



TAG Meeting December 6, 2021

Webinar



TAG Meeting Agenda

- 1. Administrative Items – Rich Wodyka**
- 2. 2021 Collaborative Transmission Plan Study Report – Orvane Piper and Lee Adams**
- 3. 2022 Study Scope Discussion – Mark Byrd**
- 4. 2021 TAG Work Plan Update and 2022 TAG Work Plan Preview – Rich Wodyka**
- 5. TAG Open Forum – Rich Wodyka**



2021 Study Activities Update

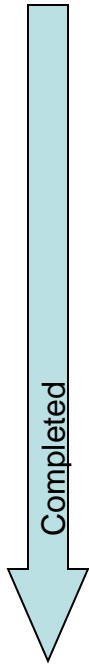
Orvane Piper - Duke Energy Carolinas

Lee Adams - Duke Energy Progress



Study Process Steps

- 1. Assumptions Selected**
- 2. Study Criteria Established**
- 3. Study Methodologies Selected**
- 4. Models and Cases Developed**
- 5. Technical Analysis Performed**
- 6. Problems Identified and Solutions Developed**
- 7. Collaborative Plan Projects Selected**
- 8. Study Report Prepared**





Annual Reliability Studies

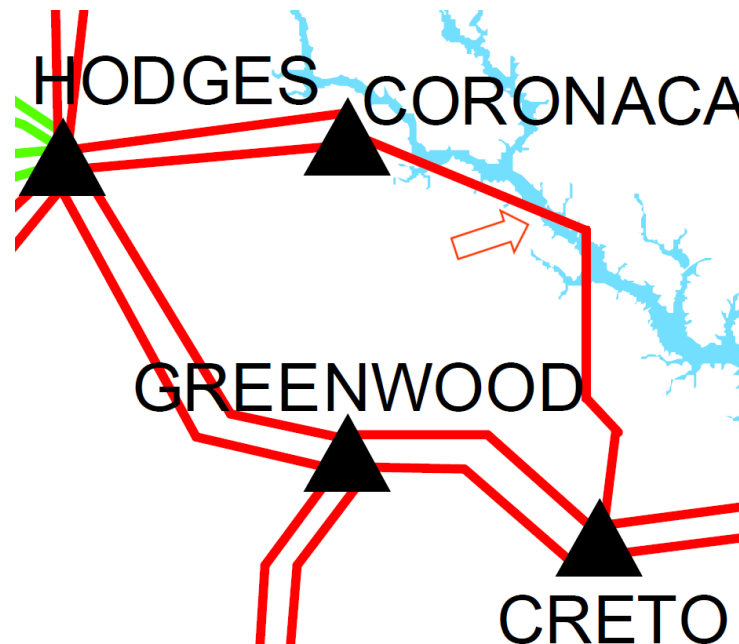
- **2026 Summer**
- **2026/2027 Winter**
- **2031 Summer**



New Projects in 2021 Plan

DEC Coronaca 100 kV Line (Coronaca-Creto), Upgrade and Add Second Circuit – scheduled for December 2025

- **NERC Category P6 & P7 violation**
- **Problem:** Loss of both Coronaca–Hodges 100 kV lines may overload the Coronaca-Creto line.
- **Solution:** Rebuild 100 kV lines with higher capacity conductors.

