Georgia Power

Bin 10230
241 Ralph McGill Boulevard, NE
Atlanta, GA 30308-3374

February 16, 2023

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

RE: Georgia Power Company's Twenty-eighth 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-eighth 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.

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

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

Sincerely,

Kelley M. Balkcom

Kelley M. Balkcom
Director, Regulatory Affairs
mmcclosk@southernco.com

Vogtle
UNITS 3 & 4

Twenty-eighth Semi-annual Vogtle Construction Monitoring Report

February 2023 · Docket No. 29849

Vogtle Unit 3 Containment

Georgia Power

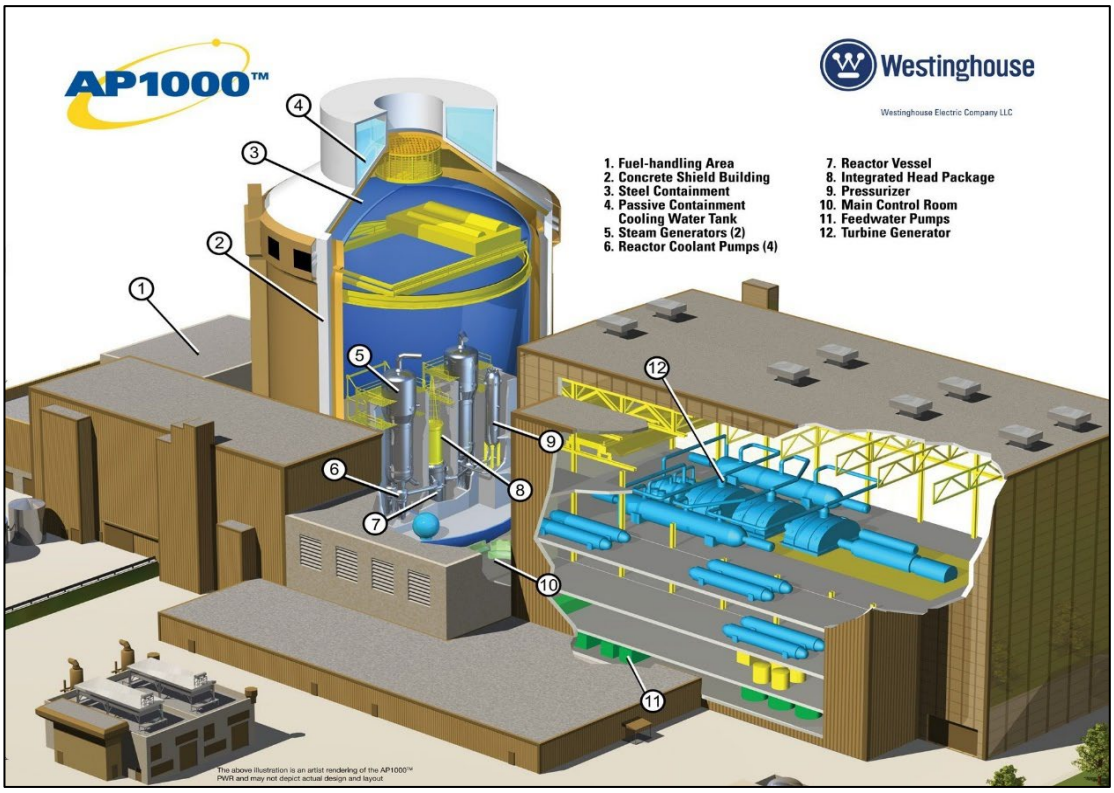
Vogtle Units 3 and 4
Twenty-eighth Semi-annual
Construction Monitoring Report

Table of Contents

	Page
Executive Summary	3
Responses to Stipulated Questions	7
Glossary	30

Unit 3 Nuclear and Turbine Islands

As of January 2023



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 continues to cultivate and enhance a culture that promotes safety first. The Site continues to have an OSHA Recordable Incidence Rate below the heavy construction industry average. Through the end of 2022, the site continued to experience a low number of recordable incidents. In February 2023, the Bechtel Construction scope of work experienced its first lost time incident ending a record period totaling of over 71 million manhours without a lost time incident. In 2023, the Site team remains committed to enhancing the safety-first culture as construction work winds down and SNC Operations continues to accept increased responsibilities for both Units.

  During the reporting period of July 1, 2022, through December 31, 2022 (the "Reporting Period"), SNC did not receive any Notices of Violation for Unit 4 and remains in favorable standing with the NRC as indicated by its green status under the NRC's Construction Reactor Oversight Process ("cROP"). With the receipt of the 103(g) finding, Unit 3 moved from the cROP to the NRC's Reactor Oversight Process ("ROP"). Since moving to the ROP, Unit 3 has received no Notices of Violation and is in favorable standing with the NRC. The ROP was designed and implemented to help ensure public health and safety in the operation of commercial nuclear power plants. Through the ROP program, the NRC communicates plant performance and assessments to the public, providing greater transparency in the process.

- **Unit 3 loads fuel and begins Start-up testing.**

  On October 13, 2022, Vogtle Unit 3 became the first newly constructed nuclear reactor in the United States to load fuel in several decades. The Site Operations team performed surveillances and met all Technical Specifications to load 157 fuel assemblies and two neutron sources into the Unit 3 Reactor Vessel. On October 17, 2022, four days after starting the Fuel Load process, the Project team successfully and safely completed all activities related to the initial Fuel Load.

  Following successful fuel load, the Site Operations team continued Start-up testing, by transitioning the unit through several of the MODE sequences. The unit has achieved MODE 3 which represents the final MODE before the unit will achieve Initial Criticality at MODE 2. The purpose of the MODE transitions is to allow the Operations team to conduct surveillances and tests at various Plant configurations. During Start-up testing the team has identified issues with certain pieces of equipment and components and determined the remediation needs to be completed prior to entering MODE 2.

  Upon completion of these remediation activities, the Project will then transition through each of the MODEs, collecting data, validating the correctives actions, and ultimately achieving MODE 2 ("Start-up") safely, where the nuclear chain reaction will be initiated. The team will increase the reactivity in the reactor by raising the controls rods from the core and reducing the boron concentration of the water in the reactor through dilution. At this point in the Start-up sequence, Unit 3 will have achieved Initial Criticality. To provide time for the remediation efforts to be completed before MODE 2, and to provide additional margin for Start-up testing, the Project Team has made the decision to extend the Unit 3 schedule and projects to place the unit in service in May or June 2023.

- **Georgia Power incurred $461 million of capital expenditures during the Reporting Period.**

Table 1 – 28th VCM Expenditures

Dollars in Millions

Original EPC & EPC Scope Change	$ -
Interim Payments & Liens	0
Site Construction Management	381
Owners Costs	55
Ad Valorem Tax	24
Transmission Interconnection	0
Total 28th VCM Expenditures	$ 461

- **Georgia Power presents $461 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 25th VCM Report, 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 VCM 17 $7.3 billion capital cost forecast until the prudency review contemplated in the Commission's VCM 17 Order. Thus, the Company is not currently seeking verification and approval of the $461 million incurred during the Reporting Period at this time and presents these costs for Commission review only.

- **The Company's share of the total Project cost forecast is approximately $10.2 billion.**

  The Company and SNC continue to monitor and evaluate costs associated with the completion of the Project. The total project capital cost forecast is now approximately $10.2 billion, which includes the addition of $181 million since the 27th VCM to replenish the unallocated construction contingency. The Company is not requesting Commission approval of the increased cost forecast 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.

  Since VCM 27, $181 million of established construction contingency was assigned to the Project's base capital forecast for costs primarily associated with schedule extensions, construction productivity, the pace of system turnovers, additional craft and support resources, procurement for Units 3 and 4 and Unit 3 Start-up testing.

  Cumulative capital expenditures through the Reporting Period are $9.4 billion after accounting for receipt of the Toshiba Parent Guaranty. The estimated remaining capital spend to complete the Project is approximately $800 million, which includes Georgia Power's share of Project contingency.

- **The in-service date for Unit 3 is now projected in the second quarter of 2023.**

  As noted above, the in-service date for Unit 3 is projected during May or June of 2023. The adjustment to the projected in-service date is necessary to remediate certain equipment and component issues identified during Start-up testing. Achievement of Unit 3's schedule primarily depends on the progression of final Start-up testing, which may be impacted by further equipment, component and / or other operational issues and challenges.

  The site work plan targets an in-service date during April 2023 for Unit 3, and as the site work plan includes minimal margin to the in-service date, an in-service date during the second quarter of 2023 is projected for Unit 3, although any further delays could result in a later in-service date.

