

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

In re: Environmental Cost Recovery Clause

Docket No. 20180007-EI

Filed: November 16, 2018

**FLORIDA POWER & LIGHT COMPANY'S POST-HEARING BRIEF**

Florida Power & Light Company ("FPL" or the "Company"), pursuant to Order No. PSC-2018-0090-PCO-EI, files its Post-Hearing Brief, and states as follows:

**I. INTRODUCTION AND SUMMARY**

At the hearing held in this docket on November 5, 2018, the Commission approved stipulations for FPL on Environmental Cost Recovery Clause ("ECRC") Issues 5, 6, 8 10C, 10D, 13 and 14. Tr. 251-52, 425. FPL witness Renae B. Deaton's prefiled testimony and exhibits were entered into the record without objection, and she was excused without cross-examination. Tr. 5-6. FPL's Issues 1 through 4, 7, 10A and 10B remain contested. FPL presented the live testimony of witness Michael W. Sole to address the remaining contested issues. *See* Tr. 5. No other witness testified. At the close of the hearing, the Commission permitted the parties to submit briefs on the contested issues. Tr. 426.

Contested Issues 1 through 4 and 7 address ECRC amounts for 2017 (final true-up), 2018 (actual/estimated) and 2019 (projected), and the total net amount to be included in the ECRC factor that will be effective in 2019. Only SACE takes an adverse position on these issues, and does so only with respect to FPL's Turkey Point Cooling Canal Monitoring Plan ("TPCCMP") Project.

The TPCCMP-related costs FPL seeks to recover relate to activities designed to comply with the Florida Department of Environmental Protection's ("FDEP") Consent Order and the Miami-Dade Department of Environmental Resource Management's ("DERM") Consent

Agreement and Addendum. This Commission has ruled that costs for such compliance activities are recoverable through the ECRC if they are prudent and reasonable. As demonstrated below, FPL's compliance activities and associated costs are prudent and reasonable. Therefore, the Commission should approve ECRC recovery in the amounts shown in FPL's positions on Issues 1 through 4 and 7.

Contested Issues 10A and 10B relate to FPL's petitions to modify two existing projects. FPL proposes to extend the existing Manatee Temporary Heating System ("MTHS") Project to include installation of a heating system at Plant Ft. Myers ("PFM"). Like the MTHS installations for which the Commission has previously approved ECRC recovery, the installation at PFM is a cost-effective way to comply with the Plant's environmental permit requirement to provide a warm refuge for manatees.

FPL also proposes to modify the National Pollution Discharge Elimination System Permit Renewal Requirement Project ("NPDES Renewal Project") to include the replacement of "packing material" contained in the Plant Scherer Unit 4 cooling tower. FPL and Georgia, co-owners of Scherer Unit 4, anticipate that the Plant's renewed NPDES permit will include a discharge limit for copper in order ensure continue compliance with Georgia's water quality standards. The old packing material at Plant Scherer became contaminated with copper, which led to elevated levels of copper discharge in the Ocmulgee River. Replacing the packing material is a cost-effective way to ensure the Plant continues to satisfy copper-related water quality standards. FPL proposes to recover the costs associated with the repacking through ECRC only if Plant Scherer's renewed NPDES permit includes a copper discharge limit.

In short, as detailed below, the requested modifications satisfy the requirements for ECRC recovery and should be approved.

## II. LEGAL STANDARD

Section 366.8255(2), Florida Statutes, permits a utility to seek cost recovery for “environmental compliance costs.” Such costs are defined as all costs or expenses incurred by an electric utility in complying with environmental laws or regulations, including but not limited to in-service capital investments, including the electric utility’s last authorized rate of return on equity thereon, and operation and maintenance expenses. § 366.8255(1)(d), Fla. Stat.<sup>1</sup> Section 366.8255(2) continues provides:

If approved, the commission shall allow recovery of the utility’s prudently incurred environmental compliance costs . . . through an environmental compliance cost-recovery factor that is separate and apart from the utility’s base rates.

Consistent with the ECR Statute, the Commission stated that it “shall” allow the recovery of costs associated with an environmental compliance activity through the environmental cost recovery factor if (1) such costs were prudently incurred after April 13, 1993; (2) the activity is legally required to comply with a governmentally imposed environmental regulation enacted, became effective, or whose effect was triggered after the company’s last test year upon which rates are based; and (3) such costs are not recovered through some other cost recovery mechanism or through base rates. *In Re: Petition to establish an environmental cost recovery clause pursuant to Section 366.0825, Florida Statutes by Gulf Power Company*, 148 P.U.R.4th 545 (F.P.S.C. Jan. 12, 1994).

