



## NCTPC 2014 Collaborative Transmission Plan Update

### June 2015

Attached is the mid-year update to the NCTPC 2014 Collaborative Transmission Plan issued January 15, 2015. Also attached is a listing of projects to be added to the 2015 Collaborative Plan. The status and timing of all projects presented in that plan have been reviewed and the attached update reflects all changes that have been identified. In addition, all cost projections have been reviewed and updated to reflect current assumptions.

The total cost estimate of 2014 Plan Reliability Projects changed up from \$209 million to \$239 million. The key differences between the original plan and this updated plan are summarized below:

<b>Updates to the 2014 Collaborative Plan</b>		
<b>Project</b>	<b>Change</b>	<b>Reason for Change</b>
Durham-RTP 230 kV Line, Reconductor	Delayed 1 year to 2024	Slower than anticipated load growth
Raeford 230 kV Substation, loop-in Richmond-Ft Bragg Woodruff St 230 kV Line and add 3 <sup>rd</sup> bank	Updated project cost estimate	Moved into Engineering design phase
Fort Bragg Woodruff St 230 kV Sub, Replace 150 MVA 230/115 kV transformer with two 300 MVA banks & reconductor Manchester 115 kV feeder	Added project since updated cost estimate now exceeds \$10 million	Mitigate transformer bank and 115 kV feeder loading
Sutton-Castle Hayne 115 kV North line Rebuild	Added project since updated cost estimate now exceeds \$10 million	Mitigate contingency loading

In addition to the 2014 Plan updates, several new projects are being added to the 2015 Plan. Five of these projects are the result of OATT requests and one results from ongoing internal studies.

<b>Projects to be Added to the 2015 Collaborative Plan</b>		
<b>Project</b>	<b>Change</b>	<b>Reason for Change</b>
Brunswick #1-Jacksonville 230 kV Line Loop-in to Folkstone 230 kV Substation	Added back to the Plan	Maximum generation case for Brunswick/Sutton generation indicates contingency overloading
Asheville 600 MW CPLE-CPLW transfer projects	5 New projects	Accommodate 600 MW Transmission Service Request from CPLE-CPLW



# North Carolina Transmission Planning Collaborative

2014 Collaborative Transmission Plan – Reliability Projects (Estimated Cost > \$10M)							
Project ID	Reliability Project	Issue Resolved	Status <sup>1</sup>	Transmission Owner	Projected In-Service Date	Estimated Cost (\$M) <sup>2</sup>	Project Lead Time (Years) <sup>3</sup>
0010A	Harris Plant-RTP 230 kV Line, Establish a new 230 kV line by utilizing the Amberly 230 kV Tap, converting existing Green Level 115 kV Feeder to 230 kV operation, construction of new 230 kV line, remove 230/115 kV transformation and connection at Apex US1	Address the need for new transmission source to serve rapidly growing load in the western Wake County area; helps address loading on Cary Regency Park - Durham 230 kV line	In-service	DEP	5/23/2014	54	0
0028	Brunswick #1 – Jacksonville 230 kV Line Loop-In to Folkstone 230 kV substation	Address loading on Folkstone – Jacksonville City 115 kV Line	Removed	DEP			
0008	Greenville - Kinston DuPont 230 KV Line Construct line (see note 4)	Address loading on Greenville - Everetts 230 kV Line	In-service	DEP	5/12/2014	31	0
0030	Raeford 230 kV substation, loop-in Richmond-Ft Bragg Woodruff St 230 kV Line and add 3rd bank	Address loading on Raeford 230/115 kV transformer	Planned	DEP	6/1/2018	20	3



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0024	Durham - RTP 230 kV Line, Reconductor	Address loading on the Durham - RTP 230 kV Line	Planned	DEP	6/1/2024	15	4
0027	Reconductor Caesar 230 kV Lines (Pisgah Tie - Shiloh Switching Station #1 & #2)	Contingency loading of the remaining line on loss of the parallel line during high imports to DEP West	In-service	DEC	12/3/2013	27	0
0014	Reconductor London Creek 230 kV Lines (Peach Valley Tie - Riverview Switching Station #1 & #2)	Contingency loading of the remaining line on loss of the parallel line when a 230 kV connected Oconee unit is off line	Removed	DEC			
0031	Jacksonville-Grant's Creek 230 kV Line and Grant's Creek 230/115 kV Substation	Mitigate loading and voltage issues on existing Havelock-Jacksonville 230 kV Line	Planned	DEP	6/1/2020	37	5
0032	Newport-Harlowe 230 kV Line and Harlowe 230/115 kV Substation	Mitigate loading and voltage issues on existing Havelock-Morehead Wildwood 115 kV Line	Planned	DEP	6/1/2020	32	5
0033	Fort Bragg Woodruff St 230 kV Sub, Replace 150 MVA 230/115 kV transformer with two 300 MVA banks & reconductor Manchester 115 kV feeder	Mitigate transformer bank and 115 kV feeder loading	Planned	DEP	12/1/2016	13	1.5



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0034	Sutton-Castle Hayne 115 kV North line Rebuild	Mitigate contingency loading	Planned	DEP	6/1/2018	10	3
<b>TOTAL</b>						<b>239</b>	

<sup>1</sup> Status: *Underway*: Projects with this status range from the Transmission Owner having some money in its current year budget for the project to the Transmission Owner having completed some construction activities for the project. *Planned*: Projects with this status do not have money in the Transmission Owner’s current year budget; and the project is subject to change.

<sup>2</sup> The estimated cost is in nominal dollars which reflects the sum of the estimated annual cash flows over the expected development period for the specific project (typically 2 – 5 years), including direct costs, loadings and overheads; but not including AFUDC. Each year’s cash flow is escalated to the year of the expenditures. The sum of the expected cash flows is the estimated cost.

<sup>3</sup> For projects with a status of Underway, the project lead time is the time remaining to complete construction and place in-service.



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0028	Brunswick #1 – Jacksonville 230 kV Line Loop-In to Folkstone 230 kV substation	Address loading on Folkstone – Jacksonville City 115 kV Line	Re-instated	DEP	6/1/2024	14	4
0035	Asheville Plant, Replace 2-300 MVA 230/115 kV banks with 2-400 MVA banks and reconductor 115 kV ties to switchyard	Transfer additional power from CPLE to CPLW as requested in TSRs	Planned	DEP	12/1/2019	13	4.5
0036	Craggy-Enka 230 kV Line, Construct	Transfer additional power from CPLE to CPLW as requested in TSRs	Planned	DEP	12/1/2019	39	4.5
0037	Foothills 500/230 kV Substation, Construct	Transfer additional power from CPLE to CPLW as requested in TSRs	Planned	DEC	12/1/2019	80	4.5
0038	Asheville Plant(DEP)-Foothills(DEC) B&W 230 kV Lines, Construct	Transfer additional power from CPLE to CPLW as requested in TSRs	Planned	DEC	12/1/2019	90	4
0039	Davidson River 100 kV Lines, Partial Rebuild	Transfer additional power from CPLE to CPLW as requested in TSRs	Planned	DEC	12/1/2019	11	3.5
<b>TOTAL</b>						<b>247</b>	