



Transcending Boundaries



ENERGY PIONEERS **in** **the NEW FRONTIER**

2021
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.



Photography notice – all images are property of SSEB unless noted below:

Cover: *Courtesy of Oklahoma Historical Society [1894.002.] William F. Harn Collection, Oklahoma Historical Society Research Division; Composited by Turney Foshee to include an image of Downtown Oklahoma City courtesy of Pixabay.com. Leaders of the Boomer movement, Captain William Couch and General James Weaver, look upon the unassigned lands that would become Oklahoma City.*

Page 3: *Courtesy of Pixabay.org. A number of pumpjacks operate in Oklahoma oilfields with wind turbines in the background.*

Page 7: *Courtesy of Oklahoma Historical Society [P1982.197.] Thomas N. Athey Collection, Oklahoma Historical Society Research Division; Oklahoma City just two weeks after the 1889 land run that established Oklahoma as a state.*

Page 12: *Courtesy of Oklahoma Historical Society [21412.M562.14] Barney Hillerman Collection, Oklahoma Historical Society Research Division; Artist's rendition of the land run, which was composed of many Americans on horseback, in horse-drawn wagons, and on foot.*

Page 23: *Image of nuclear waste transport cask licensed via CC-BY 3.0 from Wikimedia user Bill Ebbesen.*

Back cover: *Courtesy of Oklahoma Historical Society [1894.002.] William F. Harn Collection, Oklahoma Historical Society Research Division; Composited & colored by Turney Foshee.*

CONTENTS

Chairman’s Message	2
Projects	8
Digital outreach	8
Educating Stakeholders.....	10
Programs	13
Direct Air Capture Recovery of Energy for CCUS Partnership (DAC RECO ₂ UP)	13
Southeast Regional Carbon Storage Partnership: Offshore Gulf of Mexico (SECARB: Offshore).....	14
Establishing an Early CO ₂ Storage Complex in Kemper County, MS (ECO ₂ S)	15
Southeast Regional CO ₂ Utilization and Storage Acceleration Partnership (SECARB-USA).....	16
Committee on Carbon Management.....	18
Foreign Research Reactor Spent Nuclear Fuel Shipments	19
Transuranic Waste Transportation	22
Energy and Environmental Legislative Monitoring.....	24
Partnerships	26
Our Partners.....	26
Associate Members Program	26
Sources of Support.....	27
Board Members	29
In Memoriam.....	31
Staff	32
Board Overview	32

CHAIRMAN'S MESSAGE

For the 61st Annual Meeting of the Southern States Energy Board, I chose the theme, *Energy Pioneers in the New Frontier*. Our Nation is entering a period of unprecedented change and transition in the energy sector that includes all facets of energy, including production, transmission, environmental protection, transportation infrastructure, and workforce development. How we consume energy is changing every day.

The challenges before us are enormous, but with this change comes great opportunity. As we take these challenges head on, it is important that we recall the giants upon whose shoulders we stand today. In Oklahoma, they were pioneers like Frank and Waite Phillips, Bill Skelly, and E.W. Marland, or modern-day titans like T. Boone Pickens, Harold Hamm, and Aubrey McClendon who paved the way for Oklahoma to be a world leader in energy production.

Oklahoma and its oil & gas industry have always been pioneers and innovators in energy and can claim many of the most important events in history. We proudly recall the history of oil being discovered before the territory became a State: on April 15, 1897, a wooden oil derrick named the Nellie Johnstone No. 1 in Bartlesville, Indian Territory, enabled a plume of crude oil and water to burst through the earth, ushering a new oil industry into what would become Oklahoma. That well became the State's first commercial oil enterprise and drew over 100,000 barrels of oil over a period of 50 years. The process of hydraulic fracturing was invented in 1949 by Halliburton in Duncan, Oklahoma, while that same technology was later combined with horizontal drilling by other Oklahoma companies who are responsible for creating the shale revolution.

We are long removed from the time when oil derricks were scattered across the prairies, and Sooners, as they were called, used the oil they collected to grease parts from their wooden wagons. When drilling began in 1897, it would take six wagons to drag a wooden rig, sometimes over a hundred miles to the drilling site.

Today, we are a premier energy producing state that has taken our "all of the above" energy policy to the next level. We remain a leader in our proud tradition of producing fossil energy, but most people are surprised to learn that Oklahoma is a leader in renewables and alternative energy. We are one of only four states in the U.S. to get more than 40 percent of our power from renewables. Our wind resources are so legendary that they were canonized in our State by Rodgers & Hammerstein.

Our unique mix of natural gas and renewables has yielded remarkable environmental results. Oklahoma has reduced its carbon dioxide emissions from the power sector by three times the national average as



Gov. Kevin Stitt
Oklahoma

measured against the 2005 benchmark used by the Biden Administration. Using the latest numbers from the U.S. Energy Information Administration (EIA), Oklahoma has reduced its CO₂ from the power sector by 35 percent while the national average is only 12 percent. We have done so while remaining the most affordable energy in the country in 9 of the last 11 quarters, according to EIA. We believe Oklahoma can legitimately boast that we have the cleanest and most affordable energy in the country.

I am proud to be Chairman of the SSEB, because it allows us to support our member states in maximizing the use of their resources in the way that is most beneficial to their citizens and states. I strongly believe that these types of policy and resource decisions are best made by state and local governments allowing the markets and trends to guide their choices. Today, we see consumers and investors demanding cleaner sources of energy with less emissions. We are proud that Oklahoma and the Southern States Energy Board are leaders in meeting those demands in a sensible and affordable way.

Since its inception in 1960, the Southern States Energy Board has been a part of our region's pioneering spirit. From the Board's role at the outset of nuclear power development to the age of carbon management, and from the technological innovations that cleared sulfur and nitrous oxides from our Appalachian Mountain air to the development of an interstate mechanism for remediation of environmental permitting, SSEB has been an active and strident supporter of strong state responses to energy and environmental issues.

In February of this year, the Board's Carbon Management Program grew through final award of a new project that will test an emerging technology for direct air capture of carbon dioxide (CO₂). Partners include AirCapture LLC, Crescent Resource Innovation, Global Thermostat, the National Carbon Capture Center, Southern Company, and Synapse. The Technology will be designed and tested in a fabrication facility and then transported to the National Carbon Capture Center in Wilsonville, Alabama. The direct air



capture skids will be integrated into the center’s facility for operational testing. Design activities are underway now and testing will begin in 2023.

Last September, the SSEB Carbon Management Team began Phase 3 of our CarbonSAFE project, also referred to as Project ECO2S. The purpose of this activity is to determine the feasibility for establishing a CO₂ storage complex in Mississippi. Critical path milestones for this venture include ensuring compliance with the National Environmental Policy Act and pursuing a U.S. Environmental Protection Agency (EPA) Underground Injection Control Class VI permit for CO₂ storage, which will be the first for a Southern States Energy Board carbon management project since the Class VI final rule was established by EPA in 2010. To date, our team has drilled three stratigraphic test wells and one groundwater test well to further assess the suitability of the geology within our area of interest. Seismic data acquisition was completed earlier this year, and data assessment is underway. This endeavor has the most partners of any Board program.

The Southeast Regional CO₂ Utilization and Storage Acceleration Partnership, or SECARB-USA, is the follow-on phase to our highly successful SECARB project. The scope of our activities focuses on addressing key technical challenges to carbon capture, utilization, and storage (CCUS); data collection, sharing and analysis; transportation and distribution infrastructure; and promoting regional technology transfer and knowledge dissemination. During the past year, our team has been examining the geology within the southern region for future technology deployment opportunities and determining infrastructure needs to connect CO₂ sources to storage reservoirs or areas where CO₂-enhanced recovery options may exist. The maps and routing simulations created by the team will assist developers in identifying routes that have the least human and environmental impact. Our expert team of stakeholders also has identified impediments to CCUS deployment and determined additional work that the partners will perform to eliminate these challenges.

