USEA

United States Energy Association

2013 ANNUAL REPORT

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TABLE OF CONTENTS

FROM THE DESK OF OUR CHAIR	2
BOARD OF DIRECTORS	3
MEMBERSHIP	4-5
INCREASING THE UNDERSTANDING OF ENERGY ISSUES	6-7
BROADENING ENERGY SECTOR RELATIONSHIPS	8-9
PROMOTING RELIABLE & AFFORDABLE ENERGY ACCESS	10
IMPROVING RELIABILITY & EFFICIENCY	11-12
CLEAN ENERGY INTEGRATION	13-15
ENERGY SECURITY & TRADE	16-17
CONTRIBUTING TO STRATEGIC NATIONAL GOALS	18-19
SUPPORTING THE WORLD ENERGY COUNCIL	20
HONORING INDUSTRY LEADERS	21

Below: BP Center for High-Performance Computing – the World's Largest Supercomputer for Commercial Research

FROM THE DESK OF OUR CHAIR

CHAIR

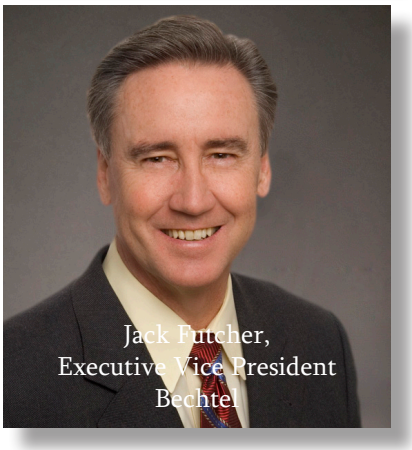
COUNSEL

Patricia Godley
Member
Van Ness Feldman

TREASURER

Sheila Hollis
Partner; Chair, Washington Office
Duane Morris, LLP

PAST CHAIRMAN



Jack Futcher,
Executive Vice President
Bechtel

Dear USEA Members & Friends,

It is with great pleasure that I write this letter to reflect on the United States Energy Association's accomplishments in 2013. USEA has again successfully fulfilled its chief mission of serving as the U.S. Member Committee of the World Energy Council. We convened senior thought leaders from the U.S. energy sector to provide input to signature WEC studies, including the World Energy Trilemma Report and Energy Scenarios. USEA also led a strong contingent of American energy companies at the 2013 World Energy Congress in Daegu, South Korea.

USEA, in conjunction with the United States Government, maintained a strong global reach on a variety of international energy issues. Our partnerships with the U.S. Department of Energy and U.S. Agency for International Development have only strengthened through our multitude of international collaborations. A major highlight from 2013 was the 5th CSLF Ministerial Meeting in Washington, D.C., celebrating 10 years of the CSLF. USEA also continued its legacy as a best-in-class international capacity building provider for energy companies in developing countries. Please continue reading to learn more about our global activities in 2013.

Domestically, the scope of USEA's informational programs continues to grow. In 2013, USEA held 40 events on pressing domestic energy issues, including shale gas, carbon capture and storage (CCS) and clean energy technology deployment. These events provided members consistent opportunities to share information, leading to a greater understanding among energy sector stakeholders of the developments impacting our industry.

Finally, USEA has once again conducted all of the aforementioned activities without increasing membership dues thanks to a securely balanced budget. We look forward to continuing our successes and taking on new challenges in 2014.

Thank you for your continued support of the United States Energy Association.

Sincerely,

Vicky A. Bailey

Vicky A. Bailey
Director
Battelle Memorial Institute

BOARD OF DIRECTORS

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Vice Chairman, Senior Partner, Energy & Resources
Deloitte LLP

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Lighthouse Consulting Group, LLC

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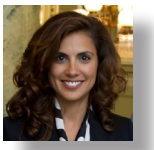
Edison Electric Institute

Michael LeClair
President & CEO
Babcock Power, Inc.

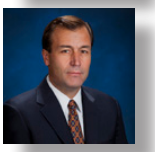
David McCurdy
President & CEO
American Gas Association



Majida Mourad
Vice President, Government Relations
Cheniere Energy, Inc.

Marvin Odum
President & Upstream Americas Director
Shell Oil Company

Dean Oskvig
President & CEO, B&V Energy
Black & Veatch Corporation



Tom Pellette
President
Solar Turbines

Robert Powers
Executive Vice President & Chief Operating Officer
American Electric Power

Hal Quinn
President & CEO
National Mining Association

Randall Roe
Vice Chairman
Burns & Roe

Lydia Thomas
Ret. President & CEO
Noblis

Andrew Vesey
Chief Operating Officer
AES Corporation

Daniel Yergin
Chairman
IHS Cambridge Energy Research Associates

Rhonda Zygocki
Executive Vice President, Policy & Planning
Chevron Corporation

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AECOM International Development, Inc.
AES Corp
AEGIS Insurance Services, Inc.
Alexandria Energy Associates, Inc.
Alstom
American Coal Council
American Council of Engineering Companies
American Electric Power
American Fuel & Petrochemical Manufacturers
American Gas Association
American Geological Institute
American Petroleum Institute
American Public Power Association
America's Natural Gas Alliance
American Society of Mechanical Engineers
AREVA
Association of Energy Engineers
ASTM International
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Black & Veatch
Bluewave Resources, LLC
BNL Clean Energy, Inc.
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Brookhaven National Laboratory
Burns & Roe
c5 Pension Administrators, Inc.
Caterpillar, Inc.
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Chemonics International
Cheniere Energy, Inc.
Chevron Corporation
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Combined Cycle Journal
ConocoPhillips
ContourGlobal
DAI
Decker Garman Sullivan, LLC
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Duane Morris, LLP
Duke Energy
Edison Electric Institute
Electric Power Research Institute
Electric Power Supply Association
Energy & Mineral Law Foundation
Energy Equipment & Infrastructure Alliance
Energy Future Holdings
Energy Holdings LLC
Energy Markets Group, Inc.
Energy Policy Institute of Australia
Ernst & Young
ESTA International
ExxonMobil
Fluor Corporation
Gas Systems Engineering, Inc.
Gas Technology Institute
GDF SUEZ
GE
Global Development Opportunities, LLC
Global Energy Strategies, LLC
Gulf Lady
Henneman Engineering, Inc.
Hunton & Williams LLP