- **The in-service date for Unit 4 is now projected during late fourth quarter 2023 or during the first quarter 2024.**

  After considering the timeframe and duration of Unit 4 hot functional and other testing as well as recent experience with Unit 3 Start-up and pre-operational testing, additional margin is being added to the Unit 4 schedule. This additional margin accounts for the current pace of component and Start-up testing efforts and allows additional time for work completion, component testing and potential Start-up challenges. Achievement of Unit 4's schedule primarily depends on potential impacts arising from Unit 4 testing activities overlapping with Unit 3 Start-up and commissioning; maintaining overall construction productivity and production levels, particularly in subcontractor scopes of work; and maintaining appropriate levels of craft labor.

  As Unit 4 completes construction and transitions further into testing, ongoing and potential future challenges include the timeframe and duration of hot functional and other testing; the pace and quality of remaining commodities installation; completion of documentation to support ITAAC submittals; the pace of remaining work package closures and system turnovers; and/or the availability of craft, supervisory, and technical support resources.

  The Project team continues to work towards a more aggressive site work plan which currently targets Fuel Load for Unit 4 in the third quarter 2023 and an in-service date during the fourth quarter of 2023. As the site work plan includes minimal margin to the milestone dates, an in-service date late in the fourth quarter 2023 or during the first quarter 2024 is projected for Unit 4, although any further delays could result in a later in-service date.

- **Unit 4 continues testing in preparation for HFT.**

  During the Reporting Period, Unit 4 continued to make significant progress in preparation for HFT. Several major testing milestones were completed including, Open Vessel Testing, Closed Vessel Testing, Turbine on Gear, Cold Hydro Testing and Condenser Vacuum Testing. Each of these tests is needed to support the upcoming milestone of HFT, which the site working plan projects to start in March 2023, and which could start as late as June 2023 to support an in-service date during the first quarter of 2024.

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

  Using the construction capital costs deemed reasonable as of this 28th VCM Report, the projected peak rate impact to retail customers is approximately nine percent, with approximately three percent expected to be placed into rates the month after Unit 3 reaches in-service, which is projected to occur later in 2023. A portion of the estimated rate impact of Vogtle Units 3 and 4 is dependent on the forecasted price of natural gas. This recent decrease in the estimated rate impact for the 28th VCM is due to higher forecasted natural gas prices that are reflected in the estimate, which results in higher projected fuel savings for the new Vogtle units. If natural gas prices return to and stabilize to pre-2022 levels, the fuel savings from the new Vogtle units would decrease and the estimated rate impact would increase.

  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.

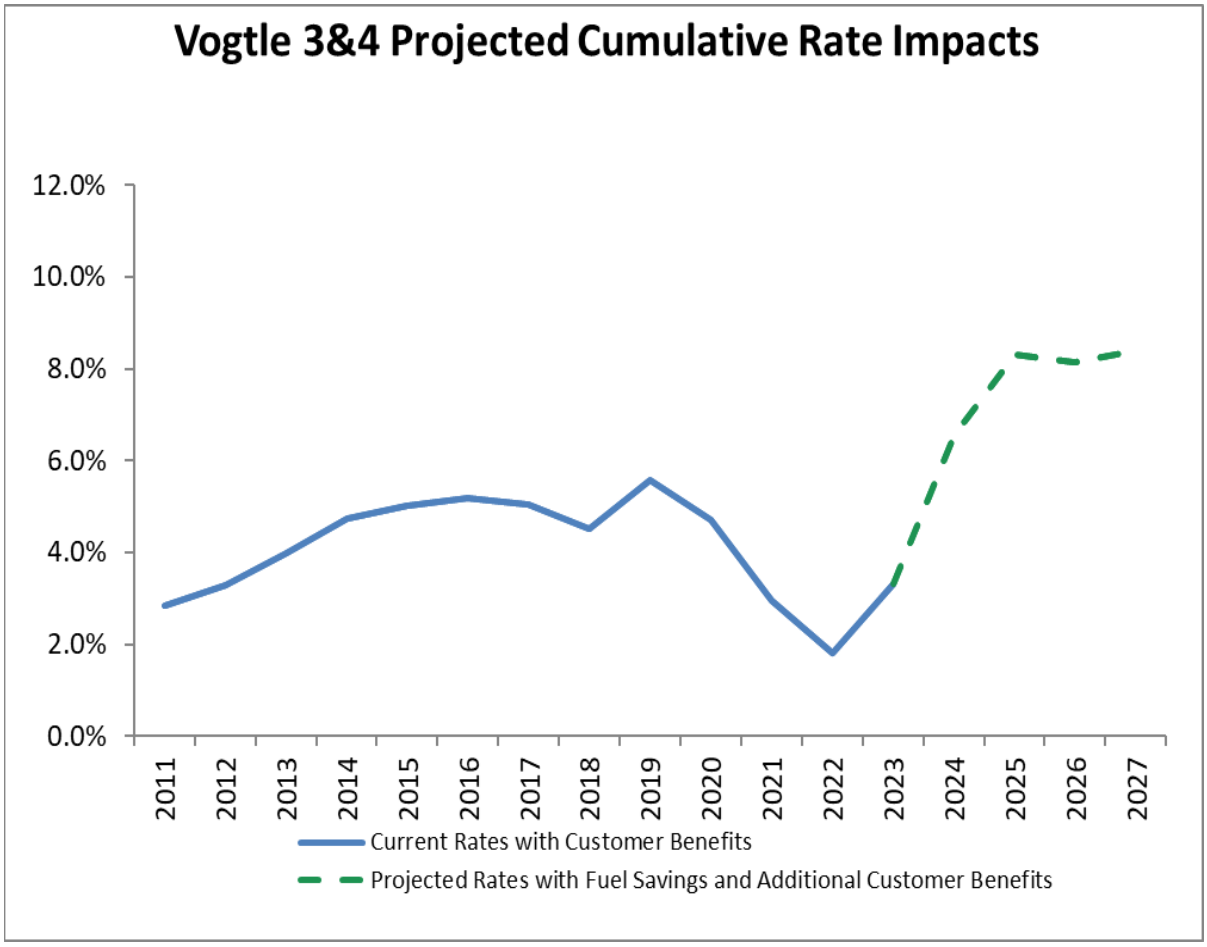


Figure A – Projected Cumulative Rate Impacts

RESPONSES TO STIPULATED QUESTIONS

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

The total Project capital cost forecast is now approximately $10.2 billion. The details of the current total Project capital cost forecast are provided in Table 1.1, which also reflects the capital investment through December 31, 2022, actual-to-forecast variances, and 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.

Since the 27th VCM Report, $181 million of established contingency was allocated to cover costs primarily associated with schedule extensions, construction productivity, the pace of system turnovers, additional craft and support resources, procurement for Units 3 and 4, and the Unit 3 Start-up and pre-operational testing challenges. The Company also replenished the unallocated construction contingency balance with an additional $181 million, which resulted in a corresponding increase to the total project capital cost forecast.

The projected risk-adjusted in-service dates for both units have been adjusted to reflect an in-service date in May or June 2023 and during late fourth quarter 2023 or the first quarter 2024, for Units 3 and 4 respectively. Unit 3's projected schedule primarily depends on the progression of final Start-up testing, which may be impacted by further equipment, component and / or other operational issues and challenges. Unit 4’s projected in-service date primarily depends on potential impacts arising from Unit 4 testing activities overlapping with Unit 3 start-up and commissioning; maintaining overall construction productivity and production levels, particularly in subcontractor scopes of work; and maintaining appropriate levels of craft laborers.

Table 1-A below shows a comparison of milestone dates between the current Unit 4 site work plan and the Risk Adjusted Schedule.

