



BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20210010-EI

IN RE: STORM PROTECTION PLAN COST RECOVERY CLAUSE

TESTIMONY AND EXHIBIT

OF

DAVID L. PLUSQUELLIC

FILED: May 3, 2020

REFILED: May 10, 2020

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

DAVID L. PLUSQUELLIC

Q. Please state your name, address, occupation, and employer.

A. My name is David L. Plusquellic. I am employed by Tampa Electric Company ("Tampa Electric" or "company") as Storm Protection Program Manager. The Tampa Electric business address is 820 South 78th Street, Tampa, FL 33619.

Q. Please describe your duties and responsibilities in that position.

A. My duties and responsibilities include the governance and oversight of Tampa Electric's Storm Protection Plan ("SPP" or "the Plan") development and implementation. This includes leading the development of the Plan, prioritization of projects within each of the programs, development of project and program costs and overall implementation of the Plan.

1 **Q.** Please describe your educational background and
2 professional experience.

3
4 **A.** I graduated from Kent State University in June 1996 with
5 a Bachelor's degree in Finance. In December of 2000, I
6 graduated from the University of Akron with a Master of
7 Business Administration specializing again in Finance.
8 I have been employed at Tampa Electric since November of
9 2019. Prior to joining Tampa Electric, I was employed
10 at FirstEnergy from 1999 to 2018 in a variety of roles.
11 During my 19 years, I progressed from an Analyst to a
12 Director through roles covering financial reporting &
13 analysis, business analytics, fossil fuel generation,
14 renewable portfolio management, process & performance
15 improvement, and Transmission & Distribution ("T&D")
16 operations. For the final four years, I was a Director
17 of Operations Support at Ohio Edison, one of the
18 FirstEnergy T&D operating companies. Throughout the 19
19 years, I played a leadership role in efforts that ranged
20 from valuing businesses, entering into 20-year purchase
21 agreements, evaluating and implementing storm process
22 improvements, evaluating asset investments, and
23 improving operational and safety performance.

24
25 **Q.** What is the purpose of your direct testimony in this

1 proceeding?

2
3 **A.** The purpose of my direct testimony is to provide a
4 description of each Storm Protection Plan ("SPP") Program
5 and to provide the detailed listing of the associated SPP
6 Projects and the activities that supports each SPP
7 program. I will also provide an overview of how the
8 projected Capital and Operating and Maintenance ("O&M")
9 costs were developed.

10
11 **Q.** Are you sponsoring any exhibits in this proceeding?

12
13 **A.** Yes. I have prepared one exhibit entitled, "Exhibit of
14 David L Plusquellic." It consists of eight documents and
15 has been identified as Exhibit No. DLP-2, which contains
16 the following documents:

- 17 • Document No. 1 provides Tampa Electric's
18 Distribution Lateral Undergrounding Program's
19 2021-2022 Project List and Summary of Costs.
- 20 • Document No. 2 provides Tampa Electric's
21 Transmission Asset Upgrades Program's 2021-2022
22 Project List and Summary of Costs.
- 23 • Document No. 3 provides Tampa Electric's
24 Substation Extreme Weather Hardening Program's
25 2021-2022 Project List and Summary of Costs.

- 1 • Document No. 4 provides Tampa Electric's
2 Distribution Overhead Feeder Hardening Program's
3 2021-2022 Project List and Summary of Costs.
- 4 • Document No. 5 provides Tampa Electric's
5 Transmission Access Enhancement Program's 2021-
6 2022 Project List and Summary of Costs.
- 7 • Document No. 6 provides Tampa Electric's
8 Vegetation Management Program's 2021-2022
9 Activities and Summary of Costs.
- 10 • Document No. 7 provides Tampa Electric's
11 Infrastructure Inspections Program's 2021-2022
12 Activities and Summary of Costs.
- 13 • Document No. 8 provides Tampa Electric's Common
14 Storm Protection Plan 2021-2022 Activities and
15 Summary of Costs.

16

17 **Q.** How is your testimony organized?

18

19 **A.** My testimony is organized by each of the company's SPP
20 Programs, which includes a description of the program, a
21 summary of the program's costs, and how project-level
22 costs were developed.

23

24 **Q.** Will your testimony address these topics for each of the
25 SPP Programs for which the company is seeking cost

1 recovery?

2

3 **A.** Yes, my testimony is organized to cover all these topics
4 for each of the eight programs in the company's proposed
5 SPP, in addition to the projected company's Storm
6 Protection Plan Planning and Common expenditures.

7

8 **Q.** Will your testimony address how project-level costs were
9 developed within each of the company's SPP Programs for
10 which the company is seeking cost recovery?

11

12 **A.** Yes, my testimony will explain how the company developed
13 the required Project-level details for the two years of
14 the Plan for this Storm Protection Plan Cost Recovery
15 Clause ("SPPCRC").

16

17 **Distribution Lateral Undergrounding**

18 **Q.** Please provide a description of the Distribution Lateral
19 Undergrounding Program.

20

21 **A.** Tampa Electric's Distribution Lateral Undergrounding
22 Program will convert existing overhead distribution
23 lateral facilities to underground to increase the
24 resiliency and reliability of the distribution system
25 serving the company's customers.

1 **Q.** How many Distribution Lateral Underground projects are
2 planned for 2021 and 2022?

3
4 **A.** Tampa Electric plans for the following activity in
5 calendar years 2021 and 2022:

- 6 • During the period, January 1, 2021 to December 31,
7 2021, there are 520 projects planned.
- 8 • During the period January 1, 2022 to December 31,
9 2022 there are 496 projected projects planned.

10 This project detail is fully detailed in my Exhibit No.
11 DLP-2, Document No. 1.

12
13 **Q.** Can you explain why this project count is different than
14 the company's SPP April 10, 2020 filing, which reflected
15 281 projects in 2021 and 316 projects in 2022?

16
17 **A.** Yes, following the April 10, 2020 filing, Tampa Electric
18 has been working through the necessary functions to
19 establish the SPP programs. As the company was working
20 through the execution of the 2020-2029 SPP, the company
21 concluded to revise the timelines for all of this
22 program's projects to accommodate engineering, permits,
23 easements and other pre-construction activities further
24 in advance of the construction start dates. Accelerating
25 engineering and pre-construction activities does change

1 the timelines in the SPP, which alters the project count
2 for individual years as compared to what was filed on
3 April 10, 2020. The original plan reflected both pre-
4 construction and construction within a single calendar
5 year. Because the company is doing more engineering in
6 advance of construction, the "project count" in all years
7 will increase to reflect both the advanced work on pre-
8 construction projects and the construction projects that
9 were originally filed.

10
11 **Q.** Did Tampa Electric communicate these changes?

12
13 **A.** Yes, Tampa Electric communicated these changes during the
14 discovery period in Docket No. 20200067-EI and again, as
15 part of my Direct Testimony in support of the company's
16 Storm Protection Plan Cost Recovery Clause projection
17 filing on July 24, 2020 in Docket 20200092-EI. These
18 communications stated that the company refined its
19 project schedules for the company's distribution lateral
20 undergrounding program. While the supplemental response
21 was in reference to 2021, as a part of this refinement,
22 the start dates and completion dates for construction of
23 some projects were changed in all project years to
24 reflect the modified approach. In addition, the company
25 is accelerating the activities to design and secure land

1 rights further in advance of construction than what was
2 originally filed.

3
4 **Q.** Do the new project counts reflect the prioritization that
5 served as the basis for the original filing?

6
7 **A.** Yes, the prioritization of the projects is the same as
8 what was filed on April 10, 2020 with a refined strategy
9 for engineering and acquiring land rights further in
10 advance of construction.

11
12 **Q.** What are the total projected expenditures for this
13 Program?

14
15 **A.** Tampa Electric estimates expenditures for this program
16 during calendar years 2021 and 2022 as follows:

- 17 • During the period, January 1, 2021 to December 31,
18 2021, estimated expenditures are \$84.1 million.
- 19 • During the period, January 1, 2022 to December 31,
20 2022, estimated expenditures are \$108.1 million.

21
22 **Q.** Do these projected expenditures match what was filed on
23 April 10, 2020?

24
25 **A.** No, the schedule refinement that I explained above

1 resulted in front loading more engineering work on more
2 projects which raised the cost estimate by approximately
3 \$4.7 million in 2021. The projected expenditures for
4 2020 match what was filed on April 10, 2020.

5
6 **Q.** Can you provide a breakdown of the projected expenditures
7 by categories such as capital and operating and
8 maintenance ("O&M") expenses?

9
10 **A.** The Distribution Lateral Undergrounding Program
11 expenditures are 100 percent capital. There are no
12 expected O&M expenses.

13
14 **Q.** What are the different components that make up the cost
15 of a distribution lateral underground conversion project?

16
17 **A.** The projects will be completed primarily by external
18 contractor partners. The main components of the
19 project's cost will be contractor labor, materials, as
20 well as some internal costs to administer and manage the
21 program. The internal costs reflect labor dedicated to
22 the Program as well as a small amount of O&M for things
23 like office supplies and incidental travel associated
24 with the program.

1 **Q.** How did you develop a cost estimate for each of these
2 components?
3
4 **A.** The company developed cost assumptions based on internal
5 historical data, an internal cost estimation tool, and
6 information obtained from industry sources with
7 experience in this type of work. This data was used to
8 develop a unit rate or activity rate for each type of
9 asset.
10
11 **Q.** Does each project have its own unique cost estimate
12 profile?
13
14 **A.** Yes, each project is assigned characteristics based on
15 its location, the number of phases, the number of
16 customers, and the number and type of assets that will
17 need to be converted.
18
19 **Q.** Were the distribution undergrounding lateral conversion
20 project's costs estimated using a single average that was
21 then applied to all projects?
22
23 **A.** No, the company used the individual component pricing
24 data to develop an estimate for each project based on its
25 unique characteristics, the number of assets, and the

1 type of assets.

2

3 **Q.** Were the same underlying cost assumptions used to develop
4 the cost estimate for each project?

5

6 **A.** Yes, the company used the same unit rate or activity rate
7 for each type of asset.

8

9 **Q.** Can you explain how the cost assumptions were used to
10 develop a cost estimate?

