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April 9, 2021

## ELECTRONIC FILING

Mr. Adam J. Teitzman, Commission Clerk  
Office of Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, Florida 32399-0850

Re: Docket 20210034-EI, Petition for Rate Increase by Tampa Electric Company

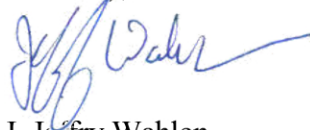
Dear Mr. Teitzman:

Attached for filing on behalf of Tampa Electric Company in the above-referenced docket is the Direct Testimony and Exhibit of Karen M. Mincey.

Thank you for your assistance in connection with this matter.

(Document 10 of 34)

Sincerely,



J. Jeffrey Wahlen

JJW/ne  
Attachment

cc: Richard Gentry, Public Counsel  
Jon Moyle, FIPUG



**BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION**

**DOCKET NO. 20210034-EI  
IN RE: PETITION FOR RATE INCREASE  
BY TAMPA ELECTRIC COMPANY**

**DIRECT TESTIMONY AND EXHIBIT  
OF  
KAREN M. MINCEY**

1                                   **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2                                   **PREPARED DIRECT TESTIMONY**

3                                   **OF**

4                                   **KAREN M. MINCEY**

5  
6   **Q.**   Please state your name, address, occupation, and employer.

7  
8   **A.**   My name is Karen Mincey. My business address is 702 North  
9           Franklin Street, Tampa, Florida 33602. I am employed by  
10          Tampa Electric Company ("Tampa Electric" or "company") as  
11          Vice     President     -     Information     Technology     and  
12          Telecommunications and Chief Information Officer.

13  
14   **Q.**   Please describe your duties and responsibilities in that  
15          position.

16  
17   **A.**   I am responsible for the company's Information Technology  
18          and     Telecommunications     ("IT")     department     vision,  
19          leadership,     and     direction     to     (1)     achieve     strategic  
20          technology and business objectives and (2) monitor the  
21          company's competitive positioning with respect to IT  
22          services. I oversee all enterprise-wide IT activities,  
23          including infrastructure, architecture, cybersecurity,  
24          applications development and support, networks, sourcing,  
25          and computer and auxiliary operations. I also (1) ensure

1 that the appropriate information protection measures are  
2 applied to corporate and customer data while meeting legal  
3 and regulatory requirements and (2) develop and manage the  
4 company's comprehensive business continuity plan for  
5 emergencies that could affect its computing systems and  
6 operations.

7  
8 **Q.** Please provide a brief outline of your educational  
9 background and business experience.

10  
11 **A.** I received a Bachelor of Science degree in Electrical  
12 Engineering from the University of New Orleans and a Master  
13 of Business Administration degree from Loyola University  
14 (New Orleans). I worked for Entergy New Orleans in various  
15 engineering and project management roles for eight years.  
16 I joined Tampa Electric in 1990 and have worked in  
17 Commercial and Industrial Marketing, Distribution  
18 Engineering, Telecommunications, and Information  
19 Technology.

20  
21 **Q.** What are the purposes of your direct testimony?

22  
23 **A.** The purposes of my testimony are to describe: (1) the  
24 company's IT Department; (2) the IT resources and  
25 applications Tampa Electric uses to operate its electric

1 system and provide an outstanding customer experience; (3)  
2 how the company has transformed its IT infrastructure and  
3 processes since its last rate case in 2013; (4) the  
4 company's 2022 IT capital budget; and (5) the company's  
5 2022 projected test year IT operations and maintenance  
6 ("O&M") expenses.

7

8 **Q.** Have you prepared an exhibit to support your direct  
9 testimony?

10

11 **A.** Yes. Exhibit No. KMM-1, entitled "Exhibit of Karen M.  
12 Mincey," was prepared under my direction and supervision.  
13 The contents of my exhibit were derived from the business  
14 records of the company and are true and correct to the best  
15 of my information and belief. It consists of the following  
16 two documents:

17

18 Document No. 1 List of Minimum Filing Requirement  
19 Schedules Sponsored or Co-Sponsored by  
20 Karen M. Mincey

21 Document No. 2 Table summarizing major IT projects  
22 since 2013

23

24 **Q.** Are you sponsoring or co-sponsoring any sections of Tampa  
25 Electric's Minimum Filing Requirements ("MFR") schedules?

1     **A.**    Yes. I am sponsoring or co-sponsoring the MFR Schedules  
2            listed in Document No. 1 of my exhibit.

3  
4     **IT DEPARTMENT OVERVIEW**

5     **Q.**    What are Tampa Electric's major areas of strategic focus?

6  
7     **A.**    As noted in the direct testimony of Tampa Electric witness  
8            Archibald D. Collins, the company's three areas of  
9            strategic focus are safety, cleaner and greener operations,  
10           and an outstanding customer experience. The company's IT  
11           department plays a vital role in supporting these areas.

12  
13    **Q.**    How does the IT department provide support in these areas?

14  
15    **A.**    The IT department supports safety by providing technology  
16           that allows employees to record and track personal safety  
17           information and personal safety reports. Our department  
18           supports cleaner and greener operations by providing  
19           technology solutions that enable employees to efficiently  
20           monitor and control the generation and distribution assets  
21           that we use to operate the electric grid and deliver power  
22           to our customers. Finally, the IT department helps provide  
23           an outstanding customer experience by implementing and  
24           providing ongoing support for the systems and technology  
25           solutions that customers use to request services and manage

1 and pay their bills.

2

3 **Q.** Please describe the company's IT department.

