

2010

THE BUSINESS OF
Clean Energy IN ALASKA



June 17th and 18th at the Dena'ina Civic and Convention Center, Anchorage Alaska

CONFERENCE PROGRAM

WHAT IS RENEWABLE ENERGY ALASKA PROJECT?

Renewable Energy Alaska Project (REAP) is a coalition of urban and rural Alaska electric utilities, businesses, conservation organizations, consumer groups, Alaska Native organizations, and municipal, state, and federal entities that are dedicated to increasing the production of renewable energy and promoting energy efficiency in Alaska.

RENEWABLE ENERGY ALASKA PROJECT STAFF

Chris Rose, Executive Director
Hannah Gustafson, Assistant Director
Stephanie Nowers, Communications Director
Caren Moss, Operations Manager
Justin Sternberg, Conference Design Manager
Sophie Plitt, Summer Intern

Welcome to REAP's second annual *Business of Clean Energy in Alaska* conference.

With vast renewable energy resources, high energy prices, a cold climate and relatively inefficient buildings, Alaska has both the incentive and the potential to be a leader in renewable energy (RE) and energy efficiency (EE) development.

Energy is the lifeblood of any economy, and the states, regions and nations that are able to harness clean, local and predictably priced energy and use it efficiently will prosper and attract investment. REAP's goal in bringing state and national RE/EE experts together in Anchorage is to demonstrate to the state's business, labor and policy leaders that Alaska has an excellent opportunity to sustain and diversify its economy through the development of renewable energy and the application of energy efficiency measures. We hope to continue the dialogue that began last year when our first conference sold out, and that continued through a legislative session this spring that saw the passage of several important bills that support and finance renewable energy and energy efficiency in the state.

We've responded to feedback we received last year by including more Alaska-based speakers, and by adding time to the agenda for the audience and presenters to interact through facilitated discussions at the end of each day.

A big thank you to all of REAP's generous sponsors, members, supporters and volunteers, without which this event would not be possible. Thanks also to all the conference presenters and speakers, some of whom have traveled great distances to join us. Finally, thanks to REAP's dedicated staff who worked so hard to make this conference happen.



Chris Rose
Executive Director
Renewable Energy Alaska Project (REAP)

**Got Energy
Questions?
We've got answers.**



RESEARCH INFORMATION CENTER (RIC)

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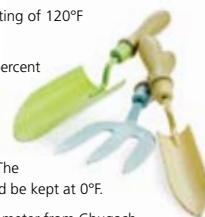
**Grow your
energy savings
this summer.**

Energy efficiency is not just for cold weather. Wasted energy means money lost in summer months, too.



Wasted electricity is costing you – even in summer. While our heating bills may drop as the weather warms up, there are plenty of other sources of energy waste in spring and summer. Check out your home. You will likely find plenty of opportunities to **stop losing money**. Here's how:

- **Use natural light** whenever possible.
- **Replace incandescent bulbs with compact fluorescent bulbs (CFLs).** They use about one-quarter the energy of incandescent bulbs.
- **Install smart power strips** for all home electronics. Even when home electronics are turned off, they're on standby mode and that uses energy. Smart power strips have a switch, allowing you to safely turn equipment all the way off when not in use. Plus, smart power strips protect sensitive electronic equipment from power surges.
- **Lower the temperature on your hot water heater.** For most uses, a setting of 120°F provides comfortable hot water.
- **Wash laundry in cold water.** Heating water for laundry accounts for 85 percent of hot water heating bills.
- **Run the dishwasher only when it's full.** But don't overload it.
- **Take the temperatures of your refrigerator and freezer.** Too cold and they use extra energy. The fresh food compartment should be 37° to 40°F. The freezer section should be 5°F. Separate freezers for long-term storage should be kept at 0°F.
- **Investigate your home's energy hogs.** Borrow a Kill A Watt or Watts Up meter from Chugach to learn just how much electricity your appliances, computers and other plug-ins are using.



FOR MORE IDEAS AND RESOURCES, GO TO SMARTPOWERAK.COM.

Exhibitors & Supporters

The Exhibit Hall

Be sure to visit these booths in the conference exhibit hall, which is free and open to the public.

Alaska Architectural Lighting, Inc
Alaska Center for the Environment
Alaska Conservation Alliance
Alaska Craftsman Home Program
Alaska Energy Authority
Alaska Housing Finance Corporation
Alaska Industrial Development & Export Authority
Alaska Manufacturing Extension Partnership, Inc
Alaska Women of Wind Energy
Alaskan Wind Industries
Ameresco
Bering Straits Development Company
Consulate of Canada, Anchorage
Denali Commission
Fink Machine, Inc

Green Star, Inc
Lynden Transport
Petroleum News
Renewable Energy Alaska Project
Renewable Energy Systems
RurAL CAP
Rural Energy Enterprises, Inc
Sierra Club Alaska
STG, Inc
Susitna Energy Systems
University of Alaska Anchorage, Institute of Social and Economic Research
University of Alaska Fairbanks, Alaska Center for Energy and Power
USDA Rural Development
Wind Diesel North America, LLC
YourCleanEnergy, LLC

Our Supporters

Thank you to the many organizations that supported the conference by helping spread the word about this event.

