



Duke Energy Nuclear License Renewal Update for the South Carolina Nuclear Advisory Council

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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	Commercial Operation	License Expiration (current)
Oconee	2,554	3 PWR	1973	2033, 2034
McGuire	2,316	2 PWR	1981	2041, 2043
Catawba*	2,310	2 PWR	1985	2043
Brunswick	1,870	2 BWR	1975	2034, 2036
Harris	964	1 PWR	1987	2046
Robinson	741	1 PWR	1971	2030
Total	10,755	11		

Duke Energy Climate Goals

Companywide CO₂ Emissions Reduction Goals

BY 2030

Cut CO₂ emissions by **at least 50%**

BY 2050

Attain **net-zero** CO₂ emissions

Duke Energy's path to a low-carbon future

- Collaborate and align with our states and stakeholders as we transform.
- Accelerate our transition to cleaner energy solutions
- Continue to operate our existing carbon-free technologies, including nuclear and renewables.
- Modernize our electric grid.
- Advocate for sound public policy that advances technology and innovation.



Duke Energy has connected more than **140 megawatts** of solar in South Carolina and expect **800 megawatts** total to come onto our system by the end of 2025.

Duke Energy has reduced CO₂ emissions in South Carolina by

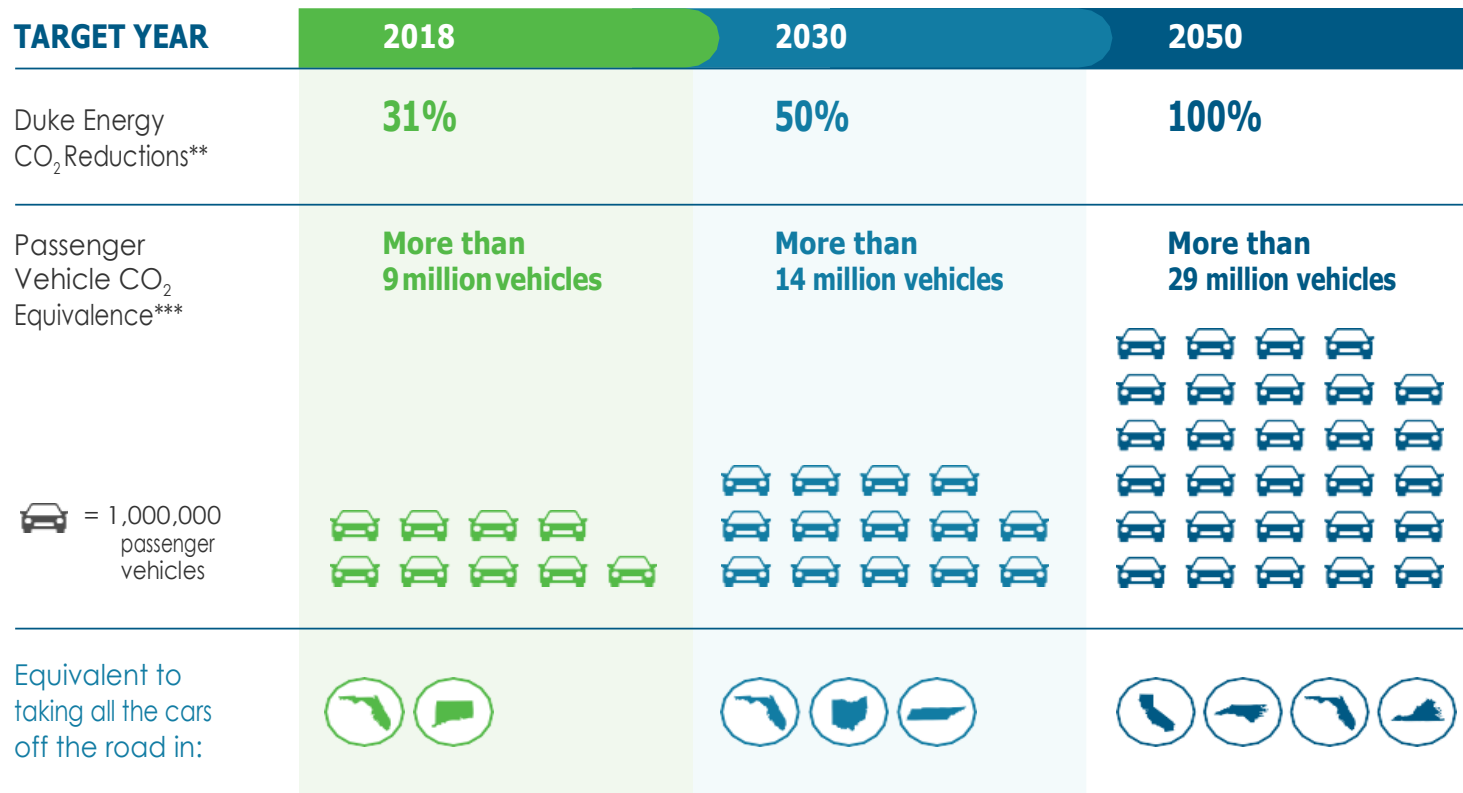


40%
since 2005



Duke Energy Climate Goals

Passenger Vehicle Equivalent of Duke Energy's Goals



* All calculations are expressed in short tons
 ** Calculated from a 2005 baseline of 153 million tons
 *** Source: EPA Greenhouse Gas Equivalencies

Duke License Renewal Announcement

- 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.
- We expect to submit the license renewal application for Oconee Nuclear Station in 2021, followed by our other nuclear stations.

