SPECIAL REPORT

ENERGY

SMALL MODULAR REACTORS:

An Answer to South Carolina's Energy Crisis?

JENNIFER BUCKLEY
SUMMER FELLOW
PALMETTO PROMISE INSTITUTE

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PALMETTO PROMISE INSTITUTE

P.O. Box 12676 | Columbia, SC 29211 | 803-708-0673

EXECUTIVE SUMMARY

What is the current state of energy in South Carolina?

South Carolina's energy market is characterized by **outrageous costs** and **diminishing capacity**.

Rapid population growth and industrial expansion have strained South Carolina's energy resources, resulting in some of the highest utility bills in the nation. The state is facing an urgent energy crisis, and an innovative solution is needed to meet growing energy demands. See pages 4-5.

The Promise of Nuclear Energy and Small Modular Reactors (SMRs)

Nuclear energy, a zero-emission clean source of electricity, is a potential answer to South Carolina's energy grid challenges. Small Modular Reactors (SMRs), in particular, represent an innovative approach to nuclear power generation. These compact reactors offer significant advantages over traditional nuclear reactors. See pages 5-6, 9-10.

What can SMRs do for South Carolina?

SMRs can provide **stability and dependability** for our energy sector. Overreliance on fossil fuels exposes the state to price volatility and supply disruptions. Nuclear provides a stable and reliable source of energy, ensuring a consistent power supply regardless of external factors. See page 14.

SMRs can bring large-scale **economic development** to South Carolina. The construction and operation of SMRs will generate a substantial number of jobs, both in the short term and long term. Development of SMRs will attract investment and innovation to the state with the potential to turn South Carolina into a hub for advanced energy technology. See page 14.

When can SMRs come to South Carolina?

Countries around the world are actively developing SMRs, with operational systems already in place in Russia and China. In the United States, NuScale Power is leading the way with a project expected to be operational by the early 2030s. Virginia has plans to dive into SMRs in the near future. With continued advancements and regulatory support, South Carolina could see its first operational SMR within the next **10 to 15 years**, providing a timely and strategic solution to the state's energy crisis. See pages 15-16.

BENEFITS OF SMALL MODULAR REACTORS (SMRS)

LOWER COSTS

Due to their compact design, the modular components have significantly lower construction costs than conventional power reactors.

LOWER CONSTRUCTION TIME

SMRs can be built in smaller units, allowing phased development that spreads out capital expenditures over time, rather than requiring massive upfront investments.

LOCATION FLEXIBILITY

SMRs are able to be installed into an existing grid or remotely, off-grid due to its smaller electrical output. They also take up fewer square miles than wind and solar.

SAFETY

Modern SMRs have inherent safety systems, including passive shut down mechanisms, built into their hardware that significantly reduce the risk of accidents.

FUEL EFFICIENCY

SMRs have high fuel efficiency and require less frequent refueling: every 3 to 7 years in comparison to 1 to 2 years for conventional nuclear plants.

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WHAT IS THE COST AND CAPACITY OF ENERGY GENERATION IN SOUTH CAROLINA?

I. OUTRAGEOUS COSTS

South Carolina is regularly in the top ten states when it comes to residential spending for electricity and has, in recent years, ranked #1 (2016). Palmetto State average utility bills currently rank #3 (2020) of the contiguous states and DC.[1] Indeed, in 2018, the U.S. Energy Information Administration (EIA) reported that **S.C. residents, on average, spend more for electricity than their counterparts in every other state**. South Carolinians spend an average of about $400 more than the national average.[2]

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AVERAGE PRICE OF ELECTRICITY TO ULTIMATE CONSUMER BY END-USER SECTOR: RESIDENTIAL

In Cents per Kilowatthour

SOUTHEASTERN STATE	APRIL 2024	APRIL 2023
Alabama	15.85	14.49
North Carolina	14.98	13.21
South Carolina	14.90	14.30
Florida	14.65	15.75
Mississippi	14.64	14.08
Georgia	14.10	13.30
Tennessee	12.76	11.93
Arkansas	12.60	12.34
Louisiana	12.30	11.17

Data from US Energy Administration Report Table 5.6A

These high electricity ***bills*** are due to a combination of high ***usage*** and high ***rates***. Rates are shown in the table above. All are unlikely to abate in the near

[1] Palmetto Promise Institute. "2022 Energy Competition." Accessed July 10, 2024. https://palmettopromise.org/wp-content/uploads/2022/08/2022-Energy-Competition_v17.pdf.
[2] The State. "SCANA and Santee Cooper Abandon Nuclear Project, Citing High Costs." Accessed July 10, 2024. https://www.thestate.com/news/state/article201539094.html.

