

THE Energy Council News

WINTER

2023

Stedman Elected Chairman of The Energy Council for 2023-2024

Alaska Senator Bert Stedman was unanimously elected Chairman of The Energy Council on September 15, 2023 in Little Rock, Arkansas.

Senator Stedman has been a member of the Alaska Senate since 2003. He serves as Chair of the Senate Transportation & Public Facilities (Fin Sub); Senate Governor (Fin Sub); Senate Conference Committee On Hb39; and Senate Legislature (Fin Sub) committees. He serves as Vice-Chair on the Senate Legislative Budget & Audit; Senate Rules; and Senate Finance committees. He also serves as a member on the Senate Special Committee On World Trade and Senate University Of Alaska (Fin Sub).

Chairman Stedman and his wife Lureen make their home in Sitka.



Bert Stedman
Alaska
Senator

The Energy Council Welcomed back to the Natural State for the 2023 Annual Meeting



Arkansas Governor Sarah Huckabee Sanders welcomed attendees back to Arkansas for the 2023 Annual Meeting. The Governor highlighted the emergence of South Arkansas as a significant player in the state's energy portfolio.

The Energy Council's 2023 Annual Meeting focused on topics such as increasing renewable reliability, energy taxes, net zero hurdles, and cryptocurrencies' impact on electric grids.

The meeting took place in Little Rock, Arkansas on September 14-16. Alaska Senator Bert Stedman, Vice Chairman of The Energy Council, was assisted in his leadership duties by Texas Representative Drew Darby, Chairman of the Center for Legislative Energy and Environmental Research (CLEER), and Arkansas Representative Rick Beck, Vice President for The Energy Council's Annual Meeting.

Arkansas Secretary of Energy and Environment, the Honorable Shane Khoury, welcomed attendees to the

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The Energy Council

The Energy Council Quarterly is the official publication of the Energy Council, a legislative organization comprised of 15 states and two international affiliates, drawn from the major energy producing regions of the United States and Canada. The Energy Council provides a forum for discussing government policies regarding energy and the environment.

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Alaska
Chairman

Tara Shaw
Secretary, Treasurer and Executive Director

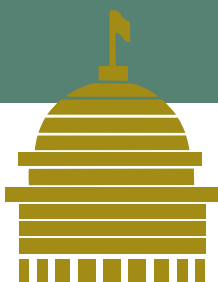
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Tell us what you think!

We welcome your suggestions and feedback. Please email erichards@theenergycouncil.org



Global Energy and Environmental Issues Conference to be held in Jackson, Wyoming

The Energy Council's 2023 Global Energy and Environmental Issues Conference will take place in Jackson, Wyoming. Leading the conference will be Alaska Senator Bert Stedman, The Energy Council Chairman.

Discussion topics expected to be considered at the 2023 Global Energy and Environmental Issues Conference include:

- Refining Capacity
- Carbon Capture, Utilization and Storage
- Deploying Technology for Grid Reliability and Affordability
- Advanced Recycling
- Wyoming's Energy Innovation Landscape
- Wood-based Bio Energy
- Implications of North America Energy and Climate Policies
- Wind Energy Successes and Hurdles
- CO2 Reductions in North America v. Abroad
- Nuclear Power Challenges and Opportunities



*Happy Holidays
from The
Energy Council*

Thompson to Chair CLEER in 2023-2024

Louisiana Representative Francis Thompson was unanimously elected as 2023-2024 Chairman of the Center for Legislative Energy and Environmental Research (CLEER) during the CLEER Business Meeting on September 15, at the 2023 Annual Meeting in Little Rock, Arkansas.

Chairman Thompson will oversee the work of CLEER's two advisory boards, the private sector Program Advisory Board (PAB) and the technical advisory arm, the University Advisory Board (UAB). He will also lead CLEER's legislative Board of Directors.

Representative Thompson has served in the Louisiana Senate and House of Representatives since 1975. He currently serves as Vice-Chair of Appropriations. He is a member on the Agriculture, Forestry, Aquaculture, and Rural Development Committee; House Executive Committee; Joint Legislative Committee on the Budget; and House Select Leadership committees.