ICF International
IHS CERA
International Resources Group (IRG)
Interstate Natural Gas Association of America
Johnson Controls, Inc.
Jordan Capital Management
Juniata College
KPMG
Lawrence Livermore National Lab
Lighthouse Consulting Group, LLC
Lukens Energy Group
Midwest Reliability Organization
Minnesota Public Utilities Commission
Morgan Stanley
Morgan, Lewis & Bockius, LLP
National Energy Education Development Project
National Energy Foundation
National Mining Association
National Rural Electric Cooperative Association
Natural Gas Supply Association
Nexant, Inc.
Noblis
North American Electric Reliability Corporation
Nuclear Energy Institute
Oak Ridge National Laboratory
Oliver Wyman
Peabody Energy
Petco International LLC
Planning & Forecasting Consultants
PricewaterhouseCoopers LLP
Public Utilities Commission of Ohio
Sacramento Municipal Utility District
Schweitzer Engineering Laboratories
Shell Oil Company
Siemens Corporation
Solar Electric Power Association
Solar Energy Industries Association
Solar Turbines, Inc./Caterpillar
Soloman Associates
Somes International
Southern Company
Squire, Sanders & Dempsey LLP SRA International, Inc.
Stony Brook University
Strategic Power Systems, Inc.
Summit Power Group, Inc.
Tennessee Valley Authority
Tetra Tech
The Abraham Group LLC
The AES Corporation
The Atlantic Council
The Communication Counsel of America, Inc.
The Gee Strategies Group
Total Gas & Power
Triangle Consulting Group
U.S. Agency for International Development
U.S. Department of Energy
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West Financial Services, Inc.
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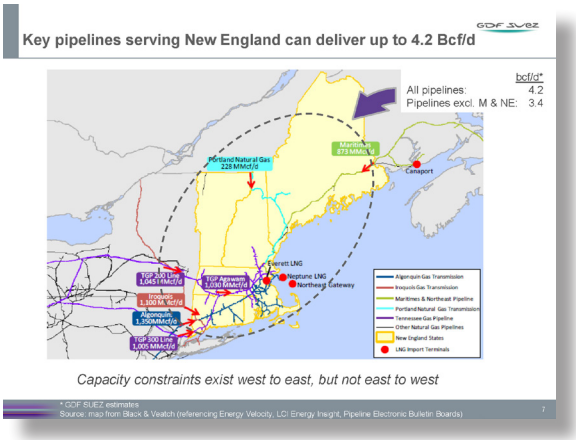
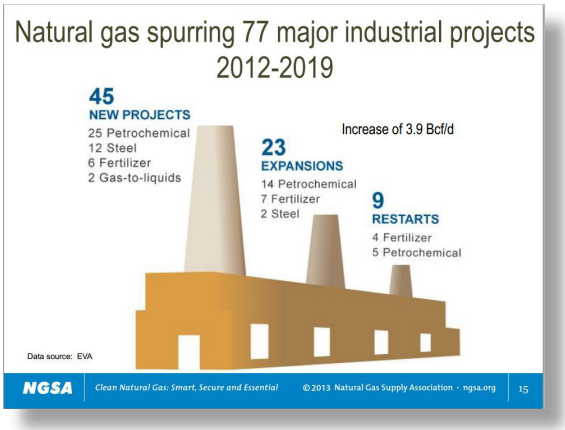
INCREASING THE UNDERSTANDING OF ENERGY ISSUES



Frank Katulak, President & CEO of Distrigas of Massachusetts, a subsidiary of GDF Suez, addresses natural gas delivery issues in New England.



Greg Vesey, Vice President of Gas Supply and Trading at Chevron, illustrates the shifting landscape for domestic natural gas utilization with industrial project announcements.

Fred Palmer, Senior Vice President at Peabody Energy, discusses the role of coal in the North American power portfolio.

90TH ANNUAL MEMBERSHIP MEETING & PUBLIC POLICY FORUM

In May 2013, USEA celebrated its 90th birthday with its Annual Membership Meeting and Public Policy Forum. USEA Officers presented reports on the organization's activities and recognized industry leaders for extraordinary achievements in the U.S. energy industry. The Forum also included a variety of influential figures from across the North American energy sector, including Duke Energy Chairman James Rogers, FERC Commissioner Phil Moeller, and Mexico's Assistant Secretary of Energy Javier Humberto Estrada.

9TH ANNUAL STATE OF THE ENERGY INDUSTRY FORUM

USEA kicked off the year by inviting senior leaders from the energy industry's major trade associations to provide an overview of their priorities for 2013. Speakers were overwhelmingly positive about the impact of growing domestic energy supplies on the nation's economic recovery. Issues such as LNG exports, new source performance standards, cybersecurity legislation and competition in electricity markets were identified as crucial topics for the nation's energy trade associations.

6TH ANNUAL ENERGY SUPPLY FORUM

Another of USEA's flagship events, the Energy Supply Forum highlighted a range of policy and technological developments affecting U.S. energy supplies. This year's forum focused heavily on the energy industry's strategies to manage North America's growing energy supplies. Panelists from the oil & gas industry discussed how North American oil & gas supply increases are causing shifts in refining economics and highlighted congestion in regional pipeline systems. Representatives from major nuclear and solar power developers described how their companies are advancing the deployment of carbon-free power resources at a competitive cost. Fred Palmer, Senior Vice President at Peabody Energy, discussed the role that coal will play in driving advancements in human development through electrification in developing countries.