Table 1-A – Unit 4 Comparison to Risk Adjusted Schedule		
Unit 4 Major Milestone	**February 2023 Site Work Plan**	**December 2023 / March 2024 Risk Adjusted Schedule**
Structural Integrity Test ("SIT") / Integrated Leak Rate Test ("ILRT")	February 2022 (Actual)	
Cold Hydro Testing	December 2022 (Actual)	
Hot Functional Testing Start	March 2023	March 2023 - June 2023
Fuel Load Start	June 2023	July 2023 - October 2023
Commercial Operation Date	October 2023	December 2023 - March 2024

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 revisions 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, 2022

	Total Project Capital			Project to Date Capital		
	VCM 27 ($ 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	632	644	12	597	595	1
Procurement	1,507	1,534	27	1,461	1,479	(18)
Contract Construction	3,154	3,200	46	3,052	3,041	11
Construction Support & Project Management	954	997	43	738	768	(29)
Total Site Construction Management	6,247	6,376	128	5,848	5,883	(35)
Owner's Costs	1,174	1,208	34	1,106	1,103	4
Ad Valorem	318	336	18	277	275	2
Transmission Interconnection	62	62	0	62	62	(0)
Test Fuel Offsets	(4)	(4)	-	0	0	-
	1,549	1,601	52	1,445	1,439	6
Total Construction & Capital Cost[4]	**11,405**	**11,586**	**181**	**10,900**	**10,929**	**(29)**
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]	(1,919)	(2,100)	(181)	-	-	-
Total Construction & Capital Cost, net of Parent Guarantee and amounts to be absorbed by GPC[5]	**$ 7,300**	**$ 7,300** (2) (3)	**$ -**	**$ 8,714**	**$ 8,743**	**$ (29)**
Other Capital Cost						
Construction Monitor	**24**	**33**	**9**	**21**	**20**	**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, 2022

	Total Project Financing	Project to Date Financing		
	Total Current Forecast ($ millions)	Actual To Date ($ millions)	Budget To Date ($ millions)	Variance ($ millions)
Project Schedule Financing				
Return on CWIP in Rate Base[6]	2,973	2,807	2,808	(1)
AFUDC - Accrued on CWIP Above Original Certified Cost	421	304	306	(2)
AFUDC - Accrued through Dec 2010 and Related Return	109	109	109	-
Total Project Schedule Financing	**$ 3,504**	**$ 3,220**	**$ 3,223**	**$ (3)**
Total Capital Cost and Financing[5]	**$ 10,804**	**$ 11,934**	**$ 11,966**	**$ (32)**

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 $60 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 $407 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 $2 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

Million of Dollars

		Deferred Benefits		Deferred Operating Costs				
Date	VCM	Replacement Energy Cost	Deferred PTCs	O&M	Depreciation	Ad Valorem	Total Deferred Operating Costs	Net Cost
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 2021		**239.9**	**170.8**	**(135.1)**	**(131.7)**	**(44.4)**	**(311.3)**	**99.4**
Total VCM 27		**224.8**	**85.6**	**(79.3)**	**(67.1)**	**(25.1)**	**(171.5)**	**138.9**
Jul-22	28th	**77.4**	14.3	(12.1)	(11.3)	(4.2)	(27.6)	64.2
Aug-22	28th	**75.0**	14.3	(12.4)	(11.3)	(4.2)	(27.9)	61.4
Sep-22	28th	**56.4**	14.3	(12.0)	(11.3)	(4.2)	(27.4)	43.3
Oct-22	28th	**29.2**	14.3	(11.9)	(11.3)	(4.2)	(27.4)	16.1
Nov-22	28th	**31.6**	14.3	(18.4)	(11.3)	(3.5)	(33.3)	12.7
Dec-22	28th	**66.8**	14.3	(13.0)	(11.3)	(3.9)	(28.1)	53.0
Total VCM 28		**336.5**	**85.6**	**(79.8)**	**(67.7)**	**(24.1)**	**(171.7)**	**250.5**
Total to Date		**1,391.4**	**1,107.4**	**(914.3)**	**(803.7)**	**(212.8)**	**(1,930.8)**	**568.1**

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

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 $520 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, 2023, the total Project is approximately 98.5% complete. The major remaining scopes of work on Unit 4 are finishing direct construction, subcontractor construction, and completing the Initial Test Program ("ITP"). As shown below, total construction, covering both Units 3 and 4, is approximately 99% complete. Direct Construction on Unit 3 is 100% complete. Direct construction on Unit 4 (as shown in Figure B on page 14) is approximately 99% complete, which represents approximately 65% of the total construction scope. The remaining 35% of construction scope includes subcontracted scopes of work, which are approximately 98% complete as of January 2023. The ITP scope is approximately 85% 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 2023 % Complete
Engineering	100%
Procurement	99.9%
Construction	99.3%
I&C / Cyber Security	100%
Initial Test Program	84.8%
Total Project*	**98.5%**

* Start-up activities are not included in the Total Project Percent Complete calculation

QUALITY AND COMPLIANCE

During the Reporting Period, the Company provided 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 help 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.

SNC personnel continue to lead the Bechtel Quality Control organization, which has supported 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. Additionally, SNC and Bechtel continue to implement lessons learned from Unit 3 to Unit 4 in an effort to reduce quality issues. The Company and SNC are committed to bringing Vogtle Units 3 and 4 on-line safely and with the highest quality.

ENGINEERING

During the Reporting Period, the overall Engineering organization continued to support construction, ITP, and Start-up progress. The Start-up Engineering organization focused on processes and programs which supported the successful Fuel Load evolution on Unit 3 and continues to support plant testing and operations. The ITP Design Engineering team focused on resolving issues identified during component and system testing. With the continued progress of Unit 3 toward Commercial Operations, the Construction Engineering organization has transitioned their focus to supporting Unit 4. The entire Engineering organization is concentrating on identifying and incorporating lessons learned from Unit 3 and applying the opportunities to Unit 4. For example, lessons learned have been integrated into engineering documentation and efforts have been focused on the completion of paperwork in support of area turnovers, and construction documentation closeout.

Additionally, during the Reporting Period, Engineering achieved several milestones for Unit 3 including (1) completion of the American Society of Mechanical Engineers ("ASME") Section III requirements, (2) transition to ASME Section XI (rules for in-service inspection, testing, and repairs and replacement activities) code jurisdiction and (3) completion of the transition of Design Authority Turnover by transferring the design authority from Westinghouse, the design engineer of record, to SNC.

During the upcoming reporting period, the primary focus for Engineering will remain on supporting completion of the Start-up activities for Unit 3, along with preparations for Unit 4 HFT, upcoming ITAAC submittals, and Unit 4 system completions.

PROJECT PERFORMANCE

In December 2022, Unit 3 declared the completion of direct construction work. The remaining work to be completed on Unit 3 involves subcontract scopes of work, documentation closure, system transitions to operations, and component, pre-operational and Start-up testing, to support Commercial Operations.

Unit 4's direct earnings through January 2023 are shown in Figure B below. As of the end of January 2023, direct construction on Unit 4 is approximately 99% complete. The milestone markers show dates from the current August 2022 site working plan and the December 2023 Risk Adjusted Schedule.

Direct Construction Percent Complete – Unit 4

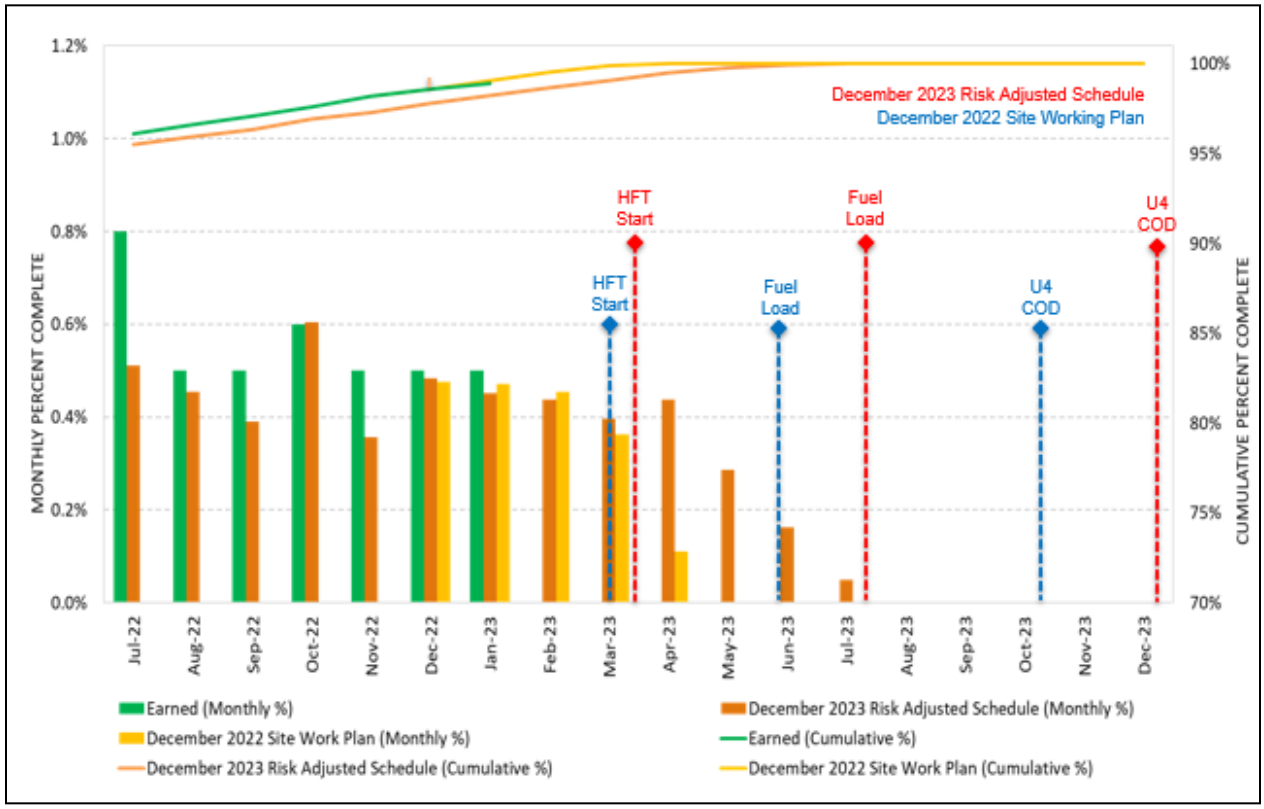


Figure B–Direct Construction Percent Complete – Unit 4

Critical Path – Unit 3

The Unit 3 Risk Adjusted Schedule Critical Path follows the continued Start-up of the Primary and Secondary plants from MODE 5 (maintenance outage) through MODE 2, then initial MODE 1 Power Ascension testing, followed by a maintenance outage prior to 100% final power, SNC declaration of Unit 3 ready for dispatch, and GPC notification to the Public Service Commission of COD.

