



CAMPUT 2022 | Deep Dive into Disruption

Energy regulation in the 2020s: a creative dynamic decade

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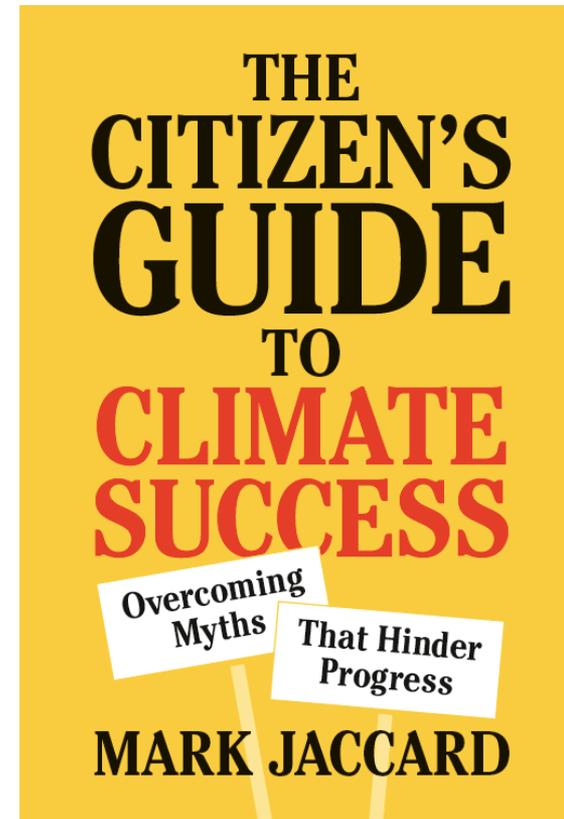
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Introduction

Original topic: self-delusions that prevent rapid decarbonization



Topic pivot: ways in which energy industry and its regulators may hinder rapid decarbonization - also with self-delusions!



Can regulators lead exciting lives? “the glorious 1990s”

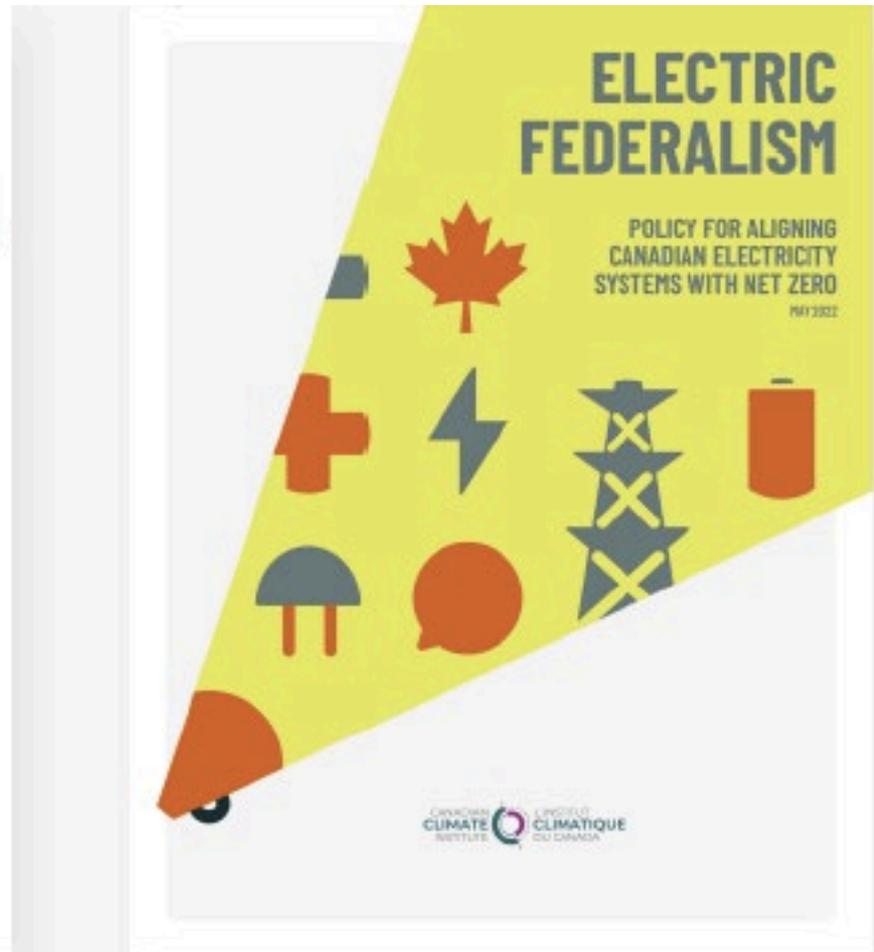
My tenure as chair and CEO of the BCUC (1992-1997)

- integrated resource planning requirements (1992)
- demand-side management requirements (1992)
- intervenor funding (1992)
- generic rate-of-return hearings (1993)
- negotiated settlements (1994)
- incentive based regulation (1995)
- electricity competitive market reforms (1996)
- shadow carbon pricing (1996)
- helping create the Regie de l’Energie (1997)

What will the 2020s be like? Big steps on the path to net-zero?



