

We Are Entering the Age of Sustainable Energy

"If solar energy is any good it would pay for itself." Ronald Reagan

As of 2016 it does.

Large-scale solar farms are providing electrical power more cheaply than natural gas and the cost is dropping. Furthermore, large-scale electrical storage, such as Tesla's 129 megawatt hour lithium-ion battery in Australia, is now making money by buying and storing electricity when it is cheap during periods of low demand and selling it at peak demand times. This will also make renewables available when the sun is not shining and the wind not blowing without the need for fossil fuel backups.

Whether we believe in the dangers of global warming or not, we have entered the age of sustainable, carbon-free, nuclear-free energy for cost considerations alone and already we are beginning to see that fossil fuels are on the way out.

No wonder India canceled plans for coal powered stations in 2017 due to low solar prices. Already, 27 coal-fired plants totaling 22 gigawatts of capacity are scheduled for early closure or conversion in 2017. Nor should we be surprised that the Kentucky coal museum switching to photovoltaics to reduce electricity costs.

This trend is worldwide.

- 98% of Costa Rica's electricity came from renewable sources in 2017.
- Over 50% of the Britain's electric power comes from renewables.
- Wind and solar now produce 10% of the energy produced in the U.S.
- Iowa gets 36.6% of its electrical power from wind.
- Greensburg, Kansas has been 100% renewable since 2013.
- On January 1, Wolverine Power Cooperative, of which Presque Isle Electric and Gas reported that they cut their carbon footprint from electricity by 25%. Now, more than half of their energy is carbon-free.

Looking forward, we see that almost 50 countries have committed to use 100% renewable energy by 2050. Cities, states and national governments have resolved to embark on a carbon free, nuclear free energy economy.

And closer to home:

- Michigan State University has installed 45 acres of solar carport capable of delivering 11 megawatts of power, enough to power approximately 1,800 homes, and saving \$10 million over 25 years.

- The Lansing Board of Water and Light will add 106 megawatts of wind and solar energy generation by 2020.
- Grand Rapids, MI resolves to be 100% renewable by 2020:
- Traverse City plans to power 100% of its municipal operations with renewable energy by 2020 and to make the entire city carbon neutral by 2050.
- Nine years ago, a friend of ours invested in an on-grid photovoltaic system at his home in Mackinaw City, because this investment pays him 2% more than he would have received from a bank. At today's lower photovoltaic prices this investment would return about 5%.
- By spending \$32,640 in 2016 on new LED lighting, the Mackinaw City School System is expected to save the school \$10,560 a year in energy costs and after three years, the lighting will not cost a cent.
- The City of Cheboygan has installed \$30,000 for LED lighting in the City with the City paying half while Consumer's Power contributed the other half...

Britain and France will ban fossil fuel only cars by 2040 for health reasons associated with vehicle emissions, costing Britain almost \$4 billion in lost productivity each year. Several reports show that electric only cars are far cheaper to run and maintain. In fact, Presque Isle Gas and Electric found it cheaper to give electricity away at its charging stations than to have customers pay for it.

This renewable transition is producing jobs, almost 25% over the previous year and now employs almost twice the number of workers in the fossil fuel industry.

Although tar-sands oil production is currently at a record high, there are signs that it will peak soon, during the 2020s according to several predictions. In 2014, Total and Shell halted their tar-sands projects due to lack of profitability. Total will spend \$248 million to convert an unprofitable oil refinery into a biofuel plant and will begin investing \$500m a year in renewables. Enbridge, a pipeline company has invested \$5.5 billion in renewables since 2002.

While these developments will not end the problems caused by our extensive use of fossil fuels, they do point to part of the solution.

David Dwyer is a member of the Straits Area Concerned Citizens for Peace and Justice.

4/11/2018