4

5 **A.** The company's IT department will have approximately 235  
6 team members in 2022. Our O&M expense and capital budgets  
7 at Tampa Electric for 2022 are \$30.5 million and \$27.5  
8 million, respectively. The projects reflected in the IT  
9 department's capital budget benefit multiple parts of our  
10 company. If a capital project benefits only one department,  
11 then that cost is usually reflected in the budget of the  
12 sponsoring department.

13

14 The IT department has eight functional areas. Four address  
15 the process for implementing IT resources: (1) planning,  
16 (2) innovating, (3) building and monitoring, and (4)  
17 operating. The others are organized around the three major  
18 functional areas of the company (Energy Supply, Electric  
19 Delivery, and Customer Experience), the Tampa Electric  
20 corporate support functions and support for the affiliate  
21 gas companies Peoples Gas System and New Mexico Gas  
22 Company. This structure allows us to synchronize our  
23 activities with the needs of those departments and  
24 affiliates.

25

1     **Q.**    What services does the IT department provide to Tampa  
2            Electric?

3

4     **A.**    The IT department provides the entire slate of IT services  
5            to Tampa Electric, including IT strategy and leadership;  
6            enterprise desktop support; service desk and access  
7            administration; application development and support; IT  
8            project management; IT infrastructure services (computers,  
9            storage, networking, and telecommunications); enterprise  
10           resource planning suite support; customer relationship  
11           management and billing suite support; IT asset and vendor  
12           management; IT compliance; and cybersecurity.

13

14    **Q.**    What IT services does Tampa Electric's IT department  
15            provide to affiliates?

16

17    **A.**    Tampa Electric provides the same slate of IT services  
18            listed above to Peoples Gas System, our Florida natural  
19            gas affiliate. Tampa Electric provides IT strategy and  
20            leadership; service desk and basic access administration;  
21            enterprise resource planning suite support; IT compliance;  
22            and cybersecurity for New Mexico Gas Company. Tampa  
23            Electric provides desktop support as needed, enterprise  
24            resource planning suite support, and cybersecurity  
25            consulting services for Emera Technologies Limited. All



1 costs noted in this testimony are those to Tampa Electric,  
2 unless otherwise noted.

3  
4 **Q.** What IT services are provided to Tampa Electric by other  
5 Emera Inc. ("Emera") companies?

6  
7 **A.** Emera provides Tampa Electric with high-level IT strategy  
8 as well as cybersecurity policy governance.

9  
10 **Q.** Does Tampa Electric obtain services from TECO Services,  
11 Inc.?

12  
13 **A.** No. Tampa Electric no longer receives services from TECO  
14 Services, Inc. ("TSI") because that entity no longer serves  
15 as a centralized services company. The functions it  
16 performed are now being provided by Tampa Electric business  
17 areas.

18  
19 TSI was formed as a centralized service company on October  
20 18, 2013, in anticipation of TECO Energy, Inc.'s ("TECO")  
21 closing of its acquisition of New Mexico Gas Company during  
22 the following year. After that acquisition closed, and as  
23 of January 1, 2015, TECO no longer met the Federal Energy  
24 Regulatory Commission's ("FERC") requirements to be  
25 considered a single state holding company. However, as part

1 of that transition, and in response to a joint waiver  
2 request of TECO and Tampa Electric, the FERC agreed that,  
3 other than a few relatively minor services, all non-power  
4 goods and services provided by Tampa Electric would be  
5 transitioned to TSI. These services included: Information  
6 Technology and Telecommunications, Human Resources, Legal  
7 Services, Corporate Security, Emergency Management, and  
8 Procurement.

9  
10 Emera acquired TECO Energy on July 1, 2016, and TSI  
11 continued operating until January 1, 2020, at which time  
12 TSI ceased operating as a centralized service company. The  
13 non-power goods and services it formerly provided were  
14 transferred to Tampa Electric and thereafter provided by  
15 the company to its affiliates.

16  
17 **Q.** Was the dissolution of TSI in the best interests of the  
18 company and its customers?

19  
20 **A.** Yes. The reorganization described above simplified our  
21 corporate structure and allowed us to capture the  
22 efficiency benefits associated with providing non-power  
23 goods and services within the TECO family under "one roof."  
24 Since Tampa Electric was the primary consumer of these non-  
25 power goods and services, it was more efficient, cost-

1 effective, and prudent to house them within the company.  
2 The FERC agreed and granted Tampa Electric's waiver request  
3 on October 30, 2019, which allowed the company to become  
4 the provider of all non-power goods and services to its  
5 affiliates as of January 1, 2020.

6  
7 **IT RESOURCES AND APPLICATIONS**

8 **Q.** What major IT applications support customer experience  
9 activities?

10  
11 **A.** The core of the company's application support for customer  
12 experience activities is our Customer Relationship  
13 Management and Billing ("CRB") system, which became  
14 operational in 2017. The CRB system works with other  
15 application suites to provide an outstanding customer  
16 experience. These other application suites such as the  
17 Contact Center Management and Interactive Voice Response  
18 ("CCM/IVR") suites and the company's online customer self-  
19 service portal ("customer portal") allow customers to  
20 contact the company by telephone, computer, and mobile  
21 devices to interact with the CRB system without agent  
22 assistance.

23  
24 **Q.** What are the major components of the CRB system and what  
25 do they do?

1 **A.** The major components of the CRB system include managing  
2 customer accounts, billing, payment, credit, and  
3 collection services. The CRB system was implemented in 2017  
4 and replaced the company's legacy billing system; it  
5 integrates directly with many critical systems, allowing  
6 for a robust customer experience that enables customers to  
7 transact with the company when, where, and how they want.

