



February 17, 2022

Ms. Sallie Tanner
Executive Secretary
Georgia Public Service Commission
244 Washington Street, First Floor
Atlanta, Georgia 30334-5701

RE: Georgia Power Company's Twenty-sixth Semi-annual Construction Monitoring Report for Plant Vogtle Units 3 and 4; Docket No. 29849

Dear Ms. Tanner:

Enclosed for filing is Georgia Power Company's Twenty-sixth Semi-annual Construction Monitoring Report for Plant Vogtle Units 3 and 4 pursuant to O.C.G.A. § 46-3A-7(b), Georgia Public Service Commission ("Commission") Rule 515-3-4-.07(2)(b), and the Commission's Final Order in Docket No. 27800. This Report is being filed in advance of the due date to coincide with the release of Southern Company's earnings for the fourth quarter of 2021. However, for purposes of the Twenty-sixth Vogtle Construction Monitoring proceeding, the Company and Public Interest Advocacy Staff have agreed that the Report will be deemed to have been filed on the due date of February 28, 2022.

There is no trade secret information included in this Twenty-sixth Semi-annual Report.

Should you have any questions, please call me at 404-506-3044.

Sincerely,

/s/ Kelley Balkcom

Kelley Balkcom
Director, Regulatory Affairs
mmcclosk@southernco.com

Twenty-sixth Semi-annual Vogle Construction Monitoring Report

February 2022 · Docket No. 29849



Unit 3 Spent Fuel Pool

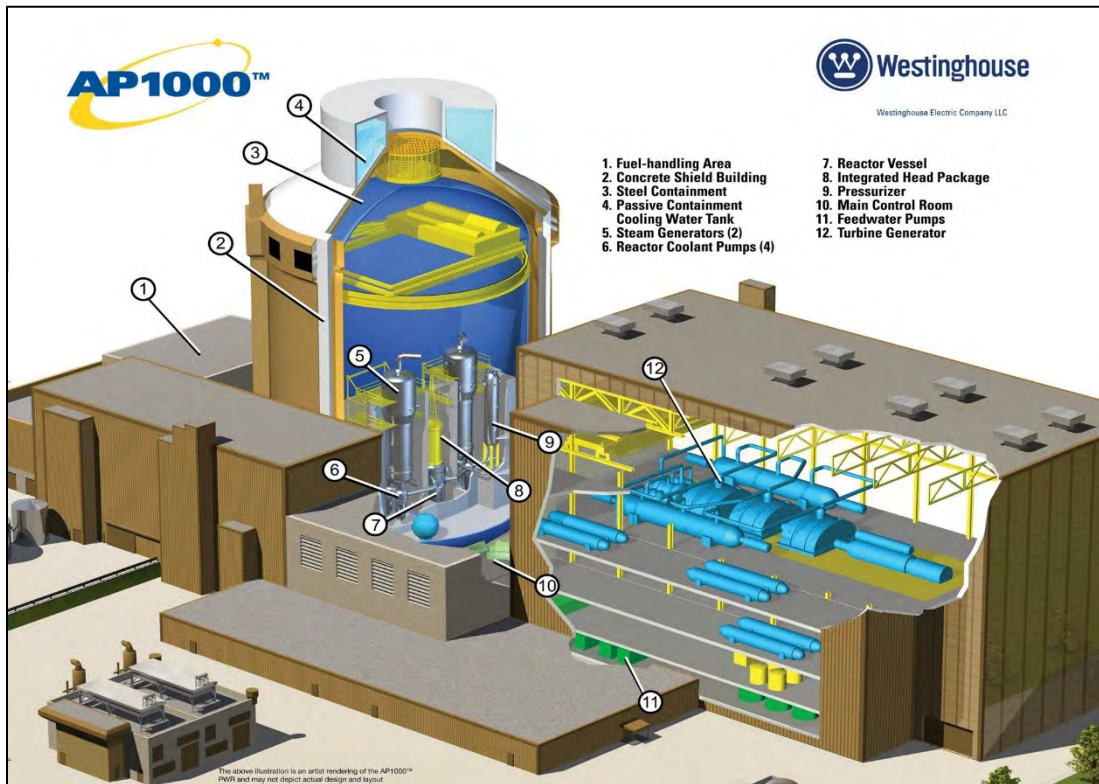
**Vogle Units 3 and 4
Twenty-sixth Semi-annual
Construction Monitoring Report**

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Unit 3 Nuclear and Turbine Islands

As of January 2022



EXECUTIVE SUMMARY

- **Georgia Power Company (“Georgia Power” or the “Company”) and Southern Nuclear Operating Company (“SNC”), as agent for Georgia Power, are committed to safety, quality, and compliance.**

Site leadership cultivates and enhances a culture that promotes safety first. The Site continues to have an OSHA Recordable Incidence Rate well below the heavy construction industry average. In 2021, the Project experienced the fewest number of recordable incidents since 2015.

The Nuclear Regulatory Commission’s (the “NRC”) Construction Reactor Oversight Process (the “cROP”) was designed and implemented to ensure reactors under construction are built according to the NRC-approved design. This program allows the NRC to arrive at objective conclusions about a licensee’s effectiveness in guaranteeing construction quality, providing for predictable responses to performance issues, and clearly communicating performance assessment results to the public.

On November 17, 2021, the NRC released its report following the previously announced special inspection of the circumstances that led to construction remediation work on electrical cable and associated raceway systems, which documented two apparent violations. Each apparent violation was a construction finding of “white,” which has low to moderate safety significance. The violations identified in the NRC’s report were already captured within the site corrective action program prior to the commencement of the special inspection. Steps have been taken to enhance the Project’s quality assurance processes and physical work continues to complete the remaining open items.

- **Georgia Power incurred \$584 million of capital expenditures during the Reporting Period.**

Table 1 – 26th VCM Expenditures	
<i>Dollars in Millions</i>	
Site Construction Management	\$ 508
Owner’s Costs	53
Ad Valorem Tax	23
Transmission Interconnection	-
Total 25 th VCM Expenditures	<u>\$ 584</u>

- **Georgia Power presents \$584 million in capital expenditures for review only, and does not request the Commission take any action at this time.**

As reported in the Company's VCM 25 filing, Project expenditures have exceeded the \$7.3 billion capital cost forecast previously deemed reasonable by the Commission in its VCM 17 Order. In the Commission's VCM 24 Order Adopting Stipulation, the Company agreed that it will not request verification and approval of any costs exceeding the \$7.3 billion until the prudency review contemplated in the Commission's VCM 17 Order. Thus, the Company is not currently seeking verification and approval of the \$584 million incurred during the Report Period at this time and presents these costs for Commission review only.

- **The Company's share of the total Project cost forecast is projected at \$10 billion.**

The Company and SNC continue to monitor and evaluate costs associated with the completion of the Project. During the Reporting Period, the Company's projected share of the total Project cost forecast was increased to \$10 billion, an increase of \$745 million since the 25th VCM Report. The Company is not requesting Commission approval of these cost increases in this filing but may request that the Commission evaluate expenditures allocated from contingency for future rate recovery (excluding the \$694 million for which the Company has agreed it will not seek recovery) no earlier than the prudence review contemplated by the VCM 17 Order.

During the Reporting Period, additional costs totaling \$646 million were added to the capital cost forecast for costs primarily associated with schedule extensions, construction productivity, the pace of system turnovers, and support resources for Units 3 and 4. The Company also increased its total capital cost forecast as of December 31, 2021 by adding \$99 million to replenish construction contingency.

Cumulative capital expenditures through the Reporting Period are \$8.4 billion after accounting for receipt of the Toshiba Parent Guaranty. The estimated remaining capital spend to complete the Project is approximately \$1.5 billion, which includes Georgia Power's share of Project contingency.

- **The in-service date for Unit 3 is projected in the fourth quarter 2022 but could be as late as the first quarter 2023.**

During the Reporting Period, SNC performed additional construction remediation work necessary to ensure quality and design standards are met as system turnovers are completed to support hot functional testing ("HFT"), which was completed in July 2021, and fuel load for Unit 3. Unit 3 faced significant challenges during the Reporting Period, including, but not limited to, construction productivity, construction remediation work, the pace of system turnovers, spent fuel pool repairs, and the timeframe and duration for hot functional and other testing. As a result, at the end of third quarter of 2021, SNC further extended certain milestone dates, including fuel load for Unit 3, from those established in July 2021.

During the fourth quarter 2021, the Project continued to face these and other challenges related to the completion of documentation (e.g., Inspection Records ("IRs")), necessary to submit the remaining Inspections, Tests, Analyses, and Acceptance Criteria ("ITAAC") and begin fuel load. As a result, at the end of the fourth quarter 2021, SNC again extended certain milestone dates, including fuel load for Unit 3, from those established at the end of the third quarter 2021.

The site work plan currently targets fuel load for Unit 3 in the second quarter 2022 and an in-service date of during the third quarter of 2022. Achieving those targets primarily depends on significant improvements in overall construction productivity and production levels, the volume of construction remediation work, the pace of system and area turnovers, and the progression of startup and other testing. As the site work plan includes minimal margin to these milestone dates, an in-service date during the fourth quarter 2022 or the first quarter 2023 for Unit 3 is projected, although any further delays could result in a later in-service date.

The Project team continues to address challenges associated with lower production, work package closure, component testing, and schedule sequencing, all of which have been exacerbated by the impact of the COVID-19 pandemic.

- **The in-service date for Unit 4 is now projected in the third quarter 2023 but could be as late as fourth quarter of 2023.**

As the result of productivity challenges and temporarily diverting some Unit 4 craft and support resources to Unit 3 construction efforts, during the Reporting Period, SNC further extended milestone dates for Unit 4 from those established in July 2021. The temporary diversion of Unit 4 resources to support Unit 3 has continued into the first quarter 2022; therefore, SNC further extended milestone dates for Unit 4 from those established at the end of the third quarter 2021. The site work plan targets an in-service date during the first quarter of 2023 for Unit 4, which primarily depends on overall construction productivity and production levels significantly improving as well as appropriate levels of craft laborers, particularly electricians and pipefitters, being added and maintained. As the site work plan includes minimal margin to the milestone dates, an in-service date during the third or fourth quarter 2023 for Unit 4 is projected, although any further delays could result in a later in-service date.

- **The Project made testing and turnover progress on both units during the Reporting Period.**

During the Reporting Period, the Project continued its progress on Unit 3 with the turnover of an additional 21 systems to Initial Test Program (“ITP”) and two system and 11 area turnovers to Site Operations. At the end of the Reporting Period, direct construction for Unit 3 was approximately 99% complete. On Unit 4, 13 systems were turned over to ITP for testing, and Open Vessel Testing (“OVT”) began in December 2021. At the end of the Reporting Period, direct construction for Unit 4 was approximately 92% complete.

- **The Project team is working diligently to mitigate risks and pressures on performance.**

The Project continues to face significant challenges to performance, particularly in the areas of construction remediation work, work package closure, system turnovers, and subcontracted scopes of work, all of which have been exacerbated by the impacts of the COVID-19 pandemic onsite. The Project team continues to prioritize safety and quality over schedule.

The Project team continues to work through quality issues identified earlier in 2021, the remediation of which has presented a significantly larger than anticipated impact on the

Project's cost and schedule. Fuel Load on Unit 3 depends on the completion of significant paper closure, including the closure of a backlog of IRs and work packages, in addition to component and pre-operational tests. The completion of these tasks, particularly completion of the significant backlog of IRs, is challenging the target date for Fuel Load. The site has increased quality control and engineering resources, improved cross-functional coordination, contingency planning, and readiness to ensure that the IR backlog closure process is as efficient as possible.