11

12 **A.** Yes, the number of each asset type would be multiplied by
13 the activity or unit rate to determine a cost estimate
14 for each asset type. The project-level estimate
15 represents the sum of the estimates for each asset type.
16 The activity rates include the external labor rates as
17 well as materials.

18

19 **Q.** How do the project characteristics such as number of
20 customers, number of phases and location of existing
21 assets factor into the cost estimates?

22

23 **A.** These characteristics directly affect the necessary
24 volume of work, the number and types of assets within the
25 project scope, and the activity rate that is used for the

1 project-level cost estimate.

2
3 **Transmission Asset Upgrades**

4 **Q.** Can you please provide a description of the Transmission
5 Asset Upgrades Program?

6
7 **A.** The Transmission Asset Upgrades Program will proactively
8 and systematically replace the company's remaining wood
9 transmission poles with non-wood material.

10
11 **Q.** How many Transmission Asset Upgrade projects are planned
12 for 2021 and 2022?

13
14 **A.** Tampa Electric plans for the following activity in
15 calendar years 2021 and 2022:

- 16 • January 1, 2021 to December 31, 2021 - 46
17 projects, consisting of 577 poles.
18 • January 1, 2022 to December 31, 2022 - 27
19 projects, consisting of 615 poles.

20 This project detail is fully detailed in my Exhibit No.
21 DLP-2, Document No. 2.

22
23 **Q.** Will you please explain how this aligns with the projects
24 counts and prioritization reflected in the filing made on
25 April 10, 2020 for the 2021 and 2022 periods?

1 **A.** Yes, the company's filed Plan called for 35 projects in
2 2021 and 28 projects in 2022. The 73 projects scheduled
3 in 2021 and 2022 keep the same prioritization that was
4 used to develop the first three years of the company's
5 2020-2029 SPP that was filed on April 10, 2020.

6
7 **Q.** Does the company's filing in this docket include any
8 different projects other than those included in the SPP
9 filing dated April 10, 2020?

10
11 **A.** No, all the projects are the same with the exception of
12 the two additional projects that were moved from 2022
13 into 2021 that was communicated in the company's original
14 SPPCRC projection filing that was filed on July 24, 2020.

15
16 **Q.** What are the total projected expenditures for this
17 Program for the 2021 and 2022 periods?

18
19 **A.** Tampa Electric estimates expenditures for this program
20 during 2021 and 2022 as follows:

- 21 • During the period January 1, 2021 to December 31,
22 2021, estimated expenditures are \$15.6 million.
- 23 • During the period January 1, 2022 to December 31,
24 2022, estimated expenditures are \$15.4 million.

1 **Q.** Do these projected expenditures match what was filed on
2 April 10, 2020?

3
4 **A.** Yes, the current projected costs align with the cost
5 estimates filed on April 10, 2020. The projected costs
6 for 2021 and 2022 were increased by approximately
7 \$100,000 each year due to the projected increased
8 transfer costs. Transfer costs are the cost incurred
9 when moving existing wires from the existing wood
10 structure to the newly constructed non-wood structure.

11
12 **Q.** Can you provide a breakdown of the projected expenditures
13 by categories such as capital and O&M expenses?

14
15 **A.** Yes, the Transmission Asset Upgrade Program is
16 predominantly capital, with some minimal O&M costs. The
17 breakdown for each year is as follows:

- 18 • For the period January 1, 2021 to December 31,
19 2021:
 - 20 o Capital of \$15.2 million
 - 21 o O&M of \$0.4 million
- 22 • For the period January 1, 2022 to December 31,
23 2022:
 - 24 o Capital of \$15.0 million
 - 25 o O&M of \$0.5 million

1 **Q.** What are the activities that are associated with the O&M
2 costs with this program?
3
4 **A.** The activity of transferring existing wires to the new
5 non-wood material pole from the existing wooden pole
6 being replaced is accounted for as an O&M cost.
7
8 **Q.** How did the company develop a cost estimate for each of
9 these components?
10
11 **A.** The company has reactively replaced wood transmission
12 poles that fail an inspection with non-wood material for
13 many years. Because of these reactive replacements, the
14 company has developed an extensive set of historical data
15 for transmission pole replacements and upgrades. The
16 historical data was used as a foundation for the project-
17 level costs estimates.
18
19 **Q.** Were your project costs estimated using a single average
20 that was then applied to all projects?
21
22 **A.** No.
23
24 **Q.** Does each transmission asset upgrade project have its own
25 unique cost estimate profile?

1 **A.** Yes, each transmission asset upgrade project represents a
2 transmission circuit, with a unique number of poles,
3 unique terrain, and a unique location.

4
5 **Substation Extreme Weather Hardening**

6 **Q.** Can you please provide a description of the Substation
7 Extreme Weather Hardening Program?

8
9 **A.** This program will harden and protect the company's
10 substation assets that are vulnerable to flooding or
11 storm surge.

12
13 **Q.** How many Substation Extreme Weather Hardening projects
14 are planned for 2021 and 2022?

15
16 **A.** The company at the time of this filing is proposing no
17 projects for the periods 2021 and 2022. The company is
18 currently in the process of conducting the substation
19 study project to further identify and evaluate other
20 potential hardening solutions beyond the single solution
21 that was modeled on the company's substations during the
22 initial development of the company's Plan. This study
23 may identify storm protection projects for substations
24 that the company may initiate in 2022. This project
25 detail is fully detailed in my Exhibit No. DLP-2,

1 Document No. 3.

2

3 **Q.** Does this represent the same number of projects you
4 included in the filing made on April 10, 2020 for the
5 2021 and 2022 periods?

6

7 **A.** Yes.

8

9 **Q.** What are the total projected expenditures for this
10 Program for the 2021 and 2022 periods?

11

12 **A.** Tampa Electric estimates expenditures for this Program
13 during calendar years 2021 and 2022 as follows:

14 • During the period, January 1, 2021 to December 31,
15 2021, estimated expenditures are \$0.3 million.

16 • During the period, January 1, 2022 to December 31,
17 2022, estimated expenditures are \$0.0 million.

18

19 **Q.** Do these projected expenditures match what was filed on
20 April 10, 2020?

21

22 **A.** Yes.

23

24 **Q.** Can you provide a breakdown of the projected expenditures
25 by categories such as Capital and O&M expenses?

1 **A.** The 2021 study cost will be charged to O&M. At this
2 time, the composition of future potential projects costs
3 is not known.

4
5 **Distribution Overhead Feeder Hardening**

6 **Q.** Can you please provide a description of the Distribution
7 Overhead Feeder Hardening Program?

8
9 **A.** This program will include strategies to further enhance
10 the resiliency and reliability of the distribution
11 network by further hardening the grid to minimize
12 interruptions and reduce customer outage counts during
13 extreme weather events and abnormal system conditions.

14
15 **Q.** How many Distribution Overhead Feeder Hardening projects
16 are planned for 2021 and 2022?

17
18 **A.** Tampa Electric plans for the following activity in
19 calendar years 2021 and 2022:

- 20 • January 1, 2021 to December 31, 2021 - 33
21 projects.
22 • January 1, 2022 to December 31, 2022 - 23
23 projects.

24 This project detail is fully detailed in my Exhibit No.
25 DLP-2, Document No. 4.

1 **Q.** Does this represent the same number of projects you
2 included in the company's Plan filing made on April 10,
3 2020 for the 2020 and 2021 periods?
4

5 **A.** No, the 56 projects scheduled in 2021 and 2022 keep the
6 same prioritization that was communicated in the
7 company's original SPPCRC Projection that was filed on
8 July 24, 2020. The company communicated that it planned
9 to complete 18 projects in 2021 and will begin work on
10 early stages of an additional six future projects in
11 2022. This alternation to the schedule resulted from a
12 long-term work forecast that aligned with anticipated
13 resource availability and project schedules for 2021 and
14 2022 and will also allow the company to provide the
15 benefits reflected in the April 10, 2020 filing.
16

17 **Q.** Does the company's filing in this docket include
18 different projects than those included in the SPP filing
19 dated April 10, 2020?
20

21 **A.** No, other than starting the engineering work in late 2021
22 on the additional six projects for 2022, all of the
23 projects are the same.
24

25 **Q.** What are the total projected expenditures for this

1 program in the 2021 and 2022 periods?

2

3 **A.** Tampa Electric estimates expenditures for this Program
4 during calendar years 2021 and 2022 as follows:

- 5 • During the period January 1, 2021 to December 31,
6 2021, estimated expenditures are \$15.8 million.
7 • During the period January 1, 2022 to December 31,
8 2022, estimated expenditures are \$30.2 million.

9

10 **Q.** Do these projected expenditures match what was filed on
11 April 10, 2020?

12

13 **A.** Yes, the current projected costs align with the cost
14 estimates filed on April 10, 2020. The projected costs
15 for 2021 and 2022 have increased slightly driven almost
16 entirely by an expected higher cost of transferring
17 assets to the new pole and the engineering of the six
18 additional projects. This slight increase was
19 communicated in the company's original SPPCRC projection
20 filing that was filed on July 24, 2020.

21

22 **Q.** Can you provide a breakdown of the projected expenditures
23 by categories such as capital and O&M expenses?

24

25 **A.** The Distribution Overhead Feeder Hardening Program is

1 predominantly capital with some minimal O&M costs. The
2 breakdown for each year is as follows:

- 3 • For the period January 1, 2021 to December 31,
4 2021:

- 5 o Capital of \$15.3 million
- 6 o O&M of \$0.5 million

- 7 • For the period January 1, 2022 to December 31,
8 2022:

- 9 o Capital of \$29.6 million
- 10 o O&M of \$0.7 million

11
12 **Q.** What are the activities that are associated with the O&M
13 costs with this program?

14
15 **A.** The activity of transferring existing wires to the new
16 overhead feeder hardening equipment from the existing
17 equipment being replaced is accounted for as an O&M cost.

18
19 **Q.** Does each overhead feeder hardening project have its own
20 unique cost estimate profile?

21
22 **A.** Yes, each overhead feeder hardening project represents a
23 distribution overhead feeder that will be hardened. The
24 underlying project information is specific to each
25 feeder. This includes location, asset type, work scope,

1 number of assets to be installed or hardened and other
2 information that is unique to each circuit.