Chairman Thompson, and his wife Marilyn, reside in Delhi.



Francis Thompson
Louisiana
Representative

2023 Annual Meeting in Arkansas

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Thanking Arkansas Governor Sarah Huckabee Sanders were The Energy Council's leadership team for the 2023 Annual Meeting (L-R) Texas Representative and CLEER Chairman, Drew Darby; Arkansas Representative and Vice President for The Energy Council's Annual Meeting, Rick Beck; and Alaska Senator and The Energy Council Vice Chairman Bert Stedman.

Annual Meeting. Secretary Khoury began his address with an overview of Arkansas's energy and environment department. He discussed the state's approach to energy policy, emphasizing the importance of both renewable and conventional energy resources.

According to Secretary Khoury, Arkansas recognizes the significance of renewables and is committed to expanding alternative energy

resources. However, he also acknowledged the necessity of conventional energy resources to ensure reliability and affordability of power sources for all citizens. The speaker emphasized that eliminating conventional resources entirely is still a ways off, and Arkansas will further develop technology and utilize all available resources.

Friday morning's general session opened with a discussion about

"Midstream Challenges." Mr. Jeff Applekamp, Government Affairs for Energy Transfer, said policymakers must confront the global mismatch between supply and demand that has driven higher fuel prices by supporting greater U.S. production. To address this growing crisis, state lawmakers, Congress, and the President must support energy investment, create new access and keep regulations from unnecessarily restricting energy growth. The world is calling out for U.S. energy leadership, according to Mr. Applekamp.

Mr. Applekamp explained that Congress should authorize critical energy infrastructure projects to support the production, processing and delivery of energy and revise the National Environmental Policy Act (NEPA) process by establishing agency uniformity in reviews, limiting reviews to two years, and reducing bureaucratic burdens placed on project proponents in terms of size and scope of application submissions.

"Carbon Innovations" was covered by Mr. Reg Manhas, CEO and Founder of Lapis Energy.

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The Energy Council Welcomes The Great State of Utah

This past June, at the Federal Meeting in Washington, D.C. Utah was unanimously voted in as the 15th state to join The Energy Council. Utah is known as an energy-rich state. The state has reserves of natural gas and coal, as well as the potential to generate renewable energy supplies from solar, wind, and geothermal sources. Legislators representing Utah include:



Wayne Harper
Utah President Pro Tempore

Senator Wayne Harper has served in the Utah Legislature since 1997, serving in both the House and Senate during his tenure. Senator Harper is the Senate president pro tempore and chairs numerous committees, including the Senate Transportation, Public Utilities, Energy, and Technology Committee and Senate Retirement and Independent Entities Committee. He was also recently named President elect of the National Conference of State Legislatures.

Senator Harper, and his wife KaLee, reside in Taylorsville.

Senator Ron Winterton has served in the Utah Senate since 2019. He serves as Co-Chair of the Economic Development & Workforce Services Interim Committee. He is a member of the Infrastructure & General Government Appropriations Subcommittee; Natural Resources, Agriculture & Environmental Quality Appropriations Subcommittee; Government Operations & Political Subdivisions; Senate Rules; and Transportation Interim Committees.

Senator Winterton, and his wife Lori, have five children. They make their home in Roosevelt.



Ron Winterton
Utah Senator



Colin Jack
Utah Representative

Representative Colin Jack was elected to the Utah House of Representatives in 2022. He serves as a member on the Economic Development and Workforce Services Interim Committee; House Economic Development and Workforce Services; House Public Utilities, Energy, and Technology; Infrastructure and General Government Appropriations Subcommittee; Public Utilities, Energy, and Technology Interim Committee.

Representative Jack, and his wife Leslie, have three children. They make their home in St. George.

Representative Steven Lund was elected to the Utah House of Representatives in 2021. He serves as Vice-Chair of the House Natural Resources, Agriculture, and Environment Committee. Representative Lund serves as a member of the Education Interim Committee; House Education Committee; House Ethics Committee; Natural Resources, Agriculture, and Environment Interim Committee; and, Natural Resources, Agriculture, and Environmental Quality Appropriations Subcommittee.