As Unit 3 nears start-up, the Project team works to address the potential risk of unanticipated challenges during the start-up phase that could cause delays, as well as the completion of the design and program commitments confirmed through the NRC's ITAAC program. Despite these efforts, the Company and SNC recognize that the Project may continue to experience challenges, which may impact the Project cost and/or the projected in-service dates.

On Unit 4, success depends on first-time quality, work package closure, craft availability and field non-manual support. Near term milestones, including the completion of Integrated Flush, OVT, and the start of Closed Vessel Testing ("CVT") as well as the completion of the Protection and Safety Monitoring ("PMS") and Class 1E DC ("IDS") Systems are the current areas of focus. Cold Hydro Testing and HFT are planned for later this year.

- **COVID-19 Update**

The Project continues to navigate the effects of the COVID-19 pandemic on the Project's workforce, schedule, and cost. Protecting the health and safety of the Vogtle Units 3 and 4 team, as well as the surrounding community, continues to be the highest priority for the Project. At the end of 2021 and into the first weeks of 2022, the Project experienced a rapid increase in COVID-19 cases due to the highly infectious "Omicron" variant. That increase has subsided in recent weeks, but the impacts of the pandemic have not been eliminated.

As of the date of this filing, there have been approximately 4,400 positive cases onsite since the beginning of the pandemic. Performance challenges associated with higher-than-normal absenteeism for both craft and non-manual personnel, and sudden disruptions to planned or ongoing work due to the required isolation of personnel assigned to direct construction, subcontracts, testing, and other support activities contributed to schedule delays and increased costs on the Project. Through the Reporting Period, it is estimated that productivity impacts of the COVID-19 pandemic have consumed approximately three to four months of schedule margin previously embedded in the site work plans for both units, with an estimated cost of \$160-200 million. These impacts from COVID-19 were the result of circumstances outside of the Project team's direct control.

Significant uncertainty continues to surround COVID-19 on a global basis, and the Project is no exception. The Company, SNC, and Bechtel continue to monitor and address these and other risks as the pandemic evolves. Despite the significant challenges and uncertainty, Project Leadership, with the support of the personnel assigned to Vogtle Units 3 and 4, have continued to safely progress the Project and achieve major accomplishments.

- **Vogtle Units 3 and 4 peak rate impact for customers is expected to be approximately ten percent.**

Using the construction capital costs deemed reasonable as of this 26th VCM Report, the projected peak rate impact to retail customers is approximately ten percent, with approximately two percent already in rates. Vogtle Units 3 and 4 will serve as an economic baseload resource to meet the electricity needs of our customers, in addition to the value that nuclear energy provides to Georgia’s future, particularly when potential environmental regulations are considered. Upon completion, Vogtle Units 3 and 4 will be an asset to Georgia Power, its customers, the state, and the nation for at least 60 years. The new units will support Georgia’s economic growth and provide economic benefits to current electric customers, as well as those looking to expand or relocate to the state.

Consistent with previous VCM reports, the rate impacts include customer benefits that the Company proactively pursued – including federal production tax credits (“PTCs”) and interest savings from the Department of Energy (“DOE”) loan guarantees. The projections also include the fuel savings associated with adding additional nuclear units to the generation mix.

In addition, as a result of the Commission’s VCM 17 Order, penalties against the Company for schedule delays are providing customers with positive benefits in the form of lower financing costs while the Project remains under construction.

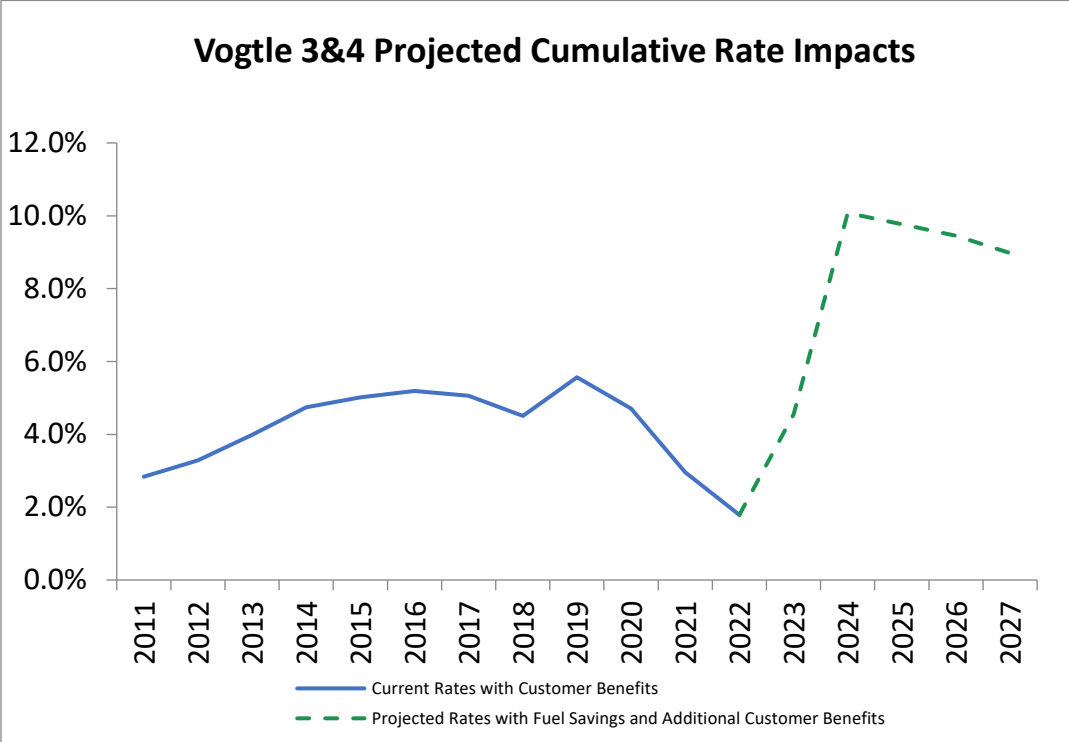


Figure A – Projected Cumulative Rate Impacts

RESPONSES TO STIPULATED QUESTIONS

1. The reasons for any additional change in the estimated costs and schedules of the units since the process began.

Since the 25th VCM Report, the Project cost forecast has increased by \$745 million to \$10 billion. The details of the new Project cost forecast are provided in Table 1.1, which also reflects the to-date capital investment, actual-to-forecast variances, and the total financing costs during construction. Total financing costs include amounts collected and forecasted to be collected pursuant to the NCCR tariff and amounts accrued and forecasted to be accrued through AFUDC.

During the Reporting Period, additional costs totaling \$646 million were added to the base capital costs forecast for costs primarily associated with schedule extensions, construction productivity, the pace of system turnovers, and support resources for Units 3 and 4. The Company also increased its total capital cost forecast as of December 31, 2021 by adding \$99 million to replenish construction contingency.

During the Reporting Period, SNC performed additional construction remediation work necessary to ensure quality and design standards are met as system turnovers are completed to support HFT, which was completed in July 2021, and fuel load for Unit 3. Unit 3 faced significant challenges during the Reporting Period, including, but not limited to, construction productivity, construction remediation work, the pace of system turnovers, spent fuel pool repairs, and the timeframe and duration for hot functional and other testing. As a result, at the end of the third quarter of 2021, SNC further extended certain milestone dates, including fuel load for Unit 3, from those established in July 2021.

Through the fourth quarter 2021, the project continued to face these and other challenges related to the completion of documentation (for example, IRs) necessary to submit the remaining ITAACs and begin fuel load. As a result, at the end of the fourth quarter 2021, SNC further extended certain milestone dates, including fuel load for Unit 3, from those established at the end of the third quarter 2021. The site work plan currently targets fuel load for Unit 3 in the second quarter 2022 and an in-service date during the third quarter 2022, and primarily depends on significant improvements in overall construction productivity and production levels, the volume of construction remediation work, the pace of system and area turnovers, and the progression of startup and other testing. As the site work plan includes minimal margin to these milestone dates, an in-service date during the fourth quarter 2022 or the first quarter 2023 for Unit 3 is projected, although any further delays could result in a later in-service date.

As the result of productivity challenges and temporarily diverting some Unit 4 craft and support resources to Unit 3 construction efforts, during the Reporting Period, SNC also extended milestone dates for Unit 4 from those established in July 2021. The temporary diversion of Unit 4 resources to support Unit 3 has continued into the first quarter 2022; therefore, SNC further extended milestone dates for Unit 4 from those established at the end of the third quarter 2021. The site work plan targets an in-service date during the first quarter of 2023 for Unit 4, which primarily depends on overall construction productivity and production levels significantly improving as well as appropriate levels of craft labor, particularly electricians and pipefitters, being added and

maintained. As the site work plan includes minimal margin to the milestone dates, an in-service date during the third or fourth quarter 2023 for Unit 4 is projected, although any further delays could result in a later in-service date.

As a result of the schedule extensions and challenges discussed previously, the Company’s share of total project cost has increased to \$10 billion, which includes an increase to the capital forecast of \$646 million and an additional \$99 million to replenish contingency.

In Table 1-A below, the Unit 3 site work plan milestone dates are shown in comparison to the Risk Adjusted schedule. The Company has acknowledged that the schedule could extend into the first quarter of 2023.

Table 1-A – Unit 3 Comparison to Risk Adjusted Schedule		
Unit 3 Major Milestone	February 2022 Site Work Plan	December 2022 – March 2023 Risk Adjusted Schedule
Cold Hydro Testing	October 2020 (Actual)	
Condenser Vacuum	December 2020 (Actual)	
Hot Functional Testing	July 2021 (Actual)	
103(g) Letter Received	April 2022	August 2022 – September 2022
Fuel Load	April 2022	August 2022 – October 2022
Commercial Operation Date	September 2022	December 2022 – March 2023

Table 1-B below shows a comparison of milestone dates between the current Unit 4 site work plan and the Risk Adjusted schedule. The Company has acknowledged that the schedule could extend into the fourth quarter of 2023.

Table 1-B – Unit 4 Comparison to Risk Adjusted Schedule		
Unit 4 Major Milestone	February 2022 Site Work Plan	September 2023 – December 2023 Risk Adjusted Schedule
Open Vessel Testing Start	December 2021 (Actual)	
Structural Integrity Test (“SIT”)/ Integrated Leak Rate Test (“ILRT”) Start	February 2022 (Actual)	
Cold Hydro Testing Start	May 2022	October 2022 – January 2023
Hot Functional Testing Start	June 2022	December 2022 – March 2023
Fuel Load Start	October 2022	April 2023 – July 2023
Commercial Operation Date	February 2023	September 2023 – December 2023

The Company and SNC recognize that the Project may continue to experience challenges, including additional COVID-related challenges resulting from future variants, and that these challenges and unanticipated events, or failure to meet the current site work plan, may require additional revision to the site work plan, capital cost forecast, and/or Project schedule.