3
4 **Q.** How were the cost assumptions used to develop cost
5 estimates for each project?

6
7 **A.** The company first defined the attributes of a hardened
8 feeder, which includes poles meeting National Electrical
9 Safety Code ("NESC") Extreme Wind loading criteria; no
10 poles lower than a class 2; no conductor size smaller
11 than 336 aluminum conductor, steel reinforced ("ACSR");
12 single phase reclosers or trip savers on laterals; feeder
13 segmented and automated with no more than 200-400
14 customers per section and no segment longer than 2-3
15 miles; no more than two to three megawatts of load served
16 on each segment; and circuit ties to other feeders with
17 available switching capacity. These criteria were then
18 applied to each potential overhead feeder project to
19 develop an estimate of the cost to harden that feeder.

20
21 **Transmission Access Enhancement**

22 **Q.** Please provide a description of the Transmission Access
23 Enhancement Program.

24
25 **A.** This program will ensure the company always has access to

1 its transmission facilities so it can promptly restore
2 its transmission system when outages occur.

3
4 **Q.** How many Transmission Access Enhancement projects are
5 planned for 2021 and 2022?

6
7 **A.** Tampa Electric plans for the following activity in
8 calendar years 2021 and 2022:

- 9 • January 1, 2021 to December 31, 2021 - 18
10 projected projects.
- 11 • January 1, 2022 to December 31, 2022 - 11
12 projected projects.

13 This project detail is fully detailed in my Exhibit No.
14 DLP-2, Document No. 5.

15
16 **Q.** Does this represent the same number of projects you
17 included in the filing made on April 10, 2020 for the
18 period 2021 and 2022?

19
20 **A.** No, the 29 projects scheduled in 2021 and 2022 keep the
21 same prioritization that was communicated in the
22 company's original SPPCRC Projection that was filed on
23 July 24, 2020. The company communicated that it planned
24 to increase the number of projects from eight to eighteen
25 for 2021. Tampa Electric, upon filing its Plan,

1 determined that it could achieve efficiency and avoid
2 potential delays in construction by beginning
3 engineering, design and permitting for future projects
4 earlier than originally planned which increased the
5 number of active projects in both years.

6 **Q.** Does the company's filing in this docket include
7 different projects than those included in the SPP filing
8 dated April 10, 2020?

9
10 **A.** No, with the exception of the additional projects that
11 are beginning earlier, the projects and the
12 prioritization are consistent with the filing made on
13 April 10, 2020.

14
15 **Q.** What are the total projected expenditures for this
16 Program in the 2021 and 2022 periods?

17
18 **A.** Tampa Electric estimates expenditures for this Program
19 during calendar years 2021 and 2022 as follows:

- 20 • During the period January 1, 2021 to December 31,
21 2021, estimated expenditures are \$1.3.
- 22 • During the period January 1, 2022 to December 31,
23 2022, estimated expenditures are \$1.5 million.

24
25 **Q.** Do these projected expenditures match what was filed on

1 April 10, 2020?

2

3 **A.** No, other than a slight increase due to the reasons
4 explained above, the projected expenditures match what
5 was filed on April 10, 2020.

6

7 **Q.** Can you provide a breakdown of the projected expenditures
8 by categories such as capital and O&M expenses?

9

10 **A.** The Transmission Asset Enhancement Program is 100 percent
11 capital. There are no expected O&M expenses.

12

13 **Q.** What is the basis for your project-level cost estimates?

14

15 **A.** The company has both historical and recent experience
16 with road and bridge projects. This information was the
17 foundation for preparing estimates for the permitting,
18 surveying, engineering, and construction costs.

19

20 **Q.** Does each project have its own unique cost estimate
21 profile?

22

23 **A.** Yes, each project has a unique project cost estimate
24 based on factors such as project type, type of
25 construction, location, permits required and the quantity

1 of material.

2

3 **Vegetation Management**

4 **Q.** Can you please provide a description of the Vegetation
5 Management ("VM") Program?

6

7 **A.** The VM Program consists of three parts including existing
8 legacy storm hardening VM activities and three new VM
9 initiatives that will impact the SPPCRC. The three parts
10 of existing legacy storm hardening VM activities include
11 the following:

- 12 • Four-year distribution VM cycle (Planned)
- 13 • Two-year transmission VM cycle (Planned)
- 14 • Transmission VM Right of Way Maintenance (Planned)

15

16 The three new VM initiatives are:

- 17 • Initiative 1: Supplemental Distribution Circuit VM
- 18 • Initiative 2: Mid-Cycle Distribution VM
- 19 • Initiative 3: 69 kV VM Reclamation

20

21 **Q.** What VM programs does the company have that will not
22 impact the SPPCRC?

23

24 **A.** The company performs unplanned VM on both the
25 distribution and transmission system. Both of these VM

1 activities will remain in base rates and not in the
2 SPPCRC.

3
4 **Q.** Does this represent the same number of initiatives you
5 included in the filing made on April 10, 2020 for the
6 period 2021 and 2022?

7
8 **A.** Yes.

9
10 **Q.** What level of activity are you projecting for each
11 initiative during the period 2021?

12
13 **A.** For the period January 1, 2021 to December 31, 2021, the
14 company projects the following activities:

- 15 • Distribution VM: 1,560 miles
- 16 • Transmission VM: 530 miles
- 17 • Initiative 1: 510 miles and 65,008 customers
- 18 • Initiative 2: 243 miles and 95,733 customers
- 19 • Initiative 3: 27 miles and 26,975 customers

20 This activity detail is fully detailed in my Exhibit No.
21 DLP-2, Document No. 6.

22
23 **Q.** What level of activity are you projecting for each
24 initiative during the period 2022?

1 **A.** For the period January 1, 2022 to December 31, 2022, the
2 company projects the following activities:

- 3 • Distribution VM: 1,560 miles
- 4 • Transmission VM: 530 miles
- 5 • Initiative 1: 692 miles and 72,533 customers
- 6 • Initiative 2: 196 miles and 77,128 customers
- 7 • Initiative 3: 27 miles and 26,975 customers

8 This activity detail is fully detailed in my Exhibit No.
9 DLP-2, Document No. 6.

10

11 **Q.** Does this represent the same projected activity levels
12 included in the filing made on April 10, 2020 for the
13 period 2021 and 2022?

14

15 **A.** Yes.

16

17 **Q.** What are the total projected expenditures for this
18 Program during the period 2021?

19

20 **A.** For the period January 1, 2021 to December 31, 2021,
21 expenditures are estimated to be:

- 22 • Distribution VM: \$13.0 million
- 23 • Transmission VM: \$3.1 million
- 24 • Initiative 1: \$5.5 million
- 25 • Initiative 2: \$1.3 million

1 • Initiative 3: \$0.7 million

2

3 **Q.** What are the total projected expenditures for this
4 Program during the period 2022?

5

6 **A.** For the period January 1, 2022 to December 31, 2022,
7 expenditures are estimated to be:

8 • Distribution VM: \$11.2 million

9 • Transmission VM: \$2.9 million

10 • Initiative 1: \$6.4 million

11 • Initiative 2: \$3.6 million

12 • Initiative 3: \$0.7 million

13

14 **Q.** Do these projected expenditures match what was filed on
15 April 10, 2020?

16

17 **A.** Yes.

18

19 **Q.** Can you provide a breakdown of the projected expenditures
20 by categories such as Capital and O&M expenses?

21

22 **A.** The VM Program is 100 percent O&M expenses. There are no
23 expected capital expenses.

24

25 **Q.** How were the estimated costs of this program developed?

1 **A.** The company used historical data along with current labor
2 and equipment rates to develop the cost estimates for
3 each component of this program. The company also engaged
4 Accenture to assist in the development of the new VM
5 initiatives, including the level of incremental work and
6 the cost for each initiative.

7
8 **Q.** Can you explain how that information was used to develop
9 a cost estimate for each initiative?

10
11 **A.** Yes, the activity levels for each initiative were
12 multiplied by the labor and equipment rates associated
13 with each activity within that initiative. The company
14 relied on the historical data as well as current
15 estimates of labor and equipment rates.

16
17 **Infrastructure Inspections**

18 **Q.** Can you please provide a description of the
19 Infrastructure Inspections Program?

20
21 **A.** This SPP program involves the inspections performed on
22 the company's T&D infrastructure including all wooden
23 distribution and transmission poles, transmission
24 structures and substations, as well as the audit of all
25 joint use attachments.

1 **Q.** How many infrastructure inspection projects does the
2 company plan to complete in 2021 and 2022?

3
4 **A.** Tampa Electric conducts thousands of inspections each
5 year. The number of inspections by type planned for 2020
6 and 2021 are as follows:

7
8

<u>Distribution:</u>	<u>2021</u>	<u>2022</u>
Wood Pole:	19,650	33,700
Groundline:	19,121	34,739

11
12

<u>Transmission:</u>	<u>2021</u>	<u>2022</u>
Wood Pole/Groundline:	367	655
Above Ground:	3,895	3,396
Aerial Infrared Patrol:	Annually	Annually
Ground Patrol:	Annually	Annually
Substations:	Annually	Annually

13
14
15
16
17
18 This activity detail is fully detailed in my Exhibit No.
19 DLP-2, Document No. 7.

20
21 **Q.** Does this represent the same number of projects you
22 included in the filing made on April 10, 2020 for the
23 period 2021 and 2022?

24
25 **A.** No, Tampa Electric in 2021 is completing the final year

1 of the eight-year distribution wood pole inspection cycle
2 which is driving the slight difference in numbers.
3
4 **Q.** What are the total projected expenditures for this
5 Program in the 2021 and 2022 periods?
6
7 **A.** The estimated costs for this program for January 1, 2021
8 through December 2021 is \$1.2 million, and \$1.5 million
9 for 2022.
10
11 **Q.** Can you provide a breakdown of the projected expenditures
12 by categories such as capital and O&M expenses?
13
14 **A.** All costs associated with this program are 100 percent
15 O&M. There are no Capital expenditures with this
16 program.
17
18 **Q.** What is the basis for your cost estimates?
19
20 **A.** The company has long-standing inspection programs with a
21 large data set of historical activity and spend. The
22 projected spend for each inspection type is based on
23 projected activity and historical spending.
24
25

1 **LEGACY STORM HARDENING INITIATIVES**

2 **Q.** What are the legacy storm hardening initiatives?

