Dear Director Hatfield and Members of the Energy Advisory Council,

I urge you to set a goal in the state energy strategy to reduce the export of our energy dollars from 66% (nearly $4 billion annually[1]), to 50% by 2023, retaining over $1 billion of economic wealth each year in New Hampshire. This goal can be reached by pursuing the following three strategies:

1. Significantly ramp up energy efficiency and conservation through system wide efficiency investments (customer-side and utility/supplier-side), to reduce overall energy use;
2. Replace imported fossil fuel use with locally produced renewable energy, with an emphasis on:
    a. distributed generation including tidal
    b. utility-scale generation
    c. thermal and electric fuel switching for heating, cooling, and transportation needs; and,
    d. Electrical storage
3. Unleash the private market to finance the infrastructure by minimizing policy risk, sending clear market signals, and better leveraging our minimal available public funds.

Rationale for changing the way we generate and consume electricity in New Hampshire

David Borden

New England is dangerously close to running out of electricity during periods of peak demand; demands caused by summer heat waves and the winter polar vortex.

Coal, oil and other power plants are called into play and the cost of generation spirals upward when the New England electrical system runs out of supply on hot days. This problem has a big impact on our economy, increasing the cost of electricity and potentially causing institutions to lay off employees and discouraging high tech manufacturing from locating here.

One would think that a deregulated electricity market would be able to shift easily from one source to another but New England coal plants and the Vermont Yankee nuclear plant are closing, shrinking the supply of “baseline” electricity. And no large generators are available to fill the gap.

You would think that the free market would let the electric companies always find the low cost suppliers, keeping our rates down. Unfortunately our electric utilities are like a factory perfectly set up to build 1,000 widgets a month at a competitive price, but peak demand, instead of creating lower costs through economies of scale, as Adam Smith predicted, creates higher costs.

Natural gas pipeline companies are holding off connecting us the shale fields right now because nobody wants to finance large gas fired power plants.

The North Country is fighting against the new power lines proposed in the Northern Pass project to bring hydropower south from Quebec.

So the real problem is peak demand and we need to address this problem directly to give us what we really need; low cost power from sustainable sources.

First, reduce demand through energy efficiency. The average American consumes around 1,400 watts of electricity per day while residents of the European Union consume about 690 watts per day. Because the savings are so dramatic, financing efficiency can be an attractive investment.

Second, create storage systems that put electricity onto the grid when the demand is highest. This is more complex but new systems are under design, which could "shave" peak demand.

Third, generate what Senator Jeb Bradley calls "home grown" electricity, particularly wind and solar. Although there is a lot of resistance to large wind farms in some areas of New Hampshire and Vermont, smaller, local wind farms could balance the demand, just as they do all over Europe. And solar power combined with storage systems and more efficient buildings has vast potential.

The draft Energy Strategy projects growth in consumption too high and savings too conservatively.

Watts per capita per day

World	313
China	447
Italy	581
UK	628
EU	688
Japan	774
France	804
Russia	808
Germany	861
US	1,402
Canada	1,871