

## **Vermont Clean Energy Investment Summit**

**April 9<sup>th</sup>, 2012**

I want to thank Governor Shumlin and Commissioner Liz Miller for working with my office to make this event possible. I am very pleased that we are joined by Major General Michael Dubie of the Vermont National Guard. And I am especially grateful that Richard Kauffman, Senior Advisor to Secretary of Energy Steven Chu, has come up from Washington to be with us. Mr. Kaufman, a former Chairman of the Board of Levi Strauss and with extensive experience in finance, testified at an Energy Committee hearing earlier this year. I was very impressed by what he had to say, and I'm delighted that he's with us today.

This Clean Energy Investment Summit is an unusual event in that we are bringing together sustainable energy businesses, the Vermont business community, federal and state officials, banks and investment companies, and leading energy organizations and non-profits. This is a diverse group, but our common goal is clear: We want to make Vermont a model for America. We are here today to talk about how we can ramp up investment, both public and private, in energy efficiency and sustainable energy

To my mind, the themes of today's conference are pretty simple. First: How can Vermont play an even greater role than it is playing today in cutting greenhouse gas emissions and helping the planet reverse global warming? Second, with the middle class in decline and money hard to come by for many Vermont families, how do we save Vermont home owners and businesses a significant amount of money on their fuel bills? Third, with unemployment much too high, how do we create new jobs in Vermont by expanding the use of energy efficiency and sustainable energy? These are the 3 major issues that I hope we can focus on.

- **Global Warming** – One of the very saddest things that is taking place in Washington today is the degree to which many in Congress are turning away from science and scientific findings. I suspect that this has a lot to do with money in politics, especially money from oil and coal companies.

In any case, virtually every major scientific institution in the world has concluded that global warming is real, and significantly driven by human activities such as the burning of fossil fuels. Last month, Senator Sheldon Whitehouse of RI and I had a most interesting media event. We had representatives of the reinsurance industry, not widely known as radical environmentalists, speak about how the number and

severity of extreme weather disturbances has impacted their bottom line, cost them billions of dollars and how government must address this issue. All over the world, in including Vermont, we have seen significant increases in droughts, flooding, unusual weather patterns and severe weather disturbances. In the United States last year, as just one example, we had a record 14 weather disasters that each caused \$1 billion or more in damage, including Hurricane Irene. In Burlington this past March, according to the National Weather Service, the average temperature was 12.2 degrees higher than normal, and 3 degrees higher than the previous warmest March which was in 1903.

Because of global warming researchers believe Vermont's climate in 2080 will be like Georgia's today. In March it felt like Georgia in Vermont, and that is not good news for winter tourism industries, or our sugar maple producers. So in the face of new weather extremes, we are here to talk about our role in reversing global warming.

- **Saving on Our Energy Bills** –In Vermont nearly 50% of our homes heat with oil, another 15% heat with propane, and 18% heat with gas. We spend \$1 billion annually to heat our homes and buildings, and 80 percent of that money goes out of state. The average cost of heating with oil for a family this year is

expected to be \$2,600. That is a lot of money. So we are also here to talk about how we can save consumers money on their fuel bills and their energy bills.

- **Create Green Jobs** -At a time when we are still desperately trying to recover from the worst Recession since the Great Depression, we need to invest in new industries that are creating jobs. When we retrofit a home, or drill a geothermal well, or install solar or wind, we are not only helping the environment, we are creating jobs. By one count, Vermont already leads the nation in the percentage of our jobs that are green jobs. We are here to talk about how we can expand upon that and create thousands more jobs in Vermont and around the country as we transform our energy system and move more aggressively toward energy efficiency and sustainable energy.

### **Vermont Making Progress**

**Energy Efficiency** -The good news is that Vermont may well be the leader in the country in terms of energy efficiency. It is no small thing that our utilities sell less electricity now than several years ago thanks to the state's efforts in energy efficiency. Think of what would mean if the rest of the country were following Vermont's example. How many fewer coal burning plants would exist, how much less air pollution and greenhouse gas emissions

would be produced? And, importantly, instead of spending 80 percent of our dollars out of state and out of the country for oil, we are spending 80 percent of our dollars in-state on energy efficiency investments.

In the last ten years we weatherized nearly 15,000 homes, helping low-income families save \$916 a year on average in energy costs. That is a savings of almost \$14,000,000 every year. That's real money, especially for the low-income community. I have personally seen the results and have talked with folks who are saving 30 or 40 percent on their bills and living in far more comfortable homes. With the average investment per unit of \$5,783 in Vermont, the payback is just over 6 years. This is an investment that cuts greenhouse gas emissions, saves consumers money on their fuel bills, and creates jobs. It is a win-win-win concept. It is something that must be expanded.

**Stimulus** -I understand that the stimulus package has been much maligned. I disagree with that assessment for a number of reasons. In terms of energy, I am proud that the stimulus package invested significantly in helping transform Vermont's energy system. We received nearly \$22 million for the Clean Energy Development Fund. We brought in \$16.8 million for weatherization, which helped 2,500 households just in the past few years. The Energy

Efficiency and Conservation Block Grant program I helped write delivered to Vermont and our cities and towns and counties about \$16.5 million. This funding is retrofitting schools, updating street lights, and improving efficiency in our public buildings. It is also helping pilot a program in Rutland to retrofit 1,000 homes, which is nearly halfway complete. The stimulus also brought in nearly \$69 million to help make Vermont the first state to have near-universal smart meters by 2013 – a development which could be very significant for efficiency purposes. We are building on that effort by working with Sandia National Lab to create a research center in Vermont for smart grid and sustainable energy.