8  
9 For example, the CRB system integrates with the company's  
10 CCM/IVR system, allowing customers to obtain service over  
11 the telephone without having to speak to an agent. If the  
12 customer chooses to interact with the company by computer  
13 or mobile device, our customer portal allows customers to  
14 pay bills, report outages, start, stop, or transfer  
15 service, report lighting outages, or enroll in a variety  
16 of customer programs, e.g., billing and payment programs  
17 or energy efficiency programs.

18  
19 The CRB system also integrates with the company's Outage  
20 Management System ("OMS"), allowing customers to report an  
21 outage and receive the latest outage updates based on the  
22 customer's communication preferences.

23  
24 Finally, beginning January 1, 2022, the CRB system will  
25 integrate with our Advanced Metering Infrastructure

1 ("AMI") system to collect customer usage information and  
2 provide automated connections or disconnections for  
3 customers.

4  
5 Tampa Electric witness Melissa L. Cosby will further  
6 describe in her direct testimony how AMI will improve the  
7 experience we provide to our customers, as well as describe  
8 the customer benefits associated with the CRB system  
9 implementation.

10  
11 **Q.** What major IT applications support Electric Delivery  
12 activities?

13  
14 **A.** As noted in the direct testimony of Tampa Electric witness  
15 Regan B. Haines, the company is modernizing its electric  
16 transmission and distribution grid to be more efficient  
17 and reliable, and to provide new services that will enhance  
18 the experience we provide to our customers. Improving and  
19 adding new IT resources are a vital part of that effort.

20  
21 The Energy Management System ("EMS") is the core  
22 application suite for electric grid operations.

23  
24 Beginning in 2021, EMS will interface with a new Advanced  
25 Distribution Management System ("ADMS"). Our ADMS will

1 coordinate and operate Distributed Energy Resources  
2 ("DER"), intelligent distribution controls, and other  
3 smart grid operating technology.

4  
5 Beginning in December of 2021, our new AMI system will  
6 interact with the CRB system to create operational  
7 efficiencies and improve customer services. Mr. Haines  
8 provides detailed information about the operational  
9 aspects of this system and its capabilities in his direct  
10 testimony.

11  
12 Our Electric Delivery department uses Work Management  
13 System ("WMS") and Geographic Information System ("GIS")  
14 application suites to efficiently plan and dispatch team  
15 members and contractors to maintain, operate, and repair  
16 our transmission and distribution assets.

17  
18 Our Electric Delivery department uses an application known  
19 as Street Light Vision ("SLV") to support the company's  
20 growing smart light-emitting diode ("LED") streetlight  
21 operations. Mr. Haines also describes the operating  
22 efficiencies associated with our LED program in his direct  
23 testimony.

24  
25 **Q.** What major IT applications support the company's Energy

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Supply activities?

**A.** The major IT application that supports Energy Supply is a Work & Asset Management System that is used to efficiently schedule work and manage materials used at the various Energy Supply sites.

**Q.** What major IT applications enable the company to comply with legal and regulatory requirements?

**A.** As discussed further below, how we have invested in, and the costs we have incurred for IT have been influenced by requirements of the FERC, the North American Electric Reliability Corporation ("NERC"), and the Sarbanes-Oxley Act of 2002 ("Sarbanes-Oxley" or "SOX"), as well as increased cybersecurity and customer privacy demands.

We operate the following key applications to address legal and regulatory compliance and cybersecurity concerns: the Security Information and Event Management ("SIEM") system; Identity and Access Management ("IAM") systems; physical access control systems; multi-factor authentication ("MFA") systems; software patch maintenance and deployment systems; anti-malware systems; governance, risk, and compliance ("GRC") systems; the configuration management

1 database ("CMdb") system; business continuity management  
2 system; an IT service management system ("SMS"); security  
3 configuration management tools; vulnerability scanning and  
4 management systems; and a risk management tracking and  
5 reporting system. Each of these systems either meets a  
6 specific regulatory requirement for security or is part of  
7 the overall defense-in-depth architecture we have  
8 established to protect customer information and the  
9 company's systems and data.

10  
11 **Q.** What other major IT applications does Tampa Electric use  
12 and what purposes do they serve?

13  
14 **A.** The other two major application systems supported by the  
15 IT department are the Enterprise Resource Planning ("ERP")  
16 system and the Energy Trading and Risk Management ("ETRM")  
17 system. ERP modules support business functions such as  
18 Finance, Human Resources, and Procurement. The ETRM system  
19 supports the company's energy trading and risk management  
20 activities. The IT department also supports a myriad of  
21 smaller applications for the company, such as collaboration  
22 and office productivity applications, e.g., Microsoft  
23 Office and Teams, and data analytics tools.

24  
25 **IT INFRASTRUCTURE AND PROCESS TRANSFORMATION**



1 **Q.** Has the company changed its approach to providing IT  
2 services since the company's last rate case in 2013?

3

4 **A.** Yes. Since the company's last rate case in 2013, we have  
5 changed our basic approach for delivering IT services to  
6 the company.

7

8 In 2013, Tampa Electric used a single highly centralized  
9 mainframe computer located in its Ybor Data Center to run  
10 its 30-year-old customer billing and support system, which  
11 was the last of our legacy corporate systems. We replaced  
12 this legacy system in 2017 with over 200 integrated  
13 computer servers distributed across various company  
14 facilities. This distributed architecture has allowed us  
15 to update our systems more efficiently when the needs of  
16 our users change, and new technology becomes available.  
17 They also allow us to provide IT solutions to our users  
18 that are more closely tailored to their ever-changing  
19 needs.

