

2008 International Wind/Diesel Workshop
The Hotel Alyeska, Girdwood, Alaska

Draft Agenda

Wednesday, April 23rd, 2008

12:00 pm: Registration

1:00 pm: Wind-Diesel 101 – An introduction to wind diesel systems (free but registration required)

This 4-hour course offered the afternoon of the 23rd will cover the basics of wind-diesel power systems, including power systems technology and some examples of current hybrid power systems. This introductory level, short course is targeted to those who have little or no experience in wind-diesel power systems. The session should even provide people new to wind-diesel applications with the understanding that will enable them to take an active role in the International Wind Diesel Workshop.

5:00 pm: Registration

6:00 pm: Opening Reception – Sponsored by Distributed Energy Systems

Thursday, April 24th, 2008

7:30 am Continental Breakfast / Registration

8:15 Workshop Welcome and Introductions – Chair – Chris Rose (REAP)

5 Minute opening statements with a round the room introduction.

- Steve Haagenson (Alaska Energy Authority)
- Larry Flowers (National Renewable Energy Laboratory)
- Scott Harper (Wind Energy Institute of Canada)
- Per Lundsager (Darup Associates ApS) – International Wind/Diesel pioneer
- Brad Reeve (KEA) – Alaska Wind / Diesel pioneer
- Brent Petrie (AVEC) – Alaska Wind / Diesel pioneer and current driving force in technology implantation

9: 00 – 11:00 Operational Experiences – Chair - Martina Dabo (AEA)

Review of experiences of existing wind/diesel applications throughout the world. The session focuses on plant operational experience, including candid discussions describing problems that have been experienced and the benefits of incorporating wind technologies. This forum allows a discussion of real plant operation by the people who do that operation. (15 minute presentations followed by discussions and questions)

- Brent Petrie (AVEC) – Operational Experiences on AVEC Wind/Diesel Applications (Attendance Confirmed – Session Not)
- Brad Reeve (KEA) – Kotzebue, Alaska Current and Planned eExpansion (Confirmed)
- Bill Thompson(AVEC) – System Stability and Surplus Energy Management in Operating Wind Diesel Systems Without Storage. (Confirmed)
- Brett Pingree (Distributed Energy Systems) – Pulau perhentian Island, Malaysia (Confirmed)

- Dusty Murdock. (PB/Powercorp) – Coral Bay Wind/Diesel Power System, Australia (Confirmed)
- Dusty Murdock. (PB/Powercorp) – Graciosa Island and Flores Island, Azores, Portugal (Confirmed)
- Jose Jara (MADE/Gamesa) Wind/Diesel projects in Ecuador and the Galapagos

11:00 to 11:30 Break in the exhibit hall

11:30 –1:00 Company Technology Reports – Chair – James Jensen (AEA)

Reports on the current status of wind, diesel, and hybrid systems technology by industry leaders including discussions of technology innovations and/or new product offerings. This session is provided to allow companies to discuss current and future plans and activities. (12 minute presentations followed by discussions and questions)

- Brett Pingree (Distributed Energy Systems) – Northwind 100 (Confirmed)
- Erin McLarnon (PowerCorp Alaska) – PowerCorp Pty Ltd Experiences & Projects in Alaska
- Dusty Murdock. (PB/PowerCorp) – PowerCorp Pty Ltd, PB New Zealand Ltd and Flywheels for Wind-Diesel (Confirmed)
- Brian Beck (VRB Batteries)- VRB Batteries (Confirmed)
- Larry Adams – Spirae Inc - Advanced Cell Architecture for Managing Electric Power Systems with High Penetration of Distributed
- Charles Newcomb (Entegrity Wind Systems) – Development, Installation, and Maintenance Challenges and How We Address Them (Confirmed)