Critical Path – Unit 4

The Unit 4 Risk Adjusted Schedule Critical Path goes through the Containment Building with the completion of HFT, Fuel Receipt, declaration of construction complete, receipt of 103(g) finding, Fuel Load and then Start-up testing through COD.

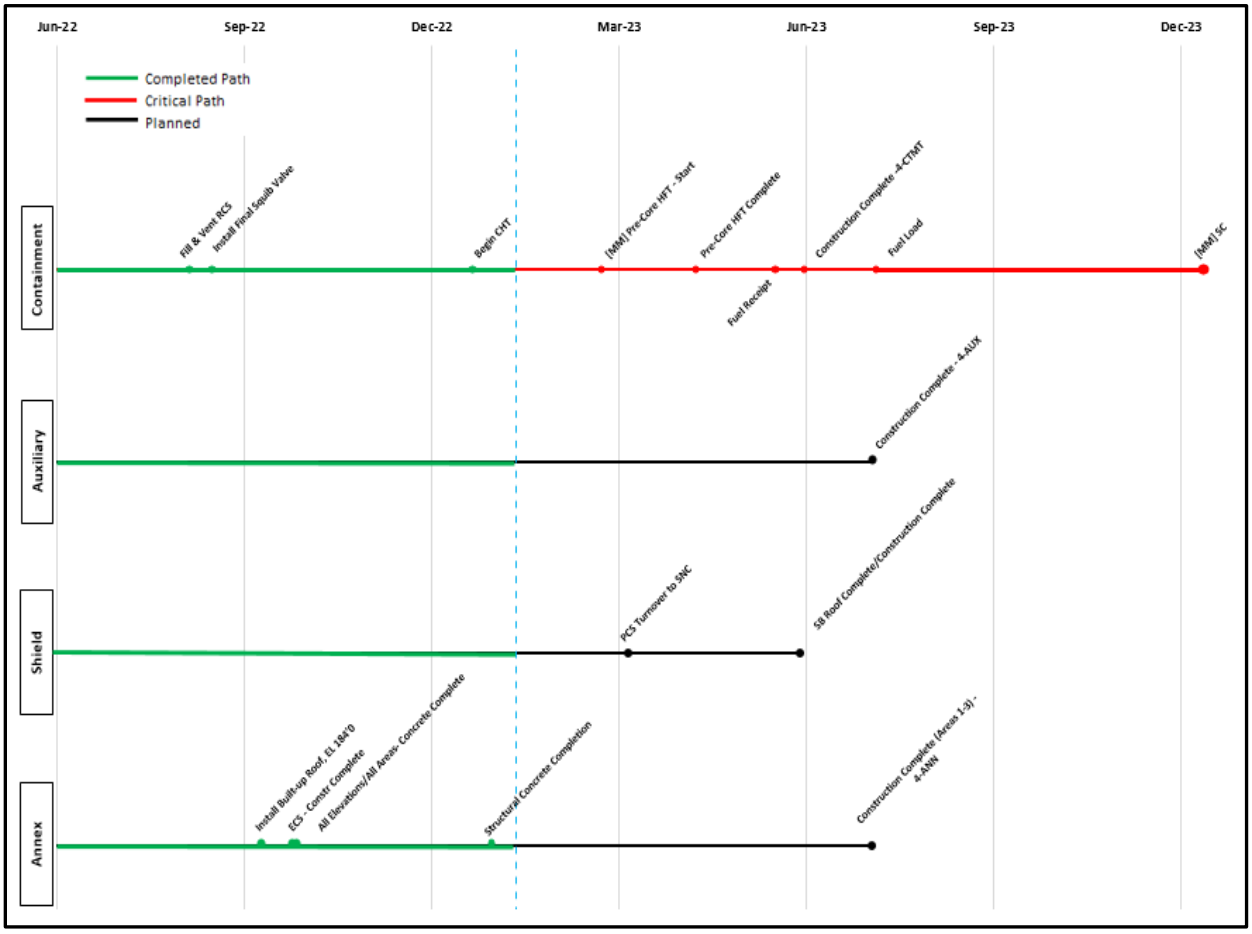


Figure C – Unit 4 Critical Path

Project Milestones

Table 3.2 shows the remaining major milestones for each unit, along with the estimated dates in the current Risk Adjusted Schedules.

	Table 3.2 – Remaining Project Milestones	
	Milestone	**Risk Adjusted Schedule Dates**
		May 2023 / June 2023
Unit 3	Submit Final ITAAC to NRC	July 29, 2022 (A)
	Protected Area Lockdown	August 3, 2022 (A)
	Achieve full Vogtle 1-3 Security Integration	August 11, 2022 (A)
	Commence Fuel Load	October 13, 2022 (A)
	Design Authority Turnover	October 27, 2022 (A)
	Start Power Ascension Testing	March 2023 – April 2023
	Initial Criticality	March 2023 – April 2023
	100% Rated Thermal Power	April 2023 – May 2023
	Commercial Operation	May 2023- June 2023
Unit 4		**December 2023 / March 2024**
	Complete Open Vessel Testing	August 18, 2022 (A)
	Complete Turbine on Turning Gear	November 24, 2022 (A)
	Complete Cold Hydro Testing	December 6, 2022 (A)
	Start Hot Functional Testing	March 2023 - June 2023
	Complete Hot Functional Testing	May 2023 - August 2023
	Complete Fuel Receipt	June 2023 - October 2023
	Commence Fuel Load	July 2023 - October 2023
	Start Power Ascension Testing	July 2023 – December 2023
	Initial Criticality	August 2023 – December 2023
	100% Rated Thermal Power	October 2023 – February 2024
	Commercial Operation	December 2023 - March 2024

PROJECT RISK

The Project continues to retire risk with the achievement of each Project milestone; nevertheless, a robust process remains in place to evaluate areas of risk commensurate with their significance, potential impact, and likelihood of occurrence. Risks continue to be actively managed, and mitigation plans are developed and administered, to decrease the probability and scope of such impacts.

SNC and contractors on the Project manage a comprehensive risk program that captures and tracks potential risks to the Project. The Company's continued oversight and its execution of the risk program reduces the probability of experiencing potential risks and curtails impacts to the Project from realized risks.

The Project risk register documents threats and opportunities that are routinely evaluated until the risk event is realized or retired, as well as mitigation plans that have been developed and executed to reduce the potential impacts of identified risks. The Project risk register is provided monthly to Commission Staff as a recurring data request (STF-142-4) and is included in the Company's Monthly Status Report. The following section identifies some of the Project risks and discusses strategies the Project team is undertaking to mitigate impacts of those risks.

- *The risk that construction is unable to achieve the projected completion rate for Unit 4, even with sufficiently qualified resources available.*

A project execution risk of being able to achieve the projected completion rates, will remain active throughout the Unit 4 lifecycle. The risk is that the Project is unable to execute with the resources accounted for by current projections, which leads to the inability to reach forecasted construction production targets.

With the completion of construction activities on Unit 3, this risk has been retired for Unit 3 and is focused solely on Unit 4. Unit 4 has made substantial progress during the Reporting Period and continues to focus on electrical commodity installation in support of milestone completions, including HFT, Fuel Receipt and Fuel Load. The Unit 4 team continues to demonstrate their ability to utilize the lessons learned from Unit 3 in the execution of work scopes. Key craft and supervision have been transferred from Unit 3 to Unit 4 to apply the on-the-job experience with Unit 4 completions. The effort of the Unit 4 team to refine the commodity sequencing and installation execution by adapting the construction schedule to incorporate experience gained from Unit 3 continues to be recognized. For example, within the Unit 4 Nuclear Island, permanent lighting has been installed and energized at a much earlier stage than on Unit 3.

