

**The Ontario Experience
And
The Future of Competition in Electricity**

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Disclaimer

I agreed to be here today to discuss Ontario, not to trash competition in electricity *per se*.

I have long advocated competition in electricity, and still think that, if implemented well, it **CAN HAVE**, and in many cases **HAS HAD**, significant net benefits.

However, I have also long questioned whether it always **WILL** or even **CAN** be done well in “U.S.-type” cases.

Thus, I interpret the premise of this panel to be: It **DOESN'T WORK IF DONE BADLY** – and there a lot of ways to do it badly.

Agenda

The Ontario Electricity Restructuring

- Context, Process and Performance
- The Political Reaction and Its Results

Lessons from Ontario and Elsewhere

- Ontario-Specific Mistakes
- More General Lessons

The Future of Electricity Competition

Context, Process and Performance

The Ontario Context

Crown-owned Ontario Hydro (“Hydro”) was:

- Integrated, self-regulated, T&D monopoly
- Largely hydro and nuclear (CANDU)
- Increasing prices & debt to cover nuke costs

Scores of Municipal Electric Utilities (MEUs):

- Bought power from Hydro at Hydro-set prices
- Mostly small, inefficient, local political fiefdoms

The political realities in Ontario:

- “Mother Hydro” was a popular “family jewel”
- Canada has strong populist/socialist sentiment

Macdonald Commission Report (6/96)

The government set up an independent commission:

- Chaired by respected former federal finance minister
- To study competition options for Ontario

The Macdonald Commission recommended that Ontario:

- Break Hydro into generation and transmission
- Privatize all generation except nukes
- Create ISO-like Independent Market Operator (IMO)
- Make Ontario Energy Board (OEB) a real regulator
- Pay debt with Competition Transition Charge (CTC)
- Start both wholesale and retail competition in 2000

Government White Paper (11/97)

White Paper accepted Macdonald recommendations on:

- Split of generation from transmission
- Need for IMO and independent OEB
- Immediate retail competition

White Paper rejected Macdonald recs. on generation

- All generation put into a single Crown company (OPG)
- Private power could compete for new capacity
- OPG might someday sell some Ontario capacity

White Paper also called for:

- Consolidation of MEUs
- Creation of Market Design Committee (MDC)

The Political Justification

Both Macdonald and the White Paper stressed:

- U.S. → competition, will lower competitive U.S. prices
- Hydro is an inefficient monopoly with bad nukes
- Ontario consumers want and will gain from “choice”
- Competition will create jobs/lower prices in Ontario

But government was cautious on privatization

- Unions, populism made it a political hot potato
- Competition would make OPG business-like, efficient
- OEB regulators would treat all competitors fairly
- OPG muscle and gov't \$\$ needed to save CANDUs
- Privatization would come later – maybe

The Market Design Committee ('98)

The MDC was a non-expert stakeholder group

- OPG, Hydro One (gridco), large consumers, small consumer advocates, Enron, IPPs, greens, etc.
- Chaired by politically astute U.T. Law School dean
- Hired PHB as expert advisors and staff

Year-long “consensus” process → market design with:

- *Ex-post* spot market (no day-ahead or capacity mkts.)
- No LMP initially, but reconsider in 18 months
- Spot-price pass-through (SPP) by MEUs
- Market Power Mitigation Agreement (MPMA) to control OPG market power and stabilize net consumer prices

Market Power, Debt and Retail Choice

The MPMA was a master “vesting contract” with OPG

- If $\Delta = [P_{\text{spot}} - 4.3 \text{ C}\phi/\text{kWh}] > 0$, OPG rebated $\Delta \times Q$
- Q = OPG’s preset “competitive” output; declined as OPG sold or otherwise gave up control over capacity

A new Crown Ontario Electricity Finance Corp (OEFC):

- Assumed OPG’s excess/stranded debt
- Used CTC and MPMA revenues to service debt and pay MPMA rebates to consumers

MEUs passed through P_{spot} and MPMA rebates

- Retailers could offer hedges or pay MEU bills
- Little need/role while MPMA and CTC were effective

Market Operations (5/02 → 11/02)

Market worked OK as a mechanical matter

- Dispatch, pricing, SPP/MPMA worked as intended
- Weaknesses: lack of LMP, trade with U.S.

There were some perceived, some real problems

- Higher T&D charges blamed on “competition”
- Retailer scams of SPP/MPMA rebate mechanism
- Hydro One execs overreached on salary/perks
- OPG nuclear restarts far over budget and schedule
- Retail prices (kWh+T&D+CTC) increased 20-25%
- Capacity shortage but little new investment

Government feared “another California”

The Political Reaction and Its Results

Political Collapse of Market (11/02)

New premier (but same party) announced intent to:

- Freeze small-consumer energy prices at 4.3 C¢/kWh
- Rebate past payments (even contracts) > 4.3 C¢/kWh,
- Freeze MEU distr. charges, review fixed charges, etc.
- “Demand” that federal gov’t remove GST on electricity
- Continue paying Hydro’s C\$7B excess debt caused by “mismanagement ... under previous governments”
- Change OPG Board, investigate OPG nuke problems
- Pay for new supply, conservation, renewables, etc.

