

**Sustain Mid Maine Coalition
Climate Change Public Policy Team
Meeting Minutes
September 23, 2013**

Meeting started at about 6:35 p.m. at the Winslow Public Library. Members present: Jane Edwards, Elery Keene, Peter Garrett, Tom Tietenberg, Dick Thomas. Also present: Ernie Grolimund of Waterville and Mike Hind of Augusta.

Tom Tietenberg made a motion to approve the minutes of the August 26, 2013 meeting. Seconded by Peter Garrett and unanimously approved.

It was decided that the next meeting, October 28, 2013 will be held at Winslow Library from 6:30 to 8:00. It will be a special meeting to which members of the Maine State Legislature who represent our SMMC towns will be invited. Also, Sustain Mid Maine Coalition Board members and team leaders will be invited. The purpose will be to develop good lines of communication that may be helpful when legislation relating to climate change is being considered by the legislature in the coming session. Our committee will make a presentation. We will ask for feedback from the legislators present. We will ask legislators to tell us what we can do to help them. We should have some time for some one on one communication between our members and the legislators.

Over the next few months members of our team will try to attend a meeting of each of the other teams, asking them to tell us about things they are trying to do that relate to public policy. We could include their concerns in our public policy statements and help them gain support from legislators and municipal officials.

Elery reported on the meeting of the Energy, Utilities, and Technology legislative committee on Friday, September 20, 2013. This was a special meeting to consider alternative energy legislation that was held over by the committee from the spring, 2013 legislative session. This is legislation that was not reported out of committee so that it can be considered during the 2014 legislative session. Committee members wanted to have more time than was available to study the issues included in this group of proposed legislation before making a decision. Elery passed around a list of LD's that were being handled in this way. He also provided a written outline of what happened at the meeting to the members present.

Elery also reported on a meeting of SMMC team leaders, reading to members a statement from the minutes regarding what our team is doing.

There was a discussion of the Policy Statement adopted at the last meeting. Minor revisions were made to this Policy Statement by vote of the team members present. See attached. Tom made a motion to approve these changes. Peter seconded this motion. The motion was approved unanimously. A copy is attached to these minutes.

There was discussion of a draft Technical Appendix to the above-mentioned Policy Statement. One minor change was suggested. Peter made a motion to accept the Technical Appendix with this one change. Elery seconded this motion. The motion was approved unanimously. A copy is attached to these minutes.

Elery distributed copies of a statement he had drafted on September 23, 2013 titled: The Transition Fuel Problem. Any action on this will need to be considered at a future meeting.

Meeting adjourned at 7:55 p.m.

Policy Statement Regarding Climate Change and High Carbon Fuels

SMMC Climate Change Public Policy Team, September 23, 2013

SMMC recognizes that increased concentrations of carbon dioxide in the atmosphere come from combustion of wood and fossil fuels. SMMC's vision statements passed and signed in 2009 and 2012 included the resolution for 2020 that: "...we have reduced our carbon footprint and our use of fossil fuels by 50% since 2009."

The path we are on will not achieve this goal. Thus SMMC supports a policy that includes:

Energy conservation and energy efficiency - for instance by weatherizing buildings and improving efficiency of household appliances.

Transitioning to non-fuel energy sources as quickly as possible - for electricity generation, heating and cooling, transportation, agriculture and industry.

Adapting to climate change in addition to mitigation because the consequences of climate change are already happening.

Natural gas may achieve the goal of providing less expensive energy to our community. However, it will likely interfere with our efforts to mitigate climate change for the following reasons:

We now know that inevitable leakage of natural gas contributes dramatically to climate change (see technical appendix).

Investing in natural gas infrastructure will delay necessary investment in low carbon alternatives.

The longer we delay the transition from high carbon fuels, such as cordwood and fossil fuels to other sources of energy the more costly it will be to overcome the damage to our way of life that will result from changes in climate. These include warming atmosphere and oceans, changed size and frequency of major storm and drought events, very significant rise in sea level and increased extinction of life forms worldwide. Furthermore, agriculture and fisheries will be harmed unless we reduce our carbon footprint. This will reduce our ability to feed as many people as are living on earth at the present time.

Technical Appendix to Climate Change Policy Statement for SMMC

SMMC Climate Change and Policy Committee September 23, 2013

In recent years natural gas has been hailed for its presumed benefits in two areas: First as a boon for the economy because it is currently cheaper than alternatives such as oil and

propane; Second as a useful “transition” fuel allowing for a shift from coal or oil to renewable sources of energy.

The first “economic benefit” is by no means secure, as the price of the natural gas itself is market-driven. Only its delivery to the customer is determined by the Public Utilities Commission. The second “benefit”, as it relates to climate change, will be examined briefly below.

Natural gas is mostly methane (CH₄). Unlike other fossil fuels, it contains only one carbon atom to four of hydrogen. Thus burning it in the presence of oxygen produces less carbon dioxide than other fossil fuels (coal or oil) for the same amount of heat produced. That is why it is sometimes hailed as being “better for the environment” and “a good transition fuel”.

Unfortunately methane is considerably more potent as a greenhouse gas than carbon dioxide. If it escapes into the air without being burned it slowly becomes oxidized to carbon dioxide, so the effect of its potency as a greenhouse gas is greatest in the early years following escape. It has been estimated that methane is 80-100 times more potent than carbon dioxide for the first 20 years following escape, decreasing to 20-25 times more potent over a 100-year time frame (IPCC estimate).

(http://www.clf.org/static/natural-gas-leaks/WhitePaper_Final_lowres.pdf)

Comparing the benefits (less carbon dioxide emissions from its use as a fuel) and drawbacks (potent greenhouse gas) has led to an estimate that if 3.5% of methane escapes unburned, then it cannot be considered a viable transition fuel from coal or oil.

So what are the chances of methane escaping unburned? Some methane escapes naturally of course, and always has, from wetlands for instance. Modern agriculture and waste disposal are relatively new sources of methane escape

(<http://epa.gov/climatechange/ghgemissions/gases/ch4.html>). The exploitation of oil/gas fields and fracking operations is associated with additional leakage, estimated at between 2.4 and 9% of the amount of methane produced for combustion.

(<http://www.nature.com/news/methane-leaks-erode-green-credentials-of-natural-gas-1.12123>).

In addition, methane leaks from natural gas distribution pipelines in our cities. Unfortunately, leakage is difficult to measure and investigation of municipal systems is just beginning. However, recent studies of Boston’s and Washington DC’s natural gas pipeline infrastructure confirm the suspicion that leakage is high. The actual rate of leakage is likely to be very high if comparison can be made to municipal water systems, which average a loss of 22% of the water produced for use, and 40% for poorly operated systems.

Given the potency of methane as a greenhouse gas and the likely losses from natural gas extraction and distribution, the nation’s newfound faith in natural gas as a transition fuel is seriously misplaced.

Instead we must keep our focus on items that we know have beneficial results, both for the economy and for reduction of climate change effects, such as:

- Weatherizing all buildings and improving the efficiency of household appliances;
- Improving the efficiency of vehicles and transportation (largely involving personal choices, but also design/re-design of towns and cities);
- Reducing production of methane from human activities (agriculture, waste disposal and natural gas production and use); and

- Proceeding with research and installation of renewable energy systems (e.g. solar, wind, geothermal, and hydropower).

To focus on anything else is short-sighted and, as this brief account of what is known about natural gas demonstrates, is likely to be counter-productive.