

# Danish Wind Co-ops Can Show Us the Way

By Russ Christianson



*Middelgrunden: The latest and largest wind power co-operative in Denmark, just off the coast of Copenhagen. More than seven thousand members own this 40 MW offshore wind park together with local utilities. It was inaugurated in May 2001.*

It was hard to make out the usually prominent downtown skyline. Even the CN Tower was barely visible through the smoggy haze clogging the lakeshore. As my family and I arrived at Pearson Airport, having been away for most of the month of June in Denmark and France, we were greeted by one of the worst air quality days in Toronto's history.

Our arrival to the gridlock in Toronto was a stark contrast to strolling the pedestrian and bicycle friendly streets of Copenhagen, Denmark's largest city. With a population over one million, it's about half the size of the pre-amalgamated City of Toronto. And while Torontonians struggle to breathe the air, the people of Copenhagen (and thousands of tourists) enjoy a very people-friendly atmosphere. In contrast to North America, bicycles, pedestrians, and ultra-modern public transit systems rule over the private automobile.

The Dane's emphasis on non-polluting individual and public transportation is not the only reason for cleaner air in their major city. After the first oil crisis in 1973, the Danes began a grassroots movement that shifted their national energy priorities. At the time, Denmark was almost completely

dependent on foreign oil for heating, transportation and electricity generation. Like many countries, they faced a fork in the road, and with characteristic intelligence and pragmatism, they chose conservation and renewable energy, and left the nuclear option behind.

## Grassroots Power

HURUP, Denmark – Jane Kruse is a soft-spoken, self-assured, thoughtful person. She's dressed comfortably in a blouse and slacks, and her auburn hair has a single braid running down her back. Jane is the Director of Information and Training at the Nordic Folkecentre for Renewable Energy. The Folkecentre was founded in 1983, in Thy (pronounced "tie") one of the poorest

areas of Denmark, and is a world leader in developing prototypes for commercial applications of renewable energy.

It's a sunny June day, and there's a refreshing sea breeze blowing across the land. Jane and I sit at a picnic table on the Folkecentre grounds. We're surrounded by a collection of energy efficient buildings with solar panels, and an eclectic mix of various renewable energy prototypes, including biogas generators, wind turbines, and an electric car. Ms. Kruse is a pioneer in the Danish feminist movement and is a founding member of the local wind energy co-operative (started in 1988).

I ask Jane how Denmark became the world leader in wind turbine technology. She pauses for a moment and responds that "young people and women were very vocal against nuclear energy". The momentum of the no-nukes movement built steadily through the nineteen seventies and early eighties. "In April 1985, bowing to public pressure, the Danish Parliament (the Folketing) made the decision to not build nuclear reactors. This was one year before the core meltdown at the Chernobyl nuclear reactor in Ukraine."

Jane continues, "But, we were not only struggling against nuclear, we also wanted to work for positive alternatives." Women politicians created a coalition against nuclear energy and "co-operated across parties to pass legislation supportive of renewable energy." This strategy was possible because Denmark's proportional representation voting system encourages women to run as candidates, and elects more women. Indeed, the percentage of women elected in Denmark has been stable at 34% for fifteen years, while Canada only elected 17% women in the last two federal elections.

One of the legacies of Denmark's grassroots feminist movement, is a landscape dotted with 5,300 wind turbines. Everywhere you travel in Denmark, there are wind turbines on the horizon. On the Folkecentre's island, with a mostly rural population of 12,000, there are 142 wind turbines. As a first time traveller here, I simply equate Denmark with these beautiful aerodynamic pinwheels.

Most of Denmark's wind farms were erected by local co-operatives and individual farmers. In 1980, the Social Democratic government offered a thirty percent subsidy for new wind energy installations. This provided the Danish wind industry the start-up support it needed to build itself into the world leader from the bottom up, creating 20,000 jobs in the process.

In 1988, a newly elected Liberal-Conservative government cut the subsidy in half. However, the return on investment in wind energy continued at fifteen to twenty five percent because of three lynch pins in the Social Democratic policy for community-owned wind energy:

1. The right to connect to the electrical grid;
2. A legal obligation for electrical utilities to purchase wind energy; and
3. A guaranteed fair price.

