

Transcending Boundaries

Powering Prosperity: Driving the South's Abundant Energy Renaissance

2024 Annual Report

MISSION STATEMENT

Through innovations in energy and environmental policies, programs, and technologies, the **Southern States Energy Board** enhances economic development and the quality of life in the South.



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CHAIRMAN'S MESSAGE

I am proud to serve as Chairman of the Southern States Energy Board during a time of unprecedented change, growth, and opportunity in the energy sector. The members of this distinguished organization have accelerated their efforts to utilize our resources wisely, employ smart technologies, educate a skilled workforce, and diversify our sources of energy generation for a bright future. Our 64th Annual Meeting, themed "Powering Prosperity: Driving the South's Abundant Energy Renaissance," celebrates a year of incredible strides made across our region.



Governor Bill Lee Chairman

The Southern States Energy Board was initially established in 1960 as the Southern Interstate Nuclear Board (SINB).

Notably, its first Annual Meeting was hosted in Nashville, Tennessee. The SINB compact of 16 states and two territories quickly became a primary catalyst for the peaceful uses of atomic energy and the deployment of nuclear power throughout a region of the United States with a yearning for electric generation and subsequent economic growth.

When the 1973 oil embargo created a worldwide panic, our southern states were searching for responses to the "Energy Crisis." Acting on legislation proposed by Legislative Councils across the region, governors recommended and legislatures passed the Southern States Energy Compact in 1978, creating the Southern States Energy Board.

A unique aspect of our Board's construct is our Associate Members program with 57 active entities. Established in 1981, members serve in an advisory capacity to the Board, providing critical insights on the impacts of federal and state policies and regulations and collaborating on Board initiatives that transcend diverse industry and academic priorities.

While our energy landscape continues to evolve, one principle has definitively informed sound policy decisions throughout our history – an all of the above energy strategy is vital to providing Americans with affordable and reliable electricity, national security, economic

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development, and health and safety. This year, our member state legislatures enacted nearly 400 new laws establishing and refining energy goals and environmental strategies ensuring investments in safe, clean, and reliable energy to meet future demands. While there is some variation in focus across our region, common threads are a commitment to conservation and environmental stewardship, energy efficiency, and diversification of resources.

Our region is undergoing a significant energy renaissance. Nuclear power and fossil fuels have long been the backbone of our energy generation. Recent years have seen a marked increase in the conversion of coal to natural gas units, investments and innovations in nuclear energy, adoption of renewable energy sources, and the emergence of industrial decarbonization technologies. A measured approach to the diversification of energy sources coupled with the deployment of advanced technologies strengthens our grid's reliability and resiliency and delivers affordable electricity to all sectors.

Tennessee is reinforcing its position as a leader in nuclear energy, building on a legacy that began the pioneering work at Oak Ridge National Laboratory (ORNL). Established during the Manhattan Project, ORNL has long been a driver of nuclear research and innovation and continues to play a pivotal role in advancing nuclear technology. Last year, I signed Executive Order 101 to create the Nuclear Energy Advisory Council and establish the Tennessee Nuclear Energy Fund, currently totaling \$60 million. These initiatives underscore our commitment to a robust nuclear ecosystem that attracts top-tier companies and academic institutions to collaborate on cutting-edge research and development. The Nuclear Fund has already helped to secure critical nuclear energy education and business partnerships in the Volunteer State, including Orano USA's decision to select Oak Ridge, Tennessee, as the preferred site to construct a new, multi-billion dollar, state-of-theart centrifuge uranium enrichment facility. As the Volunteer State strives to lead the nation in nuclear energy innovation and advancement, we will continue to deliver an environment for nuclear energy companies to invest and succeed, creating new quality jobs and greater opportunity for Tennesseans.

The Southern States Energy Board, with its unique blend of state, energy industry, and federal partnerships, is leading a multitude of energy and environmental projects that are directly benefitting our members and the communities we serve.

Through the Board's Radioactive Materials Transportation program, appointees provide input and assistance in the planning and establishment of a transportation system to ensure the safe shipment of spent nuclear fuel and high-level radioactive waste.

> Carbon management research is crucial for the South, where energy production, manufacturing, and heavy industries drive both economic growth and energy security. The Southern States Energy Board's Carbon Management Program is rapidly expanding and now includes ten research and commercial-scale development projects.

> > A key strength of the Board is its proactive leadership in advancing innovative energy technologies. A notable accomplishment is collaboration with Aircapture to develop a carbon dioxide (CO2) direct air capture technology that achieves a 99 percent purity CO2 stream, which is critical for commercial use. Building on this,

the Southeast Direct Air Capture (SEDAC) Hub project will begin later this year to create a CO2 reduction ecosystem in Mobile County, Alabama.

The Board's Southeast Regional Carbon Sequestration Partnership (SECARB) identified potential for carbon capture, utilization, and storage (CCUS) in southwest Arkansas, leading to deployment of a CCUS solution for Ash Grove's Foreman Cement Plant. Additionally, five SSEB projects within DOE's Carbon Storage Assurance Facility Enterprise (CarbonSAFE) Initiative are reducing the risks and costs associated with large-scale CCUS projects in Alabama, Louisiana, and Mississippi.

Collaborating with over 74 partners, the Board also leads SECARB-USA and the CCUS Commercialization Consortium, bridging the gap between research and commercial deployment through technology transfer and knowledge sharing.

As we look toward the future, we remain committed to fostering sustainable energy solutions that balance economic growth with the responsible use of our natural resources. I commend our members, industry partners, and stakeholders for their unwavering support and collaboration. Through current programs, the Board's work is returning nearly three quarters of a billion dollars in taxpayer funds to member states. Together, we will continue to lead the way in energy innovation, ensuring a bright and prosperous future for our region and the entire nation.

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Bill Lee Governor of Tennessee Chairman

PROGRAMS & PROJECTS

CARBON MANAGEMENT PROGRAMS

Atlantic Coast CO2 Emissions Storage Sink (Project ACCESS)

The Lake Belt Mining District in Miami-Dade County is home to several facilities that emit carbon dioxide (CO2), including cement, waste management, and electric generating plants. These facilities release approximately 7.5 million metric tons per year (MMmt/yr) of CO2. If capture and storage measures are implemented (90 percent deployment), more than 6.6 MMmt/yr could be removed from the atmosphere. Project ACCESS has sufficient nearby sources of CO2 to meet the CarbonSAFE requirements, with multiple point sources supporting the project. To demonstrate the storage potential, seismic methods and a stratigraphic test well will be used to gather site-specific geological information. This data, obtained through core samples, geophysical logs, and well testing, will be incorporated into numerical models to confirm the suitability of the storage site. Successful reservoir characterization will establish a new opportunity for CO2 storage in the carbonate-rich geology of south Florida.