3
4 **A.** These are storm hardening activities that were mandated
5 by the Commission as components of the company's prior
6 storm hardening plan.

7
8 **Q.** Are the legacy storm hardening initiatives the same for
9 the company's SPP as they were in the company's most
10 recent 2019-2021 three-year Storm Plan that was approved
11 by the Commission?

12
13 **A.** Yes, they are the same, but Tampa Electric extracted the
14 following legacy storm hardening initiatives to be
15 separate SPP Programs and included these for cost-
16 recovery through the SPPCRC:

- 17 • Four-year distribution vegetation management
18 • Two-year transmission vegetation management
19 • Transmission Right of Way vegetation management
20 • Distribution infrastructure inspections
21 • Transmission infrastructure inspections
22 • Transmission asset upgrades

23
24 **Q.** What are the other legacy storm hardening initiatives
25 that will not go through the SPPCRC?

1 **Q.** The other legacy storm hardening initiatives that will
2 not go through the SPPCRC include the following:

- 3 • Unplanned distribution vegetation management
- 4 • Unplanned transmission vegetation management
- 5 • Geographic Information System
- 6 • Post-Storm Data Collection
- 7 • Outage Data - Overhead and Underground Systems
- 8 • Increased Coordination with Local Governments
- 9 • Collaborative Research
- 10 • Disaster Preparedness and Recovery Plan
- 11 • Distribution Wood Pole Replacements

12 **Q.** Does the company have individual project detail for these
13 ongoing storm hardening initiatives for the period 2020
14 and 2021?

15
16 **A.** No, these "other" ongoing storm hardening initiatives are
17 well-established, steady state programs for which the
18 company does not propose any specific Storm Protection
19 Projects at this time.

20
21 **Q.** Is the company seeking cost recovery for any of these
22 "Other" ongoing legacy storm hardening in this SPPCRC
23 proceeding?

24
25 **A.** No.

1 Q. Is the company planning on communicating the annual
2 updates for these other legacy storm hardening
3 initiatives?

4
5 A. Yes, Tampa Electric will provide the annual update for
6 these other legacy storm hardening initiatives included
7 in the annual SPP Report due to the Commission on June 1,
8 2021.

9
10 **COMMON STORM PROTECTION PLAN ACTIVITIES AND COSTS**

11 Q. Will you please provide a description of the Common
12 Costs?

13
14 A. Yes, the costs in the Common Costs category represent
15 those costs that cannot be attributed to a specific
16 Program. They are an accumulation of incremental costs
17 associated with developing, implementing, managing, and
18 administering the SPP.

19
20 Q. What type of costs are in the Common Costs category?

21
22 A. The Common Costs reflect those SPP costs that cannot be
23 assigned to a specific SPP program or those costs which
24 bring benefits to the entire portfolio of SPP programs.
25 Examples of this include incremental internal labor to

1 support the administration of the SPP as a whole.

2
3 **Q.** In the Common Cost Category, please explain what the
4 projected charge for external consultants in 2021 is for?

5
6 **A.** As Tampa Electric began the process of standing up the
7 SPP programs in 2020, the company began learning many
8 valuable lessons learned. It became evident that the
9 original planned methodology for completing projects in
10 the Distribution Lateral Undergrounding Program would
11 lead to some future inefficiencies. These inefficiencies
12 would come from the way the company prioritized work in
13 this program. The company originally prioritized lateral
14 segments between protection devices based upon their
15 reliability during extreme weather events. During the
16 standing up of the program, the company realized that
17 this methodology would create inefficiencies by having
18 portions of an overhead lateral undergrounded which would
19 cause additional work to go into a neighborhood, setup
20 for work, perform the work, tear down the setup for work,
21 and then revisit this same area in future years to
22 underground another prioritized portion. The company did
23 combine projects that were prioritized in the first ten-
24 years of this program but believes that a different
25 methodology could provide better work efficiencies. The

1 company also noted that it would be a better customer
2 experience by undergrounding as much as the overhead
3 lateral as feasible during one work project in that
4 community. Because of these lessons and additional ones
5 that the company has observed, make it necessary to
6 reprioritize the Distribution Lateral Undergrounding
7 Program projects based upon the entire overhead lateral.
8 This updated analysis, modelling and prioritization will
9 provide the support and documentation for the company's
10 2022-2031 SPP that will be filed in early 2022 and will
11 also ensure that the 2022-2031 SPP represents an
12 opportunity to fully evaluate these opportunities,
13 incorporate those that improve the SPP Programs and
14 ensure optimal value and efficiency is provided to
15 customers. Tampa Electric brought in same outside
16 consultants that assisted the company in its SPP that was
17 filed on April 10, 2020 to perform this reprioritization.
18 In addition, the company has asked this outside
19 consultant with assisting Tampa Electric in the
20 development and documentation of an efficient
21 organizational structure that can support the level of
22 work necessary for a successful SPP.

23
24 **Q.** Were these costs reflected in the company's SPP filing on
25 April 10, 2020?

1 **A.** No, the reprioritization costs and consulting assistance
2 cost were not included in the company's SPP filed on
3 April 10, 2020 as the reasons to hire the consultant
4 again in 2021, was driven by the explanation above.

5
6 **Q.** How much does the company project to spend on common
7 expenses in the 2021 and 2022 periods?

8
9 **A.** The company projects spending \$1.1 million in 2021 and
10 \$0.7 million in 2022.

11
12 **Q.** Please provide a breakdown of these common costs in each
13 calendar year.

14
15 **A.** The following is a summary level breakdown of the costs
16 in each calendar year:

- 17 • Calendar year 2021 costs reflect the following:
 - 18 o \$0.5 million of external consulting
 - 19 o \$0.6 million of internal labor
- 20 • Calendar year 2022 costs reflect the following:
 - 21 o \$0.7 million of internal labor

22 This activity detail is fully detailed in my Exhibit No.
23 DLP-2, Document No. 8.

1 **CONCLUSIONS**

2 **Q.** Please summarize your direct testimony.

3

4 **A.** My testimony identifies the programs for which Tampa
5 Electric is seeking cost recovery for expenditures
6 occurring in 2021 and 2022. My testimony describes the
7 number and types of activities that will be carried out
8 under the company's SPP in 2021 and 2022 and explains how
9 the company developed estimates of the cost of each of
10 these activities. My testimony also demonstrates that
11 the estimated costs are reasonable since they are based
12 on sound methods and because the company has a high level
13 of confidence in its projections.

14

15 **Q.** Are the company's planned activities and projected costs
16 consistent with the company's Storm Protection Plan?

17

18 **A.** Yes, as I explained in my testimony, the company has
19 implemented each of the Programs in a manner consistent
20 with the company's SPP filing made on April 10, 2020.
21 While schedules have been refined in some cases, the
22 planned activities are prioritized consistently with the
23 SPP and the projected costs are largely consistent at
24 both the Program and project levels.

1 **Q.** Should the Commission approve the company's projected
2 expenditures for its Distribution Lateral Undergrounding,
3 Transmission Asset Upgrades, Substation Extreme Weather
4 Hardening, Distribution Overhead Feeder Hardening,
5 Transmission Access Enhancement, Vegetation Management,
6 Infrastructure Inspections Programs and Common SPP costs?

7
8 **A.** Yes, these projected expenditures should be approved.
9 The projected costs are reasonable and consistent with
10 the company's SPP.

11
12 **Q.** Does this conclude your testimony?

13
14 **A.** Yes.
15
16
17
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22
23
24
25

TAMPA ELECTRIC COMPANY
DOCKET NO. 20210010-EI
WITNESS: PLUSQUELLIC

EXHIBIT

OF

DAVE L. PLUSQUELLIC

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	2021 Cost Estimate	2022 Cost Estimate
Distribution Lateral Undergrounding Program Total	84,101,703	108,076,036
LUG PCA 13390.92599119	1,665,458	-
LUG PCA 13961.92829453	173,457	-
LUG PCA 13724.90911087	298,114	-
LUG PCA 13146.10629014	459,265	-
LUG WHA 13972.92421291	110,694	-
LUG WHA 13312.60182741	(88,334)	-
LUG WHA 13972.90241880	453,136	-
LUG PCA 13961.92820848	76,087	-
LUG PCA 13961.60193482	191,535	-
LUG PCA 13785.10676209	(142,470)	-
LUG WSA 14032.92634300	331,496	-
LUG WSA 13071.91245761	114,105	-
LUG WSA 14032.91487301	198,765	-
LUG WSA 14032.10339836	60,784	-
LUG WSA 14032.92803239	205,026	-
LUG WSA 13071.91432110	(35,713)	-
LUG WSA 13071.91432109	184,778	-
LUG WSA 14032.92729035	361,489	-
LUG WSA 13198.92183966	131,424	-
LUG WSA 13678.90514649	421,177	-
LUG PCA 13462.60458175	232,800	-
LUG WSA 13425.10244449	602,317	-
LUG WSA 13670.93124410	622,851	-
LUG WSA 13428.91540495	182,551	-
LUG WSA 13332.91335523	229,634	-
LUG WSA 13544.10053266	198,205	-
LUG WSA 13109.90641822	266,892	-
LUG WSA 13747.10299739	48,270	-
LUG WSA 13756.60165357	314,676	-
LUG WSA 13491.10230118	262,780	-
LUG WSA 13141.92630916	430,128	-
LUG PCA 14121.93159006	(95,245)	-
LUG WSA 13673.10277744	499,636	-
LUG WSA 13138.60079254	129,250	-
LUG WSA 13141.92442349	639,500	-
LUG WSA 13333.10007582	219,321	-
LUG WSA 13586.92298267	332,781	-
LUG WSA 13138.10145625	339,895	-
LUG WSA 13140.10013916	127,001	-
LUG WSA 13113.90796385	406,133	372,899
LUG WSA 13138.10145628	296,750	-
LUG WSA 13164.10158909	835,918	-
LUG PCA 13462.60180762	42,043	-
LUG WSA 13140.91873275	563,171	-