20

21 We also now use geographically dispersed "cloud-based"  
22 technology systems located in different parts of North  
23 America. These cloud-based technologies allow us to obtain  
24 and manage the growing computing power required by newer  
25 data-intensive systems. The shift to cloud-based resources

1 has caused our cost profile to shift from capital to  
2 expense, because the annual costs associated with cloud-  
3 based resources are largely expense, not capital, under  
4 applicable accounting standards. Cloud-based resource  
5 costs have gone from a negligible portion of the IT  
6 maintenance budget in 2013 to approximately 25 percent in  
7 2020.

8  
9 **Q.** Why did Tampa Electric change its IT infrastructure as  
10 described above?

11  
12 **A.** There are several reasons. The first is general changes in  
13 IT technology and the development of cloud-based computing.  
14 The network architecture changes we made reflect a world-  
15 wide trend away from large mainframe computers to a  
16 distributed network supported by cloud-based resources  
17 that can support a faster rate of change for new  
18 capabilities and functionality, which ultimately benefits  
19 the company and its customers.

20  
21 Second, we have invested significantly in IT resources to  
22 meet the changing and increasing expectations from our  
23 customers. As Ms. Cosby explains in her direct testimony,  
24 the way companies like Amazon use technology to interact  
25 with their customers has changed the expectations of our

1 customers. We have worked diligently to give our customers  
2 the ability to communicate with the company (billing  
3 questions and service changes) and access information  
4 (usage and outages) when (24-7) and how (phone, on-line,  
5 and mobile) they want to.

6  
7 Third, the way we have updated and designed our IT systems,  
8 and our increased level of spending on them, was influenced  
9 by increasing regulatory, security, and privacy demands.  
10 As our reliance on information technology has increased,  
11 so too has our need to ensure that our data and systems  
12 and the information we have about our customers are secure  
13 and protected from cybersecurity threats.

14  
15 **Q.** How have regulatory, security, and privacy concerns  
16 influenced the delivery of IT services?

17  
18 **A.** The requirements of FERC, NERC, and Sarbanes-Oxley, as well  
19 as increased customer cybersecurity and privacy demands,  
20 played a major role in the evolution of Tampa Electric's  
21 IT system.

22  
23 **Q.** What are the key regulatory cybersecurity requirements,  
24 and what has the company done to address them?

1 **A.** The primary IT regulatory requirements are contained in  
2 NERC Critical Infrastructure Protection ("CIP") Standards  
3 002 through 011 and 013. These standards are intended to  
4 mitigate cyber or physical threats to the bulk electric  
5 system (*i.e.*, the electric grid). The foundation of the  
6 company's NERC compliance efforts has two parts, its  
7 "governing committee" and its general IT compliance  
8 process.

9  
10 **Q.** Please describe the governing committee.

11  
12 **A.** The company created an internal governing committee to  
13 address the CIP standards when they first went into effect,  
14 prior to 2013. This governing committee consists of team  
15 members from the IT department, the Regulatory Affairs  
16 department, and the affected operating areas, *i.e.*, Energy  
17 Supply, Electric Delivery, Corporate Security and  
18 Procurement. The committee ensures that our IT system and  
19 procedures allow our operating departments to comply with  
20 enforceable CIP standards. The committee also: (1) promotes  
21 awareness of current and future proposed standards, (2)  
22 ensures that new or amended standards or requirements are  
23 properly implemented, (3) coordinates and facilitates CIP  
24 audits when they occur, and (4) promotes a company-wide  
25 culture of CIP compliance.

1   **Q.**   How does the company's overall IT compliance program  
2       reinforce CIP compliance?  
3

4   **A.**   Our overall IT compliance program reinforces CIP compliance  
5       in many ways:

6       • Compliance with regulations is part of our Code of  
7       Business Conduct.

8       • Our Ethics and Compliance team has developed a cross-  
9       departmental register of all compliance programs and  
10      requires confirmation of compliance each quarter by the  
11      'program manager,' including NERC CIP.

12      • Our Regulatory Affairs department has a Federal Energy  
13      Compliance Program which includes designation of a  
14      Compliance Program Coordinator ("CPC") for each business  
15      area, including NERC CIP.

16      • We integrated the CIP requirements into our IT Standards  
17      and Procedures ("S&P"). The compliance deliverables are  
18      listed in the IT S&P, and we have created automated  
19      notifications associated with each deliverable and an  
20      escalation process to ensure these deliverables are  
21      completed on time. The deliverables are reviewed each  
22      period by the CPC.

23      • We identified and implemented internal controls for each  
24      CIP requirement and proactively seek additional  
25      controls.

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- Tampa Electric monitors NERC standard revisions and provides comments during the appropriate development stages; we begin planning based on the likely impact of those revisions or new standards. We also monitor NERC guidance and other documents as they are issued to determine whether any enhancements to the NERC CIP compliance requirements are necessary.
- The company participates in a state-wide CIP compliance group and chairs the monthly discussions for current event updates and information sharing with other utilities.

We also are planning additional compliance-related training for various CIP stakeholders. In the case of any non-compliance issues, we also ensure that a new preventive control is added as part of the mitigation.

**Q.** Please describe the Sarbanes-Oxley ("SOX") requirements and controls implemented by the IT department.

**A.** The SOX requirements involving IT fall into the following control areas: entity level controls, acquisition or development of application software, technical change management, ensuring system security (e.g., logical access administration), and data management (e.g., backup and

1 recovery). We implement these control requirements through  
2 our IT S&P for each SOX application.