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<sup>1</sup> All statutory references are to the 2018 Florida Statutes.

### III. ISSUES AND POSITIONS

**ISSUE 1:** What are the final environmental cost recovery true-up amounts for the period January 2017 through December 2017?

**FPL:** \*\*\$31,560,081 over-recovery.\*\*

Tr. 22-23, 31 (Deaton); Ex. 14 at p. 1.

**ISSUE 2:** What are the estimated/actual environmental cost recovery true-up amounts for the period January 2018 through December 2018?

**FPL:** \*\*\$5,614,420 under-recovery.\*\*

Tr. 23, 31 (Deaton); Ex. 14 at p. 1.

**ISSUE 3:** What are the projected environmental cost recovery amounts for the period January 2019 through December 2019?

**FPL:** \*\*\$187,365,910.\*\*

Tr. 31 (Deaton); Ex. 14 at p. 1.

**ISSUE 4:** What are the environmental cost recovery amounts, including true-up amounts, for the period January 2019 through December 2019?

**FPL:** \*\*\$161,536,472, including prior period true-up amounts and revenue taxes.\*\*

Tr. 31 (Deaton); Ex. 14 at p. 1.

**ISSUE 7: What are the appropriate environmental cost recovery factors for the period January 2019 through December 2019 for each rate group?**

**FPL:** \*\*

RATE CLASS	Environmental Cost Recovery Factor (cents/kWh)
RS1/RTR1	0.159
GS1/GST1	0.157
GSD1/GSDT1/HLFT1	0.142
OS2	0.086
GSLD1/GSLDT1/CS1/CST1/HLFT2	0.139
GSLD2/GSLDT2/CS2/CST2/HLFT3	0.121
GSLD3/GSLDT3/CS3/CST3	0.121
SST1T	0.108
SST1D1/SST1D2/SST1D3	0.138
CILC D/CILC G	0.121
CILC T	0.112
MET	0.130
OL1/SL1/SL1M/PL1	0.035
SL2/SL2M/GSCU1	0.113
Total	0.149

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Ex. 14 at p. 131.

As noted above, generic Issues 1 through 4 and 7 are disputed only by SACE, and only to the extent they relate to FPL’s recovery of costs associated with the TPCCMP Project.

*TPCCMP Compliance Costs are Eligible for ECRC Recovery*

Following significant and substantial litigation in the 2017 ECRC Docket, this Commission determined that compliance costs associated with the TPCCMP Project are eligible for recovery. More specifically, costs associated with activities necessary to comply with the FDEP’s Consent Order (“CO”) or the Miami-Dade Department of Environmental Resource Management’s (“DERM”) Consent Agreement (“CA”) or Consent Agreement Addendum (“CAA”) (collectively, the CO, CA and CAA are referred to as the “Consent Actions”) are

“environmental compliance costs” and therefore can be recovered through the ECRC if they are prudent and reasonable. Order No. PSC-2018-0014-FOF-EI at \*22, Docket No. 20170007-EI.

The Commission’s 2017 ECRC Order also circumscribes the limited scope of its review. It recognized that “[t]he FDEP and DERM are state and local environmental regulators, respectively, with the authority to impose requirements on FPL’s operations of the CCS and other relevant plants.” Order No. PSC-2018-0014-FOF-EI at 7-8. That Order also acknowledged that “[i]t is not [the Commission’s] role to determine if the requirements of the CO, CA, or CAA are appropriate or will be effective at mitigating saltwater intrusion from the CCS.” Order No. PSC-2018-0014-FOF-EI at 14.

These rulings and holdings dictate what is and what is *not* at issue in this proceeding. The TPCCMP Project issues to be determined by the Commission are whether the costs relate to compliance activities, and if so, whether the costs are prudent and reasonable. The Commission will not decide, however, whether the remediation objectives are being met or being met timely. Whether environmental objectives are achieved is a question that lies beyond the Commission’s jurisdiction and must be determined instead by FDEP and Miami-Dade DERM, the agencies charged with oversight of the cooling canal system.

*The TPCCMP Project Costs in Question are Associated with Compliance Activities*

Below is a list of the major TPCCMP activities for which FPL seeks ECRC recovery.

Each activity is undertaken pursuant to a directive in the Consent Actions.