Representative Lund, and his wife Melissa, have three married children and five grandchildren.



Steven Lund
Utah Representative

THE ENERGY COUNCIL'S EXECUTIVE COMMITTEE UPDATE

KANSAS

Senator Michael Fagg

Senator Fagg was elected to the Kansas Senate in 2020. He serves as the Vice-Chair of the Financial Institutions and Insurance Committee. He is a member on the Ways and Means; Utilities; and Agriculture and Natural Resources Committees.

Senator Fagg, and his wife Debbie, reside in El Dorado.



Michael Fagg
Kansas Senator



Nathan Neudorf
Minister of Affordability
and Utilities
Member of Legislative
Assembly

ALBERTA

Minister Nathan Neudorf

Minister Nathan Neudorf was sworn in as Minister of Affordability and Utilities and Vice Chair of Treasury Board on June 9, 2023. He has also served as the Member of the Legislative Assembly for Lethbridge-East since 2019. He is a member of the Executive Council, Alberta First Committee, Cabinet Working Committee, Public Sector Compensation, Alberta's Executive Committee, and Vice President of the Treasury Board.

Mr. Neudorf, his wife, Deanne, and their 5 children live in Lethbridge.

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Mr. Manhas explained that Lapis is committed to providing a comprehensive carbon capture and storage (CCS) process that offers single point responsibility for managing carbon dioxide emissions. This process involves capturing both pre- and post-combustion emissions, as well as efficient transportation through minimized pipeline distances. The storage phase utilizes sub-surface knowledge to minimize plume size, ensuring effective and responsible carbon dioxide sequestration.

As the operator of the CCS process, Lapis is fully funded for a 20-plus year project, demonstrating the company's long-term dedication to carbon capture and storage, Mr. Manhas noted. Lapis

will also prioritize post-injection site care to ensure ongoing monitoring and maintenance.

Mr. Manhas also reported on the El Dorado project in the state of Arkansas. He reported the project is the third of its kind in the United States, specifically focused on ammonia production. The strategic location of the El Dorado facility, situated above deep geological formations capable of sequestering CO₂ for decades, makes it an ideal site for this project. This initiative will not only allow Lapis to become one of the first suppliers of low carbon or "blue" ammonia but also significantly reduce its scope of greenhouse gas (GHG) emissions by 25 percent, Mr. Manhas said.

Mr. Stephen Chriss, Senior Director, Utility Partnerships for Wal-Mart, spoke on the topic of "Energy Transformation." "Our business is undergoing a transformative journey to better serve our customers, driven by the changing landscape of customer mobility and the increasing demand for sustainable choices," Mr. Chriss said. This transformation extends throughout Wal-Mart's stores, logistics network, and fleet, as the company strives to meet the evolving expectations of its customers, he continued.

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NEW MEMBERS JOIN THE CLEER BOARD OF DIRECTORS

MONTANA

Representative Greg Kmetz

Representative Greg Kmetz was elected to the Montana House of Representatives in 2022. He serves on the Energy Committee.

Representative Kmetz, and his wife Alice, have three children and make their home in Miles City.



Greg Kmetz
Montana Representative



Bob Fehrenbacher
West Virginia
Delegate

WEST VIRGINIA

Delegate Bob Fehrenbacher

Delegate Fehrenbacher was elected to the West Virginia House of Delegates in 2022. He serves as Vice-Chair of Prevention and Treatment of Substance Abuse Committee. He is a member on the Banking and Insurance; Economic Development and Tourism; Energy and Manufacturing; Finance; Technology and Infrastructure; Workforce Development; and Rule Making Review Committees.

Delegate Fehrenbacher, and his wife Annette, have three children and reside in Vienna.

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By 2026, Wal-Mart anticipates that approximately 65 percent of its stores will be serviced by automation, allowing for greater convenience and efficiency, Mr. Chriss said. Additionally, around 55 percent of Walmart fulfillment centers' volume will flow through automated facilities, further streamlining operations. These investments in automation will enhance the company's ability to meet customer needs effectively.