3  
4 In 2018, we formed a working group composed of team members  
5 from IT, Emera Audit Services, Finance, Human Resources,  
6 and Customer Experience to review existing SOX controls  
7 and identify and remediate any gaps or potential weaknesses  
8 in SOX application access or separation of duties controls.  
9 This working group recommended improvements to the  
10 company's access control processes and reporting  
11 capabilities and enhanced the GRC module in the ERP suite,  
12 which was fully implemented in 2020.

13  
14 **Q.** How have customer information security concerns influenced  
15 the way the company delivers IT services?

16  
17 **A.** Our customers are very concerned about data privacy and  
18 expect that the electric service we provide to them will  
19 not be disrupted by a cybersecurity event. To address these  
20 concerns, the company has continued to improve the  
21 capabilities and maturity of its cybersecurity program by  
22 increasing the number of team members dedicated to  
23 cybersecurity and investing in their skills, purchasing  
24 and installing advanced security tools with increased  
25 functionality, and implementing new processes to mitigate

1 identified cybersecurity risk areas.

2  
3 **Q.** How do cybersecurity concerns and threats influence the  
4 way the company delivers IT services?

5  
6 **A.** We take cybersecurity concerns and threats very seriously.  
7 The company has a comprehensive cybersecurity program to  
8 address our due diligence efforts in this area. There are  
9 11 FTEs dedicated to the National Institute of Standards  
10 and Technology ("NIST") prescribed best-practice functions  
11 of identify, protect, detect, respond, and recover.  
12 Utilizing a defense-in-depth methodology, the program uses  
13 a combination of best-of-breed technology tools and best-  
14 practice processes to provide around-the-clock protection  
15 and response to the thousands of daily intrusion attempts  
16 at the company. The company also implemented an IT culture  
17 of security, ensures that cybersecurity risks are  
18 considered for all services that IT delivers, and embeds  
19 risk mitigations into the service delivery.

20  
21 **Q.** What IT investments has the company made since 2013 to  
22 improve the customer experience?

23  
24 **A.** Since our last rate case in 2013, we have made significant  
25 investments in the company's IVR, CCM, and CRB systems.



1           These investments have promoted efficiencies, improved  
2           ease of use, and provided new features and services to our  
3           customers. Additional detail regarding these investments  
4           is provided later in my direct testimony and in the direct  
5           testimony of Ms. Cosby.

6  
7           **Q.**   How have these IT investments contributed to the company's  
8           rate base growth since its last rate case in 2013?

9  
10          **A.**   Document No. 2 is a table summarizing the major IT projects  
11          Tampa Electric has invested in since 2013, the business  
12          justification of the projects, and the total actual cost  
13          (current budgeted costs if in the future) of each project  
14          that contributed to the company's rate base growth by a  
15          total of \$390.8 million. Each of these projects were needed  
16          to improve customer service, comply with regulatory  
17          requirements, or address a technology lifecycle issue and  
18          were executed using the company's normal procurement  
19          processes that ensure that we purchase goods and services  
20          at the lowest reasonable cost. It is important to address  
21          technology lifecycle issues to maintain access to original  
22          equipment manufacturer ("OEM") support, updates, security  
23          patches, and repair parts to avoid impacts to the delivery  
24          of business services to customers. Several of these  
25          projects, and others, are discussed in the direct testimony

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of Ms. Cosby.

A summary of our IT projects by year, capital cost, and benefits follows. Unless otherwise noted, the capital cost does not include AFUDC.

- 2014 - Contact Center Management (\$5.2 million). This project consolidated the IVR technologies used by Tampa Electric and Peoples Gas System and created efficiencies and a common experience for customers served by both utilities.
- 2015 - Windows 10/Laptop Replacement (\$4.5 million). This project upgraded all company team member systems to the latest version of Microsoft Windows and standardized equipment. It gave our team members stable and secure IT platforms and allowed us to streamline our internal support processes.
- 2016 - Energy Trading and Risk Management (\$12.0 million). This project consolidated several key functions provided by separate systems and improved the efficiency of this business function. The use of a single system improved controls, reduced staffing, lowered software maintenance cost, and expedited the month-end

1 closing processes.

- 2
- 3 • 2016 - Energy Management System (\$8.4 million). This  
4 project upgraded the core application the company uses  
5 to operate its electric grid to a version that will be  
6 supported in the future. It included user interface  
7 improvements, multiple cybersecurity control  
8 improvements and improved NERC CIP compliance related  
9 functionality.

- 10
- 11 • 2017 - Customer Relationship Management & Billing (\$83  
12 million including AFUDC). This project replaced legacy  
13 technologies with a single, integrated modern suite of  
14 applications, enabled the company to provide new  
15 functions and features to its customers, and increased  
16 operating efficiencies in the Customer Experience  
17 department. Ms. Cosby explains the many benefits of the  
18 CRB system and the subsequent enhancements (beyond the  
19 \$83 million in-service amount) in her direct testimony.