INCREASING THE UNDERSTANDING OF ENERGY ISSUES

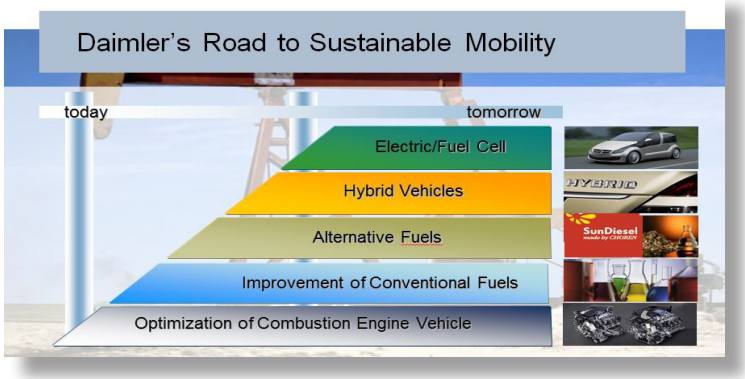
USEA BRIEFINGS

Throughout the year, USEA regularly organizes informational briefings on issues that are of interest to our members and the greater Washington, D.C. energy community. We draw from our domestic and international networks of industry experts to orchestrate timely programs on a wide variety of topics. In 2013, USEA hosted over 40 informational events, including presentations from this illustrative list of participating companies and agencies:

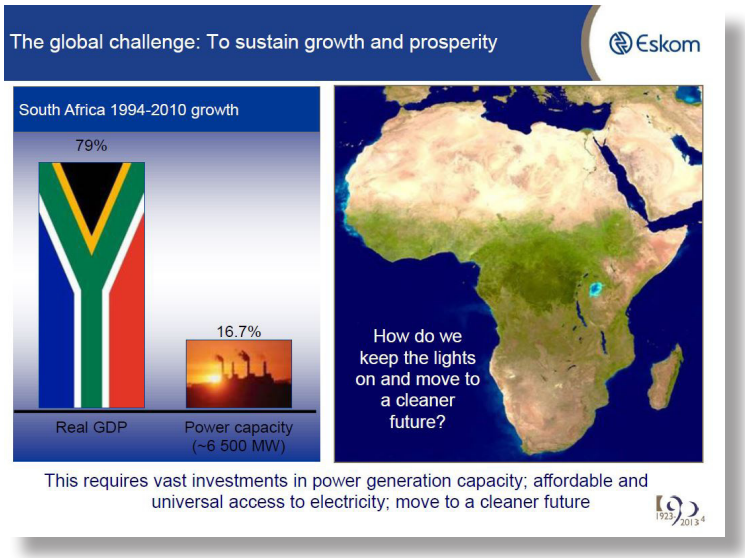
Energy Technology	Battelle Summit Power U.S. Department of Energy USEC Inc.
International	Caterpillar/Energyst DABS (Afghanistan) Eskom Sask Power Southern African Power Pool
Energy Policy	Deloitte Electric Power Research Institute Global CCS Institute

24TH ANNUAL ENERGY EFFICIENCY FORUM

Hosted jointly by Johnson Controls and USEA, the 24th Annual Energy Efficiency Forum focused on the role of energy efficiency in the new energy economy. The Forum convened world-renowned energy experts, legislators and government and business leaders to discuss how energy efficiency will factor into growing domestic energy supplies and demand. Speakers expressed optimism towards the possibility for bipartisan national energy legislation, as well as state-led initiatives to incentivise residential and commercial efficiency investments. The Forum included a broad representation of industry and government policy makers, including IHS Co-Chairman Daniel Yergin, Senator Ron Wyden and Delaware Governor Jack Markell.



Daimler discusses their vision for the future of automobile technologies.



Eskom highlights the discrepancy between GDP growth and power sector expansion in Africa.

IHS Co-Chair and Pulitzer Prize-winning author Daniel Yergin addresses the 24th Energy Efficiency Forum.

BROADENING ENERGY SECTOR RELATIONSHIPS

U.S.–CHINA OIL & GAS INDUSTRY FORUM

USEA supports the U.S. Department of Energy's Office of Fossil Energy in carrying out the U.S.–China Oil and Gas Industry Forum (OGIF). The OGIF is a public–private partnership that convenes business and government leaders from the petroleum and natural gas sectors of the United States and China on an annual basis. The U.S. Department of Energy, ExxonMobil, Chevron, ConocoPhillips, GE and Fluor – all USEA members – are key stakeholders in the effort.

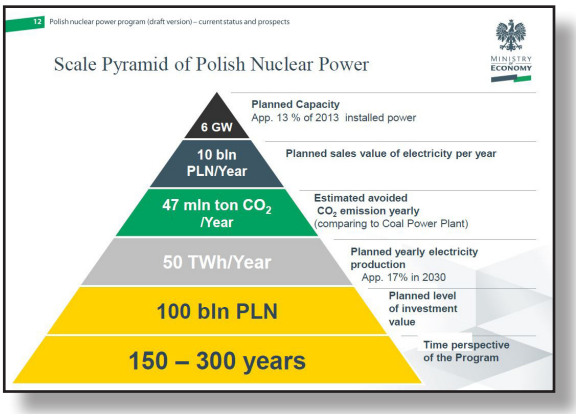
Industry leader and USEA member ConocoPhillips was among the participants in the 13th U.S.–China Oil and Gas Industry Forum.

OGIF alternates between China and the U.S. each year, and features presentations and discussions of key topics and developments in oil and natural gas exploration, production, trade and regulation. It provides a unique venue for American energy officials to meet their Chinese counterparts, discuss areas of mutual interest and improve the production and delivery of secure, economical and reliable oil and natural gas. In 2013, OGIF took place in Xi'an, China from September 24-26.

From left: Aloulou Fawzi, U.S. EIA; Sally Kornfeld, U.S. DOE; Marta Wągrodzka, Polish Ministry of Environment; Tom Murphy, Penn State University.

U.S.–POLAND ENERGY ROUNDTABLE

The 2013 U.S.–Poland Energy Roundtable is a bilateral energy dialogue between key representatives from the U.S. and Polish energy industries. Since 2010, the Roundtable has facilitated an ongoing exchange of ideas and information on issues of mutual interest to U.S. and Polish energy sectors. This year's U.S.–Poland Energy Roundtable was hosted by USEA in Washington, D.C. Support for the event was provided by the Embassy of the Republic of Poland Trade & Investment Section. During the Roundtable, representatives of the Polish delegation provided progress reports on numerous projects spanning the gamut of energy fuels and technologies. Updates included presentations on Poland's hydrocarbon law and commercial nuclear power development, two areas of significant interest for U.S. companies.