The region's limestone mining and cement manufacturing sector will benefit from decarbonization, improving the marketability of their products. Establishing a carbon capture and storage (CCS) hub at a facility like Titan's Pennsuco Plant can serve as a blueprint for other cement plants worldwide. The local community, in collaboration with the Florida Department of Environmental Protection, will be actively engaged to ensure environmental compliance and address community concerns. Societal data will be examined to develop an effective community outreach strategy and align with the broader community-focused initiatives. Simultaneously, the project will utilize the collected geological information to create plans for infrastructure, commercial development, monitoring, risk assessment, and outreach tailored to the site. Gaps in the data will be identified and prioritized for future collection to achieve compliance with UIC Class VI permitting requirements. Additionally, the project will share these datasets, along with data from other projects, to promote workforce and core capacity development in engineering design and geological assessment of CO2 storage hubs.

Project ACCESS is led by the Southern States Energy Board in collaboration with site host and project partner Titan America. Virginia Polytechnic Institute and State University leads the subsurface data acquisition and characterization effort. Beyond this, the project team includes personnel from Advanced Resources International, Crescent Resource Innovation, Florida International University, and the U.S. Geological Survey. Also included are a number of local community labor and economic development organizations, elected officials, and other regional emitters. Project ACCESS will occur over a 24-month period and is expected to lay the groundwork necessary to support subsequent project phases (i.e., CarbonSAFE Phase III). The total project funding is \$12 million, including \$3 million in cost share and \$9 million in federal funding.

To date, the project team has already begun engaging with the Florida Department of Environmental Protection, Florida Geological Survey, and other regulatory agencies. These efforts are in support of planned seismic acquisition and well drilling activities that are critical to characterizing the subsurface for CO₂ storage. Finally, a team site visit is planned in mid-October 2024 to facilitate site selection for the stratigraphic test well, as well as to host an in-person risk assessment meeting and community benefits planning session.

Direct Air Capture Recovery of Energy for CCUS Partnership (DAC RECO2UP)

In early 2021, SSEB launched DAC RECO₂UP, and the project met or exceeded all metrics and successfully concluded on July 31, 2024.

The DAC RECO₂UP project was the first direct air capture (DAC) system installed at the National Carbon Capture Center in Wilsonville, Alabama. The NCCC provided a commercially relevant environment in which to assess the DAC solid-amine CO₂ adsorption-desorption contactor technology. Five testing campaigns were completed with an experimental period of over 3,300 hours, allowing the project team to obtain a sizable and varied database. The in-field operational data was used to develop a pre-screening techno-economic analysis, a life cycle analysis, and assess risk. A DAC unit based on the lessons learned from the DAC RECO₂UP project is being designed internationally for commercial installation in the United Arab Emirates.

The DAC RECO₂UP project was successful in decreasing the cost of CO₂ capture through the testing of existing DAC materials in integrated field units and producing a concentrated CO₂ stream of 99 percent purity exceeding the initial goals set for the project.



A DAC skid is shown on the left with a heat skid on the right at the project site.

Recoverable energy is readily available from many commercial locations where DAC can be deployed; therefore, advancing the fidelity of energy recovery to directly reduce the cost of DAC was a key project objective. In addition, many commercial facilities have lowconcentration CO₂ vents that are uneconomical to treat alone but could provide more efficient mass and thermal transport to DAC systems with integrated energy recovery and flexible CO₂ treatment capabilities.

Results of the project addressed critical technical barriers and demonstrated improved capital and operating costs of DAC technology while validating commercial relevance of cost and product quality and desirability.

The project team consists of SSEB, Aircapture, Amy Landis, Ph.D. at Colorado School of Mines, Synapse Development Group, Global Thermostat, Crescent Resource Innovation, and Southern Company. This work was completed in cooperation with the U.S. Department of Energy's National Energy Technology Laboratory and the National Carbon Capture Center.

Establishing an Early CO2 Storage Complex In Kemper County, Mississippi (ECO2S)

The Project ECO2S Phase III project builds on the Phase II results that successfully demonstrated the subsurface adjacent to the Kemper County Energy Facility has the potential to store commercial volumes of CO2 safely, permanently, and economically within a regionally significant saline reservoir system. The primary goal of the Phase III program is completing the site characterization in support of a Class VI Underground Injection Control (UIC) permit to construct. To meet this goal, the Partners have completed regional characterization and detailed injection site characterization necessary to support the UIC permit, including:

- 1. The drilling of characterization/monitoring wells;
- 2. The acquisition of seismic data for reservoir and structural characterization purposes; and
- 3. The assessment/baseline monitoring of underground sources of drinking water (USDWs).

In parallel, pre-feasibility studies for CO₂ capture from a variety of CO₂ sources were completed to identify capture technologies as well as potential CO₂ capture volumes, achievable CO₂ purity, and delivery pressures.

Accomplishments to date:

- Three characterization wells were drilled during Phase II and an additional three were drilled during Phase III.
- Identification and characterization of three storage reservoirs, Massive Sand/ Dantzler, Washita-Fredericksburg, and Paluxy, was completed.
- The National Environmental Policy Act (NEPA) Environmental Information Volume was submitted to National Energy Technology Laboratory (NETL) on July 13, 2021.
- A 92-mile 2D seismic survey was completed on July 25, 2021, and the USDW characterization well drilling concluded on July 26, 2021.
- The Initial Phase III Risk Registry was prepared within 45 days of award prior to the commencement of the well drilling activities and a second assessment was completed in the summer of 2022.
 - Preliminary modeling of potential transport options was finalized.
 - CO2 capture assessments were completed.
 - Class VI UIC permit applications were submitted in August 2022.
 - In 2022, the team received a NEPA finding that required the completion of an Environmental Assessment. This work has been ongoing throughout 2023- 2024.

In 2022, NETL announced additional requirements for Phase III to Phase IV readiness. SSEB and NETL negotiated the terms of the additional requirements and cost. Work began on these requirements in 2023 and continued into 2024. The requested deliverables were a pipeline front end engineering and design (FEED) study, a storage development plan, and community benefits plan. Project ECO2S successfully identified and characterized a world-class geological resource, and the potential for future economic growth opportunities regarding CO2 storage in Mississippi. Currently, the project team is developing a lessons learned document that will benefit future project development throughout the Southeast. The project will enter its closeout phase in 2025.

Foreman Cement Plant Carbon Capture and Storage FEED (Foreman FEED)

Foreman FEED is developing a CCS integrated solution to support reduction of CO₂ emissions associated with cement manufacturing to improve the sustainability of the Ash Grove Foreman Cement Plant in Foreman, Arkansas. This is particularly important as the Foreman Cement Plant is a major industry in the region, employing more than 150 individuals with an annual payroll of more than \$12 million. To accomplish this, the project team will execute and complete front-end engineering and design (FEED) studies for an integrated CCS system. The team will utilize Air Liquide's proprietary technology as the basis for a post-combustion CO₂ capture and processing system. The technology being implemented is environmentally sustainable as it only requires electricity without significant heat requirements, does not use any chemicals or flammables, and can manage impurities such as nitrogen and sulphur oxides, mercury, and particulate matter.