future. All of the major utilities serving South Carolina have sought rate increases from the Public Service Commission (PSC) in recent years. Duke (Progress) requested higher rates in 2022[3] and Duke (Carolinas), Santee Cooper, and Dominion have all filed to raise rates in 2024. Dominion Energy, which provides electricity to over 764,000 South Carolinians,[4] just announced that they are seeking a 14.21% rate hike for residential customers.[5]

II. DIMINISHING CAPACITY

South Carolina has reached a crisis point in our energy capacity. Our booming population growth coupled with widespread industrial expansion has left the Palmetto State scrambling to find solutions to its increased energy demands. Before long, South Carolina will not have the land or generation capacity to serve the growing number of residential, retail and industrial customers. When rolling out a legislative energy proposal earlier this year, Speaker of the House Murrell Smith stated that "This is one of the most crucial issues that we face, and it's real. This is not hyperbole that we are about to run out of capacity to serve our citizens."[6] V.C. Summer, a power plant which supports thousands of Carolinians, was projected to add two units to their generating station, but, when the project fell through due to mismanagement in 2017, South Carolina was left without the additional power the state was counting on (see page 8 for the full story). South Carolina is facing a critical point in our energy expenditure, and diversifying our sources of generation is necessary to mitigate the lack of energy capacity.

WHAT IS NUCLEAR ENERGY?

Nuclear energy is a zero-emission, clean source of electricity generation where power is produced through *fission*, the process of splitting uranium

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[3] Duke Energy. "DE Progress Rates." Accessed July 10, 2024. https://www.duke-energy.com/home/billing/de-progress-rates.
[4] Dominion Energy. "Delivering Energy." Accessed July 10, 2024. https://www.dominionenergy.com/our-company/delivering-energy.
[5] WLTX. "Dominion Energy Customers Could See Bill Increase." Accessed July 10, 2024. https://www.wltx.com/article/news/local/dominion-energy-customers-could-see-bill-increase/101-936adf40-fae0-4a7a-bfd9-38d06baae077.
[6] Live 5 News. "Plan to Address SC's Energy Crisis Point Advancing in State House." Accessed July 10, 2024. https://www.live5news.com/2024/03/19/plan-address-scs-energy-crisis-point-advancing-state-house/.

atoms to yield energy.[7] The released heat of the nuclear reaction creates steam which spins a turbine to generate electricity.[8]

A BRIEF HISTORY OF NUCLEAR ENERGY IN AMERICA

Nuclear technology first broke ground in the United States during World War II with the birth of the Manhattan Project under General Leslie Groves.[9] While initial nuclear developments were geared entirely towards military purposes, after the war, attention turned to the peaceful applications of the reactors. The first electricity generated by a nuclear reactor was produced at the Experimental Breeder Reactor I (EBR-I) in Idaho, in which one reactor successfully lit four lightbulbs.[10] While the amount of electricity the reactor produced was small, it was not trivial, and the advancement marked a milestone in the beginning of civilian nuclear power development. Shortly after, President Eisenhower delivered a speech before the United Nations entitled “Atoms for Peace,” and the dawn of nuclear energy was underway.

In 1954, the Atomic Energy Act was passed, allowing private companies to develop and operate nuclear power plants under the oversight of the Atomic Energy Commission (AEC). [11] The first commercial nuclear power plant, the Shippingport Atomic Power Station in Pennsylvania, began operations in 1958. Throughout the 1960s and 1970s, the U.S. saw rapid growth in nuclear power plant construction, driven by the promise of abundant and clean energy.

Despite several setbacks, nuclear energy has continued to play a crucial role in the U.S. energy mix. Today, the U.S. remains one of the largest producers of nuclear power in the world, with nuclear energy providing about 20% of the nation's electricity.[12]

With adjustments to scale, the future can still be *bright* for further nuclear energy developments in the United States.