BROADENING ENERGY SECTOR RELATIONSHIPS

SOUTHERN AFRICAN POWER POOL

Funded by USAID, USEA supports the Southern African Power Pool (SAPP) Capacity Building Program. This program focuses on sharing best practices in cross border electricity trade and electricity market operations. SAPP is comprised of 16 utilities, independent transmission companies and independent power producers representing 12 countries in Southern Africa. It aims to optimize the use of regional energy resources and support member utilities during emergencies.

In addition to utility bilateral activities, SAPP introduced and operates a short term energy market (STEM), based on daily and hourly firm contracts after the obligations of the bilaterals have been met. SAPP also leads Post-STEM and day-ahead market with plans to add an ancillary service balancing market and financial market.

With SAPP's vision of developing a competitive electricity market in the Southern African region, USEA has exposed SAPP utilities to U.S. standards and trends in cross border electricity trade. This information is helping SAPP utilities to develop a balancing ancillary service market. SAPP participants are also learning about the progression from U.S power pools to independent system operators, which could be an option for SAPP in the future.

SOUTH ASIA REGIONAL INITIATIVE FOR ENERGY INTEGRATION (SARI/EI)

The SARI/EI program is the regional energy program of USAID covering eight countries of the region: Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka. Beginning in 2000 with USEA as an implementing partner, the program has consistently promoted energy security in South Asia in three focus areas: 1) cross border energy trade, 2) energy market formation, and 3) regional clean energy development.

In SARI/EI's current fourth phase, USEA is implementing a series of activities under the existing Energy Utilities Partnership Program (EUPP) mechanism. The activities focus on the sharing of best practices in cross border electricity trade, electricity markets and planning and operations between private and public sector systems and transmission operators in the U.S. and overseas with their counterparts in South Asia. The EUPP assists SARI/EI in its goal to improve regional energy cooperation and energy integration.

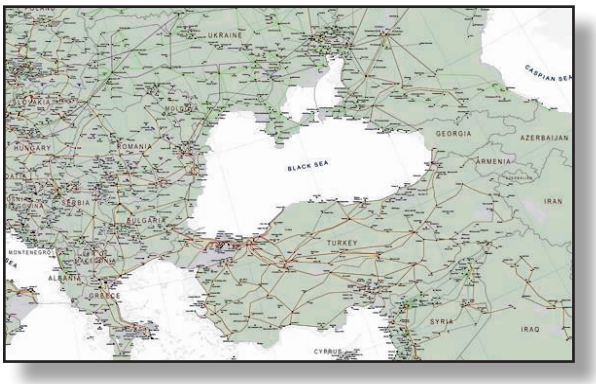
Members of the SAPP Demand Side Management Working Group view a rooftop solar panel at PGE's Pacific Energy Center in San Francisco.

SAPP delegates visit an electric vehicle charging station at National Grid in Massachusetts.

PROMOTING RELIABLE & AFFORDABLE ENERGY ACCESS

Kenyan and U.S. geothermal experts discuss drilling operations at the Menengai geothermal field near Nakuru, Kenya.

Pakistani regulatory officials pose in front of an AEP Ohio bucket truck.



ETAG supports electric power transmission development to encourage east-west electricity trade in the Europe and Eurasia region.

ENERGY UTILITY PARTNERSHIP PROGRAM

With funding from the U.S. Agency for International Development (USAID), USEA manages the Energy Utility Partnership Program (EUPP). This program assists developing countries with increasing environmentally sustainable energy production and use, as well as improving the operational efficiency and increased financial viability of their utilities and related institutions. The goal of EUPP is to increase access in USAID-assisted countries to environmentally sound energy services in the following ways:

1. Improving policy and legal frameworks to establish necessary market conditions for the private sector delivery of energy services and environmental management services;
2. Increasing institutional ability to provide or deliver energy and environmental management services in the new and enhanced markets;
3. Increasing public understanding of, and participation in, decisions regarding energy delivery and environmental management services; and
4. Transferring best practices and allowing developing country utilities to benchmark themselves against world standards.

ENERGY TECHNOLOGY & GOVERNANCE PROGRAM

USAID and USEA completed the first year of the Energy Technology and Governance (ETAG) Program for Europe and Eurasia in support of the following objectives:

1. Plan for robust, reliable cross border transmission interconnections as the backbone infrastructure for cross border trade and exchange of electricity generated by clean and innovative energy technologies;
2. Develop technical rules, guidelines, and network infrastructure assessments to accelerate integration of clean and innovative energy technologies;
3. Support utility commercialization, privatization and market transformation to improve overall network efficiency and support clean energy market development; and
4. Build capacity within regional transmission and distribution system operators to develop climate change adaptation and mitigation emergency response and disaster preparedness programs.

PROMOTING RELIABLE & AFFORDABLE ENERGY ACCESS: *IMPROVING RELIABILITY & EFFICIENCY*

BANGLADESH

In 2011, USEA established the U.S.–Bangladesh Power Generation Partnership between select U.S. energy companies, the Bangladesh Power Development Board (BPDB) and Electricity Generating Company of Bangladesh (EGCB). This partnership aims to share best practices in the operation and maintenance of gas-fired power plants to reduce outages and improve operational efficiency. In 2013, five executives from BPDB and EGCB traveled to Longmont, CO to participate in a two week GE training program on gas turbine control systems designed to improved power plant performance.

Executives from BPDB and EGCB participate in a training program on GE Mark VIe Turbine Control Systems in Longmont, CO.

NIGERIA

With funding from USAID, senior distribution executives from Ethiopia, Ghana, Kenya, Liberia, Nigeria and Tanzania participated in USEA's Reducing Power Outages and Improving Electric Services, held in Lagos, Nigeria. The workshop focused on distribution system management, reliability, metering, revenue protection and customer service improvement. Participants learned about technologies and techniques for boosting utility performance, including smart grid technologies and customer information systems. So far, participating U.S. companies have reported almost $400K in final sales to participating African utilities with more agreements pending.

Female senior executives from eight Pakistani distribution utilities tour Abu Dhabi Distribution Company's Customer Service Center during a PDP executive exchange on customer service.