In parallel, the project team will execute a stratigraphic test well targeting the Jurassic Smackover Formation to support the development and submission of its U.S. Environmental Protection Agency Underground Injection Control Class VI Permit for the permanent storage of CO₂. This builds on prior work funded by the state of Arkansas and the U.S. Department of Energy and completed by Advanced Resources International and Southern States Energy Board. The project will include the development of a refined life cycle analysis informed by the CCS FEED assessment, the pipeline FEED assessment, the storage field development plan, and the submission of a National Environmental Policy Act (NEPA) environmental information volume based on the integrated CCS system. A robust community benefits plan will be developed and deployed in anticipation of subsequent project phases to ensure community engagement and access to clean energy careers.

The Foreman FEED study, led by SSEB, began on January 1, 2024, and is expected to occur over a 36-month period. The overall project budget is \$15.2 million (\$7.6 million industry cost-share and \$7.6 million federal). The project team consists of Advanced Resources International, Ash Grove Cement (site host), Vault 44.01 (CO2 offtake partner), Air Liquide (technology provider) and Crescent Resource Innovation. Environmental Resource Management and Sargent & Lundy will participate in the project as vendors.

Louisiana Offshore CO2 Hub Repurposing Infrastructure to Decrease Greenhouse Gas Emissions (Project Lochridge)

Project Lochridge is a new project in support of the U.S. Department of Energy's CarbonSAFE Phase II Program goals of reducing project risks and costs for future carbon dioxide (CO₂) capture, utilization, and storage (CCUS) projects, bringing more storage resources into commercial classifications that support business and financial decisions, and encouraging more rapid growth of a vibrant, geographically widespread industry for geologic carbon storage. The project will achieve five key objectives to establish an offshore Storage Complex, including: 1) demonstrate that the subsurface saline formations at the Storage Complex can store at least 50 million metric tons of captured CO₂ safely and permanently over a 30-year period; 2) conduct meaningful engagement and two-way communications with communities and stakeholders to inform project planning and design, address potential societal concerns and impacts, and seek opportunities for economic revitalization and job creation; 3) identify commercial project risks and develop a comprehensive mitigation strategy; 4) complete a technical and economic feasibility assessment; and 5) develop a plan for subsequent detailed site characterization to support the U.S. Department of Interior's Bureau of Safety and Environmental Enforcement Outer Continental Shelf (OCS) permit readiness. The team will utilize existing public and proprietary data to further characterize approximately 5,000 acres in the federal waters of U.S. Gulf of Mexico's South Timbalier (ST) Lease Area currently operated by Natural Resources Worldwide. Static capacity estimates and preliminary seismic interpretations suggest that the ST Lease Area can store commercial volumes of CO₂ safely and permanently. Therefore, Project Lochridge has a high likelihood of being able to transition into a commercial OCS Storage Complex to support the decarbonization of the Louisiana industrial corridor, situated along the Mississippi River, which emits more than 90 million metric tons of CO₂ per annum.

The project team is led by SSEB, and includes Natural Resources World, Carbon-Zero, Crescent Resource Innovation, Louisiana State University, Repsol E&P USA LLC, and Southern University at Shreveport with technical performance from the Southern University and A&M College campuses.

To date, the project team has held a kickoff meeting and begun the process of organizing existing public and private date to create updated geologic and reservoir models. Moving forward, this work will be utilized to further understand the commercial opportunity in this area of the Gulf of Mexico. This work will also include active engagement with local industry and regulators with the U.S. Department of Interior.

Longleaf CCS Hub (Longleaf Project)

The Longleaf Project seeks to develop a CO₂ storage facility near Bucks, Alabama, that builds on the successful SECARB Regional Carbon Sequestration Partnership's (RCSP) CO₂ injection demonstration at the Anthropogenic Test Site, conducted at nearby Citronelle, Alabama. The Longleaf Project will be overseen by the Southern States Energy Board (SSEB), and the project team consists of Tenaska Sequestration Services, LLC (Tenaska | Host Site), Advanced Resources International, Inc., Crescent Resource Innovation, Inc., ENTECH Strategies, LLC; the Geological Survey of Alabama, the University of South Alabama, and Williams.

The project has acquired approximately 13,000 acres of pore space and is in the process of acquiring additional acres of pore space and is in final land negotiations for its total acreage. The pore space is estimated to have a total storage accommodation of 6 to 25 million metric tons of CO₂ per square mile, with numerous CO₂ emission sources demonstrating interest



A vibroseis truck utilizes low-frequency vibrations to acquire data at the project location in northern Mobile County, Alabama.

in the greater Mobile area. In total, committed CO2 sources emit 2.6 million tons per year (Mtpy) and lie within a 50-mile radius of the storage hub. Further, additional CO2 sources totaling up to 5 Mtpy have shown interest in storing their emissions at this facility. Ultimately, removal of this CO2 from the atmosphere represents a significant reduction in the region's carbon emissions.

The Longleaf Project includes eight objectives:

- 1. Rigorously characterize the subsurface for large-scale storage;
- 2. Develop a comprehensive community benefits plan;
- 3. Obtain Class VI UIC permits;
- 4. Mature understanding of CO₂ sources in the region;
- 5. Understand pipeline transportation options;
- 6. Develop a storage field development plan;
- 7. Manage project risks; and
- 8. Complete the NEPA EIV process.

To date, the project team has successfully held its kickoff meeting and completed the National Environmental Protection Act Environmental Information Volume for the integrated

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commercial projects. This document details the footprint of the project and identifies any potential environmental impacts future construction and operation phases may have on the environment. On March 22, 2024, Project Longleaf partner, Tenaska, held a kickoff meeting at the Mobile Maritime Museum to publicly unveil the project to the local community and take questions from reporters. Speakers included Bret Estep (Tenaska), Jim Barber (Chief of Staff for the City of Mobile), Connie Hudson (Mobile County Commissioner), Bradley Byrne (Former Congressman and current president of the Mobile Chamber), and Dr. Benjamin Wernette (SSEB). Additionally, the project planned for and successfully acquired 2D seismic data during the final week of July 2024. These data were collected over a 22-linear mile path over a one-week period and will provide insight into the structure and continuity of the local geology, which is of critical importance to developing a CO2 storage hub. As part of this, the Longleaf team held an open house on July 31, 2024, and August 1, 2024, and invited local and regional stakeholders to learn about the project's activities and the acquisition of seismic data. In total, over 60 individuals participated in the two-day event.