The efforts on Unit 4 to ensure continued training on IEEE-384 standards to reinforce lessons learned from Unit 3 and to bolster the Project's focus on first-time quality for electrical installation have proven effective. This training, along with collaborative inspection efforts between Construction, Licensing, and Quality has significantly improved the efficiency of safety related electrical installations. Additionally, Unit 4's process of closing work packages and completing Inspection Records ("IRs") is re-enforcing a "sign as you go" approach. This approach actively mitigates the risk that Unit 3 experienced in developing a backlog of work package closures and

IR reviews. This strategy has proven to be successful thus far, and the Project team continues to be ahead of work package closure rates when compared to a similar point on Unit 3. Collectively, management continues to evaluate 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.*

Another project execution risk is CPI continuing to increase or remaining above Unit 4 budgeted rates for the duration of the Project life cycle. First-time quality remains an area of focus for the Project team. The Project team implemented organizational changes that were designed to focus on first-time quality improvements and reduce remediation work. In addition, the Site team's reinforcement of the "sign as you go" approach continues to encourage completion of documentation earlier in the construction and testing processes and improves the rate of first-time quality. Further, the Site team continues to conduct focused training programs to remind existing and new craft of the standards required in the construction of nuclear facilities. Project management remains focused on initiatives to increase direct construction hours earned in comparison to the direct construction hours spent; however, with all large projects it is common to experience an increase in CPI during the later stages of a Project.

Additionally, the Unit 4 team continued utilizing the "Ready-Ready" strategy during the Reporting Period, which focuses on identifying barriers to future work activities and establishes mitigating actions to improve the team's readiness for work execution. For example, such actions have included the incorporation of lessons learned, review of engineering documentation, verification of material availability, and work package readiness. Further actions being implemented on Unit 4 to increase productivity include the transfer of craft and field non-manual employees from Unit 3 to Unit 4, the addition of craft and field non-manual staffing beyond those being transferred between Units, and increased focus on key subcontracts.

The Project team continues to review and implement opportunities 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 Units 3 and 4.*

During the Reporting Period, Unit 3 completed all the remaining room, area and system turnovers from Construction to SNC. Similar to the previously discussed risk, this risk has been retired for Unit 3.

Unit 4 continues to complete system turnovers in support of near-term milestones and has begun the process of turning over areas by utilizing key personnel transferred from Unit 3. Utilizing these key resources whose experience, gained from Unit 3 close out, is expected to improve planning and execution on Unit 4 specifically related to area transitions, which will continue through the current reporting period. Project management remains focused on the "sign as you go" process. Incorporating lessons learned from Unit 3 and focusing on system turnover

completion is anticipated to reduce the amount of risk between HFT and Fuel Load. Although there was a delay in the transition of craft resources to Unit 4, the experience gained on Unit 3 has enhanced the sequencing of commodities which has positively impacted the quality of system and area turnovers.

- *The risk the Project is unable to complete the required documentation on a timeline that supports the current schedule.*

During the Reporting Period, Unit 3 completed all the remaining documentation to receive the historic 103(g) finding and support the successful Unit 3 Fuel Load. On December 22, 2022, the final Bechtel construction work package was declared complete. As noted above, this risk for Unit 3 has been retired.

For Unit 4, the Project team remains focused on documentation closure required to support the turnover of systems in support of upcoming milestones and the closure of ITAACs. As a result of the experience gained from Unit 3, the licensing team took an action item to work with the NRC to reduce the total number of ITACCs required by identifying ITAACs that utilized the same testing or analysis results to fulfil the requirement. The ITAACs identified as utilizing the same requirements were not removed but rather were consolidated into a single ITAAC, which was captured in a LAR to the NRC requesting the reduction of 29 ITAACs. The LAR was approved on November 22, 2022.

Additionally, the licensing team has focused more time and attention in the field on areas that challenged Unit 3. Targeted inspections have reduced the amount of rework, improved safety related first-time quality and provided earlier identification of individuals and groups who required additional training in areas such as IEEE-384.

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

During the Reporting Period, as Unit 3 progressed through Start-up testing, the Unit experienced a few challenges that have required the collective team to perform trouble shooting procedures. Two examples of these challenges are the Control Rod testing and vibration mitigation on the ADS Stage 4 piping. Although each of these items created a unique set of challenges, the team has utilized the collective experience, knowledge, and resources to systematically evaluate the conditions and perform trouble shooting measures. These recent examples of issue identification and resolution provide ample evidence that the SNC organization is highly skilled and experienced in the operation of nuclear power plants, has retained experienced personnel who were involved with the first of a kind start-up technology in China, and as a collective group are able to troubleshoot challenges as they arise.

Although the Operations team stands ready to operate Unit 3, most challenges to design, equipment, and simulator are caught as part of the testing process; a risk remains that additional challenges will surface during the final stages of Start-up that will require trouble shooting and possible modifications and may create a delay to the commercial operation date. As demonstrated by the response to the previously described challenges, the Organization remains steadfast to their core commitment to ensure that the safety and quality of these Plants remains the highest priority.

PROJECT CONTINGENCY

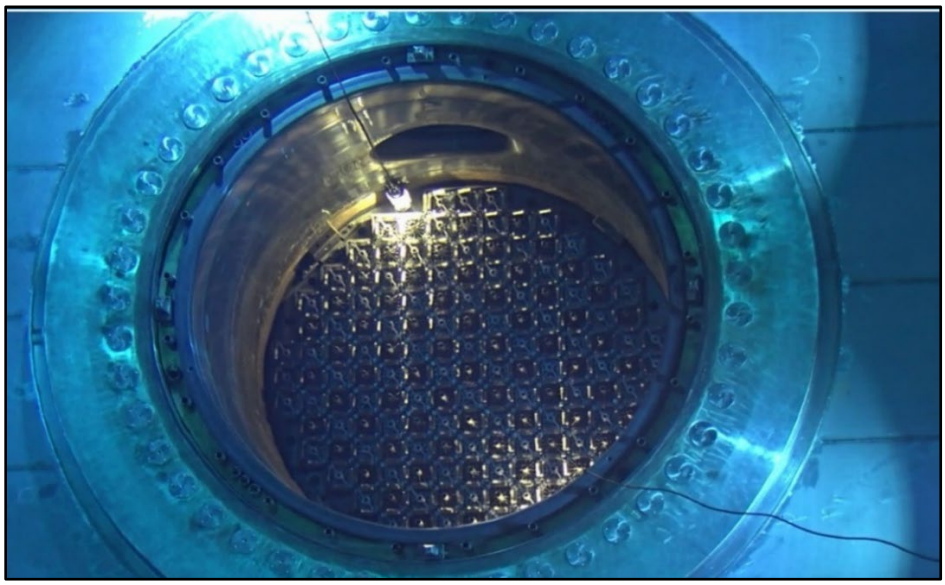
Since the 27th VCM Report, $181 million of established construction contingency was assigned to the Project's base capital forecast for costs primarily associated with schedule extensions, construction productivity, the pace of system turnovers, additional craft and support resources, procurement for Units 3 and 4, and the Unit 3 Start-up and pre-operational testing challenges.

The Company continues to anticipate that all the forecasted contingency, including the additional construction contingency, will be spent by the completion of the Project.