LUG WSA 13605.91052996	607,224	423,472
LUG WSA 13071.60170422	892,380	-
LUG WSA 13111.92999604	162,592	-
LUG WSA 13586.60303627	733,832	-
LUG PCA 13961.10696431	152,060	-
LUG PCA 13785.92299245	586,692	-
LUG PCA 13961.92834683	405,559	-
LUG PCA 13462.91407512	183,537	-
LUG PCA 13462.91412064	55,720	-
LUG PCA 13961.10696486	363,286	-
LUG PCA 13961.91967308	480,410	-
LUG PCA 13961.10696417	60,918	-
LUG WHA 13916.60279623	50,597	-
LUG WHA 13297.10560430	280,241	-
LUG WHA 13314.92426509	307,896	-
LUG WHA 13118.92612349	417,916	-
LUG WHA 13313.90084626	86,296	-
LUG WHA 13699.10637242	478,757	-
LUG WHA 13313.10684614	165,338	-
LUG WHA 13296.92376304	237,755	-
LUG WHA 13313.60568375	395,243	-
LUG WHA 13297.60269456	248,554	-
LUG WHA 13699.10637259	60,980	-
LUG WHA 13473.60168916	381,010	-
LUG WHA 13296.10562356	66,345	-
LUG WHA 13916.92509975	282,853	-
LUG WHA 13297.10560425	312,735	-
LUG WHA 13296.60531111	640,804	-
LUG PCA 13120.60015632	57,958	-
LUG WHA 13699.10637247	67,194	-
LUG WHA 13473.60168942	182,293	-
LUG WHA 13118.92659353	264,576	-
LUG WHA 13118.10535995	695,003	-
LUG WHA 13699.10637240	467,934	-
LUG WHA 13313.93103371	87,604	-
LUG WHA 13118.92204382	396,994	-
LUG WHA 13118.92659172	457,941	-
LUG WHA 13473.92097460	166,297	-
LUG WHA 13296.90010289	857,779	-
LUG PCA 13785.92466250	2,766,420	-
LUG WHA 13313.10684581	469,848	-
LUG WHA 13118.10535999	347,174	-
LUG WHA 13699.60165416	242,027	-
LUG WHA 13916.91386005	106,677	350,858
LUG WHA 13314.10567076	85,716	486,227
LUG WHA 13296.10562361	45,318	63,212
LUG WHA 13297.10560432	94,766	417,846

LUG WHA 13972.10618037	50,970	140,477
LUG PCA 13724.10671283	77,060	158,886
LUG PCA 13722.60360851	49,584	109,474
LUG CSA 14040.10786382	35,060	-
LUG PCA 13268.91633548	182,420	443,090
LUG PCA 13724.10671319	359,761	520,693
LUG PCA 13243.10791853	103,918	111,939
LUG PCA 13724.10671334	116,847	198,057
LUG PCA 13243.91351288	98,218	209,597
LUG PCA 13655.90431393	251,281	907,013
LUG PCA 13243.90684154	46,358	211,917
LUG PCA 13268.10705945	287,961	395,737
LUG PCA 13724.10671229	61,314	43,715
LUG PCA 13268.92962459	89,265	180,156
LUG CSA 13840.93019714	(13,290)	-
LUG PCA 13724.93103251	90,786	177,236
LUG PCA 13243.90586047	56,619	126,083
LUG PCA 13724.91049435	408,032	942,800
LUG CSA 13204.91532149	547,834	-
LUG CSA 13836.91406642	100,484	-
LUG CSA 14040.10786374	187,463	183,431
LUG CSA 13590.91231633	292,710	-
LUG CSA 13102.91293905	171,048	-
LUG CSA 13104.10362869	636,571	-
LUG CSA 13831.10427677	327,685	-
LUG CSA 14040.60233886	49,737	-
LUG CSA 13939.60144164	243,763	-
LUG CSA 13158.90816343	337,982	-
LUG CSA 13021.60058683	271,101	-
LUG CSA 13104.91643108	491,874	-
LUG CSA 13836.91406672	(72,100)	-
LUG CSA 13835.60314670	364,283	-
LUG CSA 13107.10376186	62,240	-
LUG CSA 13592.91365233	300,399	-
LUG CSA 13993.10372414	379,171	-
LUG CSA 13354.10582069	173,860	-
LUG CSA 13468.60128378	703,440	-
LUG CSA 13632.60305848	417,922	-
LUG DCA 13815.92407065	(181,473)	-
LUG CSA 13176.10375148	495,207	-
LUG CSA 13099.60125388	229,246	-
LUG CSA 14102.91582612	175,696	-
LUG CSA 13468.60128362	608,031	-
LUG CSA 13399.60037987	244,629	-
LUG CSA 13835.91773975	228,481	-
LUG CSA 13418.92018190	276,227	-
LUG CSA 13158.60011810	759,936	125,894

LUG DCA 13815.90288627	(193,929)	-
LUG CSA 13105.10580690	461,859	-
LUG CSA 13205.90022802	50,957	262,281
LUG CSA 13418.91924595	54,525	255,886
LUG CSA 13105.60164901	29,106	141,536
LUG CSA 13934.10467597	141,765	17,797
LUG CSA 13205.90442230	63,781	469,009
LUG CSA 14040.10786358	108,238	64,218
LUG CSA 13105.10580689	32,422	27,660
LUG DCA 13815.93026469	1,056,266	-
LUG CSA 13107.10376201	37,950	26,476
LUG CSA 13105.10580676	33,538	84,577
LUG CSA 13993.10433144	30,243	107,766
LUG CSA 13939.60144172	38,197	154,146
LUG CSA 13158.91461782	85,134	195,599
LUG CSA 13633.91847345	21,914	35,004
LUG CSA 13934.10467575	23,415	86,311
LUG CSA 13183.60036344	(36,843)	-
LUG CSA 13188.92070695	43,035	171,573
LUG CSA 13948.10442391	55,221	301,572
LUG CSA 13158.92347931	74,323	-
LUG CSA 13633.90564142	64,280	46,932
LUG DCA 13006.92949400	327,670	29,187
LUG DCA 13432.10761257	309,815	72,167
LUG CSA 13826.60127680	69,746	-
LUG CSA 13632.10408290	261,735	323,601
LUG CSA 13205.60059346	(73,663)	-
LUG CSA 13204.60170504	97,418	366,222
LUG CSA 13176.10375141	160,363	749,413
LUG CSA 13948.10442379	35,202	61,151
LUG CSA 13835.10429505	51,970	249,165
LUG CSA 13026.60059509	21,984	39,062
LUG CSA 13021.92350282	82,341	216,052
LUG CSA 13106.10361901	755,730	764,200
LUG CSA 13468.91640192	27,369	36,973
LUG CSA 13106.91722510	27,929	75,484
LUG CSA 13026.60059452	42,162	63,341
LUG CSA 13934.10467606	31,861	-
LUG CSA 13632.10408272	25,419	110,743
LUG CSA 13102.90748252	158,339	170,739
LUG CSA 13026.60059457	53,960	273,021
LUG CSA 13099.10368943	67,030	13,283
LUG CSA 13104.91668251	52,523	184,575
LUG CSA 13176.10375136	169,348	748,733
LUG CSA 13104.91241032	39,038	149,172
LUG CSA 13633.92740152	49,315	309,048
LUG ESA 13230.10471377	529,247	-

LUG ESA 13509.60346595	162,826	-
LUG ESA 13502.10497396	326,228	-
LUG ESA 13796.92356181	25,030	90,661
LUG ESA 13509.92890860	31,654	304,843
LUG ESA 13230.92496254	27,392	337,190
LUG ESA 13509.10501141	15,468	251,663
LUG ESA 13454.91522987	4,100	80,916
LUG CSA 13592.10402239	(65,821)	-
LUG ESA 13509.10501110	8,505	42,144
LUG ESA 13797.93185703	4,226	48,647
LUG ESA 14116.91073265	8,756	164,869
LUG SHA 13900.10717269	39,523	29,156
LUG SHA 13652.92748361	45,070	141,797
LUG SHA 13001.93346473	132,224	1,166,215
LUG SHA 14022.90591555	71,676	358,886
LUG CSA 13351.93283733	38,966	-
LUG SHA 13001.60179144	110,522	720,142
LUG SHA 13645.91519309	46,796	87,877
LUG SHA 13780.10723993	25,530	71,519
LUG SHA 13001.92048269	22,540	235,150
LUG SHA 13001.60179191	34,443	390,895
LUG SHA 13001.10663240	42,714	225,713
LUG SHA 13900.92336596	43,412	231,360
LUG SHA 13645.92207754	69,245	142,701
LUG SHA 13900.91863298	25,187	89,515
LUG CSA 13099.90882614	349,123	-
LUG SHA 13001.10663269	11,170	91,917
LUG SHA 13001.10663262	8,701	58,624
LUG ESA 13127.90334707	44,980	21,815
LUG ESA 13878.10105723	36,537	249,448
LUG ESA 13911.92679866	54,778	507,034
LUG ESA 13229.92525393	31,770	495,674
LUG ESA 13909.92173076	32,204	195,428
LUG ESA 14355.60258173	17,936	230,543
LUG CSA 13093.91004837	567,046	461,327
LUG ESA 13457.10482593	13,449	155,815
LUG ESA 13127.90334731	51,705	26,620
LUG ESA 13906.10096968	57,043	780,724
LUG ESA 13909.90380435	42,519	86,056
LUG ESA 13906.92282884	16,952	79,233
LUG ESA 13911.60157737	224,600	1,659,923
LUG ESA 13710.92354144	29,805	310,163
LUG ESA 13793.92685255	19,479	62,232
LUG ESA 13906.10096960	48,393	161,432
LUG CSA 13630.10429536	(839)	-
LUG ESA 13793.92686002	24,904	28,736
LUG ESA 13686.93697046	43,492	-

