

**Duke Energy
Oconee Nuclear Station
Subsequent License Renewal
Environmental Application Pre-Submittal Meeting
October 27, 2020**



Agenda

- Opening Remarks & Introductions
- Background on Duke Energy
- Introduction to Oconee Nuclear Station (ONS)
- Permits & Authorizations
- Agency & Stakeholder Consultations
- Lessons Learned
- Closing Remarks
- Acronyms

Opening Remarks & Introductions

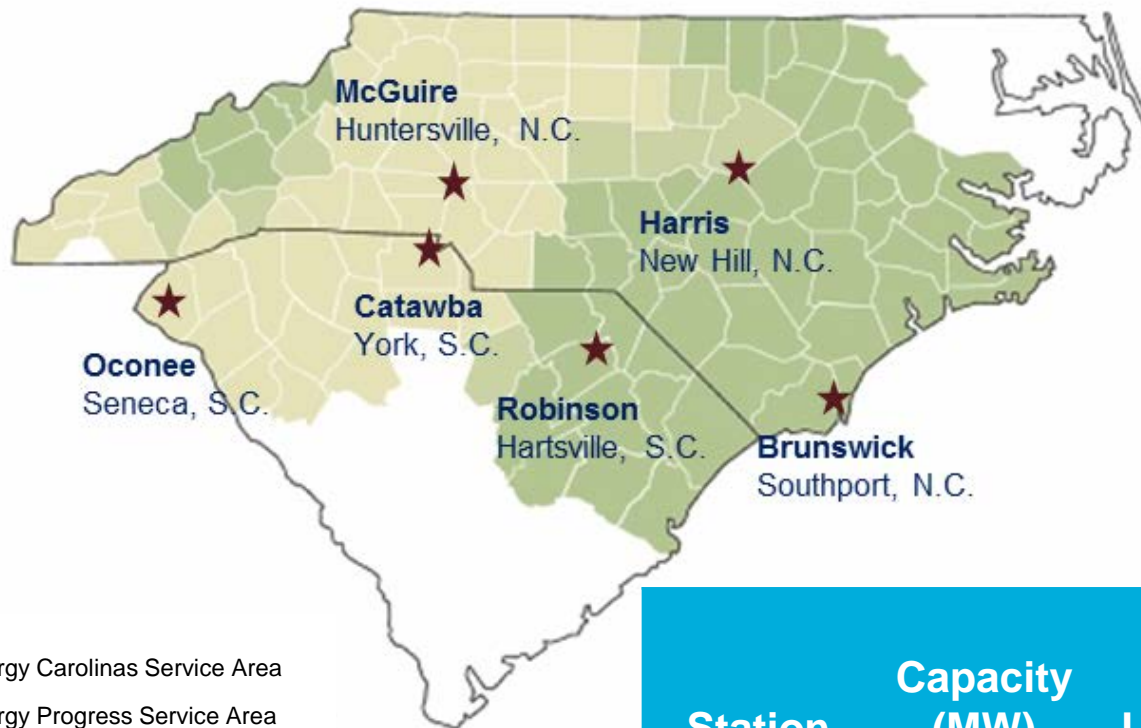
Speakers

- Arun Kapur (Duke Energy)
- Rounette Nader (Duke Energy)
- Greg Robison (Duke Energy)
- Tom Slavonic (ENERCON)
- Paul Guill (Duke Energy)

Background: Duke Energy

- As we plan to meet our customers' future energy needs and continue to reduce our carbon footprint, we are seeking to renew the licenses of the 11 nuclear units we operate at six plant sites in the Carolinas.
- This provides the option to operate these plants for an additional 20 years.
- Relicensing our nuclear fleet is critical to meet Duke Energy's goal of net-zero carbon emissions by 2050.
- We expect to submit the license renewal application for Oconee Nuclear Station in March 2021.