Table 1.1

Vogtle 3&4 Project
Georgia Power Company Cost - **Subject to Commission Verification and Approval**
Project To Date
Through Period Ending December 31, 2021

	<u>Total Project Capital</u>			<u>Project to Date Capital</u>		
	VCM 25 (\$ millions)	Total Current Forecast (\$ millions)	Variance (\$ millions)	Actual To Date (\$ millions)	Budget To Date (\$ millions)	Variance (\$ millions)
Construction & Capital Cost						
Original EPC ⁽¹⁾	\$ 3,198	\$ 3,198	-	\$ 3,198	\$ 3,198	0
Interim Payments & Liens	411	411	0	409	409	(0)
Site Construction Management						
Engineering Contractor	530	577	46	497	497	(0)
Procurement	1,393	1,483	89	1,325	1,337	(12)
Contract Construction	2,786	3,066	280	2,635	2,627	8
Construction Support & Project Management	772	1,012	240	552	580	(28)
Total Site Construction Management	5,482	6,137	655	5,008	5,040	(32)
Owner's Costs	1,144	1,158	14	1,013	1,018	(6)
Ad Valorem	273	318	45	228	228	(0)
Transmission Interconnection	62	62	0	61	61	(0)
Test Fuel Offsets	(4)	(4)	0	0	0	-
	1,475	1,534	59	1,302	1,308	(6)
Total Construction & Capital Cost⁽⁴⁾	10,565	11,280	714	9,917	9,955	(38)
Toshiba Parent Guarantee, net of customer refunds	(1,492)	(1,492)	-	(1,492)	(1,492)	-
Total to be Absorbed by GPC	(694)	(694)	-	(694)	(694)	-
Allocated Contingency Included Above ⁽⁴⁾	(1,079)	(1,794)	(714)	-	-	-
Total Construction & Capital Cost, net of Parent Guarantee and amounts to be absorbed by GPC⁽⁵⁾	\$ 7,300	\$ 7,300 ^{(2) (3)}	\$ 0	\$ 7,731	7,769	(38)
Other Capital Cost						
Construction Monitor	22	24	(2)	16	17	(1)

Vogtle 3&4 Project
Georgia Power Company Financing Cost - **Recovered Pursuant to O.C.G.A. 46-2-25 (c.1),
the January 3, 2017 Order Adopting Stipulation, and the VCM 17 Order**
Project To Date
Through Period Ending December 31, 2021

	<u>Total Project Financing</u>	<u>Project to Date Financing</u>	
	Total Current Forecast (\$ millions)	Actual To Date (\$ millions)	Budget To Date (\$ millions)
Project Schedule Financing			
Return on CWIP in Rate Base ⁽⁶⁾	2,900	2,609	2,611
AFUDC - Accrued on CWIP Above Original Certified Cost	375	195	196
AFUDC - Accrued through Dec 2010 and Related Return	109	109	-
Total Project Schedule Financing	\$ 3,384	\$ 2,913	\$ 2,916
Total Capital Cost and Financing⁽⁵⁾	\$ 10,684	\$ 10,644	\$ 10,685
		\$ (41)	

Footnotes:

1. Includes Original EPC contract payment milestones and EPC Scope Change.
 2. \$7.3 billion is the Total Construction & Capital Cost approved by Georgia Public Service Commission (Order dated January 11, 2018). Above excludes \$150 million in unspecified project contingency. Such amounts may be recommended for consideration by the GPSC as and when included in the Construction and Capital Cost forecast.
 3. Above excludes approximately \$440 million of costs associated with the cost-sharing and tender provisions of the joint ownership agreement that Georgia Power will not seek recovery for from retail customers.
 4. The Company is not requesting Commission approval of the \$1.8 billion of contingency allocated to construction cost categories in this filing but may request that the Commission evaluate expenditures allocated to contingency for rate recovery as and when appropriate.
 5. Excludes construction monitor fees pursuant to the VCM 19 Order.
 6. NCCR will only be collected on the certified capital cost of \$4.418 billion per the January 3, 2017 Order Adopting Stipulation and VCM 17 Order.
- Note: Details may not add to totals due to rounding.

Table 1.2

Replacement Energy Costs and Deferred Operating Costs								
<i>Million of Dollars</i>								
Date	VCM	Deferred Benefits		Deferred Operating Costs			Total Deferred Operating Costs	Net Cost
		Replacement Energy Cost	Deferred PTCs	O&M	Depreciation	Ad Valorem		
Total 2016		43.6	89.6	(67.0)	(41.2)	(9.3)	(117.5)	15.7
Total 2017		115.8	186.5	(130.4)	(112.3)	(23.2)	(265.9)	36.4
Total 2018		174.3	161.5	(131.9)	(127.7)	(25.6)	(285.1)	50.7
Total 2019		140.2	161.5	(150.2)	(127.9)	(25.0)	(303.1)	(1.4)
Total 2020		116.3	166.2	(140.6)	(127.9)	(36.2)	(304.6)	(22.2)
Total VCM 25		85.2	85.4	(66.3)	(65.1)	(21.2)	(152.6)	18.1
Jul-21	26th	24.2	14.2	(11.8)	(11.1)	(3.5)	(26.4)	12.0
Aug-21	26th	25.7	14.2	(11.5)	(11.1)	(4.9)	(27.5)	12.5
Sep-21	26th	28.9	14.2	(11.6)	(11.1)	(3.7)	(26.4)	16.7
Oct-21	26th	31.7	14.2	(11.5)	(11.1)	(3.7)	(26.3)	19.6
Nov-21	26th	21.3	14.2	(11.0)	(11.1)	(3.7)	(25.8)	9.7
Dec-21	26th	22.8	14.2	(11.5)	(11.1)	(3.6)	(26.2)	10.9
Total VCM 26		154.6	85.4	(68.9)	(66.6)	(23.2)	(158.7)	81.3
Total to Date		830.1	936.2	(755.2)	(668.8)	(163.6)	(1,587.6)	178.7

2. The status of the Company’s loan guarantee application at the DOE and to the extent that the application is granted, then the Company shall also report on the impact it has or would have on the final expected in-service cost of the units.

Table 2 – DOE Loan Guarantee		
Available	Received	Remaining
\$5.13 billion	\$5.13 billion	\$0

As of the end of the Reporting Period, Georgia Power has borrowed all \$5.13 billion related to Vogtle Units 3 and 4 costs through the DOE Loan Guarantee Agreement and a multi-advance credit facility among Georgia Power, the DOE, and the Federal Financing Bank.

The DOE loan guarantee does not have a material impact on the in-service cost of Vogtle Units 3 and 4, but it does provide benefits to customers through access to lower credit spreads during construction and future operation. Georgia Power customers are estimated to save approximately \$532 million, which has already been secured through draws against the credit facility.

3. The status of Quality and Compliance, Procurement, Engineering, Construction and Operational Readiness.

TOTAL PROJECT PERCENT COMPLETE

As of January 31, 2022, the total Project is approximately 96% complete. The major remaining scopes of work are finishing direct construction, subcontractor construction, and completing the ITP/Start-Up Testing. As shown below, total construction, covering both Units 3 and 4, is approximately 97% complete. Direct construction (as shown in Figure B on page 16) is approximately 96% complete, which represents approximately 65% of the total construction scope. The remaining 35% of construction scope includes subcontracted scopes of work, which are approximately 97% complete as of January 2022. The ITP/Start-Up Testing scope is approximately 66% complete and will continue to progress as Construction turns over components and systems to the ITP team.

Table 3.1 – Total Project Percent Complete	
Project Phase	January 2022 % Complete
Engineering	100%
Procurement	99.9%
Construction	96.6%
I&C / Cyber Security	99.9%
ITP / Start-Up Testing	66.1%
Total Project	95.9%

QUALITY AND COMPLIANCE

During the Reporting Period, the Company continued to provide oversight of the Project while SNC directed and provided guidance to contractors and actively addressed issues and concerns. SNC also continued quality oversight of construction, the ITP organization, and Site Operations to ensure compliance with laws, regulations, and Project licensing documents. SNC-led Quality Assurance (“QA”) teams monitored the safety and quality of work being conducted by Bechtel and various subcontractors through audits and field surveillances.

As discussed previously, in 2021 the NRC completed a special inspection at Unit 3 to identify the circumstances that led to construction remediation work for the electrical cable and associated raceway systems. The inspection report issued following the special inspection documented two apparent violations. The final significance of the apparent violations issued in late 2021 determined each apparent violation was a construction finding of “white” significance, which has low to moderate safety significance. SNC continues to implement corrective actions from their Root Cause Determination on electrical remediation. One such corrective action is the continuation of SNC personnel leading the Bechtel Quality Control organization, which has resulted in early identification of adverse quality installation, improved first-time quality via corrective actions led

by Quality Control's documentation of non-conforming inspection results, and faster inspection turnaround time. SNC is committed to bringing Vogtle 3 and 4 on-line safely and with the highest quality. All issues with electrical installation will be corrected and will meet all regulatory and code requirements. The project is currently preparing for a follow-up inspection from the NRC.

ENGINEERING

During the Reporting Period, the overall Engineering organization continued to support construction, ITP, and start-up progress. The Construction Engineering organization continued to support Construction by ensuring engineering documentation was completed and ready for system turnover, while the Start-up Engineering organization focused on processes and programs to support Fuel Load and plant operation. The ITP Design Engineering team focused on resolving issues identified during component and system testing. The overall goal of the organization is to resolve issues and minimize impact to testing progress. The Start-up Engineering organization continued to develop processes and programs for Fuel Load and plant operation, as required by NRC regulations.

The Construction Engineering organization continued their involvement in the American Society of Mechanical Engineers ("ASME") Nuclear Component Stamp ("N-Stamp") approval process and work package closure. The NRC utilizes the N-Stamp to ensure ASME Section III safety-related piping systems, pumps, and other equipment meet the quality requirements set forth in the ASME Boiler and Pressure Vessel Code ("B&PV"). The ASME team has completed the final piping and support as-built design reports, which support completion of the remaining System N-5 data reports and the final N-3 report. There are currently 23 of 24 System N-5 reports completed with only Passive Core Cooling System ("PXS") remaining. Once the remaining reports are completed, and the NRC issues the 103(g) finding, the final N-3 report will be completed to support fuel load and transition from ASME B&PV Code, Section III to ASME B&PV Code, Section XI.