PAKISTAN

USEA implements the Utility Exchange Program component of USAID's Power Distribution Program (PDP) in Pakistan. PDP is a five-year project aimed improving performance at Pakistan's distribution utilities in the areas of loss reduction, revenue collection and customer service. USEA's utility exchanges enable U.S. and third-country utilities to share practical information, real-world case studies and best practices with their counterparts in Pakistan.

In 2013, USEA brought PDP delegations to Australia, Malaysia, the Philippines, Thailand, the U.A.E. and the U.S. to meet their utility counterparts. Topics included best practices for distribution utilities in training, engineering, planning, communications, customer service, finance and utility regulation.

African utility executives attending USEA's Regional Workshop for Distribution Utilities.

PROMOTING RELIABLE & AFFORDABLE ENERGY ACCESS: *IMPROVING RELIABILITY & EFFICIENCY*

Southeast Europe DSO Security of Supply Working Group members examine new smart meter protection systems implemented by EVN Macedonia.

TANESCO officials examine the computer-generated load profile of the highly efficient Bakresa Milling Factory in Dar es Salaam.

SECURITY OF SUPPLY WORKING GROUP FOR SOUTHEAST EUROPE

In 2013, USEA initiated the Southeast Europe Distribution System Operator Security of Supply Working Group with funding from USAID. This program brings together distribution system operators from Albania, Bosnia-Herzegovina, Croatia, Kosovo, Macedonia and Serbia to share best practices, with an emphasis on mutual assistance as a climate change mitigation and adaptation strategy. This year, the Working Group DSOs, together with their regulatory authorities, launched the region's first-ever benchmarking study on system outage performance. Through ongoing benchmarking and a continuous improvement process, regional DSOs aim to improve outage management and reduce carbon emissions by limiting the use of customer owned diesel generators.

TANZANIA

USAID and USEA provide capacity building support to the two utilities in Tanzania – the Tanzania Electric Supply Company Ltd. (TANESCO) and the Zanzibar Electricity Corporation (ZECO). The partnership exposes Tanzanian utilities to U.S. utility best practices in energy efficiency, commercial restructuring, demand response, advanced metering, regulation, improved transmission operations and reliability.

Like other countries in the region, Tanzania is looking at ways in which energy efficiency and demand response programs will help to reduce the load on their system and increase the network reliability. Additionally, TANESCO and ZECO must address reliability issues related to their aging transmission grid. Through the involvement of U.S. energy experts, Tanzania's utilities have learned about proven strategies implemented by their U.S. utility counterparts that could potentially benefit their systems.

TANESCO and ZECO delegates at an energy efficiency workshop in December 2013.

EAST AFRICA – GEOTHERMAL

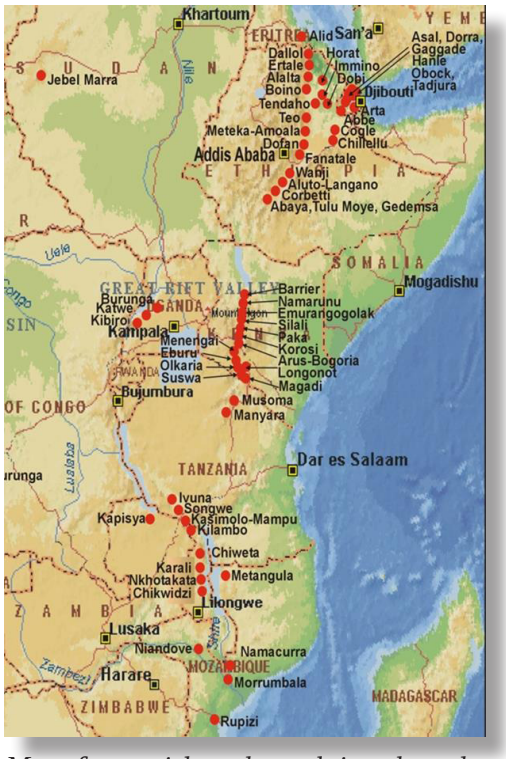
USEA implements the U.S.-East Africa Geothermal Partnership (EAGP) in coordination with the Geothermal Energy Association (GEA). Funded by USAID, the partnership aims to advance geothermal energy development in East Africa, catalyze direct working relationships between U.S. and East African geothermal stakeholders, and increase policy makers' awareness and understanding of geothermal project development and finance.

In 2013, EAGP developed and implemented nine capacity building programs in Kenya and Ethiopia in most aspects of geothermal project planning, development and implementation. The modules covered a range of topics, including geothermal geoscience, environmental policy and regulatory issues, drilling engineering, geothermal project management, reservoir engineering and power plant design. The courses were taught by U.S. geothermal industry experts representing 17 U.S. entities. Additionally, EAGP facilitated a one-week, in-country assessment of practices and equipment for collecting, processing, storing and sharing geothermal data for Kenya's Geothermal Development Company (GDC).

In September, EAGP sponsored nine East African delegates from Kenya and Ethiopia on an Exchange Program to the 2013 Geothermal Resources Council (GRC) Annual Meeting and GEA Geothermal Energy Expo. The conference included a number of workshops, technical sessions, field visits and meetings with U.S. industry.

Also in the last year, EAGP established relationships with 20+ key government agencies, international banks, donors and state-run institutions and engaged in numerous outreach efforts to keep the U.S. geothermal industry informed about geothermal opportunities in East Africa.

Representatives from Kenya and Ethiopia visited the John L. Featherstone geothermal power plant in the Salton Sea area, Imperial Valley, California.



Map of potential geothermal sites along the Great Rift Valley in East Africa.

Geothermal Development Company (GDC) employees and U.S. geothermal experts conduct field work at the Suswa geothermal site in Kenya during an EAGP training module in May 2013. The module was one of nine training programs EAGP led in Kenya and Ethiopia in 2013.