Moving forward, the team will plan for and drill a deep stratigraphic test well in 2025. The data collected from this effort will be utilized to update Tenaska's existing Class VI permit application and will provide the confidence necessary to advance the storage complex readiness toward commercialization. Simultaneously, the team will conduct source feasibility studies to determine the capital required to capture CO₂ in the region and will conduct a pipeline engineering study to understand the technical requirements of transporting CO₂ to the storage hub.

Optimizing Alabama's CO2 Storage in Shelby County (Project OASIS)

Project OASIS supports the U.S. Department of Energy's CarbonSAFE Phase II Program goals of reducing project risks and costs for future CO₂ capture, utilization, and storage (CCUS) projects. Bringing more storage resources into commercial classifications that support business and financial decisions, Project OASIS will enoucrage more rapid growth of a vibrant, geographically widespread industry for geologic carbon storage. The goal is to establish the foundation for a commercial-scale geologic storage complex for CO₂ captured from Plant Gaston and surrounding industrial sources of CO₂ located in Shelby County, Alabama. Currently, these plants have no economically viable option for geological storage of CO₂ in the area. The team established seven objectives to achieve its goal:

- 1. Demonstrate that the subsurface saline formations at the storage complex can store commercial volumes of CO₂ safely and permanently;
- 2. Initiate a comprehensive Community and Stakeholder Engagement Plan;
- 3. Develop the infrastructure framework for a CO₂ storage hub;
- 4. Prepare a rigorous risk registry and conduct a comprehensive risk assessment;
- 5. Create a monitoring plan;
- 6. Develop a comprehensive site characterization plan to support an Underground Injection Control Class VI Permit in Phase III; and
- 7. Evaluate project commerciality.

Work on this project will be conducted under the purview of SSEB, Advanced Resources International, Inc., Alabama A&M University, Auburn University, Crescent Resource Innovation, Oklahoma State University, Southern Company and Alabama Power Company, Westervelt, and Baker Hughes.



Participants in the November 3, 2023, Project OASIS-NCCC open house.

To date, the project team drilled a deep stratigraphic test well throughout October of 2023 and the first week of November of 2023. In total, Westover #2 was drilled to a total depth of 6,725 ft. Whole core (17.7 ft total) was collected from 3,200 to 3,219 ft and a total of 60 sidewall core depths were selected and a total of 39 separate samples were successfully collected. Whole core samples were sent to the Geological Survey of Alabama for storage. Sidewall core samples were sent to Core Lab in Houston, Texas, for routine and special core analysis that was conducted on 30 of the 39 samples. The samples now reside with our partners at Auburn University for detailed characterization.

To support engagement iteratives, the Project OASIS team held an open house event on November 3, 2024. Local industry stakeholders that participated in the open house included Alabama Oil and Gas Board, Alabama Power Company, Argos, Carmeuse, Lhoist, Pure Sky, and Carbon America. In addition to local industry, students from Auburn University participated in the event that included a tour of the National Carbon Capture Center (NCCC) in Wilsonville, Alabama, and a visit to the Project OASIS drilling site.

Moving forward, the project team will continue to engage with students through paid internships, and aggregate the data generated as part of this project. New data will be used to update geologic and reservoir models which will provide insight into the commercial opportunity at this location and inform future development strategies.

Southeast Regional CO₂ Utilization and Storage Acceleration Partnership (SECARB-USA)

The Southern States Energy board is leading a coalition of technical experts to identify and address regional onshore storage and transportation challenges facing commercial deployment of CO₂ capture, utilization, and storage technologies (CCUS). The project team includes experts from Advanced Resources International, Auburn University, The University of Texas at Austin's Bureau of Economic Geology, Crescent Resource Innovation, Environmental Defense Fund, Geological Survey of Alabama, Los Alamos National Laboratory, Oklahoma State University, SAS, and the Virginia Center for Coal and Energy Research. Industry participants include The Clean Air Task Force, Denbury Resources, Inc., Marathon Petroleum Corporation, Mitsubishi Heavy Industries of America, Inc., SAS Institute, Inc., Southern Company, and the Tennessee Valley Authority. The project is funded by the U.S. Department of Energy (DOE) and project partners. SECARB-USA encompasses the states of Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia and portions of Kentucky, Missouri, Oklahoma, Texas, and West Virginia.

In continuing its regional studies, the project is evaluating potential opportunities for longterm CO₂ storage near cement manufacturing facilities in collaboration with Virginia Tech and Titan America. This effort focuses on the Valley and Ridge province of southwestern Virginia, an area that lacks historical data from oil and gas exploration. The project aims to assess geologic formations in regions that have not traditionally been studied for storage potential. In parallel, the team has conducted assessments of potential CO₂ storage sites in eastern and central Tennessee. These regions present unique challenges due to complex geological structures. However, further west in the Cumberland Plateau, the rock layers are more favorable for CO₂ storage because of their stable, undisturbed nature at depths exceeding 2,400 feet, conditions suitable for storing CO2. Other efforts have focused on the continued understanding of CO₂ storage opportunities in areas where significant adoption of carbon reduction strategies is expected, such as Oklahoma (Oklahoma State University) and Texas (The University of Texas at Austin). Beyond this, the team continued efforts simulating potential pipeline infrastructure scenarios across the region in collaboration with Los Alamos National Lab. This simulation is vital for understanding how CO₂ emissions from areas with less established storage geology can be managed and provides insight to capital requirements for these projects. Associated business models and considerations such as workforce development and stakeholder engagement are being developed in parallel with this effort.

In addition to the execution of its technical scope, the SECARB-USA team continues its role as a source of knowledge for the region. In total, 170 separate engagements have been documented by the SECARB-USA team over the last year. These engagements commonly included discussions with industry interested in carbon management, regulators, legislators, and students. In addition, the SECARB-USA team supported the development and execution of public forums to support carbon management discussions with project developers and community members. Lastly, the SECARB-USA team began examining existing data sets such as public comments submitted in response to Louisiana's Class VI primacy application



Geology students recieve updates on the SECARB-USA program.

and utilized text analytics and large language models to rapidly describe this dataset and the associated themes. This unique approach is critical to regulators and project developers as it provides a quantifiable understanding of public sentiment toward CCS projects, which allows for efficient prioritization of messaging and outreach activities.

Moving forward, the project team will continue its efforts to identify and remove barriers to commercial deployment of CCS technologies in the Southeast by utilizing a combination of technical and non-technical pathways.

SECARB: Offshore Partnership

With more than 540 CO₂-emitting point sources within 50 miles of the Alabama, Florida, Georgia, Louisiana, and Mississippi coast, the state and federal waters of the Gulf of Mexico (GOM) may provide a unique opportunity to permanently store the CO₂ emissions from the region's many industries. SSEB is facilitating offshore geologic storage of CO₂ in the GOM through a government-industry partnership focused on assembling the knowledge base required for secure, long-term, large-scale CO₂ storage. The following organizations contribute their expertise to the project: Advanced Resources International, Battelle Memorial Institute, Crescent Resource Innovation, Geological Survey of Alabama, Louisiana State University, Oklahoma State University, Virginia Polytechnic Institute and State University, the Energy Institute of Alabama, Interstate Oil and Gas Compact Commission, the Mississippi Energy Institute, and SAS.