PROJECT PERFORMANCE

Direct Construction Percent Complete – Unit 3

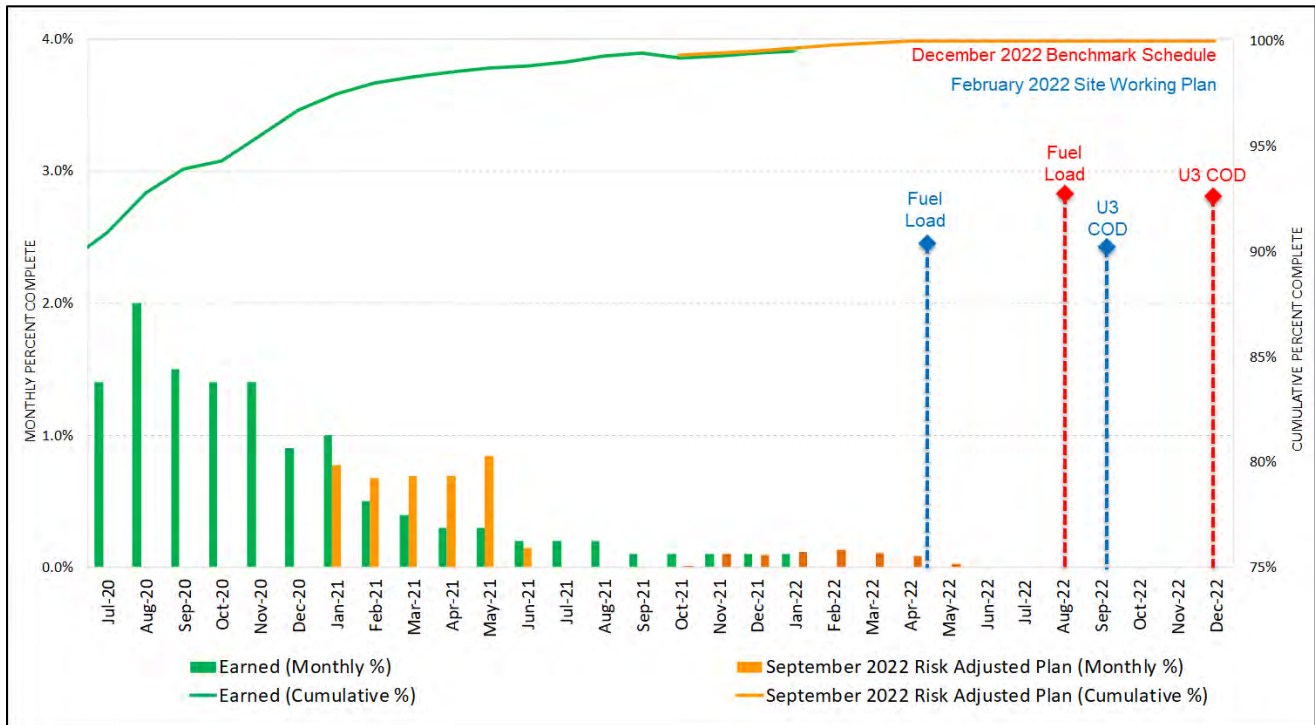


Figure B – Direct Construction Percent Complete – Unit 3

Unit 3’s direct earnings through January 2022 are shown in Figure B above. As of the end of January 2022, Unit 3 direct construction is approximately 99% complete. The remaining work to be completed on Unit 3 involves construction remediation, paper closure, system and area turnovers, component and pre-op testing, fuel load, and start-up. The milestone markers show dates from the current February 2022 Site Working Plan and the December 2022 Benchmark Schedule. The Company has acknowledged that the benchmark schedule could extend into the first quarter of 2023.

Direct Construction Percent Complete – Unit 4

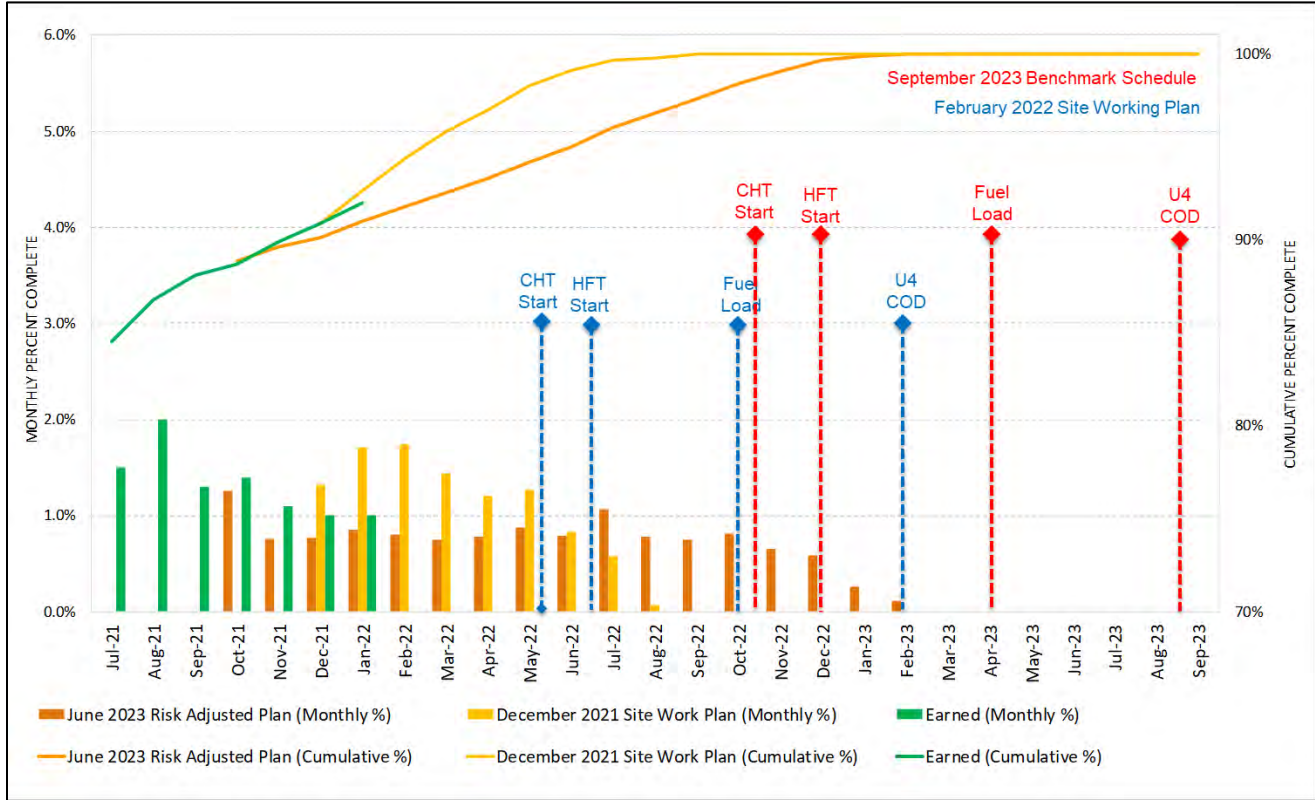


Figure C – Direct Construction Percent Complete – Unit 4

Unit 4’s direct earnings through January 2022 are shown in Figure C above. As of the end of January 2022, direct construction on Unit 4 is approximately 92% complete. The milestone markers show dates from the current February 2022 Site Working Plan and the September 2023 Benchmark Schedule. The Company has acknowledged that the benchmark schedule could extend into the fourth quarter of 2023.

Construction Schedule Performance

The Schedule Performance Index (“SPI”) is a measure of how efficiently the Project is progressing compared to the schedule:

$$SPI = \frac{\text{hours planned}}{\text{hours earned}}$$

If the SPI is above 1.0, the Project is earning fewer hours than planned in the schedule during a given time. If SPI is less than 1.0, the Project is earning more hours than planned during a given time.

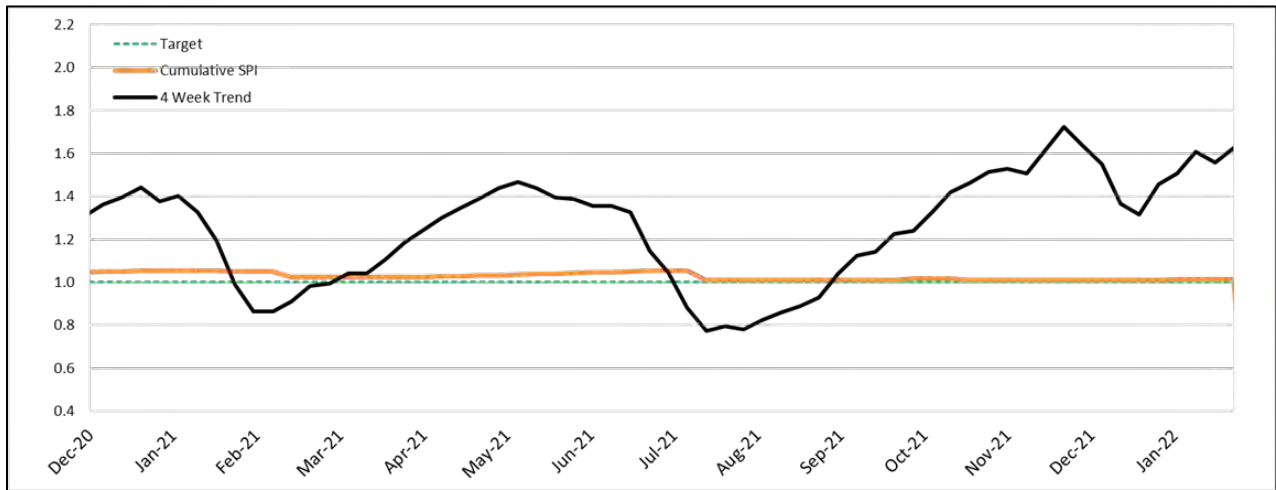


Figure D – Direct Construction Schedule Performance Index

Construction Cost Performance

The Cost Performance Index (“CPI”) is a measure of the cost efficiency of direct construction resources expressed as a ratio of earned value to actual cost:

$$CPI = \frac{\text{hours spent}}{\text{hours earned}}$$

If the CPI is above 1.0, the Project is spending more hours than planned to complete a task. If CPI is less than 1.0, the Project is spending fewer hours than planned to complete a task.

The Project is currently running a cumulative direct construction CPI near 1.5, which is largely attributable to increased construction complexity, system completion, work remediation, productivity challenges exacerbated by the impacts from the COVID-19 pandemic, and the transition of craft to other work fronts. To better quantify the impacts of lower than desired productivity on the required direct construction resources, the Project continues to adjust the to-go budget forecast for Unit 3 and Unit 4 with the allocation of contingency dollars as necessary to account for higher CPI.

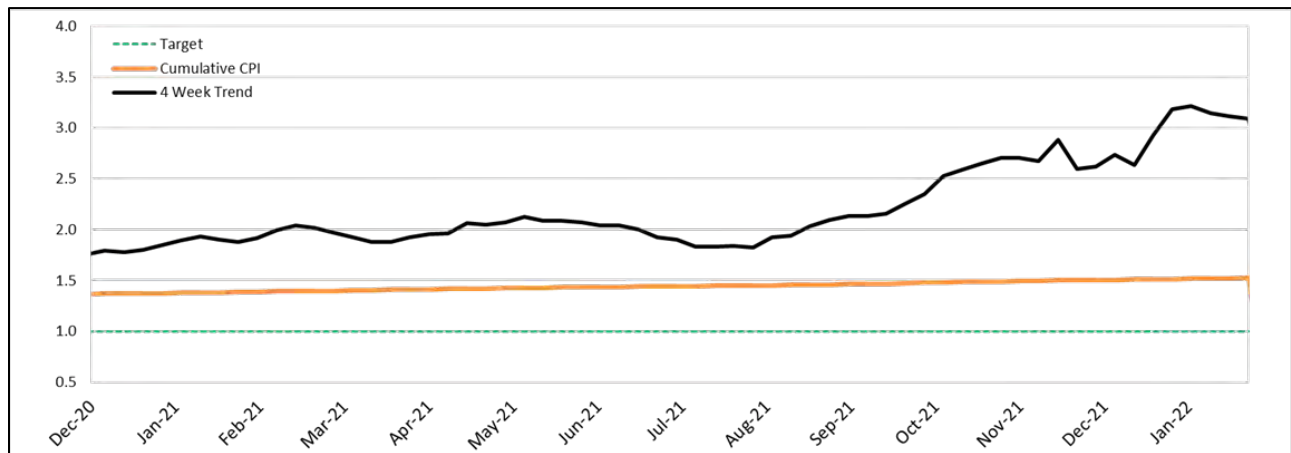


Figure E – Direct Construction Cost Performance Index

Critical Path – Unit 3

The Unit 3 Site Work Plan Critical Path follows multiple parallel paths, among them PMS testing, Main Control Room (“MCR”) punch list and HVAC balancing, completion of the Containment and Auxiliary Building electrical punch lists, closure of all related ITAACs and submittal of the “All ITAACs Complete” letter to the NRC. Once those are complete, after the receipt of the 103(g) finding, Fuel Load will commence followed by approximately 130 days of Start-up testing and Operations.