Alaska Craftsman Home Program
Anchorage Economic Development Corporation
Alaska Center for Energy and Power
Alaska Design Forum
Alaska State Chamber of Commerce
Alaska Village Initiatives
Alaska Women's Environmental Network
American Institute of Architects, Alaska Chapter
Anchorage Chamber of Commerce
Anchorage Home Builders Association
Balance Alaska
Bioneers in Alaska

BuyAlaska Program
Cold Climate Housing Research Center
Fairbanks Economic Development Corporation
Kenai Peninsula Builders Association
Northern Alaska Environmental Center
Pioneer Natural Resources Alaska, Inc
Resource Development Council
Southeast Alaska Conservation Council
Yukon River Inter-Tribal Watershed Council

Welcome Speakers

Thursday, June 17th 8:00–8:25AM



Chris Rose
Executive Director
Renewable Energy Alaska Project
Anchorage, Alaska

Chris Rose is the Executive Director of Renewable Energy Alaska Project (REAP), a statewide coalition of over 70 electric utility companies, conservation organizations, consumer groups, businesses, Alaska Native organizations, and municipal, state, and federal entities that are dedicated to increasing the production of renewable

energy and promoting energy efficiency in Alaska. Before founding REAP in 2004, he received his law degree from the University of Oregon, and had a private law and mediation practice for over a decade that included extensive work with Native Alaskans in the Northwest Arctic. He has been very active in community issues in the Matanuska Valley where he lived for 18 years and has served on various statewide boards and committees, including the Railbelt Electrical Grid Authority Advisory Committee and the Renewable Energy Grant Fund Advisory Committee.



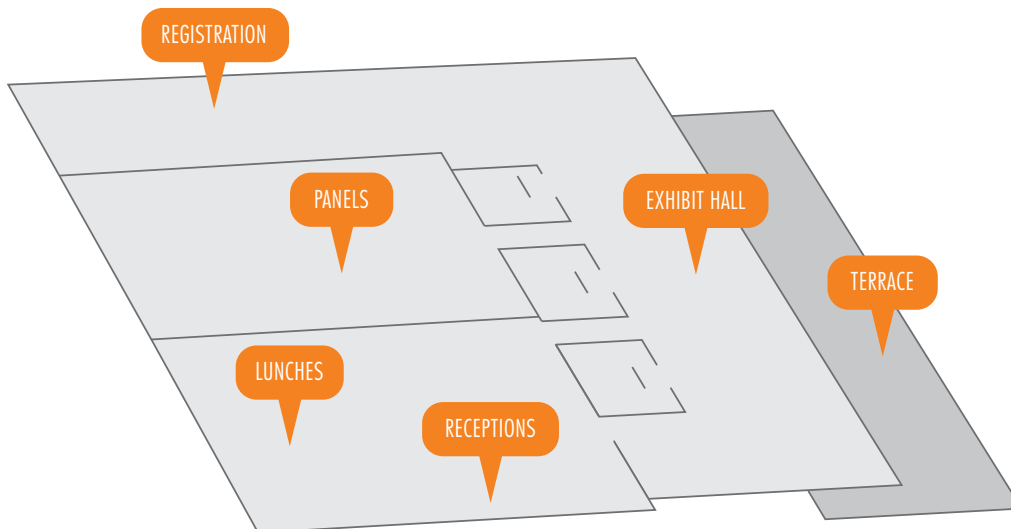
Gene Therriault
Senior Policy Advisor
In-State Energy, Alaska
Juneau, Alaska

Gene Therriault was born in Fairbanks and has lived his entire life in Interior Alaska. After graduating from the University of Alaska Fairbanks with degrees in Business Administration and Computer Information Systems, Gene began working in the legislative office of Representative Mike Miller. First elected to the House of

Representatives in 1992, Gene served in the House for eight years including four as the Co-chair of the House Finance Committee. Elected to the Senate in 2000, Therriault served one term as Senate President and three years as the Senate Minority Leader before resigning his position to join the Parnell administration in the fall of 2009. Gene currently serves as a Senior Policy Advisor on In-State Energy issues for Governor Parnell. Gene is married to Jo Kuchle and has two children, Justin (18) and Jordyn (14).

Conference Map

Third Floor of Dena'ina Civic and Convention Center, Anchorage, Alaska.



Messages from Alaska's Congressional Delegation

Thursday, June 17th 8:25–8:55AM



Mark Begich
U.S. Senator
Alaska

Senator Mark Begich was elected to the U.S. Senate in November 2008 after serving as the Mayor of Anchorage since April 2003. Born and raised in Anchorage, Senator Begich's priorities include focusing on a national energy

policy that includes Alaska's oil and gas resources, an Alaska natural gas pipeline and the many renewable resources in Alaska.

As Mayor of Anchorage, Begich created the first-ever Renewable Resources Coordinator position to launch a city-wide focus on recycling, energy efficiency,

and development of new renewable energy sources for the city.

He is equally committed to efforts that will reduce the deficit and the nation's debt; promoting legislation that strengthens the economy and creates jobs; and keeping our military strong while improving the service and benefits for our nation's veterans who have served our country so honorably. Begich serves on the Senate Committee on Science, Commerce and Transportation, the Senate Budget Committee, the Senate Committee on Armed Services, and the Senate Committee on Veterans Affairs.

A businessman for more than 30 years, Senator Begich is bringing his business acumen to the work in the Senate. His extensive experience in public office, along with service to dozens of non-profits and community groups, all add to his know-how and ability to get things done.



Lisa Murkowski
U.S. Senator
Alaska

Senator Lisa Murkowski is the first Alaskan-born Senator to serve the State and only the sixth United States Senator from Alaska. Senator Murkowski is a third generation Alaskan, born in Ketchikan and raised in

towns across the state: Wrangell, Juneau, Fairbanks and Anchorage. Since joining the Senate in 2002, Senator Murkowski has already made many strides on numerous issues facing Alaskans. As she advocates for legislation on the Senate floor, her passion for improving the state of health care, education, energy, Veteran's affairs and infrastructure development in Alaska is unquestionable.

