BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for approval of revised underground residential distribution tariffs, by Duke Energy Florida, LLC.	DOCKET NO. 20170069-EI ORDER NO. PSC-2017-0283-TRF-EI ISSUED: July 24, 2017

The following Commissioners participated in the disposition of this matter:

JULIE I. BROWN, Chairman
ART GRAHAM
RONALD A. BRISÉ
DONALD J. POLMANN

ORDER APPROVING REVISED
UNDERGROUND RESIDENTIAL DISTRIBUTION TARIFFS

BY THE COMMISSION:

Background

On March 30, 2017, Duke Energy Florida, LLC (Duke or Company) filed a petition for approval of revisions to its underground residential distribution (URD) tariffs. The URD tariffs apply to new residential subdivisions and represent the additional costs Duke incurs to provide underground distribution service in place of overhead service. The proposed (legislative version) URD tariffs are contained in Attachment A of this Order. Duke's current charges were approved in Order No. PSC-14-0396-TRF-EI (2014 Order).[1]

This Commission suspended Duke's proposed tariffs in Order No. PSC-17-0166-PCO-EI.[2] Duke responded to Commission staff's first data request on May 16, 2017. We have jurisdiction over this matter pursuant to Sections 366.03, 366.04, 366.05, and 366.06, Florida Statutes (F.S.).

Decision

Rule 25-6.078, Florida Administrative Code (F.A.C.), defines investor-owned utilities' (IOU) responsibilities for filing updated URD tariffs. Duke has filed the instant petition pursuant to subsection (3) of the rule, which requires IOUs to file supporting data and analyses for URD tariffs at least once every three years.

[1] Order No. PSC-14-0396-TRF-EI, issued July 31, 2014, in Docket No. 140067-EI, In re: Petition for approval of revised underground distribution tariffs, by Duke Energy Florida, Inc.
[2] Order No. PSC-17-0166-PCO-EI, issued May 11, 2017, in Docket No. 170069-EI, In re: Petition for approval of revised underground residential distribution tariffs, by Duke Energy Florida, Inc.

The URD tariffs provide standard charges for underground service in new residential subdivisions and represent the additional costs, if any, the utility incurs to provide underground service in place of standard overhead service. The cost of standard overhead construction is recovered through base rates from all ratepayers. In lieu of overhead construction, customers have the option of requesting underground facilities. Any additional cost is paid by the customer as contribution-in-aid-of construction (CIAC). Typically, the URD customer is the developer of a subdivision.

Traditionally, three standard model subdivision designs have been the basis upon which each IOU submits URD tariff changes for Commission approval: low density, high density, and a high density subdivision where dwelling units take service at ganged meter pedestals (groups of meters at the same physical location). Examples of this last subdivision type include mobile home and recreational vehicle parks. While actual construction may differ from the model subdivisions, the model subdivisions are designed to reflect average overhead and underground subdivisions.

Table 1 shows the current and proposed URD differentials for the low density, high density, and ganged meter subdivisions. The charges shown are per-lot charges.

Table 1
Comparison of URD Differential per Lot

	Current Differential	Proposed Differential
Low Density	$768	$694[3]
High Density	$459	$403
Ganged Meter	$211	$158

Source: 2014 Order and 2017 Petition

As shown in Table 1, the proposed URD differentials show a decrease for all model subdivisions. The calculations of the proposed URD charges include updated labor and material costs, as well as updated operational costs.

Updated Labor and Material Costs

The installation costs of both overhead and underground facilities include the labor and material costs to provide primary, secondary, and service distribution lines, as well as transformers. The cost to provide overhead service also includes poles. The cost to provide underground service includes the cost of trenching and backfilling. Duke reevaluated each subdivision design to determine if the designs still met current construction standards for the National Electric Safety Code (NESC) and Duke. According to Duke, all subdivision designs had minor modifications to meet NESC and Duke standards. Duke reported that it upgraded certain padmounted transformers in the underground designs, resulting in a minor increase in the differential cost.

[3] $694 is calculated as follows: $408 (Table 2) + $286 (Table 3) = $694.

