

"Ontario's Green Power Past and Future"

"Those who forget the past are condemned to repeat it."

George Santayana

"A cynic knows the cost of everything -- but the value of nothing."

Oscar Wilde

Canadians are widely reputed to be a peaceably pragmatic lot, not prone to claims of revolutionary high drama, divine destiny, or prima donna self-promotion. We can't claim a Paul Revere, a Joan of Arc, a Donald Trump or Lady Gaga.

Instead, we have Banting and Best's quiet discovery of insulin, Dr. Norman Bethune's battlefield blood transfusion kit, Alexander Graham Bell's crackling telephone, Massey-Ferguson tractors, the RIM Blackberry, the Tim Horton's drive-thru - innovations which succeeded because they *worked*.

So it may be tempting to assume that a condensed version of Ontario's 100-year history of electric power might be worthy of only a bored yawn, or an early exit for an advance coffee break.

I am here to convince you otherwise.

One hundred years ago, much of southern Ontario was literally and metaphorically electrified when the clean, renewable "white coal" of Niagara arrived in Toronto,

Kitchener and London via the first publicly-owned transmission grid in North America.

It is impossible to convey the public pride and awe which marked the "switch on" celebrations. Vast, cheering crowds lined the streets. Parades and motorcades rivalled those of a coronation. Newspapers used banner headlines. Premiers and mayors gave speeches -- and no one booed. Factory owners in bowler hats stood shoulder to shoulder with labourers in humble work clothes, mothers and children. At the old Toronto City Hall "switch on" 40,000 came to cheer themselves hoarse.

The loudest rang for Adam Beck, the charismatic champion behind the creation of North America's first public power utility. He was hailed by the public as a conquering hero, dubbed the "White Knight", an "Electric Adonis", and "Ontario's Dynamo" by an adoring press, and lauded by manufacturers for delivering low-cost Niagara power.

Thanks to several dozen municipal referendums backing him, Beck had the public, most of the press, and the Conservative premier at the time, James Whitney, all in his corner. But he also had powerful, implacable enemies.

The most prominent were a trio of millionaire monopolists whom Beck and the press vilified as "The Electric Ring". Acting in concert, they had bribed corrupt provincial and municipal politicians to obtain exclusive, multi-decade "franchises" to supply electric power, street lighting, and tram services. Most relied on imported Pennsylvania coal,

which was burned in waterfront power plants that relentlessly spewed smoke, ash and cinders.

Facing extortionate power prices, brownouts, contempt for customer service, and filthy air winter and summer, the public revolted - in their polite Canadian way - by showing up on the front steps of the Ontario Legislature to demand change, literally beneath the Premier's window.

As the "public power" crowds grew to include municipal officials and manufacturers from across southern Ontario, and their choruses grew louder, Premier Whitney sought a backroom compromise between Beck and the "Electric Ring" leaders.

Both sides turned him down. Beck was convinced his daring plan for a public transmission grid and huge hydro plant at Niagara was politically invincible, and ordained by Destiny. The "Electric Ring" trio, convinced the bribes they had paid to previous Liberal politicians were solid as gold bullion, was adamant that Beck's "Bolshevik" plot would be derailed by sympathetic British banks and courts.

It was a 20-year, titanic battle, with both sides intent on total victory and a vanquished foe. In the end, the "Electric Ring" trio lost because they failed to change their gouging ways, improve service, or mask their odious public image. One member, the 300-pound Henry Pellatt, built his opulent Casa Loma above the worst slums of Toronto.

Just for the record, it had:

- an electric panel 35 feet long to service 98 rooms and 5,000 lights
- 30 bathrooms, some with solid gold taps, marble floors and ivory adorned toilet seats
- a dining room for 100, 25 fireplaces, a 60-foot indoor pool, an indoor roller-skating rink, three bowling alleys, a rifle range, and a wine vault holding 1,800 bottles - the largest in North America

Pellat's partner, William Mackenzie, squeezed every nickel out of every operation *he* ran - including from a caboose converted into a brothel - which he trailed across Canada for indentured workers paid a pittance to build his railroad trestles. The brothel manager was his wife, so the profits were kept in the family. Their financier ally, Joseph Flavelle, was reviled as the "Bacon Bandit" for the rancid meat his pork-packing company supplied WW1 troops in France.