SSEB’s assessment of CCUS opportunities in Southwest Arkansas has shown very positive results. This evaluation was requested by Governor Asa Hutchinson. The Board and its partner, Advanced Resources International, Inc., (ARI) first performed a screening study of CO₂ storage and enhanced oil recovery options, which was funded by the State. Upon completion of the initial screening, the project was transferred into our SECARB project in order to use existing funding to perform more robust analyses.

On June 23, SSEB, Governor Hutchinson, Secretary of Commerce Mike Preston, Public Service Commission Chairman and Governor’s Alternate to SSEB Ted Thomas, ARI, and CRI jointly hosted a Southwest Arkansas Revitalization Workshop in El Dorado, Arkansas. The event coincided with the 100th anniversary of the January 1921 discovery of oil in Union County, Arkansas. The workshop presenters covered many aspects of the opportunity for revitalization of the oil and gas industry in Southwest Arkansas, including the concept of CCUS, why it is a viable commercial opportunity in El Dorado and

surrounding areas, the legal and regulatory frameworks surrounding CCUS, asset financing options, and suitable business models and case studies.

The Southern States Energy Board's CCUS Offshore Partnership recently received approval for its second and final phase of work. The results of the project will include high prospect areas for future offshore CCUS project development in the eastern Gulf of Mexico. This venture also will culminate in a guidance document on the legal, regulatory, and technical feasibility of offshore CO₂ subsea storage projects, as well as a prospect-specific feasibility assessment for infrastructure development, operations, and decommissioning.

Another agreement that has received a five-year renewal is our project that supports the Transuranic, or TRU, Waste Transportation Working Group. These are state officials that coordinate the interstate shipments of TRU waste to the Waste Isolation Pilot Plant in Carlsbad, New Mexico. The project also enables SSEB to provide direct funding to states for full time staff who monitor these shipments, engage in emergency response planning, direct emergency responder training, and procure equipment. The Working Group meets twice per year, and our staff is in constant communication with the states on shipment schedules, training opportunities, coordination, and purchasing needs.



SSEB also serves as the staff for the Southern Emergency Response Council created by Southern Governors in 1972. The Council, with SSEB serving as the Secretariat, administers the Southern Mutual Radiation Assistance Plan (SMRAP) which provides mutual aid from state to state in the event of an emergency occurring at any of the region's nuclear power plants. SMRAP is vigorously tested annually.

The Southern States Energy Board has provided innovative technical and policy leadership over many decades while being mindful of the socio-economic impacts of our actions on generations to come. The SECARB, SECARB-USA, Project ECO₂S, SECARB Offshore, and Direct Air Capture projects exemplify the pioneering spirit and effectiveness of public-private partnership collaborations in designing, developing,

and demonstrating the clean energy technologies of the future. However, the Board has recognized a significant need to assemble a larger group of industry stakeholders and experts to promote the rapid and transformative deployment of CCUS technologies – commercially and at a much larger scale.

Last September, we announced our collaboration with the University of Houston’s Center for Carbon Management in Energy. We are applying lessons learned and experiences in our R&D projects and demonstrations to develop a Commercialization Consortium that will accelerate CCUS deployment. We also are engaging a Leadership Team of industry and subject matter experts to provide visionary strategies in our development of a roadmap designed to achieve CCUS commercialization. The Leadership Team is composed of representatives from 33 major U.S.-based energy companies that are committed to providing us with assistance to further identify and offer solutions to remaining uncertainties impeding industry investments in CCUS technologies. We are excited to work with such an impressive group of industry stakeholders, many of whom are Associate Members!

Assembling our members and project partners in virtual meetings has become a common means of communication and collaboration for our staff since the onset of the pandemic in 2020. At SSEB, we held our first large, virtual conference just over a year ago and have hosted over 250 virtual meetings and webinars since our last Board meeting.

Earlier this year, we initiated a webinar series. This is not meant to replace our meetings but offers a unique way to gather for an hour and learn about technologies or issues that are of importance to our member states. The first webinar, held February 25th, analyzed the growing pace of electric vehicle adoption in the Southeast and examined the industry and policy response. The second event occurred on March 11th and focused on innovations in electric vehicle batteries and new facilities planned for southern states. Two subsequent webinars have focused on Regional Initiatives for Carbon Capture and Storage and SSEB’s SECARB-USA Partnership.

During the past two years of my Chairmanship, we have seen great change as a constant. The pandemic has created great strain on all of us. It has changed the way we are able to work, the way we meet, the way we deliver services, but it has also revealed the needs from health care to transportation or how the demand for energy can change so quickly. We learned to be ready for anything. I am not sure any of our member states was fully prepared for the polar vortex that hit the south last February. With temperatures remaining well below freezing for 10 days, we saw new winter peaks and unprecedented disruptions and millions without power during this powerful storm. We are seeing northern and northwestern states experiencing heatwaves causing similar disruptions in the power grid causing problems. Our work here in the SSEB is more important than ever.

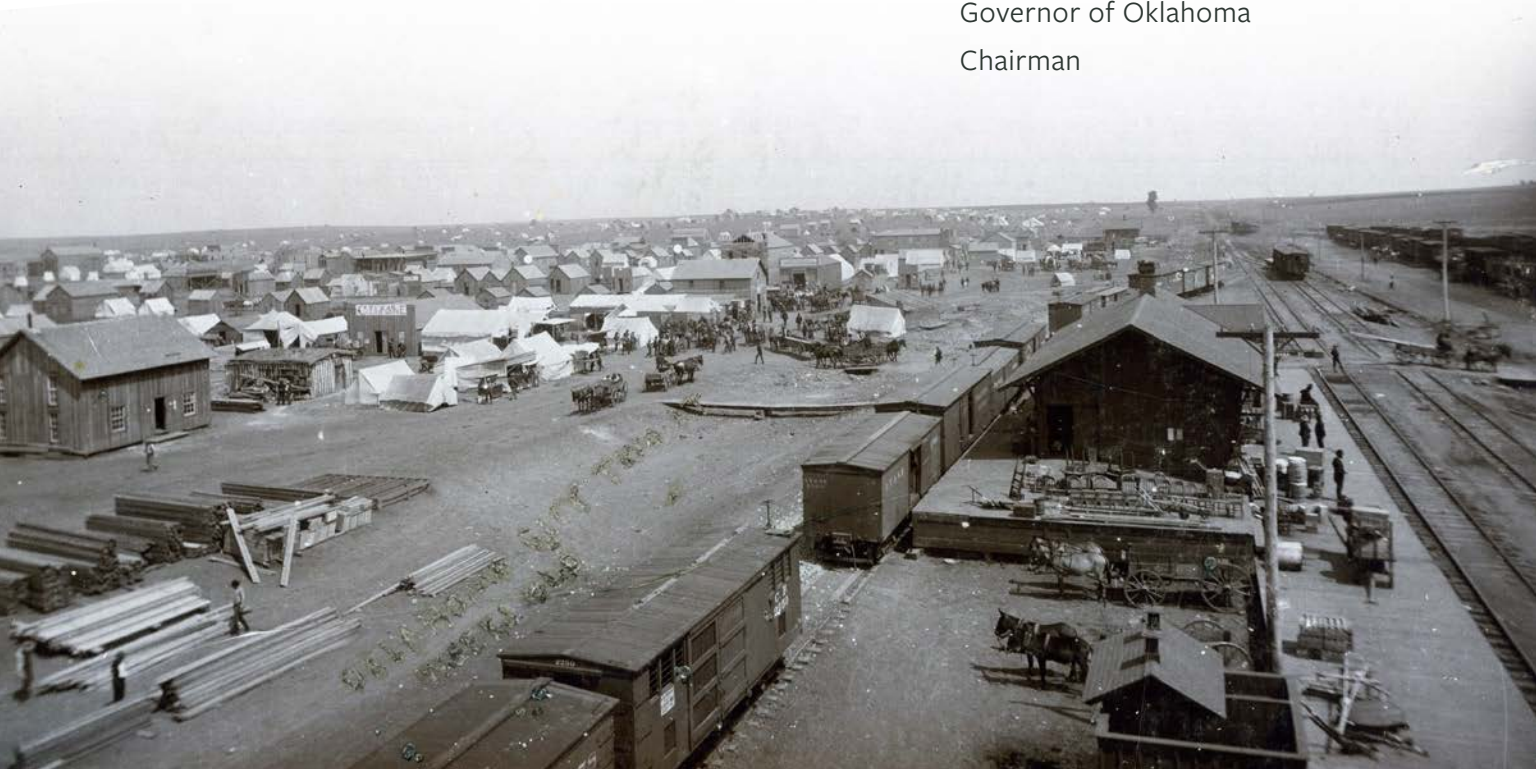
With all these changes, these pioneers are facing a new frontier and we are spearheading an “all of the above” approach to energy policy. We choose energy that is produced locally, that is affordable, and that is reliable. We are a leader in wind generation and other renewable resources, ranking #2 nationally in wind production. As one of four states that receives 40 percent of our electricity from renewable resources, we have embraced a future that enables us to produce power locally and export 28 percent of our energy to neighboring states.