Labor and material costs decreased from 2014 to 2017. Duke explained that material costs have fluctuated marginally, i.e., plus or minus five percent; thus, the decrease in labor cost is the primary driver in cost reduction. Overhead construction continues to be performed by Duke employees and underground construction continues to be performed by contractors. Labor rates for Duke employees have remained relatively flat; the decrease is due to a decrease in Duke's other (i.e., non-pension) post-employment benefit plan. Other post-employment benefits do not include pension, but may include healthcare or life insurance premiums. In response to Commission staff's data request, Duke explained that its predecessor company's (Progress Energy Florida, Inc.) benefit plan was harmonized, i.e., blended, with Duke's plan, resulting in a plan amendment which reduced benefits for a four-year period beginning in the fourth quarter of 2014.

Contractor labor costs decreased due to the move from hourly pricing to unit-based pricing. Duke explained that hourly pricing compensates contractors for the duration to complete the work, including, for example, any unforeseen delays. Under unit-based pricing, contractors are compensated based on fixed prices for specific work; therefore, contractors absorb the cost of any unforeseen delays.

Loading factors decreased from 2014 to 2017. The Design and Project Management loading factor decreased from 17.90 to 13.90 percent of labor. The Management and Supervision loading factor decreased from 35.67 to 28.86 percent of labor. Both factors decreased because the investment in distribution costs increased at a greater rate than the actual management and supervision costs.

Table 2 below compares total 2014 and 2017 labor and material costs for the three subdivisions. As Table 2 shows, the total labor and material cost differentials decreased for all three model subdivisions because the cost of underground construction decreased at a greater rate than the cost of overhead construction.

Table 2
Labor and Material Costs per Lot

	2014 Costs	**2017 Costs**	**Difference**
Low Density			
Underground Labor/material Costs	$1,654	$1,477	($177)
Overhead Labor/material Costs	$1,168	$1,069	($99)
Per lot Differential	$486	$408	($78)
High Density			
Underground Labor/material Costs	$1,309	$1,181	($128)
Overhead Labor/material Costs	$946	$865	($81)
Per lot Differential	$363	$316	($47)
Ganged Meter			
Underground Labor/material Costs	$753	$686	($67)
Overhead Labor/material Costs	$627	$609	($18)
Per lot Differential	$126	$77	($49)

Source: 2014 Order and 2017 Petition

Updated Operational Costs

Rule 25-6.078(4), F.A.C., requires that the differences in net present value (NPV) of operational costs between overhead and underground systems, including average historical storm restoration costs over the life of the facilities, be included in the URD charge. The inclusion of the operational cost is intended to capture longer term costs and benefits of undergrounding.

Operational costs include operations and maintenance costs and capital costs and represent the cost differential between maintaining and operating an underground versus an overhead system over the life of the facilities. The inclusion of the storm restoration cost in the URD differential lowers the differential, since an underground distribution system generally incurs less damage than an overhead system as a result of a storm, and therefore, less restoration costs when compared to an overhead system. Duke's operational costs, last updated for the 2014 filing, represent a five-year average (2012 – 2016). The methodology used by Duke in this filing for calculating the NPV of operational costs was approved in Order No. PSC-12-0348-TRF-EI.[4]

Duke's NPV calculation used a 34-year life of the facilities and a 6.80 percent discount rate. We note that operational costs may vary among IOUs as a result of differences in size of service territory, miles of coastline, regions subject to extreme winds, age of the distribution system, or construction standards.

Table 3 below compares the 2014 and 2017 NPV calculations of operational and storm restoration cost differentials between overhead and underground systems on a per lot basis. As Table 3 shows, there are minor differences in the differentials from 2014 to 2017.

Table 3
NPV of Operational Costs Differential per Lot

	2014 Calculation	2017 Calculation	Difference
Low Density			
Underground NPV - Operational Costs	$1,022	$1,189	$167
Overhead NPV - Operational Costs	$741	$903	$162
Per lot Differential	$282	$286	$4
High Density			
Underground NPV - Operational Costs	$520	$605	$85
Overhead NPV - Operational Costs	$424	$517	$93
Per lot Differential	$96	$87	($9)
Ganged Meter			
Underground NPV - Operational Costs	$400	$466	$66
Overhead NPV - Operational Costs	$315	$385	$70
Per lot Differential	$85	$81	($4)

Source: 2014 and 2017 Petitions

[4] Order No. PSC-12-0348-TRF-EI, issued July 5, 2012, in Docket No. 110293-EI, In re: Petition for approval of revised underground residential distribution tariffs, by Progress Energy Florida, Inc.