LUG ESA 13906.10096964	68,940	639,671
LUG ESA 13911.90130568	143,858	1,192,679
LUG ESA 13906.90137810	81,831	583,567
LUG ESA 13793.92686712	4,706	46,552
LUG ESA 13127.92663180	108,270	986,426
LUG CSA 13205.90998414	112,263	-
LUG ESA 13457.90176591	51,038	200,197
LUG ESA 14355.92354352	37,129	549,125
LUG ESA 13793.92686736	20,843	47,723
LUG ESA 13911.10554595	13,004	229,104
LUG ESA 13911.91995336	98,960	675,863
LUG ESA 13127.92661768	57,879	411,763
LUG CSA 13948.91837409	(19,248)	-
LUG ESA 13878.10105726	58,384	421,170
LUG ESA 13454.90188551	21,841	232,822
LUG ESA 13878.10105717	39,698	214,053
LUG ESA 13231.10868121	31,081	305,012
LUG ESA 13911.60157736	18,086	45,821
LUG ESA 13171.10455381	21,218	81,361
LUG ESA 13878.10105728	33,045	28,425
LUG CSA 13093.91004843	(60,976)	-
LUG SHA 14024.10747874	18,905	42,855
LUG SHA 13342.91010293	39,641	206,737
LUG SHA 14020.60223573	51,329	-
LUG SHA 13342.10925094	35,088	-
LUG SHA 14024.90116190	15,755	-
LUG SHA 13817.10722417	184,933	-
LUG SHA 13003.10895211	323,947	393,736
LUG SHA 13342.90527363	38,763	-
LUG CSA 13836.91377944	790,904	496,223
LUG WSA 13162.92185426	355,424	-
LUG WSA 13194.90645535	832,025	-
LUG WSA 13079.60077624	389,488	-
LUG WSA 13586.91748729	368,017	-
LUG WSA 13162.10158432	147,112	-
LUG WSA 13864.10310477	120,230	666,444
LUG WSA 13113.92909503	12,271	77,179
LUG WSA 13516.60169592	44,049	239,060
LUG WSA 13192.90932106	58,689	145,517
LUG WSA 13333.91785740	39,211	293,989
LUG CSA 13102.60123654	(10,754)	278,089
LUG WSA 13863.60279838	79,475	114,658
LUG WSA 13109.90643551	112,926	746,831
LUG WSA 13332.91700188	18,324	32,109
LUG WSA 13756.90207831	64,131	564,395
LUG WSA 13672.60106849	45,136	214,382
LUG WSA 13860.10307215	47,219	213,587

LUG WSA 13756.60165355	14,032	226,077
LUG WSA 13672.10493801	98,061	395,585
LUG WSA 13864.10310468	35,623	217,985
LUG WSA 13864.10310497	25,372	71,485
LUG CSA 13158.92874802	26,016	-
LUG WSA 13586.92442286	130,252	309,259
LUG WSA 13672.91971930	32,933	186,344
LUG WSA 13678.10254063	46,513	121,718
LUG WSA 13141.10147344	16,659	62,805
LUG WSA 13756.10589587	24,285	80,004
LUG WSA 13864.10310505	85,529	218,185
LUG WSA 13860.10307212	42,669	7,232
LUG WSA 13111.60072751	34,470	253,631
LUG CSA 13176.10375134	111,488	-
LUG WSA 13333.10007588	27,064	148,373
LUG WSA 13164.90252716	36,482	216,753
LUG WSA 13491.91827162	40,454	216,775
LUG WSA 13113.90422522	18,577	64,027
LUG WSA 13756.10589595	42,153	406,575
LUG WSA 13586.10255333	20,562	45,920
LUG WSA 13428.90423835	44,530	74,116
LUG WSA 13141.91575422	16,146	135,953
LUG WSA 13678.90514672	90,627	212,911
LUG CSA 13107.10376173	340,952	-
LUG WSA 13164.10158912	35,560	70,632
LUG WSA 13544.10053269	27,359	108,060
LUG WSA 13864.60380454	26,718	120,071
LUG WSA 13141.92442350	14,832	127,434
LUG WSA 13141.10147371	79,544	810,622
LUG WSA 13678.10288738	97,740	163,167
LUG WSA 13533.91957169	41,326	8,607
LUG CSA 13057.10121709	47,951	-
LUG WSA 13865.90531031	47,900	144,988
LUG WSA 13535.92983670	37,373	148,719
LUG WSA 13589.93177909	27,282	29,684
LUG WSA 13522.10392924	20,372	54,538
LUG WSA 13737.10297943	35,498	144,414
LUG WSA 14030.90886759	156,929	537,305
LUG WSA 13207.90147316	35,963	193,379
LUG WSA 13059.60302601	138,435	936,792
LUG CSA 13418.92357188	664,980	-
LUG WSA 13738.10298299	54,930	301,987
LUG WSA 13207.90146892	46,252	373,694
LUG WSA 13162.10158434	66,893	371,859
LUG WSA 13079.60077605	35,113	401,890
LUG WSA 13870.90428273	78,723	180,832
LUG WSA 13737.91960399	75,864	435,598

LUG WSA 13674.10277747	101,031	212,113
LUG WSA 13078.10127958	133,668	296,805
LUG CSA 13592.91213055	264,863	-
LUG WSA 13510.10218990	62,786	308,477
LUG WSA 13669.60107076	24,927	90,511
LUG WSA 13873.60311122	157,421	695,698
LUG WSA 13207.90613782	114,305	611,537
LUG WSA 13208.92767537	71,734	169,488
LUG WSA 13737.60311396	42,094	43,692
LUG WSA 13198.92655424	23,092	211,455
LUG WSA 13514.10624934	41,260	121,545
LUG CSA 13100.91340554	728,801	261,439
LUG WSA 13483.60393455	376,112	1,575,588
LUG WSA 13520.10242257	79,232	643,411
LUG WSA 13892.10338448	196,135	861,845
LUG WSA 13612.90312305	56,546	34,433
LUG WSA 13522.91947423	92,440	-
LUG WSA 13334.91645657	85,380	-
LUG WSA 13490.92815117	34,523	-
LUG WSA 13522.10392902	117,671	-
LUG CSA 13715.90737020	65,585	-
LUG WSA 14030.60341032	23,260	-
LUG WSA 13574.10250638	38,774	-
LUG WSA 13220.10191173	91,311	-
LUG WSA 13612.60022877	13,701	-
LUG WSA 13220.90901917	86,299	-
LUG WSA 13535.92983661	58,688	-
LUG WSA 13535.91618829	119,894	43,631
LUG WSA 13669.92770538	102,073	210,210
LUG CSA 13176.91029163	46,643	-
LUG WSA 13079.60104344	34,137	-
LUG WSA 13575.90054924	25,699	-
LUG WSA 13750.60110680	34,860	-
LUG WSA 13198.10051875	18,305	-
LUG WSA 13612.92956326	85,755	7,265
LUG WSA 13514.91361858	29,979	-
LUG WSA 13522.10392905	84,078	-
LUG WSA 14030.92669942	172,561	-
LUG WSA 13612.60003135	53,898	-
LUG CSA 13835.60131429	255,878	-
LUG WSA 13522.92169062	56,335	-
LUG WSA 13575.90054386	18,031	-
LUG WSA 13522.10392882	222,357	310,471
LUG WSA 13198.10051851	37,644	-
LUG WSA 14030.92670479	23,984	-
LUG WSA 13522.10392874	32,419	-
LUG WSA 13162.93124277	29,304	-

LUG WSA 13198.10051896	33,642	-
LUG CSA 13593.93057902	582,820	-
LUG WSA 13612.60002970	47,443	-
LUG WSA 14030.60125643	48,110	24,646
LUG WSA 13071.92377934	174,852	-
LUG WSA 13138.60170460	47,185	-
LUG WSA 13535.92952190	50,088	-
LUG WSA 13162.90435139	103,405	337,797
LUG CSA 13105.10580678	237,212	-
LUG WSA 13138.10145618	17,336	-
LUG WSA 13737.90740214	18,116	-
LUG WSA 13737.90740699	29,652	-
LUG WSA 13079.90517178	28,404	-
LUG WSA 13078.10127955	34,094	-
LUG WSA 14030.92669557	1,603	-
LUG WSA 13522.10392864	19,019	-
LUG WSA 13674.90420693	58,005	-
LUG CSA 13188.10655453	164,248	-
LUG WSA 13612.90291123	60,747	143,965
LUG WSA 13109.60233901	84,750	-
LUG WSA 13737.10297934	35,390	-
LUG WSA 13589.93162023	58,612	-
LUG CSA 13592.10402259	95,826	-
LUG WSA 13522.60305720	12,304	-
LUG CSA 13948.10442385	303,390	297,831
LUG ESA 13174.60588225	72,783	-
LUG ESA 13454.90755954	238,697	-
LUG ESA 13174.60451701	229,546	43,369
LUG ESA 13710.92881445	392,890	-
LUG ESA 13509.60287236	141,956	-
LUG SHA 13897.10933151	857,041	-
LUG ESA 13174.10913196	269,302	270,442
LUG ESA 13171.90598389	909,571	446,930
LUG ESA 13211.60044019	576,805	-
LUG ESA 13231.10868138	627,569	520,898
LUG ESA 13230.10471354	484,300	-
LUG ESA 13502.92679861	192,441	-
LUG ESA 13796.10842826	142,051	-
LUG ESA 13509.10501132	105,259	-
LUG ESA 13433.10466911	772,137	-
LUG ESA 13230.92208546	185,090	-
LUG ESA 13171.93104605	392,291	-
LUG ESA 13509.90504849	1,049,115	-
LUG ESA 13502.92573944	671,986	-
LUG ESA 13799.60395568	492,097	-
LUG ESA 13226.10462583	125,472	-
LUG ESA 14116.60140011	343,587	-