PROMOTING RELIABLE & AFFORDABLE ENERGY ACCESS: *CLEAN ENERGY INTEGRATION*

COLOMBIA

In July 2013, USEA conducted the USAID-funded Regional Workshop on Clean Energy Development Strategies in Latin America. Held in Bogotá, Colombia, the workshop focused on rural electrification, energy efficiency programs, integrating clean energy into the grid and financing clean energy projects. Senior energy executives from Colombia, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Panama and Peru gained an understanding of the integrated resource planning process used by electric utilities. These best practices will help participants to plan supply and demand resources in order to meet their customers' future capacity needs. During this workshop, participants visited a solar PV installation at a school outside Bogotá to learn how intermittent renewable energy can be integrated and operated from behind the meter.

From left: Jay Lee, USAID/Colombia; Victor Araujo, CNEE Guatemala; Kristen Madler, USAID.

INDONESIA

With support from USAID, USEA established the PT PLN Persero (PLN) – Hawaiian Electric Company (HECO) Partnership in 2013. The goal of this partnership is to share best practices for increasing renewable energy integration on island systems in Indonesia. PLN has aggressive renewable energy expansion plans. As they prepare to increase the penetration of intermittent renewable energy into their electric grid on many islands, they face significant challenges in managing grid stability with intermittent generation sources. Their partnership with HECO is providing them with real world case studies from a utility that has achieved 10-20% penetration of intermittent renewable energy on their network at a given time.

Executives from PT PLN Persero tour the 69 MW Kawailoa Wind Farm operated by First Wind on Oahu's north shore.

KENYA

In December 2013, USEA began a wind energy integration partnership with Kenya Power and KETRACO, Kenya's two transmission companies. Kenya is planning to integrate its first 300 MW wind farm into its 1800 MW network. To prepare for this expansion, USEA will expose Kenya's transmission companies to utility best practices in integrating intermittent renewable energy and operating the grid with a high penetration of intermittent wind power. USEA member company Siemens will deliver training programs on system planning and operations.

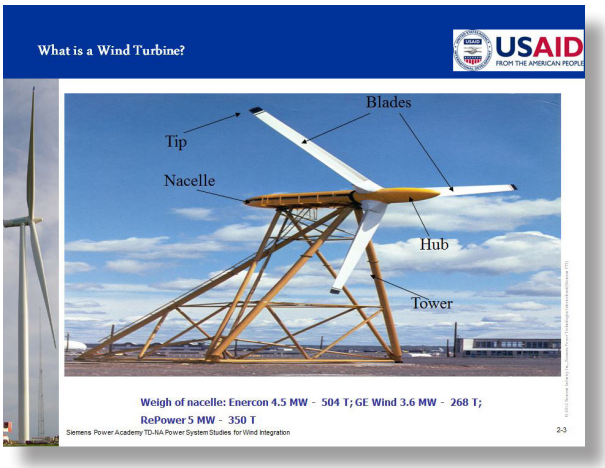
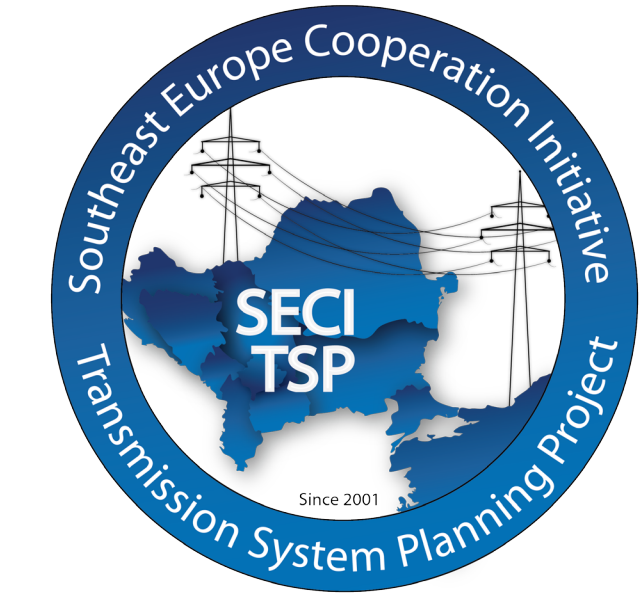


Diagram of a wind turbine presented during the first Siemens training for Kenya's transmission system operators.



SECI Working Group members in front of the Southwest Power Pool headquarters in Little Rock, Arkansas.

SECI presented its Wind Integration Study at the United Nations Climate Change Conference held in Warsaw, Poland in November, 2013.

SOUTHEAST EUROPE

USAID/USEA Southeast Europe Cooperation Initiative (SECI) Transmission System Planning Project supports a regional approach to network planning within the Energy Community of Southeast Europe through the development of common transmission planning tools and methodologies.

This year, with support from USAID and USEA, SECI completed a Reliability Assessment of the Southeast Europe Transmission Network. This assessment measured the impact of aging transmission network infrastructure on system reliability. The study found that despite its age, the network will remain reliable well past 2020, enabling network operators to re-prioritize transmission investment in favor of expanded trade and integration of clean energy generation sources.

One outcome of this study was that SECI commissioned a new regional study designed to help members optimize net transfer interconnection capacity between neighboring countries. Greater interconnection capacity will alleviate network congestion, accelerate development of clean energy resources and enhance the trade of clean energy in Southeast Europe.

In November 2013, USEA's SECI Transmission Planning Project was invited to give a presentation at the joint State Department/USAID COP 19 Official Side Event in Warsaw to discuss a recently completed Wind Integration Study. The Study found that by employing a regional approach to wind integration, the Southeast European grid has the potential to integrate twice as much wind capacity on a country-by-country basis. Further analysis indicates this could displace more than 44 million tons of CO_2/year. The session was introduced by Trigg Talley, Director of the State Department's Office of Global Change, and Kit Batten, USAID's Global Climate Change Coordinator.

Finally, USEA organized a study tour to the United States for SECI Working Group members. The exchange focused on transmission system planning in competitive power markets and managing intermittent renewable energy resources. Meetings and site visits were conducted with the Mid-Continent ISO (MISO), the Southwest Power Pool (SPP) and Federal and state regulators.