Last year, Senator Murkowski became the top Republican on the Senate Energy and Natural Resources Committee and won a coveted seat on the Senate Appropriations Committee, and in June 2009, Senator Murkowski was elected by her peers to be a member of the Republican Senate leadership team.

In addition to her tenure in the United States Senate, Senator Murkowski was elected to three terms in the Alaska State House of Representatives, beginning in 1998. Senator Murkowski is married to Verne Martell, and they have two sons, Nicolas and Matthew. Senator Murkowski enjoys spending time with her family, skiing, fishing, camping, and actively participating in community outreach programs.



Don Young
U.S. Representative
Alaska

Congressman Don Young was re-elected to the 111th Congress in 2008 to serve his 19th term as Alaska's only Representative to the United States House of Representatives. First sworn in as a freshman to the

93rd Congress after winning special election on March 6, 1973, Congressman Young is today the 2nd most ranking Republican member and 6th overall member of the House of Representatives.

Congressman Young served as Chairman of the House Resources Committee from 1994 to 2000 and then as the Chairman of the House Transportation and Infrastructure Committee from 2000-2006. In the 100th Congress, Representative Young returned to the helm of the Resources Committee to lead his fellow Republicans as the Ranking Member. Representative Young currently serves as a senior Republican on the House Transportation and Infrastructure Committee and House Natural Resources Committee.

Retrofitting Buildings for Energy Efficiency

Thursday, June 17th 8:55–10:35AM

PANEL 1 MODERATOR

MICHAEL BARBER

PARTNER, CONTINUUM INDUSTRIES

ANCHORAGE, ALASKA



Dune Ives, Ph.D.
Founder
Milepost Consulting
Winthrop, Washington

Building the Business Case for Strategic Energy Management in the Built Environment

In the US, buildings consume approximately 40% of total energy and account for roughly 38% of total greenhouse gas emissions. Rising utility rates, the impact of the economic downturn, and state level building performance disclosure regulations are putting pressure on building owners and managers to understand and manage building performance. This presentation will articulate the business case for energy efficiency retrofits in the built environment and an integrated focus on strategic energy management as a business imperative.

Dune Ives is the founder of Milepost Consulting, Inc, and is the Commercial Office Real Estate Market Specialist for BetterBricks, a program of the Northwest Energy Efficiency Alliance, where she works to make sustainability a strategic priority in the Puget Sound market. In addition to her consulting practice, Dune is on the faculty at the Presidio Graduate School where she teaches in the MBA program on the topic of climate change strategy development. She is also a member of Nobel Laureate Al Gore's organization The Climate Project, serves on the Regional Leadership Council for the National Wildlife Federation and is the energy committee chairperson for the BOMA King County sustainability committee. Dune was raised in Fairbanks, Alaska and holds her Ph.D. in Psychology.



Nancy Clanton
President
Clanton & Associates, Inc
Boulder, Colorado

Alaska's Lighting Energy ... Let's Save 50% More!

Alaska summers produce an abundance of daylight, yet winter months crave it. Learn how effective lighting design complete with layers of light, efficient equipment, and intelligent controls can easily reduce energy use by 50%. This presentation will focus on the importance of daylighting, effective design, control systems, smart grid integration, and developing energy codes and incentives.

Nancy E. Clanton is founder and President of Clanton & Associates, a lighting design firm specializing in sustainable design. Nancy is a registered Professional Engineer, chairperson of the IESNA Outdoor Environmental Lighting Committee and Mesopic Lighting Committee, and a past member of the Board of Directors of the International Association of Lighting Designers and the IESNA board of directors. She is currently on the USGBC LEED Environmental Quality Technical Advisory Group and on the International Dark Sky Association Board of Directors. Nancy was lighting group leader for the Greening of the White House and the C40 Summit in Seoul, Korea. Nancy supported Anchorage's Title 21 revision for Exterior Lighting and performed the street lighting demonstration in Anchorage and the street lighting design criteria. Her firm has authored the Interior and Exterior Lighting Criteria for The Department of Defense Unified Facilities Criteria.



Gary Gagnon
Director of Operations
Ameresco, Inc
Anchorage, Alaska

Energy Services Performance Contracting (ESPC) for Alaska

This presentation will give an overview of ESPC, comparing common contracting vehicles and how it can benefit continued energy efficiency in Alaska.

For the past 20 years, Gary Gagnon has worked in every aspect of providing energy solutions to customers. Projects have ranged from the de-centralization of high-pressure steam plants, installation of electric-to-hot-water heating systems for schools and alternative energy projects. Projects have all been "Turn Key" with one point of project responsibility for the customer to include design, procurement, construction, commissioning and if required, continuing service and maintenance. Gary is currently a Director with Ameresco's Alaska office. Ameresco, Inc. is one of the pioneers in the energy services business, delivering long-term customer value through innovative systems, strategies and technologies and they have offices throughout North America.

Designing Smart Buildings

Thursday, June 17th 10:55–12:35PM

PANEL 2 MODERATOR

LINA CONSTANTINOVICI

SUSTAINABILITY STRATEGY CONSULTANT, ADAPTIVE EDGE

SAN FRANCISCO, CALIFORNIA



Klaus Mayer
Partner
mayer sattler-smith
Anchorage, Alaska

Working with Climate, Culture and Technology

The Alaska Design Forum has been hosting international designers and architects since 1992. This presentation will highlight a few case studies of houses in Anchorage and Eagle River and discuss what sustainability could mean for architecture in Alaska.