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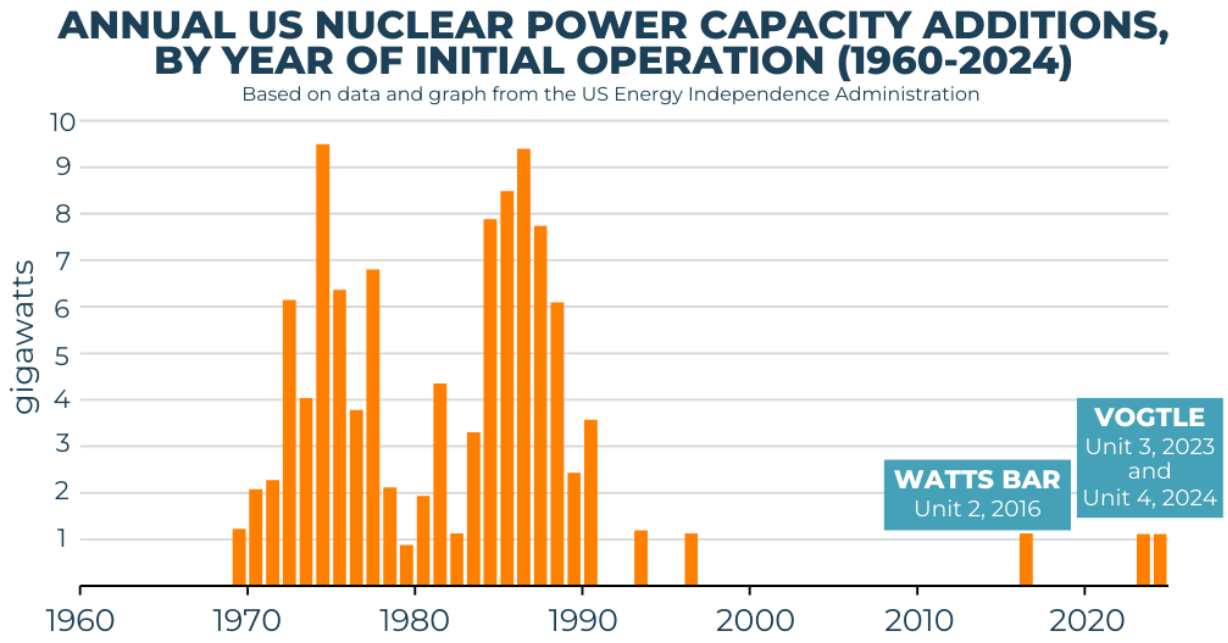
[7] U.S. Department of Energy. "3 Reasons Why Nuclear Is Clean and Sustainable." Accessed July 10, 2024. https://www.energy.gov/ne/articles/3-reasons-why-nuclear-clean-and-sustainable.
[8] Nuclear Energy Institute. "Emissions Avoided by the U.S. Nuclear Industry." Accessed July 10, 2024. https://www.nei.org/resources/statistics/old/emissions-avoided-by-us-nuclear-industry.
[9] National Park Service. "Manhattan Project National Historical Park." Accessed July 10, 2024. https://www.nps.gov/mapr/learn/manhattan-project.htm.
[10] Nuclear Energy Institute. "Emissions Avoided by the U.S. Nuclear Industry." Accessed July 10, 2024. https://www.nei.org/resources/statistics/old/emissions-avoided-by-us-nuclear-industry.
[11] Nuclear Energy Institute. “Emissions Avoided by the U.S. Nuclear Industry.”
[12] U.S. Energy Information Administration. "How Much of U.S. Carbon Dioxide Emissions Are Associated with Electricity Generation?" Accessed July 10, 2024. https://www.eia.gov/tools/faqs/faq.php?id=427&t=3.



Data Source: U.S. Energy Information Administration, *Annual Electric Generator Report* [13]

A BRIEF HISTORY OF NUCLEAR ENERGY IN SOUTH CAROLINA

Because of recent legislative and operational unforced errors in nuclear expansion projects, South Carolinians have a right to be skeptical of further nuclear developments. **But let us remember that South Carolina has a strong pro-nuclear energy history, and nuclear power continues to be popular among political conservatives.**

South Carolina became a prominent player in the nuclear industry with the construction of the Savannah River Site in the early 1950s, a key facility for producing materials for nuclear weapons during the Cold War.[14] The Palmetto State's commitment to nuclear energy continued with the development of commercial nuclear power plants. The Oconee Nuclear Station, which began operations in 1973, was one of the first large-scale nuclear power plants in the United States. Today, South Carolina hosts several major nuclear power plants, including the Catawba, Robinson, and V.C. Summer plants, contributing significantly to the state's electricity generation.

