57

FPL’s Response to OPC's First Set of Interrogatories Nos. 4-8

QUESTION:
Describe specifically how the Company measures the success of each approved storm protection program and project "to achieve the objectives of reducing restoration costs and outage times associated with extreme weather events and enhancing reliability."

RESPONSE:
Please see Sections II and IV of FPL's 2023-2032 Storm Protection Plan filed on April 11, 2022 (Exhibit MJ-1) for an overview of how each program will achieve the legislative objectives codified in Section 366.96, F.S., "to strengthen electric utility infrastructure to withstand extreme weather conditions by promoting the overhead hardening of electrical transmission and distribution facilities, the undergrounding of certain electrical distribution lines, and vegetation management" in order to "reduce restoration costs and outage times to customers and improve overall service reliability."

QUESTION:
Pole inspection program

a. Does the inspection program include the cost to replace and rehabilitate poles that fail inspection?

b. If so, provide the breakdown in costs for the following categories for the years 2020, 2021, and 2022

   i. Number of poles replaced

   ii. Cost to replace poles

   iii. Number of poles rehabilitated

   iv. Cost to rehabilitate poles

   v. Average cost per pole for inspection less replacement and rehabilitation costs

c. NESC Table 261-1 defines replacement of wood poles (Grade B) when strength deteriorates to 75% of that required when installed.

   i. Confirm whether FPL is using the 75% requirement for Grade B.

   ii. List the load factor (NESC Table 253-1) values FPL uses for "when installed" Grade B or Grade C.

   iii. Is FPL applying extreme wind loading for these poles when evaluating "when installed" loads?

   iv. Is the loading different for feeder poles and lateral poles? If so, Why?

RESPONSE:
a. Yes, the Distribution Inspection Program includes the cost to replace and remediate poles that fail inspection. See Section (IV)(A) of FPL's 2023-2032 Storm Protection Plan (Exhibit MJ-1) filed on April 11, 2022.

b. Please see FPL's objections filed on April 14, 2022. Subject to and without waiver of said objections, the number of poles remediated/replaced under the Distribution Inspection Program and the associated costs are both a function of the annual distribution pole inspections actually completed during a calendar year. The Distribution Inspection Program is ongoing for calendar year 2022 and, therefore, the requested information is not available for calendar year 2022. For a projection of the estimated number of projects and costs

associated with the Distribution Inspection Program during calendar year 2022, see FPL's 2022 SPPCRC Projection filing approved in Docket No. 20210010-EI. For purposes of the Distribution Inspection Program during calendar years 2020 and 2021, information responsive to subparts (b)(i)-(v) is provided in the table below:

	2020	**2021**
Number of poles replaced [(1)]	2,108	3,118
Cost to replace poles	$17.0M	$23.2M
Number of poles reinforced (trussing) [(1)]	2,986	3,308
Cost to reinforce poles	$2.9M	$2.7M
Average cost for inspection per pole (excluding replacement and reinforcement)	$31	$34

[(1)] The 2020 numbers were provided in FPL's 2021 SPP Annual Report filed on June 1, 2021. The final numbers for 2021 will be included in the FPL's 2022 SPP Annual Report to be filed on June 1, 2022.

c.

i. When inspecting distribution wood poles, FPL uses the 2/3 (67%) requirement for 250B Grade B as stated in footnote 2 of NESC Table 261-1.

ii. When inspecting distribution wood poles, FPL uses a load factor of 1.0 (as listed on NESC table 253-1 Rule 250C Extreme Wind Grade B) for its feeder poles and a transverse load factor of 2.5 for non-feeder poles (as listed on Rule 250B Grade B).

iii. When inspecting distribution wood poles, FPL applies NESC Rule 250C Extreme Wind Load (EWL) Grade B for its feeder poles and applies Rule 250B Grade B for non-feeder poles.

iv. Yes, please see FPL's response to subpart (iii) of this response above. FPL follows NESC Rule 250C (EWL) Grade B for its feeder pole population because these feeder poles serve a significantly larger number of customers than lateral poles.

QUESTION:
Transmission Pole Inspection

a. Provide actual costs for inspection for 2020, 2021, and 2022.

b. Provide the number of transmission pole inspections by material type for each year (2020, 2021, and 2022)

   i. Concrete

   ii. Steel

   iii. Wood

c. Provide the average cost per year for wood pole inspection.

d. Provide average cost per year for steel and concrete pole inspection.

e. For each year (2020, 2021, 2022) provide the number of concrete poles that failed inspection.

   i. For the Priority 2 poles, how many of these poles have been rehabilitated or replaced, and at what cost?

   ii. Describe the failure mode of these poles.

f. For each year (2020, 2021, 2022) provide the number of steel poles that failed inspection.

   i. For the Priority 2 poles, how many of these poles have been rehabilitated or replaced, and at what cost?

   ii. Describe the failure mode of the poles.

RESPONSE:
See FPL's objections filed April 14, 2022. Subject to and without waiver of said objections, the Transmission Inspection Program is ongoing for calendar year 2022 and, therefore, the requested information is not available for calendar year 2022. For a projection of the estimated number of projects and costs associated with the Transmission Inspection Program during calendar year 2022, see FPL's 2022 SPPCRC Projection filing approved in Docket No. 20210010-EI. For purposes of the Transmission Inspection Program during calendar years 2020 and 2021, information responsive to this request is provided below.

a. The actual program cost for FPL's Transmission Inspection program for 2020 and 2021 is included in the table below.