Background: Current Nuclear Fleet

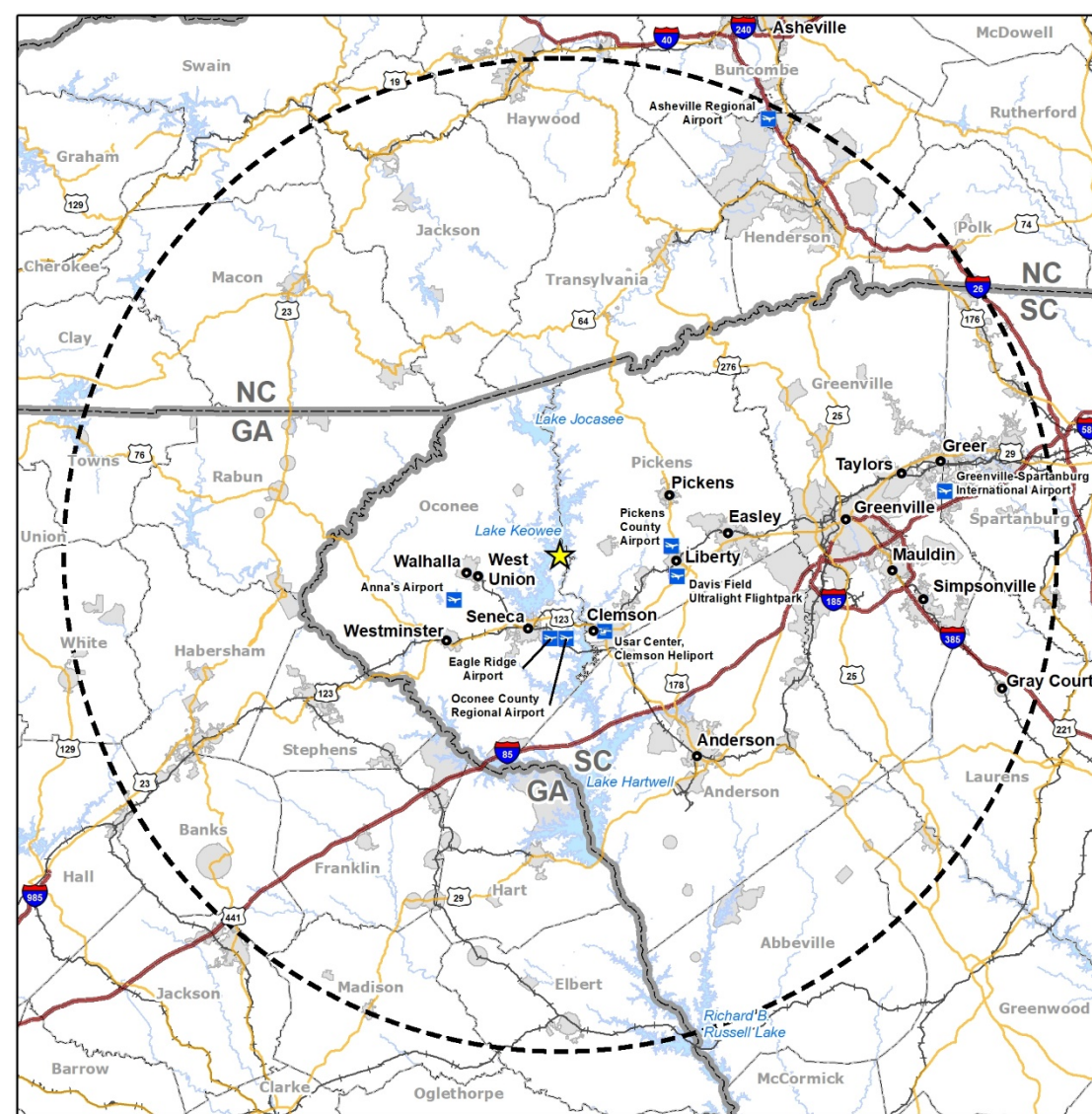


- Duke Energy Carolinas Service Area
- Duke Energy Progress Service Area
- Overlapping Areas

Duke Energy owns 100% of all units except the Catawba units.

