



MINUTES

March 21, 2013

5:30 PM

Bennington Station Restaurant

Meeting Registrants

BCRC Commissioners: Susan Beal – Local Food and Agriculture, Meg Cottam – Glastenbury, Chris Cranston – Woodford, Janet Hurley – Manchester Village, Rick Kelley - Manchester, Walter Klinger – Pownal, Lee Krohn – Manchester, Bruce Lierman – Transportation, Daniel Monks – Bennington, Bill Pennebaker – Shaftsbury, Scott Printz – Bennington, Charlie Rockwell – Rupert, Ed Shea – Woodford, Keith Squires - Arlington

Others: Olaf Aase, John Bootle, Nelson Brownell, David Bushee, Donald Campbell, Bill Christian, Jeanne Rogers, J. Cormier, Keith Dewey, Eyal Dolev, Yael Dolev, Bruce Evey, Doreen Forney, William Hall, Jim Hand, Nancy Henderson, Jeannie Jenkins, Amy Jensen, Matthew Patterson, Jim Lee, Karen Lee, Dianna Leezer, Bill Levine, Carl Lill, Dennis Madden, Jim Marsden, Patrick McArdle, Steven McClure, Don Miller, John O'Keefe, David Pearson, Bob Pinsonneault, Gerard Prue, Linda Putney, Tyler Resch, Hira Rhode, Solin Rhode, Jim Salsgiver, Walt Schwarz, Jonah Spivak, Mike Slattery, Rob Sperber, Norm St. Onge, Ned Wood, Wendy Woods, Carol Baringer, Cullen Meves, Alan Baker, Joan Erenhouse, Lindy Lynch, Jim Trimarchi

Speakers: Tom Evslin, John Guerin, Bill Scully, Adam Sherman

BCRC Staff: Mark Anders, Michael Batcher, Jim Henderson, Allison Langsdale, Jim Sullivan

I. Introductions by Chariman Monks. Annual meeting announced - May 16, Brian Searles, AOT Secretary featured speaker. Directed people to www.bcrct.org for other upcoming events. Introduced Allison Langsdale, new BCRC Regional Planner.

II. New Energy for Southern Vermont

Scott Printz, Chair of the BCRC Regional Energy Committee, introduced the speakers.

Wind and Solar - John Guerin, EOS Ventures

Wind: need wind resources, interconnection, permitting, and financing. Noted difficulties with permitting because of differing perspectives on wind facilities. Discussed developing "FloDesign" technology - less impacts than traditional turbines.

Solar: need adequate amount of land, interconnections, southern aspect, permitting, financing. Reviewed recently developed 2.2 MW project in Pownal. Easy to build, but financing is challenging. Federal incentives and grants, state grants, feed in tariffs, and renewable energy credits (RECs). Solar most expensive electricity to generate so the public funding support is essential. Also discussed loans and private equity.

Reviewed Vermont incentives in more detail. Provided an update on current pending legislation in Vermont. S-30 to be voted on next week; concern that message being sent is that Vermont is not open to certain renewable energy technologies.

Thermal Storage technology - energy used to heat storage devices - smoothes out power spikes and valleys.

Tom Evslin - Natural Gas

NG Advantage - delivers gas by truck to users beyond pipeline.

Natural gas is methane. CNG = compressed natural gas, LNG = liquefied natural gas, LPG = propane. Emits less CO₂ than other petroleum products and fewer other pollutants. Technology advances have led to a significant price drop, especially in the US. Current benefits are limited to users with access to a pipeline.

Limited pipeline in Vermont. Businesses in areas not on pipeline are at a competitive disadvantage. NG Advantage can save customers 20-40% on their fuel bills. Diagrammed process from compressor to delivery to customer/end user. Project development at facility in Milton went quickly with limited difficulty. Assistance from regional development corporation, VEDA, Key Bank, Town of Milton, state agencies.

Estimated annual savings for one customer using 1,500,000 gallons of oil is \$1.7 million+. Also, significant reductions in pollutants.

