TECO.
TAMPA ELECTRIC
AN EMERA COMPANY

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

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

KAREN M. MINCEY

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

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

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

A. I am responsible for the company's Information Technology and Telecommunications ("IT") department vision, leadership, and direction to (1) achieve strategic technology and business objectives and (2) monitor the company's competitive positioning with respect to IT services. I oversee all enterprise-wide IT activities, including infrastructure, architecture, cybersecurity, applications development and support, networks, sourcing, 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-

8

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?

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

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

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

Finally, beginning January 1, 2022, the CRB system will 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

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

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

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

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

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

1		Supply activities?
2		
3	**A.**	The major IT application that supports Energy Supply is a
4		Work & Asset Management System that is used to efficiently
5		schedule work and manage materials used at the various
6		Energy Supply sites.
7		
8	**Q.**	What major IT applications enable the company to comply
9		with legal and regulatory requirements?
10		
11	**A.**	As discussed further below, how we have invested in, and
12		the costs we have incurred for IT have been influenced by
13		requirements of the FERC, the North American Electric
14		Reliability Corporation ("NERC"), and the Sarbanes-Oxley
15		Act of 2002 ("Sarbanes-Oxley" or "SOX"), as well as
16		increased cybersecurity and customer privacy demands.
17		
18		We operate the following key applications to address legal
19		and regulatory compliance and cybersecurity concerns: the
20		Security Information and Event Management ("SIEM") system;
21		Identity and Access Management ("IAM") systems; physical
22		access control systems; multi-factor authentication
23		("MFA") systems; software patch maintenance and deployment
24		systems; anti-malware systems; governance, risk, and
25		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**

14

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

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

Q. Why did Tampa Electric change its IT infrastructure as
described above?

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

Second, we have invested significantly in IT resources to
meet the changing and increasing expectations from our
customers. As Ms. Cosby explains in her direct testimony,
the way companies like Amazon use technology to interact
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?
25		

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.

1   • Tampa Electric monitors NERC standard revisions and

2   provides comments during the appropriate development

3   stages; we begin planning based on the likely impact of

4   those revisions or new standards. We also monitor NERC

5   guidance and other documents as they are issued to

6   determine whether any enhancements to the NERC CIP

7   compliance requirements are necessary.

8   • The company participates in a state-wide CIP compliance

9   group and chairs the monthly discussions for current

10   event updates and information sharing with other

11   utilities.

12

13 We also are planning additional compliance-related

14 training for various CIP stakeholders. In the case of any

15 non-compliance issues, we also ensure that a new preventive

16 control is added as part of the mitigation.

17

18 Q. Please describe the Sarbanes-Oxley ("SOX") requirements

19   and controls implemented by the IT department.

20

21 A. The SOX requirements involving IT fall into the following

22   control areas: entity level controls, acquisition or

23   development of application software, technical change

24   management, ensuring system security (*e.g.,* logical access

25   administration), and data management (*e.g.,* backup and

recovery). We implement these control requirements through

our IT S&P for each SOX application.

In 2018, we formed a working group composed of team members

from IT, Emera Audit Services, Finance, Human Resources,

and Customer Experience to review existing SOX controls

and identify and remediate any gaps or potential weaknesses

in SOX application access or separation of duties controls.

This working group recommended improvements to the

company's access control processes and reporting

capabilities and enhanced the GRC module in the ERP suite,

which was fully implemented in 2020.

Q. How have customer information security concerns influenced

the way the company delivers IT services?

A. Our customers are very concerned about data privacy and

expect that the electric service we provide to them will

not be disrupted by a cybersecurity event. To address these

concerns, the company has continued to improve the

capabilities and maturity of its cybersecurity program by

increasing the number of team members dedicated to

cybersecurity and investing in their skills, purchasing

and installing advanced security tools with increased

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

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

closing processes.

- <u>2016 – Energy Management System ($8.4 million)</u>. This project upgraded the core application the company uses to operate its electric grid to a version that will be supported in the future. It included user interface improvements, multiple cybersecurity control improvements and improved NERC CIP compliance related functionality.

- <u>2017 – Customer Relationship Management & Billing ($83 million including AFUDC)</u>. This project replaced legacy technologies with a single, integrated modern suite of applications, enabled the company to provide new functions and features to its customers, and increased operating efficiencies in the Customer Experience department. Ms. Cosby explains the many benefits of the CRB system and the subsequent enhancements (beyond the $83 million in-service amount) in her direct testimony.

- <u>2019 – Unified Communications System ($3.0 million)</u>. This project upgraded the company's telephone system to a Voice over Internet Protocol ("VoIP") platform and gave team members access to advanced features like wideband (HD) audio, desk phone control with 'click to

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

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

- 2021 – Advanced Distribution Management System ($24.3 million). This project includes an IT platform that will provide multiple next generation distribution grid functions and features, such as 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, that will benefit our customers. Mr. Haines provides more detail on this project in his direct testimony.

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

2022 PROJECTED IT CAPITAL BUDGET

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

A. Team members in our IT department collaborate with team members in Energy Supply, Electric Delivery, Customer Experience, and the gas company affiliates, and other smaller Tampa Electric departments to develop and maintain technology plans that align with the company's future needs. The technology plans reflect the projects needed in 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

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

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

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

Digitalization. We will spend $1.7 million for digitalization to provide new and innovative customer-facing services in the areas of mobility and data analytics and improve the efficiency of internal business functions through the application of artificial intelligence and 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

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

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

SUMMARY

Q. Please summarize your direct testimony.

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

Q. Does this conclude your direct testimony?

A. Yes, it does.

EXHIBIT

OF

KAREN M. MINCEY

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DOCKET NO. 20210034-EI
EXHIBIT NO. KMM-1
WITNESS: MINCEY
DOCUMENT NO. 1
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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
C-39	BENCHMARK YEAR RECOVERABLE O&M EXPENSES BY FUNCTION
C-41	O&M BENCHMARK VARIANCE 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 NAESB 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

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Projects	Business Case Description	Total / Budgeted Cost
2017 - CRB – Customer Relationship Management & Billing (includes AFUDC)	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: * Risk – The aged and custom-nature of the technology platforms made it very difficult to find support resources; there was 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; * 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 * 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). 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. 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: * Provided the foundation for future growth, * 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, * Realized operational efficiencies and information flow across the organization.	$83,000,000.00
2019 - UCS – Unified Communications System	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.	$3,000,000.00

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Projects	Business Case Description	Total / Budgeted Cost
2021 - AMI/MDM (includes AFUDC)	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. 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.	$242,400,000.00
2021 - ADMS	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. Implementation of an ADMS solution will monitor & 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.	$24,300,000.00
2021 – IVR/CCM – Interactive Voice Response/Contact Center Management	The following are key scope items for the CCM-IVR System: • Hardware deployed to geographically redundant data centers in an "active/active" geo-configuration • Core omni-channel contact center platform • Self service IVR • Integration to TECO backend systems for IVR self service and agent desktop screen-pop • Virtual assistant to augment self service features on the TECO portal with conversational AI • Advanced contact center reporting • Workforce management, performance management, call recording, and speech analytics • IVR reporting, End user administrative portal, Rapid re-skiller • Emergency IVR solution	$8,000,000.00
	TOTAL	$390,800,000.00