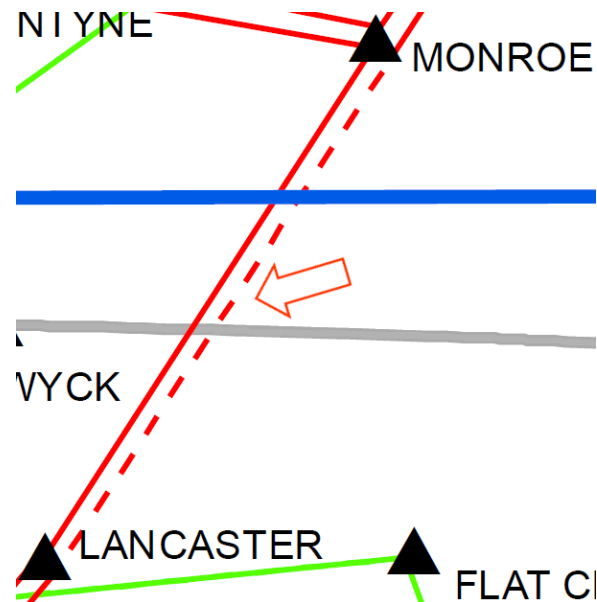




New Projects in 2021 Plan

DEC Monroe 100 kV Line (Lancaster-Monroe), Upgrade – scheduled for June 2027

- **NERC Category P3 violation**
- **Problem:** Loss of one of the Lancaster-Monroe 100 kV lines (black circuit) may overload the remaining line (white circuit). Loss of a transformer at Morning Star may also overload existing 100 kV lines.
- **Solution:** Rebuild 100 kV lines with higher capacity conductors.

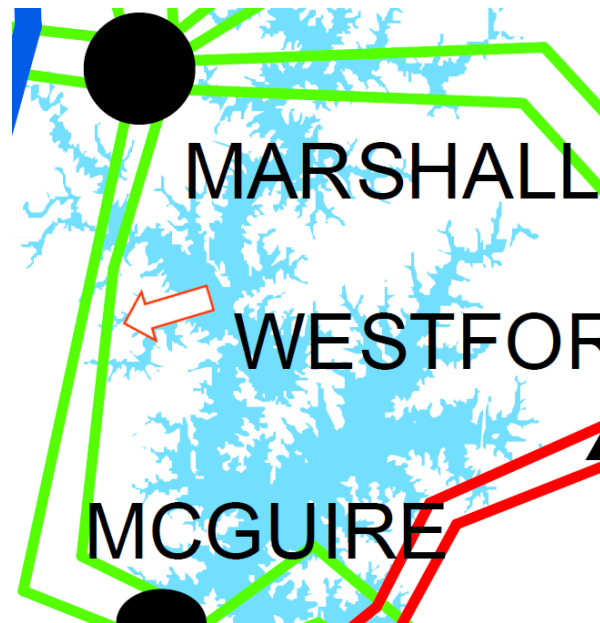




New Projects in 2021 Plan

DEC Westport 230 kV Line (McGuire-Marshall), Upgrade – TBD

- **NERC Category P3 violation**
- **Problem:** Loss of one of the McGuire-Marshall 230 kV lines may overload the remaining line.
- **Solution:** Rebuild 230 kV lines with higher capacity conductors.





Comparison to Previous Collaborative Transmission Plan

	2020 Original Plan	2020 Plan Mid-year Update	2021 Plan
Number of projects with an estimated cost of \$10 million or more each	17	17	16
Total estimated cost of Plan	\$804 M	\$846 M	\$694 M



Public Policy Request

- **Accelerated retirement of coal generation**
- **Increased solar generation**
- **Increased wind in DVP**
- **Wind imports – offshore + onshore**
- **Combined Cycle at Roxboro**
- **Mayo Battery**



Public Policy Request – Case 1

- **Load Level – Summer Peak Case**
- **Maximize Onshore and Offshore Wind 100% of nameplate**
- **Scale Back Solar to 50% DEP and 80% DEC of nameplate, based on historical data**
- **Mayo Battery 568MW generating**
- **Economically dispatch other generation**



Public Policy Request – Case 2

- **Load Level – 75% of Summer Peak Case**
- **Maximize Onshore and Offshore Wind 100% of nameplate**
- **Maximize Solar 100% of nameplate**
- **Mayo Battery 568MW charging**
- **Economically dispatch other generation**



Study Report Prepared

- **TAG is requested to provide any input to the OSC on the 2021 Collaborative Transmission Plan Study Report.**
- **Provide input by **January 7, 2022** to Rich Wodyka (rich.wodyka@gmail.com)**



Questions ?