Reviewed many environmental benefits of natural gas relative to other fuels. Significant potential for Vermont to make quick improvements by using natural gas. Noted potential downsides as well.

Adam Sherman - Biomass

Focus on thermal biomass. Works for Biomass Energy Resource Center (BERC) which was recently acquired by Vermont Energy Investment Corporation.

Working Landscape - reminded everyone that forests are part of that landscape and that utilization of forest biomass for energy can be significant. Vermont forests have been adding more biomass than we have used for the past 50+ years. Focus on use of annual growth for fuel. Forested land near Bennington County offers about 1.4 million tons of wood biomass fuel available per year.

Discussed cord wood, wood chips, and wood pellets - tremendous potential for offsetting current use of oil for heating in the area. Could offset most all of the oil use and save millions of dollars currently exported from the regional economy (while replacing it with local economic activity).

Noted two local schools in Bennington and one college currently using wood biomass for heating. Example: college uses 400,000 gallons less oil annually since going to biomass. In general, Vermont has been a leader in thermal biomass applications (schools, one hospital, office complexes, housing complexes, college campuses, many individual businesses).

Fuel supply system is well-established and reliable.

Provided example of Austria which has wood biomass district heating systems throughout the country. Many of the systems are cooperative district owned. Austria also has integrated tourism with the working landscape and these district heating systems.

Compared heating prices for wood chips, pellets, propane, oil, and natural gas. (Lots of savings over oil and propane.) Also noted that wood chip costs are more stable than oil prices - helps with financial planning.

Bill Scully - Hydroelectric

Discussed the Paper Mill Village project in Bennington. Every potential hydro site is unique; no consistent way to meet requirements. Outlined lengthy process to obtain permits.

Vermont history of hydro - once was all hydro power. Currently over 1,000 unused dams in Vermont.

Discussed need to balance important dual goals of maintaining water quality and developing green energy. Overwhelming public support for hydro in Vermont.

Paper Mill Site: Walloomsac River. Two turbines - total installed capacity of 360 KW using "run of river" technology. Generation of 1.454 GWH per year (avg use of about 160 homes). Will have advantage of being able to control water flow to keep flow through an adjacent channel. VT Agency of Natural Resources has agreed with the water quality treatment.

Discussed brownfield remediation work done with support from BCRC. Now an EPA success story. Future use of site for housing as well as the hydro.

Lots of data to develop certainty about potential energy production - reduces risk.

Many people have helped develop a small park at the site. Major benefit to the town and residents.

Reviewed environmental benefits - saves 1,026 metric tons of CO2 emissions per year.

Lots of upfront costs and work with hydro, but then all to the good.

Questions

How can we meet state's renewable energy goals? A: real goal should be reduction in carbon. Also, solution will require a combination of many energy sources and technologies. Need to encourage people to try new technologies. Also, have to focus on thermal energy, conservation, and efficiency.

Is there a way to provide benefits back to host communities (these projects need community support to succeed)? Scully noted that his proposed hydro project in Pownal will provide a direct benefit back to the town.

Natural gas benefits versus "fracking" dangers? Evslyn discussed fracking technology. Gas layer well below ground water level, but need to be very conscious/careful about material passing through the gw layer. Horizontal drilling technology limits exposure. Also, need to carefully recover, treat, and recycle injected water/chemicals.

Is there a way to get trucked natural gas to individual businesses and homes? Yes, trucks/trains can supply community distribution pipelines. Probably also would incentivize eventual transmission pipelines. Also, could build a natural gas district heating system.

Difference in delivery technology between propane and natural gas? Difference is due to the nature of the fuel (CH₄ is very low density so has to be at much higher pressure).

Concern over ecosystem impacts of biomass harvesting? Discussed accepted management practices for forestry activities.

Solar thermal? Valuable for space and water heating.

Concern over noise associated with wind projects.

The meeting was adjourned at 8:05 PM.

Note: Presentations will be posted on www.bcrcvt.org. Also, the forum was filmed by CAT-TV.

Respectfully submitted,

James Sullivan