Klaus Mayer is a founding partner in the multi-disciplinary design firm mayer sattler-smith, based in Anchorage, Alaska. Their design practice has the goal to find an appropriate response to local climate, culture and technology. Projects range from urban design, architecture, interior design and graphic design, to furniture and art. Klaus has lived and worked in Alaska since 1995. After working for various architects, he joined forces with Petra Sattler-Smith in 2001 to establish mayer sattler-smith. Klaus has been instrumental in the growth of Alaska Design Forum (ADF), serving as President of the Board since 1999. Known for its lecture series, ADF has played a significant role in expanding the conversation about architecture and design in Alaska. Klaus studied architecture, receiving his degree at the University of Applied Science in Stuttgart, Germany. In 2004, Klaus was awarded a Loeb Fellowship at the Harvard Graduate School of Design in advanced environmental studies.



Karl T. Schmid
Architect
Architekturbüro Schmid
Böhmenkirch, Germany

Living in a Power Plant

This presentation will show how political conditions in Germany have created changes in building design that support decentralized power supply and self-sufficient homes and buildings.

Before starting his own office in 1996, Karl Schmid worked with several architects in Switzerland and Austria. His influences include the Austrian (Vorarlberg) Design of high efficient, modern wooden structures. Karl works with both retrofits and new design of everything from single-family homes to industrial buildings, including complete interior design. With the start of the new millennium, his main focus has been renewable energy integration into building structures to create net zero energy plus buildings. In addition to his architect office, he runs two companies for developing photovoltaic projects.



Jack Hébert
President & CEO
Cold Climate Housing Research Center
Fairbanks, Alaska

Indigenous Wisdom, 21st Century Technology

The arctic, perhaps the most severe climate in the world, has been home to distinctive indigenous people for millennia. Today despite its remoteness, the region is undergoing a rapid transformation — climate change, accelerated resource development, and a dramatic increase in energy prices are all challenging the environmental and cultural sustainability of northern communities and cultures. This presentation will examine how the Cold Climate Housing Research

Center (CCHRC) is addressing the challenge of designing sustainable shelter for remote areas of the far north and how what we are learning through this process can be applied to other locations.

Jack Hébert is President, CEO, and founding Chair of CCHRC. The organization is committed to promoting safe, affordable, durable, and energy efficient housing for cold climate regions. As owner of Hébert Homes, LLC, Jack has been designing and building homes in Alaska for over thirty years. His homes and planned communities are built to create high quality, well designed, environmentally appropriate, and energy efficient buildings. Jack has received numerous honors including the first State of Alaska Governor's Award for Excellence in Energy Efficient Design, the Energy Rated Homes of Alaska President's Award, and two-time Alaska State Homebuilder of the Year. Jack currently serves as the National Association of Home Builders' (NAHB) National Vice Chair for Area 15.

"We know the country that harnesses the power of clean, renewable energy will lead the 21st century."
- President Barack Obama, address to Congress, February 24, 2009.

Keynote: The New World of Green

Thursday, June 17th 1:05–1:50PM




David Gottfried
Managing Director, Regenerative Ventures
Founder, U.S. Green Building Council and
World Green Building Council
Berkeley, California

The New World of Green

David Gottfried will share insight, stories, experience and inspiration from his personal “greening” journey -- as he progressed from a real estate developer in the booming 1980’s to founder of the U.S. and World Green Building Councils and pioneering visionary of one of the fastest growing green organizations in the world.

David Gottfried is the Managing Director of Regenerative Ventures, which serves as the holding company for the U.S. Regenerative Network and WorldBuild Consulting. David is also the Founder & CEO of the U.S. Regenerative Network, a uniquely vetted collaborative business consortium of industry-leading green building product manufacturers and service providers. He founded the U.S. and World Green Building Councils, and currently serves as an Advisory Board member to seven venture-funded greentech start-ups. David is the author of “Greed to Green: The Transformation of an Industry and a Life”, as well as the forthcoming “Greening My Life”. His personal residence is the highest rated LEED® Platinum home.



“Never doubt that a small group of thoughtful,
committed people can change the world. Indeed,
it is the only thing that ever has.”

- Margaret Mead

Efficient Power Generation and Transmission

Thursday, June 17th 2:00–3:40PM

PANEL 3 MODERATOR

JIM POSEY

GENERAL MANAGER, MUNICIPAL LIGHT AND POWER
ANCHORAGE, ALASKA



Tom Tanton
President
T2 & Associates
Lincoln, California

Distributed Generation: Unique Opportunities for Alaska

Distributed generation and combined heat and power promise energy efficiency and renewable energy opportunities to Alaska. The opportunities will likely not be realized without broad understanding of the technologies and economics as well as necessary policies. This presentation will describe the technologies capable of 50-100% improvements in energy efficiency while taking advantage of locally sourced renewables and simultaneously avoiding costly infrastructure expansions. Associated facilitating policies will also be discussed.

Tom Tanton is President of T2 & Associates, a firm providing consulting services to the energy and technology industries. Tom has over 35 years experience in the energy, economy, and environmental fields. T2 & Associates are active in the area of energy and interconnected infrastructures, analyzing and providing advice on their impacts on energy prices, environmental quality, and regional economic development. Tom's previous employment includes serving as Vice President and Senior Fellow with the Institute for Energy Research, from 2002 to 2006, and General Manager for EPRI, the Electric Power Research Institute, from 2000 to 2003. Prior to 2000, Tom was the principal policy advisor with the California Energy Commission (CEC) where he was responsible for designing and implementing legislation including electric restructuring, gasoline and natural gas supply and pricing, energy facility siting, environmental issues, technology development, and transportation.