Canadian Climate Institute's The Big Switch



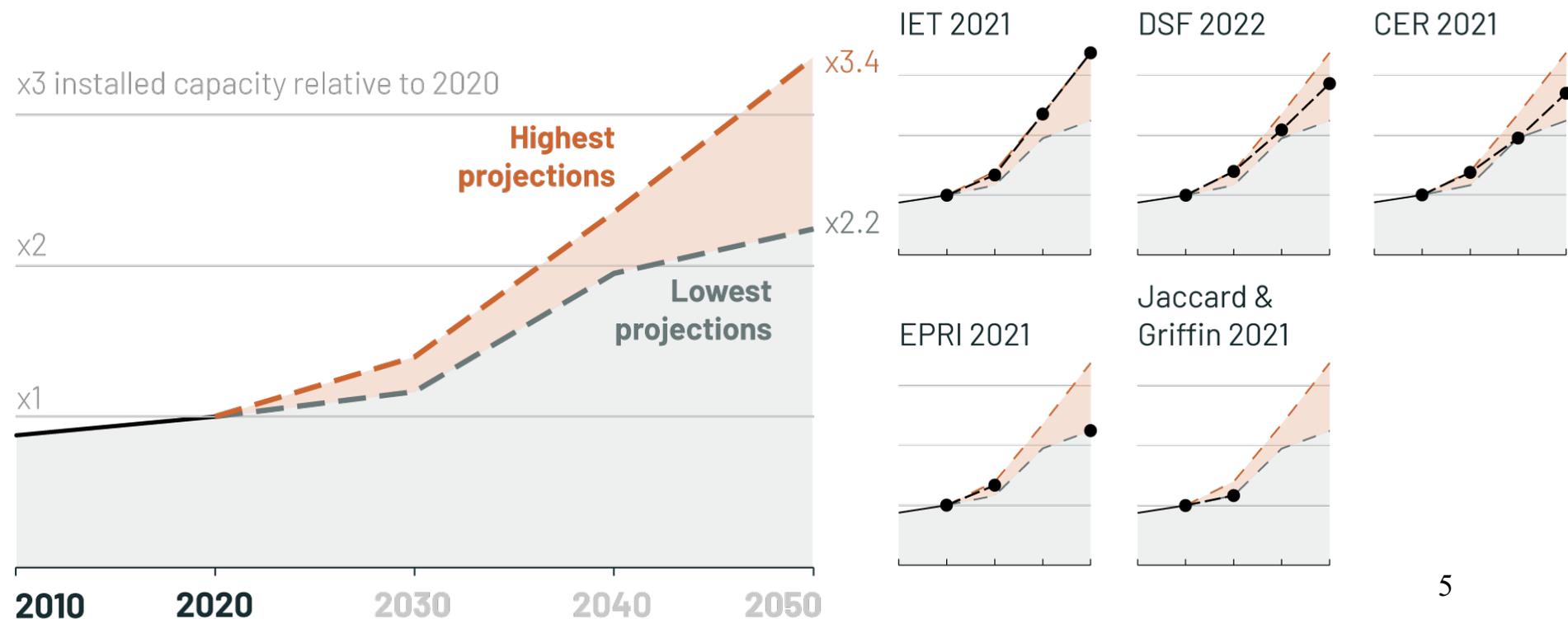


What does a net-zero energy future look like?

Most studies suggest a 100%-250% increase of electricity capacity in 30 years (for demand by buildings, transport, industry)

On the path to net zero, **installed capacity** must grow substantially

Studies show capacity will be 2.2 to 3.4 times larger by 2050 relative to today





How does net-zero future happen?

GHG policies by senior levels of government

Preferably federal government to ensure all provinces pull their weight via federal policy or provincial equivalents.

Carbon tax:

- Same carbon price for every unit emitted.

- With production subsidies for globally competitive industries (OBPS).

Sector-specific flexible regulations:

- Clean electricity standard

- Clean fuel standard

- Zero-emission vehicle mandate (personal vehicles and trucks)

- Building codes (new) and emission or energy regulations (existing)

Government financial support:

- Industry - process shifts, renewables, CCS

- Consumers - vehicles, buildings

- Workers and Indigenous peoples - just transition



What electricity policy by what government?