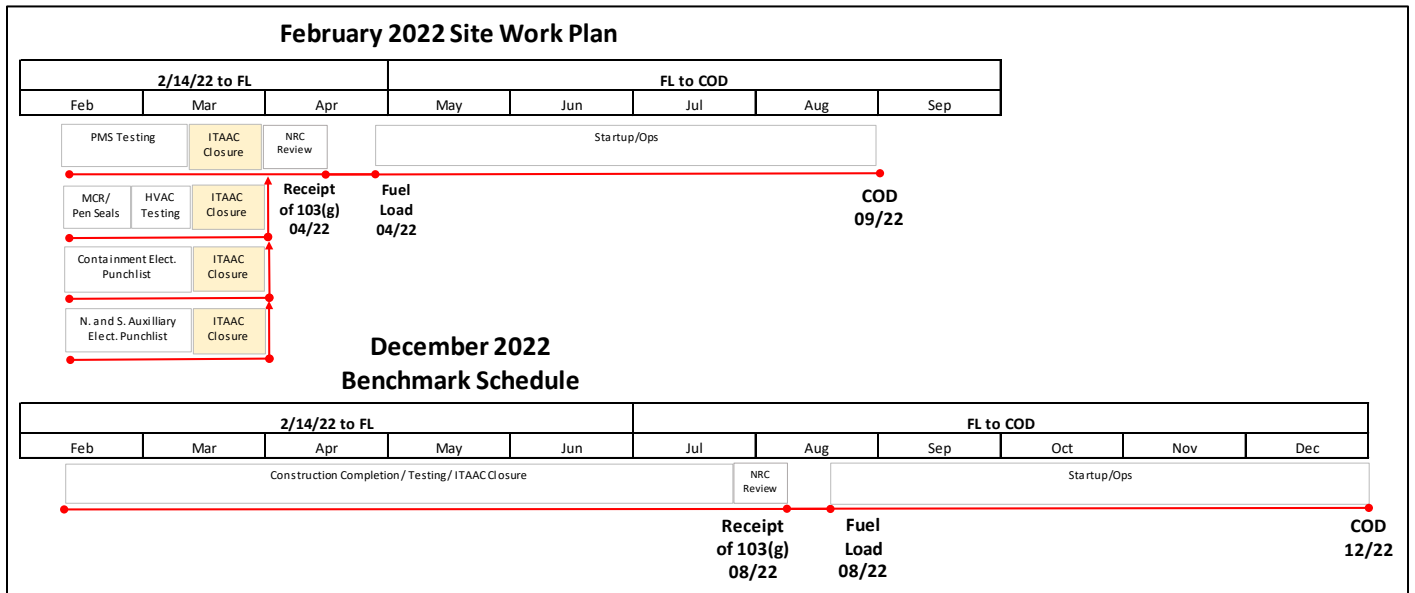


Figure F – Unit 3 Critical Path

Critical Path – Unit 4

The Unit 4 Critical Path goes through the Containment Building with the completion of SIT/ILRT, Completion of Integrated Flush (“IF”), Cold Hydro Testing, HFT, declaration of construction complete, receipt of the 103(g) finding, and then Fuel Load.

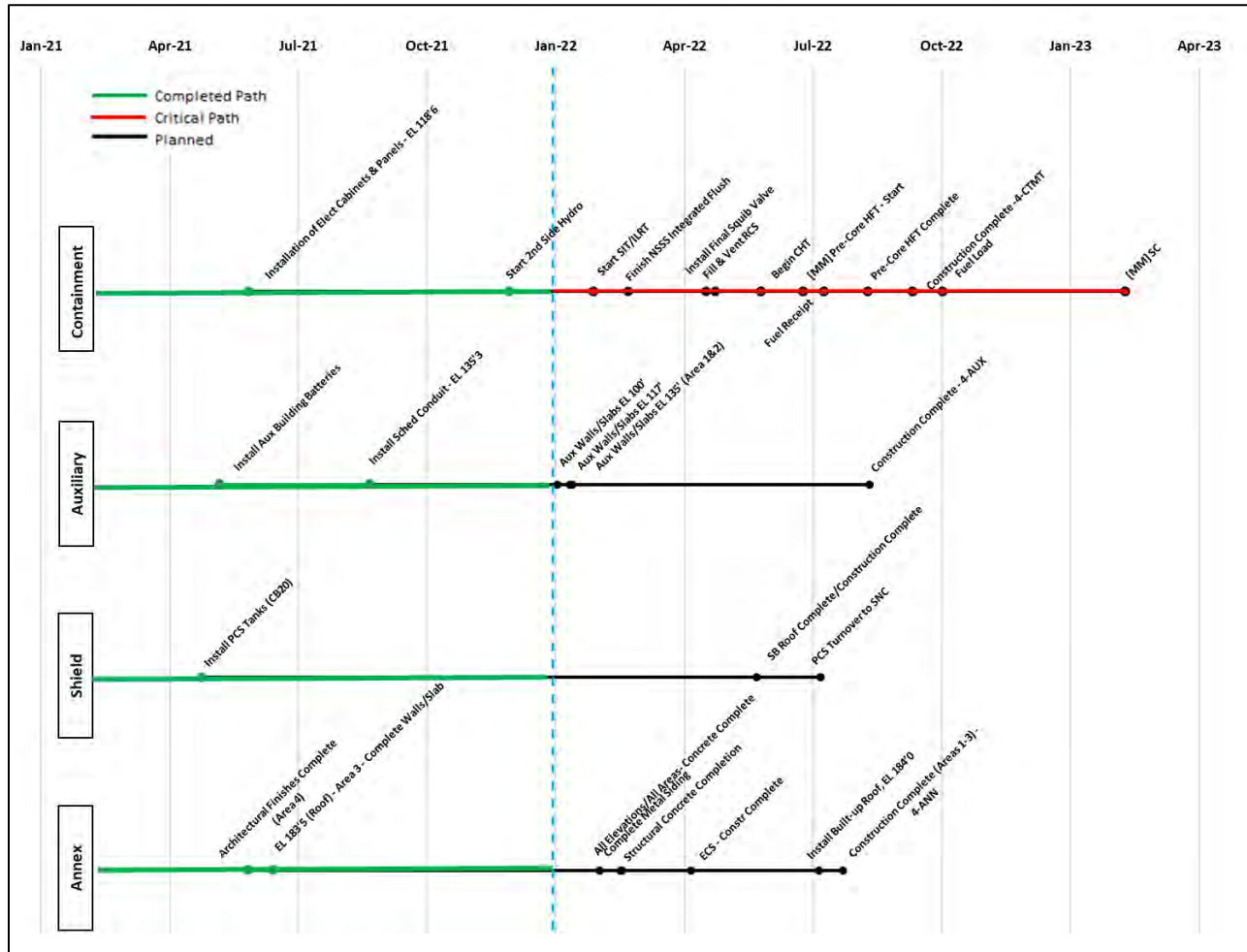


Figure G – Unit 4 Critical Path

Project Milestones

Table 3.3 shows the remaining major milestones for each unit, along with the estimated dates in the current benchmark schedules.

Table 3.3 – Remaining Project Milestones		
	Milestone	December 2022 / September 2023 Benchmark Schedule Dates
Unit 3	Protected Area Lockdown	July 2022
	Submit Final ITAAC to NRC	July 2022
	Achieve full Vogtle 1-3 Security Integration	August 2022
	Commence Fuel Load	August 2022
	Start Power Ascension Testing	September 2022
	Initial Criticality	September 2022
	Design Authority Turnover	October 2022
	100% Rated Thermal Power	November 2022
	Commercial Operation	December 2022
Unit 4	Complete SIT/ILRT	February 8, 2022 (A)
	Complete Open Vessel Testing	July 2022
	Complete Cold Hydro Testing	October 2022
	Complete Turbine on Turning Gear	October 2022
	Successful Completion of WANO Pre-Startup Review	October 2022
	Start Hot Functional Testing	December 2022
	Complete Hot Functional Testing	February 2023
	Complete Fuel Receipt	April 2023
	Commence Fuel Load	April 2023
	Start Power Ascension Testing	June 2023
	Initial Criticality	June 2023
	100% Rated Thermal Power	August 2023
	Commercial Operation	September 2023

PROJECT RISK

With Company oversight, SNC actively manages risk on the Project, continuing to focus on targeted areas such as construction productivity, work package closure, subcontracts management, testing, and start-up. Issues in these areas could have significant impact if left unmitigated. The Project continues to focus on areas of risk commensurate with the significance of the potential impacts. Areas of risk are monitored, and mitigation plans are developed and administered, to reduce the probability and scope of such impacts.

Administration of the Project risk management program includes the proactive identification of risks and, where appropriate, execution of mitigation strategies. SNC functional areas and contractors on the Project work collectively to implement a comprehensive risk program that captures and tracks the potential risks to the Project. The Company's continued oversight of the risk program and its execution reduces the probability of experiencing potential risks and minimizes impacts to the Project from realized risks.

A risk is defined as an uncertain event or set of circumstances that, should it occur, will have an impact on achievement of one or more of the Project's objectives. The Project utilizes several methods to identify potential risks, including consultation with Project subject matter experts, challenge sessions, observations from the Chinese AP1000 units, lessons learned, and collaborative dialogues with Project partners. The Project risk register is a dynamic document that quantifies the potential impact of a risk event. The Project risk register captures threats and opportunities that are routinely evaluated until the risk event is realized or retired. Additionally, the risk register includes mitigation plans developed to reduce the impact of the risk in the event a risk is realized. The Project risk register is provided monthly as an update to data request STF-142-4 in the Company's Monthly Status Report. The following section identifies some of the Project risks and discusses strategies the Company is undertaking to mitigate the impacts.

- *The risk that construction is unable to achieve the projected completion rate for both Units, even with sufficiently qualified resources available.*

This risk has been identified as a Project execution risk that will remain active throughout the Project lifecycle. Broadly stated, this execution risk is that the Project is unable to execute with the resources accounted for by current projections, leading to the inability to reach forecasted construction production targets.

The Project team has implemented strategies to address challenges that continue to impact Project production. The strategies for each Unit vary based on the phase of the Unit and therefore require different approaches to mitigate the schedule pressure. As the Project continues to move through the various phases, the team regularly reviews the strategies and their effectiveness and adjusts as required to ensure the focus remains on safely achieving commercial operations for both Units.

Unit 3 continues to progress through the completion of work items, paper closure, testing and turnover, ITAAC submittal, and startup activities. The near-term Project milestones of 103(g) and Fuel Load continue to require focused efforts on electrical commodity completion and work package and IR closure in support of the final testing evolutions. As the Project team works towards the completion of these activities, the Project team has focused on deploying work teams to more effectively and more efficiently identify and resolve the outstanding work items remaining to close paperwork in support of ITAAC submittals, system turnovers, and work package completion leading up to Fuel Load. As discussed previously, the site team separated the 103(g) and Fuel Load milestones, which has allowed the teams to focus on the remaining work to support each milestone and prioritize where necessary. Additional strategies include continued alignment of construction work scope with final testing activities, continued utilization of dedicated crews

for complex commodity installation activities and “work to go” meetings, which concentrate on completion of outstanding scopes of work for system turnovers and Project completion.

