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Lessons from winter

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It has been a chilly and snowy winter in the northeast, while temperatures in the western US and Alaska have been high. Temperatures in the Arctic have been very high and the sea-ice cover has reached record low values. As the Arctic warms, the cold polar vortex weakens, and it has become more unstable. There have been large exchanges of warm air flowing into the Arctic and cold polar air sinking into eastern North America and then into Europe in March. These air-mass exchanges produced both our cooler winter and the warmer Arctic.

Snow cover locks in cold temperatures, because it reflects so much of the sun's energy that little snow can melt, until the sun is higher in the sky. But the winter has had some extreme transitions. When warm air came in from the south on January 11-12, temperatures which had been below zero soared to 60 degrees. The snow all melted, and to my surprise, the soil was unfrozen and I could dig under some of my cover crop.

By late March, we are eating spinach again that overwintered in a glass cold frame, buried under snow until last week. Our spring lettuce will soon be ready. The Rutland farmers' market has had mixed salad greens, grown in unheated greenhouses, since mid-February.

Last December the fuel efficiency of our Prius Prime plug-in hybrid dropped below 100mpg for the first time, as the battery is less efficient when cold, and 20% of its energy is used to heat the car. In contrast we average 160 mpg in summer with a mix of short and long-range trips. Our average on the first 14000 miles is 134 mpg, which means we are burning only 90 gallons of gas per year. Plug-in hybrids reduce carbon emissions by 80% and are available now.

Global trade issues are in flux. The European Commission has backed a French call to make trade deals with Europe contingent on membership of the Paris climate agreement. This is a step forward towards global responsibility. And a small step towards holding the US government responsible for sacrificing the Earth's climate to protect the financial interests of its fossil carbon sponsors. However our president believes he can control trade using tariffs, so trade wars threaten.

The deeper economic issue is that climate change denial is driving a huge fossil carbon bubble. We face the collapse of the perceived value of fossil carbon assets and related industries, as well as the value of coastal property threatened by storm surges and sea level rise. Trillions of dollars of assets will lose their value as climate change accelerates. We would be wise to manage this transition using a little environmental intelligence.

At town meeting last month, 35 Vermont towns voted overwhelmingly in favor of resolutions seeking climate solutions. They urged the State of Vermont to meet its goals for 90% renewable energy, and called for a fair and equitable transition off fossil fuels. The majority of the resolutions also demanded a ban on any new fossil fuel infrastructure, such as natural gas pipelines. This is a stark but encouraging contrast with federal policy.

I am reminded how Vermont conservatives realized long ago that conserving the natural resources of the Earth was crucial for our society. I remember well Art Gibb, one of my neighbors in Weybridge, who led the

Commission that drafted Act 250 in 1970. Yet strangely in our Nation's capital, many that claim to be conservatives do not see that conserving the climate of this planet is crucial for future life on Earth. Morally blind, they would sell our children's future to those who fund their election campaigns.

Yet spring is here again and very soon I will have the delight of planting frost-hardy seeds to rejoin the cycle of life.