Lisa Schwartz
Senior Associate
Regulatory Assistance Project
Albany, Oregon

Is It Smart if It's Not Clean? State Policies for Smart Grid Investments

Smart grid technologies can help minimize energy losses on utility distribution systems and reap energy savings for end-use customers. This presentation will discuss how states can tap the smart grid's potential for clean energy resources through smarter policies, regulatory support, targeted programs and customer engagement.

Lisa Schwartz is a senior associate at the Regulatory Assistance Project (RAP), a nonprofit group that advises policy-makers in the U.S. and abroad on energy and environmental issues. Her work covers smart grid, clean energy resources, and regulatory and market mechanisms. Before joining RAP, Lisa was staff lead at the Oregon Public Utility Commission on renewable resources, integrated resource planning and competitive bidding. She also served as a senior policy analyst at the Oregon Department of Energy and assistant administrator of the Oregon State University Extension Energy Program. Lisa received a master's degree in Land Resources from the University of Wisconsin-Madison and a bachelor's degree in Environmental Studies from George Washington University.



Bryan Hannegan, Ph.D.
Vice President, Environment & Renewables
Electric Power Research Institute
Palo Alto, California

Dance Partners: Renewables and the Smart Grid

Increasing deployment of variable wind energy brings challenges to existing local and grid-connected power systems. This presentation will highlight some of the Electric Power Research Institute's (EPRI) recent work in bringing together distributed renewables and a smarter grid as "dance partners" that can provide reliable, low-cost and environmentally sustainable sources of energy.

Dr. Bryan Hannegan is Vice President of Environment and Renewables for EPRI, an independent, nonprofit organization that brings together scientists, engineers and experts from academia and industry to help address challenges in electricity, including reliability, efficiency, health, safety and the environment. Its members represent more than 90 percent of the electricity generated and delivered in the United States. Bryan leads the teams responsible for EPRI's research into technologies and practices that enable cleaner and more efficient renewable power generation options, and reduce the environmental footprint associated with electric power generation, delivery and use. A climate scientist, engineer and energy policy expert, Bryan holds a Doctorate in earth system science, a Master of Science in engineering, both from the University of California — Irvine, and a Bachelor of Science in meteorology from the University of Oklahoma.

Conference Schedule

Thursday, June 17th 7:00AM–7:00PM

7:00–8:00AM

Exhibit Hall Opens, Registration

8:00–8:25AM

Welcome Chris Rose, Executive Director, Renewable Energy Alaska Project (REAP); Anchorage, Alaska
Gene Therriault, Senior Policy Advisor for In-State Energy Alaska; Juneau, Alaska

8:25–8:55AM

Messages from Alaska's Congressional Delegation

Mark Begich, U.S. Senator, Alaska
Lisa Murkowski, U.S. Senator, Alaska
Don Young, U.S. Representative, Alaska

8:55–10:35AM

Retrofitting Buildings for Energy Efficiency

PANEL 1

MODERATOR Michael Barber, Partner, Continuum Industries; Anchorage, Alaska
PANEL Dune Ives, Ph.D., Founder, Milepost Consulting; Winthrop, Washington
Nancy Clanton, President, Clanton & Associates; Boulder, Colorado
Gary Gagnon, Director of Operations, Ameresco; Anchorage, Alaska

10:55–12:35PM

Designing Smart Buildings

PANEL 2

MODERATOR Lina Constantinovici, Sustainability Strategy Consultant, Adaptive Edge; San Francisco, California
PANEL Klaus Mayer, Partner, mayer sattler-smith; Anchorage, Alaska
Karl T. Schmid, Architect, Architekturbüro Schmid; Böhmenkirch, Germany
Jack Hebert, President & CEO, Cold Climate Housing Research Center; Fairbanks, Alaska

12:35–1:05PM

Lunch

1:05–1:50PM

Keynote: The New World of Green

David Gottfried, Managing Director, Regenerative Ventures; Berkeley, California

2:00–3:40PM

Efficient Power Generation and Transmission

PANEL 3

MODERATOR Jim Posey, General Manager, Municipal Light and Power; Anchorage, Alaska
PANEL Tom Tanton, President, T2 & Associates; Lincoln, California
Lisa Schwartz, Senior Associate, Regulatory Assistance Project (RAP); Albany, Oregon
Bryan Hannegan, Ph.D., Vice President, Electric Power Research Institute (EPRI); Palo Alto, California

4:00–5:30PM

Discussion of Energy Efficiency in Alaska

FACILITATOR Cady Lister, Information Insights; Anchorage, Alaska

5:30–7:00PM

Reception Hosted by the Consulate of Canada, Anchorage

7:00PM

Exhibit Hall Closes

Conference Schedule

Friday, June 18th 7:00AM–7:00PM

7:00–8:00AM

Exhibit Hall Opens, Registration

8:00–8:10AM

Welcome Chris Rose, Executive Director, Renewable Energy Alaska Project (REAP); Anchorage, Alaska

8:10–8:55AM

Keynote: Energy Strategies for the Green Economy

Joel Makower, Executive Editor, GreenBiz.com; Oakland, California

8:55–10:35AM

The State of Renewable Energy in Alaska Today

PANEL 4

MODERATOR Meera Kohler, President & CEO, Alaska Village Electric Cooperative; Anchorage, Alaska

PANEL Ron Acarregui, Vice Chairman, Kodiak Electric Association (KEA); Kodiak, Alaska

Jim St. George, President, STG Incorporated; Anchorage, Alaska

Roya Stanley, Director, Iowa Office of Energy Independence; Des Moines, Iowa

10:55–12:35PM

Opportunities for Growing Alaska's Renewable Sector

PANEL 5

MODERATOR Bill Popp, President & CEO, Anchorage Economic Development Corporation; Anchorage, Alaska

PANEL Dr. Árni Ragnarsson, Executive Director, International Geothermal Association; Reykjavik, Iceland

Tim McLeod, President & General Manager, Alaska Electric Light & Power; Juneau, Alaska

Peter West, Director of Energy Programs, Energy Trust of Oregon; Portland, Oregon

12:35–1:05PM

Lunch

1:05–1:50PM

Keynote: Seizing the Energy Opportunity: Building Blocks of Federal Clean Energy Action in the 111th Congress

Kate Gordon, Vice President for Energy Policy, Center for American Progress; Washington, D.C.