SSEB’s enormous portfolio of current projects and programs exceeds \$457 million in 2021, a phenomenal amount considering the size of the staff. What I have focused on above is merely a part of the range of activities that are the Board’s emphasis this year. Since October 2020, SSEB has generated more than \$34 million in new public-private partnerships that include energy industry, state, and federal funding. The majority of these funds support member states and territories through contracts and subawards with state agencies, colleges and universities, utility partners, energy research organizations, national laboratories, energy resource companies, and businesses in our southern region.

It is a privilege for me to serve as the Chairman of such a vigorous and constructive organization that constantly is transcending boundaries and closing the gaps between policy and technology applications!



The Honorable Kevin Stitt
Governor of Oklahoma
Chairman



PROJECTS

DIGITAL OUTREACH

The COVID-19 pandemic, as with most organizations, had the effect of limiting our outreach efforts. Rather than waiting for the pandemic to recede, we formulated a new strategy to engage our Board Members and beyond in the digital space.

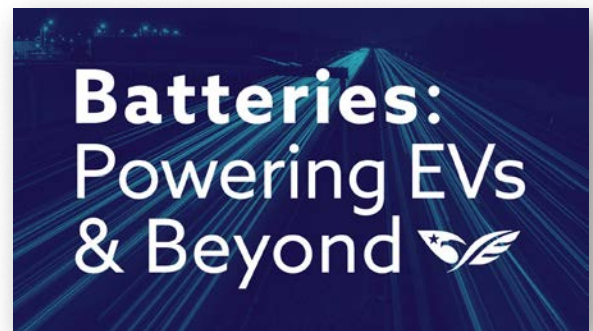
To that end, we kicked off a webinar series that, to date, has traversed topics such as electric vehicles (EVs), the batteries that power those vehicles, and regional carbon capture initiatives—including our own, SECARB-USA. Scan the QR codes under each image below to access the webinar.

In our inaugural webinar installment, *The Evolution of EVs in the South*, our presenters provided an analysis of the growing pace of EV adoption in the Southeast and examined the industry and policy response.

Among the topics discussed were REV West and Tennessee’s transportation electrification initiatives including Drive Electric, the Southeast Regional EV Information Exchange, and the state’s joint effort with TVA to install a network of fast charging stations for EVs.

We expanded on the topic of EVs with our next webinar on *Batteries: Powering EVs & Beyond*. We were joined by three experts from the federal, state, and industry perspective to discuss the value of battery innovation as it relates to transportation electrification and the broader goals of strengthening the nation’s grid resiliency and reaching decarbonization goals.

For our third webinar, we explored the past, present, and future work of the regional initiatives (RIs) focused on carbon capture, utilization, and storage (CCUS). The RIs and respective project leads highlighted in the webinar were the Carbon Utilization and Storage Partnership (CUSP) helmed by the New Mexico Institute of Mining and



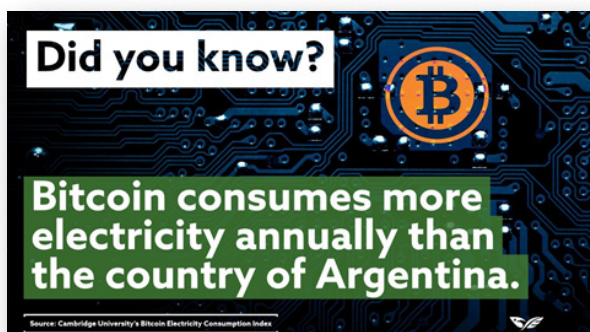
Technology, the Midwest Regional Carbon Initiative (MRCI) led by the Battelle Memorial Institute, and the Plains CO2 Reduction Partnership (PCOR) headed by the University of North Dakota's Energy & Environmental Research Center (EERC).

The session also featured Jason Lanclos, the Director of the Louisiana State Energy Office, discussing the value and effects of regional carbon capture initiatives.

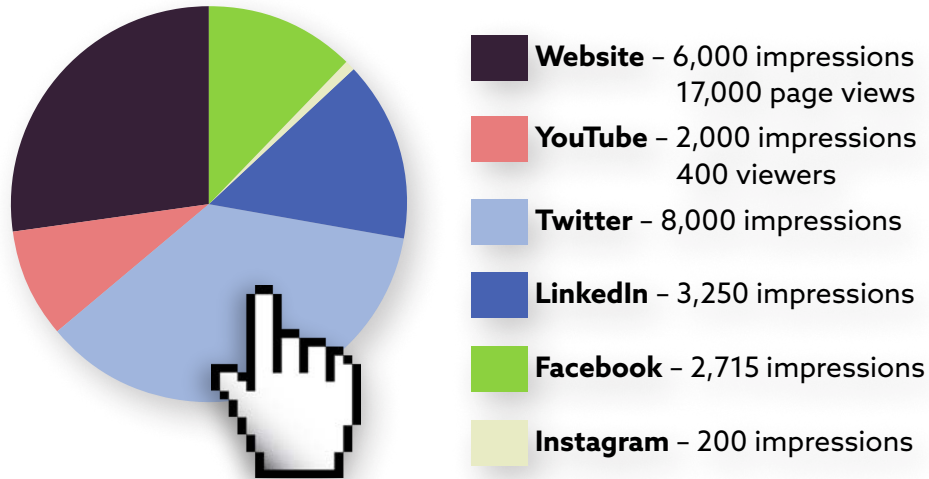
In August, we presented the ongoing work of our carbon capture regional initiative, SECARB-USA, a project built on nearly two decades of experience in CCUS policies and technologies. We were joined by project partners Dr. Richard Esposito of Southern Company, Dr. Susan Hovorka from the Bureau of Economic Geology at UT Austin, and Katherine Zimmerman of Wood to discuss our past and future work together on CCUS issues and priorities, including the current push for the inclusion of carbon capture technology in federal decarbonization efforts.

Each entry in our webinar series has gained more attendees than the one before—totaling more than 400 registrants altogether. We look forward to hosting many more webinars and virtual discussions in the future!

Coinciding with our webinars, SSEB strengthened its social media reach as well. Our reach expands across Facebook, Instagram, YouTube, LinkedIn, and Twitter, and we are constantly seeking novel and exciting ways to engage new and familiar audiences in the digital world. A sampling of some of those posts are below. The following page highlights our various outreach outlets and specifies the unique impressions, or views, for each source.



Year-to-Date Impressions



EDUCATING 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.

On July 8, 2021, SSEB hosted the 2021 Energy Briefing to Southern Legislative Leaders. In preparation for the meeting, SSEB published its 2021 Energy and Environment Legislative Digest, a compendium of legislation passed by the Board's 18 member states and territories. The virtual meeting included presentations by Board Members and Associate Members as well as an overview of legislative trends in the region. Speakers included:

- The Honorable Lynn Smith, Georgia House of Representatives and Vice Chair, Southern States Energy Board;
- The Honorable Kenneth E. Wagner, Oklahoma's Secretary of Energy and Environment and Chairman's Alternate, Southern States Energy Board;
- Kenneth Nemeth, Secretary and Executive Director, Southern States Energy Board;
- Rick Eastman, Senior Legislative Representative, Ameren Missouri;
- Chris Guttman-McCabe, Chief Regulatory and Corporate Communications Office, Anterix; and
- The Honorable Garret Graves, U.S. House of Representatives, Louisiana

In coordination with the University of Houston's Center for Carbon Management in Energy, SSEB is leading a carbon capture, utilization, and storage (CCUS) Leadership Team. Consisting of 33 companies and organizations, this unique public-private consortium will promote the rapid and transformative deployment of CCUS technologies. To this end, SSEB and the University of Houston are working closely with subject matter experts to develop a CCUS roadmap that will reduce risks and uncertainties across the CCUS value chain and incentivize and encourage industry investment. To date, SSEB and the University of Houston have hosted three Leadership Team meetings and six Working Group sessions.