Let us pause here to make a few points.

1. A century ago, the promoters of private power proved to be their own worst enemies by delivering expensive, dirty, unreliable power with large dollops of monopolistic arrogance. The public threw them out. They deserved their fate.
2. Beck's "public power" crusade prevailed because it promised - and delivered - low cost, clean, reliable

power underpinned by Ontario's best green asset:
Niagara Falls.

3. Economic ideologies and political allegiances were turned inside out. Arguably the most corrupt government in Ontario history, the Mowat Liberals backed the "Electric Ring" robber barons to the bitter end, and were demolished in subsequent elections. But Conservative James Whitney, perhaps the most progressive premier in Ontario history, approved public borrowing to bankroll a province-wide grid and begin constructing the costly Niagara power plant.

So, a century ago both the public and an astute Premier knew what they wanted: what *works*. But the following 80 years saw this lesson gradually lost - starting with the fall from grace of Adam Beck himself.

On his way to vanquishing the "Electric Ring", and marshalling the money and manpower to build the world's largest hydro plant at Niagara, Beck attained near deity status and became the single most powerful political figure in Canada. Drunk on grandiose schemes to build countless power plants, electrify industries and even a Hydro-owned railway network, Beck badgered Ontario premiers and federal Prime Ministers for blank cheques and his own monopoly charters.

"Nothing is too big. Nothing is too visionary. Nothing is too expensive to imagine," Beck famously vowed.

When he was thwarted, Beck convened his populist posse's and appeared at mass rallies as the "White Knight" to bully politicians into submission. As old age and illness set in, his campaigns descended into demagoguery, and his tactics bordered on despotic. He lied to premiers about project costs, and power supply levels. He artificially stoked demand with loss-leader pricing, and relentless campaigns promoting profligate power use. He buried internal Hydro scandals and costly engineering mistakes, and even used public funds to hire private detectives to spy on those who dared criticize him.

In a personal tragedy worthy of Greek drama, Beck's own hubris led him to disown his only daughter, and send his closest friend and confidante to prison. He died a forlorn, lonely man.

The public knew none of this. Knighted before his death in 1925, Sir Adam Beck's reputation as the valiant crusader for "the people's power" lasted decades - particularly in rural Ontario where the grid transformed lives more dramatically than the Internet has changed ours. Where there had once been back-breaking drudgery, electricity brought safe, bright lights, heated water for baths, electric stoves and washing machines, radios, machinery, power tools, and motors to pump well water or cool dairy herd milk.

Fittingly, one of the most popular songs of that era, and a favourite of the late, great Canadian novelist Robertson

Davies, was called "Oh! What a Difference Since the Hydro Came."

Even in courtship, it seems.

But Beck's most enduring legacy was the elite technical corps he first assembled. From 1920 to 1970, his dream prevailed as some five dozen hydro plants were built in the Trent, Madawaska and Ottawa valleys, across northern Ontario, and near Cornwall on the St. Lawrence. These projects all required large amounts of capital borrowed in the public name. But they paid off handsomely because hydro plants feature rugged, reliable technology, the fuel is free and limitless, and they create no pollution. Virtually all are still operating flawlessly today.

So, for the first half century, Ontario thrived on a 100 per cent green power system, prices were affordable, and our public utility was universally admired. Because it *worked*.

That changed during the next 50 years, as it built ever larger coal and nuclear plants to meet demand the utility itself was stoking. To secure coal supplies, Ontario Hydro bought the entire output of a mine in Pennsylvania. But because mammoth plants like Nanticoke convert only 33% of the energy value into power, this resulted in decades of voracious coal consumption and relentless emissions of pollutants like sulphur dioxide, nitrous oxide, heavy metals, and greenhouse gases.

To secure uranium, it signed the largest, most expensive commercial contracts in Ontario history to buy three-decades of ore from high-cost, low-grade northern Ontario mines. The contracts came into force just before it was learned that these uranium companies were members of an illegal price-fixing cartel.

One of these uranium company presidents was also a major donor to the Conservative Party then in power, and a personal friend of the Premier -- whose other best friend was then his top political advisor, *and* Party bagman, *and* Chairman of Ontario Hydro. It was a cosy world, where the three blithely discussed billion-dollar uranium contracts during Conservative Party political conventions.