2:00–3:40PM

Emerging Technologies: Diversifying Alaska's Economy

PANEL 6

MODERATOR Katherine Keith, WiDAC Coordinator, Alaska Center for Energy and Power; Fairbanks, Alaska

PANEL Bill Leighty, Director, The Leighty Foundation; Juneau, Alaska

Sean O'Neill, President, Ocean Renewable Energy Coalition (OREC); Darnestown, Maryland

Liz Wouters, Director, British Columbia Innovative Clean Energy Fund (ICE); Victoria, British Columbia

4:00–5:30PM

Discussion of Renewable Energy in Alaska

FACILITATOR Cady Lister, Information Insights; Anchorage, Alaska

5:30–7:00PM

Reception

7:00PM

Exhibit Hall Closes

Keynote: Energy Strategies for the Green Economy

Friday, June 18th 8:10—8:55AM



Joel Makower
Executive Editor, GreenBiz.com
Author, *Strategies for the Green Economy*
Oakland, California

Energy Strategies for the Green Economy

Today's energy companies aren't just limited to traditional oil, coal, natural gas, and nuclear power companies -- or even to solar, wind, geothermal, and other renewable energy firms. A wide range of companies of all sizes and sectors are now in the energy business, and emerging technology trends will find more and more companies able to exploit energy and climate challenges as a catalyst for innovations in products, processes, and business models. There are pitfalls on the road to such prosperity, but companies that understand the opportunities and prepare for them will have a competitive advantage.

Joel Makower is a leading author and voice on the greening of mainstream business. He is executive editor of GreenBiz.com and co-founder and chairman of Greener World Media, a producer of other popular web sites, research, and conferences on the greening of mainstream business. He hosts GreenBiz.com's annual *State of Green Business Forum* as well as *Greener By Design*, an annual conference focusing on green product design. Joel, who writes the popular blog, "Two Steps Forward," is author of more than a dozen books, including his latest, "Strategies for the Green Economy." The Associated Press has called him "The guru of green business practices."



Renewable Energy Alaska Project's goal is to increase the production of renewable energy in Alaska

The State of Renewable Energy in Alaska Today

Friday, June 18th 8:55–10:35AM

PANEL 4 MODERATOR

MEERA KOHLER

PRESIDENT & CEO, ALASKA VILLAGE ELECTRIC COOPERATIVE
ANCHORAGE, ALASKA



Ron Acarregui
Vice Chairman
Kodiak Electric Association
Kodiak, Alaska

Toward Energy Independence in Kodiak

Kodiak Electric Association, Inc. (KEA) completed a 4.5-megawatt wind project on Pillar Mountain in July 2009. This project earned KEA the 2009 Wind Cooperative of the Year Award from the U.S. Department of Energy. These turbines represent

Alaska's first megawatt-scale wind project. This presentation will highlight how the integration of wind power has been received by the Kodiak business community.

Ron Acarregui and his wife Judi have made Kodiak, Alaska their home for over 20 years. He has been active as a Rotarian, served on the Kodiak Chamber of Commerce Board, AK Aerospace Board, Kodiak Business Advisory Board, the Kodiak Electric Association Board of Directors, and the Treasurer for the Providence Hospital Board. Ron has a bachelor's degree in Business Administration and over 40 years of business knowledge and experience. Currently, Ron has slowed down his business ventures and is performing consulting work, property management and is the owner of Total Interiors, a furniture store on the island.



Jim St. George
President
STG Incorporated
Anchorage, Alaska

Economics of Energy Systems in Rural Alaska

This presentation will focus on the lessons learned from over three decades of heavy industry construction experience garnered through the execution of projects across Alaska. Drawing on his experience leading STG Incorporated, Mr. St. George will discuss the economic and social impacts that have been experienced through the community wind installations his firm has constructed. He will also offer perspective into the role renewable energy can play in developing more sustainable rural Alaska energy systems over the long term.

Jim St. George is the founder and owner of STG Incorporated (STG), a construction management and services company specializing in rural Alaska construction projects ranging from power generation and distribution facilities, communication towers, bulk fuel tank farm construction, pile foundations, and renewable energy systems. Over three decades of experience executing rural infrastructure projects, STG has grown into one of Alaska's most respected heavy industry contracting firms serving remote areas of the state. STG now exists as one of the leading foundation contractors servicing rural Alaska and maintains statewide market leadership in the installation of renewable energy systems. Since the company's inception, Jim has served as STG's President and oversees all business activities from the company's headquarters in Anchorage.



Roya Stanley
Director
Iowa Office of Energy Independence
Des Moines, Iowa

Iowa: Energy Independence, Economic Prosperity and the Map We're Charting to Get There

Iowa is rich in renewable energy assets, leading the nation in the production of ethanol and in wind generation as a percentage of total power output. While Iowa's resources are plentiful, the policy map to go from bold ideas to production has been long in the making. This presentation will discuss the landmarks (and the struggles) of Iowa's renewable energy policy, from being the first state with a renewable energy portfolio standard in 1983, to the creation of the Iowa Power Fund in 2007, to the state's vision for the future.