Other Proposed Tariff Changes

In addition to the proposed tariff changes discussed above, Duke proposed modifications to the charges and credits for feeder mains within the subdivision, customer-provided trenching and backfilling, new underground service laterals from overhead distribution systems, and for the conversion of existing service laterals from overhead to underground. Factors which contributed to the changes include the updated labor and material charges. In addition, Duke proposed a change in language in the construction contract's facility charge from cost-specific information to a description of the costs themselves.

Conclusion

This Commission has reviewed Duke's proposed URD tariffs and associated charges, its accompanying work papers, and its responses to Commission staff's data request. We find that the proposed URD tariffs and associated charges are reasonable. Therefore, Duke's proposed URD tariffs and associated charges as shown in Attachment A are hereby approved, effective July 13, 2017.

Based on the foregoing, it is

ORDERED by the Florida Public Service Commission that Duke Energy Florida, LLC's proposed underground residential distribution tariffs and associated charges, as discussed in the body of this Order, are hereby approved. It is further

ORDERED that the effective date of Duke Energy Florida, LLC's tariff revisions shall be July 13, 2017. It is further

ORDERED that if a protest is filed within 21 days of issuance of the Order, the tariffs shall remain in effect, with any revenues held subject to refund, pending resolution of the protest. It is further

ORDERED that if no timely protest is filed, this docket shall be closed upon the issuance of a Consummating Order.

By ORDER of the Florida Public Service Commission this 24th day of July, 2017.

Carlotta S Stauffer

CARLOTTA S. STAUFFER
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399
(850) 413-6770
www.floridapsc.com

Copies furnished: A copy of this document is provided to the parties of record at the time of issuance and, if applicable, interested persons.

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NOTICE OF FURTHER PROCEEDINGS

The Florida Public Service Commission is required by Section 120.569(1), Florida Statutes, to notify parties of any administrative hearing or judicial review of Commission orders that is available under Sections 120.57 or 120.68, Florida Statutes, as well as the procedures and time limits that apply. This notice should not be construed to mean all requests for an administrative hearing or judicial review will be granted or result in the relief sought.

Mediation may be available on a case-by-case basis. If mediation is conducted, it does not affect a substantially interested person's right to a hearing.

The Commission's decision on this tariff is interim in nature and will become final, unless a person whose substantial interests are affected by the proposed action files a petition for a formal proceeding, in the form provided by Rule 28-106.201, Florida Administrative Code. This petition must be received by the Office of Commission Clerk, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, by the close of business on August 14, 2017.

In the absence of such a petition, this Order shall become final and effective upon the issuance of a Consummating Order.

Any objection or protest filed in this docket before the issuance date of this order is considered abandoned unless it satisfies the foregoing conditions and is renewed within the specified protest period.

DUKE ENERGY.

SECTION NO. IV
~~EIGHTEENTH~~NINETEENTH REVISED SHEET NO. 4.113
CANCELS ~~SEVENTEENTH~~EIGHTEENTH REVISED SHEET NO. 4.113

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(2) Contribution by Applicant:

(a) Schedule of Charges:

Company standard design underground residential distribution 120/240 volt single-phase service (see also Part 11.03(7)):

To subdivisions with a density of 1.0 or more but less than six (6) dwelling units per acre ..... $~~788~~694.00 per dwelling unit

To subdivisions with a density of six (6) or more dwelling units per acre ..... $~~459~~403.00 per dwelling unit

To subdivisions with a density of six (6) or more dwelling units per acre taking service at ganged meter pedestals ..... $~~211~~158.00 per dwelling unit

To multi-occupancy buildings ..... See Part 11.06(2)

(b) The above costs are based upon arrangements that will permit serving the local underground distribution system within the subdivision from overhead feeder mains. If feeder mains within the subdivision are deemed necessary by the Company to provide and/or maintain adequate service and are required by the Applicant or a governmental agency to be installed underground, the Applicant shall pay the Company the average differential cost between such underground feeder mains within the subdivision and equivalent overhead feeder mains as follows:

Three-phase primary main or feeder charge per trench-foot within subdivision:

(U.G. - Underground, O.H. - Overhead)

#1/0 AWG U.G. vs. #1/0 AWG O.H. ..... $~~2.40~~3.02 per foot

500 MCM U.G. vs. 336 MCM O.H. ..... $11.~~47~~54 per foot

1000 MCM U.G. vs. 795 MCM O.H. ..... $12.~~08~~55 per foot

The above costs are based on underground feeder construction using the direct burial method. If conduit is required, the following additional charge(s) will apply:

2 inch conduit ..... $~~1.79~~2.08 per foot
4 inch conduit ..... $~~5.25~~3.40 per foot
6 inch conduit ..... $~~7.19~~5.06 per foot
Cable pulling – single phase ..... $~~1.07~~1.76 per foot
Cable pulling – 3 phase small wire ..... $~~1.07~~1.76 per foot
Cable pulling – 3 phase feeder ..... $~~2.06~~2.63 per foot

The above costs do not require the use of pad-mounted switchgear(s), terminal pole(s), pull boxes or feeder splices. If such facilities are required, a differential cost for same will be determined by the Company on an individual basis and added to charges determined above.

(c) Credits (not to exceed the "average differential costs" stated above) will be allowed where, by mutual agreement, the Applicant provides trenching and backfilling for the use of the Company's facilities in lieu of a portion of the cash payment described above. These credits, based on the Company's design drawings, are:

Primary and/or Secondary Systems, for each Foot of Trench ..... $~~3.68~~2.81

Service Laterals, for each Foot of Trench ..... $~~3.68~~2.81

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DUKE ENERGY.

SECTION NO. IV
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CANCELS ~~SIXTEENTH~~SEVENTEENTH REVISED SHEET NO. 4.114

(3) Point of Delivery:

The point of delivery shall be determined by the Company and will be on the front half of the side of the building that is nearest the point at which the underground secondary electric supply is available to the property. The Company will not install a service on the opposite side of the building where the underground secondary electric supply is available to the property. The point of delivery will only be allowed on the rear of the building by special exception. The Applicant shall pay the estimated full cost of service lateral length required in excess of that which would have been needed to reach the Company's designated point of service.

(4) Location of Meter and Socket:

The Applicant shall install a meter socket at the point designated by the Company in accordance with the Company's specifications. Every effort shall be made to locate the meter socket in unobstructed areas in order that the meter can be read without going through fences, etc.

(5) Development of Subdivisions:

The above charges are based on reasonably full use of the land being developed. Where the Company is required to construct underground electric facilities through a section or sections of the subdivision or development where service will not be required for at least two (2) years, the Company may require a deposit from the Applicant before construction is commenced. This deposit, to guarantee performance, will be based on the estimated total cost of such facilities rather than the differential cost. The amount of the deposit, without interest, in excess of any charges for underground service will be returned to the Applicant on a prorata basis at quarterly intervals on the basis of installations to new customers. Any portion of such deposit remaining unrefunded, after five (5) years from the date the Company is first ready to render service from the extension, will be retained by the company.

(6) Relocation or Removal of Existing Facilities:

If the Company is required to relocate or remove existing overhead and/or underground distribution facilities in the implementation of these Rules, all costs thereof shall be borne exclusively by the Applicant. These costs shall include costs of relocation or removal, the in-place value (less salvage) of the facilities so removed, and any additional costs due to existing landscaping, pavement or unusual conditions.

(7) Other Provisions:

If soil compaction is required by the Applicant at locations where Company trenching is done, an additional charge may be added to the charges set forth in this tariff. The charge will be estimated based on the Applicant's compaction specifications.

11.04 UNDERGROUND SERVICE LATERALS FROM OVERHEAD ELECTRIC DISTRIBUTION SYSTEMS.

(1) New Underground Service Laterals:

When requested by the Applicant, the Company will install underground service laterals from overhead systems to newly constructed residential buildings containing less than five (5) separate dwelling units.

(2) Contribution by Applicant:

(a) The Applicant shall pay the Company the following average differential cost between an overhead service and an underground service lateral:

For Service Lateral up to 80 feet ..... $~~485~~439.00

For each foot over 80 feet up to 300 feet .....$ 0.0 per foot

Service laterals in excess of 300 feet shall be based on a specific cost estimate.

(b) Credits will be allowed where, by mutual agreement, the Applicant provides trenching and backfilling in accordance with the Company specifications and for the use of the Company facilities, in lieu of a portion of the cash payment described above. These credits, based on the Company's design drawings, are as follows:

For each Foot of Trench .....$ ~~2.69~~2.81

The provisions of Paragraphs 11.03(3) and 11.03(4) are also applicable.

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DUKE ENERGY.