CONSTRUCTION

Unit 3

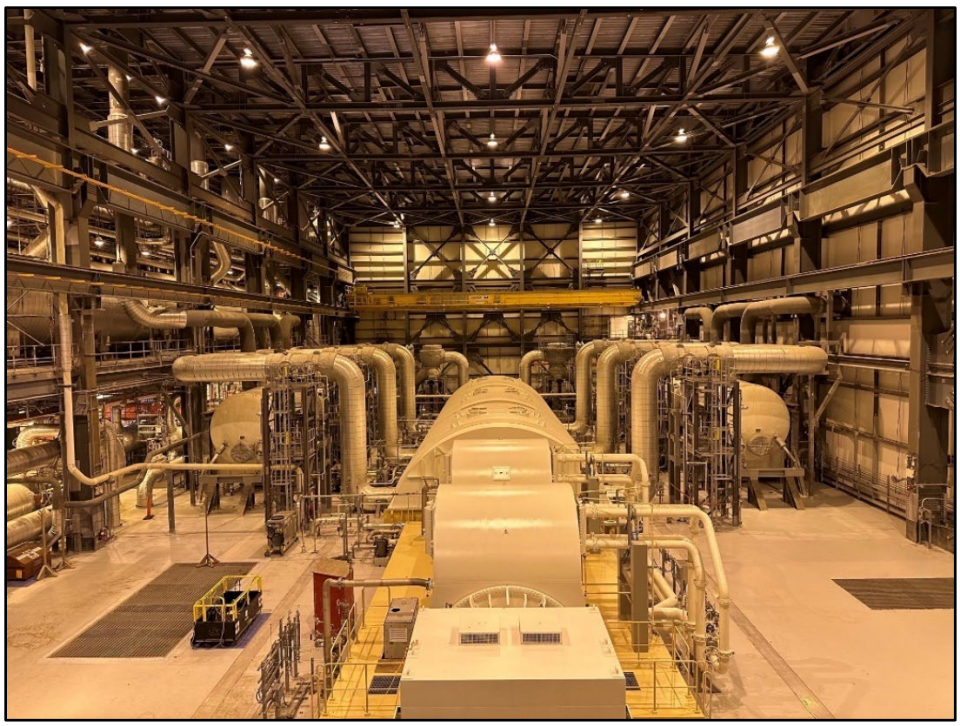
On October 13, 2022, the Project team achieved the requisite conditions to place nuclear fuel into the reactor. Unit 3 Fuel Load was successfully completed on October 17th. This achievement marks the first-time nuclear fuel has been loaded into a newly constructed domestic reactor in several decades. Achieving this milestone represents the culmination of millions of man hours of work and exemplifies the dedication of the entire Project team and all the Stakeholders who have participated in the construction and testing of Vogtle Unit 3.



Unit 3 Fuel Load

Additionally, during the Reporting Period, the Project team continued to transition the Plant to the Operations team and focused on completing the final construction work packages. On December 22, 2022, the final Bechtel construction work package was declared complete. This achievement represents years of effort by the entire team and included the planning, execution, and closure of over 20,000 work packages to construct Unit 3.

The most noticeable changes with Unit 3 are the closure of the Containment building and the reduction of craft and support personnel. Subcontractors continue to complete final coating and touch ups in areas outside of the Containment building, while SNC Operations and ITP teams, along with the Maintenance organization, continue with Plant Start-up and testing activities. In the coming weeks, the collective team will transition the Plant to MODE 1, focusing on several sets of tests to validate the operation of critical components and the ability for those components



Unit 3 Turbine Building

to respond to various conditions, which is intended to ensure the systems required for safe operation perform as intended. During power ascension testing, tests are performed at increasing levels of power from roughly 10 percent through 100 percent. Similar tests and baseline data collection are performed at various plateau power levels. Test examples include rod controls testing, testing from the remote shutdown room, validation of control during a simulated loss of offsite power, and both a generator and plant trip. Upon successful completion of the MODE 1 testing and identified correctives required to make the Unit available for reliable dispatch, Unit 3 will be ready to declare Commercial Operations. The collective team is driving toward achieving the final Unit 3 milestone of Commercial Operations, but they remain steadfast in their commitment to ensure Unit 3 is constructed with the highest level of quality and will represent an asset to the customers and the state of Georgia for the next 60 to 80 years.

Unit 4

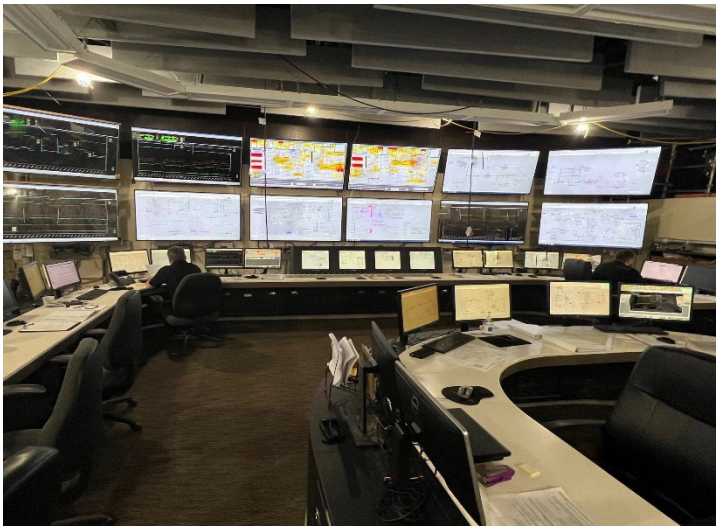
During the Reporting Period, Unit 4 completed several significant milestones including placing the turbine on the turning gear and CHT. Since the Reporting Period, construction work has continued in support of successfully completing the Condenser Vacuum milestone and in preparation for HFT. As discussed in VCM 27, the Unit 4 team continues to utilize numerous lessons learned from Unit 3. For example, the ITP electrical team has worked directly with the Construction team to develop a comprehensive plan focused on completing work scope, planning outages to support testing, and energizing permanent plant electrical systems. One focus area for the ITP electrical team was to complete and energize the Unit Auxiliary Transformer, which supplies power to the Auxiliary Boiler. The team's focus and coordination recently culminated in successful commissioning of the Auxiliary Boiler, which was utilized to support the successful Condenser Vacuum milestone and will be utilized during HFT. Another successful example of the focused electrical plan has been energization of critical transformers and electrical cabinets that support Plant systems including HVAC, plant equipment, and plant lighting allowing for these systems and components to use permanent power. As these and

similar work activities are completed, the Project team continues to focus on the closure of supporting documentation in an effort to reduce the potential for documentation closure backlogs.

Unit 4 Passive Containment Cooling Water Storage Tank

The progress of construction is evident in each of the Plant buildings, including the Containment Building where engineering, construction and the ITP electrical teams have collaborated to utilize information from Unit 3 related to the routing of electrical commodities to expand the success of the first-time quality program. The success of these efforts is clearly visible in Containment, with the energization of permanent plant lighting prior to HFT. Additionally, experience acquired on Unit 3 continues to support earlier installation of the HVAC systems which made considerable progress during the Reporting Period and are in the process of testing. In addition, supports related to the cable separation barriers have been designed and installed in advance for completion of the cable trays, which will reduce the installation duration after final cable inspections are completed.

In the Auxiliary Building, the Main Control Room is substantially complete, including incorporation of the cable separation lessons learned. The Construction, Licensing, and Quality inspection teams have worked together to install, review, and analyze the critical wiring and components in the Main Control Room in an effort to increase the rate of first-time quality on safety related installations. The collaborative effort has been regarded as another successful implementation of lessons learned. Additionally, the lessons learned in the Auxiliary Building PMS rooms have been incorporated for items such as Roxtec Glands and cable separation barriers. Furthermore, architectural finishes such



Unit 4 Main Control Room

as doors and seals are being evaluated and installed where practical to improve the efficiency of ventilation testing and in support of HFT. Repairs and testing of the Spent Fuel Pool have been successfully completed, along with enhancements in the Fuel Transfer Canal and Cask Loading Pit. The team is in the process of preparing the Spent Fuel Pool for Fuel Receipt, which includes installation of the fuel racks, commissioning of the fuel handling machine, and testing of the fuel racks. These activities will support receipt of nuclear fuel in the coming months.

In the Shield Building, the air baffles are installed and the coatings on CB20 have been completed. Additionally, the CB20 tank has been filled and drained and the modified PCS piping configuration has been installed along with the upgraded pumps to support the higher flow volume requirement for the upcoming Containment Vessel coverage test.

Unit 3 Containment Vessel Coverage Test

Areas within the Annex building have been occupied by the Test Control Center, which is responsible for controlling the activities associated with testing. Additionally, in the upcoming reporting period, the tagging office will be moved to the Annex building. As with other buildings, focused efforts in electrical and subcontracts have successfully placed the HVAC systems on permanent power for the ongoing testing.

During the Reporting Period, several critical systems were completed in the Turbine Building, and turned over including the condensate system which when operated in conjunction with other systems will allow for the flow of water and the cleanup of piping systems. The upgraded Jacking Oil pumps were successfully operated during the Turbine On Gear ("TOG") testing evolution. As previously noted, the Auxiliary Boiler was commissioned and utilized to complete the Condenser Vacuum testing and will be a critical component for HFT.

As outlined in several of the examples above, one factor driving success on Unit 4 continues to be the steadfast commitment to using lessons learned from Unit 3. The above examples represent only a few of the areas positively impacted by the Project's focus on lessons learned. The application of lessons learned has improved efficiency and sequencing of construction work, resulting in the completion of systems to support each of the upcoming testing evolutions.

Subcontracts

During the Reporting Period, subcontractors continued contributing to the Project's progress and significant milestone achievements. Critical areas include supporting the Start-up and maintenance teams on Unit 3 and, on Unit 4, the focus has remained on HVAC installation and balancing work, along with installation of fire suppression and detection, penetration seals, coatings, and pipe insulation.