In 1993, the Social Democrats were again elected, and held office in various coalition governments until 2001. This was the golden age for wind energy in Denmark, with production more than tripling from 1,200 to 4,100 GWh. Eighty-five percent of the turbines were owned by

local co-operatives and individual farmers, and by 2001, wind farm production was providing twelve percent of Denmark's electricity, enough for 1.2 million Danish households.

However, when the Liberal-Conservative coalition government was re-elected in 2001, they pulled the plug on wind energy by saying that it had to stand on its own in the "free" market. A "free" market that subsidizes fossil fuels with tax breaks and by externalizing health and environmental costs.

In the words of Bjarne Lundager Jensen, the Managing Director of the Danish Wind Industry Association (the lobby group for the large wind turbine manufacturing companies), "after some tremendous years in the late 1990's, it was uphill for the industry with the conservative government. The depressing fact is that in 2004 only five wind turbines were erected on Danish soil."

### **Industry Consolidation**

Preben Maegaard, the founder and Director of the Nordic Folkecenter for Renewable Energy and the President of the World Wind Energy Association, looks strikingly similar to the British actor Alastair Sim, in his most famous role, *Ebenezer Scrooge* in Dickens' classic *A Christmas Carol*. Mr. Maegaard has white hair, steel eyes, and just like Ebenezer on Christmas morning, a ready smile.

I'm sitting with Preben in the boardroom at the Nordic Folkecentre for Renewable Energy. Like most rooms in Denmark, it's designed with smooth clean lines. The black board has a recent sketch of Hubert's peak oil curve, and the thermopane windows have state-of-the-art thin film solar cells.

It takes Preben a little while to warm up, but a half hour into our meeting, he's on a roll. He has just returned from a trip around the world, including Canada's Maritime Provinces, Toronto, Vancouver, Cuba and Japan. In April, he gave a presentation on Danish community-owned wind farms in Alliston Ontario. He says wistfully, "This meeting in Alliston reminded me of similar meetings in Denmark in the late 1970s. At the time, I would present at four of these meetings each week. There were always hundreds of people, and like Alliston, more people than could fit in the room."

Preben looks squarely into my eyes and says, "Canada has a special situation at this moment, like Denmark after the 1970s energy crisis, or in Germany after Chernobyl. But, renewable energy development will only happen with the right legislation."

For Preben, renewable energy means more than the hard technology itself. Renewable energy is intrinsically decentralized, small and medium scale, and democratic. "The decentralized nature of renewable energy requires new organizational structures and alliances, that's the role of co-ops. When local people own the wind farms, and share in the benefits, they will support them. It won't be NIMBY (Not In My Back Yard), it will be POOL (Please On Our Land)."

Maegaard is strongly opposed to Denmark's current energy policy. "There is now severe discrimination against community power in favour of big companies. The new energy policy only talks about competition. Our politicians can only think about market solutions and bigger is better. The liberalization of the industry is really a struggle between Swedish and Danish state energy companies. They will divide up the country and stop broad ownership in decentralized energy production."

Preben's comments about industry consolidation are confirmed during my meetings with Hanne Jersild, a Consultant with the Danish Wind Industry Association (the three core members are Vestas, Siemens, and LM Glasfiber). Hanne and I meet in her office in downtown Copenhagen, in a beautiful old building that is currently wrapped with restoration scaffolding.

The afternoon we meet, Hanne is busy organizing an upcoming offshore wind farm conference. Like most Danes her English is excellent, and she is casually dressed in light brown slacks and a turtle neck sweater. After initial introductions, I begin the conversation with the same question I asked Jane Kruse at the Folkecentre, "What were the key policy, economic, and cultural ingredients that encouraged the successful development of the Danish wind industry?"

Like Jane Kruse, she begins with the importance of grassroots support, the no-nuke movement, Denmark's history of co-ops, and local ownership of wind turbines. "Grassroots groups began with very small home scale turbines, and the agricultural machinery manufacturers (like Vestas) became interested. Co-operatives were the evident solution to develop wind turbines. Now, the government policy is so free-market oriented, and the projects are so large, that co-ops are selling their site licenses to big developers."

The very reason that the Danish wind industry became an international success – the growing domestic market and strong public support underpinned by locally owned wind co-ops – has been abandoned by the Liberal-Conservative coalition government.