- Installation and operation of Floridan wells. Ex. 57 at p. 6.
- Sediment removal. Tr. 371 (Sole); Ex. 38 at p. 37.
- Installation and operation of a recovery well system. Tr. 285, 364-65 (Sole); Exs. 14 at p. 112, 38 at p. 37, 57 at p. 9.
- Preparation of three-dimensional groundwater model. Tr. 364-65 (Sole); Exs. 14 at p. 112, 38 at p. 37.
- Preparation of a groundwater salt model. Tr. 364-65 (Sole); Exs. 14 at p. 112, 38 at p. 37.
- Monitoring and reporting. Exs. 38 at p. 37, 57 at p. 9-10.
- Installation of groundwater monitoring wells. Ex. 38 at p. 37.
- Continued maintenance of all pumps, motors and wells. Tr. 365 (Sole).
- Installation of Turning Basin fill. Tr. 362-64 (Sole); Exs. 14 at p. 112, 57 at p. 8-9.
- Installation of Turtle Point fill. Tr. 364 (Sole); Exs. 14 at p. 112, 57 at p. 8-9.
- Development and implementation of a nutrient management plan. Tr. 392-93 (Sole); Exs. 38 at p. 37, 57 at p. 5.
- Continued monitoring and preparation of continuous surface electromagnetic mapping. Exs. 38 and 37.

*FPL has Continued To Act Prudently with Respect to its Obligations under the Consent Actions*

FPL is continuing to move forward with compliance and implementation of actions associated with activities required under the Consent Actions. Ex. 14 at p. 112. Much of the costs associated with the compliance activities that were projected to occur in 2017 were deferred to 2018. The deferrals were due largely to delays in the permitting process, which adversely impacted the timely implementation of the recovery well system (“RWS”), Turning Basin and Turtle Point Backfill projects. Tr. 285 (Sole). FPL submitted the RWS designs and modeling for agency review and approval on May 16, 2016. It took the agencies about a year to approve the design. *Id.*

Similarly, permit approval from Miami-Dade County and the U.S. Army Corps of Engineers for the Turning Basin and Turtle Point Backfill projects took longer than anticipated. Mr. Sole testified that, due to the late start of those backfill projects, some of those activities and associated costs will continue into 2019. Tr. 370-71 (Sole). Sediment removal activities also were deferred, but that delay was due to FPL’s decision to evaluate the appropriate removal level needed to address system thermal performance in view of the system’s current performance, which was an unknown at the time of the original projected schedule. Tr. 371 (Sole).

On May 9, 2018, after months of delays in the permitting process, FPL received a Section 404 permit from the U.S. Army Corp of Engineers for the restoration of the Turning Basin and Turtle Point Canal, two deep external artificial channels adjacent to the cooling canals. Ex. 14 at p. 112. On May 15, 2018, FPL began operation of the RWS – consisting of 10 extraction wells – required by the Consent Actions. The RWS will extract 15 million gallons per day of hypersaline groundwater from the Biscayne aquifer and safely dispose it in an underground injection control well. Since FPL began extracting the hypersaline plume using an interim



extraction system in the fall of 2016, FPL has removed approximately 3,800 million pounds of salt from the Biscayne Aquifer. *Id.*

Prior to operation of the RWS, FPL completed a baseline controlled source electromagnetic survey required by the Consent Actions. This survey will provide a three - dimensional view of the hypersaline plume and aid in assessing the extraction of the hypersaline plume. Pursuant to the CO, on June 20, 2018 FPL completed an analysis that seeks to allocate relative contributions of other entities or factors to the movement of the saltwater interface. This analysis was completed using the variable density three dimensional groundwater model developed under the CA, with input from DEP and other agencies. Ex. 14 at p. 112.

FPL's canal management actions have been effective in reducing nutrient concentrations in the cooling canals and in shallow groundwater near the canals. Ex. 57 at p. 4 (discussing nutrient management plan and impact on ammonia levels). These activities consist of sediment removal, berm management, vegetation management, freshening with low nutrient Floridan aquifer water, and groundwater extraction. Semi-annual total nitrogen concentrations in the CCS canals have dropped from 15.2 mg/L in September 2013 to 3.5 mg/L in September 2018. Phosphorous concentrations have also dropped to well below half of what they had been in September 2014. *Id.* Additionally, freshening with low nutrient Floridan aquifer water reduces the concentration of salts and nutrients in the cooling canals. *Id.* at 6.

In conclusion, FPL's planning and execution of compliance activities are prudent and reasonable. FPL continues to move forward with activities required to comply with the Consent Actions and continues to work cooperatively with the environmental agencies.