Station	Capacity (MW)	Units	Operating License	License Expiration (current)
Oconee	2,554	3 PWR	1973, 1974	2033, 2034
Robinson	759	1 PWR	1970	2030
Brunswick	1,870	2 BWR	1974, 1976	2034, 2036
McGuire	2,316	2 PWR	1981, 1983	2041, 2043
Catawba	2,310	2 PWR	1984, 1986	2043
Harris	964	1 PWR	1986	2046
Total	10,773	11		

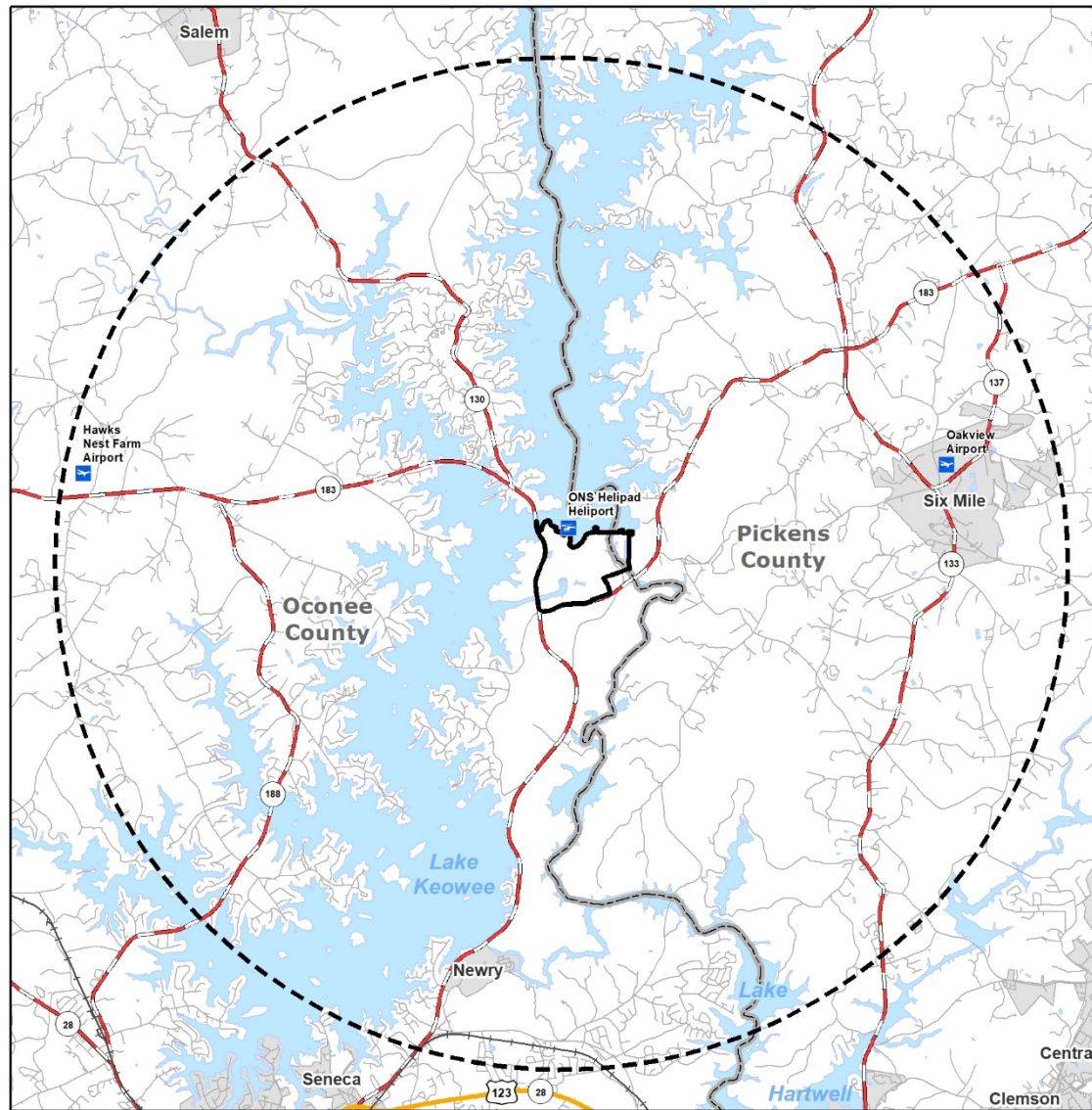
Introduction to ONS: Region



- Duke Energy's Lake Keowee occupies the area immediately north and west of ONS.
- The US Army Corps of Engineer's Hartwell Reservoir is located south of ONS.
- All or parts of 29 counties are located within the ONS 50-mile region.
- Larger cities within the region include:
 - Greenville
 - Anderson
 - Clemson
 - Easley