2022 Study Scope Discussion

Mark Byrd - Duke Energy Progress



Current 2021 Study

- **Base reliability case analysis – 2026 summer and 2026-2027 winter and 2031 summer**
 - **An “All Firm Transmission” Case(s) will be developed which will consider all confirmed long term firm transmission reservations with roll-over rights applicable to the study year(s)**
 - **DEC and DEP generation down cases will be created from the common Base Case**



2022 Proposed Study Scope

- **Base reliability case analysis – 2027 summer and 2027-2028 winter and 2032-2033 winter**
 - **An “All Firm Transmission” Case(s) will be developed which will consider all confirmed long term firm transmission reservations with roll-over rights applicable to the study year(s)**
 - **DEC and DEP generation down cases will be created from the common Base Case**
- **Alternate scenarios/sensitivities – 2032-2033 winter**
- **Study scope To Be Determined**



Past Studies' Alternate Scenarios

- **Hypothetical Imports/Exports re-evaluated every other year (last performed in 2019)**
 - 1000 MW transfers
- **Hypothetical NC Generation**
 - Fossil Fuel
 - Wind Energy
 - Off-shore – NCTPC only and NCTPC-PJM Joint Study
- **Retirement of Coal Units**
- **High Renewables (underway for 2021)**



Local Economic Study Requests

- **Propose economic hypothetical scenarios to be studied as part of the transmission planning process**
- **Requests can include in, out and through transmission service**
- **Official TAG request to be distributed in January 2022**



Public Policy Study Requests

- **Provide input on public policies that are driving the need for local transmission for study**
- **Official TAG request to be distributed in January 2022**



TAG Input Request

- **TAG is requested to provide any additional input to the OSC on the 2022 Study Scope, any additional suggested study scenarios, as well as input on Local Economic Study Requests and Public Policy Study Requests.**
- **Stakeholder feedback is needed!**
- **Provide input by **February 4, 2022** to Rich Wodyka – Administrator (rich.wodyka@gmail.com)**



Questions?





2021 TAG Work Plan

Rich Wodyka
Administrator



2021 NCTPC Overview Schedule

Reliability Planning Process

- Evaluate current reliability problems and transmission upgrade plans
 - Perform analysis, identify problems, and develop solutions
 - Review Reliability Study Results

Local Economic Planning Process

- Propose and select Local Economic Studies and Public Policy Study scenarios
 - Perform analysis, identify problems, and develop solutions
 - Review Local Economic Study and Public Policy Results

Coordinated Plan Development

- Combine Reliability and Local Economic Study and Public Policy Results
 - OSC publishes DRAFT Plan
 - TAG review and comment

TAG Meetings





January - February – March

➤ **2020 Study Update**

- ✓ Receive Final 2020 Collaborative Transmission Plan Report
- ✓ Receive Draft 2020 Off-shore Wind Study Report
 - *TAG provide input to the OSC on Offshore Wind Study results*

➤ **2021 Study – Finalize Study Scope of Work**

- ✓ Receive request from OSC to provide input on proposed Local Economic Study scenarios and interfaces for study
 - *TAG provide input to the OSC on proposed Local Economic Study scenarios and interfaces for study*
- ✓ Receive request from OSC to provide input in identifying any public policies that are driving the need for local transmission
 - *TAG provide input to the OSC in identifying any public policies that are driving the need for local transmission for study*
- ✓ Receive final 2021 Reliability Study Scope for comment
 - *TAG review and provide comments to the OSC on the final 2021 Study Scope*



January - February – March

First Quarter TAG Meeting – March 22nd

- **2020 Off-shore Wind Study Analysis**
 - ✓ Receive report on and discuss the 2020 Off-shore Wind Study Results
- **2021 Study Update**
 - ✓ Receive a report on the Local Economic Study scope and any public policy scenarios that are driving the need for local transmission for study
 - ✓ Receive a progress report on the Reliability Planning study activities and the 2021 Study Scope