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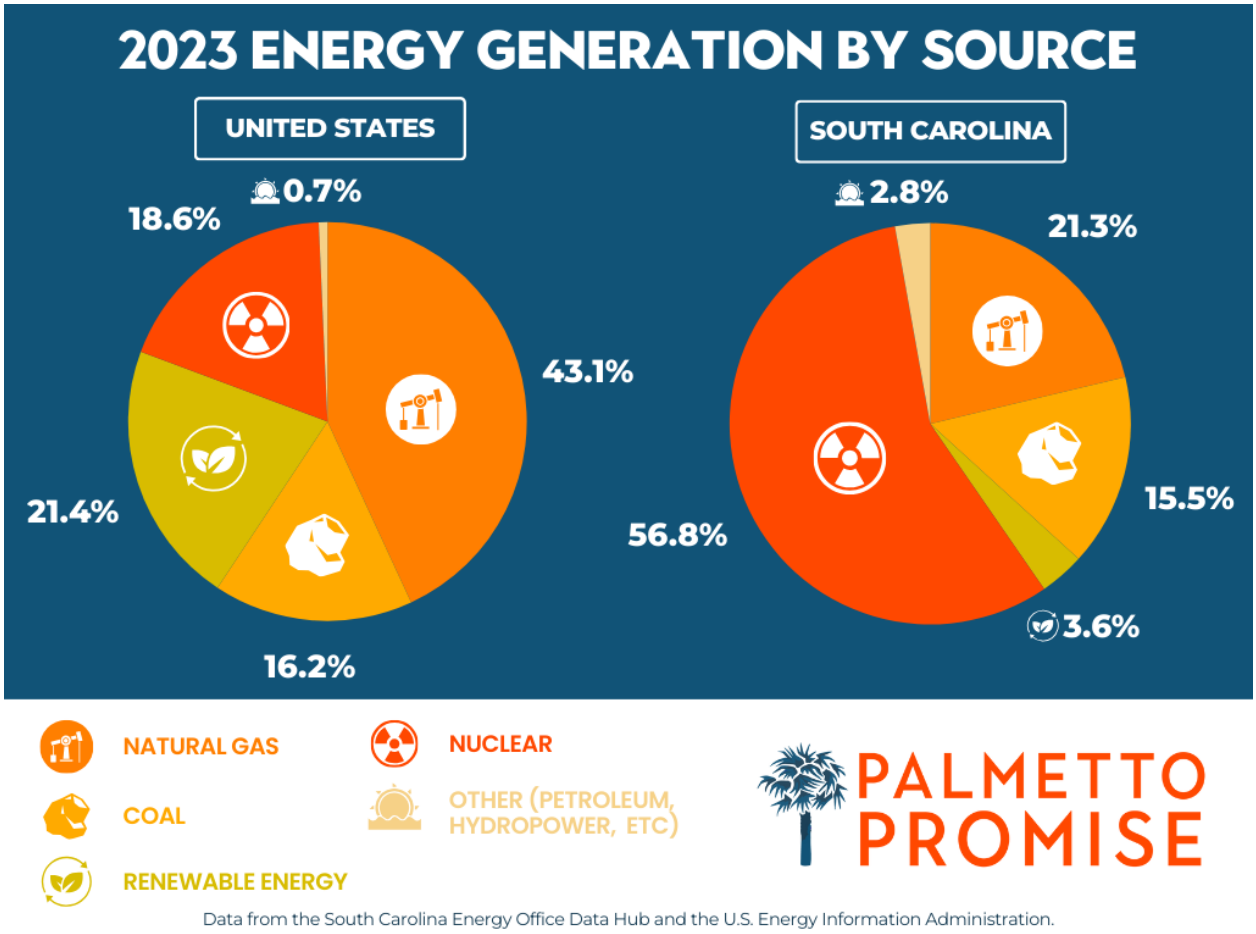
[13] U.S. Energy Information Administration. "U.S. Electricity Generation Declined by 1% in 2022." Accessed July 10, 2024. https://www.eia.gov/todayinenergy/detail.php?id=61963.
[14] Savannah River Site. "History of SRS." Accessed July 10, 2024. https://www.srs.gov/general/about/history1.htm.



The Twin Tales of V.C. Summer and Plant Vogtle

In May 2008, investor-owned South Carolina Electric & Gas (a subsidiary of SCANA Corporation, later acquired by Dominion Energy) and state-owned Santee Cooper announced plans for a $9.8 billion expansion project at the V.C. Summer plant in Fairfield County, with the parties splitting the costs between them.[15] The objective was to add two additional nuclear reactors to the V.C. Summer Nuclear Station near Jenkinsville using a cutting-edge technology known as AP1000 that promised quicker construction.

However, the project soon reached a financial and operational crisis due to severe mismanagement, cost overruns, and delays. The initial projected cost of $9.8 billion ballooned to a projected $25 billion, and the timeline extended far beyond the original completion date. In 2017, the project was abruptly abandoned by SCANA and Santee Cooper after the lead contractor, Westinghouse Electric Company, filed for bankruptcy. Due to the Baseload

[15] Palmetto Promise Institute. "2022 Energy Competition." Accessed July 10, 2024. https://palmettopromise.org/wp-content/uploads/2022/08/2022-Energy-Competition_v19.pdf.