Federal government has negligible jurisdiction over electricity.
But courts recognize its Canada-wide GHG responsibility.
It can negotiate equivalency agreements with one or more provinces.

Two key acts - can use one or both to reduce electricity GHG emissions
Canadian Environmental Protection Act - clean electricity standard
Greenhouse Gas Pollution Pricing Act - carbon pricing (tax or cap&trade)

See Jaccard and Griffin (2021)

A Zero-Emission Canadian Electricity System by 2035



What electricity policy stringency?

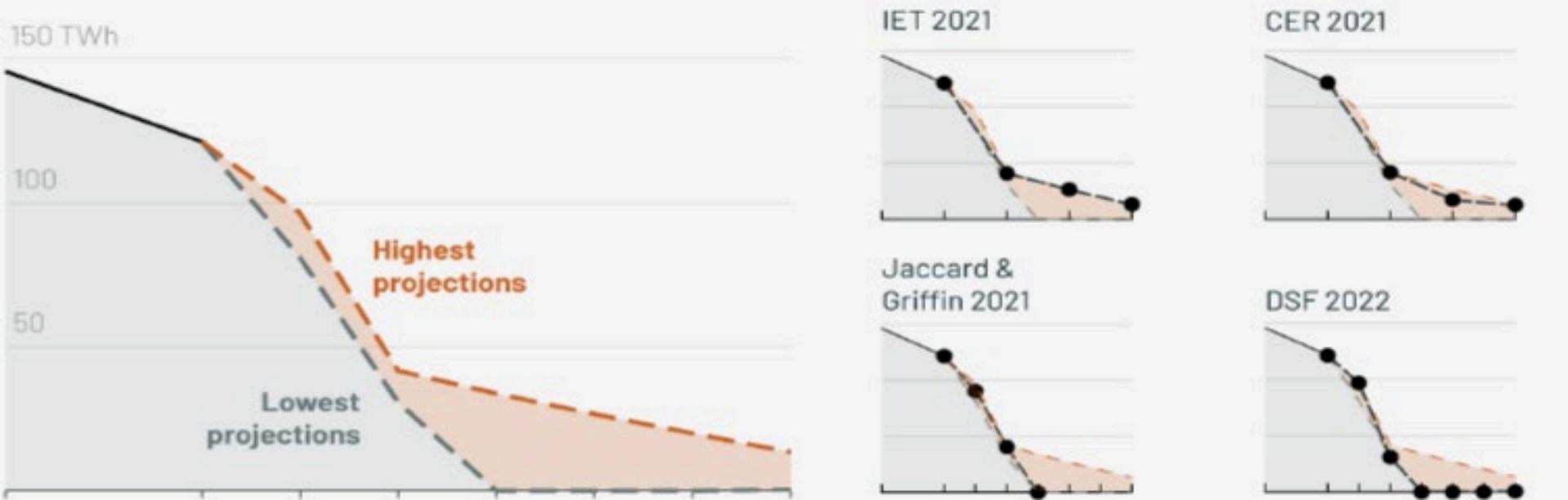
Full carbon price must apply to all GHG emissions (2030? 2035?) so that emissions are close to zero. (phase-out OBPS for electricity?)

and / or

Stringency of clean electricity standard must decline to near-zero (40 g/tCO₂?) so that natural gas and coal used only with CCS

On the path to net zero, unabated fossil fuel generation must be phased out

Studies show that unabated fossil fuel generation will reach at most 14 TWh in 2050, or 1% of total generation





What natural gas policy by what level of government?

Perhaps rising carbon tax is sufficient. But some urban governments (like Vancouver) plan to prohibit gas distribution connection to new buildings.

Is this good GHG regulatory policy?

Alternative regulatory approach is to require declining amount of natural gas in a utility's delivered gas, thus allowing a rising share of zero-emission gaseous substitutes (clean produced biomethane or hydrogen).

This enables the competitive market to determine the winning zero-emission option in buildings - electricity vs gaseous products vs other.

British Columbia is implementing this policy, with administration delegated to the energy regulator, BCUC.



Energy regulators: will they help or hinder the rapid transition to net-zero?

Argument that regulators don't need to be creative and dynamic:

If GHG policies by senior governments rapidly increase electricity demand, energy regulators will allow the necessary supply expansion.

Why? Risk-averse regulators keen to avoid blame for insufficient electricity
“Gov should implement its GHG policies, and we'll do our job.”

Argument that energy regulators must be creative:

Regulators may argue that GHG targets are unrealistic (unachievable).

Regulators may presume uncertainty of enduring political commitment.

Regulators may focus only on short-run financial costs, not long-run cost risks.

Regulators may focus on short-run impacts to sub-set of ratepayers.