- 20
- 21 • 2019 - Unified Communications System (\$3.0 million).  
22 This project upgraded the company's telephone system to  
23 a Voice over Internet Protocol ("VoIP") platform and  
24 gave team members access to advanced features like  
25 wideband (HD) audio, desk phone control with 'click to

1 call,' extension mobility, as well as video calls and  
2 soft phone that help them perform their work more  
3 efficiently and effectively.  
4

- 5 • 2021 - Advanced Metering Infrastructure ("AMI")  
6 Initiative/Meter Data Management (\$242.4 million  
7 including AFUDC). This project enables us to provide  
8 more efficient and reliable service to our customers  
9 (*i.e.*, shorter outage response times and durations) and  
10 additional features and functions to our customers  
11 (*e.g.*, remote connect and disconnect). Ms. Cosby and Mr.  
12 Haines provide additional information about the benefits  
13 of the AMI program in their direct testimonies.  
14

- 15 • 2021 - Advanced Distribution Management System (\$24.3  
16 million). This project includes an IT platform that will  
17 provide multiple next generation distribution grid  
18 functions and features, such as include fault location,  
19 isolation and restoration; volt/volt-ampere reactive  
20 optimization; conservation through voltage reduction;  
21 peak demand management; and support for microgrids and  
22 electric vehicles, that will benefit our customers. Mr.  
23 Haines provides more detail on this project in his direct  
24 testimony.  
25

- 1 • 2021 - Interactive Voice Response/Contact Center  
2 Management (\$8.0 million). This project installs the  
3 core IT functions that will enable multiple next  
4 generation call center capabilities such as intuitive  
5 natural language understanding interactive voice  
6 response, new agent desktop experience bringing context  
7 aware knowledge management articles, customer virtual  
8 assistant, improved workforce management and quality  
9 monitoring tools, enhanced virtual hold technology and  
10 operational analytics to help meet the increasing  
11 expectations of our customers. Ms. Cosby provides  
12 additional information about this new project in her  
13 direct testimony.

14  
15 **2022 PROJECTED IT CAPITAL BUDGET**

16 **Q.** What process does the company use to identify the projects  
17 the IT department will implement?

18  
19 **A.** Team members in our IT department collaborate with team  
20 members in Energy Supply, Electric Delivery, Customer  
21 Experience, and the gas company affiliates, and other  
22 smaller Tampa Electric departments to develop and maintain  
23 technology plans that align with the company's future  
24 needs. The technology plans reflect the projects needed in  
25 the functional areas and form the basis for the IT

1 department's long-term plans and annual capital  
2 expenditure budgets.

3

4 **Q.** Once IT projects are approved, what steps does the company  
5 take to ensure that projects are "procured" at the lowest  
6 reasonable cost?

7

8 **A.** The IT department follows the formal bidding process for  
9 the purchase of all ordinary goods and services as outlined  
10 in company policies. The company's Procurement department  
11 conducts the bidding process so the company procures goods  
12 and services through an unbiased, consistent, and objective  
13 procurement process, that leads to the lowest reasonable  
14 cost. The key elements of the process are requesting formal  
15 and well-documented bids from three or more vendors, a full  
16 review of bidders' qualifications and information  
17 submitted, evaluating other factors such as diversity  
18 considerations, and ensuring proper level of approvals  
19 after a vendor is selected.

20

21 **Q.** What capital projects are included in the company's \$27.5  
22 million IT capital budget for the 2022 test year?

23

24 **A.** The projects reflected in our 2022 capital budget are  
25 needed to ensure compliance with regulations, promote

1 cybersecurity, strengthen privacy protections, and enhance  
2 the experience we provide to our customers. The goods and  
3 services needed for the projects in the company's 2022  
4 capital budget will be procured as described above and are  
5 needed and prudent. They include the following projects.

6  
7 Cybersecurity. We will spend \$2.3 million for new and  
8 upgraded tools that will strengthen the company's  
9 cybersecurity protections and keep pace with the ever-  
10 increasing capabilities of bad actors. The company's  
11 cybersecurity program ensures the confidentiality,  
12 integrity, and availability of customer information and  
13 company services.

14  
15 Cybersecurity Compliance. We will spend \$4.5 million on  
16 improvements to cybersecurity programs that are mandated  
17 or required by regulations and internal compliance  
18 standards.

19  
20 Digitalization. We will spend \$1.7 million for  
21 digitalization to provide new and innovative customer-  
22 facing services in the areas of mobility and data analytics  
23 and improve the efficiency of internal business functions  
24 through the application of artificial intelligence and  
25 machine learning solutions.

1        Sustaining Investments for Applications. We will spend \$9.6  
2 million to replace or update existing applications that  
3 soon will not be supported by vendors and update  
4 applications so they will provide new functions and  
5 features. Approximately \$8 million of this investment is  
6 the IT department's share of the cost of upgrading the CRB  
7 system, which will improve the customer experience. This  
8 project is described in greater detail in Ms. Cosby's  
9 direct testimony.

10  
11        Sustaining Investments in Computing. We will spend \$1.6  
12 million to upgrade end-of-life server hardware and pay for  
13 new team member computers, as needed.

14  
15        Sustaining Investments in Storage. We will spend \$2.3  
16 million to ensure that the company has sufficient data  
17 storage to meet its growing needs. This level of capital  
18 spending also will ensure that the company has sufficient  
19 backup capacity to mitigate data loss scenarios.

20  
21        Sustaining Investments in Networks. We will spend \$1.9  
22 million to replace computer network equipment that is no  
23 longer supported by the vendor and to provide more network  
24 capacity to support the increased demands of technology  
25 used by the business, such as data analytics.



1            Sustaining Investment in Telecom. We will spend \$3.6  
2 million to replace end-of-life equipment, to increase the  
3 capabilities of our telecommunications system, and to  
4 replace a single radio tower that is over 40 years old.  
5 The company needs to increase the capabilities of its  
6 telecommunications system to support the increased demands  
7 of technology used by the business such as smart grid field  
8 devices. Replacing the radio tower will reduce maintenance  
9 costs and provide additional space for antenna mountings.