#### *FPL Remains in Compliance*

The record evidence demonstrates that FPL remains in compliance with the obligations set forth in the Consent Actions. SACE attempted to muddle the facts by offering a July 10,

2018 letter from DERM to FPL, which SACE mischaracterized as exhibiting non-compliance with the DERM CAA's surface water ammonia standards.<sup>2</sup> FPL witness Sole corrected SACE's false and misleading suggestion by confirming that: (1) the letter does not indicate non-compliance and (2) FPL's contribution to the ammonia levels of the surrounding water bodies is negligible. Tr. 367, 382-84, 387 (Sole).

As a threshold matter, Mr. Sole clarified that the CAA does not require FPL to fully address areas that have ammonia exceedances. Tr. 372, 377-78 (Sole). Under the CAA, FPL was required to perform analyses to quantify and assess the ammonia to determine its origin; those analyses would then culminate in a site assessment report. Tr. 366 (Sole). In compliance with the CAA, FPL performed the required analyses and submitted the report. *Id.* DERM has approved the site assessment report and has asked FPL to prepare an action plan. Tr. 382. In fact, the letter upon which SACE so heavily relies points out that a failure to comply may result "in the assessment of penalties as outlined in the subject Consent Agreement." Ex. 55. No penalties have been assessed. Tr. 417 (Sole). The terms of the letter and the chronology of events indicates that DERM deems FPL to be in compliance. Tr. 389 (Sole).

Mr. Sole also explained that the elevated levels of ammonia are attributable substantially to naturally occurring conditions rather than the cooling canals. *See, e.g.*, Tr. 382-83 (Sole). The cooling canal system's contribution to elevated ammonia levels was not more than two percent, which is de minimis. Tr. 367, 383, 387 (Sole). In fact, the ammonia levels within the cooling canals – although not subject to water quality standards – meet Miami-Dade water quality standards. Tr. 416-17 (Sole). Assessment of the waters surrounding the cooling canal systems

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<sup>2</sup> SACE also alleged at hearing that FPL failed to disclose to the Commission in the 2017 ECRC proceeding that FPL filed a notice with the NRC to extend the life of the Turkey Point 3 and 4 reactors on May 17, 2017. Tr. 399. However, the license renewal application was only made public in 2018. *See* <https://www.nrc.gov/docs/ml1807/ML18072A232.pdf>.

revealed that the ammonia exceedances result primarily from accumulation of detrital material (leaf litter) and low flow, which combine to create a scenario for ammonification. Tr. 382-83 (Sole).

**ISSUE 10A: Should the Commission approve FPL’s Petition for Approval of Modification to Manatee Temporary Heating System Project and the recovery of the associated costs through the ECRC pursuant to Section 366.8255, F.S.?**

**FPL:** \*\*Yes. The PFM MTHS Project is being undertaken in order to comply with PFM’s Manatee Protection Plan during periods when PFM is shut down for extended outages or because it is not being economically dispatched. Installation of the proposed MTHS is a cost-effective way to meet PFM’s compliance requirement.\*\*

Modification of FPL’s MTHS Project to include PFM satisfies the requirements for ECRC recovery. As a condition of its NPDES permit, FPL is required to comply with a Manatee Protection Plan (or “MPP”) at PFM by providing a warm refuge for manatees. Installation of a fixed, electric MTHS is a prudent, cost-effective compliance option. These compliance costs are not recovered in base rates.

*MTHS Project*

The Commission originally approved the MTHS Project as ECRC-eligible in 2009.<sup>3</sup> By Order No. PSC-09-0759-FOF-EI, the Commission authorized ECRC recovery for the installation of an MTHS at FPL’s Cape Canaveral and Riviera Beach plants. In doing so, the Commission reasoned that “specific environmental laws and regulations []require FPL to comply with a MPP . . . and thus warrant the implementation of the MTHS. . . . FPL is not presently recovering the costs of the Project through base rates or any other recovery mechanism, nor has it included the costs in its 2010 test year Minimum Filing Requirements.” *In re: Environmental Cost Recovery*

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<sup>3</sup> See Order No. PSC-09-0759-FOF-EI at 9, issued November 18, 2009, in Docket No. 20090007-EI, *In re: Environmental Cost Recovery Clause*; Order No. PSC-12-0613-FOF-EI at 8-9, issued November 16, 2012, in Docket No. 20120007-EI, *In re: Environmental Cost Recovery Clause*; Order No. PSC-2018-0014-FOF-EI at 30, issued January 5, 2018 in Docket No. 20180007-EI, *In re: Environmental Cost Recovery Clause*.