Review Act, an act of the South Carolina General Assembly that allowed utilities to raise electricity rates *during* construction of new generation capacity, South Carolina taxpayers and utility ratepayers were faced with billions in sunk costs with no new generation to show for it.

But V.C. Summer had a "twin" of sorts. In 2009, shortly after the announcement of V.C. Summer, work began on Plant Vogtle in Burke County, Georgia. Vogtle, near Savannah, was also an AP1000. It faced numerous delays and cost overruns as well, yet Vogtle expansion construction managed to continue. Originally estimated to be completed by 2016 at a cost of $14 billion, the project's budget escalated to over $30 billion.

Despite its challenges, Plant Vogtle is now completed and in operation.[16] The plant is poised to significantly benefit Georgia by providing a stable, low-carbon energy source, contributing to energy security, and supporting that state's commitment to reducing greenhouse gas emissions. Plant Vogtle, now boasting two new units for a total of four reactors, will be the largest nuclear power station in the United States, and is expected to generate enough electricity to power over 500,000 homes and businesses, thus playing a crucial role in meeting future energy demands and fostering economic growth. Vogtle is owned by Georgia Power (an investor-owned utility owned in turn by the Southern Company), Oglethorpe Power (electric cooperatives), MEAG (municipal utilities) and Dalton Utilities.

With the success of the Vogtle project in our neighboring state, the stain of V.C. Summer is magnified.

But all is not lost.

There could still be a future for nuclear energy in South Carolina. **The solution to expanding our nuclear energy sector and avoiding a repetition of the V.C. Summer disaster goes by a three-letter acronym: *SMR*.**

WHAT ARE SMALL MODULAR REACTORS (SMRS)?

Small Modular Reactors (SMRs) are specific types of nuclear reactors that are emerging as a promising method of generating cost-effective nuclear energy with more benefits than traditional reactors. Put simply, SMRs are compact versions of the conventional nuclear power reactor that, like its larger counterpart, harnesses nuclear fission to generate heat to produce

[16] U.S. Energy Information Administration. "U.S. Electricity Generation Declined by 1% in 2022." Accessed July 10, 2024. https://www.eia.gov/todayinenergy/detail.php?id=61963.

energy.[17] The size of an SMR size makes it possible for systems and components to be factory-assembled and transported to a location for installation. Affordability, portability, stability, and efficiency are unique benefits of SMRs.

BENEFITS OF SMRS

Table 1: Benefits of SMRs Compared to Traditional Nuclear Power[18]

Factor	SMR	Traditional Nuclear
Cost	Lower initial capital costs, $1-2 billion per GW of power	High initial capital costs, $6-9 billion per GW of power
Time	5-10 years from planning to operation	10-15 years from planning to operation
Siting	Flexible, non-site specific siting options including remote and smaller sites (10-50 acres)	Requires large, specific sites often near large bodies of water (500-1,000 acres)
Safety	Passive safety systems and automatic cooling	Complex construction of systems that increases risk
Fuel Efficiency	Fuel-efficient with reduced waste and longer refueling cycles (operational up to 30 years without refueling)	Generally efficient but high fuel requirements

I. LOWER COSTS, LESS TIME

One of the most significant upsides of SMRs is their cost profile. Due to their compact design, **the modular components have significantly lower**

[17] International Atomic Energy Agency. "What Are Small Modular Reactors (SMRs)?" Accessed July 10, 2024. https://www.iaea.org/newscenter/news/what-are-small-modular-reactors-smrs.
[18] International Atomic Energy Agency. "What Are Small Modular Reactors (SMRs)?" Accessed July 10, 2024. https://www.iaea.org/newscenter/news/what-are-small-modular-reactors-smrs.

construction costs than conventional power reactors.[19] This means that producers spend less per reactor than they would spend on traditional nuclear reactors.

Additionally, the lower capital investment required for SMRs makes them attractive for nuclear plant owners. Instead of requiring site-specific design like traditional reactors, SMR modular components can be fabricated in factories, independent of their location, which reduces both the overall cost and construction time. With these reduced capital costs, SMRs can begin producing electricity more quickly, providing a more economical and efficient solution for nuclear energy production.

SMRs can be built in smaller units, allowing **phased development** that spreads out capital expenditures over time, rather than requiring massive upfront investments. This phased approach reduces financial risk and allows for better project management and adjustment as needed. Phased development SMR projects involve simpler logistics and fewer regulatory hurdles, which streamlines the approval process and minimizes the potential for costly delays. SMRs are conducive to more predictable capitalization, avoiding the pitfalls of large-scale, high-risk nuclear projects.