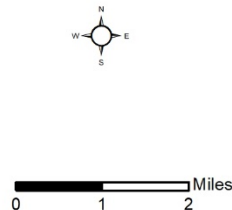
Introduction to ONS: Vicinity

- The vicinity of ONS is defined as the area within a 6-mile radius.
- This includes portions of Pickens and Oconee Counties, SC.
- Located ~8 miles NE of Seneca, SC, on the southern shore of Lake Keowee.
- Towns in the vicinity include:
 - Six Mile
 - Newry



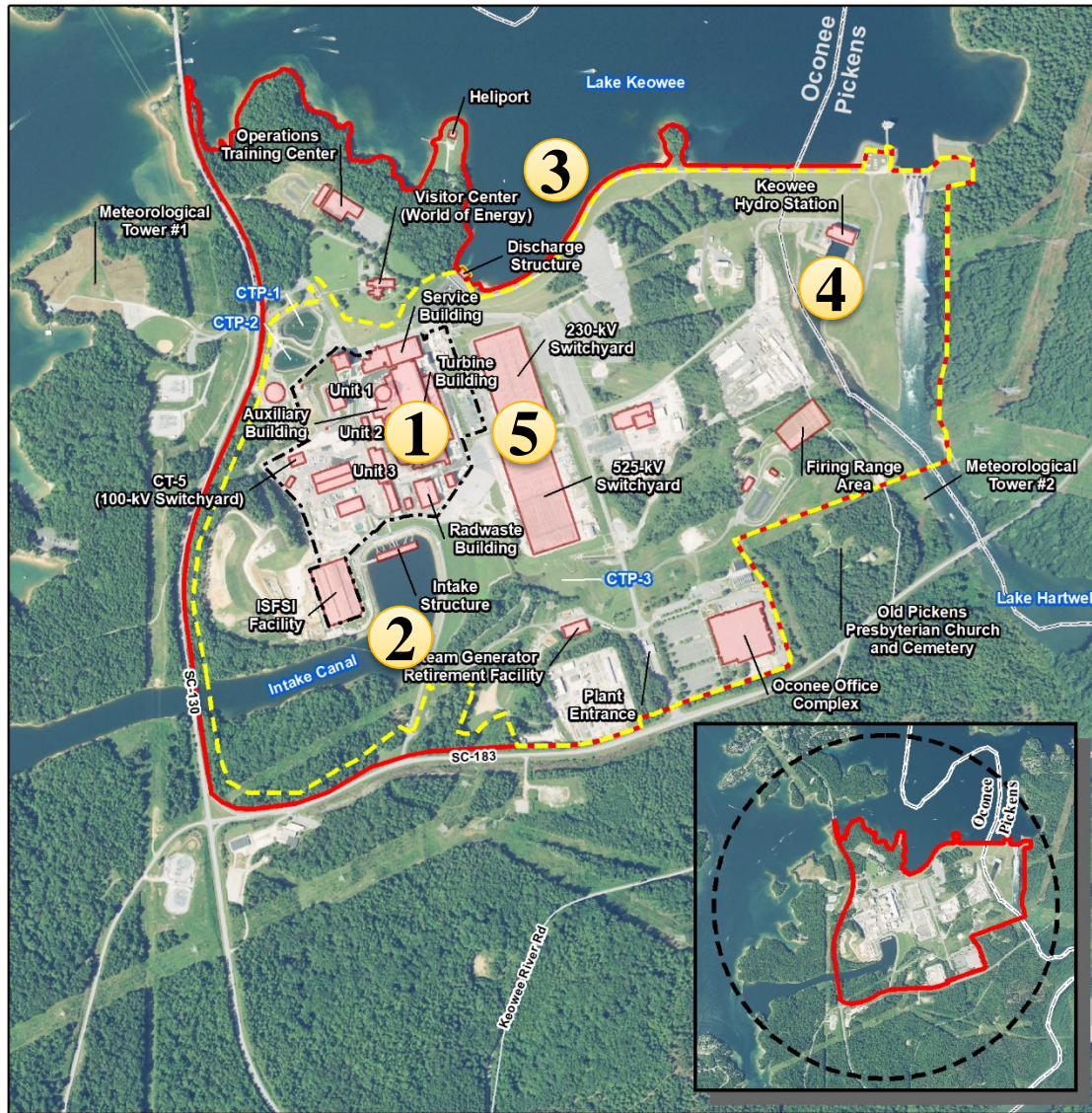
Legend

- | | |
|---------------|---------------|
| Airport | Surface Water |
| Heliport | ONS Site |
| U.S. Route | 6-Mile Radius |
| State Highway | Place |
| Local Road | County |
| Railroad | |