To support this energy transition, Wal-Mart is actively involved in the development of robust transmission infrastructure. This includes establishing pathways to improve access to diverse generation resources, enhancing reliability, and

ensuring resilience in its energy supply. Additionally, the company is focused on expanding regional and local distribution infrastructure to accommodate the growing energy demands of its customers. Through these transformative efforts, Wal-Mart aims to create a sustainable and customer-centric business model that not only meets the needs of its customers but also contributes to a cleaner and more resilient energy future, Mr. Chriss concluded.

Mr. Chad Allen, Regional External Affairs Director for Midcontinent Independent System Operator, reported on "Investing in Dispatchable Resources." Mr. Allen emphasized that the decarbonization goals and

policies are driving portfolio change, resulting in increasing variability and diminishing reliability attributes. Enhanced reliability risk evaluation and management tools are needed to handle the uncertainty rising from increased variability and more extreme weather. Moreover, he stated, promising new technologies are far from commercial maturity, requiring reliance on transition resources as reliability insurance. MISO and stakeholders are working toward a shared initiative called the Reliability Imperative aimed at balancing reliability, affordability, and sustainability. Tenants of the Reliability Imperative include risk evaluation, resource accreditation

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(including fuel assurance), attribute requirements, pricing and incentives (wholesale and retail) and system planning (Long Range Transmission Planning).

“Increasing Renewable Reliability” was presented by Mr. Bruce Rew, Senior Vice President of Operations for Southwest Power Pool. Mr. Rew noted that the electric grid has experienced a significant growth in renewable energy resources during the past ten years. New generation interconnection connections requests continue that trend with resources being primarily wind, solar, and storage. According to Mr. Rew, these new generation resources have led to the retirement of coal and gas generation. In his estimation, the challenge facing grid operators is how to maintain a reliable system with the new generation resource portfolio changes.

To close out Friday’s general session was the Governor of Arkansas, the Honorable Sarah Huckabee Sanders.

In addition to the discussion on energy resources in Arkansas from Secretary Khoury, Governor Huckabee Sanders said it is worth noting that South Arkansas is emerging as a significant player in the state’s energy industry. Specifically, South Arkansas is known for its oil and natural gas drilling activities. However, there is now a remarkable shift towards becoming the lithium capital of America.

South Arkansas is witnessing a surge in activity and excitement due to the potential to extract lithium, the Governor noted. The region is home to one of North America’s largest prime processing industries, which can now extract lithium thanks to new technologies. As lithium is a crucial component for batteries and other energy products, this development has the potential to transform both the region and the entire state of Arkansas.

Massive investments are being made by companies in South Arkansas to scale up their lithium



Shane Khoury, Arkansas Secretary of Energy and Environment, welcomed Energy Council attendees to the 2023 Annual Meeting and highlighted some of the state’s approach to energy policy.

operations, the Governor said. Once fully operational, these companies estimate that Arkansas could produce 15 percent of the world’s lithium supply. It is important to note that despite this transformation, the oil and natural gas industries in Arkansas are still thriving. The state continues to produce 4 million barrels of oil and 400,000,000 cubic feet of natural gas annually, she added.

In closing, Governor Huckabee Sanders said the coexistence and success of these industries, whether it be lithium, oil, or natural gas, translate to new job opportunities and business growth for the people of Arkansas. This diversification of the energy sector brings promising prospects for the state’s economy and its residents.

After the meeting adjourned for business sessions on Friday afternoon,

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Entergy Arkansas hosted participants on a tour of R Emmel Dam. R Emmel Dam is part of a three-dam project that provides hydroelectric power for southern Arkansas.

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Ms. Stacie Morales from the Texas Tech Energy Law Program presented on the topic of “Energy Taxes” at the 2023 Annual Meeting.

Entergy Arkansas hosted Energy Council participants for a tour of the Remmel Dam. The Dam is situated on the Ouachita River at Jones Mill. Entergy operates Remmel Dam in response to the growing demand for electrical power in southern Arkansas and surrounding states.