Nuclear Subsequent License Renewal

Meeting Customers' Energy Needs with Safe, Clean, Reliable Electricity

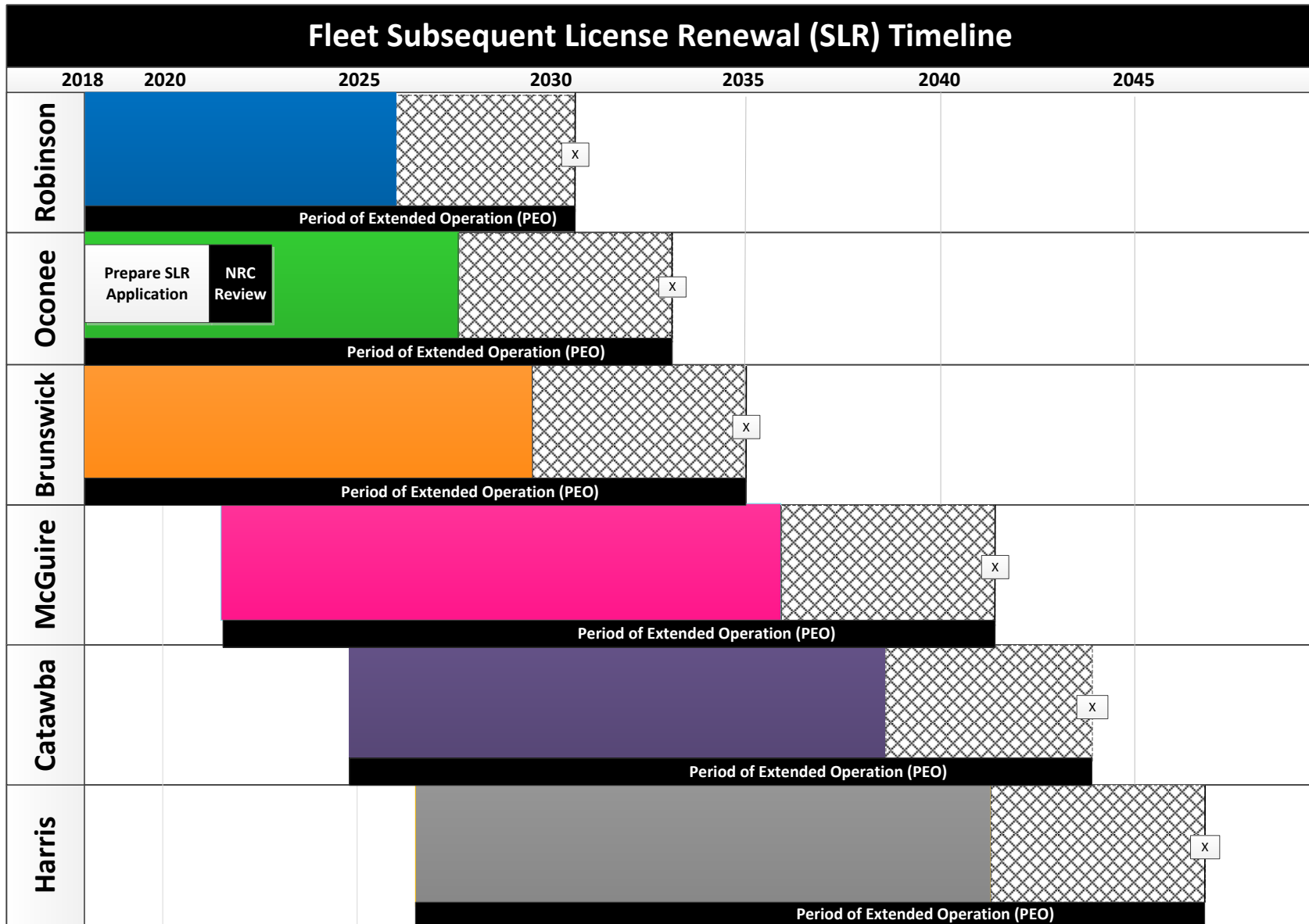
- Environmentally Sound
 - In 2018, avoided the release of about 54 million tons of CO₂.
- Technologically Safe and Reliable
 - In 2018, provided half of our Carolinas customers' electricity.
 - In 2018, marked its 20th consecutive year with a fleet capacity factor greater than 90%.
- Economically Beneficial
 - In 2018, employed about 5,000 nuclear employees across the Carolinas.
 - In 2018, paid approximately \$135 million in property and payroll taxes in SC plant communities.
 - Every year, our nuclear teammates provide community support through donations and volunteer efforts.