Unit 4 continues to focus on electrical commodity installation in support of milestone completions, including the Integrated Flush milestone, OVT and CVT. However, even as Unit 4 continues to complete complex scopes of work more efficiently by implementing lessons learned from Unit 3, currently and during the Reporting Period key Unit 4 craft and support resources have been deployed to assist with completion of Unit 3. This temporary assignment of Unit 4 resources has hampered progress for the unit. Strategies to address this issue include focusing on the sequence of activities in congested areas and ensuring alignment of critical resources on the work scope. Additionally, Unit 4 has enhanced the commodity sequencing and installation execution by adapting the construction plan to incorporate experience gained from Unit 3 testing. Unit 4 personnel have also been provided enhanced training regarding IEEE-384 standards to reinforce lessons learned from Unit 3 and to bolster the Project’s focus on first-time quality for electrical installation. Based on experience from Unit 3, Unit 4’s process of closing work packages and completing IRs is re-enforcing a “sign as you go” approach to mitigate the risk that Unit 4 may experience the same backlog of work package closure and IR review as Unit 3 is currently experiencing. Collectively, Management continuously evaluates available options as part of selecting the best strategies to maintain focus on the Project’s goal of completing Vogtle Units 3 and 4 in a safe and quality manner.

- *The risk that construction is unable to maintain or improve performance.*

This risk has been identified as a Project execution risk that may be realized if CPI continues to increase or continues to remain above budgeted rates for the duration of the Project life cycle. The Project must increase the number of direct construction hours earned relative to the number of direct construction hours spent to improve the Project’s CPI.

First-time quality remains an area of focus for the Project team. Higher than projected amounts of rework and construction remediation have placed pressure on the Project team’s ability to improve performance. The Project team has implemented organizational changes that are designed to focus on first time quality improvements and reduced remediation work. In addition, the site team has amended their programs for crediting work further re-enforcing a “sign as you go” approach. This approach encourages completion of paperwork earlier in the process and should decrease the need for future remediation work. Further, the site team has implemented focused training programs to remind existing and new craft of the standards required in the construction of nuclear facilities.

The Company remains focused on initiatives to increase direct construction hours earned in comparison to the direct construction hours spent. Several of the strategies are discussed above, as part of the description of construction schedule performance risk. In addition to those strategies, SNC and Bechtel continue to work with labor unions to identify and bring quality craft to the Project, and the Project team has adjusted site leadership to create better alignment and improve communication across all areas of the Project.

- *The risk that the Project is unable to complete the final work scope and open items associated with System and Area turnovers as projected in the Project Schedule for Unit 3 and Unit 4.*

As Unit 3 continues to complete remaining work items including scoped system work, IRs and associated open work items, work packages, testing and final documentation closure, the Project Schedule has remained focused on driving Project resources to open and available work fronts. Management has established numerous teams to support the critical paths and near-critical paths, including the Project Control Center (“PCC”), ITAACs War Room, and specialized issues teams as needs arise. The organization has focused efforts around the challenge of completing remaining work and testing in preparation for the upcoming 103(g) and Fuel Load milestones. Although the Project team is focused on completing the outstanding scope, the Project remains challenged with completing the remaining open work items and corresponding testing within the timelines projected in the Project Schedule.

In addition to the remaining construction and testing work scopes, completion of work packages and Engineering documentation remains a challenge the Project will continue to face in the coming months as Unit 3 prepares to load fuel and transitions into Site Operations. Management has incorporated additional strategies to ensure continued collaboration from the entire Project team. The Project team continues to increase focus on the closure of Engineering documentation, which eliminates constraints and ensures work packages are ready for closure, further mitigating one of the risks to Fuel Load and to the forecasted in-service dates.

Unit 4 continues its progress as demonstrated by the completion of Secondary Hydro, SIT/ILRT and commencement of OVT. As mentioned earlier, the Unit has increased emphasis on a “sign as you go” mentality which is anticipated to improve the efficiency of Project closeout and completion. Unit 4 has focused on completing the electrical infrastructure by using bulk cable pulls. The challenge remains that as Unit 4’s resources continue to be deployed in support of the open item closure on Unit 3, Unit 4’s progress will be impeded. As the number of open items has expanded, the risk of the resources taking longer to return to Unit 4 increases the likelihood the Project Schedule will be impacted.

- *The risk the Project is unable to complete an ITAAC as currently defined.*

The combined license (“COL”) issued by the NRC includes prescribed ITAAC that are intended to confirm that the facility has been constructed in conformance with the license and NRC regulations. All ITAAC must be closed by SNC and accepted by the NRC to receive the 10 CFR 52.103(g) finding necessary to load fuel for each Unit. SNC has undertaken numerous efforts to mitigate risks associated with ITAAC closure. These include, among other actions, early submittal of required regulatory filings, partial completion of ITAAC closure documentation to facilitate early inspections, regular discussions with NRC Staff regarding ITAAC status and challenges, and increased human resources for the closure process.

- *The risk the Project experiences a significant unanticipated challenge during the start-up phase that requires design modification.*

Although this risk is deemed low probability, it is possible that during the first of a kind start-up of Unit 3, the Project will experience an unanticipated challenge that requires modification and

impacts the forecasted in-service dates. SNC is highly skilled and experienced with the operation of nuclear power plants and especially the experience of personnel that were involved with the first of a kind startup technology in China. The organization has a fleet of resources that it can call upon for support in the event of an unanticipated challenge during the start-up phase of the Project. The organization is well equipped and has licensed operators who are prepared to operate Vogtle Units 3 and 4. The depth of fleet resources was demonstrated during the successful HFT evolution; as challenges arose during HFT, the organization worked together as a whole to overcome each issue and ensure the core Plant equipment and systems were in the appropriate condition to function as intended.

During the lifecycle of the Vogtle Project, the Operations organization has spent significant time learning about the Units, identifying and implementing lessons learned, and performing simulator operations. SNC operators are also embedded in the ITP organization to support testing prior to Site Operations ownership so that they are aware of any technical issues, challenges, or design modification to the system. In addition, the SNC operators have spent many hours in training and continue to receive training in the simulator, which remains updated as the Project progresses.

- *The risk that COVID-19 continues to have an impact on the Project cost and schedule.*

Protecting the health and safety of the Vogtle Units 3 and 4 team, as well as the surrounding community, remains a high priority for the Project. As mentioned in previous filings, the Project has taken numerous proactive measures in response to the COVID-19 pandemic. Even with the proactive measures taken by Project Management, fully mitigating the impacts of the COVID-19 pandemic remains outside the Project team's direct control.

In late July 2021, the Project began to experience the impact of the "Delta" variant. The number of individuals in quarantine rose through August and subsided in late September. Following several months of single-digit cases on-site, the Project encountered the impacts of the "Omicron" variant as the end of the year approached. The Project continues to see impacts on the site similar to those being experienced in the surrounding areas. Project Management continues to monitor and take actions based on the advice of the medical professionals, consistent with the long-standing commitment of placing the health and safety of the Project team and the surrounding community at the forefront of all decisions at Vogtle Units 3 and 4.

The Project Team will continue to adjust its processes as the guidance from medical advisors and the CDC evolves or if federal or state mandates require additional testing or other protocols. The focus has and will remain the health and safety of the Project workforce and the surrounding community.

PROJECT CONTINGENCY

Approximately \$714 million in contingency had been allocated during the Reporting Period. During the third quarter of 2021, the Company's projected share of total Project cost forecast increased by \$264 million as the remaining construction contingency previously established was fully allocated to address the extended time necessary to reach the start of Unit 3 HFT and the potential cost risk remaining to complete both units.

During the fourth quarter, the Company also increased the projected share of total Project cost by \$481 million. Of that amount, \$383 million was assigned to the base capital cost forecast for costs primarily associated with schedule extensions for Units 3 and 4, construction remediation work, construction productivity, support resources, and revised projected in-service dates for both units, with the remaining \$99 million used to replenish construction contingency. The Company continues to anticipate that all of the forecasted contingency, including the additional construction contingency, will be spent by the completion of the Project.

CONSTRUCTION

Unit 3

Direct construction on Unit 3 is approximately 99% complete through the end of the Reporting Period. Construction continues to focus on work scopes necessary for system turnovers and previously identified construction remediation. During the Reporting Period, Construction completed the work scopes necessary to turn over multiple electrical, ventilation, and primary sampling systems for testing. These system turnovers supported critical testing evolutions such as diesel generator testing, Unit 3 air balancing, and the sampling equipment for testing during operations.

The construction contractor, Bechtel, continues to focus on reducing a backlog of construction IRs, which are expected to be completed in the coming months to support work package closure and testing in preparation for the final ITAAC submission, which is necessary to achieve the 103(g) milestone.

Accomplishments during the Reporting Period included:

- Completion of Civil and Structural construction in the Auxiliary Building;
- Completion of all the Mechanical and Structural modules inside Containment;
- Completion of the Spent Fuel Pool remediation work scope;
- Completion of coatings for vertical surfaces on the Shield Building and CB20;
- Turnover of 21 systems from construction to ITP;
- Turnover of 11 areas from construction to Site Operations; and
- Joint walkdown of Nuclear Island rooms to perform IEEE-384 extent of condition and remaining room turnover punch list discovery.



Unit 3 Nuclear and Turbine Islands

Unit 4 Nuclear Island

During the Reporting Period, civil work was substantially completed on Unit 4. Inside Containment, Reactor Vessel Internals (“RVI”) work continued, which was sequenced using lessons learned from Unit 3 and supports both OVT and CVT.

During the Reporting Period, Construction continued to benefit from the lessons learned on Unit 3. An example is the Steam Generator System (“SGS”) system, which was recently completed by Construction. The SGS systems share jurisdiction with the Turbine building and supported the successful completion of Secondary Hydro during the Reporting Period. Implementing lessons learned from Unit 3, the Unit 4 Primary Sample System (“PSS”) was turned over earlier and included a larger scope than it did on Unit 3.

Unit 4 has also completed all work scope necessary to support the successful completion of SIT/ILRT. ILRT verifies that the Containment Vessel leak rate at the designed pressure satisfies the NRC Leak Rate Test Program requirements, and that



Inside Unit 4 Containment

all Containment penetrations perform their safety-related functions. SIT verifies that Containment meets the structural requirements necessary to operate safely.

Additional accomplishments during the Reporting Period included:

- Completion of the CB20 concrete placements;
- Completion of instrument installation for the DAS-1;
- Completion of piping installation for PXS system;
- Completion of cable pulls and terminations to support PMS turnover;
- Completion of civil work in the Auxiliary Building; and
- Installation of Welded Water Curtain Spray Nozzles in the Spent Fuel Pool.

Unit 4 Turbine Island

The completion of mechanical scope in support of upcoming turbine testing included the installation of the jacking oil pumps in preparation for the Turbine on Gear (“TOG”) milestone, which is scheduled to be completed later this year. As mentioned previously, the Secondary Hydro test was successfully conducted, and due to the application of lessons learned, the initial hydrostatic test included a larger scope than what was completed previously on Unit 3.

Additionally, the electrical resources have continued their focus on the completion of raceway and conduit in support of electrical bulk commodity installations. The Turbine Building roof is nearing substantial completion and the siding on the Turbine Building is over 85% installed.

Accomplishments during the Reporting Period included:

- Completion of Lube Oil Flushing;
- Completion of construction scope to support successful completion of Secondary Hydro; and
- Completion of bulk cable pulls and terminations in support of upcoming system turnovers.

Unit 4 Annex Building

Construction of the Unit 4 Annex Building continued with installation of cable tray and conduit to support electrical cable pulls, terminations, and completed installations. Progress continues with the installation of instruments and architectural finishes including doors, siding, and security gates.

Accomplishments during the Reporting Period included:

- Completion of terminations for the EFS-2 devices;
- Installation of piping and ductwork in support of Air Handling systems;
- Installation of scheduled and unscheduled Electrical Commodities;
- Installation of security delay gates; and
- Completion of bulk cable pulls to support upcoming system turnovers.