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AFGHANISTAN

USEA implements the USAID-funded U.S. – Afghanistan Utility Partnership focused on utility best practices in power generation, transmission and distribution with Da Afghanistan Breshna Sherkat (DABS) – Afghanistan's state-owned electricity utility. In June 2013, DABS visited Tata Power Delhi Distribution and Calcutta Electric Supply Corporation to review best practices in customer service and commercial operations. In November 2013, executives from DABS, along with representatives from Afghanistan's Ministries of Economy, Finance, Energy and Water, and Mines and Petroleum travelled to the U.S. to review best practices in power generation, transmission and distribution systems, market operations, regulation and finance.

CESC Ltd. provides the DABS delegation with a demonstration of the latest meter tampering techniques, signs of tampering and how to best choose a tamper-resistant meter.

ARMENIA

Through the USAID/USEA Energy Assistance Program (EAP) for Armenia, USEA is supporting Armenia's Ministry of Energy and Natural Resources to harmonize the planning and operating rules and standards governing its transmission network by developing a grid code consistent with European standards.

Armenia participants discuss transmission system scenarios.

AZERBAIJAN-GEORGIA-TURKEY

The AGT Project is a sub-regional transmission component of the USAID and USEA Energy Technology and Governance Program, supporting clean energy trade and energy security. In 2013, USEA and the system operators of Georgia and Turkey celebrated the commissioning of the new interconnection line that will enable trade between the Southern Caucasus region and rapidly growing demand centers in Turkey.

Transparent calculation and publication of cross border transmission capacity, or net transfer capacity (NTC), is the technical foundation needed for investors, electricity traders, transmission system operators and other wholesale market participants to engage in sub-regional trade of clean electricity. The AGT Power Bridge Project developed a Business Process Manual (BPM) for calculating NTC. The BPM prescribes a common methodology for calculating and allocating transmission capacity at the borders between Azerbaijan and Georgia and between Georgia and Turkey. The methodology is based upon principles practiced in the Energy Community of Southeast Europe, supporting integration of the Caucasus with Turkish and European energy markets.

AGT Working Group Meeting participants discuss sub-regional transmission collaboration. From left: Steve Burns, USAID; William Polen, USEA; Jamshid Heidarian, USAID; Jill Kelly, USAID; Ucha Uchaneishvili, Georgian State Electrostystem.

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BLACK SEA

With funding from USAID, USEA implements the Black Sea Regional Transmission System Planning Project (BSTP). This program supports a regional approach to network planning and optimization among the littoral nations of the Black Sea region. In 2013, the BSTP improved its regional planning models, which are used to simulate the economic and technical effects of adding clean energy generators to the regional network generation mix. The model continued to assist transmission system operators (TSOs) to identify investments required for overcoming technical challenges to clean electricity production and trade. TSOs are using the model to prepare studies needed to license and site new projects, assess network investments needed to remove transmission constraints and calculate back-up reserves required to compensate for the intermittent nature of wind and solar photovoltaic generators.

HAITI

In 2013, USEA received funding from USAID/Haiti to implement the Haiti Energy Policy and Utility Partnership Program (HEPP). This program will expose Haitian energy policy makers and utility officials to the policy, regulatory and technical frameworks needed to expand generation, encourage private investment and diversify Haiti's power resources. USEA will implement this program through a series of workshops and executive exchanges for Haitian stakeholders. These activities will address issues critical to energy policy reform, cross border electricity exchange, LNG imports and renewable energy integration.

Distribution lines and solar street lamps in the northern city of Cap Haitian, Haiti.

ROMANIA-UKRAINE-MOLDOVA (RUM)

The RUM sub-regional transmission planning project is a component of the USAID and USEA Energy Technology and Governance Program focused on integrating Ukraine and Moldova with the Energy Community of Southeast Europe. The project completed an interconnection study providing recommendations for the optimal configuration for the existing, but out of service, 750 kV Soviet era transmission corridor that once connected Ukraine and Romania. The study evaluated asynchronous and synchronous connection scenarios for 750 kV, 440 kV and 220 kV assuming different locations for asynchronous substations in Ukraine, Moldova and Romania. The study recommends a phased approach to establishing the corridor through an initial connection between Moldova and Romania that will support early electricity trade and provide Moldova with an interconnection to ENTSO-E.

The proposed interconnection study transmission corridor between Ukraine, Moldova and Romania.

CONTRIBUTING TO NATIONAL GOALS
CARBON SEQUESTRATION LEADERSHIP FORUM

CSLF Ministers gather for a group photo.

Christopher Smith, Assistant Secretary for Fossil Energy, addresses the CSLF Policy Committee.

From left: Barry Worthington, Executive Director, USEA; U.S. Energy Secretary Ernest Moniz; Canadian Natural Resources Minister Joe Oliver; Vicky A. Bailey, Chair, USEA.

CARBON SEQUESTRATION LEADERSHIP FORUM

In November 2013, USEA helped organize the 5th Carbon Sequestration Leadership Forum Ministerial held in Washington, D.C. Initiated in 2003, CSLF is a Ministerial-level international climate change initiative focused on the development of improved cost-effective technology for carbon capture and storage (CCS). The CSLF mission is to facilitate the development and deployment of such technologies via collaborative efforts that address key technical, economic and environmental obstacles. The CSLF, whose member countries represent over 3.5 billion people, also promotes awareness and champions legal, regulatory, financial and institutional environments conducive to such technologies.

U.S. Secretary of Energy Ernest Moniz presided over the CSLF Ministerial, which offered energy ministers and senior policy makers from 18 of the CSLF's 23 member countries an opportunity to outline their governments' CCS activities and commitments. Secretary Moniz, along with ministers from Canada, Norway and the United Kingdom, expressed clear and complementary visions of the pathway for CCS moving forward, effectively rejuvenating global interest in CCS.

Maria van de Hoeven, Secretary General of the International Energy Agency, and Brad Page, CEO of the Global CCS Institute, provided keynote remarks on global imperative for CCS deployment. Secretary Moniz also hosted a CEO roundtable on re-energizing global momentum for CCS featuring senior executives from leading global CCS projects.

As a supporter of the CSLF Secretariat, USEA was responsible

From left: Norwegian Petroleum & Energy Minister Tord Lien; U.K. Secretary of State for Energy & Climate Change Edward Davey; U.S. Secretary of Energy Ernest Moniz; Barry Worthington, Executive Director, USEA.

