

**Mid-Maine Sustainability Coalition**  
**Renewable Energy and Conservation Committee**  
**Quarterly Report #1**  
**John Joseph, April 12, 2009**

We have had seven meetings of the subcommittee. At our first meeting the committee established the goal of developing a common base of knowledge. To quote from the meeting notes: "Our first goal is to become the best educated people in Maine and make sure we do not reinvent the wheel. We need to be grounded in what is being done."

The education efforts will be an ongoing process, a number of events have taken place and a more are planned. The group has simultaneously reached out to the community and initiated some important projects outlined below.

**State Policy:**

We launched our educational process with a public meeting where John Kerry, Director of the Maine Office of Energy Independence and Security, presented the State Energy Plan at Thomas College. This was attended by about 75 people and gave us an overview of the state policies. We learned that plans for spending Economic Recovery Act funds have not been fully developed but the general categories look like the following:

**Grants Available to State of Maine (Approximate Department of Energy Funding for Maine under Economic Recovery Act.**

\$41 million for low-income residential weatherization going through all the 10 CAA's, both multi-family and single family

State Energy Program \$27.2 million (A plan will be submitted to legislature, Ken Fletcher will send plan to us. Energy Efficiency and Block Grants \$11 million (We need to research this and have a meeting)

Funds to be spent over 3 years

The legislature is also working to reorganize the state's energy efficiency programs (currently under Efficiency Maine and the Energy and Carbon Savings Trust). The objective is to bring them within the same organizational structure them to implement an all fuels perspective. The Joint Select Committee on Maine's Energy Future trying to bring things together.

**Residential Energy Conservation: Dick Thomas and Ken Fletcher**

On April 9 the committee met with KVCAP staff to review the low-income weatherization program. KVCAP will experience a significant increase in funding as the state weatherization program which normally receives \$4 million a year will receive an additional \$41 million over the next three years as part of the Economic Recovery Act (stimulus plan).

Meeting attended by Ken F., Francis R., Chris B., John J., Steve E., Elery K., Tom T., Dick T. Presentation was made by David Gilpatrick. The group decided to supplement KVCAP's efforts by focusing on the residential population above the income eligibility range for KVCAP, i.e. household above 200% of Poverty, above \$28,000 annual income.

**Target 200% above poverty for residential sector**, we have devised the outline of a plan:

1. Engaging bankers (Dave Roy, Kennebec Savings, holds their own loans, Dick Thomas talked with Dave, Kennebec Federal Savings Bank, Credit Unions
  - a. Finance Committees should be invited to take part.
2. Engage Energy companies, (Spring Brook, Downeast Energy)
3. Use Cambridge Community Alliance as a model (Dick Thomas is doing research on this <http://www.cambridgeenergyalliance.org/>)
4. Utilize student research resources
  - a. *Inventory of housing energy needs*
    - i. LIHEAP Data
  - b. Work with an oil Company to get congregate data regarding oil consumption in our community. Ask the oil company to mail a letter to customers asking permission to call to obtain data on the square footage of their home. Oil use /square footage should provide a figure that reflects how energy efficient a home is to heat.
  - c. *Prepare a consumer package*
    - i. Wx
    - ii. Alternative Energy
5. Approach Kendal Foundation possible funding: (They funded the Cambridge Energy Alliance and have worked in Waterville with Colby before).
6. Develop a One-stop shopping package for residences, involving an energy audit with recommendations regarding weatherization, energy efficiency, alternative fuels, and financing.

### **Commercial Conservation and Alternative Energy**

We hosted a meeting of USDA Rural Development Office held at Thomas College where the USDA staff briefed our member plus other potential clients for the USDA Rural Energy Grants and Loans program. This meeting was attended by about 50 people. Good contacts were made for future financial assistance. These funds are primarily for small business; value added food processors, and agricultural producers. Dick Fortin of Efficiency Maine also made a presentation addressing ways that Efficiency Maine can supplement USDA funds and also how Efficiency Maine Fund can be accessed independently of USDA.