Saturday morning’s session began with a panel discussion on “Net Zero Hurdles.” First to present was Dr. Peter Green, Deputy Laboratory Director, Science and Technology, National Renewable Energy Laboratory. Dr. Green gave attendees an overview of the ARIES research platform developed by the National Renewable Energy Laboratory and DOE’s Office of Energy Efficiency and Renewable Energy. He explained that the research platform will support the nation’s transition to a decarbonized energy system.

Through ARIES, which is the Advanced Research on Integrated Energy Systems Platform, electric utilities, local governments, and community-based organizations will be able to decrease risk for

and accelerate their clean energy transition by analyzing and validating which pathways make the most sense for their community. ARIES will allow validation through a “clean energy sandbox” by 1) connecting real hardware into a virtual representation of their community, 2) trying out a real controller to make sure the lights stay on in the virtual community, and 3) experimenting with piecing different technologies together to see how they work.

The second speaker, Mr. Doug Sandridge, Senior Vice President, Fulcrum Energy Capital Funds, stated that the “so-called” energy transition and the goal of attaining “net-zero” carbon emissions is the defining issue of our time. He maintained there are significant hurdles to attaining net-zero carbon emissions by 2050. He believes some of the hurdles will not be overcome for technological reasons, other hurdles may not be overcome for economic reasons and yet other hurdles may not be overcome because of socio/political considerations. Understanding these hurdles is critical to overcoming them, he concluded.

“Energy Taxes” was covered by Ms. Stacie Morales, Texas Tech Energy Law Program, Texas Tech School of Law. Ms. Morales highlighted some of the common taxes imposed on energy production by various states. She explained severance taxes can be imposed by a state on the extraction of non-renewables that is usually, but not always, for the consumption of other states; an impact fee can be imposed to recover costs associated with development; Ad Valorem taxes are based on the assessed value of an item, such as real estate or personal property; and a privilege or franchise tax is assessed where certain producers have to pay to conduct business and operate in a state. In closing Ms. Morales said energy resources are not treated equally. As a result, the tax incentives for energy

resources are also not equal. When the government inserts itself into the energy markets, taxpayers foot the bill, she maintained. She encouraged legislators to weigh both the pros and cons of all energy sources when considering legislation, especially legislation concerning different energy tax incentives.

Ms. Kathleen Sgamma, President, Western Energy Alliance briefed attendees on “Hinderances to Exploration.” Ms. Sgamma explained the regulatory environment that the oil and natural gas industry is facing, particularly on public lands, and the regulatory, legislative, legal, and outreach actions Western Energy Alliance is taking to counteract the overreach. In her estimation, she also stated the whole-of-government approach to climate change the Administration is taking may risk American energy security.

Ms. Kate Zaykowski, Senior Vice President, Strategic Communications for McGuire Woods Consulting, highlighted “Cryptocurrencies’ Impact on Electric Grids.” Ms.



Ms. Kate Zaykowski highlighted “Cryptocurrencies’ Impact on Electric Grids” at the 2023 Annual Meeting.

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Zaykowski briefly discussed the impact Large Energy Users (and flexible LEUs) can have on the grid and the relationship between these new energy users and projected overall energy use and grid capacity in the near term with a focus on the Electric Reliability Council of Texas (ERCOT). She stated that in August, Riot Platforms, a Bitcoin mining company, was paid \$31.7 million dollars in energy credits by ERCOT for cutting back its energy use. The amount paid to Riot was nearly four times the amount the company made mining bitcoin.

“Oil versus Gas Supply Chains and Pipelines” was presented by Robin Rorick, Vice President of Midstream Policy, American Petroleum Institute. During production, crude oil is produced on both land and at sea. Oil production includes drilling, extraction, and recovery of oil from underground. Short term storage serves as the staging area for crude distribution throughout the entire supply chain. Without storage

facilities, the ability to adjust supply and demand would be debilitated, Mr. Rorick said. Ports of call represent the major entrance and exit points of crude oil prior to short term storage and, later, refining. Ports serve as central gathering facilities for entrance into the U.S. Shipping channels are the most travelled and commonly used source to move foreign oil to domestic refineries. Large tankers contain thousands of barrels of crude oil to be refined into fuel and other by-products, he added.