	2020[(1)]	**2021**[(2)]
FPL Transmission Inspection Program (Actual Costs)	$28.4M	$34.4M

[(1)] The 2020 actual program costs was provided in FPL's 2021 SPP Annual Report filed on June 1, 2021. This cost includes both capital and O&M expense irrespective of whether the costs are recovered through base rates or SPPCRC. In 2020 FPL did not seek recovery of 2020 SPP project costs through SPPCRC.

[(2)] The final number for 2021 actual program costs will be included in FPL's 2022 SPP Annual Report to be filed on June 1, 2022. This cost includes both capital and O&M expense irrespective of whether the costs are recovered through base rates or SPPCRC.

b.

	2020	**2021**
Concrete and Steel transmission structures inspected [(1)(2)]	66,074	67,684
Wood transmission structures inspected [(1)]	2,888	1,474

[(1)] The 2020 numbers were provided in FPL's 2021 SPP Annual Report filed on June 1, 2021. The final numbers for 2021 will be included in the FPL's 2022 SPP Annual Report to be filed on June 1, 2022.

[(2)] FPL reports inspection numbers for concrete and steel transmission structures as combined.

c. FPL does not separate out inspection cost by pole material type (wood, concrete, and steel). The cost included below includes climbing and bucket truck inspection cost on all wood (on a 6-year cycle), concrete, and steel (on a 10-year cycle) and does not include costs for remediation.

	2020	**2021**
Transmission structure inspection cost per year [(1)]	$1.2M	$1.1M

[(1)] The 2020 numbers were provided in FPL's 2021 SPP Annual Report filed on June 1, 2021. The final numbers for 2021 will be included in the FPL's 2022 SPP Annual Report to be filed on June 1, 2022.

d. Please see response to subpart (c) for transmission inspection cost per year. FPL does not separate out cost by poles material type (wood, concrete, and steel).

e.

	2020	**2021**
Number of concrete and steel transmission structures failing inspection [(1)]	213	212

[(1)] The 2020 numbers were provided in FPL's 2021 SPP Annual Report filed on June 1, 2021. The final numbers for 2021 will be included in the FPL's 2022 SPP Annual Report to be filed on June 1, 2022.

i. FPL has completed rehabilitation or replacement of all priority 2 poles identified during inspection year 2020. FPL is currently rehabilitating or replacing priority 2 poles identified during inspection year 2021. FPL does not separate rehabilitation or replacement costs associated with different transmission components (poles, crossarms, insulators, bolts, overhead ground wire, etc.) nor by material types (concrete, steel or wood).

ii. The primary cause of failure for concrete or steel transmission structures was corrosion/cracks.

f. Please see FPL’s response to subpart (e). FPL reports combined number for concrete and steel poles.

QUESTION:
Lateral Hardening (Undergrounding)

a. Provide criteria used to determine undergrounding of laterals during the pilot program.

b. Provide costs per lateral.

c. For each feeder impacted by the program, provide the percentage of laterals undergrounded.

RESPONSE:
For purposes of answering this discovery request, FPL is assuming that the "pilot program" referenced in OPCs First Set of Interrogatories, Interrogatory No. 7 refers to the lateral underground program pilot that was approved by Commission Order No. PSC-2020-0293-AS-EI. Based thereon, FPL responds as follows:

a. See Section IV(D)(5) of FPL's 2020-2029 Storm Protection Plan approved by Commission Order No. PSC-2020-0293-AS-EI.

b. See Appendix C to FPL's 2020-2029 Storm Protection Plan approved by Commission Order No. PSC-2020-0293-AS-EI.

c. See Attachment 1 to this response, which includes the percentage of laterals per feeder that were undergrounded in 2021.

QUESTION:
Vegetation Management – Distribution Program

a. Describe in detail how the vegetation management program is impacted by Lateral Hardening (undergrounding).

b. Provide the reduction of lateral trimming required for 2020, 2021, and 2022, as measured in miles.

c. Provide the average cost for trimming laterals on a per mile basis.

d. State whether or not outage restoration costs, which often include the cost of tree trimming crews, are excluded from the Storm Hardening Program and costs.

   i. If not, provide the annual costs for 2020, 2021, and 2022 for tree trimming/clearing related to power restoration.

RESPONSE: (do not edit or delete this line or anything above this)

a. The Distribution Vegetation Management Program is designed to maintain the overhead system and, as such, FPL will continue to maintain vegetation on all of its overhead system. Undergrounded facilities are not maintained under the current Distribution Vegetation Management Program. As FPL undergrounds more laterals as part of the SPP Lateral Hardening Program, FPL anticipates a decrease in vegetation management costs for laterals. However, the Distribution Vegetation Management Program and its associated costs are dependent on various factors including: the total number of overhead laterals and feeders in the system, total feeders, mid-cycle maintenance, and customer trim requests. These factors can change year-to-year due to construction of new overhead feeders and laterals as a result of growth and system expansion.

b. Please see FPL's objections filed on April 14, 2022. Subject to and without waiver of said objections, see FPL's response to subpart (a). As of the end of 2021, only approximately 600 overhead laterals (out of a total overhead lateral population of approximately 69,000) were converted to underground as part of the SSUP or Lateral Hardening Program. As a result, FPL has not experienced a material reduction in vegetation management costs for laterals.

c. For 2020 and 2021, the average cost of trimming laterals was approximately $6,200 per mile.

d. FPL assumes the term "outage restoration" in this request refers to a named storm event, such as a hurricane or tropical storm. Based on this assumption, all vegetation costs associated with outage restoration for a named storm event are excluded from FPL's SPP Distribution Vegetation Management Program (*i.e.*, such costs are not recorded and tracked to the Storm Protection Plan Cost Recovery Clause).