Since the beginnings of the COVID-19 pandemic, the Board and its staff were faced with new outreach and communications challenges. Amid newfound and wide-spread public health emergency response responsibilities and travel restrictions affecting our members and partners, most meetings were converted to virtual events while others were canceled. Staying true to our goal of providing a forum for members to share experiences and lessons learned, the Board's leadership sought ways in which its members and partners could continue to interact through virtual events. The SSEB staff also embraced the opportunity to enhance its project-related team coordination and outreach efforts using virtual venues. Examples of significant engagements from the past year are provided below and demonstrate that, even in such an unprecedented year, a robust communications effort remains a tremendously successful focus of the Board.



SSEB's Secretary to the Board and Executive Director, Ken Nemeth, participates in a virtual meeting.

SSEB Briefings to Board Members | Host and Presenters

SSEB Annual Energy Briefing to Southern Legislative Leaders | Host and Presenters

Joint Meeting of the Board and Associate Members | Host and Presenters

SSEB Associate Member Meetings | Host and Presenter

Southern Legislative Conference Annual Meeting | Presenter and Participant

State Energy Offices, Briefings on SSEB Programs and Activities | Presenters

SECARB Offshore GOM Partnership (Joint Meeting with The University of Texas at Austin, Bureau of Economic Geology) Stakeholder Briefing | Co-host and Presenters

Direct Air Capture Recovery of Energy for CCUS Partnership Kickoff Meeting | Presenters

SECARB-USA Project Meetings | Host and Presenters

Project ECO2S Phase III Kickoff Meeting and Team Meetings | Host and Presenters

Project ECO2S Phase III Virtual Field Trip
| Host and Presenters

Southwest Arkansas Revitalization
Workshop: A Pre-Feasibility Assessment
of Carbon Capture, Utilization, and
Storage (CCUS) Opportunities to Spur
Economic Development (hybrid) | Co-
host and Presenters

National Energy Technology Laboratory's
2021 Virtual Integrated Project Review
Meeting | Presenters and Participants

CCUS Commercialization Accelerator
Consortium Project Kickoff Meeting and
Leadership Team Meetings | Host and
Presenters

National Association of Regulatory Utility
Commissioners Winter Policy Summit |
Presenter

Midland CO2 Conference | Presenter

National Coal Council Fall Annual Meeting
| Presenter

United States Energy Association
Webinar on Carbon Capture, Utilization,
and Storage | Presenter

Virginia Coal and Energy Alliance, SSEB,
and Virginia Center for Coal and Energy
Research's 41st Annual Conference,
"Coal's Continuing Vital Role" | Host, Co-
sponsor, and Presenter

Western Interstate Energy Board High-
Level Radioactive Waste Committee and
Western Governors Association 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

National Nuclear Materials
Transportation Stakeholder Forum | Host

Southern Emergency Response Council
Meeting | Host



PROGRAMS

DIRECT AIR CAPTURE RECOVERY OF ENERGY FOR CCUS PARTNERSHIP (DAC RECO₂UP)

Over the past year, SSEB launched a new project known as the Direct Air Capture Recovery of Energy for CCUS Partnership (DAC RECO₂UP). The project employs a team approach and supports the Department of Energy's Office of Fossil Energy and Carbon Management's goal to decrease the cost of carbon capture through the testing of existing direct air capture (DAC) materials in integrated field units that produce a concentrated carbon dioxide (CO₂) stream of at least 95 percent purity. Solid-amine CO₂ adsorption-desorption contactor technology, proven in the laboratory, will undergo high-fidelity design/validation. Recoverable energy is readily available in a large number of commercial locations where DAC can be deployed; therefore, advancing the fidelity of energy recovery to directly reduce the cost of DAC is a key project objective. In addition, many commercial facilities have low-concentration 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.

Technology scale up will leverage past research and occur in a commercially-relevant environment at the National Carbon Capture Center. Pre-screening techno-economic analysis, risk assessments, and life cycle analysis will be performed by experienced team members. Results of the project will address critical technical barriers that, when solved, will improve the capital and operating costs of DAC while validating commercial relevance of cost and product quality/need.

Team members for the project include AirCapture LLC, Global Thermostat, Synapse Product Development, Crescent Resource Innovation, the National Carbon Capture Center (pictured), and Southern Company.



The project ends its Design Phase this October, after which it will transition into the Construction Phase set to end in October of 2022. From there, the project will enter its final phase, Integrated Systems Testing that is scheduled to conclude in January of 2024.

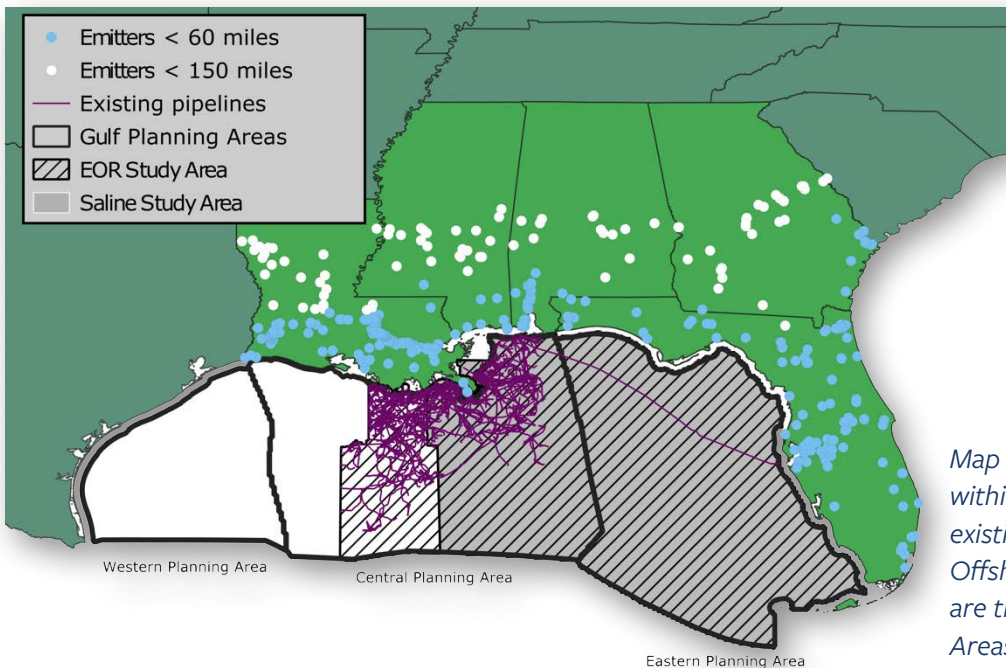
SOUTHEAST REGIONAL CARBON STORAGE PARTNERSHIP: OFFSHORE GULF OF MEXICO (SECARB: OFFSHORE)

With more than 290 CO₂-emitting point sources within 60 miles of the Alabama, Georgia, Louisiana, and Mississippi coast, the State and Federal waters of the Gulf of Mexico (GOM) may provide a unique opportunity to store emissions from the many industries located in the region. SSEB is facilitating offshore geologic storage of CO₂ in the GOM through the creation of a government-industry partnership that is focused on assembling the knowledge base required for secure, long-term, large-scale CO₂ storage, with or without enhanced hydrocarbon recovery.

SSEB is leading this partnership of universities and technical experts. 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.