Mr. Rorick added that API’s goal is to raise the level of awareness around the oil supply chain among key stakeholders in order to facilitate positive working relationships and more informed decision making. In his conclusion, Mr. Rorick said that API has built resiliency and rapid response capabilities into its supply chain to prevent incidents and to ensure that, if events occur, they produce the least possible impact.

Saturday afternoon’s CLEER University Advisory Board (UAB) Seminar was on the topic of Fuel Sources for All

Power Electronic Grids. Dr. Alan Mantooth, Distinguished Professor, The Twenty-First Century Research Leadership Chair in Engineering for the University of Arkansas, presented. Dr. Mantooth said that the transition to more electrification and the changing climate has significant implications for society. Energy is a crucial aspect, with electrification being the primary driver of this transition. As the climate changes, it becomes increasingly important to address and manage energy supply, demand, and utilization on a global scale, Dr. Mantooth said.

Electrical energy is playing an ever-growing role in managing power and is becoming the heart of many systems that drive decarbonization, electrification, and the adoption of renewable energy. This shift towards electrification also includes the use of battery technology, hydrogen, synthetic fuels, and other renewable sources. Dr. Mantooth emphasized to effectively address these challenges, it is necessary to think globally while allocating resources and finding solutions locally. It is crucial to prioritize the development of new infrastructure that can integrate with existing systems, as solely relying on the evolution of the current grid infrastructure may be too slow to meet the goals set for 2050, he added.

However, it is important to note that achieving this transition requires more than just government involvement, Dr. Mantooth said. It necessitates collaboration and participation from various stakeholders, including businesses, communities, and individuals, to drive the necessary changes and ensure a sustainable and resilient energy future, he concluded.



Long-time University Advisory Board (UAB) member Dr. Alan Mantooth (center) from the University of Arkansas closed out the conference with a seminar on “Fuel Sources for all Power Electronic Grids.” Alaska Senator and The Energy Council Chairman, Bert Stedman (left) and Mr. Chad Allen long-time Program Advisory Board member (right), thanked Dr. Mantooth for his continued support of the Council.

The Energy Council's 2023 Annual Meeting September 14-16, 2023 *Little Rock, Arkansas*

Welcome Breakfast and Opening Address

The Honorable Bert Stedman
Alaska Senator and
Vice Chairman, The Energy Council

The Honorable Drew Darby
Texas House of Representatives and
Chairman, The Center for Legislative
Energy and Environmental Research

The Honorable Rick Beck
Arkansas House of Representatives
and Vice President for The Energy
Council's Annual Meeting

The Honorable Shane Khoury
Arkansas Secretary of Energy and
Environment

Midstream and Downstream Challenges

Mr. Jeff Applekamp
Director of Government Affairs
Energy Transfer

Carbon Innovations

Mr. Reg Manhas
CEO and Founder
Lapis Energy

Energy Transformation

Mr. Stephen Chriss
Senior Director, Utility Partnerships
Wal-Mart Chief Executive Officer

Investing in Dispatchable Resources

Mr. Chad Allen
Regional External Affairs Director
Midcontinent Independent System
Operator

Increasing Renewable Reliability

Mr. Bruce Rew
Senior Vice President of Operations
Southwest Power Pool

Working Lunch: Energy Council and CLEER Business Meetings and CLEER Program Advisory Board Meeting

Net Zero Hurdles

Dr. Peter Green
Deputy Laboratory Director, Science and
Technology

National Renewable Energy Laboratory

Mr. Doug Sandridge
Senior Vice President
Fulcrum Energy Capital Funds

Energy Taxes

Ms. Stacie Morales
Texas Tech Energy Law Program
Texas Tech School of Law

Hinderances to Exploration

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UAB Seminar: Fuel Sources for All Power Electronic Grids

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