For Information Purposes Only

Introduction to ONS: Site



- ONS Units 1, 2 and 3 are owned and operated by Duke Energy Carolinas, LLC (Duke Energy).
- The ONS site is 510 acres.
- Located in eastern Oconee and western Pickens Counties, SC.
- Transmission lines within the scope of the license renewal are located within the ONS site boundary.

Introduction to ONS: Station

- ONS is a three-unit, B&W NSSS, PWR plant
- Station Output: 2554 MWe
- Emergency power supplied by Keowee Hydro
- No ground-disturbing activities or refurbishment associated with SLR.
- No adverse affects to the environment or any cultural or historic resources are anticipated.

	OLs	40 Yrs	60 Yrs	80 Yrs
Unit 1	1973	2013	2033	2053
Unit 2	1973	2013	2033	2053
Unit 3	1974	2014	2034	2054



Discussion Items

- Methodology
 - Regulatory
 - Standard Practices
 - NUREG 1437, Rev. 1, GEIS, Incorporate by Reference
- SAMA
 - All SAMAs were screened out either qualitatively or quantitatively in accordance with the NEI 17-04, Rev 1 methodology. Therefore, the “Stage 2” NEI 17-04 was not required, and the Level 3 PRA was not updated.
 - The analysis concluded that there is no new and significant information that would alter the conclusions of the original SAMA analysis for ONS.

Permits & Authorizations

- As outlined in Chapter 9, Status of Compliance, of the ER:
 - NPDES Waste Water Permit
 - CWA §316(a) and §316(b)
 - Section 401 Certification
- Permits and Authorizations not applicable to ONS:
 - CZMA does not apply
 - No Essential Fish Habitat
 - No Bald and Golden Eagle Protection Act Permits

Agency & Stakeholder Consultations

- Agency and stakeholder consultation strategy executed through written communications and virtual meetings
- Agencies consulted to inform development of the ER included:
 - US Fish and Wildlife Service
 - SC Dept. Health and Environmental Control
 - SC Dept. of Natural Resources
 - SC Dept. of Archives and History
 - SC Institute of Archaeology and Anthropology
- Additional Agencies and Stakeholders notified of SLR project:
 - FERC and USACE
 - Native American Tribes
 - Other Stakeholders including applicable county, town and non-government organizations.

Industry Experience & Lessons Learned

- Industry Experience
 - Actively participated in the NEI License Renewal Environmental Task Force
 - Supported Industry Peer Reviews for five previous SLR ERs.
- Lessons Learned
 - Allocate time to incorporate updated data/studies/reports
 - Perform an industry peer review to refine the ER based on industry experience
 - Allocate sufficient time in agency consultations to resolve issues
 - Incorporate requested information (e.g. LERF) from previously submitted SAMA analyses into the ONS SAMA basis document.
 - Review and incorporate applicable information based on previously submitted SLR ER RAIs (e.g. Turkey Point, Peach Bottom and Surry)

Closing Remarks

- Summary
- Questions & Comments
- Thank you

Acronyms

- CWA – Clean Water Act
- CZMA – Coastal Zone Management Act
- B&W – Babcock & Wilcox
- BWR – Boiling Water Reactor
- ER – Environmental Report
- FERC – Federal Energy Regulatory Commission
- GEIS – Generic Environmental Impact Statement
- LERF - Large Early Release Frequency
- MWe – Mega Watts Electric
- NEI – Nuclear Energy Institute
- NPDES – National Pollutant Discharge Elimination System
- NRC – Nuclear Regulatory Commission
- NSSS- Nuclear Steam Supply System
- NUREG – Nuclear Regulatory Guide
- OLs – Operating License
- ONS – Oconee Nuclear Station
- PRA – Probabilistic Risk Assessment
- PWR – Pressurized Water Reactor
- RAI - Request for Additional Information
- SAMA – Severe Accident Mitigation Alternative
- SC – South Carolina
- SLR – Subsequent License Request
- USACE – U.S. Army Corps of Engineers