### **Community Wind:** Chris Bryan, Mike Willey and Bob Hussey

We have meet with Dana Doran from KVCC, Greg Fletcher (faculty member at KVCC) has made some wind measurements on the campus -- which is right across I-95 from Hammond Tractor. John Joseph and Chris Bryan have both told Greg about our group and Greg is happy to cooperate. Based on your conversations with Greg and his results you could decide whether it makes sense to do further monitoring at KVCC or to jump over to Gary Hammond.

**Planning a Community Wind Workshop** (Chris Bryan) Speakers are available, great web sites, lots of research going on, opportunities of collaboration, discussion with Unity Sustainability group. Workshop open to the public: Review different business models, Ron Desrosiers, Mary Ann Hayes (Maine Rural Partners) Fred Snow on local ordinance for wind. How should community wind projects be structured?

We are monitoring community wind legislation related to net metering: Wind rebates, cash in excess of net metering, off site group of people.

**Small workshop for wind generator siting issues:** Paul Villeneuve at UMO & Tom Kahl has knowledge of wind resource. KVCOG is developing a model ordinance for with siting (Fred Snow) Micro climate in Central Maine. AWS Truewind has data that allows you to choose sites. Mike Willey, Bob Hussey, Chuck Lakin, and Chris, are focused on Wind. Waterville Air Port has any anemometer.

**District Energy** Gus Libby, John Joseph, Elery Keene, and Greg Brown met on April 7. Group will met with Huhtamaki. Ken will seek students to assist on this project at the steering committee meeting on April 23, 2009. This is project which could distinguish the Mid-Maine Community as the first in Maine to adopt this strategy. The project will need a grant for feasibility analysis. John Joseph will follow up on funding possibilities.

The district energy project would likely be fuel with wood and would produce energy (electricity, steam, hot water) to be used by local industrial users, downtown buildings and new firms located adjacent to the facility. It could essentially be an economic development project, or an Eco Park.

Draft of first draft set of questions which may be addressed in Feasibility Analysis:

1. Define the District: What is the optimal sized of the district?
2. Who are the potential partners?
3. What is the hot water/heat load in the district, on a monthly basis?
4. What is property owner interest: municipal, commercial, institutional, and residential?
5. What is the optimal fuel type?
6. Can wood chips/pellets be procured sustainably at a competitive price, how? Would it be more economical to obtain logs and produce wood chips for fuel on-site and to produce wood pellets for local sale?
7. What are the economic options for fuel delivery, local by truck, longer distance by rail?
8. What is the optimal combustion technology?
9. What is the optimal heat distribution technology?
10. What is the optimal technology for connecting to the client buildings?
11. How should usage be measured and how should billings be administered?
12. How should the ownership and management structured?

13. What will the project cost? Can it be done in phases? What size buildings are feasible to be served?
14. What are the potential revenues?
15. How should prices be set?
16. At what oil prices does the district heating system create real economic value?
17. Can electricity be produced economically? How much at what price?
18. What kind of sustainable economic development can be attracted with to the district with competitive? Green houses, food processing, data storage, ice making? An ECO development park would be an appropriate term for the concept.
19. What is the optimal financial plan, bonds, private investment, grants?
20. What are the environmental issues, water usage, air permits, etc.?
21. What are the roles for Colleges, City, State, and Federal Government?
22. How do we create community support for the project?
23. Would it economical to use exhaust air (which is heated and CO2 rich) for a large scale greenhouse to produce food for local sale? (If transportation costs become prohibitive someday, it may behoove our community to produce its own residential fuel and vegetables all winter.)

**Solar PV and Solar Hot Water:** We have concluded that solar hot water is a near term alternative with commercial opportunities. We have found out that KVCC provides professional certifications for both solar hot water and solar PV. The PV certification is national and the solar hot water is a state certification. KVCC is a leader in this field and we expect to work closely with them.