April - May – June

Second Quarter TAG Meeting – June 7th

- **2021 Study Update**
 - ✓ **Receive a progress report on study activities**

 - ✓ **Receive update status of the upgrades in the 2020 Collaborative Plan**



July - August – September

Third Quarter TAG Meeting – October 25th

➤ 2021 Study Update

- ✓ Receive a progress report on the study activities and preliminary results
- ✓ TAG is requested to provide feedback to the OSC on the technical analysis performed, the problems identified as well as proposing alternative solutions to the problems identified
- ✓ TAG input requested by **November 3rd**



October - November - December

Fourth Quarter TAG Meeting – **December 6th**

➤ 2021 Study Update

- ✓ TAG will receive feedback from the OSC on any alternative solutions that were proposed by TAG members
- Receive and discuss draft of the 2021 Collaborative Transmission Plan Report – **Provide input on Report by January 7, 2022 to Rich Wodyka (rich.wodyka@gmail.com)**

➤ 2022 Study Scope

- ✓ Discuss potential study scope scenarios for 2022 studies



Questions ?





2022 TAG Work Plan

Rich Wodyka
Administrator



2022 NCTPC Overview Schedule

Reliability Planning Process

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 - Perform analysis, identify problems, and develop solutions
 - Review Reliability Study Results

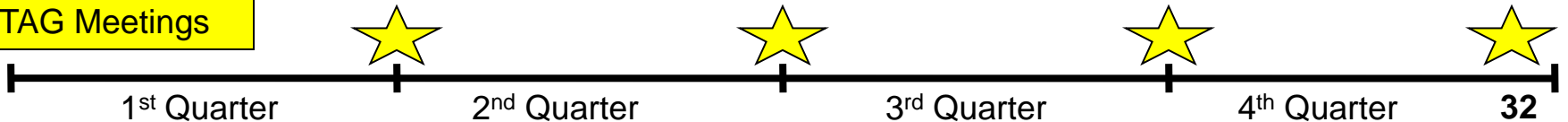
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- Propose and select Local Economic Studies and Public Policy Study scenarios
 - Perform analysis, identify problems, and develop solutions
 - Review Local Economic Study and Public Policy Results

Coordinated Plan Development

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TAG Meetings





January - February – March

➤ 2021 Study Update

- Receive Final 2021 Collaborative Transmission Plan Report
- Receive Draft 2021 Public Policy Study Report
 - *TAG provide input to the OSC on Public Policy Study results*

➤ 2022 Study – Finalize Study Scope of Work

- Receive request from OSC to provide input on proposed Local Economic Study scenarios and interfaces for study
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- Receive request from OSC to provide input in identifying any public policies that are driving the need for local transmission
 - *TAG provide input to the OSC in identifying any public policies that are driving the need for local transmission for study*
- Receive final 2022 Reliability Study Scope for comment
 - *TAG review and provide comments to the OSC on the final 2021 Study Scope*



January - February – March

First Quarter TAG Meeting – TDB

➤ **2021 Public Policy Study Analysis**

- **Receive report on and discuss the final draft of the 2021 Public Policy Study Report**

➤ **2022 Study Update**

- **Receive a report on the Local Economic Study scope and any public policy scenarios that are driving the need for local transmission for study**
- **Receive a progress report on the Reliability Planning study activities and the final 2022 Study Scope**



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October - November - December

Fourth Quarter TAG Meeting – TBD

➤ 2022 Study Update

- TAG will receive feedback from the OSC on any alternative solutions that were proposed by TAG members
- Receive and discuss final draft of the 2022 Collaborative Transmission Plan Report

➤ 2023 Study Scope

- Discuss potential study scope scenarios for 2023 studies



Questions ?





TAG
Open Forum Discussion

Comments or Questions?