Building on previous activities, the project team evaluates storage opportunities in the offshore environment, ascertains reservoir properties that influence CO₂, and examines the legal and regulatory requirements for offshore commercial CO2 storage operations. Although CO2 storage capacity estimates continue to evolve as information becomes available, recent calculations suggest that the study area is capable of storing hundreds of years of annual U.S. CO2 emissions. Moreover, the project team has determined that some existing oil and natural gas infrastructure within the U.S. Gulf of Mexico may be suitable for reuse, reducing capital costs for project developers. Recent estimates indicate as much as 15 billion tons of CO₂ storage potential exists in depleted oil and gas fields, or the equivalent of removing emissions from all cars globally for two years. While the legal and regulatory framework required for storing CO₂ in federal waters is being developed by the U.S. Department of Interior, several states have begun the process of developing the requisite rules to support this burgeoning industry. Louisiana and Texas have established leasing and fee structures for their state waters and are expected to continue their leadership in this area. Texas continues to lease its state waters, with its latest initiative (September 2023) resulting in six more offshore leases for storing CO₂.

Over the last year, the SECARB: Offshore team has continued to evaluate the necessary information for conducting commercial CCUS operations in offshore settings. This involves ongoing scrutiny of prospects for CO2 storage, risk analysis for commercial ventures, and an examination of pertinent legal and regulatory factors. The project is expected to conclude in December of 2024.

Southeast Direct Air Capture (SEDAC) Hub

The Southeast DAC (SEDAC) Hub supports the deployment of Direct Air Capture (DAC) technologies in northern Mobile County, Alabama. DAC is a process designed to reduce CO₂ levels in the atmosphere by capturing CO₂ directly from the air. The CO₂ is then stored safely and securely. The SEDAC Hub is one of five Topic Area 2 projects chosen by the federal government to receive funding in order to establish a regional DAC hub.

Mobile County is an ideal location to support the initial phases of a DAC hub as it is home to many industrial facilities, large tracts of available land, and appropriate subsurface geology to support the creation of a sustainable CO2-based economy. In addition, numerous opportunities exist to employ the region's skilled workforce in pursuit of a variety of CO2 use cases beyond permanent storage in subsurface reservoirs (e.g., CO2 to fuels). Because of these attributes, the SEDAC Hub will not only abate local emissions but also lead to the development of a carbon reduction ecosystem in the area and the Gulf South more broadly.

The SEDAC Hub is led by the Southern States Energy Board. The project team includes 8 Rivers, Aircapture, Crescent Resource Innovation, ENTECH Strategies, Georgia Tech, Mitternight, RTI International, the University of Alabama, and the University of South Alabama. Stakeholders include Southern Company and its Alabama Power Company subsidiary, Tenaska Sequestration Solutions, and the Mobile Chamber of Commerce among many others.

The team has established a robust community outreach and two-way engagement program that includes a Community Advisory Board (CAB) composed of diverse local stakeholders; industry partners interested in decarbonization; and local community colleges, universities, and trade schools. The CAB will provide input to achieve community-supported DAC growth and guide the development of SEDAC's Community Benefits Plan.

The SEDAC Hub project will complete front-end engineering design (FEED) studies required to support the construction and operation of two DAC facilities, each with an initial capture capacity of 50,000 net tonnes of CO₂ (the equivalent of permanently removing nearly 22,000 internal combustion cars from the road). The project team will complete a balance of plant FEED study for infrastructure to be shared between the two DAC technologies assessing the feasibility of low-carbon intensity energy sources and evaluating the availability and suitability of existing infrastructure for reuse. SSEB and its partners also will work closely with regional storage field developers to identify a CO₂ storage solution and submit a National Environmental Policy Act (NEPA) Environmental Information Volume (EIV) based on the integrated DAC Hub. Alabama Power Company will work with the project team to potentially provide a location for the DAC hub on property adjacent to its James M. Barry Electric Generating Plant in Bucks, Alabama.

Tri-State CCS Hub

The Tri-State CCS Hub will significantly reduce CO₂ emissions in an industrial region of eastern Ohio, the adjacent northern panhandle of West Virginia, and western Pennsylvania. To this end, the project will focus on establishing a CO₂ storage hub in a three-county area consisting of Harrison County, Ohio; Jefferson County, Ohio; and Hancock County, West Virginia, to serve as a solution for the region's emitters. In total, there are 131 facilities reporting in excess of 47 million metric tons of CO₂ emissions per annum within a 50-mile radius of the project focus area, with currently no viable CO₂ storage solution.

To support this goal, the project team will rigorously characterize four stacked geologic reservoir and caprock carbon sequestration systems to better understand suitability for CO2 storage and caprock competence.

During Phase One, the team will develop an Environmental Information Volume and characterize the target formations through geophysical (seismic) methods. In addition to this, the team will develop a broad engagement effort to promote collaboration among state agencies in Ohio, Pennsylvania, and West Virginia, with the goal of facilitating large scale deployment of CCS technologies in the region. A go/no-go decision point will be used to gauge community and regulator feedback as well as strategies to de-risk drilling activities. Further, the team will submit necessary documentation for the UIC Class VI permit application(s). For Phases 1 and 2, three deep characterization wells will be completed from which whole/ sidewall core, geophysical well logs, and well tests will be collected and conducted. Plans for Storage Site Operations, Financial Plans and Arrangements, and Commercialization will be completed. Finally, the documentation for the required NEPA class of action (Categorical Exclusion, Environmental Assessment, or Environmental Impact Statement) will be submitted. The project includes site host and owner/operator Tenaska as well as Ohio State University, Projeo, West Virginia University, and the West Virginia Geologic and Economic Survey.

NUCLEAR PROGRAMS

Foreign Research Reactor Spent Nuclear Fuel Shipments

The Board maintains its partnership with the National Nuclear Security Administration's global nuclear non-proliferation program known as Material Management and Minimization or (M3). During the life of the DOE program, most of the shipments have entered the U.S. via the southern region (Joint Base Charleston Naval Weapons Station) before being transported by rail to the Savannah River Site (SRS) in Aiken, South Carolina, or cross-country by truck to the Idaho National Laboratory in Idaho Falls, Idaho. SSEB, through its committee structure, has successfully assisted M3 with planning and conducting shipping campaigns (1996-to present) under which the U.S. (Joint Base Charleston Naval Weapons Station) has received over 70 shipments eliminating over 1,865 kilograms of highly enriched uranium and plutonium from over 30 countries. As we steadily approach the 30-year milestone, the conversion, removal, and disposal program continues national security efforts to prevent state and non-state actors from developing nuclear weapons or acquiring weapons-usable radiological materials.