**Sustainable Energy** -Finally, I am also pleased that we are beginning to make progress as a state on sustainable energy. We have General Dubie here today, and we worked together to install a 1.45 megawatt solar project at the Vermont National Guard base that is expected to save roughly \$250,000 a year in energy costs. It is not just the Guard; we are seeing an explosion of solar across our state. I have worked on a solar in schools program that helped install solar in 11 schools, including the largest solar project at any public school in the state at Camel's Hump Middle School.

Camel's Hump is also one of 47 schools in the state heating with biomass. We have some terrific geothermal projects, including at Champlain College, the Veterans Home in Bennington, and even

the rest area on I-89 in Sharon. And we have major wind projects, and leading wind technology manufacturers in Vermont.

### **OurFuture Energy Challenge**

With all of this progress, the truth is we still have barely dented the surface of our potential. In my view, if you look at the moral imperative we face to reverse global warming; if you look at the need to move toward energy independence and avoid future wars in the Mideast; if you want to cut back on air pollution; if you want to save consumers money; if you want to create jobs - the best investment we as a nation and state can make is in energy efficiency and sustainable energy.

We in Vermont have a history of frugality. We don't like to waste. That is part of our culture. It makes no sense, therefore, that we are wasting hundreds of millions of dollars a year on energy that is simply going through roofs, windows, walls and doors and in the operation of inefficient heating and cooling systems and appliances. We want to capture that huge sum of money and put it back into the hands of Vermont's working families.

Further, at a time when the cost to install solar and wind has declined dramatically, and when we know geothermal and biomass heating is increasingly cost-effective, we want to expand

sustainable energy. And for those of us who think it is time for Vermont Yankee to retire, sustainable energy is even more imperative.

So how do we meet our goals? We need significant investment capital. We are not talking about buying a TV. We are talking about energy investments that save substantial sums of money, cut emissions, create jobs, and add tax revenue. To quote National Grid, efficiency improvements are “investment grade.” They make as much sense to investors as environmentalists.

If I am a homeowner making \$50,000 a year and spending \$3,300 on fuel and electric bills, which is about average in Vermont, I can save money by doing things like insulation, caulking, installing efficient lighting or windows, or upgrading my furnace. According to Efficiency Vermont, for an investment of about \$10,000 I can save 25 percent, or \$825 a year, on my energy bills. That would be about a 12 year payback, not unreasonable. What if we could achieve these savings in a quarter of our homes, about 80,000 of them? We would save \$66 million annually! But we’d need to invest \$800 million. As frugal Vermonters, we don’t like wasting hundreds of millions in energy costs annually, but how do we make the big upfront investment we need?



You know, if you own the Empire State Building, you can get a contractor to pay for the upfront cost of a retrofit at about \$13 million, and use the savings, in their case \$4.4 million a year, to pay back the project cost in 3 years. That is a pretty good deal. And if you are a low-income family you can receive weatherization assistance. A few years ago I met with Agnes Billings, a senior citizen from Barre, Vermont, who joined me to talk about how weatherization at her historic duplex saved her family 40 percent on fuel bills.

**On-Bill Financing** -But what if you are not the owner of the Empire State Building, and you are not a low-income family. What if you are a middle-income family, or a small business? How can we reach the vast majority of people who all things being equal, would probably like to save money on their energy bills and help the environment? Well, one way we can help is through something called on-bill financing. It gives households and small businesses and schools the same deal the Empire State Building gets. With on-bill financing, utilities work with investors or lenders to provide funds to make energy upgrades, and you use the savings to pay back the loan over time on your energy bill. All the potential partners to make this happen are here today. Let's work together to bring on-bill financing to Vermonters.

**Clean Energy Bank** –Our Clean Energy Development Fund has invested in efficiency and sustainable energy projects, large and small. But we cannot meet our goals solely with public funds. We need to leverage our dollars, and we need maximum flexibility. And we need to partner with those financial investors, and maybe our own pension funds, who see the opportunity to create jobs and make real investments that help the environment instead of putting their money in the unethical gambling casino on Wall Street. Well our neighbors in Connecticut have had an interesting idea. They have developed a unique Clean Energy Bank that combines public and private funds to invest in efficiency and renewable energy projects. The Bank will allow private investors to make a fair profit, and will draw in private capital that might otherwise not have been invested in clean energy.Why can't we do this or something like it in Vermont? Let's explore this concept today.

### **Model for the Nation**

Our job, and it is not easy, is to develop a process and a business plan to attract capital to these critical sustainable energy and energy efficiency projects. Even if we succeed, Vermont is a small state, we cannot solve global warming by ourselves. But we can be a model for the nation, and help make America a model for the world, that is how our actions here can have a huge impact. We are

a leader in efficiency, and beginning to move on sustainable energy. This Summit is about exploring innovative ideas and driving them forward aggressively. Let's work together to expand on our energy efficiency leadership, catalyze sustainable energy investments, and make Vermont a model for the nation.