Roya Stanley is a results oriented leader-manager and marketer with the proven ability to develop and implement untested concepts into business strategies to achieve organizational objectives. She has enjoyed 25 years of experience in renewable energy and energy efficiency technology policy development, program implementation and business development through her work at the Iowa Department of Natural Resources and the National Renewable Energy Lab (NREL). In 2007, she was appointed by Iowa's Governor to open and organize the newly created office of Energy Independence, which, among many other duties, is responsible for the Iowa Energy Independence Plan and for guiding the \$100 million Iowa Power Fund into research, development and commercialization of renewable energy and energy efficiency technologies.

Opportunities for Growing Alaska's Renewable Sector

Friday, June 18th 10:55–12:35PM

PANEL 5 MODERATOR

BILL POPP

PRESIDENT & CEO, ANCHORAGE ECONOMIC DEVELOPMENT CORPORATION

ANCHORAGE, ALASKA



Dr. Árni Ragnarsson
Executive Director
International Geothermal Association
Reykjavik, Iceland

*Using Stranded Renewables for Value Added
Manufacturing & Processing*

Renewables play a key role in Iceland's economy, both for industry and tourism. This presentation will cover the development of geothermal and hydropower resources in Iceland for heat and electricity generation. Dr. Ragnarsson will explain

how Iceland has capitalized on its renewable resources and provide insight into how Alaska could do the same.

Árni Ragnarsson is the Executive Director of IGA, the International Geothermal Association. After finishing his Ph.D. studies in Mechanical Engineering at the Norwegian Institute of Technology in 1982, he worked at the research institutions SINTEF and IFE in Norway 1982-1987. He worked at the Geothermal Department of Orkustofnun, Iceland, in the period 1987-1996 and was Head of the Energy Statistics and Analysis Division of Orkustofnun 1997-2005. Since then, he has been working in the Engineering Department of ÍSOR (Iceland GeoSurvey) in a half-time position.



Tim McLeod
President and General Manager
Alaska Electric Light & Power Company
Juneau, Alaska

*Water to Fuel: Hydro-Powered Electric Vehicles
in Southeast Alaska*

This presentation will discuss the opportunity to switch to electric vehicles in Juneau, where the road system is relatively small and the potential to harness more stably priced hydroelectricity exists. Mr. McLeod will discuss how electric vehicles would work in SE Alaska, what the first steps toward such a shift are, and what Alaska Electric Light and Power Company (AELP) and others are doing right now to promote electric vehicles in Alaska's capital city.

Tim McLeod is the President and General Manager for AELP. He studied Electrical Engineering through International Correspondence Schools and began work in the electric utility sector in 1970 at Miner and Miner Consulting Engineers. In 1973, he took a position with Mountain Parks Electric Cooperative in Granby, Colorado as Engineering Manager until 1983 when he joined AELP. Tim managed the Transmission and Distribution department for AELP until 2000 and then served two years as the Chief Financial Officer and Assistant General Manager, before taking his current position in 2002. He is also currently the President Elect of the Juneau Chamber of Commerce.



Peter West
Director of Energy Programs
Energy Trust of Oregon
Portland, Oregon

*The Energy Trust of Oregon: A Focused Structure to
Promote Efficiency and Renewable Energy*

In 1999, the Oregon legislature established the Energy Trust of Oregon as an independent, non-profit organization to provide incentives, information and services to help consumers in the state make energy efficiency improvements and generate clean, renewable power. Oregon also established a stable, consistent mechanism to fund the Trust's programs. This presentation will discuss how the Trust works through a network of more than 1,200 private contractors, installers and developers to provide a structure that has helped Oregon complete over 60,000 energy efficiency and renewable energy projects per year.

Peter West is the Director of Energy Programs for the Energy Trust of Oregon, supervising programs to deliver clean energy. In 2005, the American Wind Energy Association presented its Special Achievement Award to Peter and the Energy Trust. Previously, Peter was the Assistant Director for Renewable Northwest Project, a leading advocacy group for renewable energy. In 2002, he was awarded the national Green Power Leadership Award for innovative outreach efforts to promote renewable energy. Peter was the founding President of the Climate Trust and helped to launch the Pacific Rivers Council. He also served as the Supervisory Regional Economist for Bonneville Power, overseeing economic and electrical demand analysis and forecasting. Peter has a graduate degree in Agriculture and Resource Economics from Oregon State University and a Bachelor of Science in Economics from the University of Maine.

Keynote: Seizing the Energy Opportunity

Friday, June 18th 1:05–1:50PM



Kate Gordon
Vice President for Energy Policy
Center for American Progress
Washington, D.C.

Seizing the Energy Opportunity: Building Blocks of Federal Clean Energy Action in the 111th Congress

With the fate of federal climate and clean energy legislation still uncertain in the Senate, and a massive environmental calamity in the Gulf of Mexico reminding Americans of the downsides of the gray energy economy, what are the prospects for the green energy economy in the United States? If the votes can't be found for a comprehensive climate and energy plan this year, what other policy pathways exist to help our emerging clean energy industries survive the persisting interim uncertainty? This presentation will bring an inside-the-beltway perspective to climate and clean energy policy, from D.C. to Juneau.