Currently, the foreign research reactor program will conclude in 2029 although shipments from Japan are expected to continue beyond the date. However, the domestic receipt program at the SRS is scheduled for operation until 2032. The domestic program supports the production of isotopes for the medical community as well as advanced science and nuclear materials research. During the May 2024 Annual Meeting of the National Transportation Stakeholders Forum, SSEB members heard from the Fuel Receipt Program Manager at SRS. He showed slides of two approved routes used for the recently completed Canadian shipments as well as graphics and statistics for the domestic receipt program. Lastly, he displayed pictures of the various Type-B transportation packages used to bring fuel to SRS and the current inventory and mission being undertaken at the site's L Area Storage Basin.

Radioactive Materials Transportation

As a part of a cooperative agreement with DOE-Nuclear Energy's (NE) Office of Integrated Waste Management, SSEB provides input and assistance with the planning and establishment of a transportation system for shipments of spent nuclear fuel and high-level radioactive waste. Radiological health professionals, emergency managers and law enforcement officers who serve on the Board's Radioactive Materials Transportation Committee address policy, preparedness and communication issues related to the national program.

SSEB staff and North Carolina Committee Member (Master Trooper Robert Dennis – North Carolina Highway Patrol) kicked off the year by participating in a February 2024 DOE-NE interactive webinar called "Sharing Perspectives: A Consent-based Siting Listening Session." The goal of the virtual webinar was to gather perspectives to help guide, inspire, or inform DOE's Consent-based Siting Consortia as they help DOE pursue a communitycentered approach to siting one or more federal consolidated interim storage facilities for commercial spent nuclear fuel. SSEB was one of a group of organizations invited to speak because of experiences with public engagement, navigating legislative challenges, resolving sociopolitical gridlocks, and pursuing community well-being.

During the Committee's mid-year meeting, members received an update regarding an intermodal transport from the decommissioned Crystal River Nuclear Plant in Florida to Waste Control Specialist (WCS) in Andrews, Texas. The campaign includes the packaging of four large reactor components. A specialized transporter was used to move the packages from the mausoleum to a barge slip for deep-water direct passage from Florida to Texas and used again for heavy haul transport to WCS. Lastly, members were provided a schedule (completed and anticipated) for the various phases of the transportation campaign and briefly discussed the security and preparations applicable to escorting, tracking, response, weight, and other regulatory requirements.

SSEB continues to hold discussions regarding DOE's plans for a spent nuclear fuel transportation package performance demonstration. Testing has been performed in the U.S. and abroad to convey the safety and robustness aspects of spent nuclear fuel casks in performing their duty. Despite substantial data and computer model testing, organizations such as the National Academy of Sciences and the Blue-Ribbon Commission on America's Nuclear Future have advocated for full-scale cask testing. Thus, SSEB is committed to an engagement plan which involves gathering input from states and tribes and using their experience as a conduit to determine what stakeholders would want to gain from a package performance demonstration involving hypothetical accident conditions.

Southern Emergency Response Council (SERC)

SERC is responsible for the administration of a mutual aid agreement, formalized in 1972, amongst southern states to support one another in the event of a radiological incident involving a nuclear power plant. The 14 signatory states that currently comprise SERC are as follows: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia. SERC's authority is documented in the Southern Mutual Radiation Assistance Plan (SMRAP) which illustrates how protocols would be implemented in the case of such an emergency. Created as a blueprint for coordinating radiological emergency assistance capabilities among participating states in the southern region, SERC representatives review, revise, and administer SMRAP on an annual basis to reflect changes in state emergency response capabilities and equipment.

To maintain preparedness for SERC members, the Southern States Energy Board acts as regional coordinator to simulate the activation of the SMRAP during state nuclear power plant exercises. Since the beginning of 2024 until the present time, one signatory state (North Carolina) incorporated SSEB into their Federal Emergency Management Agency evaluated drill involving the Brunswick Nuclear Plant and made contact to request personnel/ subject matter expertise (field teams, lab analyst and dose projectionist) from their border states. The drills adhere to Nuclear the

Miles & Car

Regulatory Commission's established emergency classifications. The emergency classifications increase in severity from Notification of Unusual Event; Alert; Site Area Emergency; and General Emergency. A SERC meeting is held once per year in conjunction with the Organization of Agreement States meeting. This gathering allows members the opportunity to discuss matters related to SMRAP. The most recent meeting of the group was held in August 2024, in Santa Cruz, California, to ratify the latest version of SMRAP. During the recent meeting, state participants discussed schedules for their upcoming nuclear power plant graded exercises and how mutual aid agreements such as SMRAP are critically important as states have limited resources.

Transuranic Waste Transportation

The southern region hosts two DOE sites (Savannah River Site and Oak Ridge National Laboratory) which generate and/or house transuranic (TRU) waste destined for disposition at the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico. The waste, which is generated from the production of nuclear weapons, mainly consists of solid items such as protective clothing and gloves, rags, lab instruments and equipment, as well as other items that have become contaminated by transuranic isotopes. SSEB assists in the mission by means of their TRU Waste Transportation Working Group which establishes policy and implements protocols for the safe transport of these shipments to WIPP.

Preparation for this undertaking is a complex process and requires the development of individual programs within each corridor state to support the TRU shipments. Therefore, SSEB negotiates with the U.S. Department of Energy's Carlsbad Field Office (DOE-CBFO) on behalf of our impacted member states, to acquire funding for planning and other preparedness activities in accordance with the objectives of the national program. The funding, which annually exceeds \$2 million, is administered by SSEB via a cooperative agreement to the WIPP corridor state subgrantees. Additionally, SSEB hosts a series of virtual meetings with the subgrantees at the beginning of each year to discuss the technical and financial considerations of each state's workplan and budget.

Earlier in the year, SSEB staff distributed the DOE-CBFO Corridor Self-Assessment Form to impacted southern corridor states to gather quantitative data of each state's WIPP program. The form is in essence an audit product to be used annually for updating operational data

and providing the states, tribes, and DOE with a snapshot of program capabilities as well as a tool to aid with planning and improving program safety and efficiencies. It covers multiple topic areas such as inspections, routing, training and exercise, and radiological emergency response equipment just to name a few.

Another matter addressed by the TRU Working Group was the Legacy TRU Waste Disposal Plan. The plan is a condition of a state-issued permit required to keep WIPP operational. The major factors of the plan were to provide definitions for legacy TRU and TRU mixed waste and provide an outlook of how a dedicated panel would be mined and reserved for disposal of legacy TRU and TRU mixed waste at the WIPP site.

Since opening in 1999, the WIPP facility has processed over 14,000 shipments. Southern sites have comprised more than 2000 of those shipments (ORNL - 287 / SRS - 1,774) and represent over 3 million miles of highway transport.

Firefighter examines labeling and prepares to survey a radiological source package during Modular Emergency Response Radiological Transportation Training in Georgia.