*Clause*, Docket No. 20090007-EI, Order No. PSC-09-0759-FOF-EI at 9 (Nov. 18, 2009). The Commission concluded that the costs associated with the MTHS at Cape Canaveral and Riviera Beach “meet the requirements of Section 366.8255, F.S., for recovery through the ECRC.” *Id.*

The Commission later expanded the MTHS Project to include installation of heating systems at FPL’s Port Everglades and Lauderdale plants. *See* Order No. PSC-12-0613-FOF-EI at 8-9, issued November 16, 2012, in Docket No. 20120007-EI, *In re: Environmental Cost Recovery Clause*; Order No. PSC-2018-0014-FOF-EI at 30, issued January 5, 2018 in Docket No. 20180007-EI, *In re: Environmental Cost Recovery Clause*. Like Cape Canaveral and Riviera Beach, the Port Everglades and Lauderdale plants were subject to an MPP requiring FPL to provide a warm water refuge for manatees at those sites. Tr. 414-15 (Sole).

*MTHS Project at PFM is Required for Compliance with the MPP*

Like the Cape Canaveral, Riviera Beach, Port Everglades and Lauderdale plants, PFM has an MPP with which it must comply. *See* Tr. 413-15 (Sole); Ex. 5. PFM’s MPP is Specific Condition I.D.10 to the NPDES Permit Number FL0001490, issued by the Florida Department of Environmental Protection on January 20, 2016. Specific Condition I.D.10 to the NPDES Permit states that “the permittee shall continue compliance with the facility’s Manatee Protection Plan approved by the Department on August 18, 1999.” Ex. 4 at p. 15; *see also* Tr. 269 (Sole). Pursuant to the MPP for PFM, FPL must maintain a warm water manatee refuge if the water temperature at the Plant’s cooling water discharge falls below 61 degrees Fahrenheit. Tr. 270 (Sole).

Until recently, FPL had no need to install an MTHS at PFM because the plant routinely operated during the manatee season (November through March) and the plant’s regular cooling water discharges provided a sufficient and consistent supply of warm water. Tr. 270 (Sole).

However, due to FPL's increasing generation efficiencies, FPL cannot continue to rely solely on the Plant's regular cooling water discharges to meet the permit requirement for a warm water manatee refuge. *Id.* Over the past two decades, FPL has upgraded its fossil fleet, constructing state-of-the-art combined cycle units at its Turkey Point, Martin, Manatee, West County, Cape Canaveral, Riviera and Port Everglades plants. Similar units are planned to go into service at Okeechobee and Ft. Lauderdale. Tr. 270-71 (Sole). These upgrades already have produced in \$9.3 billion in fuel savings for customers and have avoided over 120 million tons of carbon dioxide emissions. *Id.*

These efficiency improvements have had two consequences for PFM that now require the installation of an MTHS at that site. First, combined cycle units need significant routine maintenance. Until now, FPL has been able to schedule the maintenance for PFM outside of the manatee season, which meant it could rely on the Plant's normal cooling water discharge to provide a warm water manatee refuge without the need for an MTHS. The upgrades at FPL's other plant sites have resulted in both a significant increase in the number of combined cycle units requiring routine maintenance and a significant decrease in the number of smaller units with individual steam turbines that can remain in operation to provide warm water for manatees. Tr. 271 (Sole). The size of FPL's combined cycle fleet and the reduction in the number of small, single units that can be taken out of service separately for maintenance outages has now reached the point that FPL can no longer ensure that the PFM outages are sequenced outside of manatee season. Tr. 272 (Sole).

Second, improvements in the efficiency of FPL's fossil fuel fleet since the time that PFM was repowered have pushed PFM down the dispatch stack to the point that FPL can no longer be confident that it will be dispatched regularly and for sustained periods during winter months. The

newer combined cycle units are more efficient and are dispatched before PFM, with the result that there may be extended periods during manatee season when PFM would not be dispatched to meet load and thus would not be producing a cooling water discharge that could maintain the necessary warm water manatee refuge. Tr. 272 (Sole).

*Installation of the MTHS at PFM is Prudent and Reasonable*

Installation of an MTHS will ensure compliance with the MPP. FPL evaluated two other options – running PFM out of economic dispatch and renting a temporary diesel heater – and concluded that installing a fixed, electric MTHS is the best solution.

