

Alan Betts: Energy Update

(VPR HOST) *Where do we stand now in Vermont, as the Governor's Commission on Climate Change wraps up a year of analysis? Commentator Alan Betts says Vermont has many options.*

(BETTS) Recently the Climate Change Commission held its last plenary meeting in Montpelier. Four working groups have been analyzing policy options for Vermont that would reduce our greenhouse gas emissions twenty years from now to one-half of what they were in 1990. As you can imagine this is challenging; but we need to do it, if we are to shift VT away from dependence on fossil fuels; and avoid a climate crisis not just for Vermont, but for the whole earth later this century. Of course VT can't do it alone, but we can make a start; and it is clear that there are huge savings and economic benefits for Vermonters, as fossil fuels get more costly.

So what can Vermont do?

Transportation is the largest source: 44% of the state's greenhouse gas emissions in 2005. Vermont is a rural state; many have long daily commutes; and the average fuel consumption of our light vehicles is only 20 mpg. This adds up to over \$3000 a year in gas costs for many families. The solution is obvious: reducing greenhouse gas emissions and gasoline costs requires primarily more efficient vehicles. If we have more efficient vehicles, then we can take a further significant bite out of our emissions by partially substituting biofuels, which Vermont can grow. But we can gain something in other ways by dreaming up more efficient ways to get around and perhaps drive less. In the long-term, it means better long-range planning of where we live and work; and how we plan development and public transportation in Vermont. The current reality is that more than 90% of the cars on our roads have a single occupant. In the short term, we could devise better tools for ride-sharing, just as Google Transit has addressed the networking of public transport in many states.

Winter heating by burning fossil fuels, primarily oil and some natural gas is the second largest source: 30% of the state's emissions. Reductions here mean improvements in building energy efficiency: both in new construction and the retrofitting of older buildings. The savings in fuel costs are large, so that payback on investment is usually rapid. Still, it will take a while to transform Vermont's buildings. We need to get started, and figure out schemes to finance the up-front costs.

Greenhouse gas emissions from the electrical sector are low in Vermont (only 7% in 2005), because roughly one-third of Vermont's electricity comes from hydroelectric sources, and one-third from nuclear power (where emissions come primarily from processing nuclear fuel and waste). In addition, electrical consumption is slowly falling because Vermont has been a leader in reducing demand through Efficiency Vermont. More can still be saved by greater efficiency; and if we develop the state's renewable resources (biofuels, wind, and small hydro), we will reap economic benefits.

Finally Vermont's forests are crucial for biodiversity and wild-life; they matter to us for recreation, they are a source of wood products and fuels, and their growth takes up CO₂. We must plan carefully the future of our forests.

Alan Betts is president of the Vermont Academy of Science and Engineering.