LEGISLATIVE MONITORING

Energy & Environment (E&E) **Legislative Digest**

The E&E Legislative Digest, a longstanding publication spanning over four decades, stands as a comprehensive reflection of legislative trends in its member states. It serves as a vital resource for legislators, policymakers, industry stakeholders, and the general public by providing valuable insights into the ever-evolving realm of energy-related legislation, regulations, and resolutions.

This year, the E&E Digest contains nearly 400 bills. It offers a consolidated view of the region's energy priorities and environmental strategies. For those who prefer a digital experience, the bills can be explored through interactive categories and maps on the SSEB website (sseb.org).

The Digest highlights notable legislative trends across the membership. While there is some variation in focus across our region, a

common thread is the commitment to environmental stewardship, energy efficiency, and utility regulation. Each state is addressing these issues in ways that reflect their unique environmental and economic landscapes, yet the overall trends suggest a coordinated effort to transition toward low- and zero-carbon energy sources, enhance sustainability, and protect natural resources across the Southern United States.





Scan this code to view

the interactive Digest.

GOUTHERN STAT



2024

Scan this code to view the static Digest.

The latest version of the printed Digest is current as of September 1, 2024. The interactive Digest receives continuous updates as bills are filed and adopted within our membership region.

Fossil Energy & Carbon Management (FECM) Digest

Our FECM Digest is an essential resource for policymakers, industry leaders, and stakeholders in the energy sector. As the energy landscape evolves, understanding the legal framework surrounding fossil fuels and carbon management becomes crucial for making informed decisions that balance economic growth with environmental stewardship.

The document examines legislative initiatives that impact energy production, environmental sustainability, and carbon reduction efforts. The Digest offers a detailed analysis of bills, laws, and regulations that shape the future of energy in our region and beyond. For stakeholders looking to navigate the complex and often-changing legislative environment, this resource is invaluable.

The FECM Digest is also a critical tool for fostering collaboration among our member states. By highlighting trends and best practices in energy policy, the Digest encourages

dialogue and cooperation, helping states align their efforts to address common challenges. Whether you are a policymaker, energy professional, or an advocate for environmental issues, the information contained within this Digest can guide your actions and strategies, ensuring that you are up-to-date with the latest FECM legislative developments in the nation. By reading the Digest, you gain a deeper understanding of how state-level decisions influence the broader goals of energy security, economic prosperity, and environmental protection in the United States.

The next release will be available this November.



PARTNERSHIPS

The Southern States Energy Board has myriad collaborative efforts underway and through these robust partnerships with government, business, industry, and academia, our member states and territories benefit from the work of energy and environmental experts throughout the country.

CCUS COMMERCIALIZATION CONSORTIUM

In collaboration with the University of Houston's Center for Carbon Management in Energy, SSEB launched the CCUS Commercialization Consortium in 2020. This partnership supports and enhances the U.S. Department of Energy's (DOE) mission of helping the United States meet its growing need for secure, reasonably priced, and environmentally sound energy supplies. The Southern States Energy Board manages this effort that fosters and sustains an innovative environment for the development of fossil energy and carbon management policies and technologies for domestic and international economic development opportunities. Broadly, project objectives include fostering and facilitating communications, education, and outreach, supporting regional outreach efforts focused on briefing state policymakers and regulators on the historical and current technical aspects of clean energy demonstration programs, and promoting the adoption of U.S. technologies abroad.

Composed of 74 companies and organizations, this distinctive partnership between the public and private sectors aims to expedite and bring about significant changes in the adoption of CCUS technologies. To achieve this objective, SSEB and the University of Houston collaborated closely with the Consortium Membership to execute a CCUS Commercialization Roadmap. The roadmap was meticulously designed to outline the most critical challenges hindering the widespread commercialization of these technologies. This endeavor was realized through a combination of surveys conducted among the Consortium Membership and a series of meetings orchestrated to deliberate on the obstacles encountered by the industry. Broadly speaking, it was established that the foremost challenges faced by the industry could be categorized into three main groups:

- 1. Stakeholder engagement and environmental justice (working group lead: Kerry McGrath, Hunton Andrews Kurth LLP);
- 2. Legal and regulatory considerations (working group lead: Fred Eames, Hunton Andrews Kurth LLP); and
- 3. Facilitators for commercialization including risk mitigation and engagement with financial markets (working group lead: Brian Hill, Crescent Resource Innovation).

Consortium partners are listed below:



The Consortium took the initiative to establish dedicated working groups addressing each topic separately. These groups are tasked with delving deeper into the challenges identified within each of the three categories. Working groups convene monthly, and discussions are focused on steering Consortium initiatives to support CCUS commercialization.

In addition, the Commercialization Consortium holds in-person events to discuss salient topics in the field. For example, on April 10, 2024, the Commercialization Consortium convened at the Greater Houston Partnership in Houston, Texas, to discuss CCUS deployment initiatives with special presentations from Drax Global, Warwick Carbon Solutions, Worley, and the Houston Energy Transition Initiative. The meeting included an overview of working group activities and a detailed discussion around the U.S. Department of Energy's CCUS priorities and status of project funding opportunities. These events are seen as critical in supporting CCUS deployment through knowledge sharing across industry sectors.

EDUCATING AND ENGAGING STAKEHOLDERS

Southern States Energy Board prioritizes outreach and education through a variety of venues including keynote presentations, panel discussions, conferences and workshops, exhibits, and myriad activities meant to engage public officials and other stakeholders. SSEB strives to enhance and improve understanding and awareness of domestic energy development, energy and environmental policies, and clean energy technologies and their importance in the region.

Examples of Significant Engagements

The following represents a mix of in-person and virtual events that establish our communications and outreach efforts as robust and wide-ranging:

- SSEB Briefings to Board Members | Host and
 National Association of State Energy Officials Presenters
- SSEB Associate Member Meetings
- Southern Legislative Conference Annual Meeting | Participant
- State Energy Offices, Briefings on SSEB **Programs and Activities | Presenters**
- Southeast Section Meeting | Participant
- Direct Air Capture Recovery of Energy for **CCUS** Partnership Annual Review Meeting and Peer Review | Presenters
- SECARB-USA Project Meetings and Annual **Review Meeting | Host and Presenters**