The project team has prepared five technical documents that identify ideal storage targets in the

offshore environment, evaluate reservoir properties that most influence CO₂ storage, and examine infrastructure buildout and development strategies. Importantly, this work suggests that



Map of onshore CO₂ point sources within 150 miles of the coast and existing pipelines in the SECARB: Offshore study area. Also included are the Gulf of Mexico Planning Areas and the generalized extent of the SECARB: Offshore study area.

significant opportunity exists for the creation of a CCUS marketplace in the GOM. For example, current estimates indicate that CO₂-enhanced oil recovery may permanently store over four billion metric tons of CO₂ while producing as much as six billion barrels of oil from the Gulf's depleted oil fields. Further, a detailed evaluation of over 3,500 deep-water reservoirs suggests an aggregate CO₂ storage capacity in excess of one trillion metric tons (150 years of U.S. annual CO₂ emissions). In addition to storage resource studies, the project team has evaluated over 25,000 miles of existing pipeline infrastructure to determine suitability for CO₂ transportation and designed novel subsea completions for CO₂ injection. Finally, SSEB hosted the third annual joint partnership meeting with the University of Texas at Austin's Gulf Coast Carbon Center on April 14 and 15. In total, 150 individuals registered for the two-day event.

Moving forward, the project team will continue to characterize the geology of the shallow and deep-water environments, refine storage capacity estimates, identify storage risks, and evaluate infrastructure buildout scenarios. Lessons learned from international offshore CCUS projects will aid in the development of legal and regulatory best practices. Last, outreach activities will continue and include industry and other research partnerships. Budget period two for the project began on July 1, 2021, and will continue through March 31, 2023.

ESTABLISHING AN EARLY CO₂ STORAGE COMPLEX IN KEMPER COUNTY, MS (ECO₂S)

The "Establishing an Early CO₂ Storage Complex in Kemper County, Mississippi: Project ECO₂S" Phase III project builds on the Phase II results that successfully demonstrated that the subsurface adjacent to the Kemper County Energy Facility has the potential to store commercial volumes of carbon dioxide (CO₂) safely, permanently, and economically within a regionally significant saline reservoir system. The Phase III program has the primary goal of completing the site characterization in support of a Class VI Underground Injection Control (UIC) permit (to construct). To meet this goal, the Partners will move from regional characterization to developing the detailed injection site characterization necessary to support the UIC permit, including: (1) the drilling of characterization/monitoring wells; (2) the acquisition of a seismic survey 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 will be performed to identify capture technologies as well as potential CO₂ capture volumes, achievable CO₂ purity, and delivery pressures. Tying it all together and feeding back into the UIC Class VI Permit application, injection simulation studies will be carried out to define the project's potential Area of Review (AoR) for the development scenario.

Accomplishments to date:

- Drilled three characterization wells during Phase II and an additional three during Phase III;
- Identification and characterization of three storage reservoirs (Massive Sand/Dantzler, Washita-Fredericksburg, and Paluxy);
- 92-mile 2D seismic survey completed July 25, 2021;
- USDW characterization well completed July 26, 2021;
- Class VI UIC permit applications in preparation;
- NEPA Environmental Information Volume submitted to NETL on July 13, 2021;
- Initial Phase III Risk Registry prepared within 45 days of award prior to the commencement of the well drilling activities;
 - A more comprehensive risk assessment is underway for the fully integrated project;
- Preliminary modeling of potential transport options;
- CO₂ capture assessments underway at Plant Miller (coal) and Plant Ratcliffe (natural gas); and
 - For the third source, Plant Daniel, a separately funded FEED study is underway (FEO031847)



Project ECO₂S on-site whole core processing with Plant Ratcliffe in the background.

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 carbon dioxide (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, and The Virginia Center for Coal and Energy Research. Industry participants include The Clean Air Task Force, Denbury Resources,

Inc., Mitsubishi Heavy Industries of America, Inc., SAS Institute, Inc., and Southern Company.

The project is funded by the U.S. Department of Energy (DOE) and 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.

To date, the project team has prepared six technical reports. These reports examine aspects of CCUS value chain and provide key insights into the development of CCUS marketplace in the Southeast. For example, the project team has identified 40 basins in the Southeast that are amenable to CO₂ storage.

In addition, a comprehensive assessment of the study area has quantified the capital investment required to characterize the geology in different regions of the Southeast. Preliminary infrastructure buildout scenarios have been developed and utilize existing easements to connect IRS Section 45Q-eligible point sources (e.g., coal- and natural gas-fueled power plants) with potential CO₂ storage complexes. Finally, SECARB-USA industry participants have inventoried the non-technical challenges associated with the commercial development of CCUS technologies.

In addition to preparing technical reports, SSEB and Advanced Resources International are coordinating a series of stratigraphic test bores in Georgia and Alabama with Southern Company Services Research and Development. Funded by Southern Company and its subsidiaries, these stratigraphic test bores will further characterize the subsurface geology in northwest Georgia and central Alabama and contribute to the local economies.



Drilling begins at the stratigraphic test bore site in northwest Georgia.

The project team continues to meet with regional industry parties interested in CCUS technologies. These meetings communicate the work of the SECARB-USA program and take advantage of the vast technical expertise of the project team. In addition, SSEB hosted two separate webinars (July 15, 2021, and August 25, 2021) focused on communicating regional CCUS successes and challenges to a broad group of stakeholders.

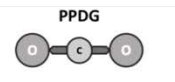
The project team will continue to characterize a portfolio of prospective CO₂ storage complexes, evaluate infrastructure buildout scenarios, and coordinate with industry to identify and address existing knowledge gaps. In addition, the SECARB-USA team will expand its industry stakeholder network to include hard to abate industries that are unique to the region (e.g., pulp and paper). In February of 2021, the project received an additional \$5 million in federal funding. Total federal and partner (cost-share) funding for the project now exceeds \$12 million.

COMMITTEE ON CARBON MANAGEMENT

The Board's Committee on Carbon Management 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. This effort 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 1) fostering and facilitating communications, education, and outreach, 2) supporting regional outreach efforts focused on briefing state policymakers and regulators on the historical and current technical aspects of clean energy demonstration programs, and 3) promoting the adoption of U.S. technologies abroad.

SSEB continues to achieve programmatic goals by engaging with relevant organizations and state and federal legislators. On October 26, 2020, SSEB co-hosted a webinar with the Metallurgical Coal Producers Association (MCPA).

In coordination with the University of Houston's Center for Carbon Management in Energy, SSEB is leading a carbon capture, utilization, and storage (CCUS) Leadership Team. Consisting of 33 companies and organizations, this unique public-private consortium will promote the rapid and transformative deployment of CCUS technologies. To this end, SSEB and the University of Houston are working closely with subject matter experts to develop a CCUS roadmap that will reduce risks and uncertainties across the CCUS value chain and incentivize and encourage industry investment. To date, SSEB and the University of Houston have hosted three Leadership Team meetings and six Working Group sessions.



CCUS Leadership Team Participants

FOREIGN RESEARCH REACTOR SPENT NUCLEAR FUEL SHIPMENTS

The DOE’s National Nuclear Security Administration’s (NNSA) Office of Material Management and Minimization (M3) is tasked with the prevention of acts of nuclear terrorism by eliminating inventories of weapons-usable nuclear materials. One method of achieving non-proliferation is the removal and disposition to the United States. SSEB worked with NNSA M3 and its predecessor programs for over two decades through its committee structure to successfully complete a shipping campaign (1996-2019) under which the U.S. accepted up to 19.2 metric tons of spent nuclear fuel from research reactors around the globe. During the life of the program, most of the shipments entered the U.S. via the southern region (Naval Support Activity Charleston) hailing from over 30 countries before being transported by rail to the Savannah River Site (SRS) in Aiken, South Carolina. In addition, 10 cross-county shipments have been conducted to move fuel from Charleston to the Idaho National Laboratory.

Over time the emphasis of the program has gradually shifted from maritime movements hailing from overseas to highway transport from Canada. Once again, SRS was chosen as the receipt facility for the shipments. Nuclear inventory from the Chalk River facility in Ontario include Target Residue Material (TRM), National Research Experimental (NRX) and National Research Universal (NRU). The TRM is a highly enriched liquid form and therefore requires unique handling and packaging requirements. The NRX/NRU movements are spent fuel from the two research reactors. Together, these campaigns used to

produce medical isotopes have yielded 171 shipments since they began in 2015. The shipments traverse states in the region en route to SRS and thus SSEB continues to offer assistance with the outreach efforts for education and identification of first responder organizations for radiological transportation training to respond to an accident.