The lower up-front costs and reduced risk associated with SMRs' phased development prevent the massive budget overruns and delays that plagued the V.C. Summer and Alvin W. Vogtle projects. SMRs lend themselves to financial stability, ensuring that South Carolina can meet its energy needs without burdening taxpayers with risk and utility customers with exorbitant rates.

II. LAND EFFICIENCY, SITING

One of the greatest challenges to accelerating energy access, and part of the reason for South Carolina's energy crisis, is limited grid coverage, especially in rural areas. SMRs are able to be installed into an existing grid or remotely, off-grid due to its smaller electrical output. This means **that SMRs can provide low-carbon power for industries and the public in areas lacking sufficient transmission lines and grid capacity.**

SMRs utilize land more effectively than traditional reactors, generating a higher output of electrical energy per unit of land area.[20] North Carolina recently released its Clean Energy Plan which relies on nuclear energy as a

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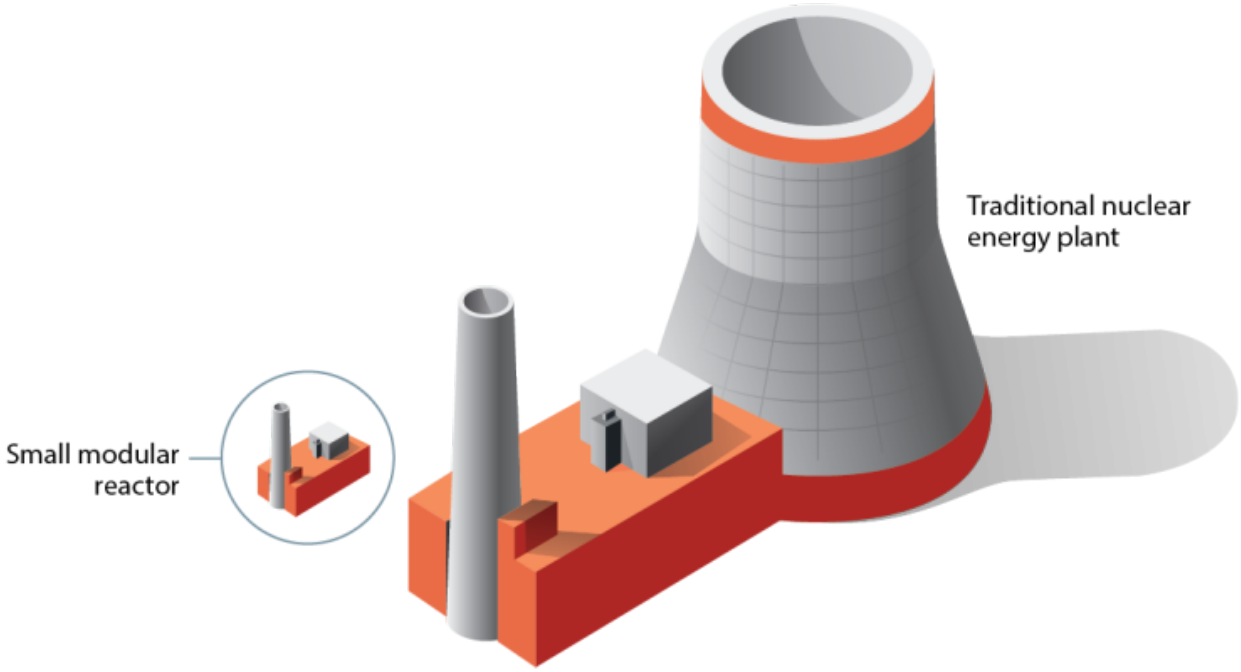
[19] U.S. Department of Energy. "Benefits of Small Modular Reactors (SMRs)." Accessed July 10, 2024. https://www.energy.gov/ne/benefits-small-modular-reactors-smrs.
[20] Visual Capitalist. "Visualized: The Four Benefits of Small Modular Reactors." Accessed July 10, 2024. https://decarbonization.visualcapitalist.com/visualized-the-four-benefits-of-small-modular-reactors.

primary method of reducing greenhouse gas emissions by seventy percent. They report that "Nuclear energy requires just 0.5 square miles... in order to average 1,000 megawatts over the course of a year in North Carolina" in comparison to the 575 square miles required for onshore wind power, 265 square miles for offshore wind, and 60 square miles for solar power to provide the same amount of electricity.[21] This effective utilization of land would help solve South Carolina's capacity problem, enabling the Palmetto state to continue to outpace North Carolina in annual energy production.[22]