LUG ESA 13797.93188519	711,070	-
LUG ESA 13226.92664597	335,942	-
LUG ESA 13796.92728705	472,802	-
LUG ESA 13230.60258173	(10,267)	-
LUG ESA 13796.92884623	1,434,718	280,978
LUG ESA 13502.92577310	166,575	-
LUG ESA 13225.60139973	885,843	120,180
LUG ESA 13796.10842823	481,512	-
LUG ESA 13226.92670950	206,528	-
LUG ESA 13226.92665539	85,389	-
LUG ESA 13883.91179506	72,278	-
LUG ESA 13509.91772133	41,613	-
LUG ESA 13509.10501150	568,265	236,343
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LUG ESA 13454.90397369	485,949	-
LUG CSA 13205.90929181	225,012	-
LUG CSA 13021.10051153	71,924	-
LUG ESA 13433.93369551	662,152	-
LUG CSA 13026.60059524	255,173	203,860
LUG ESA 13174.92555763	22,777	-
LUG CSA 13835.10429522	316,935	-
LUG ESA 13883.92008787	(50,151)	-
LUG ESA 13230.92180224	471,178	-
LUG WSA 14032.10820614	105,578	-
LUG WSA 13071.90738378	108,038	-
LUG PCA 13390.10643541	(124,525)	-
LUG PCA 13785.90239166	-	-
LUG PCA 13961.10696419	-	-
LUG CSA 13099.60563698	-	-
LUG CSA 13158.93317809	-	-
LUG CSA 13106.91795934	-	-
LUG CSA 13100.10371703	-	-
LUG CSA 13418.92292295	-	-
LUG CSA 13104.10362882	-	-
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LUG CSA 13158.92290015	-	-
LUG CSA 13836.93321406	-	-
LUG CSA 13633.90633859	-	-
LUG CSA 13836.60133704	-	-
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LUG ESA 13127.10836901	-	-
LUG ESA 13911.91276385	-	-
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LUG WSA 13162.60154843	-	-
LUG WSA 14030.90242104	-	-
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LUG WSA 13669.92774744	-	-
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LUG CSA 13021.10051146	-	166,494
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LUG CSA 13028.10085332	-	158,807
LUG CSA 13090.60010026	-	76,894
LUG CSA 13093.60029683	-	65,659
LUG CSA 13093.60029758	-	244,080
LUG CSA 13093.60029776	-	479,193
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LUG CSA 13099.60125260	-	634,073
LUG CSA 13099.91324334	-	464,029
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LUG CSA 13101.10366868	-	54,403
LUG CSA 13102.60350013	-	67,307
LUG CSA 13102.60350014	-	162,706
LUG CSA 13102.91015266	-	248,367
LUG CSA 13104.10362871	-	240,410
LUG CSA 13104.10362874	-	207,341
LUG CSA 13104.10362881	-	187,565
LUG CSA 13104.91640897	-	216,386
LUG CSA 13104.91645481	-	181,032
LUG CSA 13106.10361894	-	301,192
LUG CSA 13106.10361899	-	247,791
LUG CSA 13106.91643964	-	167,885
LUG CSA 13176.10375130	-	112,646
LUG CSA 13176.10375133	-	106,241
LUG CSA 13176.90719743	-	356,440
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LUG CSA 13204.60062686	-	557,139
LUG CSA 13204.60068869	-	380,627
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LUG CSA 13420.10055941	-	36,648
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LUG CSA 13630.10429530	-	58,475
LUG CSA 13630.90179103	-	59,517
LUG CSA 13630.91863539	-	69,271
LUG CSA 13630.92831833	-	54,356
LUG CSA 13632.10408280	-	216,855
LUG CSA 13825.91414736	-	72,869
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LUG CSA 13829.10425054	-	29,735
LUG CSA 13829.91481416	-	58,381
LUG CSA 13835.10429499	-	156,710
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LUG CSA 13948.10442372	-	249,502
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LUG DCA 13431.10745580	-	187,602
LUG DCA 13431.60297955	-	430,583
LUG DCA 13431.60529999	-	276,383
LUG DCA 13431.92349883	-	320,644
LUG DCA 13431.92545401	-	120,578
LUG DCA 13431.93281804	-	261,337
LUG ESA 13038.10859730	-	177,367
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LUG ESA 13038.92275699	-	118,324
LUG ESA 13039.92496615	-	105,350
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LUG ESA 13229.10457701	-	50,331
LUG ESA 13229.10457713	-	13,684
LUG ESA 13229.60251639	-	138,163
LUG ESA 13229.92389274	-	51,563

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LUG ESA 13710.92263635	-	41,714
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LUG ESA 13906.90397839	-	58,475
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LUG ESA 13906.93403488	-	98,201
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LUG ESA 13909.91338194	-	61,884
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LUG ESA 13909.92206482	-	94,366
LUG ESA 14109.60272365	-	65,246
LUG ESA 14114.60380731	-	25,710
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LUG PCA 13243.10791865	-	123,056
LUG PCA 13243.10791889	-	210,941
LUG PCA 13243.90586046	-	453,323
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LUG PCA 13268.10705847	-	349,135
LUG PCA 13268.10705883	-	791,990
LUG PCA 13268.10705889	-	931,299
LUG PCA 13268.90378808	-	278,222
LUG PCA 13268.93067842	-	367,264
LUG PCA 13268.93351292	-	379,186
LUG PCA 13268.93449800	-	232,792
LUG PCA 13462.91382618	-	427,003
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LUG PCA 13655.92356416	-	662,778
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LUG PCA 13655.92358234	-	238,744
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LUG PCA 13724.10671224	-	144,469
LUG PCA 13724.10671287	-	208,154
LUG PCA 13724.10671327	-	357,715
LUG PCA 13724.60503818	-	709,113
LUG PCA 13724.90295206	-	641,453
LUG PCA 13724.90295207	-	202,127
LUG PCA 13785.10667361	-	225,946
LUG PCA 13785.10667366	-	60,905
LUG PCA 13785.10667391	-	604,773

LUG PCA 13785.60393235	-	121,264
LUG PCA 13785.60398085	-	498,124
LUG PCA 13785.90851473	-	79,058
LUG PCA 13785.92051767	-	58,610
LUG PCA 13785.92464127	-	579,033
LUG PCA 13961.10696429	-	155,461
LUG PCA 13961.10696435	-	162,141
LUG PCA 13961.10696498	-	435,242
LUG SHA 13001.10663251	-	45,360
LUG SHA 13001.10663258	-	79,451
LUG SHA 13001.92472394	-	145,265
LUG SHA 13003.10895244	-	63,163
LUG SHA 13003.10895256	-	35,748
LUG SHA 13003.10895259	-	149,621
LUG SHA 13003.10895266	-	50,758
LUG SHA 13003.90638278	-	231,723
LUG SHA 13003.90638283	-	369,366
LUG SHA 13341.10813126	-	349,384
LUG SHA 13342.10925106	-	66,477
LUG SHA 13342.10925119	-	151,941
LUG SHA 13342.10925137	-	108,665
LUG SHA 13342.91007734	-	161,742
LUG SHA 13342.92390275	-	81,629
LUG SHA 13344.10813122	-	89,394
LUG SHA 13344.92814355	-	11,932
LUG SHA 13344.93164126	-	117,756
LUG SHA 13489.10737681	-	23,390
LUG SHA 13489.90367628	-	219,271
LUG SHA 13489.92436549	-	102,178
LUG SHA 13650.92182142	-	23,201
LUG SHA 13817.10722371	-	48,295
LUG SHA 13817.10722388	-	35,133
LUG SHA 13817.10722416	-	23,722
LUG SHA 13817.10722429	-	179,072
LUG SHA 13817.90199873	-	64,725
LUG SHA 13817.90204879	-	49,953
LUG SHA 13817.93215104	-	254,687
LUG SHA 14020.10742009	-	95,786
LUG SHA 14020.10742013	-	51,042
LUG SHA 14020.10742015	-	33,333
LUG SHA 14020.60440052	-	48,958
LUG SHA 14024.90106483	-	57,055
LUG SHA 14024.90111178	-	52,509
LUG SHA 14024.91741334	-	53,504
LUG WHA 13118.92651890	-	118,327
LUG WHA 13118.92652010	-	55,754
LUG WHA 13118.92660079	-	287,778

LUG WHA 13289.10566566	-	311,747
LUG WHA 13289.10566580	-	367,973
LUG WHA 13296.10562342	-	300,692
LUG WHA 13297.10560398	-	150,272
LUG WHA 13297.60161443	-	50,776
LUG WHA 13297.60166032	-	507,462
LUG WHA 13309.60166032	-	420,842
LUG WHA 13370.90747757	-	415,040
LUG WHA 13309.91504609	-	794,194
LUG WHA 13309.92600372	-	268,073
LUG WHA 13309.92605591	-	279,850
LUG WHA 13309.92915430	-	178,823
LUG WHA 13309.92915806	-	87,502
LUG WHA 13313.10684584	-	50,444
LUG WHA 13313.10684588	-	246,729
LUG WHA 13313.10684608	-	83,252
LUG WHA 13313.10684613	-	86,740
LUG WHA 13370.60253106	-	345,258
LUG WHA 13370.90747759	-	199,047
LUG WHA 13370.90798073	-	359,744
LUG WHA 13370.92181604	-	365,927
LUG WHA 13473.10599416	-	129,313
LUG WHA 13473.60105326	-	50,691
LUG WHA 13698.10595470	-	637,454
LUG WHA 13698.10595500	-	554,966
LUG WHA 13698.60170586	-	344,191
LUG WHA 13698.60171778	-	704,547
LUG WHA 13698.60171942	-	428,740
LUG WHA 13699.10637209	-	377,762
LUG WHA 13921.60178629	-	221,974
LUG WSA 13059.10122239	-	137,770
LUG WSA 13059.60084637	-	248,097
LUG WSA 13059.93003525	-	77,045
LUG WSA 13142.10162073	-	105,554
LUG WSA 13142.91071417	-	11,761
LUG WSA 13161.92081600	-	135,043
LUG WSA 13161.92214946	-	92,642
LUG WSA 13191.10173491	-	40,909
LUG WSA 13191.10173494	-	46,321
LUG WSA 13191.10173500	-	48,239
LUG WSA 13191.10173518	-	31,023
LUG WSA 13191.60474882	-	57,571
LUG WSA 13207.10168329	-	49,517
LUG WSA 13207.90146008	-	14,190
LUG WSA 13207.92190389	-	26,165
LUG WSA 13208.90152415	-	18,750
LUG WSA 13208.92767544	-	30,256

