

**NORTH CAROLINA UTILITIES COMMISSION  
DOCKET No. E-2, SUB 1318  
DOCKET No. EC-67, SUB 55**

**JOINT APPLICATION FOR A  
CERTIFICATE OF PUBLIC  
CONVENIENCE AND NECESSITY**

**PERSON COUNTY ENERGY COMPLEX  
COMBINED-CYCLE COMBUSTION TURBINE  
ADDITION PROJECT**

Exhibit 3: Cost Information



### 3.1 CONSTRUCTION COST

Duke Energy Progress, LLC’s (“DEP” or the “Company”) projected total project costs as spent dollars as of in-service in 2029 to construct one hydrogen capable, advanced-class combined cycle gas turbine (“CC”) facility at the existing Roxboro Plant (this Exhibit will refer to the CC and its ancillary facilities as the “Proposed Facility”) are presented below in Table 3.1.

**Table 3.1: Proposed Facility Cost Summary**

[BEGIN CONFIDENTIAL]

CATEGORY	COST <sup>[1]</sup>
On-site bus connection to switchyard	
Definitive Interconnection System Impact Study network upgrades	
Generator Replacement Request upgrades	
Engineering, Procurement, and Construction	
Other owner costs including major equipment and contingency (but excluding AFUDC)	
<b>Total project costs (excluding AFUDC)</b>	
Winter output, MW	1,360 MW (estimated nominal winter capacity)
Summer output, MW	1,220 MW
Project cost \$/kW (winter)	



[END CONFIDENTIAL]

### 3.2 CASH FLOW

The projected cash flow for the costs presented in Table 3.1 is presented below in Table 3.2.

**Table 3.2: Projected Cash Flow**

[BEGIN CONFIDENTIAL]

SPEND YEAR	DIRECT COST <sup>[1]</sup>	AFUDC <sup>[2]</sup>	TOTAL
2024			
2025			
2026			
2027			
2028			
2029			
<b>Total</b>			

[END CONFIDENTIAL]

### 3.3 COST ESTIMATING METHODOLOGY

The Company’s cost estimate for constructing the Proposed Facility is based upon several sources of information, including: (1) third-party quantity-based indicative estimates; (2) firm bids that DEP received to supply major equipment components; (3) transmission interconnection cost estimates; (4) review of publicly available comparable project pricing; and (5) in-house historical reference pricing data.

The Company engaged Burns & McDonnell to develop a quantity-based cost estimate for the Proposed Facility. Burns & McDonnell is a third-party engineering firm that provides DEP with engineering and technical documents necessary to support several aspects of DEP’s construction of new generating facilities including, but not limited to, site evaluation, specification development, and permit submittals. The Company developed and then provided Burns & McDonnell with a site-specific layout and general arrangement for the Proposed Facility. Burns & McDonnell utilized DEP’s site-specific layout and general arrangement documents in conjunction with its own historical project database to generate a quantity-based estimate for the cost of constructing the Proposed Facility, which it then delivered to DEP. Burns & McDonnell’s quantity-based estimate included civil, earthwork, structural, piping, electrical, and equipment components that aligned with the Proposed Facility’s scope of work. In addition to the supporting work by Burns & McDonnell, DEP engaged other Engineering, Procurement, and Construction (“EPC”) contractors to provide indicative pricing based on the facility information DEP provided and the EPC contractors’ own internal pricing history. DEP then evaluated and compared the

pricing received from EPC contractors, as well as other publicly available comparable project pricing, and used it to develop DEP's comprehensive cost estimate.

In parallel with the above-described process involving Burns & McDonnell and other EPC contractors, DEP developed specifications for major components including combustion turbines, steam generator turbines, and transformers, and received firm bids for the desired delivery dates.

The electrical transmission interconnection cost estimate is itself composed of three separate components. First, it includes the estimate for the new collector yard and bus lines connecting the new generation to the on-site switchyard. Second, it includes the estimated costs for upgrades and interconnection facilities defined by the Generator Replacement Request Interconnection Agreement. Finally, it includes the results from the Phase I Definitive Interconnection System Impact Study ("DISIS"). Note that the DISIS Phase I study reported no potential impacts to neighboring affected systems and, therefore, DEP did not budget for costs associated with affected systems issues.