Visualization from the Idaho National Laboratory.[23]

III. SAFETY

One of the most frequent hesitations pertaining to nuclear energy developments is the question of safety. **However, SMRs have a strong case for being one of the safest methods of energy production—far safer than even coal and petroleum.**[24]

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[21] John Locke Foundation. "Energy Crossroads." Accessed July 10, 2024. https://www.johnlocke.org/research/energy-crossroads/.
[22] U.S. Department of Energy. "How Much Energy Does Your State Produce?" Accessed July 10, 2024. https://www.energy.gov/articles/how-much-energy-does-your-state-produce.
[23] Idaho National Laboratory. "Advanced Small Nuclear Reactors." Accessed July 15, 2024. https://inl.gov/trending-topics/small-modular-reactors/
[24] Our World in Data. "What Are the Safest Sources of Energy?" Accessed July 10, 2024. https://ourworldindata.org/safest-sources-of-energy.

Modern SMRs have inherent safety systems built into their hardware that significantly reduce the risk of accidents. SMRs use natural circulation for the cooling of the reactor core. This feature means that SMR systems can passively shut down the reactor without human intervention in case of an emergency.[25] In addition, the smaller size and modular nature of these reactors allow for more flexible and controlled deployment, reducing the potential impact of any such issues. This makes SMRs safer than traditional large-scale nuclear plants.

Furthermore, safety concerns about SMRs in South Carolina can be alleviated by looking at the successful track record of nuclear-powered submarines. There are 46 known nuclear submarines in the U.S. Navy as of 2023.[26] And, for decades, the Navy has operated nuclear-powered submarines in and around South Carolina waters without incident.[27] These submarines use compact nuclear reactors similar to SMRs and have maintained an impeccable safety record, demonstrating the robustness and reliability of the technology. The rigorous safety protocols and advanced engineering applied to these submarine reactors provide a strong foundation of reliability. This proven history underscores the potential for SMRs to be safely and effectively utilized in South Carolina, leveraging decades of nuclear operational experience.

IV. FUEL EFFICIENCY

SMRs are notably more fuel efficient compared to many other energy sources. They utilize advanced technology that maximizes fuel economy, extracting more energy from the same amount of nuclear material. **This high efficiency means that SMRs require less frequent refueling: every 3 to 7 years in comparison to 1 to 2 years for conventional plants.**[28] Some SMRs are designed to operate up to 30 years without refueling. This is a sharp contrast to fossil fuels, which are burned quickly and produce significant emissions in the process. SMRs operate for extended periods with minimal environmental impact. Their superior fuel efficiency not only reduces operational costs but also conserves resources and minimizes waste.

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[25] European Commission. "Small Modular Reactors Explained." Accessed July 10, 2024. https://energy.ec.europa.eu/topics/nuclear-energy/small-modular-reactors/small-modular-reactors-explained_en/.
[26] Senator Roger Wicker. "The U.S. Navy Needs More Attack Submarines." Accessed July 10, 2024. https://www.wicker.senate.gov/2023/7/the-u-s-navy-needs-more-attack-submarines.
[27] ABC News 4. "Nuclear-Powered Submarine Spotted Cruising on the Cooper River." Accessed July 10, 2024. https://abcnews4.com/news/videos/nuclear-powered-submarine-spotted-cruising-on-the-cooper-river.
[28] U.S. Department of Energy. "Benefits of Small Modular Reactors (SMRs)." Accessed July 10, 2024. https://www.energy.gov/ne/benefits-small-modular-reactors-smrs.

ADDITIONAL BENEFITS FOR SOUTH CAROLINA

I. STABILITY & DEPENDABILITY

South Carolina's reliance on fossil fuels exposes it to price volatility and supply disruptions.[29] SMRs provide a stable and reliable source of energy, ensuring a consistent power supply regardless of external factors. This stability is crucial for supporting South Carolina's growing population and its expanding industries, which require dependable energy to thrive. With SMRs, the state can achieve a diversified energy mix that reduces dependency on imported fuels and enhances energy independence.

II. ECONOMIC DEVELOPMENT POTENTIAL

There are numerous economic incentives to the development of SMRs. The construction and operation of SMRs can generate a substantial number of jobs, both in the short term and long term. These jobs range from building and engineering to ongoing operations and maintenance. The Federal Office of Nuclear Energy corroborates this claim, reporting that "A 2010 study on economic and employment impacts of SMR deployment estimated that a prototypical 100 MWe [Megawatt electric] SMR costing $500 million to manufacture and install would create nearly 7,000 jobs and generate $1.3 billion in sales, $404 million in earnings (payroll), and $35 million in indirect business taxes."[30] The study showed that these astronomical benefits would be realized by developing an SMR manufacturing unit at even moderate deployment levels.