10  
11        **2022 IT O&M EXPENSE BUDGET**

12        **Q.** What amount of O&M expense for IT did the company include  
13 in the 2022 test year and what major activities are  
14 reflected in that expense amount?

15  
16        **A.** The Tampa Electric O&M expense for IT in 2022 is \$30.5  
17 million. Direct labor costs account for approximately 60  
18 percent of IT O&M expense. Outside services, which includes  
19 contractors, application management services, cloud  
20 application services, and application and hardware  
21 maintenance, accounts for approximately 30 percent of total  
22 O&M expense. The remaining 10 percent is composed of other  
23 items such as rent or lease expense.

24  
25        **Q.** How does the 2022 test year IT O&M expense amount compare

1 to IT O&M expenses in the company's 2013 rate case.

2

3 **A.** The 2022 test year IT O&M expenses are higher than in the  
4 company's 2013 rate case for understandable reasons. As  
5 technology solutions have evolved, Tampa Electric's  
6 computing environment has changed from a largely  
7 centralized mainframe computer for its core business  
8 applications to a distributed computing environment. The  
9 new systems the company uses for its core business  
10 applications and its operational systems are data-  
11 intensive, highly resilient, and provide significant new  
12 capabilities and insight for our customers and business  
13 operations. The architecture of these newer distributed  
14 systems is more complex and requires multiple  
15 interconnected computers to operate properly.  
16 Consequently, there are higher hardware and software costs  
17 associated with the newer distributed systems.  
18 Additionally, some of the systems utilize software and  
19 hardware systems located in the cloud, not on Tampa  
20 Electric's premises, which are considered O&M expenses  
21 rather than capital costs. The higher numbers reflected in  
22 the 2022 test year are representative of these technology  
23 changes.

24

25 More specifically, 2022 represents an increase of

1 approximately \$12.75 million or 72 percent over the 2013  
2 spending level of approximately \$17.75 million. Labor costs  
3 increased by \$7.6 million with the major driver being the  
4 headcount increase for cybersecurity, IT operations  
5 monitoring capability increases, and creating a center of  
6 excellence to support the distributed systems associated  
7 with CRB. The other major driver of the increase is  
8 maintenance costs associated with the implementation of  
9 multiple technology projects, which increased by \$2.8  
10 million.

11  
12 While the incremental increases in technology spend in the  
13 period between 2013 and 2022 were all individually  
14 justified through internal company procedures, the  
15 reasonableness of overall spend on IT can only be justified  
16 using external benchmarking. To this end, TEC benchmarks  
17 on a variety of IT measures, including cost, against a  
18 group of investor-owned utilities. Based upon a 2020 study  
19 of 2019 actuals, IT capital and O&M spending per customer  
20 account served (Tampa Electric and Peoples Gas System) was  
21 the 7<sup>th</sup> lowest out of 21 companies reporting. IT capital  
22 and O&M spending per member of the workforce (Tampa  
23 Electric and Peoples Gas System) was the 7<sup>th</sup> lowest out of  
24 22 companies. Based upon these two metrics, 2019 IT costs  
25 are in the 2<sup>nd</sup> quartile of lowest cost per unit. The net

1 benefit to the company's overall O&M expense from  
2 technology advancements is also reflected in our total O&M  
3 falling below the Commission's O&M benchmark, as described  
4 in the direct testimony of Tampa Electric witness Jeffrey  
5 S. Chronister.

6  
7 **SUMMARY**

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

9  
10 **A.** Tampa Electric's IT department provides technology and  
11 services that support all aspects of the company's  
12 operations. The amounts the company spent for IT projects  
13 since 2013 and plans to spend in 2021 and 2022 are  
14 reasonable and prudent. We made these investments to  
15 support safety, a greener fleet, and an improved customer  
16 experience. The company's 2022 test year capital and O&M  
17 budgets are reasonable and prudent, will enhance  
18 cybersecurity protection, promote operating efficiency,  
19 enable useful features and functions, and improve the  
20 experience we provide to our customers.

21  
22 **Q.** Does this conclude your direct testimony?

23  
24 **A.** Yes, it does.  
25

**EXHIBIT**

**OF**

**KAREN M. MINCEY**

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LIST OF MINIMUM FILING REQUIREMENT SCHEDULES  
SPONSORED OR CO-SPONSORED BY KAREN M. MINCEY

MFR Schedule	Title
B-07	PLANT BALANCES BY ACCOUNT AND SUB-ACCOUNT
B-08	MONTHLY PLANT BALANCES TEST YEAR-13 MONTHS
C-16	OUTSIDE PROFESSIONAL SERVICES
C-37	O&M BENCHMARK COMPARISON BY FUNCTION
C-38	O&M ADJUSTMENTS BY FUNCTION
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Projects	Business Case Description	Total / Budgeted Cost
2014 – CCM - Contact Center Management	The gas and electric call centers combined under one management in 2010 with the intent of executing upon a business strategy to unify the work processes of gas and electric customer service professionals. Starting in late 2011 and continuing on through 2012, Customer Service management started an initiative to gain a better understanding of the technology differences between the two ACD and IVR systems, and to look at ways to improve customers' experiences. This culminated in a combined effort amongst Customer Service, Information Systems, and Telecom to evaluate TECO Energy's two existing contact center vendors with the intent of selecting one to support TECO's strategy of a more homogenous customer experience between gas and electric customers.	\$5,200,000.00
2015 - Windows 10/Laptop Replacement	Replacement of the aged inventory of desktop and laptops and upgrade to the appropriate version of Windows. Windows 7 went end of life on January 1, 2020 – this was before the next hardware refresh. Mobility technology was evaluated and deployed, as appropriate.	\$4,500,000.00
2016 - ETRM – Energy Trading and Risk Management	The implementation included the replacement of legacy Energy Trading and Risk Management System, Fuels Management System, and major pieces of functionality from the Energy Tracking System, with a single multiple-commodity ETRM system. The new ETRM solution provided a single platform for transactions management of power, natural gas, oil, propane, coal and financial derivative transactions as well as the logistical assets involved with the physical operations of TECO Energy.	\$12,000,000.00
2016 - EMS – Energy Management System	Original system was implemented in 1999. Vendor support is virtually non-existent. Current system is not NAEBS compliant; only supports IE6/7. Several custom TECO middleware applications were developed as a work around to the lack of system functionality. Upgrade EMS, last upgrade was in 2009; Vendor will no longer support our version soon.	\$8,400,000.00