1:00- 1:45 Sponsored Lunch

1:45 –3:00 Company Technology Reports – Continued

- Steve Drouihet (Sustainable Automation) — Web-based Remote Monitoring and Control of Geographically Dispersed Power Systems (Confirmed)
- Peter Lilienthal - Recent Advances in the HOMER Software (Confirmed)
- Niklas Wägar (Wartsila) – Wind/Diesel or Wind/Gas, Cases and Possibilities by Wartsila (Confirmed)
- Pascal Larssonneur (Vergnet Eolien) – Vergnet Fleet of Wind Turbines and Wind/Diesel Applications (Confirmed)
- Dipl.-Ing. Benjamin Jargstorf - Comparison Between the Operating San Cristóbal and Planned Baltra/Santa Cruz – Wind / Diesel Systems in the Galápagos Islands (Confirmed)

3:00 to 3:30 Break in the exhibit hall

3:30 – 6:00 Research & Development Updates – Chair – Nolan Clark (USDA)

Review of technology advances on the part of government and non-government research bodies into the field of wind/diesel technologies. Software tools, analysis, and other research is highlighted and discussed, allowing a bridge between research and market innovation. (12 minute presentations followed by discussions and questions)

- Scott Harper (Wind Energy Institute of Canada) – Overview of WEICan and Recent Developments (Confirmed)
- Per Lundsager (Darup Associates ApS) – Risoe Wind/Diesel Research Summary (Confirmed)
- Per Lundsager (Darup Associates ApS) – Remote Wind Systems (Confirmed)

- Kris Noonan (Alaska Energy Authority) – AEA Switchgear Advances (Confirmed)
- Dennis Witmer (University of Alaska Fairbanks) - Results of VRB Battery Testing and Other Research at the University of Alaska Fairbanks (Confirmed)
- James Glennie (Wind Energy Institute of Canada) - Small Wind Certification Council (Confirmed)
- Robert Horbaty (Swiss Wind Energy Association) - Wind Energy Development in Harsh Climatic Conditions in Switzerland (Confirmed)
- Yves Brissette (IREQ) - Hydro-Québec's 25 kV tests Line and Simulation facilities at IREQ (Confirmed)
- Utama Abdulwahid (University of Massachusetts) - Dynamic Control Communication System for Hybrid Power Systems - (Confirmed)
- Luis Arribas (CIEMAT) - Operating Experience Focused on Small Power Wind / Diesel Systems (Tentative)

6:30 Sponsored Banquet and Reception – Host – Ian Baring-Gould (NREL)

- Statement from Banquet Sponsor
- Statement From Carbon Offset Sponsor
- Wind/Diesel Awards Ceremony
- Dinner Speaker – Larry Flowers - 20% Wind in America

Friday, April 25th, 2008

7:30 am Continental Breakfast / Registration

Emerging and Developing Markets

8: 15 to 10:00 Emerging Markets/Systems under Development – Chair – Peter Crimp (AEA)

Presentations describing wind/diesel projects that are currently being developed or country programs that are expected to be implemented in the foreseeable future. A strong focus will be placed on regional development concepts that are starting to be implemented. (10 minute presentations followed by discussions and questions)

- Martina Dabo (AEA) - Expanded Alaska Market (Confirmed)
- XXXX (XXX) - Canada Expanding the use of Wind (Not defined)
- Ian Baring-Gould (NREL) - Ross Island, Antarctica Wind Diesel System (Confirmed)
- Christian Casillas, (UC Berkeley) - The Potential for Wind/Diesel Systems in Class 1- 3 Wind Regimes in Nicaragua (Confirmed)
- Dipl.-Ing. Benjamin Jargstorf - New Wind/Diesel System for the Chilean Antarctic Base Eduardo Frei
- Hannah (REAP) - Expected Alaska Wind/Diesel Projects Under Consideration - (Confirmed)
- Tim Weis (Or Other) – Wind/Diesel Options in the Canadian Northern Territories (Confirmed)
- James Glennie (Wind Energy Institute of Canada)- Expansion of the Ramea Newfoundland wind/diesel power systems (Tentative)
- David Connelly (Ile Royale Enterprises Ltd.) - Commercial Development of Beaufort Communities Hub and Spoke Wind Energy Model (Confirmed)
- Kodiak Alaska Wind Diesel project (Tentative)

10:00 to 10:30 Break in the exhibit hall

10:30: to 11:45 Panel on Community Issues and Institutional Perspectives – Chair – Brent Petrie (AVEC)

A panel discussion of the community impacts and perspectives, both positive and negative, regarding the implementation of wind into the community. Impacts of reducing the dependence on diesel fuel usage, wind turbine noise, power quality, cost of energy, environmental impacts, and the impacts on the local power companies are all examples of positive or negative impacts that may be discussed.

