ONTARIO 360

Policy Solutions for Ontario's Prosperity

Electricity Procurements in Ontario: Time for a New Approach

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ONTARIO 360

Summary Of Recommendations

1. Shift electricity procurement responsibilities to local electricity distributors.

Table of Contents

ONTARIO 360

Introduction

Last year the *Ontario 360* project released a "briefing memo" on the need for the Ontario government to establish a more evidence-based model for energy procurement.[1] The briefing memo argued that a lack of oversight and good governance had contributed to the province's ongoing energy challenges.

In particular, successive Auditor General reports as well as external analysis have found that the province's ineffective procurement model has contributed to an oversupply of energy and high prices for businesses and households. The problem here has been fundamentally about policy and process as much as it has been about technology. It is critical, then, that the Ontario government fix its underlying procurement model if it wants to avoid similar challenges in the future.

The province is now considering a new set of electricity procurements to meet its capacity needs in the mid-2020s. Its changing capacity needs are driven by the expiration of current supply contracts and the removal from service of the Pickering Nuclear Generating Station.[2] In effect, the province's oversupply problem that has bedeviled successive governments will soon be replaced by the need for more supply to meet the province's demands and so it needs to secure new sources for the medium-term. How much new electricity is required may be further affected by the Independent Electricity System Operator (IESO)'s current review of existing gas and renewable generation contracts "to identify opportunities to lower electricity costs within such generation contracts."[3]

Yet, it is unclear how these procurements will be conducted. Specifically, there is no direction on whether the IESO will act under government directives, through informal government guidance, through its own procurement initiatives, or a combination of all three. Each route has been tried in the past, and as will be detailed below, each one has been largely unsuccessful by reference to cost and transparency.

What is clear is that, as of yet, none of these models are expected to involve any independent regulatory review of electricity planning or procurement. This lack of independent review of electricity procurements makes Ontario an outlier in North America where independent regulatory oversight is a central regulatory feature.

In the absence of such oversight, it is difficult to have any confidence that future procurements in the province will be any more effective than the ones that have been carried out in the past. Simply

[1] George Vegh, "Energy policy – transition briefing," Ontario 360, April 3, 2018. https://on360.ca/30-30/ontario-360-reforming-ontarios-energy-policy-transition-briefing/.
[2] IESO, Annual Planning Outlook, January 2020. http://www.ieso.ca/en/Sector-Participants/Planning-and-Forecasting/Annual-Planning-Outlook.
[3] Directive from Minister of Energy, Northern Development and Mines to IESO, dated October 25, 2019.

put: if the government does not follow our 2018 recommendations to improve oversight and governance, there is a risk that the outcomes will be the same.

This new *Ontario 360* policy brief analyses the weaknesses of the current method of electricity procurements in Ontario and suggests alternative models to achieve greater accountability, transparency, and ultimately better results. Three options are set out in the policy brief: (i) independent review of IESO procurements; (ii) moving procurement responsibilities to electricity distributors, and (iii) direct rate regulation of generators. These models are drawn from ones currently used in Ontario (in other regulatory areas) and other North American jurisdictions, and, as our analysis shows, each of them is preferable to the *status quo*.

The key takeaways from our research and analysis are as follows:

- As the province moves forward with another round of procurement, it must get back to basics and reform its procurement system. Much of Ontario's energy woes in the past few decades have been a direct result of a lack of oversight and poor governance. Fixing the procurement process therefore is critical to producing better outcomes with respect to forecasting, costs, and ultimately business and household prices.
- Ontario's current system for electricity procurement makes us an outlier with comparable jurisdictions. A lack of proper regulatory oversight of procurements is a governance problem that has contributed to too little scrutiny of procurement assumptions and decisions.
- If the government accepts that governance reform is required, there are, as described above, three options available to it. On balance, this policy brief argues that moving procurement responsibilities to local distributors and transmitters under OEB oversight is the best option because it focusses electricity procurement decisions to the local level, where they can be made to address actual customer needs and will be less prone to pursuing the political and bureaucratic ambitions of provincial governments and central agencies.

The author recognizes that this would involve significant reform to the status quo. But if the government is to successfully procure the electricity supply that the province needs in the medium-term and avoid the long-term damages associated with past experiences, it must get the basic procurement model right and this will necessitate, in our view, such governance reforms.

