

Earth hour:

Cheap, abundant electricity is one of Earth's best friends

By Hiroko Shimizu & Pierre Derochers
For The Drill

TORONTO — On Saturday, March 29, from 8:30pm to 9:30pm, officials in over 6,950 cities and towns across 152 countries and territories across the world will formally ask their citizens to switch off their house's lights to express their commitment to healing the planet. Begun in 2007, "Earth Hour" has become the world's largest voluntary environmental action. According to its organizers, nearly 2 billion people got by with candlelight (and, one suspects, computer and smartphone glow) for sixty minutes in 2012.

On every "Earth Hour" day though, approximately three billion people, like every other day, get by without much if any electricity, and depend on burning biomass such as wood, animal dung and crop residues to cook their food and keep warm. In the process, they not only damage their environment, but more importantly their health. That is because as a result of the soot, particles, carbon monoxide and toxic chemicals released by burning low quality materials in their poorly ventilated homes, approximately 2 million people die prematurely each year of chronic pulmonary obstructive diseases and acute respiratory infections.

Unfortunately, as I explained in my last column on President Obama's "Power Africa" initiative, many people who are rich enough to switch off their lights are determined to "help" truly poor people by championing small scale, costly, intermittent and unreliable wind and solar power that can never make a meaningful difference.

As Dr. Todd Moss of the Center for Global Development observes, in Africa, about 600 million people have no electricity at all while the average person in Tanzania and Liberia uses less than 80 kWh of electricity per year, which is less than 20 percent of the electricity consumption of his new Energy Star refrigerator (459 kWh per year). Even worse, almost 60 percent of the refrigerators used in health clinics in Africa are plugged into an unreliable electricity supply, in the process compromising the effectiveness of vaccines and pharmaceuticals used to fight life or

death diseases. For many Africans, a standard of living comparable to Tunisia where annual per capita consumption is 1,260 kWh (enough to power four 60W light bulbs, one fan, one TV and one cooking oven) would be a major step forward, but keep in mind that the average US citizen used 10,837 kWh in 2012!

Energy poverty can only seem desirable to people who have never experienced it. This was first made painfully clear to me a few decades ago when I lived for a year as an exchange student in a remote part of rural China. In the summer when outside temperatures reached 110 degrees and the Yellow River dried up, blackouts were almost daily occurrences. All machines stopped working, and nobody knew when the electricity would be back. Studying or even exerting my body in any meaningful way was out of the question, and I became ever thankful for having been born in a developed economy like Japan.

Of course, the whole point of Earth Hour is not to effect meaningful change or even to have a positive, if minuscule, impact. Indeed, electric grid operators who rely primarily on fossil fuels have found out that suddenly powering down and then ramping up electricity production essentially nullify the meager savings attributable to switching the lights off for one hour.

Rather, the goal of Earth Hour is to make us feel guilty of our material abundance. Humanity's gains in terms of overall numbers and wealth, environmentalists believe, can only mean Nature's loss in some way or another. This impulse is much older than most people realize. For instance, in his treatise *On the Testimony of the Soul* published more than 1,800 years ago, at a time when the world's population was about 30 times smaller than it is today, the Christian theologian Tertullian noted with horror that humans had "become a burden to the Earth," the "fruits of nature hardly sufficed to sustain [humanity]" and there was "a general pressure of scarcity giving rise to complaints, since the Earth can no longer support us." Fortunately, he added, "plague and famine, warfare and earthquake" came to the rescue and could be "regarded as remedies."

What Tertullian and present day environmentalists misunderstand, however, is that it is possible to raise the number and liv-

ing standards of human beings while reducing their environmental impact. The key to this paradox is very simple: A larger and more prosperous population does not just mean more mouths to feed, but also more creative brains that, if allowed to break away from convention, will find new and better ways to do things.

For example, the development of natural gas and hydroelectricity have led to a sizable reduction in the demand for coal and fuel wood, thereby lowering pressure on forests and greatly improving air quality in cities. A new large size refrigerator today uses less than a third as much electricity as a late 1970s model. And think of all the copper telephone lines we no longer need today!

Moreover, the quest for increased profitability combined with technological innovation is constantly pushing people to turn polluting waste into good uses. A little over a century ago, gasoline was a volatile waste material from kerosene production (refined from petroleum) that nobody knew what to do with. In time though, the invention of the internal combustion and the diesel engines not only turned polluting production residuals into valuable commodities, but they made it possible to remove horses from cities where they created significant problems (from typhoid fever to their propensity to trample people in heavy traffic) while exerting significant pressures on the countryside in terms of feed and care (such as hay for bedding).

In 2000, the US National Academy of Engineering declared electrification to be the most significant engineering achievement of the 20th century. Abundant, affordable, and reliable electricity, most of which is produced by burning fossil fuels, has liberated human beings from the physical toil and misery that plagued our ancestors. Astonishingly, one study even suggests that the electricity consumed by a person in an advanced economy is, on average, equivalent to having had 56 personal servants in the not so distant past. Far from being sinful, cheap and affordable electricity is something we should strive to provide to the billions of people who suffer from "Earth hour" all day, every day.

Shimizu is a policy analyst. Derochers is an associate professor of geography at the University of Toronto. They are the authors of the book "The Locavore's Dilemma: In Praise of the 10,000 mile Diet."

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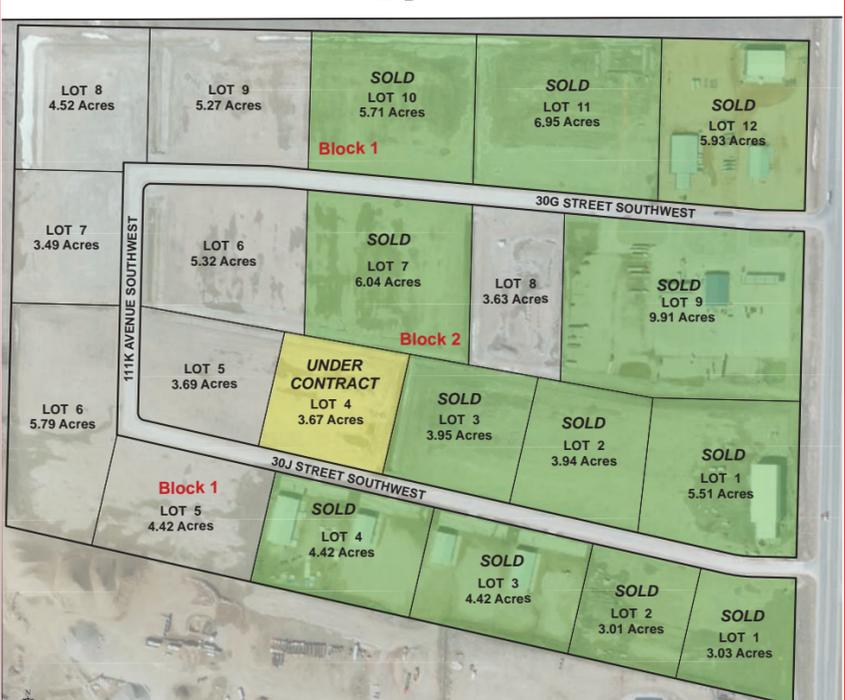


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