Hanne tells me that the Danish wind turbine manufacturers are hoping for renewal with a four-prong strategy:

1. Re-power existing land-based wind farms by replacing old, smaller turbines with modern, large turbines. (Many of these wind farms will likely change ownership from locally owned co-ops to large corporations, and this will erode public support for wind turbines.)
2. Build large-scale offshore wind farms.
3. Continue to grow the export business for Danish wind turbines.
4. Consolidate Denmark as a hub for research and development of wind turbine technology.

The result of the conservative government's "free" market policy is consolidation, from a locally owned, decentralized industry to a more concentrated, centralized industry. Like other more mature industries in the global "free market" economy, the wind turbine industry is becoming an oligopoly.

## **The Elephant and the Mouse**

As the Danish historian, Stig Hornshoj-Moller states, “the history of Denmark is above all a struggle lasting more than a thousand years against being swallowed up by Germanic culture”. Like Canada and the United States, Denmark is a mouse to Germany’s elephant.

When it comes to renewable energy, Denmark was the world leader until the start of this new millennium, and they have inadvertently passed the torch to their large neighbour to the south. Germany has swallowed up Denmark’s renewable energy policy and improved on it.

In 2001, Germany’s new red-green coalition government (Social Democrats and Greens) legislated the phase out of the nation’s nineteen nuclear reactors. It also introduced legislation similar to Denmark’s, including eco-taxes on fuel, energy conservation and efficiency measures, and renewable energy incentives. The 2004 legislative amendment sets targets of at least 12.5% renewable energy by 2010 and at least 20% renewable energy by 2020. There are now over 130,000 people employed in Germany’s renewable energy industry. In Preben Maegaard’s words, “Germany’s renewable energy policy is a miracle!”

Meanwhile, here we are in Ontario, sitting through another summer of smog days with our fingers crossed that the power won’t go out. Atomic Energy of Canada Ltd. (another white elephant) is lobbying in the corridors of power for \$12 billion to build eight new nuclear reactors in Ontario, and the McGuinty government has delayed the closure of our worst polluting coal fired electrical plant. One has to wonder why we can’t learn from the Danes and Germans.

Last October in Toronto, the Ontario Sustainable Energy Association (OSEA) provided federal, provincial, and municipal politicians with a spoon-fed, direct from the horse’s mouth seminar on the successful Danish and German energy policies. According to Deborah Doncaster, OSEA’s Executive Director, “the Ontario Ministry of Energy, the Ontario Energy Board, and the new Ontario Power Authority are listening. We expect them to announce a Renewable Energy Tariff policy that will encourage community-owned renewable energy projects this summer.”

As I hear the hope and concern in Deborah’s voice, I wonder if Canadians will have the wisdom to abandon nuclear energy, and focus our collective energies and creativity on conservation, efficiency and decentralized renewable energy strategies.

The Dane’s leadership in renewable energy was possible because their culture has been effused with the “Danish Ideal”. In 1820, the great Danish luminary, N.F.S. Grundtvig, expressed this ideal in a homily to his fellow citizens: “We are rich indeed, when few have too much and still fewer have too little.” It was Grundtvig’s ideas of social equality and sharing that formed the foundation of modern Danish society. The basic principle is that individuals are free to shape their own lives, but they are also responsible to the community.

Canada has a proud heritage of working together to supply people and communities with their needs. Our public health and education systems, public infrastructure and utilities, and the sixteen million Canadians who are members of co-operatives and credit unions all speak to the Canadian way.

Canadians are facing a fork in the road. We can bravely join Denmark and Germany as world leaders in renewable energy, or we can timidly follow our neighbour to the south, repeating our past mistakes by building new nuclear reactors and squandering the world's rapidly diminishing fossil fuel reserves.

It's time to strongly express our voices in favour of an energy policy for our common future. An energy policy that leaves nuclear behind, and embraces conservation, efficiency and locally owned renewable technologies. An energy policy that will leave a legacy of clean air, strong local economies, and a debt-free public utility in Ontario.

*Russ Christianson is the President of Rhythm Communications and has been involved in the development of over forty co-operatives in Ontario over the past two decades.*