- Project ECO₂S Phase III Team Meetings and Annual Review Meeting | Host and Presenters
- CCUS Commercialization Consortium Leadership Team Meetings | Host and Presenters
- Midland CO₂ Conference | Presenter
- Global CCS Institute | Presenter
- Western Interstate Energy Board High-Level Radioactive Waste Committee and WIPP Technical Advisory Group Meeting | Presenter
- Council of State Governments Northeast High-Level Radioactive Waste Transportation Task Force | Presenter
- Council of State Governments Midwestern Office Radioactive Materials Transportation Committee Meeting | Presenter
- Transportation Emergency Preparedness Program Ad Hoc Working Group | Chairman
- Tribal Radioactive Materials Transportation Committee Meeting | Presenter
- Spent Nuclear Fuel Rail/Routing Ad Hoc Working Group | Member
- Section 180(c) Ad Hoc Working Group | Member
- Communications and Outreach Ad Hoc Working Group | Member
- National Transportation Stakeholder Forum
 | Planning Committee Member
- Department of Energy Office of Nuclear Energy Transportation Core Group | Member
- Southern Emergency Response Council Meeting | Host
- DOE Webinar Sharing Perspectives: A Consent-based Siting Listening Session | Panelist

- CCUS Commercialization Consortium Working Group Web Calls
- DOE-NETL CCUS Annual Review Meeting in Pittsburgh, PA| Presenters
- Longleaf Student Engagement Event and Seismic Acquisition in Mobile County, AL | Presenters
- Summer Associate Members Meeting | Host and Presenter
- Project OASIS Event at the National Carbon Capture Center in Wilsonville, AL | Presenters
- Project Longleaf Kickoff Meeting in Morgantown, WV | Presenters
- EUCI CCUS 101 Workshop, Virtual | Presenters
- Longleaf Public Unveiling and Media Availability in Mobile County, AL | Presenters
- CCUS Commercialization Consortium Meeting in Houston, TX | Host and Presenters
- Direct Air Capture and Environmental Justice Workshop at Georgia Tech | Sponsor
- Project OASIS Student Engagement Event | Presenter
- DOE and EPA sit-down to discuss Public Perception and Novel Applications for Text Analytics to Understand Public Sentiment | Presenter
- SECARB-USA Meeting with Oklahoma Secretary of Energy and Environment | Presenter
- Southern Legislative Conference | Participant

ASSOCIATE MEMBERS PROGRAM

The SSEB Associate Members program was founded in 1981 by Kentucky Governor John Y. Brown during his chairmanship. The members represent both regional and national energy providers, resource companies, educational institutions, trade associations, and technology developers. The Associate Members act in an advisory capacity to the Board. With increasing interest from the region's prominent energy industries and organizations, SSEB gains a broad depth of knowledge and diverse perspectives on the impact of energy and environmental policies and regulations on the region's economy.

2024 Officers



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Members

^{34 –} Associate Members Program

SOURCES OF SUPPORT

The Southern States Energy Board's primary source of funding is its annual appropriations from the 18 member states and territories. Each member's share is computed by a formula written into the original compact. This formula is composed of an equal share, per capita income, and population. The Board has not requested an increase in annual appropriations since 1987. The compact authorizes the Board to accept funds from any state, federal agency, interstate agency, institution, person, firm, or corporation provided those funds are used for the Board's purposes and functions. This year, additional support was received for research projects from cooperative agreements from the United States Department of Energy and Department of Defense.

Additionally, SSEB continues to lead an Associate Members program composed of industry partners who provide an annual contribution to the Board. Membership includes organizations from the nongovernmental sector, corporations, trade associations, and public advocacy groups. The Associate Members program provides an opportunity for public officials and industry representatives to exchange ideas, define objectives, and advance energy and environmental planning to improve and enhance the South's economic and environmental well-being.

In addition, the SSEB carbon management program's industry associates and partners provide monetary sponsorships to complement the Board's CCUS projects and activities and assist with cost share needs on our federal projects. SSEB also receives corporate sponsorships, registration fees, as well as other in-kind contributions to support the expenses associated with the SSEB annual meeting and other events. SSEB state appropriations are as follows:

Alabama \$32,572	Maryland \$37,192	South Carolina \$31,372
Arkansas \$31,027	Mississippi \$29,077	Tennessee \$34,267
Florida \$47,212	Missouri \$36,247	Texas \$55,402
Georgia \$35,782	North Carolina \$37,042	U.S. Virgin Islands \$25,297
Kentucky \$32,197	Oklahoma \$32,512	Virginia \$38,362
Louisiana \$33,817	Puerto Rico \$25,597	West Virginia \$28,732

BOARD MEMBERS

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Christopher Wells Director, Nuclear Programs

Benjamin Wernette, Ph.D. Principal Scientist & Strategic Partnerships Lead

Adjunct Staff

Brian Hill Senior Technical Advisor

Michael Nasi Special Counsel

Eddie Joe Williams Senior Policy Advisor

IN MEMORIAM: DR. GERALD "JERRY" HILL

Gerald "Jerry" Hill, 78, passed away on June 14, 2024, after a battle with adrenal cancer. A dedicated husband, father, grandfather, and friend, Jerry was deeply loved and will be missed by all who knew him.

Jerry served his country in the U.S. Air Force before he began his vast and prodigious career in the energy sector, including a role on Ronald Reagan's transition team

and collaborations with various prestigious



Jerry's compelling wit and passion for sharing his wisdom will be profoundly missed.

organizations like NASA and the Department of Energy. He was an Adjunct Professor and President of Crescent Resource Innovation, a company he founded with his son Brian. Jerry continued to work, publish, and lecture until his retirement in January 2024.

His contributions to our mission over 36 years are incalculable. Jerry joined SSEB in 1978, serving as Director of Technology Programs and later as Deputy Director. He was a rising star in the energy field and followed other pursuits in 1986. Jerry returned to SSEB in 1996 as the Board's Senior Technology Advisor. During his tenure, SSEB's state and federal projects proliferated, and our staff greatly benefitted from his dynamic leadership and mentorship. Jerry led a first-ever engineering project with Oak Ridge National Laboratory to build an Annual Cycle Energy System (a shallow pool of water kept under a building utilizing a heat pump to cool in summer and heat in winter) in a district court and multi-service building in Elkton, Maryland—an application that still exists today. In the 2000s, Jerry was instrumental in establishing the Board's Carbon Management Program.

Outside of work, Jerry enjoyed traveling, golf, and cheering for the Iowa Hawkeyes. Jerry hoped his cancer fight and participation in clinical trials would help advance research. In his memory, the family requests donations to St. Jude Children's Research Hospital. **Use the QR code to contribute**.



BOARD OVERVIEW

The Southern States Energy Board (SSEB) is a non-profit interstate compact organization created in 1960 under Public Laws 87-563 and 92-440. The Board's mission is to enhance economic development and the quality of life in the South through innovations in energy and environmental policies, programs, and technologies. Sixteen southern states and two territories comprise the membership of SSEB.

SSEB was created by state law and consented to by Congress with a broad mandate to contribute to the economic and community well-being of the southern region. The Board exercises this mandate through the creation of programs in the fields of energy and environmental policy research, development and implementation, science and technology exploration, and related areas of concern. SSEB serves its members directly by providing timely assistance designed to develop effective energy and environmental policies and programs and represents its members before governmental agencies at all levels.

CONNECT WITH US ON SOCIAL MEDIA!







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