On Unit 3, subcontractors are focused on completion of the coatings outside of the Containment building. Additionally, SNC subcontractors are focused on supporting the Start-up testing evolutions, equipment and system corrections, and routine maintenance activities.

The subcontract teams on Unit 4 are focused on completion of work to support the upcoming HFT evolution, including HVAC installation and balancing, penetrations seals, and pipe insulation. Unit 4 subcontractors continue to capitalize on lessons learned and sequencing experience to remain ahead of Unit 3 progress. In addition to HVAC performance, penetration seal installation on Unit 4 is ahead of Unit 3 at a similar point, including the penetration seals for Fuel Receipt and HFT.

Unit 3 Spent Fuel Pool Cooling Pump

TURNOVER AND TESTING

Systems for Unit 4 as of mid-February 2023 are broken down by each organization. All the systems for Unit 3 have been transferred to ITP and significant progress has been made with turning systems over on Unit 4. Ultimately, all systems will be turned over from Construction to ITP for testing, and then to Site Operations.

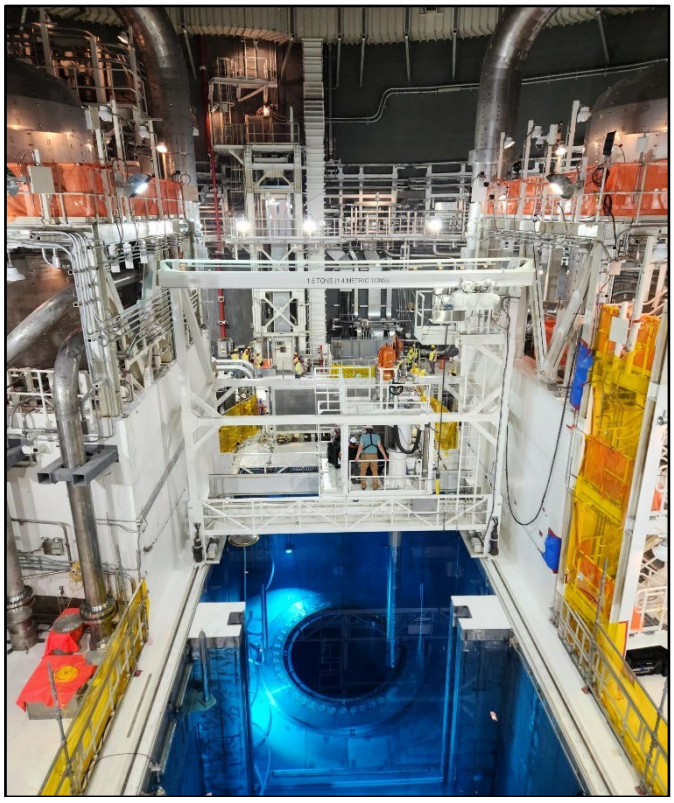
Table 3.3 – System Jurisdictional Control

	Construction	ITP
Unit 4	25	154

Construction has successfully turned over 318 systems or partial systems to the ITP organization for both Units through mid-February 2023. Additionally, the ITP team has completed over 9,000 component tests for Unit 3 and approximately 4,300 component tests for Unit 4.

Unit 3 Start-up Testing and Site Operations

During the Reporting Period, the Project received the 103(g) finding from the NRC, which signifies that no further NRC findings are necessary for SNC to load fuel and begin the Unit 3 Start-up sequence. By October 13, 2022, the Site Operations team had completed all the prerequisite surveillances and met all the required Technical Specifications to successfully load the 157 fuel assemblies and the two neutron sources into the Reactor Vessel. Fuel Load was completed safely on October 17, 2022. Once the Project team placed and tensioned the Reactor Vessel Integrated Head Package on to the Reactor Vessel, the Plant was transitioned from MODE 6 ("Refueling") to MODE 5 ("Cold Shutdown") for the first time on October 31, 2022.

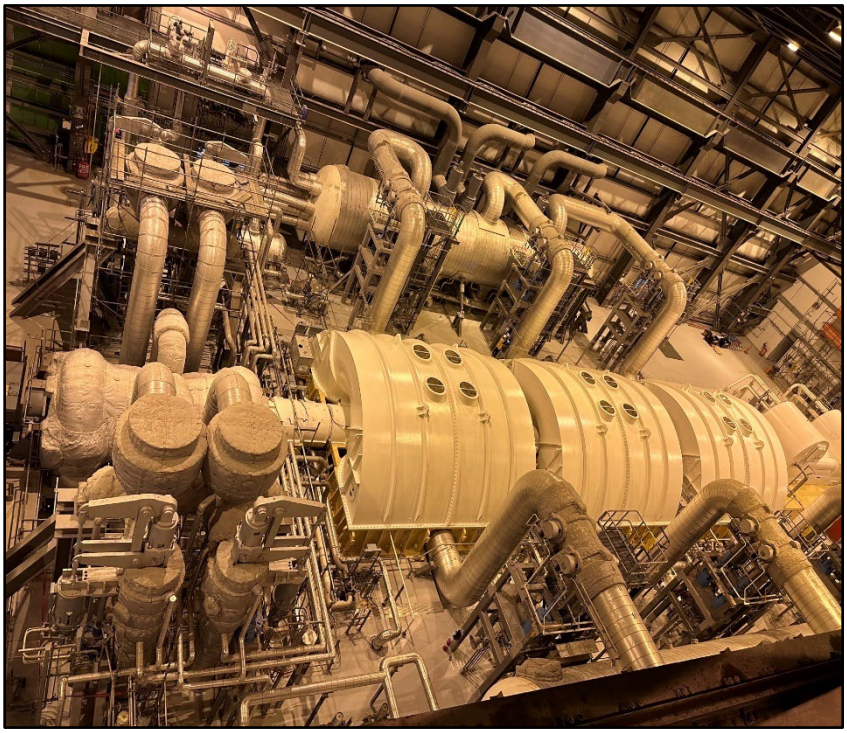


Unit 3 Fuel Load

The Site Operations team continued to perform surveillances to verify the required Technical Specifications for MODE 4 and, on December 7, 2022, the Unit 3 containment building was closed out and the Plant successfully entered MODE 4 ("Safe Shutdown") utilizing the Reactor Coolant Pumps ("RCPs") to heat up the Reactor Coolant System to 420 degrees Fahrenheit. Since then, the Site Operations team continued to heat up the Reactor Coolant System to 557 degrees Fahrenheit and increase the pressure to 2,235 psig, which are the Plant conditions experienced during HFT and represent the normal operating temperature and pressure of the Plant. This Plant condition is also known as MODE 3 ("Hot Standby") which was achieved on December 13, 2022.

The Site is now preparing for MODE 2 ("Start-up"), where the nuclear chain reaction will be initiated and reactivity increased in the reactor by raising the control rods from the core and reducing the boron concentration of the water in the reactor through dilution. The reactor will achieve "Criticality" when the number of neutrons safely being produced equals the number being absorbed, which in turn produces the same number of neutrons and the chain reaction becomes self-sustaining. Low-Power physics testing is performed during MODE 2 and confirms the conditions in the reactor core remain consistent with the design.

After completion of the testing requirements in MODE 2, Site Operations will continue to raise the thermal power and, once it reaches above 5%, MODE 1 ("Power Operation") is entered, which is projected to occur in the coming weeks. During MODE 1, the Plant will go through several sets of tests to validate the operation of critical components and the ability for those components to respond to various conditions to ensure the systems required for safe operation perform as intended. During the Start-up power phase, tests are performed at increasing levels of power from roughly 10 percent through 100 percent. Similar tests and baseline data collection are performed at various plateau power levels. Test examples include rod control testing, testing from the remote shutdown room, validation of control during a simulated loss of offsite power, load swing testing and both a generator and plant trip. Upon successful completion of the MODE 1 testing and the maintenance outage, the Unit will become available for reliable dispatch, at which time, Unit 3 will be ready to declare Commercial Operation.



Unit 3 Steam Turbine and Generator

Table 3.4 – Plant Start-up MODEs				
MODEs	**Title**	**% Rated Thermal Power (MWth)**	**Avg. RCS Temperature (F)**	**Description**
6	Refueling	N/A	N/A	Fuel is loaded into the Reactor Vessel
5	Cold Shutdown	N/A	≤ 200	Reactor Vessel is pipe tight in preparation for operation
4	Safe Shutdown	N/A	420 ≥ Tavg > 200	Adding energy to reactor coolant system – most safety systems required to be operable
3	Hot Standby	N/A	> 420	Reactor coolant system heated to normal operating pressure & temperature
2	Start-up	≤ 5	N/A	Operators begin nuclear reaction and production of nuclear heat
1	Power Operation	> 5	N/A	Operators raise power for electricity generation

During the process of bringing the Plant from MODE 6 to MODE 1, the Project team has transitioned 77 systems and 54 areas in Unit 3 to Operations. The few remaining systems, areas, and rooms will be transitioned prior to COD.