Projects	Business Case Description	Total / Budgeted Cost
<p>2017 - CRB – Customer Relationship Management &amp; Billing (includes AFUDC)</p>	<p>TECO Energy’s electric and gas legacy Customer Information Systems (CIS) were implemented in 1981 and 1986, respectively. These systems have served the company well over the years, but were challenged to meet either current or future customer and stakeholder needs. Specifically, the platforms present the following challenges:</p> <ul style="list-style-type: none"> <li>* Risk – The aged and custom-nature of the technology platforms made it very difficult to find support resources; there was a waning significant business and reputational impact from system unavailability and with scarce support resources, there was a waning ability to recover from such a system outage;</li> <li>* Strategic Growth and Service Capabilities – Limited ability to meet customer expectations (e.g., ability to perform various self-service functions), constrains the ability to readily accommodate growth and further modernize grid infrastructure; and</li> <li>* Operational Efficiency – Legacy business practices and disparate platforms hinders streamlining and standardization of gas and electric processes; considerable manual back-office work to make up for functional deficiencies (e.g., effort expended in rate changes).</li> </ul> <p>These limitations impeded the ability to grow TECO’s business, better serve its customers, and realize operational savings. For example, there was a need for TECO to realize its vision of consolidating Peoples Gas’ and Tampa Electric’s CIS onto a single integrated platform.</p> <p>The CRM software utilized centralized business rules processing with de-centralized accountability, enabling employees to conduct and perform their business needs in the most streamlined and efficient manner. In support of the vision, the future state CRM software enabled TECO to accomplish the following:</p> <ul style="list-style-type: none"> <li>* Provided the foundation for future growth,</li> <li>* Improved service that will facilitate customers to be served when, where, and how they want to be served – including web and mobile self-service, and,</li> <li>* Realized operational efficiencies and information flow across the organization.</li> </ul>	<p>\$83,000,000.00</p>
<p>2019 - UCS – Unified Communications System</p>	<p>The new suite is a network-wide UC system centralized at Ybor City and Secure Center (Polk City) locations integrating the voice, video, and data network into existing routers and switches. TEC consolidated and standardized the moves, adds, change, and deletion (MACD) process into one management system.</p>	<p>\$3,000,000.00</p>

Projects	Business Case Description	Total / Budgeted Cost
2021 - AMI/MDM (includes AFUDC)	<p>The AMI Program consists of implementing advanced metering technology and meter data collection system, communication infrastructure, a meter data management system and customer engagement programs and services.</p> <p>Provide improved levels of customer experience. Improve outage response time and durations. Replace all single phase and multi-phase meters (electric only) with AMI meters. Provide monthly register billing and reduce truck rolls and billing estimates.</p>	\$242,400,000.00
2021 - ADMS	<p>Tampa Electric has been piloting the implementation of smart meters and is also moving in the direction of smart lights. The company is highly interested in implementing a self-healing network and as much related functionality as is feasible. Included in this vision is an Advanced Distribution Management System (ADMS) which is a software platform that supports the full suite of distribution management and optimization. An ADMS includes functions that automate outage restoration and optimize the performance of the distribution grid. Functionality being developed for electric utilities include fault location, isolation and restoration; volt/volt-ampere reactive optimization; conservation through voltage reduction; peak demand management; and support for microgrids and electric vehicles.</p> <p>Implementation of an ADMS solution will monitor &amp; control the entire distribution network efficiently and reliably. It will act as a decision support system to assist the control room and field operating personnel with the monitoring and control of the electric distribution system. Energy Delivery wants the ability to see when meters go offline and be able to route personnel before being notified by the customer. An ADMS can help do that as well as improving the reliability and quality of service in terms of reducing outages, minimizing outage time, maintaining acceptable frequency and voltage levels which are the key deliverables of an ADMS. In 2019 AMI meters will start to be installed and Tampa Electric's current OMS system is not compatible.</p>	\$24,300,000.00
2021 - IVR/CCM - Interactive Voice Response/Contact Center Management	<p>The following are key scope items for the CCM-IVR System:</p> <ul style="list-style-type: none"> <li>Hardware deployed to geographically redundant data centers in an "active/active" geo-configuration</li> <li>Core omni-channel contact center platform</li> <li>Self service IVR</li> <li>Integration to TECO backend systems for IVR self service and agent desktop screen-pop</li> <li>Virtual assistant to augment self service features on the TECO portal with conversational AI</li> <li>Advanced contact center reporting</li> <li>Workforce management, performance management, call recording, and speech analytics</li> <li>IVR reporting, End user administrative portal, Rapid re-skiler</li> <li>Emergency IVR solution</li> </ul>	\$8,000,000.00
<b>TOTAL</b>		<b>\$390,800,000.00</b>