SSEB kicked off the 2021 National Transportation Stakeholders Forum Virtual Series with a webinar providing an overview of this important program and emphasizing how state participation in DOE's planning efforts have factored into its success.



NRU Reactor at the Chalk River Facility in Ontario, Canada.

SOUTHERN EMERGENCY RESPONSE COUNCIL (SERC)

The Southern Emergency Response Council (SERC) consists of 14 signatory states (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia) responsible for the administration of a mutual aid agreement formalized in 1972 to help one another in the case of a radiological incident involving a nuclear power plant. SERC's authority is documented in the Southern Mutual Radiation Assistance Plan (SMRAP) that 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, personnel, capabilities, and equipment.

As a part of the scope of this endeavor, 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 the year, several states (Alabama, Georgia, North Carolina, and Virginia) have incorporated SSEB into their Federal Emergency Management Agency (FEMA) evaluated drills and have made contact to request personnel, equipment, vehicles, and subject matter expertise from their border states. The drills

adhere to the Nuclear 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 simulated exercise in May reached the highest classification level during which KI (potassium iodide) was authorized for distribution to emergency workers and members of the public within an impacted zone. 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 2021, in Philadelphia, Pennsylvania, to ratify the latest version of SMRAP. During the meeting, members discussed if the FEMA designated Radiological Operations Support Specialist Team could be included as a resource in future editions.

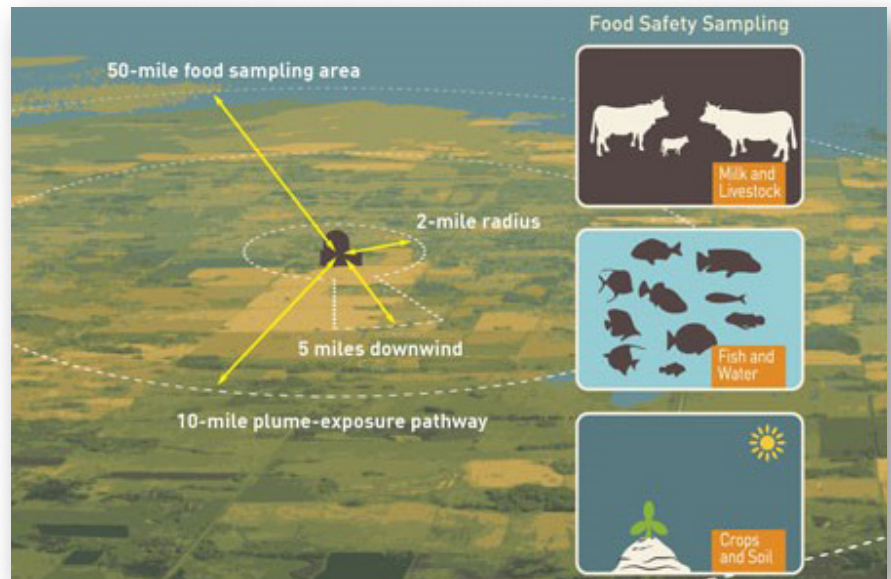


Illustration of an emergency planning zone surrounding a nuclear power plant.

RADIOACTIVE MATERIALS TRANSPORTATION

SSEB completed a continuation application with the Department of Energy’s Office of Nuclear Energy (DOE-NE) that will allow for the ongoing partnership between the two organizations regarding the safe transport and disposal of the nation’s spent nuclear fuel and high-level radioactive waste. More specifically, this five-year cooperative agreement (October 1, 2021, through September 30, 2026) with DOE-NE’s Office of Integrated Waste Management outlines areas of collaboration to be conducted with SSEB’s Radioactive Materials Transportation Committee. These activities include, but are not limited to, site preparation activities at nuclear power plant sites, evaluation of regional transport considerations, and transportation coordination efforts as part of an integrated waste management system.

SSEB Staff and Committee Members participated in the Department’s Rail/Routing Ad Hoc Working Group Meeting in July 2020 to further their understanding of how future rail shipments of spent nuclear fuel will operate. The Group received an update of the Federal Railroad Association’s (FRA) Safety Compliance Oversight Plan that emphasizes and coordinates actions between the FRA, other Federal,

State, local and tribal organizations, and rail carriers to promote the safe and secure rail transport of these shipments on the Nation’s railroads. Additional topics pertaining to transportation were discussed the same month during DOE-NE’s Virtual Transportation Core Group Meeting. The Core Group Meeting revealed DOE is resuming work on consent-based siting. The primary goal is to find one or more communities willing to host interim storage and disposal facilities for spent nuclear fuel and other nuclear waste.

Finally, the Southern States Energy Board was set to serve as host of the 2021 National Transportation Stakeholders Forum (NTSF). The annual gathering focuses on the Department’s remediation efforts and national planning strategies for the safe transport of radioactive materials. However, due to COVID-19 pandemic the meeting was transitioned into a series of webinars beginning in May and concluding in July. The series was well received as content from the draft Annual Meeting Agenda was used to cover a variety of topics including international transports from Canada, U.S. Navy spent fuel shipments, decommissioned reactor campaigns, and nuclear power plant site evaluation visits.

RWC Shipments

RWC-A, RWC-B & RWC- E have been delivered to WCS

- RWC-E was category 1 quantity

Scope has been reduced from 9 shipments to 7 total

- 4 shipments to be completed
- 2 remaining category 1 quantities

VY transport of low-level decommissioning waste for disposal

orano

Vermont Yankee RWC Shipments

Screenshot from a 2021 National Transportation Stakeholders Forum Virtual Meeting.

TRANSURANIC WASTE TRANSPORTATION

SSEB’s Transuranic (TRU) Waste Transportation Working Group partners with the U.S. Department of Energy (DOE) to develop policy and implement protocols necessary to safely transport shipments of TRU waste from DOE Laboratories in the southern region (Savannah River Site and Oak Ridge National Laboratory) to the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico. However, with shipments

being halted, delayed, or reduced due to the COVID-19 outbreak the TRU Working Group shifted its focus from transportation to remote training opportunities.

The major training elements of the WIPP program utilized by the states are TRANSCOM, Commercial Vehicle Safety Alliance (CVSA) Level VI and Modular Emergency Response Radiological Transportation Training (MERRTT). During the pandemic the states realized training such as TRANSCOM, tracking and communication web application used to monitor the progress of shipments, was well suited for the online learning environment. In fact, the computer-based training applies to the majority of the states' personnel who were seeking Cyber Security and General User training. The CVSA Level VI, an inspection procedure employed by law enforcement for select radiological shipments, began the process of creating a web portal Learning Management System to allow officers to maintain their certification.

The MERRTT proved to be the most difficult of the regimen to conform to a virtual format because it relies heavily on teaching hands-on practical exercises. However, the TRU Working Group came up with a novel approach for solving this dilemma. They proposed the idea of employing training videos for radiological instruments used in the WIPP program. Their suggestion involved having Just-in-Time (JIT) videos available for each instrument used by first responders. A QR code tag attached to the instrument case would allow responders to scan the code with a cell phone and view a JIT before using the



A nuclear waste container coming out of a Nevada Test Site on public roads.

instrument. The JIT would give a quick overview of how to use the instrument. Since first responders typically don't use radiological instruments on a daily basis, their technical knowledge and confidence in using the instruments could be bolstered by the JIT. DOE-EM Office of Packaging and Transportation took note of the conversation and offered the support of the Transportation Emergency Preparedness Program (TEPP) that happened to have a similar resource of "How-to Videos" on their website. As a result of this discussion, it was determined SSEB would poll its member states regarding the inventory of the most frequently used radiological detection equipment to compile a submittal list for potential future videos. Pending available resources, TEPP can begin to make this idea a reality by creating additional videos which are of use to the emergency response community.