The creation of a strong SMR-based energy sector would attract investment and technological innovation to the state, potentially turning South Carolina into a hub for advanced energy technology. Developing SMRs in South Carolina has enormous potential to spur economic growth and create a strong and diversified economy that draws investors from all corners of the nation.

STATUS OF SMRS

Globally, there is a race towards SMRs. The European Commission on Energy reports that "While countries such as the U.S., UK, Canada, Japan, and

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[29] Energy Education. "Energy Diversification." Accessed July 10, 2024. https://energyeducation.ca/encyclopedia/Energy_diversification.
[30] U.S. Department of Energy. "Benefits of Small Modular Reactors (SMRs)." Accessed July 10, 2024. https://www.energy.gov/ne/benefits-small-modular-reactors-smrs.

the South Korea are actively developing their own designs, Russia and China connected their first SMRs to the grid in 2019 and 2021, respectively."[31] SMRs are not just theoretical, but they are materializing around the world. Amidst initial setbacks, NuScale Power in Portland, Oregon, has plans to construct what could be the first fully operational SMR system in the United States. Dominion Energy in Virginia is taking the first steps towards SMR development to help meet their own growing electricity demands.[32]

With continued advancements and regulatory support, **it is reasonable to anticipate that South Carolina could see its first operational SMR within the next 10 to 15 years.**

Table 2: Status of SMR Development Around the World

Country	Developer	SMR Model	Status
USA	NuScale Power	NuScale SMR	Design certification approved by U.S. Nuclear Regulatory Commission (NRC). Once construction is resumed, could be operational by the early 2030s[33]
Canada	Ontario Power Generation	BWRX-300	Environmental assessment in progress
China	China Nuclear Corporation (CNNC)	ACP100	Connected to the grid (Linglong One)
Russia	Rosatom	RITM-200	Connected to the grid (Akademik Lomonsov)

[31] European Commission. "Small Modular Reactors Explained." Accessed July 10, 2024. https://energy.ec.europa.eu/topics/nuclear-energy/small-modular-reactors/small-modular-reactors-explained_en.
[32] David Conti, "Seeking Carbon-Free Power, Virginia Tries to Jump-Start Nuclear with Small Reactors," Yahoo Finance, June 21, 2024, https://finance.yahoo.com/news/seeking-carbon-free-power-virginia-201233089.html.
[33] NuScale Power. "Home." Accessed July 10, 2024. https://www.nuscalepower.com/en.

UK	Rolls-Royce	Rolls-Royce SMR	Design in development, expected by 2028[34]
Argentina	National Atomic Energy Commission	CAREM-25	Under construction
South Korea	Korea Hydro & Nuclear Power	SMART	Under construction

CONCLUSION

The promise of Small Modular Reactors (SMRs) stands as a pivotal solution to South Carolina's urgent energy generation crisis. **These innovative reactors promise a cost-effective, efficient, and reliable alternative to traditional energy sources**, aligning with the state's growing industrial and residential energy demands. Unlike the failed V.C. Summer project, SMRs offer a phased development approach that significantly mitigates financial risks, reduces construction times, and avoids the pitfalls of massive budget overruns. By leveraging the advantages of SMRs, South Carolina can enhance its energy security, decrease reliance on fossil fuels, and ensure a stable and affordable energy supply for its residents.

SMRs would greatly benefit South Carolina's economy. The development and deployment of these reactors has the potential to generate thousands of jobs, attracting investment, and establishing South Carolina as a leader in advanced energy technology. **The successful implementation of SMRs would not only meet the state's immediate energy needs but also foster long-term economic growth and sustainability.** As we look towards a future of clean, efficient, and resilient energy systems, it is clear that investing in SMRs is a strategic and forward-thinking choice that will drive South Carolina toward a prosperous and energy-secure future.

Jennifer Buckley is a student at the University of California, Los Angeles, working toward her B.A. in Public Affairs with a minor in Geography. She is a Departmental Honors student in the Luskin School of Public Affairs and is currently writing her thesis on the 2024 presidential election. She serves as a 2024 Summer Fellow at Palmetto Promise Institute.

[34] Rolls-Royce. "Small Modular Reactors (SMR) Brochure." July 2017. Accessed July 10, 2024. https://www.rolls-royce.com/~/media/Files/R/Rolls-Royce/documents/customers/nuclear/smr-brochure-july-2017.pdf.