Running PFM out of economic dispatch would neither ensure compliance nor save costs. First, this option would not eliminate the need for an MTHS during planned and unplanned outages. This concern is greater at PFM than at FPL plants located further south because its geographic location makes it more likely to fall below 62 degrees Fahrenheit (*i.e.*, the temperature at which FPL would have to start PFM in order to provide a timely warm water manatee refuge). Tr. 273, 315-16 (Sole). Moreover, running the plant out of economic dispatch could be very costly. Tr. 272-73, 304 (Sole). Based on the frequency of events for the past ten years during manatee season where the water temperature dipped below 62 degrees, the annual incremental fuel and other operating and maintenance expenses of running PFM out of dispatch are estimated to range from \$350,000 in an average year to more than \$1 million in a worst case year. Tr. 272-73 (Sole). These costs would mount, as the need for the MTHS will continue indefinitely. *Id.*

Installation of the MTHS also is more cost-effective than renting a temporary system every season. FPL analyzed the cost differential and determined that installing the electric-powered MTHS saves \$5,148,300 (CPVRR) as compared to renting a diesel-fueled MTHS. Ex. 36 (p. 7).

Underscoring the prudence and reasonableness of the decision to install an MTHS at PFM is the application of lessons learned from previous MTHS installations by FPL's design team. A few examples of lessons learned FPL incorporated when designing and planning the installation include:

- critical review of the warm water refuge thermal loss mechanisms, including use of a thermal model that divides the refuge into at least six cells and accounts for tidal exchange, advection and convective flows between cells and at the refuge entrance;
- optimization of the temporary refuge design such as locating the heated water discharge at a depth which promotes uniform distribution of warm water and the withdrawal at the opposite end of the refuge enhances mixing;
- optimization of the warm water refuge size to provide only 1 the necessary area of heated water for the expected number of manatees at PFM; and
- coordination of electrical service for the PFM MTHS with the plant upgrade construction plans and schedule, in order to maximize use of existing transformers and electrical feeds.

Tr. 276-77 (Sole).

*FPL's Petition for Modification of the MTHS Program Satisfies the Requirements for ECRC Recovery*

Like the original MTHS Project and the subsequent modifications, FPL's current request to include the installation of an MTHS at PFM satisfies the requirements for ECRC recovery and should be approved because: (1) FPL is subject to an environmental requirement – the PFM MPP which is a permit condition; and (2) FPL did not include any costs for the PFM installation in its

2017 test year Minimum Filing Requirements and is not presently recovering the costs of the Project through any other recovery mechanism. Tr. 273 (Sole).

OPC's cross-examination of FPL witness Sole suggests an argument that FPL has characterized its request and petition regarding the MTHS and PFM as a "modification" in order to avoid the need to make the requisite showings. Witness Sole flatly rejected that contention:

Q. Is it your opinion that there is a generic Commission policy where they have approved any Manatee Temporary Heating System project at any plant if it is a requirement of a permit?

A. No. [] FPL is, at this point, seeking specific Commission approval of this project, or to amend this project based upon the need demonstrated specifically at Ft. Myers and the requirement to meet its National Pollution Discharge Elimination System permit and Manatee Protection Plan obligations at that facility.

Tr. 300 (Sole).

**ISSUE 10B: Should the Commission approve FPL's Petition for Approval of Modification to National Pollution Discharge Elimination System Permit Renewal Requirement Project and the recovery of the associated costs through the ECRC pursuant to Section 366.8255, F.S.?**

**FPL:** \*\*Yes. It is anticipated that Plant Scherer's renewed NPDES permit will include a limit on copper discharges. Repacking Scherer Unit 4's cooling tower fill medium is a cost-effective way to reduce copper levels.\*\*

Modification of FPL's NPDES Permit Renewal Project to include the repacking of Scherer Unit 4's cooling tower material satisfies the requirements for ECRC recovery. FPL and Georgia Power anticipate that its renewed NPDES permit will include as a condition a copper discharge limit. Replacing the copper-contaminated cooling tower packing material is a prudent, cost-effective way to reduce the copper discharge.