Subsequent License Renewal (SLR)

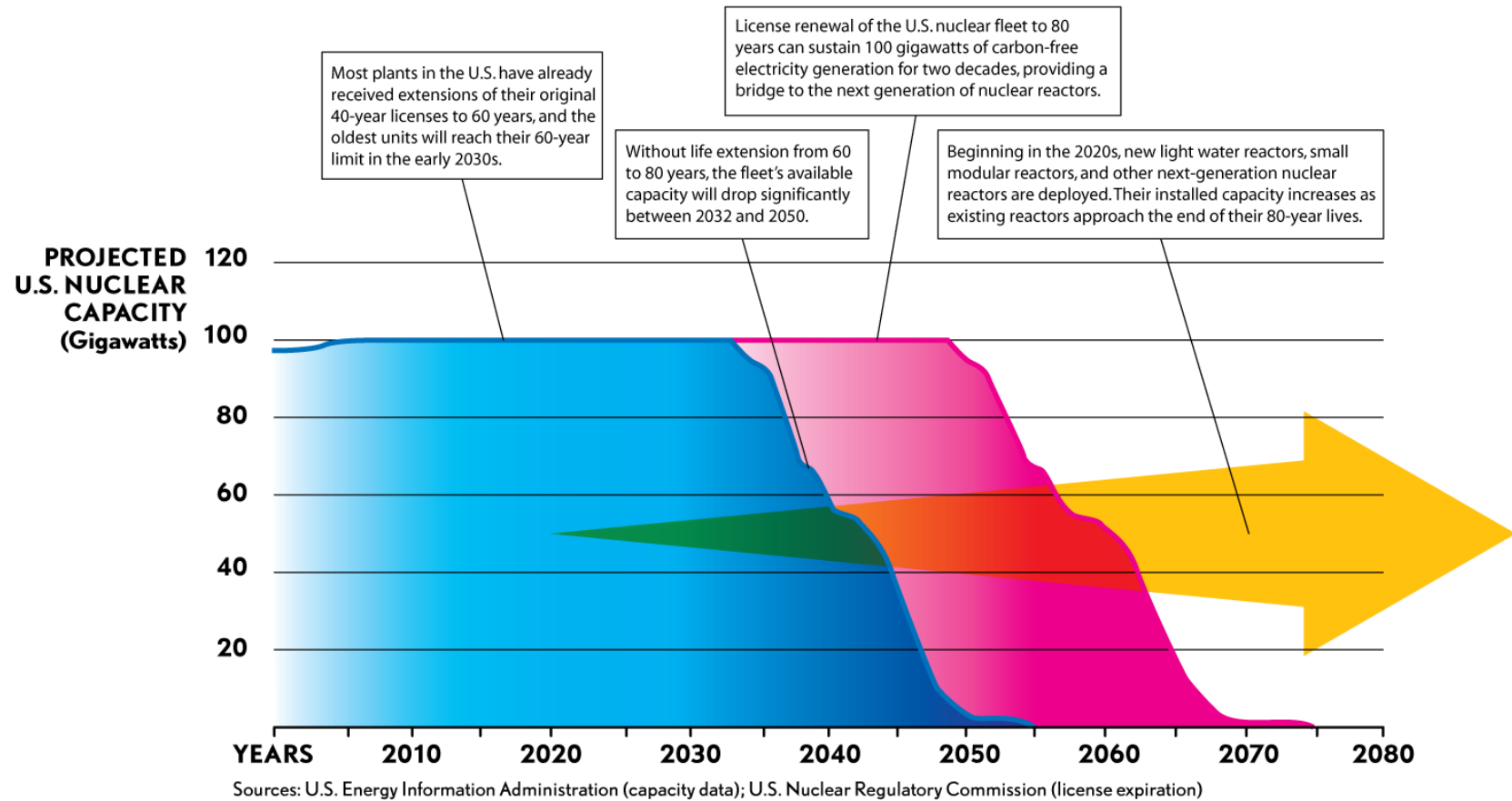
- The Nuclear Regulatory Commission (NRC) Commissioners decided to leave 10 CFR 54 intact for SLR.
- The NRC has updated guidance for SLR
- The Department of Energy (DOE), Electric Power Research Institute (EPRI) and the nuclear industry have conducted research that has shown nuclear plants can be safely operated during a second license renewal period.
- Three SLR Applications are in NRC review and on schedule to receive renewed licenses in 2019 and 2020.

Duke Nuclear Fleet Licenses



Industry Subsequent License Renewal – What It Means

Life Extension as Strategic Bridge for Nuclear Power



Questions ?