Additionally, Operations is fully staffed and has achieved a significant milestone by obtaining dual-unit licenses for 72 Operators as of January 2023. Receiving dual-unit licenses means that all Operators licensed to operate Unit 3 are now also licensed to operate Unit 4. The fifth Initial Licensing Training ("ILT") class, which began in July 2020, was completed and all participants successfully passed the NRC exam. The ILT-5 class will receive their licenses upon completion of meaningful work time on the Units and once complete, the Units will have 79 dual unit licensed operators.

Unit 4 Open Vessel Testing ("OVT")

During the Reporting Period, ITP successfully completed OVT, which included flow measurement, pump performance, line resistance, and tank mapping testing for the major systems flushed during Integrated Flush. Measurements obtained during OVT ensured 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 Turbine on Gear Testing ("TOG")

The Unit 4 TOG milestone was completed in November 2022. The test is conducted by simultaneously rotating the four steam turbines using the turning gear motor continuously for twenty-four hours to show reliable operation. This milestone included placing the required lubricating oil systems in operation following the completion of initial testing. Successful completion of this test is important in preparing for Condenser Vacuum testing and HFT, which marks the completion of the main turbine generator assembly.

Unit 4 Cold Hydro Testing ("CHT")

The Unit 4 CHT milestone was completed in December 2022. CHT includes several separate tests in different areas of the Plant to verify welds, joints, pipes, and other components of the Reactor Coolant System ("RCS") meet design requirements. To accomplish these tests, internals were installed in the Reactor Vessel and the Integrated Head Package was attached, the RCS was filled and pressurized above normal operating conditions, then backed down to normal design pressure, and held there while the comprehensive inspection was concluded.

Unit 4 Condenser Vacuum Testing ("CV")

The Unit 4 CV was completed in January 2023. The CV was established with the main turbine on turning gear and by placing auxiliary steam, condensate, feedwater, and support systems in service. The test was completed once the CV had 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 operate together to support HFT and Start-up.

Unit 4 Hot Functional Testing ("HFT")

Unit 4 HFT is projected to start in the coming weeks. 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.

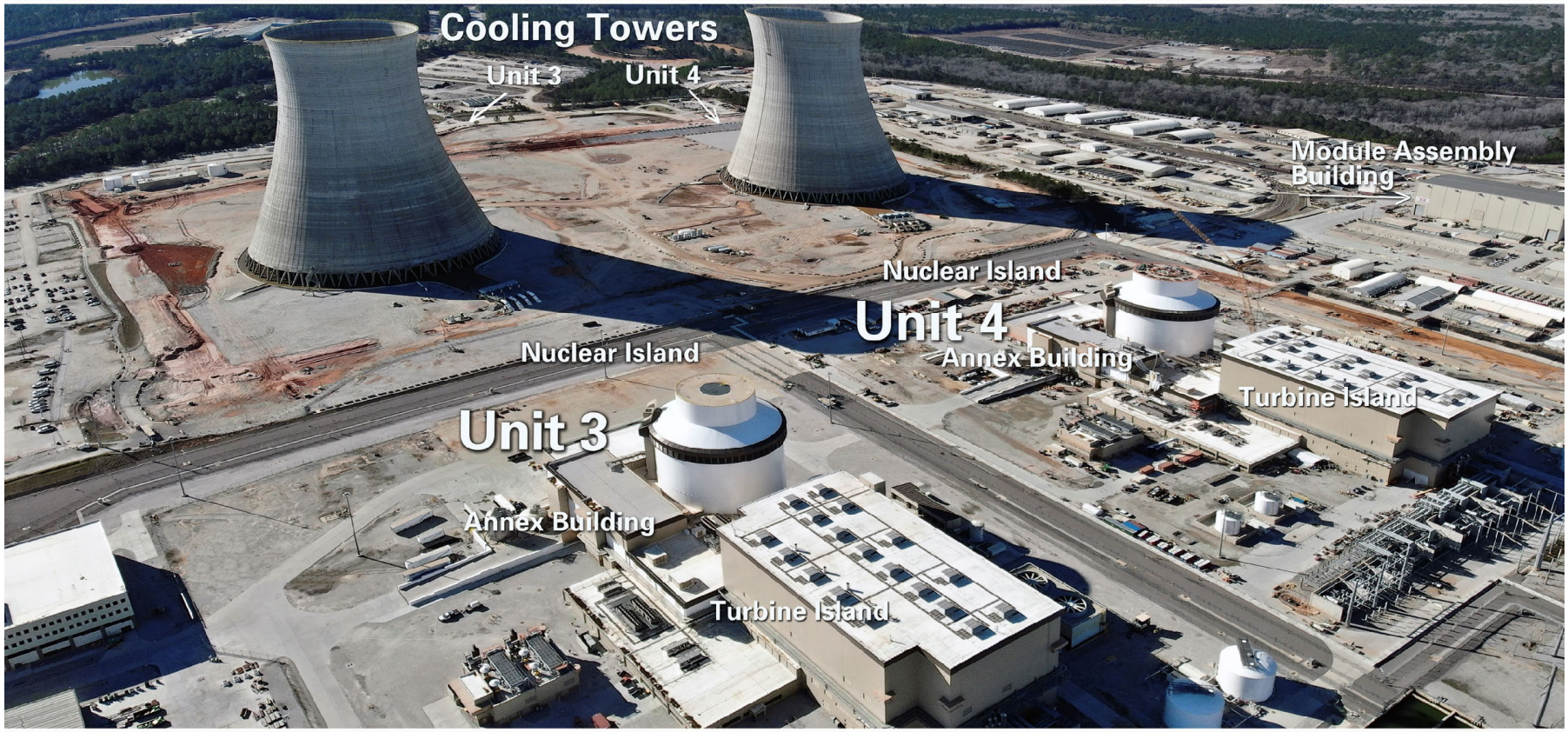
Unit 4 ITAAC

During the Reporting Period, the ITAAC organization continued to support construction and testing for submittal of ITAAC Completion Notifications ("ICN") for Unit 4. The completion of these ITAACs provide the NRC assurance that the Unit meets strict nuclear safety and quality standards. Additionally, the Licensing team submitted a License Amendment Request ("LAR"-22-003) during the Reporting Period to remove Unit 4 ITAAC duplicate activities and consolidate numerous ITAACs to improve efficiency of the ITAAC completion and closure process. On November 22, 2022, the NRC approved LAR-22-003 to reduce Unit 4 ITAACs by 29, bringing the total down to 364 from 393 ICNs. As of January 2023, 182 Unit 4 ICNs have been submitted to the NRC and 182 ICNs remain outstanding.

Unit 4 Site Integration

During the Reporting Period, the Protected Area for Unit 3 was established along with the Plant Access Point ("PAP") to control personnel access to Unit 3. During the next Reporting Period, it is projected that prior to Unit 4 Fuel Load, the Unit 4 Protected Area will be established. This will be followed by integration with Unit 3, at which time, the PAP will become the controlled personnel access point to all four units.

Vogtle 3&4 - Construction, January 28, 2023



Georgia Power

Glossary of Abbreviations	
103(g)	10 C.F.R Part 52.103(g)
ASME	American Society of Mechanical Engineers
BOP	Balance of Plant
CB20	Passive Containment Cooling Water Tank
CHT	Cold Hydrostatic (or “Hydro”) Testing
CPI	Cost Performance Index
cROP	Construction Reactor Oversight Process
CV	Condenser Vacuum
CVT	Closed Vessel Testing
DOE	Department of Energy
HFT	Hot Functional Testing
I&C	Instrumentation & Controls
ICN	ITAAC Closure Notifications
ILRT	Integrated Leak Rate Test
ILT	Initial Licensing Training
IRs	Inspection Records
ITAAC	Inspection, Test, Analysis, and Acceptance Criteria
ITP	Initial Test Program
MWth	Megawatt Thermal
NRC	Nuclear Regulatory Commission
OVT	Open Vessel Testing
PAP	Personnel Access Point
PCC	Project Control Center
PCS	Passive Containment Cooling System
PTC	Production Tax Credit
QA	Quality Assurance
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
ROP	Reactor Oversight Process
SIT	Structural Integrity Test
SNC	Southern Nuclear Company
SPI	Schedule Performance Index
TCC	Testing Control Center
TOG	Turbine On Gear
VCM	Vogtle Construction Monitoring