*NPDES Renewal Project*

By Order No. PSC-11-0553-FOF-EI, dated December 7, 2011, the Commission approved FPL's existing NPDES Renewal Project as appropriate for recovery through the ECRC. The



Commission found that the NPDES Renewal Project “is designed to comply with the Federal Clean Water Act, which requires all point source discharges to navigable waters from industrial facilities to obtain permits under the National Pollutant Discharge Elimination System (NPDES) program. (33 U.S.C. Section 1342) NPDES permits must be renewed every five years.” Order No. PSC-11-0553-FOF-EI at p. 8. It further recognized that, in Florida, the FDEP was delegated authority by the U.S. Environmental Protection Agency (“EPA”) to implement the NPDES program. *Id.*

The project is intended to address new requirements that require compliance by FPL as it renews NPDES permits. Tr. 331 (Sole). At the time of the Commission’s initial approval, the FDEP had amended its rules to include certain new requirements for all renewed wastewater discharge permits for power plants. Order No. PSC-11-0553-FOF-EI at p. 8. The Commission concluded that the NPDES Renewal Project “meets the criteria for cost recovery established by the Commission in Order No. PSC-94-0044-FOF-EI. In addition, FPL’s compliance with the NPDES permit is legally mandated under a governmentally imposed environmental regulation.” *Id.*

*FPL and Georgia Power Anticipate Plant Scherer’s Renewed NPDES Permit will include a Copper Discharge Limitation*

FPL and Georgia Power Corporation co-own Plant Scherer Unit 4 located in Georgia.<sup>4</sup> Authority to implement the NPDES program in Georgia was delegated by EPA to the Georgia Environmental Protection Division of Georgia’s Department of Natural Resources (“Georgia EPD” or the “Division”). Under the NPDES program, wastewater discharges from Plant Scherer cannot cause a water body to exceed Georgia’s water quality standards. Tr. 279 (Sole).

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<sup>4</sup> Georgia Power operates and maintains all facilities, including all four generating units, at Plant Scherer. Tr. 334 (Sole).

Plant Scherer submitted an updated NPDES permit renewal application on January 30, 2018. *See* Ex. 7. Recent testing and monitoring of the effluent from Plant Scherer’s cooling tower basin revealed that the Plant’s copper discharge levels have the potential to result in an exceedance of the Georgia water quality standards. Tr. 280 (Sole). As a consequence of that testing and in view of Georgia EPD’s permitting procedures, as well as consultations with the Division, FPL and Georgia Power anticipate that the Georgia EPD will include in Plant Scherer’s renewed NPDES permit a new condition to ensure the plant does not exceed the Georgia Water Quality Standards for copper.<sup>5</sup> Tr. 280-81 (Sole).

*Repacking the Cooling Tower Material is a Prudent Solution*

Georgia Power analyzed the source of copper in Plant Scherer’s discharge stream and evaluated options for reducing the concentration of copper in the discharge. It determined that that the elevated copper levels in the effluent were attributable to two sources: the degradation of the Plant’s copper condenser tubes and the concentration of copper in the cooling tower packing, where copper from the condenser tubes became entrained over years of operation. Tr. 281 (Sole). After identifying the sources, Georgia Power evaluated three options that could potentially resolve the elevated copper concentrations in the cooling water wastewater: (1) coating of condenser tubes, (2) installation of a treatment system to remove copper from the cooling tower discharges, or (3) replacement of condenser tubes and cooling tower packing. Tr. 282 (Sole).

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<sup>5</sup> Georgia’s WQS for copper in the Ocmulgee River, which is found in Rule 391-3-6.03 (5)(e)(ii)5, is 5 parts per billion (“ppb”). As established in Rule 391-3-6.06 (4)(d)5(ii) of the Georgia Rules and Regulations, if a chemical constituent listed in the WQS is present in an effluent stream, an effluent limit may be required. Copper is one of those constituents. Tr. 279-80 (Sole). In the case of Plant Scherer, the calculated limit is approximately 60 ppb at the point of discharge from the collection basin for the Plant Scherer cooling towers. Tr. 280 (Sole).

Replacement of condenser tubes and cooling tower packing was determined to be the most cost-effective, long-term solution.<sup>6</sup> This entails replacing the copper condenser tubes with titanium tubes and replacing the copper-contaminated packing in the cooling towers with new packing material. Ex. 8; Tr. 282 (Sole). Having been in service since the 1980s with a life expectancy of 30 years, and the copper condenser tubes in Unit 4 were near the end of their useful life and Georgia Power replaced them consistent with its normal replacement schedule. Accordingly, FPL does not seek to recover the condenser tube replacement costs through the ECRC. Tr. 282-83 (Sole).

Unlike the tubes, the packing material in Unit 4 has not reached the end of its useful life. In fact, the packing materials had a remaining useful life of 10 to 15 years. Tr. 416 (Sole). Replacement of the packing material is therefore not in step with its normal replacement schedule. The repacking was necessary solely to ensure that the copper concentration in the cooling tower basin can remain consistently in compliance with applicable water quality standards. Tr. 283 (Sole).