Regulators may be blind to creative opportunities.

Regulators may sustain silo approach to energy regulation.

Regulators may not understand or believe in market dynamics.

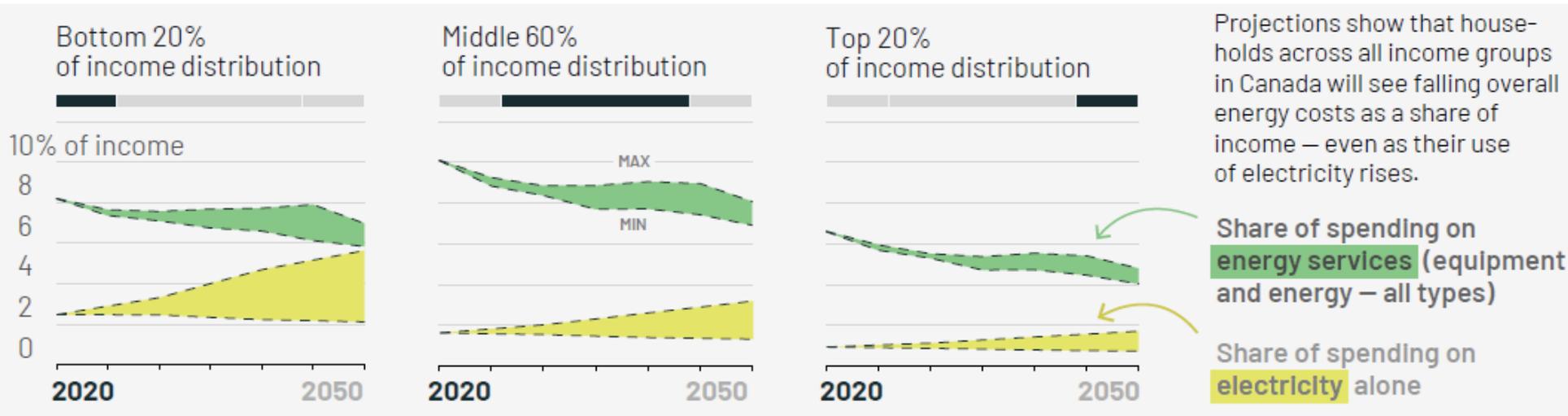
Regulators may ignore benefits of strategic grid developments.



Example of a potential challenge

If regulators and policy makers focus only on electricity rates instead of total energy service costs, they may make the wrong decisions.

(figure from The Big Switch)





Another potential challenge: insufficient support for Indigenous energy development by policy-makers and regulators

INDIGENOUS
CLEAN ENERGY

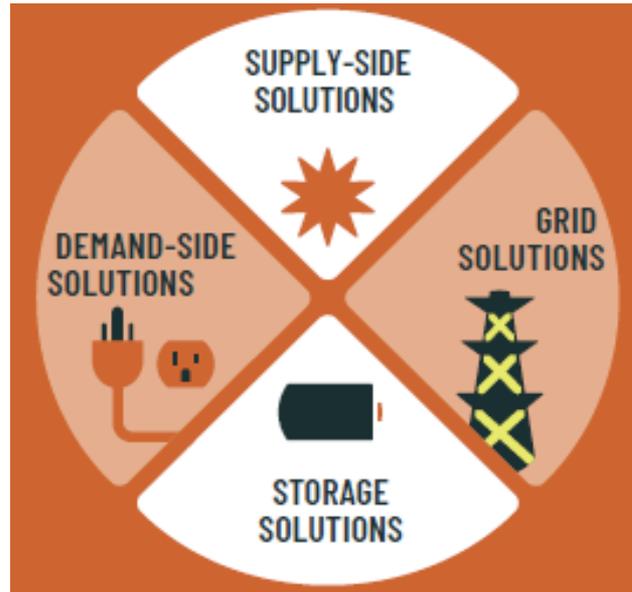




EMRG

What choices by energy regulators in the 2020s?

Whether driven by government GHG policy or their own motives, regulators can play a creative, dynamic role in the interconnected efforts of the energy transition in the 2020s. (The Big Switch)



Or they can be a hindrance!



Conclusion: Ideas for consideration

How might we align regulatory mandates with government GHG goals?

Legislation? Utility act amendment? Cabinet directive? Other?

How might GHG alignment requirements be worded?

“Decisions should be consistent with GHG targets”?

“Decisions should contribute to achieving GHG targets”?

“Regulators should apply shadow carbon price consistent with targets”?

What can regulators do in the absence of specific directives like these?

Many suggestions to explore in The Big Switch!

Many suggestions to explore during this conference!

Thank you

Return pivot:

But you must read this book
for assured climate success!

Learn more about strategy
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