The Project Management and Construction Team ("PMC") also maintains a confidential database of various project quantities and estimates to inform new project estimates. PMC's database includes information accumulated from actual EPC project bids and/or similar work that PMC has executed and the information is used as a sounding board when assembling the comprehensive cost estimate from the various sources of pricing information.

The Company utilized all of the above-described sources of information (i.e., Burns & McDonnell's estimate, other EPC contractor indicative pricing, firm bids for major components, transmission interconnection estimates, and in-house historical data) to build a detailed cost estimate that includes the facility quantities and material costs and all other components of DEP's construction costs. The Company's costs include the development, permitting, any DEP-furnished components, EPC oversight, interconnecting facilities, contingencies, risk mitigation, and AFUDC.

The Company's cost estimating process also attempts to take into account recent dynamic inflationary impacts and trends in the energy supply chain and labor market in the United States, including North Carolina, as the construction industry is currently experiencing increased labor demand and higher inflation than has been experienced in the recent past. These developments have added uncertainty to the EPC market, and contract prices in today's economy appear to price in this increased uncertainty in terms of cost and allocation of risk.

DEP has developed the Proposed Facility cost estimates presented in Table 3.1 and 3.2 above per the Association for the Advancement of Cost Engineering (“AACE”) cost estimating standard. This industry-recognized standard reflects evolving precision as the maturity of project scope and definition progresses through the project lifecycle from project initiation (typically informed by Class 4 cost estimate accuracy within a range of -30% to +50%) to project commitment (typically informed by Class 3 cost estimate accuracy within a range of -20% to +30%) in advance of construction. Based on this standard and the current level of project maturity and estimating effort completed to date, DEP’s current cost estimate accuracy for the Proposed Facility is between a Class 4 and a Class 3 estimate and DEP currently projects that the total cost to construct the Proposed Facility is in the predictability range of **[BEGIN CONFIDENTIAL]** [REDACTED] **[END CONFIDENTIAL]** DEP will solicit firm EPC contract pricing in 2Q 2024 and expects to receive bids in July 2024. As the current energy supply chain continues to be very dynamic, DEP will keep the Commission apprised of any material changes to the estimated cost of the Proposed Facility as they become known.

### 3.4 OPERATING COSTS

The Proposed Facility’s total estimated annual operating costs by category are presented below in Table 3.4. The costs reflect DEP’s portion of the annual operating costs, NCEMC’s portion of annual operating costs, and total annual operating costs for both the first year of operation and an average of the first five years of operation.

**Table 3.4: Operating Costs**

**[BEGIN CONFIDENTIAL]**

CATEGORY	ANTICIPATED IN-SERVICE EXPENSES FOR THE 12 MONTHS AFTER COMMENCEMENT OF COMMERCIAL OPERATION	ANNUAL \$/MEGAWATT HOUR (“MWh”) FOR 12 MONTHS AFTER COMMENCEMENT OF COMMERCIAL OPERATIONS	5-YEAR AVERAGE ANNUAL COST
Fixed O&M			
Variable O&M			
Gas Pipeline Intrastate Firm Transportation			
Fuel			
<b>Total</b>			

**[END CONFIDENTIAL]**

The in-service expenses associated with the Proposed Facility reflect modeled costs projected for 2029. Variable operations and maintenance (“O&M”) and fuel costs are based on projections from planning models. Assumptions relative to costs and forecasts vary and are subject to change.

**3.5 UTILITY REVENUE REQUIREMENTS DURING CONSTRUCTION**

The Proposed Facility will operate as a baseload electric generating facility. Consistent with treatment of recently constructed combined cycle facilities, the Company may elect to seek CWIP cost recovery during the construction period in a future rate case. However, due to the uncertainty regarding future rate case timing, applicable capital cut off dates and precise monthly cash flows for the Proposed Facility, the revenue requirements included in this Application do not attempt to model the impact of such CWIP recovery.

**3.6 CUSTOMER RATES**

The Company estimates the 2029 North Carolina retail revenue requirement to be \$98 million, which would result in an approximate average retail rate increase across all classes of 2.6%. This represents DEP’s portion of the Proposed Facility and excludes NCEMC’s.