But these high-risk coal and uranium contracts were symptoms of a deeper pathology embedded in a giant utility which was neither public, nor private. It had turned into a kind of 500-kilovolt Frankenstein, with no master.

By the early 1980's, Ontario Hydro was the largest company in Canada by assets, ranked among the largest electric utilities in North America, directly employed 30,000 (as many as all citizens of the Yukon), and accounted for about half the debt obligations of the province.

Its' official plan was to build, by the year 2000, the equivalent of 150 Pickering-sized nuclear and coal units. This would require a capital outlay of \$13 billion each year for 20 years, and force it to borrow more just to make

interest payments. Yet this plan contained no rate increases to achieve cost recovery.

In short, this was a business plan which would lose money on every kilowatt-hour sold, but somehow make up the losses in volume.

The implied penalty for failing to meet Hydro's break-neck construction schedule, or not approving unlimited public funds to pay for all this, was blackouts and crippling economic impacts.

In just one example, the Darlington nuclear plant was exempted from any independent economic and environmental assessment hearings because, Hydro warned, any delay would be catastrophic. The initial projected cost was \$3.4 billion; the final price-tag was \$14.3 billion.

By contrast, current Ontario environmental rules compel developers of any solar ground-mount project larger than 10 *kilowatts* to conduct archaeological, acoustic and habitat studies, and convene public hearings. This is like fencing in mice after letting elephants stampede.

But the worst legacy of this era of unaccountability still remains hidden. It began with the NDP government two decades ago, when the Darlington nuclear units were to come into the rate base. Instead of adjusting rates to reflect the inherited \$14.3 billion capital cost, the Rae government

buried more debt to avoid public wrath - then froze power rates.

This folly was accelerated by Conservative premier Mike Harris, who vowed zero rate increases during his entire elected term - *before* being elected, or even looking at Hydro's books. Harris kept his word. Four years later, the utility debt was \$39 billion. Four years after that, the costliest blackout in Ontario history hit a vulnerable grid starved of maintenance funds, leaving the economy crippled for weeks.

This is far from ancient history. Here's why:

When the old Ontario Hydro effectively became bankrupt in 1999, about \$30 billion in stranded debt was shifted to different government ledgers. Virtually all of it was due to unrecoverable nuclear costs. This was originally supposed to be paid down by 2012. *But since 1999 Ontario ratepayers have made \$36.3 billion in cumulative payments on this stranded debt -- yet \$27.6 billion remains to be paid. Someday. Somehow.*

\$27.6 billion. How many in Ontario know of this debt, or what it means, or how it will be dealt with? It is all but invisible to the public. Our politicians want to keep it that way. Yet the press remains lazily indifferent to this serial negligence while devoting acres of outraged ink to microscopic payments paid to farmers who put up their own money to put Pv panels on their barns.

According to National Post pundits, these farmers now form part of a sinister cabal of "solar robber barons". Who knew?

This \$27.6 billion stranded debt, more than any other single fact, tells us that our "public" utility is anything but publicly accountable, and that all the price signals in Ontario's power "market" are dangerously distorted because this lurking, \$27.6 billion ice-berg of hidden debt is not treated as a generation cost.

So we have a perverse optical illusion: more than half of Ontario's energy comes from nuclear plants which appear far cheaper than they are, while new renewable projects appear far more expensive than their secretly-subsidized main rival.

Ironically, it is now the Hudak Conservatives which want to preserve an unaccountable, debt-laden state monopoly by building more nuclear and coal plants; to mask accurate price signals by keeping the stranded debt hidden; and to dismantle the FIT program which gives grid access to thousands of private sector and community-based generators. This defies every principle of fiscal prudence.

Meanwhile, the McGuinty Liberals - which inherited the ticking Mike Harris debt bomb, and decrepit grid - are getting hammered by press pundits and opposition politicians for actually daring to stop digging the fiscal hole even deeper:

- It has moved most of the locus for approving OPG and Hydro One spending from the Premier's office to an independent tribunal, and of the FIT tariffs to the Ontario Power Authority. This is making power prices inch toward reality after a decade-long rate freeze.
- It has approved the landmark FIT program, which ensures Ontario's old, dirty coal plants will be replaced with renewable power, on a strict "pay for performance" model. Under FIT, *generators are only paid for power actually delivered*, so ratepayers are 100 % protected from all future cost overruns, breakdown and repair costs, or management failures. By contrast, the pending OPG Darlington reactor overhauls will cost ratepayers \$10 billion.