TRU 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. Annually, SSEB provides a total of \$2 million to corridor states via a cooperative agreement negotiated on their behalf with DOE's Carlsbad Field Office. The funding will be used by the states for equipment purchases, public outreach, training, exercises, and other preparedness activities in accordance with the objectives of the national program. Since opening in 1999, the WIPP facility has processed over 12,900 shipments. Southern sites are steadily approaching 2000 of those shipments (ORNL – 245 / SRS – 1,683) and represent 2.85 million miles of highway transport.

ENERGY AND ENVIRONMENTAL LEGISLATIVE MONITORING

Every year, our legislative monitoring program collects and summarizes bills and resolutions in all of the Board's member states to produce the Energy and Environment Legislative Digest, available on our website digitally and in print. This year, as legislatures wrangled with the problems caused by the COVID-19 pandemic and weather-related disasters, our members were busy passing more than 540 energy and environmental acts.

In total, 313 energy-related bills and 228 environmental acts were passed by our member states and territories. As with previous years, flood mitigation, emergency information sharing, and emergency management planning continue to dominate legislative agendas.

This year, a handful of notable trends emerged in our member states. Of those trends, the most prominent is commonly known as "energy discrimination laws." Alabama, Arkansas, Florida, Georgia, Kentucky, Mississippi, Missouri, Texas, and West Virginia all passed some version of the law, which is

generally intended to prohibit any political subdivision from halting the expansion, connection, or reconnection of a utility service based upon the type or source of energy provided to a customer.

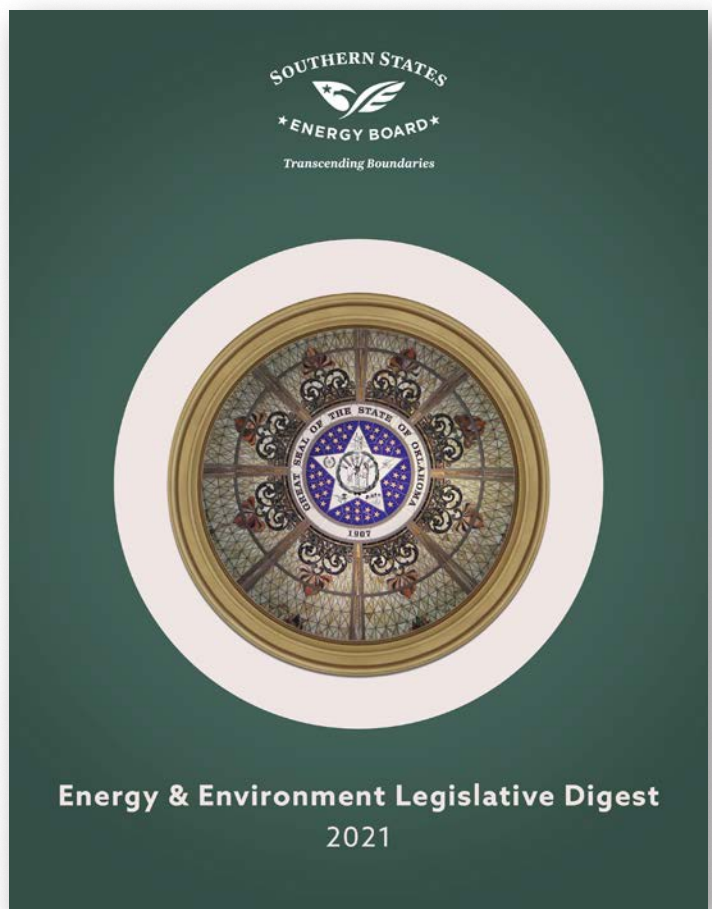
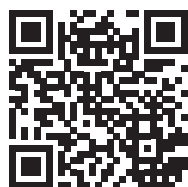
The pandemic's effect of necessitating high-speed internet access for a surge in virtual events, telemedicine, virtual schooling, and more means the trend that began last year with enhanced broadband deployment measures has continued this year. Alabama, Florida, Georgia, Louisiana, Maryland, Mississippi, Oklahoma, Texas, Virginia, and West Virginia all passed laws pertaining to broadband deployment via easement provisions with utilities, tax incentives, and the establishment of offices dedicated to the deployment of broadband access.

Our Digest also covered the legislative push for electric vehicle infrastructure, electric vehicle ad valorem taxation and tax breaks, and the associated issue of battery production and disposal. Alabama, Arkansas, Florida, Georgia, Maryland, Oklahoma, South Carolina, Texas, and Virginia all addressed the topic in some form.

Renewable energy legislation saw a resurgence this year as well in states such as Florida, Louisiana, Maryland, South Carolina, Texas, Virginia, and West Virginia. Several legislatures passed tax incentives and other statutes affecting the deployment of wind, solar, and the associated energy storage systems both privately and commercially owned. Related to the residential side of renewable technology deployment, several states also passed laws prohibiting the ability for housing associations to restrict solar installations and/or electric vehicle charging infrastructure.

Our members in Texas passed the most bills this year with 85 total. Many of the measures were directed at addressing the problems created by the historic winter storm Uri, which devastated parts of Texas in February 2021 with prolonged power outages.

The latest version of the Digest is current as of September 1, 2021.



Scan the QR code to view the Digest.

PARTNERSHIPS

OUR PARTNERS

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.

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, 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.

2020-2021 Officers



Chair
Jennifer Jura
Edison Electric
Institute



Vice Chair
Danny Gray
Green Cement



2nd Vice Chair
John Eick
American Fuel &
Petrochemical
Manufacturers



Immediate Past Chair
George Guidry
Koch Companies
Public Sector, LLC

Members

Ameren Missouri

American Chemistry Council

American Electric Power

American Fuel & Petrochemical
Manufacturers

American Gas Association	Metallurgical Coal Producers Association
American Petroleum Institute	Midwest Energy Emissions Corp.
America's Power	National Coal Council
Anterix	National Mining Association
BHE Gas Transmission & Storage	National Rural Electric Cooperative Association
BP	Nuclear Energy Institute
Carbon Utilization Research Council	NuScale Power
Chevron U.S.A. Inc.	ONE Gas
Coalition for Fair Energy Codes	Peabody
Cooperative Energy	Phillips 66
Dominion Energy	SEFA Group
Duke Energy	Shell Oil Company
Edison Electric Institute	South Carolina Public Service Authority/ Santee Cooper
Energy Fairness	Southern Company
Energy Institute of Alabama	Tennessee Valley Authority
Energy Policy Network	Troutman Pepper
Exxon Mobil Corporation	Virginia Center for Coal & Energy Research
Green Cement	West Virginia University
Koch Companies Public Sector, LLC	
Marathon Petroleum Corporation	