Balance of Plant (“BOP”)

In BOP areas, work efforts culminated in the turnover of 11 BOP areas and the successful completion of the Phase 1 and Phase 2 security lockdowns for Unit 3. Additionally, the focus remains on being fully prepared for the Unit 3 Phase 3 lockdown to support Fuel Load in the coming months. The achievement of the Phase 1 and Phase 2 lockdowns required the completion of final paving, grading, and security work to establish a secure perimeter. The Project is now utilizing the permanent Personnel Access Point (“PAP”) for entry into the secure area.

As mentioned in the previous VCM, the retirement and demobilization of the Lampson crane has allowed construction of the final portion of the vehicle barrier ditch to begin. Once completed, the barrier will provide protection against vehicle intruders and also provide protection against the Site’s highest Probable Maximum Precipitation event as outlined in the licensing basis.

For Unit 4, progress continues on the security fencing, vehicle access points, and site grading to prepare for near term milestones and security drills. Additionally, the demobilization of temporary support structures on both Unit 3 & Unit 4 continues.

Additional accomplishments during the Reporting Period included:

- Turnover of 11 BOP areas;
- Completed the Vehicle Access barrier and security fencing; and
- Completed the Cooling Towers basin wall updates on both Units.



Employees entering through the Personnel Access Point

Subcontracts

During the Reporting Period, subcontractors continued to contribute to Project progress and significant milestone achievements. The Project team and critical subcontractors have worked collaboratively to develop a plan to implement lessons learned from Unit 3 on Unit 4. On Unit 4, subcontractors have been able to work ahead of the Unit 3 sequence to take advantage of lower craft density and reduce the number of work fronts. The HVAC, coatings, insulation, and fire protection/detection subcontractors remain ahead on Unit 4 when compared to their progress at a similar point on Unit 3.



Piping Insulation inside the Unit 3 Turbine Building

The HVAC subcontractor, SSMI, is one example of where a lesson learned on Unit 3 has been applied. Earlier access to available work fronts enabled SSMI to avoid the challenges experienced on Unit 3 leading up to and during HFT.

During the Reporting Period:

- SSMI continued installation of HVAC ductwork and equipment throughout Unit 4 and is

completing HVAC system air balancing for Unit 3;

- FD Thomas, the primary coatings subcontractor on the Project, continued to apply coatings inside Containment, the Auxiliary Building, and other areas throughout both Units;
- CSM Industrial made significant progress with the architectural siding installation on the Turbine Building and other buildings; and
- PCI Energy Services NSSS has continued to support the preparation of Reactor Vessel for the upcoming milestone of Fuel Load on Unit 3 and CVT on Unit 4.

TURNOVER AND TESTING

In Table 3.4 below, the jurisdictional control of systems for Unit 3 and Unit 4 as of January 2022 is broken down by each organization. Ultimately, all systems will be turned over from Construction to ITP for testing, and then ultimately to Site Operations.

Table 3.4 – System Jurisdictional Control		
	Construction	ITP
Unit 3	10	154
Unit 4	133	34

Construction Turnover to Testing

During the Reporting Period, the Testing & Completions team completed several major accomplishments including successful completion of HFT on Unit 3, which demonstrated the Plant’s ability to operate at Normal Operating Temperature (“NOT”) and Normal Operating Pressure (“NOP”). HFT represents the final major testing evolution prior to Unit 3 Fuel Load and start-up. The Testing & Completions organization is responsible for prioritizing and sequencing

work to achieve testing milestones on both units. The team's goal is to ensure the Project remains aligned on organizational structure, process, and schedule integration throughout construction completion. The Project has successfully turned over 184 systems or partial systems to the ITP organization through January 2022.

Initial Test Program

During the Reporting Period, the Testing Control Center ("TCC") continued to manage the testing efforts on Unit 3. The TCC was critical to the successful completion of Unit 3 HFT with strong management engagement, cross functional coordination, and use of mitigation tools when necessary. The TCC remains the central hub of testing activities and continues to be staffed 24/7 to communicate status, respond directly to testing issues, and remove barriers that affect testing preparation and execution. Following the successful completion of HFT, and due to the increase in testing activities on Unit 4, the TCC team has increased its focus and permanently shifted over to support Unit 4. The Project Control Center ("PCC") has been established on Unit 3 and is focused on coordinating the remaining activities to achieve the 103(g) and Fuel Load milestones.

The ITP team remains committed to continuous improvement throughout the testing evolution and continues to demonstrate this commitment by evaluating and applying lessons learned from Unit 3 to Unit 4. A lesson learned related to equipment setup during the measurement recording period of SIT/ILRT on Unit 3, which informed a more efficient setup during the Unit 4 SIT/ILRT that cut the testing execution time roughly in half from that experienced on Unit 3.

During the Reporting Period, the ITP organization successfully completed several major testing evolutions in support of the upcoming Unit 3 major milestones. The ITP team has completed roughly 9,000 component tests for Unit 3 and over 1,500 component tests for Unit 4. Unit 4 accomplished Initial Energization by utilizing lessons learned from Unit 3. Additionally, ITP has successfully completed Secondary Hydro for Unit 4 and the SIT/ILRT.

During the next Reporting Period, the ITP organization will continue to work towards completing the open items on Unit 3 in support of the 103(g) finding and Fuel Load. Unit 4 will continue to progress through major testing evolutions, in support of OVT, TOG, and CVT.

Unit 3 Startup Testing

Upon completion of work scope required for Fuel Load, startup testing is expected to begin. With the NRC's issuance of the 103(g) finding, the Site will be permitted to load fuel into the Reactor Vessel to perform startup testing. Startup testing will demonstrate the integrated operation of the primary coolant system and steam supply system at design temperature and pressure with fuel inside the reactor. Operators will utilize the general operating procedures to bring the plant from cold shutdown to initial criticality, synchronize the Unit to the grid, and achieve power ascension through multiple steps, ultimately raising power to 100%. This test is to ensure all systems are operating together and to validate operating procedures prior to declaration of commercial operation.

This is the first time the plant is going through various MODEs, similar to an operating unit. The six MODEs are defined in the technical specification as part of the licensing document in which NRC imposed the operating conditions and limits for the plant. Each MODE corresponds to any one inclusive combination of core reactivity condition, power level, average reactor coolant temperature, and reactor vessel head closure bolt tensioning. There are a total of six MODEs of operations where MODE 6 is in refueling and MODE 1 is plant operations.



Unit 3 Turbine

Unit 4 Open Vessel Testing (OVT)

During the Reporting Period, ITP started Unit 4 OVT, which is expected to be completed in the coming months. OVT includes flow measurement, pump performance, line resistance, and tank mapping testing for the major systems flushed during Integrated Flush. Measurements obtained during OVT ensure that safety and defense-in-depth systems and components function properly to support pre-operational testing and meet the design requirements for protection of the plant and the public during normal and emergency operating conditions.

Unit 4 Structure Integrity Test/Integrated Leak Rate Testing (SIT/ILRT)

The SIT and ILRT testing milestones were completed successfully for Unit 4 in February 2022, demonstrating that the Containment Vessel has met construction quality standards and design requirements. Successful completion of these tests is required for NRC approval to load fuel for Unit 4. SIT called for the Containment Vessel to be pressurized for the first time at pressure above design specification and then inspected in accordance with ASME section III. Similarly, ILRT tested the Containment Vessel leak rate at design pressure to confirm it satisfied the NRC Leak Rate Test Program requirements that all containment penetrations met the allowable leakage rate and performed their safety related functions. These tests were performed well within the design requirements with margin remaining, demonstrating the high-quality construction of the finished product. The Containment Vessel serves as a barrier to protect the public and surrounding communities by containing material produced inside the Reactor Vessel during plant operations in the unlikely event of an emergency. Successful completion of this test demonstrates that the Containment Vessel meets the design requirements for protection of the plant and the public during normal and emergency operating conditions.

Unit 4 Turbine on Gear Testing (TOG)

The TOG milestone is forecasted to start in the fourth quarter of 2022. The test is conducted by simultaneously rotating the four steam turbines with the use of the turning gear motor continuously for twenty-four hours to show reliable operation. This milestone includes placing the required lubricating oil systems in operation following the completion of initial testing. Successful completion of this test is important in preparing for CV testing and HFT and marks the completion of the main turbine generator assembly.

Unit 4 Condenser Vacuum Testing (CV)

The Unit 4 CV test is forecasted to begin later in 2022. The CV will be established with the main turbine on turning gear and by placing auxiliary steam, condensate, feedwater, and their support systems in service. The test will be completed once the CV has been fully established with feedwater in circulation and secondary water cleaned and deaerated. This milestone is significant in demonstrating the steam supply systems including feedwater, main steam, and the main turbine operating together to support HFT and startup.

Unit 4 Cold Hydro Testing (CHT)

Unit 4 CHT is forecasted to begin in the fourth quarter of 2022. CHT includes several separate tests in different areas of the plant to verify that welds, joints, pipes, and other components of the Reactor Coolant System (“RCS”), steam-supply system and associated high pressure systems do not leak and will hold pressure. To accomplish these tests, internals will be installed in the Reactor Vessel and the Integrated Head Package, the RCS will be filled and pressurized above normal operating conditions, then backed down to normal design pressure, and held there while the comprehensive inspection is concluded.

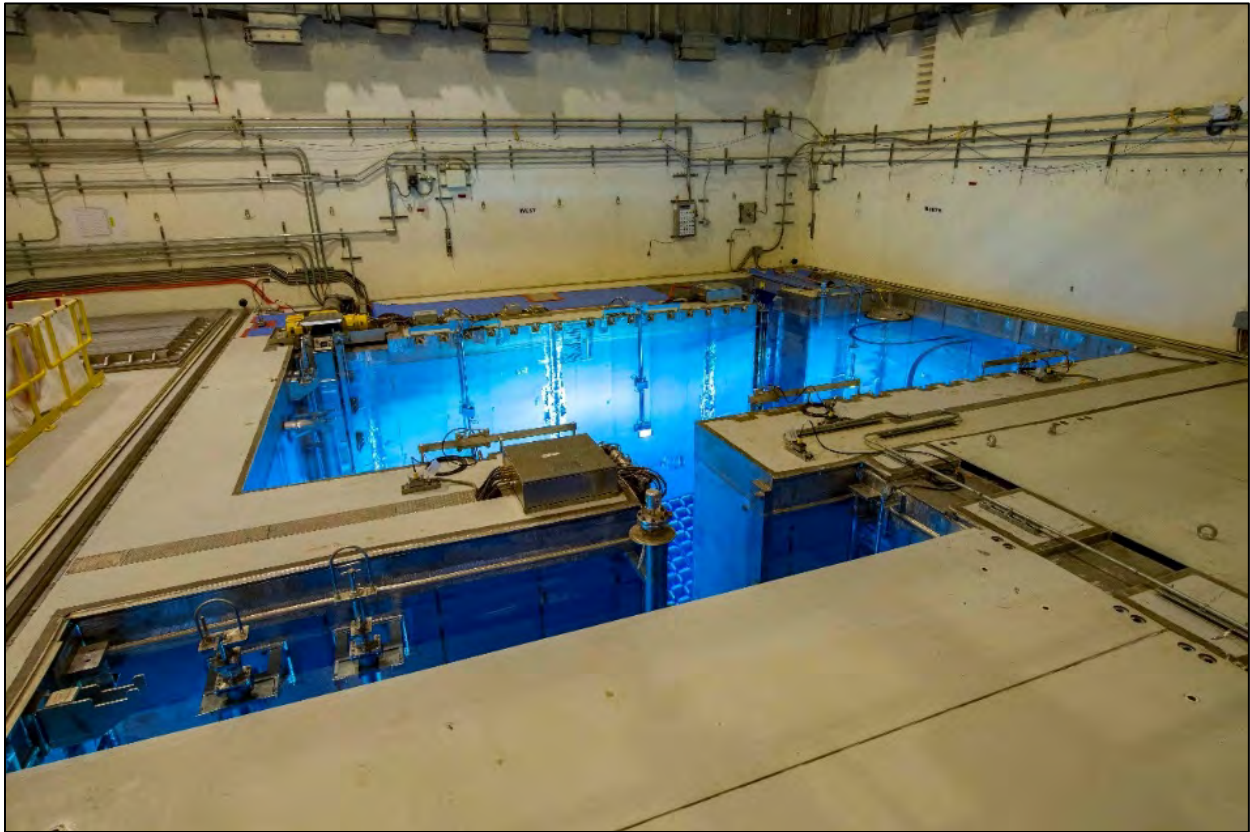
Unit 4 Hot Functional Testing (HFT)

Unit 4 HFT is anticipated to begin in the fourth quarter of 2022. Many of the plant systems will be required to be turned over and tested to complete this milestone. HFT will demonstrate the integrated operation of the primary coolant system and steam supply system at design temperature and pressure, but without fuel in the reactor. Operators use the heat generated by the RCPs to raise the temperature and pressure of plant systems to normal operating levels. The Unit’s main turbine will be raised to normal operating speed using plant steam. This test will be the first time that components and systems are operated together, allowing operators to exercise and validate procedures as required before Fuel Load. Completion of the test will validate many testing ITAACs that are required for Fuel Load.

