboration Costs

Utility	Average Number of Customers (1)	Percent of Total
Florida Power & Light	4,901,871	45.72%
Florida Public Utilities	31,992	0.30%
DukeEnergy Florida	1,885,567	17.59%
Gulf Power Company	461,806	4.31%
Tampa Electric Company	744,691	6.95%
Lee County Electric Cooperative	214,668	2.00%
Florida Electric Cooperatives Association	930,208	8.68%
Florida Municipal Electric Association	1,548,600	14.45%
Total	10,719,403	100.00%

(1) Source: 2017 Statistics of the Florida Electric Utility Industry,
Florida Public Service Commission, October 2018

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Appendix B

Research Collaboration Partners

Mark Cutshaw
Director, Business Development & Generation
Florida Public Utilities Company
1750 South 14th Street, Suite 200
Fernandina Beach, Florida 32034

Mike Bjorklund
Executive Vice President and General Manager
Florida Electric Cooperatives Association
2916 Apalachee Parkway
Tallahassee, FL 32301

John Fischer
Manager Technical Services
Florida Power & Light Company
2455 Port West Blvd, Bldg. E PDL/PDC
Riviera Beach, FL 33407

Amy Zubaly
Executive Director
Florida Municipal Electric Association
P.O. Box 10114
Tallahassee, FL 32302

Darren Fudge
Manager Distribution Engineering, Standards
and Design
Tampa Electric Company
P. O. Box 111
Tampa, FL 33601

Paul Talley
Project Services Manager
Gulf Power Company
One Energy Place
Pensacola, FL 32520 – 0302

Charise Swanson
Director, Corporate Services
Chief Risk & Compliance Officer
4980 Bayline Drive
North Ft. Myers, FL 33917

Randall Miranda
Manager II – PQR&I Engineering
Duke Energy Florida
2166 Palmetto St.
Clearwater, FL 33765