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Not Invented Here: What New England Can Learn from Northern Europe (And how many small businesses could benefit)

Marlboro MBA students and faculty are traveling to Sweden in December in partnership with the Vermont Global Trade Partnership (the state's trade-promotion agency) to try to learn how Northern Europe manages to achieve a higher standard of living - and potent business competitiveness - on a much leaner energy diet than any US state at present can countenance. We'll be visiting district energy plants, biogas digesters, and resource-efficient buildings, and scrutinizing everything from local agriculture to public transit. [The details of this trip are available from the main Marlboro College Grad Center web page, at <http://www.marlboro.edu>.]

But we'll be neck-deep in a history and social context quite different from those of the US, lest anyone think, "Oh, all we have to do is bring some of those European boxes home and hook them up."

By now, it is fairly well-known that EU average per-capita energy consumption is about half of that in the US. If the US were performing at the EU norm in energy efficiency, our energy bill and carbon emissions would roughly be halved. The US imports about 10 million barrels of crude oil per day. Imagine if that were cut in half. That would keep \$675,000,000 from leaving the country each day, or about \$250 billion per year. Start cutting the various other slices of the US energy pie in half as well – such as electric consumption and domestic natural gas - and pretty soon you'd be talking about real money!

The US also emits about a quarter of global greenhouse gases. If the US were performing at European energy efficiency norms, and this improvement were reflected evenly across all energy types, humanity would achieve a 12.5% reduction in greenhouse gas emissions – a meaningful step toward the 80% reduction that climatologists believe we must reach by 2040 or 2050.

I'm not talking about sweeping visions of energy transformation, like Al Gore's challenge to America to generate 100% of electricity using renewables within 10 years, or T. Boone Pickens' ideas about wind energy and natural gas, or one of the many other radical and perhaps a bit grandiose roadmaps leading away from fossil fuel dependency. No. I'm talking about a combination of technologies and behaviors that you can see for yourself a mere half-day's flight from most of the US: daily life in the EU. It's not science fiction. It's not a prototype. It's just everyday normality, with modern life going on around and within it.

Everyday normality. Not here, though. What is commonplace in the EU could just as well be generations away from what most Americans experience in our daily life.

Examples include not just the smaller cars, but the vast network of high-quality, modern rail and bus systems across the continent, the well-insulated buildings in Northern Europe, the triple-glazed windows in many countries, the timer switches that turn off corridor lights when no one needs them, and the extensive use of district energy systems. (Note that NONE of the above need involve renewable energy technologies.)

Then there's the far-lower amount of retail space per EU inhabitant, the smaller living areas of houses and apartments, fewer vehicles per household, the more compact town and city centers, and the greater reliance on walking and cycling to get around.

Such factors are part of the detail of this alternative modern reality that Americans can benchmark themselves against. A step backwards? A more meager existence? That might be how Europe looked to Americans in the aftermath of the Second World War – ever heard of the book *Europe on \$5 a Day?* – but today most of the EU outperforms the US on a long list of social, health, and welfare indicators, and still manages to remain industrially competitive in a variety of knowledge-intensive and niche markets.

Of course, this did not happen overnight, and governments played active roles. With higher population densities than much of the US, and more limited energy resources, along with the memory of the Second World War (when energy was extremely scarce), European energy consumption never soared to US levels, and public policy steered away from the US route in the aftermath of the 1970s' oil crises. The public tolerated much more stringent energy regimes. Europeans love their cars, but the infrastructure of society never reached the heights of automobile focus on which living patterns in much of the US are based. With the exception of some suburbs, Europe's configuration of settlement came into being before there were cars and the energy-intensive lifestyle they bring.

Which brings me back to New England and Sweden. New England's towns and villages were laid and spaced out before there were cars. Suburbs surround the cities today, but a lot of people still live right in the cities and towns, or in the villages clustered along rivers, coastlines, and roads of colonial origin. We have our malls, and lots of people like to live out in rural areas from which it's necessary to drive long distances to jobs, but when you look at New England you can see a basic pre-industrial European landscape, with certain differences. It is not impossible to imagine the changes that could be implemented by adopting the patterns and practices that help the EU achieve its higher energy (and climate) performance, myriad as they may be. And in pursuing this direction of thought, Scandinavia is of particular interest. First, the winter climate is good and cold, like Vermont's, for example. Second, it rains about as much, so water is generally not a scarce resource. Third, despite better trains and busses, population density is much lower than you'll find in Europe's major urban centers, and many people need cars for getting to work and stores. And fourth – like New England - there are a lot of forests, and wood is both an important resource for construction and a source of renewable energy.

With things as they are, going to Sweden to take a closer look appears to be a potentially useful exercise for our students and for business and political leaders around Vermont.

But here's my hunch, and why I believe that many opportunities for trade and technology transfer may eventually result. While government and some larger corporations such as ABB and Skanska provide some of the explanation for Sweden's advanced position on the energy front relative to our own, a wide variety of small and medium-sized companies provide the know-how, innovations, components, and services needed by everything from district energy systems to greener buildings to mass-transit networks. Moreover, these companies are used to a mainly domestic market, or – increasingly – a regional European market. Because energy has historically been so cheap in the US, the infrastructure they contribute to has never developed here. Consequently, they have no experience doing business in the US. They may work internationally within the EU, but not across the Atlantic. Most likely, the US has always been a

daunting, huge, scary, litigious environment where profits were never especially promising for them.

This is most likely changing. The US is in a kind of energy shock at the moment. Crude oil prices this summer have neared \$150 per barrel. Heating this coming winter will be difficult for many to afford. Sales of SUV's are dropping fast. Many short-term adjustments to the situation are being made. However, over time – assuming continued energy price increases – adjustment will shift into a more durable, long-term mode by both private and public-sector investors, and the kinds of solutions we see in a place like Sweden – particularly on a building, site, or community scale – will become increasingly compelling. It is then that all the relevant SME's in Sweden will start to see their potential US market emerge. Certainly, in some areas (e.g., wind power), this has already happened.

Perhaps more so than any other New England state, Vermont is a state of small businesses, as well as small cities, towns, and villages. It is a good environment for the small business person, on the whole. Vermont businesses and government agencies understand SMALL. They are also oriented toward international trade; within the past few years, Vermont ranked first among US states for international product export revenues as a share of state gross product.

Given the similarity of conditions between Vermont and Scandinavia, the small-business-friendly environment here, Vermont's international trade experience, the acute need for energy-efficiency solutions, and the availability of such solutions in the EU, Vermont is a logical place for SME's in Sweden to begin testing and exploring the US marketplace. Vermont is not unique in this regard, and can expect stiff competition from places like Massachusetts, Minnesota, and Washington, but with the right enterprising spirit on both sides of the North Atlantic and a willingness to think beyond today's state of affairs, part of Vermont's, New England's, and America's strategy for overcoming the looming energy crisis may come from trade missions such as ours, and the small business-to-business links that come about as a result. Vermont's business community can pilot-test, license, assemble, manufacture, distribute, and/or service the pieces of the European energy puzzle and retain its place as a small and rural yet innovative, progressive state that never waits around for the mainstream of US states to prove a concept first. And small businesses in both Vermont and Sweden may be among the greatest beneficiaries of this trend.