***Arithmetic and mechanics were/are unclear,
but it was clearly the end of any real market***

Current Situation/Outlook (1/03)

Government has continued rollback of market

- Rate freeze may be extended to large consumers
- Hydro One IPO reduced to 49%, then cancelled
- OPG, Hydro One boards have been purged
- OEB, IMO are being politicized

Economic/financial problems are severe

- OPG is piling up huge debts paying for bad nukes, foolish acquisitions and sales at 4.3 C¢/kWh
- Frozen T&D charges are hurting MEUs, Hydro One
- OEFC debt is increasing, not declining

Ontario government/taxpayers must pay the bill

The Lessons:
Ontario-Specific Mistakes

The Biggest Mistake: Crown Monopolies

Hydro bureaucrats → high paid executives/deal makers

- Eager to play in the big leagues of diversification, acquisitions, etc. – but with tax \$\$!
- Excessive salaries/perks created public backlash
- Bad investments created bigger debts

OPG nuclear program has been a disaster

- Sold nuke to British Electric, which went bankrupt
- Nuclear restarts are \$\$billions over budget, years behind schedule, and yet to produce 1 MWh

The threat of GWs of subsidized nukes has scared off private investment, but has yet to materialize

Another Big Mistake: Bad Regulation

T&D charges were allowed to increase dramatically

- MEUs and Hydro One could earn commercial ROIs on full replacement costs of existing assets
- T&D increases were blamed on “competition”

Retailers were allowed to scam/defraud consumers

- Big political push for customer “choice,” but with inadequate education and explanation
- Retailers compared their energy-only price to incumbents all-in energy+T&D+CTC prices
- Many consumers switched – to get higher bills

Surprise: Public felt cheated by “competition”

The Basic Problem: Weak Political Leadership

Political leadership/commitment was always weak

- Politicians could/would not control Ontario Hydro
- Competition was largely a “U.S. and me too” answer
- Use of Macdonald and MDC was a political cop-out – although it worked (too?) well in this case
- Political weakness → Crown monopolies, weak OEB

Political will collapsed at the first sign of trouble

- Nobody spoke in defense of “their” market
- Politicians are competing to be biggest critics

“It doesn’t work” without strong political leadership and commitment in design and implementation

Some More General Lessons

When/Where “It Works”: The Evidence

Electricity restructuring has “worked” when/where:

- A strong government drove – and led – the process (e.g., Chile, UK, Norway, Victoria, ...); and/or
- A failed system had to be saved from regulators and politicians; (e.g., Chile, Victoria, Argentina, Peru, ...)

The government (or a public interest utility/pool) must:

- Be strongly committed to the idea
- Assure competent public interest representation
- Sell and defend the market to the public

Good electricity markets do not design themselves and are not the property of those who “use” them

When/Where “It Fails”: The Evidence

Restructuring has “failed” when/where:

- The market design was entrusted to self-interested parties (e.g., California); and/or
- Political support was weak (e.g., California, Ontario)

Restructuring has never really happened when/where:

- There was no political will to tackle the monopolies
- The existing system was working “well enough”
- E.g., Europe, Japan, much of the U.S.

Electricity restructuring is not something to take on without good reason, high-level political support and a strong public interest focus

The Future of Electricity Competition

What Is This All About, Anyway?

The objective is reliable, low-cost electricity, not:

- Competition or markets for their own sakes
- Business opportunities for middlemen, IPPs, lawyers, consultants, ...

There is overwhelming logical/empirical evidence that:

- Competition is *usually* the best solution, *BUT that*
- Competition in *electricity* is particularly difficult/risky

Electricity competition is not (or at least should not be) a religious issue; it should be a rational decision based on social costs, benefits and risks

The Benefits of Electricity Competition

The basic potential benefits are lower costs due to:

- Competitive pressure for efficiency and innovation
- The discipline of private capital markets
- Less political interference in economic decisions
- Better price signals to consumers, investors, ...

How large can these be in a developed economy?

- There are no telecom/computer-like innovations
- Private capital markets can/do make big mistakes
- Regulators are relatively competent and honest
- “Uplift” can be used to subsidize political goals

Potential benefits may be small in many cases

The Costs and Risks of Competition

The potential costs and risks of competition include:

- The direct costs of the needed sophisticated markets
- The loss of coordination and planning efficiencies (e.g., in planning and financing transmission)
- The possibility of California-type mistakes

The costs/risks may fall with time and experience, but:

- Market-based coordination really is very hard
- The rules must continually evolve
- “Market capture” may replace “regulatory capture”
- Political backlash may always be an election away

There is little evidence things are settling down

Where/When Are Net Benefits Positive?

Electricity markets can/do have large pay-offs where:

- Systems are bankrupted by regulators/politicians
- Powerful monopolies are outside political control
- Reliability is bad and/or costs are very high
- These factors → the political will to get the job done.

But why incur the costs and risks of competition where:

- Regulators and utilities work together well
- Reliability is high and prices are low
- Consumers/voters are content with the status quo?

If it ain't broke, why fix it?

Costs and Benefits in the United States

Benefits may not be large in the U.S., where regulation:

- Is (relatively) competent, honest and effective
- Has produced reasonable service and prices
- Is easier for a “pure monopoly” than for a mixture of monopoly and competition

Costs and risks are significant in the U.S., given:

- The state/federal system
- The strength of special interests
- Populism and poor grasp of economics

Who thinks that the movement to competition in the U.S. has produced net benefits so far?

The Likely Future of Competition in the U.S.

FERC's Standard Market Design (SMD):

- Is (broadly speaking) the right answer to “how”
- Begs the question of “why”
- Will spread only slowly and unsurely

Retail competition, at least for small consumers:

- Was always sought by retailers wanting to be chosen, not by consumers eager to choose
- Will continue to disillusion and decline

A likely (the best?) future would see:

- Wholesale competition to supply LDC monopolies
- “Prudence” regulation of LDC purchasing