LUG WSA 13217.10028768	-	94,901
LUG WSA 13217.60659922	-	124,901
LUG WSA 13217.92097014	-	42,869
LUG WSA 13220.90668598	-	61,406
LUG WSA 13220.90902634	-	25,313
LUG WSA 13334.60104341	-	21,051
LUG WSA 13358.10147354	-	24,759
LUG WSA 13358.10197577	-	88,423
LUG WSA 13358.60081731	-	148,722
LUG WSA 13358.60170521	-	35,284
LUG WSA 13358.60505673	-	42,060
LUG WSA 13358.91179943	-	57,486
LUG WSA 13405.10064507	-	133,722
LUG WSA 13405.10064508	-	419,872
LUG WSA 13405.10064523	-	217,457
LUG WSA 13405.60048514	-	29,233
LUG WSA 13405.91256591	-	217,713
LUG WSA 13405.91811196	-	65,412
LUG WSA 13510.10218976	-	48,196
LUG WSA 13510.10218987	-	19,176
LUG WSA 13510.60088567	-	67,202
LUG WSA 13510.92448697	-	9,077
LUG WSA 13517.91150567	-	41,122
LUG WSA 13533.60094069	-	73,381
LUG WSA 13533.91060899	-	51,179
LUG WSA 13613.60031838	-	22,500
LUG WSA 13613.90530159	-	53,139
LUG WSA 13738.10298286	-	58,210
LUG WSA 13740.10299009	-	208,977
LUG WSA 13740.60104604	-	95,923
LUG WSA 13740.60614298	-	38,267
LUG WSA 13740.90392839	-	51,349
LUG WSA 13740.91943165	-	258,920
LUG WSA 13740.91951196	-	104,105
LUG WSA 13740.93176460	-	250,185
LUG WSA 13754.10297442	-	31,023
LUG WSA 13754.90097474	-	246,009
LUG WSA 13754.90423524	-	13,381
LUG WSA 13754.90630567	-	29,574
LUG WSA 13754.90847913	-	55,355
LUG WSA 13754.91928022	-	32,386
LUG WSA 13754.91930150	-	23,437
LUG WSA 13754.92203067	-	72,187
LUG WSA 13754.92203676	-	58,807
LUG WSA 13865.10311280	-	59,105
LUG WSA 13865.60305740	-	31,491
LUG WSA 13870.10320670	-	57,741

LUG WSA 13870.10320672	-	117,997
LUG WSA 13870.10320688	-	25,696
LUG WSA 13889.10266413	-	77,216
LUG WSA 13889.91845370	-	76,662
LUG WSA 13895.90424414	-	33,026
LUG WSA 14031.10340753	-	192,017
LUG WSA 14031.10340775	-	271,193
LUG WSA 14031.91064701	-	58,636
LUG WSA 14031.91680239	-	177,315
LUG WSA 14031.91999678	-	15,298
LUG WSA 14069.90668922	-	201,179

	2021 Cost Estimate	2022 Cost Estimate
Transmission Asset Upgrades Program Total	15,152,160	14,984,767
SPP TAU - Circuit 66840	5,132	-
SPP TAU - Circuit 66007	(22,222)	-
SPP TAU - Circuit 66019	14,507	-
SPP TAU - Circuit 66425	35,214	-
SPP TAU - Circuit 230403	628	-
SPP TAU - Circuit 66413	44,440	-
SPP TAU - Circuit 66046	243,718	-
SPP TAU - Circuit 66059	42,382	-
SPP TAU - Circuit 230008	76,113	-
SPP TAU - Circuit 230010	-	-
SPP TAU - Circuit 230038	(166)	-
SPP TAU - Circuit 230003	832,423	-
SPP TAU - Circuit 230005	470,020	-
SPP TAU - Circuit 230004	762,608	-
SPP TAU - Circuit 230625	267,026	-
SPP TAU - Circuit 230021	364,908	-
SPP TAU - Circuit 230052	192,179	-
SPP TAU - Circuit 66024	797,959	-
SPP TAU - Circuit 230608	386,908	-
SPP TAU - Circuit 230603	257,921	-
SPP TAU - Circuit 66407	958,693	-
SPP TAU - Circuit 66033	823,674	-
SPP TAU - Circuit 66016	1,304,272	-
SPP TAU - Circuit 66427	220,720	-
SPP TAU - Circuit 66415	317,000	-
SPP TAU - Circuit 66834	632,082	-
SPP TAU - Circuit 66022	1,596,940	-
SPP TAU - Circuit 66060	190,145	-
SPP TAU - Circuit 66048	158,460	-
SPP TAU - Circuit 66031	63,367	-
SPP TAU - Circuit 66036	976,040	-
SPP TAU - Circuit 230402	300,100	-
SPP TAU - Circuit 230412	1,746,147	-
SPP TAU - Circuit 230602	805,001	1,444,801
SPP TAU - Circuit 230012	7,200	336,800
SPP TAU - Circuit 230606	12,600	589,960
SPP TAU - Circuit 230033	3,600	294,700
SPP TAU - Circuit 230609	2,250	105,250
SPP TAU - Circuit 230013	9,000	421,000
SPP TAU - Circuit 66030	54,390	1,498,910
SPP TAU - Circuit 66025	86,580	3,181,360
SPP TAU - Circuit 66020	11,100	305,900
SPP TAU - Circuit 66027	19,980	550,620
SPP TAU - Circuit 66008	6,660	275,310

SPP TAU - Circuit 66001	71,040	2,146,850
SPP TAU - Circuit 66045	3,424	1,720,359
SPP TAU - Circuit 66026	-	1,446,734
SPP TAU - Circuit 230006	-	69,286
SPP TAU - Circuit 66021	-	45,648
SPP TAU - Circuit 66028	-	49,244
SPP TAU - Circuit 66032	-	40,576
SPP TAU - Circuit 66017	-	234,972
SPP TAU - Circuit 66011	-	22,317
SPP TAU - Circuit 66047	-	1,014
SPP TAU - Circuit 66436	-	34,490
SPP TAU - Circuit 66098	-	22,210
SPP TAU - Circuit 230020	-	41,939
SPP TAU - Circuit 230623	-	44,720
SPP TAU - Circuit 230604	-	24,768
SPP TAU - Circuit 66035	-	35,029

	2021 Cost Estimate	2022 Cost Estimate
Substation Extreme Weather Hardening Program Total	250,000	-
Substation Extreme Weather Protection Study	250,000	-

	2021 Cost Estimate	2022 Cost Estimate
Distribution Overhead Feeder Hardening Program Total	15,334,461	29,581,441
SPP FH - E Winterhaven 13308	499,502	-
SPP FH - Knights 13807	565,896	-
SPP FH - Knights 13805	442,593	-
SPP FH - Casey Road 13745	227,200	-
SPP FH - Coolidge 13533	351,912	-
SPP FH - 13461	1,124,973	-
SPP FH - 14121	459,738	-
SPP FH – Lake Magdalene 13939	915,157	-
SPP FH – Ehrlich 13890	648,753	-
SPP FH - Lake Region 13443	2,255,470	-
SPP FH - 13227	970,032	-
SPP FH - 13462	1,006,599	-
SPP FH – Pine Lake N 13633	874,589	-
SPP FH - Yukon 13101	574,200	256,274
SPP FH - McFarland 13104	548,200	244,082
SPP FH - Manhattan 13111	390,000	173,838
SPP FH - East Winter Haven 13309	278,440	125,468
SPP FH - 13313	415,532	73,036
SPP FH - 13314	457,235	29,668
SPP FH - 13339	145,942	23,656
SPP FH - 13433	26,968	1,016,972
SPP FH - 13808	1,226,701	740,120
SPP FH - 13964	-	572,242
SPP FH - 13148	76,408	1,219,093
SPP FH - 13048	135,570	2,077,657
SPP FH - 13094	134,462	5,554,203
SPP FH - 13770	70,913	5,898,017
SPP FH - 13118	121,730	3,377,800
SPP FH - 13296	208,173.36	4,494,494
SPP FH - 13989	57,873.86	832,493
SPP FH - 13984	81,465.61	1,171,851
SPP FH - 14123	41,947.20	1,248,736
SPP FH - 14094	287.53	8,559
SPP FH - 13651	-	50,386
SPP FH - 13346	-	80,786
SPP FH - 13312	-	312,011

	2021 Cost Estimate	2022 Cost Estimate
Transmission Access Enhancement Program Total	1,328,137	1,517,935
SPP TXE - Site Access-230008	10,710	52,933
SPP TXE - Site Access-230623	31,442	155,398
SPP TXE - Site Access-Proposed Bridge P	108,179	202,192
SPP TXE - Site Access-Hampton Substation	93,677	160,192
SPP TXE - Site Access-230033	16,547	81,781
SPP TXE - Site Access-Morris Bridge Rd	92,766	157,192
SPP TXE - Site Access-66007	20,202	88,585
SPP TXE - Site Access-230037	22,576	111,582
SPP TXE - Site Access-66839	40,093	175,809
SPP TXE - Site Access-230606	26,926	133,081
SPP TXE - Site Access-Columbus Drive #2	107,152	199,191
SPP TXE - Site Access-West Of Forbes Rd	96,749	-
SPP TXE - Site Access-Columbus Drive #1	107,152	-
SPP TXE - Site Access-Tampa Palms #1	95,725	-
SPP TXE - Site Access-19th Av NE	84,546	-
SPP TXE - Site Access-East Of Sydney Washer Rd	109,038	-
SPP TXE - Site Access-Tampa Palms #3	108,180	-
SPP TXE - Site Access-Proposed Bridge M	156,474	-

	2021 Cost Estimate	2022 Cost Estimate
Vegetation Management Program Total	23,536,860	24,773,133
Distribution SPP Veg Mgmnt Subtotal	19,791,650	21,160,688
Planned	13,028,364	11,203,848
Supplemental	5,495,330	6,388,836
Mid-cycle	1,267,956	3,568,004
Transmission SPP Veg Mgmnt Subtotal	3,745,210	3,612,445
Planned	2,850,213	2,898,245
ROW Maintenance (Mowing, etc)	199,998	-
69kv Incremental	695,000	714,200

	2021 Cost Estimate	2022 Cost Estimate
Infrastructure Inspections Program Total	1,174,467	1,503,786
Distribution Wood Pole Inspections	593,036	1,020,000
Routine Ground Patrol - Trans	214,328	150,858
Infrared Thermography - Trans	117,020	114,444
Above Ground Inspection - Trans	10,331	10,404
Ground Line Inspections - Trans	45,322	62,424
Substation Inspections	194,430	145,656

Common Storm Protection Plan Program Total
 SPP Common (Internal Labor, material, other, etc.)
 External Consulting

2021 Cost	2022 Cost
Estimate	Estimate
1,134,769	679,700
606,769	679,700
528,000	-