- Brad Reeve (KEA) – Kotzebue Alaska (Confirmed)
- Harvey Paul (Chininik Wind Group) – Chininik, Kwigillongok & Kongiganak, Alaska (Invited)
- Tiel Smith (BBNC) - Dillingham, Alaska (Confirmed)
- Roger Taylor (National Renewable Energy Laboratory) – Implementing (Confirmed)
- Wade Carpenter (Invited)

11:45 to 1:15 Lunch at the Seven Glaciers Restaurant on the top of the Mt. Alyeska Sponsored by STG Inc.

Addressing the barriers to expanded use of wind/diesel technology and its application

Discussion of the wider barriers to the further expansion of the wind diesel market in the developed world (US, Australia, Canada and Europe) and further expansion into international markets.

1:15 to 2:15 Panel Session on Economic Factors of Wind/Diesel Systems – Chair – Dennis Meiners (IES)

Although the rising costs of diesel fuel are making wind diesel projects seem more attractive, the high costs of these projects, especially in rural Alaska, make them hard to justify. Following the initial presentations we will conduct an open discussion of the costs of wind diesel applications, how these can be reduced, and some methods to make projects more affordable.

- Brent Petrie (AVEC) - Real Total Cost of Wind / Diesel Projects in Alaska (Attendance Confirmed – Session Not)
- Dave Myers (STG) - Construction Costs of Wind / Diesel Projects in Alaska (Confirmed)
- James Glennie (Wind Energy Institute of Canada) – Crude Oil Supply and Demand Trends and Likely Future Price Trends and Their Impact on Rural Diesel Power Energy Supply - (Confirmed)
- Chris Rose (REAP) - Role of Green Tags in Financing (Confirmed)
- Peter Crimp (AEA) – Role of Government Funding (Confirmed)

2:15 to 3:15 Panel Session on Technical Issues – Chair – Brad Reeve (KEA)

Although many wind/diesel power stations are being implemented and what was considered research science just a few years ago is now becoming common place, technical challenges still exist. This discussion will outline some of the key technical issues still facing the development of wind diesel applications.

- Bill Thompson(AVEC) - Panel Technical Issues (Confirmed)
- Brett Pingree (Distributed Energy Systems) (Attendance Confirmed – Session Not)
- Dusty Murdock. (PB Ltd, New Zealand) (Confirmed)
- Charles Newcomb (Entegrity Wind Systems) (Attendance Confirmed – Session Not)
- Daniel Rogers (Electric Power Systems) (Confirmed)

3:15 to 3:45 Break in the exhibit hall

3:45 to 4:45 Panel Session on Non-Technical Issues – Chair – Per Lundsager (Darup Associates ApS)

There continue to be many non-technical issues that are delaying the implementation of wind/diesel applications, both in OECD and developing countries. During this panel discussion we hope to hear from international and Alaskan experts regarding non-technical barriers to project development.

- Dennis Meiners (Intelligent Energy Systems) – Community Scale Project Development (Confirmed)
- Martina Dabo (AEA) - Regional Development (Confirmed)
- Steve Haagenson (AEA) – Energy Plan Development (Confirmed)
- Tim Weis - Pembina Institute in Canada – Community Assessments of Wind/Diesel Applications in Canada (Confirmed)
- Kathy Prentki (Denali Commission) – Funding Large Energy Development Projects (Confirmed)
- Charles Newcomb (Entegrity Wind Systems) – Business Models for Development (Attendance Confirmed – Session Not)

4:45 to 5:15 Special Topics – Chair – Chris Rose (REAP)

A time set aside for more general discussion of presentation topics or other issues that are brought up over the course of the workshop.

5:15 to 5:45 Closing session, wrap up, and discussion – Chair – Larry Flowers (NREL)

The Greening of this event has been sponsored by TDX Power through the purchase of Denali Green Tags.