SECTION NO. IV
~~SEVENTEENTH~~EIGHTEENTH REVISED SHEET NO. 4.115
CANCELS ~~SIXTEENTH~~SEVENTEENTH REVISED SHEET NO. 4.115

11.05 UNDERGROUND SERVICE LATERALS REPLACING EXISTING RESIDENTIAL OVERHEAD SERVICES:

Applicability:

When requested by the Applicant, the Company will install underground service laterals from existing overhead lines as replacements for existing overhead services to existing residential buildings containing less than five (5) separate dwelling units.

Rearrangement of Service Entrance:

The Applicant shall be responsible for any necessary rearranging of his existing electric service entrance facilities to accommodate the proposed underground service lateral in accordance with the Company's specifications.

Trenching:

The Applicant shall also provide, at no cost to the Company, a suitable trench and perform the backfilling and any landscaping, pavement, or other suitable repairs. If the Applicant requests the Company to supply the trench or remove any additional equipment other than the Service Lateral, the charge to the Applicant for this work shall be based on a specific cost estimate.

Contribution by Applicant:

The charge excluding trenching costs shall be as follows:

For Service Lateral ..... $~~907~~815.00 per service

11.06 UNDERGROUND DISTRIBUTION FACILITIES TO MULTIPLE-OCCUPANCY RESIDENTIAL BUILDINGS:

(1) Availability:

Underground electric distribution facilities may be installed within the tract of land upon which multiple-occupancy residential buildings containing five (5) or more separate dwelling units will be constructed.

(2) Contribution by Applicant:

There will be no contribution from the Applicant so long as the Company is free to construct the extension in the most economical manner, and reasonably full use is made of the tract of land upon which the multiple-occupancy buildings will be constructed. Other conditions will require a contribution from the Applicant.

(3) Responsibility of Applicant:

(a) Furnish details and specifications of the proposed building or complex of buildings. The Company will use these in the design of the electric distribution facilities required to render service.

(b) Where the Company determines that transformers are to be located inside the building, the Applicant shall provide:

i. The vault or vaults necessary for the transformers and the associated equipment, including the ventilation equipment.

ii. The necessary raceways or conduit for the Company's supply cables from the vault or vaults to a suitable point five (5) feet outside the building in accordance with the Company's plans and specifications.

iii. Conduits underneath all buildings when required for the Company's supply cables. Such conduits shall extend five (5) feet beyond the edge of the buildings for joining to the Company's facilities.

iv. The service entrance conductors and raceways from the Applicant's service equipment to the designated point of delivery within the vault.

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DUKE ENERGY.

SECTION NO. IV
SEVENTH ~~SIXTH~~ REVISED SHEET NO. 4.122
CANCELS SIXTH~~FIFTH~~ REVISED SHEET NO. 4.122

12.05 CONSTRUCTION CONTRACT:

(1) GENERAL:

Upon acceptance by the Applicant of the binding cost estimate, the Applicant shall execute a contract with the Company to perform the construction of the underground distribution facilities. The contract shall specify the type and character of system to be provided; establish the Facility Charge to be paid by Applicant prior to commencement of construction; specify details of construction to be performed by Applicant, if any; and address any other pertinent terms and conditions including those described in Part (4) below.

(2) FACILITY CHARGE:

Charge = Remaining net book value of existing overhead facilities to be removed;

plus, removal cost of existing overhead facilities;

minus, salvage value of existing overhead facilities;

plus, estimated construction cost of underground facilities including underground service laterals to residential customers meters or point of delivery for general service customers;

minus, estimated construction cost of overhead facilities including overhead service drops to customers' meters;

minus, qualifying binding cost estimate fee.

~~Plus~~plus/minus, ~~$247per mile, (or $0.05 per foot) of the existing overhead facilities. This represents~~ the net present value of the lifecycle operational costs differential including storm restoration.

3) CONSTRUCTION BY APPLICANT:

If agreed upon by both the Applicant and the Company, the Applicant may construct or install portions of the underground system as long as such work meets the Company's engineering and construction standards. The Company will own and maintain the completed distribution facilities upon accepting the system as operational. The type of system provided will be determined by the Company's standards.

Any facilities provided by the Applicant will be inspected by Company inspectors prior to acceptance. Any deficiencies discovered as a result of these inspections will be corrected by the Applicant at his sole expense, including the costs incurred by performing the inspections. Corrections must be made in a timely manner by the Applicant, otherwise the Company will undertake the correction and bill the Applicant for all costs of such correction. These costs shall be additional to the original binding estimate.

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