Georgia Power completed the repacking in the spring of this year,<sup>7</sup> Tr. 348 (Sole), and it is already working. Tr. 358, 408 (Sole). Testing performed after the repacking demonstrated a significant reduction in the copper effluent. Copper levels (parts per billion) that had been as high as 90 declined to levels in the low 20s. The cause and effect and beneficial result of the repacking is demonstrably evident. Tr. 358 (Sole).

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<sup>6</sup> The condenser tube coating option was rejected because it was not expected to last more than two years, it would reduce Plant Scherer's generating efficiency and would do nothing to address the copper releases originating from the cooling tower packing material. Ex. 36 (p. 14). The waste water treatment option was rejected due to substantially higher capital and continuing O&M costs. Ex. 36 (p. 15).

<sup>7</sup> Georgia Power, as FPL's agent for the operation and maintenance of Scherer Unit 4, used competitive bidding for equipment and services as part of their standard practices.

*Requested Accounting Treatment - Deferred ECRC Recovery*

The NPDES permit renewal process for Plant Scherer is still in process. Therefore, FPL is not seeking current ECRC recovery of the cooling tower repacking costs. Rather, FPL requests approval to recover those costs through the ECRC only after issuance of the renewed NPDES permit with a requirement to address copper discharges. Prior to that, FPL will exclude the capital costs incurred for the repacking activity at Plant Scherer Unit 4 from ECRC recoverable accounts and instead will record those costs in base capital accounts. Any associated expenses will likewise be recorded in base expense accounts. Tr. 18 (Deaton).

If, as anticipated, the renewed NPDES permit for Plant Scherer includes a condition that requires a reduction in copper concentration (thus confirming the regulatory requirements for the repacking activity), FPL will transfer the balance of all reasonable and prudent costs for the repacking activity from the base capital accounts to ECRC recoverable accounts and begin the normal process of ECRC recovery for those and future reasonable and prudent associated capital costs and O&M expenses. Tr. 18-19 (Deaton).

*FPL's Petition for Modification of the NPDES Renewal Program Satisfies the Requirements for ECRC Recovery*

The requested modification is designed to ensure compliance with an anticipated new NPDES permit renewal requirement as contemplated by the Commission's original approval of the NPDES Renewal Project. Tr. 331 (Sole). But FPL is not relying on the original approval to obviate the need for the Commission's approval of the requested modification. To the contrary, ample evidence developed and presented by FPL and admitted into the record in this proceeding supports approval.

As demonstrated above, the repacking activity is a compliance activity that stems from an anticipated environmental regulation. FPL did not include the costs for the repacking activity in

its most recent rate case Minimum Filing Requirements. Tr. 283-84 (Sole), *see also* Ex. 36 at p. 20 (also noting that no other recovery mechanism is available). Finally, while FPL has recorded the compliance costs in base rates for now, FPL is seeking to transfer the costs to ECRC accounts if and when the renewed NPDES permit for Plant Scherer includes a copper discharge limit. As such, FPL would be recovering the compliance costs through only one mechanism. The requested modification of the NPDES Renewal Project to include the repacking activity at Plant Scherer Unit 4 should therefore be approved.

#### **IV. CONCLUSION**

FPL satisfies the requirements for ECRC recovery for the TPCCMP Project and the requested modifications of the MTHS Project and NPDES Renewal Project. The TPCCMP Project activities in question are required under the Consent Actions, and the associated costs are prudent and reasonable. The modification of the MTHS Project to include PFM should be approved. Installation of an MTHS is a cost-effective way to comply with PFM's MPP. Likewise, the requested modification to the NPDES Renewal Project should be approved. The replacement of the packing material is a cost-effective way to satisfy the copper discharge limits that FPL and Georgia Power anticipate will be included in Plant Scherer's renewed NPDES permit.

For all of the foregoing reasons, consistent with Section 366.8255, Florida Statutes, and prior Commission orders, and based on the evidentiary record in this proceeding, FPL requests that the Commission approve its 2018 ECRC recovery factors and approve its Petitions to Modify the MTHS Project and NPDES Renewal Project.

Respectfully submitted this 18th day of October 2018.

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**CERTIFICATE OF SERVICE**  
**Docket No. 20180007-EI**

I **HEREBY CERTIFY** that a true and correct copy of the foregoing has been furnished by electronic delivery on this 16th day of November 2018 to the following:

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