SITE OPERATIONS

Site Operations and Maintenance

The Site Operations organization continues to focus on obtaining the required number of licensed operators to support Fuel Load for both units. As of the end of the Reporting Period, the Operations is fully staffed and has achieved a major milestone by obtaining NRC approval issuing dual-unit licenses to 72 Operators. Receiving dual-unit licenses means all Operators licensed to operate Unit 3 are now also licensed to operate Unit 4. The fifth Initial Licensing Training (“ILT”) class, which includes 13 operators, began in July 2020 and is in the final phase of training before the NRC exam in March 2022. The 72 licensed operators continue to meet the Unit 3 testing, Fuel Load, and Start-up needs.



Unit 3 Spent Fuel Pool and Cask Loading Pit

The Project team has established a turnover and acceptance process to systematically assume plant ownership. The process is managed by the Project’s Site Operations, Maintenance, and Engineering organizations as an integrated turnover acceptance team. During the Reporting Period, Site Operations continued to make progress in system/area turnover acceptance. Most of the remaining rooms and buildings in Unit 3 are expected to turn over during the next Reporting Period to support Unit 3 startup testing. The turnover process is rigorous and thorough, requiring plant health committee approval to ensure the plant is in acceptable condition when Site Operations takes over. SNC Operators continue to perform monitoring activities across the Site, while the Maintenance organization is engaged in the preservation of installed equipment. Utilizing the SNC

Maintenance group to preserve equipment minimizes equipment failure prior to operation, while providing valuable on-the-job training prior to acceptance. Additionally, similar to Operations, maintenance personnel are also supporting ITP testing by validating component functionality to ensure equipment can be safely energized and will function as part of component and pre-operational testing.

Cyber Security

During the Reporting Period, the Cyber Security organization continued to make significant progress toward enrolling the required systems in the Cyber Security Program to support fuel load and startup testing. Walkdowns have been completed for over a third of the Unit 3 systems and are ready for Cyber Security program enrollment during Startup testing. The remaining systems will be walked down prior Unit 3 Fuel Load.

ITAAC and Licensing

During the Reporting Period, the ITAAC organization continued to support construction and testing for submittal of ITAAC Completion Notifications. At the end of January 2022, 269 Unit 3 ITAAC Closure Notifications (“ICNs”) had been submitted to the NRC and 129 ICNs remain. SNC is planning to submit the “All ITAACs Completed Letter” to the NRC in the next Reporting Period, which is the final submission by SNC to support the NRC’s issuance of the 103(g) finding required for Fuel Load. Each of the 398 Unit 3 ICNs must be submitted and verified complete in order to provide this letter to the NRC and allow for Unit 3 Fuel Load.

As for Unit 4, 114 Unit 4 ICNs had been submitted to the NRC and 279 ICNs remain as of February 2022. Additionally, the site has completed and submitted all Unit 4 Uncompleted ITAAC Notifications (“UINs”) for all ITAAC that will not yet be completed per the schedule at least 225 days prior to the scheduled date for initial Fuel Load for Unit 4.

Site and Corporate Licensing continued to provide support to Construction, Operations, and Engineering to ensure the Project’s compliance with regulatory requirements. During the Reporting Period, Site and Corporate Licensing and ITAAC teams continued to work with the NRC on timely submittal of ICNs for review.

Integration of the Four Unit Site

During the Reporting Period, phase 1 and phase 2 of the security lockdown was completed in support the upcoming final phase of security lockdown to fully establish the Protected Area for Unit 3 prior to fuel load. The security lockdown means to establish security control of all areas within the Unit 3 physical security zones, and this is important to ensure all security and safety related components are protected after testing and placed in service after Fuel Load. Additionally, the PAP building has been placed in service to allow personnel access to the Unit 3 Protected Area. The PAP will serve as the plant access entry for Vogtle 1-4 once all four units are integrated.



Plant Vogtle Units 1-4

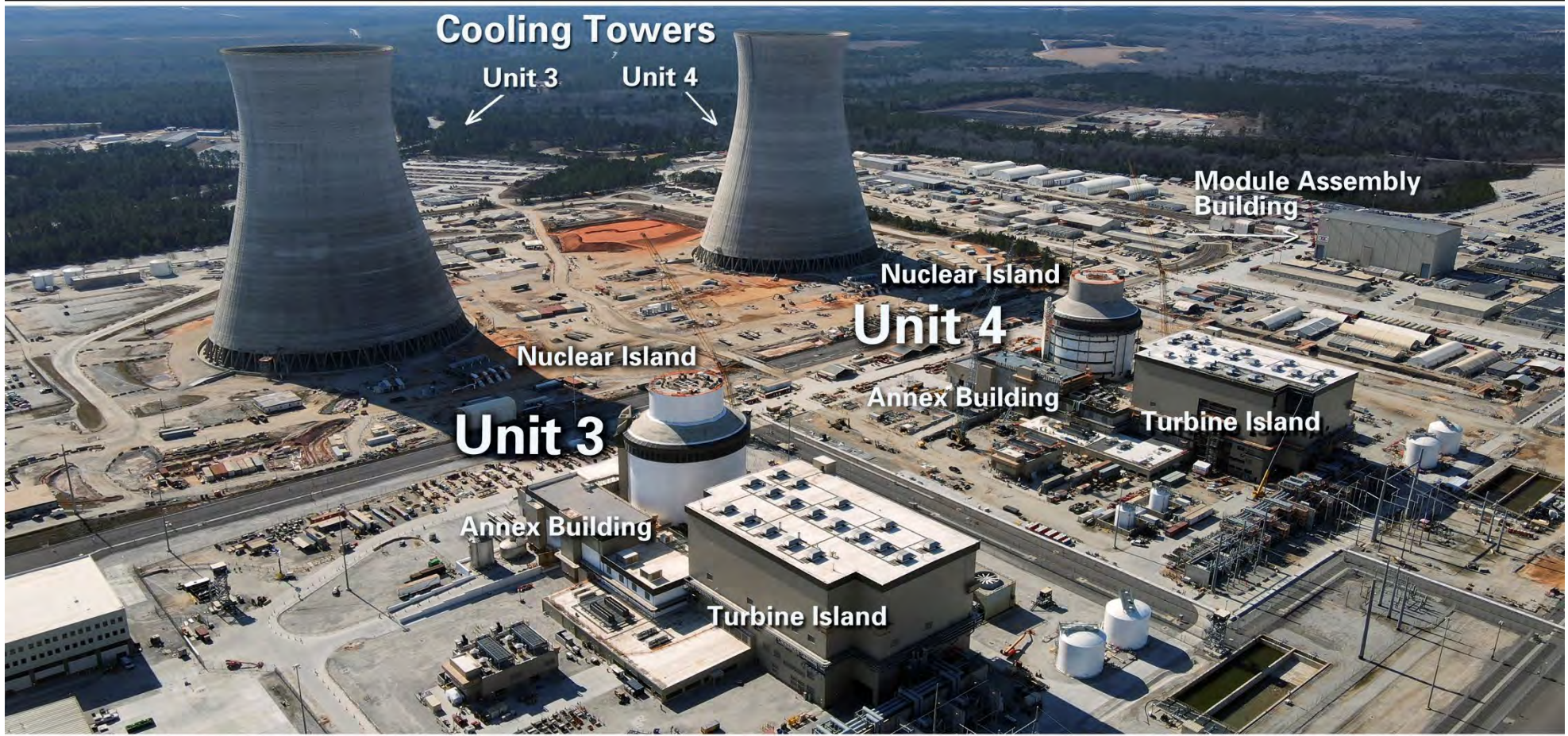
4. An updated comparison of the economics of the certified project to other capacity options.

Per the stipulated agreement adopted by the Commission in its Order on the 23rd VCM Report on February 16, 2021, this stipulated question is no longer required in the Company's VCM Reports.

5. **The Company will be under a continuing obligation to supplement its response to PIA Staff DR STF-TN-1-2 by ensuring that the financing data reflected in the schedules attached to that DR response reflect the most current and updated information at the time of each semi-annual monitoring report. In addition, the Company will provide the most current information shared with each of the Rating Agencies.**

Simultaneous with this filing, the Company has filed supplemental PIA Staff DR STF-TN-1-2.

Vogtle 3&4 - Construction, January 30, 2022



Glossary of Abbreviations	
ASME	American Society of Mechanical Engineers
B&PV	ASME Boiler and Pressure Vessel Code
BOP	Balance of Plant
CB20	Passive Containment Cooling Water Tank
CHT	Cold Hydrostatic (or “Hydro”) Testing
COL	Combined License
CPI	Cost Performance Index
cROP	Construction Reactor Oversight Process
CVT	Closed Vessel Testing
DOE	Department of Energy
HFT	Hot Functional Testing
I&C	Instrumentation & Controls
ICN	ITAAC Closure Notifications
IDS	Class 1E DC System
IF	Integrated Flush
IHP	Integrated Head Package
ILRT	Integrated Leak Rate Test
ILT	Initial Licensing Training
ITAAC	Inspection, Test, Analysis, and Acceptance Criteria
ITP	Initial Test Program
MCR	Main Control Room
NOP	Normal Operating Pressure
NOT	Normal Operating Temperature
NRC	Nuclear Regulatory Commission
N-Stamp	Nuclear Component Stamp
OVT	Open Vessel Testing
PAP	Personnel Access Point
PCC	Project Control Center
PMS	Protection and Safety Monitoring
PSS	Primary Sampling System
PTC	Production Tax Credit
PXS	Passive Core Cooling System
QA	Quality Assurance
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
RVI	Reactor Vessel Internals
SFP	Spent Fuel Pool
SFS	Spent Fuel Pool Cooling System
SGS	Steam Generator System
SIT	Structural Integrity Test
SNC	Southern Nuclear Company
SPI	Schedule Performance Index
TCC	Testing Control Center
TOG	Turbine On Gear
UIN	Uncompleted ITAAC Notifications
VCM	Vogtle Construction Monitoring