SOURCES OF SUPPORT

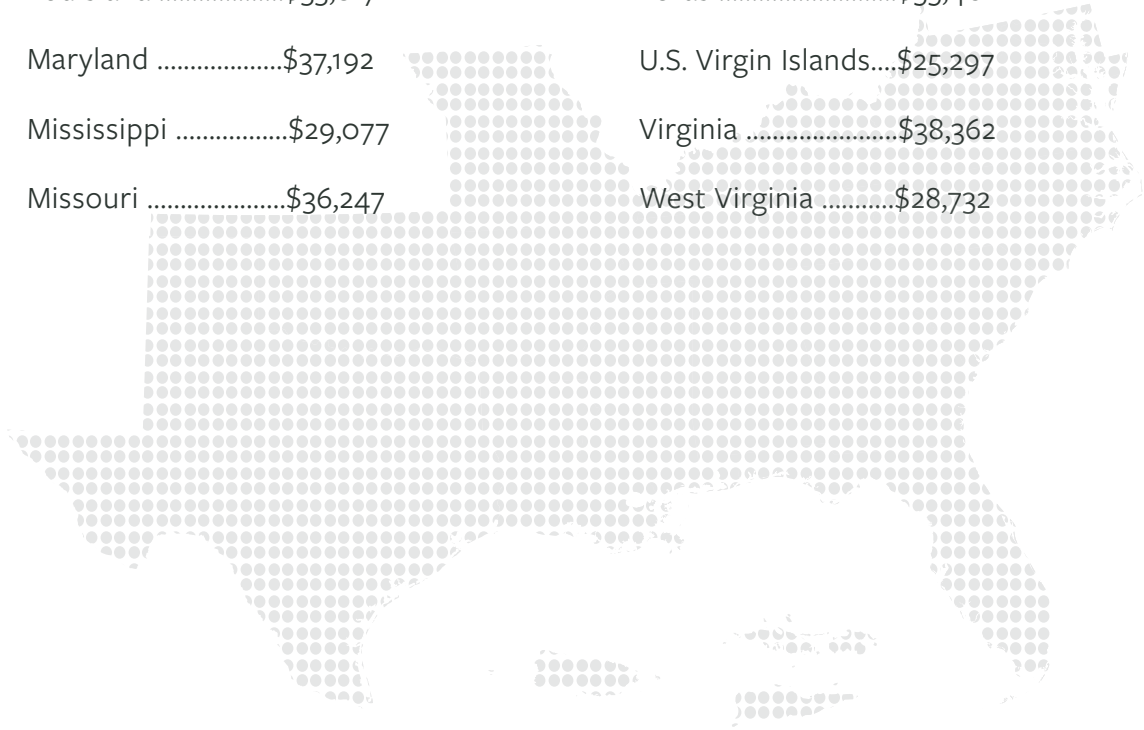
The Southern States Energy Board's primary source of funding is its annual appropriations from the 18 member states and territories. Each member's share is computed by a formula written into the original compact. This formula is composed of an equal share, per capita income, and population. The Board 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.

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



BOARD MEMBERS

2020-2021 Executive Committee



Chairman
Gov. Kevin Stitt
Oklahoma



Vice Chair
Rep. Lynn Smith
Georgia



Treasurer
Rep. Bill Sandifer
South Carolina



Member
Gov. Asa Hutchinson
Arkansas



Member
Gov. John Bel Edwards
Louisiana



Member
Rep. John Ragan
Tennessee



Member
Rep. Howard Sanderford
Alabama



Member
Sen. Brandon Smith
Kentucky



Member
Sen. Ken Yager
Tennessee



SLC E&E Chair
Rep. Jim Gooch, Jr.
Kentucky



Federal Representative
Pending Appointment



Secretary
Kenneth Nemeth
SSEB

Members

Alabama

Gov. Kay Ivey
Sen. Jimmy Holley
Rep. Howard Sanderford
Rep. Alan Baker (Alternate)
Sen. Clyde Chambliss (Governor's Alternate)

Arkansas

Gov. Asa Hutchinson
Sen. Bob Ballinger
Sen. Gary Stubblefield (Alternate)
Rep. Rick Beck
Comm. Ted Thomas (Governor's Alternate)

Florida

Gov. Ron DeSantis
Sen. Jeff Brandes
Sen. Debbie Mayfield (Alternate)
Rep. Bobby Payne
Rep. Jay Trumbull (Alternate)
Ms. Kelley Burk (Agriculture Commissioner's Appointee)

Georgia

Gov. Brian Kemp
Sen. Jeff Mullis
Rep. Lynn Smith
Rep. Chuck Martin (Alternate)

Kentucky

Gov. Andy Beshear
Sen. Brandon Smith
Rep. Jim Gooch, Jr.
Hon. Rocky Adkins (Governor's Alternate)

Louisiana

Gov. John Bel Edwards
Rep. Debbie Villio

Sec. Thomas Harris (Governor's Alternate)

Maryland

Gov. Larry Hogan
Sen. Brian Feldman
Sen. Stephen Hershey (Alternate)
Del. Dereck Davis
Dr. Mary Beth Tung (Governor's Alternate)

Mississippi

Gov. Tate Reeves
Sen. Joel Carter, Jr.
Sen. Dennis DeBar, Jr. (Alternate)
Rep. Brent Powell
Rep. Angela Cockerham

Missouri

Gov. Michael Parson
Sen. Mike Cierpiot
Sen. Jason Bean (Alternate)
Rep. Bill Kidd
Dr. Kayla Hahn (Governor's Alternate)
Mr. Craig Redmon (Governor's Alternate)

North Carolina

Gov. Roy Cooper
Rep. John Szoka
Rep. Dean Arp (Alternate)

Oklahoma

Gov. Kevin Stitt
Sen. Mark Allen
Sen. Casey Murdock (Alternate)
Rep. Mark McBride
Rep. Brad Boles (Alternate)
Sec. Kenneth Wagner (Governor's Alternate)

Puerto Rico

Gov. Pedro Pierluisi
Rep. Victor Parés Otero
Mr. Francisco Portela (Governor's
Alternate)

South Carolina

Gov. Henry McMaster
Sen. Lawrence Grooms
Sen. Thomas Alexander (Alternate)
Rep. William Sandifer
Mr. Richard Lee, Jr. (Governor's
Alternate)

Tennessee

Gov. Bill Lee
Sen. Ken Yager
Rep. John Ragan
Comm. David Salyers (Governor's
Alternate)

Texas

Gov. Greg Abbott
Sen. Bryan Hughes

Rep. Drew Darby
Comm. Christi Craddick (Governor's
Alternate)

U.S. Virgin Islands

Gov. Albert Bryan

Virginia

Gov. Ralph Northam
Sen. Lionell Spruill, Sr.
Sen. John Edwards (Alternate)
Sen. Emmett Hanger, Jr. (Alternate)
Del. Schuyler VanValkenburg
Del. Martha Mugler (Alternate)
Del. Kathy Tran (Alternate)

West Virginia

Gov. Jim Justice
Sen. Randy Smith
Sen. Dave Sypolt (Alternate)

Federal Representative

Pending Appointment

IN MEMORIAM

Ed Emery

1950 - 2021

Ed Emery was a valued Board Member and prominent figure on our Executive Committee until 2020. He served in the Missouri State Legislature for 16 years where he was an unwavering voice for energy and infrastructure issues in the state.

Ed was born on May 25, 1950, the son of Frank and Helen Emery and grew up in Nevada, Missouri. He graduated from the University of Missouri at Rolla and moved to New Orleans to work in the petroleum industry. He spent 22 years working for Texaco before he moved on to answer the call of government service.



BOARD OVERVIEW

The Southern States Energy Board (SSEB) is a non-profit interstate compact organization created in 1960 and established 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, and each jurisdiction is represented by the governor and a legislator from the House and Senate. A governor serves as the chair and legislators serve as vice-chair and treasurer. Ex-officio non-voting Board members include a federal representative appointed by the President of the United States, the Southern Legislative Conference Energy and Environment Committee Chair, and SSEB's executive director, who serves as secretary.

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.

STAFF

Kenneth J. Nemeth

Secretary to the Board and Executive Director

Patricia Berry
Senior Geologist

Michelle Thornton
Meetings and Event Planner

Joan Brown
Senior Accounting Specialist

Christopher Wells
Director, Nuclear Programs

Turney Foshee
Communications Manager

Benjamin Wernette, Ph.D.
Geologist and Project Manager

Kimberly Sams Gray
Managing Director

Adjunct Staff

Gerald R. Hill, Ph.D.
Senior Technical Advisor

Leigh Hawkins
Grants and Accounting Manager

Kathy Sammons
Director, Business Operations

Jim Powell
Senior Policy Advisor

Rebecca Stavelly
Administrative and Accounting Assistant

Eddie Joe Williams
Senior Policy Advisor



Add us on LinkedIn at
**[linkedin.com/company/
southernstatesenergyboard](https://www.linkedin.com/company/southernstatesenergyboard)**



Find us on Instagram
[@southernstatesenergyboard](https://www.instagram.com/southernstatesenergyboard)



Friend us on Facebook at
[facebook.com/southernenergy](https://www.facebook.com/southernenergy)



Follow us on Twitter at
twitter.com/SSEBoard



Subscribe to our Youtube Channel
[Southern States Energy Board](https://www.youtube.com/SouthernStatesEnergyBoard)



For meeting announcements,
project updates, and more, visit
www.sseb.org



6325 Amherst Court
Peachtree Corners, GA 30092
(770) 242-7712
www.sseb.org