Southern Company CEO Tom Fanning updates CSLF Ministers on the Kemper County CCS project.

for convening private sector CCS stakeholders to build consensus on the major issues impacting CCS deployment. Experts from technology developers, utilities, NGOs, regulatory agencies, media outlets and financial institutions participated in a series of roundtable discussions on the following topics:

- Project finance
- Communicating the value proposition of CCS
- CCS regulations
- CCS deployment in developing countries.

USEA Executive Director Barry Worthington presented to the Ministers key findings from the stakeholder roundtables. CSLF stakeholders believe that the CSLF must:

- reach out to a broader group of stakeholders in order to fulfill its mission as an inclusive convening forum;
- be an outspoken advocate for an "all of the above" approach to energy resource planning, which will produce the most affordable, secure, reliable and sustainable energy supply possible;
- communicate the imperative role of CCS in helping the global energy sector to achieve international climate goals given the fact that fossil fuels will, under all scenarios, comprise over 50% of total consumed energy through 2050; and
- address the role that CCS can play in economic development and job creation, particularly in developing countries.

Following the Ministerial, CSLF Ministers visited Southern Company's Kemper County Energy Facility, a CSLF-recognized IGCC project that will capture and transport approximately three million tonnes of CO_2 per year for use in enhanced oil recovery.

U.S. Secretary of Energy Ernest Moniz addresses CSLF Ministers.

SUPPORTING THE WORLD ENERGY COUNCIL

USEA is the U.S. Member Committee of the World Energy Council, the world's foremost multi-energy organization. With members representing 94 countries and over 3,000 organizations including most major energy consumers and producers, WEC is the preeminent forum for international discussion and dialogue on global energy affairs. Its mission is "to promote the sustainable supply and use of energy for the greatest benefit of all people."

WORLD ENERGY COUNCIL
CONSEIL MONDIAL DE L'ÉNERGIE
For sustainable energy.

In October 2013, WEC hosted the 22nd World Energy Congress in Daegu, South Korea. WEC's flagship event was a success, attracting 267 speakers, over 7,500 delegates and 52 government ministers from 123 countries. Senior executives from the following USEA members represented the United States at the Daegu Congress:

- Black & Veatch
- Duke Energy
- Electric Power Research Institute
- ExxonMobil
- Fluor Corporation
- GE
- Westinghouse

Media coverage also far exceeded that of previous Congresses, with nearly 6,000 press articles written and broadcast highlighting the event. Participants submitted positive feedback on the variety and depth of content explored during the 64 sessions and the broader Congress itself.

In addition to the Daegu Congress, USEA coordinated U.S. contributions to WEC's fact-finding missions for the Energy Scenarios and Trilemma Reports. In May 2013, USEA hosted a workshop for North American WEC Member Committees to provide input to the Energy Scenarios study. Karl Rose, WEC's Director of Studies, also provided an overview of the Energy Scenarios study at USEA's Annual Meeting. USEA also helped to organize consultative interviews with senior U.S. energy policy makers to provide input for WEC's Trilemma study. In September 2013, USEA hosted the global launch of the WEC's World Energy Trilemma report at the National Press Club in Washington, D.C.

From left: WEC Secretary General Christoph Frei, outgoing WEC Chairman Pierre Gadonneix and incoming WEC Chair Marie-José Nadeau during the WEC Executive Assembly.

Steve Bolze, President & CEO of GE Power & Water, delivers a keynote address at the 22nd World Energy Congress in Daegu, South Korea.

HONORING INDUSTRY LEADERS: *JAMES ROGERS*

The 2013 United States Energy Award

James Rogers is the recipient of the 2013 United States Energy Award. He is the Chairman of the Board for Duke Energy. Prior to being elected Chairman in January 2007, he also served as Duke Energy's President and CEO from April 2006 until his retirement on July 1, 2013.

James Rogers accepts the 2013 United States Energy Award from USEA Chair Vicky Bailey and USEA Immediate Past Chair Jack Futcher.

Rogers served as a CEO in the utility industry for 25 years. Over that period, he delivered an average total shareholder return of more than 12 percent per year by focusing on sustainable growth and executing a series of well-timed mergers, acquisitions and divestitures.

Rogers became Chairman, President and CEO of Duke Energy following the merger between Duke Energy and Cinergy in 2006, and continued in that role following the Duke Energy/Progress Energy merger in 2012. He previously served as Cinergy's Chairman and CEO for more than 11 years. Prior to the formation of Cinergy, he joined PSI Energy in 1988 as the company's Chairman, President and CEO. He also served as chairman of the Edison Electric Institute (EEI).

James Rogers has illustrated support for USEA and for the World Energy Council. He is a frequent speaker at USEA and WEC events, including the 2013 World Energy Congress in Daegu, South Korea. Rogers was inducted in the USEA co-sponsored Energy Efficiency Forum Hall of Fame in 2009. He is responsible for both Cinergy and Duke Energy becoming members of USEA.

For almost two decades, James Rogers and Duke Energy have actively participated in the USEA International Utility Partnership capacity building program, which is funded by USAID. His companies have participated in numerous peer-to-peer exchanges and direct partnerships with developing country utilities focused on sharing their "utility best practices" in transmission, distribution and generation. This relationship began when Rogers assumed the CEO position at Cinergy and continued the capacity building utility partnership with Kazakhstanenergo, helping to privatize its large generation units and improve the operations of its transmission and distribution business units. Under the USEA partnership program, Duke partnered with the Egyptian Electricity Holding Company to share best practices in utility management and human resources development. Duke also hosted senior executives of the Nepal Electricity Authority to discuss power generation and distribution operations. In 2009, Duke engineers reviewed their transmission operating procedures with visiting executives from the Jordanian national transmission company. Recently, in the Fall of 2012, Duke Energy shared its distribution system planning and engineering practices with senior executives from 10 Pakistan distribution companies.

Previous Honorees:

2012: John W. Rowe, Chairman Emeritus, Exelon Corporation
2011: Michael G. Morris, Chairman & CEO, American Electric Power Company
2010: Peter Robertson, Vice Chairman (Retired), Chevron
2009: Bob Catell, Chairman, National Grid, U.S.

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