Ontarians will also likely pay at least *\$40 billion* in the next decade just to service and retire that \$27.6 billion nuclear-related debt --- and get not a single extra kilowatt-hour delivered for these payments.

So what lessons are to be drawn here? Using history and the multiple metrics of *value* instead of mere cost, we can see that the first 50 years of our public utility proved that investing exclusively in green power brought Ontario affordable prices, reliable service, and no pollution because these attributes were embedded in the very nature of hydro technology. The initial capital *cost* was high, but the long-term dividends proved to be almost priceless in *value*.

The same holds true today. We must remember that cost is not the same thing as value, and that value is the net sum of *all* the costs and benefits.

The Green Energy Act will not just deliver cleaner air, and green energy into the grid. It has already brought billions of investment capital into Ontario during a recession, ignited economic development in all parts of Ontario, spurred innovation, secured major green manufacturing commitments; and stimulated ownership diversity by inviting households, huge factories, farms, First Nations, and urban co-operatives to get into the generation game.

Taken together, this composite value should be measured against an incremental 'green power' cost increase of about \$5 per month per household. That's about what we might pay for one Tim Horton's coffee and two donuts.

Put another way, the average monthly household power bill is about \$120, or \$4 per day including taxes. This 'buys' us instantaneous, 24/7 electricity to make all our hot water, cook all our meals, and run power tools, lights, computers, and flat-screen televisions on demand. Now imagine all this power being made by a live-in servant, not grid-delivered electrons. Their current wage would be 16 cents per hour.

Does this not tell us that the enemies of honesty and sound economics are politicians who cravenly claim they can and will reduce power prices - while a \$27 billion debt already lurks on the public ledgers, and half of Ontario's ageing generation fleet must be replaced?

It is like promising a pony for every child next Christmas. It can't be done. It is deceptively reckless to even try.

To conclude, our own history shows us that what matters most is not whether the generator is public or privately owned, nor whether the government is Conservative, Liberal or NDP, nor what conforms to prevailing ideologies or orthodoxies.

Long ago, Ontario suffered the abuses of the "Electric Ring" trio. They had a recent U.S. counterpart when Enron imploded. But today there are hundreds of honest, astute and agile companies which want to invest private capital to produce green power. Many are here today.

We should welcome them all, large and small, because most of Ontario's major generation assets must be replaced in the next two decades, and we face a looming health care funding crisis due to our ageing population.

So the investment capital, mission-driven ethics, technical talent and business discipline of these new green entrepreneurs are desperately needed. They can not only help solve Ontario's power problems, but free up precious public dollars to maintain the health care system we all cherish.

Also long ago, we had a public utility to be proud of. Then one to be feared. Remember: the reckless Ontario Hydro of

the 1980's was then widely regarded as the cool, competent voice of reason, and its' critics were cast as heretical Luddites. But if reality had not intruded, it would have built 150 more nuclear and coal units than we need today, and the province would be bankrupt beyond recovery.

I hope this historical snapshot has shown that what matters most is *content*, - or which electrons deliver the most economic, environmental and social value, and leave the fewest debts and liabilities to the future.

In this respect, it will actually be our grandchildren and their children who will someday make the final value appraisal of the choices we must make today.

For all his flaws, Adam Beck built an engineering marvel at Niagara which has produced pristine, 24/7 power since 1921. Some fought that project fiercely. Some predicted it would bankrupt the province. Rival politicians condemned it as a reckless descent into 'socialism'. Today, we can bless Beck's dynamic vision. It brought Ontario the cheapest, cleanest, most reliable power on the Planet.

By contrast, our generation's public utility will leave behind some 40,000 tonnes of OPG nuclear wastes that will remain latently lethal for centuries, and a related fiscal time-bomb for entombing retired reactors, for which we are likely to be cursed.

If it takes investing in 21st Century green power at an added cost of a few bucks more per household each month, and

sucking up our own failure to pay for past mistakes,
perhaps its time to start paying these debts forward.

I will leave you with a final question: What do you imagine
our grandchildren might implore us to do if they could?