Kate Gordon is the Vice President for Energy Policy at the Center for American Progress. Most recently, Kate was the co-director of the national Apollo Alliance, where she still serves as senior policy advisor. Kate is nationally recognized for her work on the intersection of clean energy and economic development policy. She also has a long history of working on economic justice and labor issues. At the Center on Wisconsin Strategy (COWS), along with her energy work, Kate focused on corporate tax policy, progressive federalism, and rural economic development. Prior to that, she served as an employment and consumer rights litigator at Trial Lawyers for Public Justice in Oakland, CA. She is a primary or co-author on most of Apollo's major reports, including "The New Apollo Program," "Green-Collar Jobs in America's Cities," "Greener Pathways," and the "New Energy" series. She is also the author of several published articles on contract fairness, federal preemption, mandatory arbitration litigation, and regional economic development. Kate earned a J.D. and master's degree in city planning from the University of California-Berkeley and is a member of the the State Bar of California.



Renewable energy projects in rural Alaska reduce dependence on costly diesel, provide jobs and educational opportunities, and help protect valuable natural resources.

Emerging Technologies: Diversifying Alaska's Economy

Friday, June 18th 2:00–3:40PM

PANEL 6 MODERATOR

KATHERINE KEITH

WiDAC COORDINATOR, ALASKA CENTER FOR ENERGY AND POWER
FAIRBANKS, ALASKA



Bill Leighty
Director
The Leighty Foundation
Juneau, Alaska

Making Ammonia Fuel From Alaska's Vast Stranded Renewable Energy Resources

Much of Alaska's abundant renewable energy is stranded in remote areas of the state, with no feasible way to transmit it to the state's population centers. This presentation will discuss the possibility of converting these resources to anhydrous ammonia (NH₃) fuel that can be stored in ordinary steel tanks and either used by local remote communities, or exported with existing storage and transportation technologies. The discussion will include a brief comparison of the technologies

that can be used to convert excess renewable energy into NH₃, and the price points at which doing so will be cost competitive. If conversion technology can be brought to market economically, and a price on carbon is established in the United States, Alaska will have a way to unlock its vast and inexhaustible wind, geothermal and ocean energy resources that exist in places like the Aleutian Islands.

Bill Leighty is the Director of the Leighty Foundation, a small, charitable, family foundation, founded by his father in 1985, in their home town of Waterloo, Iowa. Bill is the co-author of over twenty papers examining ways to convert large-scale, stranded renewable energy resources into hydrogen or liquid anhydrous ammonia and then store and transmit that energy. He received his BS in Electrical Engineering from Stanford in 1966 and his MBA from Stanford in 1971.



Sean O'Neill
President
Ocean Renewable Energy Coalition
Darnestown, Maryland

Alaska: The Ocean Renewable State

Since July 2005, when ocean renewable technologies were first re-introduced into the federal definition of renewable energy, Alaska has taken a leadership role in promoting marine and hydrokinetic (MHK) technologies. This presentation will review Alaska's efforts to promote MHK, as well as the market potential, environmental and financial resources and the tremendous ocean resources that are attracting the best and brightest of the MHK industry to Alaskan waters.

Sean O'Neill co-founded the Ocean Renewable Energy Coalition in 2005 with Carolyn Elefant. Before that, Sean served as Director of Public Affairs for the US Generating Company from 1990 until 2001. He has provided public and community affairs support in siting over 8,000 MW's of electric generation in 17 states and managed referendum and initiative campaigns in California, Vermont, Massachusetts, Florida, Wisconsin, and New York. He has also directed communications and public affairs programs to encourage the development of electric industry deregulation, water conservation, municipal solid waste management, and public safety. He is a graduate of Columbia University in New York City, and received his master's degree in Public Communications from American University in Washington, D.C., where he has served on the adjunct faculty.



Liz Wouters
Director
British Columbia Innovative Clean Energy Fund
Victoria, British Columbia

British Columbia's Clean Energy Vision – Funding Innovative Technologies and Green Energy Solutions

The British Columbia (B.C.) Energy Plan is a vision for clean energy leadership that focuses on making B.C. energy self-sufficient in an environmentally responsible way. Out of that plan, the Innovative Clean Energy (ICE) Fund was created. The fund supports over 40 clean energy projects, which will provide economic and

environmental benefits to the province. These projects demonstrate technologies such as solar, ocean/tidal, bioenergy, smart grid management and geothermal. This presentation will explain how Alaska's neighbor is promoting renewables growth to set the foundation for a future of clean energy investments, energy conservation, strengthened environmental protection, regional job creation and First Nations' involvement in clean electricity development.

Liz Wouters has worked for the B.C. government in the area of alternative energy and energy efficiency for five years, specifically in public relations and program management. Her professional background also includes conflict management and many years ago, critical care nursing. Liz's personal commitment to clean energy is using her bicycle as a primary means of transportation.

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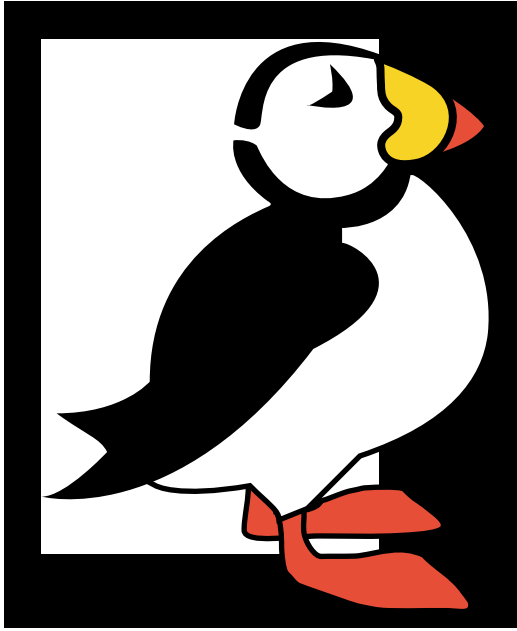
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