A Basic Primer on Electricity Procurements

Most readers will know that the Ontario government's energy procurement has over the past decade and a half contributed to unsustainable electricity costs in the province. A 2015 report by the Auditor General, in fact, estimated that the province spent billions of dollars extra for energy between 2006 and 2014.[4] It is no surprise therefore that Ontario now has among the highest advertised electricity rates in North America.[5]

But most will not know exactly how it happened. It is worth providing a brief primer on Ontario's history with respect to electricity procurements including the role of the government and related players in the system.[6]

It is important to remember at the outset that the process of procuring electricity to meet Ontario's business and household demand involves a combination of government and market players and as such reflects a mix of regulation, subsidies, and government policies. This policy brief assumes that most readers have a basic understanding of Ontario's policy and market architecture including its energy mix of renewables and non-renewable sources.

Instead this policy brief will focus more on the lessons learned from past procurement experiences and how they can inform a better model for the province as it launches another round of procurements. Some of this is quite technical but it is critical to understanding where and how the current model has previously failed and how to reform it.

Government Directives

The government has the power to direct the IESO (and before that its predecessor, the Ontario Power Authority (OPA)), to procure electricity supply. The costs of contracts made in accordance with a government directive have guaranteed recovery and are specifically excluded from regulatory review.

This directive power was established in 2004 as part of the government's promise to remove and replace coal fired electricity. The model (which was established in

[4] Rob Ferguson and Robert Benzie, "Ontarians paid $37 billion extra for electricity from 2006-14, says auditor general Bonnie Lysyk," Toronto Star, December 2, 2015. https://www.thestar.com/news/queenspark/2015/12/02/ontario-consumers-likely-paying-billions-extra-for-hydro-one-decisions-auditor-general.html.

[5] Andrea Holmes, Empowering Ontario: Constraining Costs and Staying Competitive in the Electricity Market, Ontario Chamber of Commerce, 2015. http://www.occ.ca/wp-content/uploads/Empowering-Ontario.pdf.

[6] For those searching for a basic description of Ontario's electricity system, see Michelle McQuigge, "How does the hydro system work in Ontario? The Canadian Press explains," National Post, May 16, 2018. https://nationalpost.com/pmn/news-pmn/canada-news-pmn/how-does-the-hydro-system-work-in-ontario-the-canadian-press-explains; and Adrian Morrow and Tom Cardoso, "Why does Ontario's electricity cost so much? A reality check," Globe and Mail, January 8, 2017. https://www.theglobeandmail.com/news/national/why-does-electricity-cost-so-much-in-ontario/article33453270/.

legislation) was for the then-OPA to seek regulatory approval of an Integrated Power System Plan and a proposed procurement process. The legislation provided that the government's directive power would expire once a plan and procurement process was approved by the Ontario Energy Board which is responsible for regulating natural gas and electricity prices in the province. Yet, like many transitional powers, the directive power did not disappear as planned.

The expectation that the system would function with independent planning and procurement processes was eventually abandoned by the government and the agencies, all of them acting without regard to the legislative requirements. We have since had a more *ad hoc* model that has been at times shaped by politics or other, policy considerations. Before addressing how this happened (in the next section), it is helpful to look at why electricity planning and procurement are integrated with each other and the reasons for regulatory review of both.

Planning

Electricity capacity planning involves a forecast of electricity requirements and the identification of resources available and required to meet these needs. Forecasting requirements involves predicting electricity consumption (including by businesses and households) over the planning period plus a reserve amount that addresses contingencies, such as extreme weather or generation and transmission outages. Once the forecasted demand is settled, the next step is to identify how existing resources can meet that forecasted demand over the plan's period.

This process also involves considering how to treat generation capacity that may come out of service during that period and whether that capacity will be replaced. This analysis can help to inform the mix between different energy sources and what, if any, steps may need to be taken to replace capacity that will be out of service over the course of the plan. This is the circumstance, incidentally, that the current government finds itself in as the Pickering Nuclear Generating Station goes out of service in 2024. Once the forecasted demand and supply are settled, the question becomes how to fill any forecasted gap.

Although it sounds simple enough, there are some fundamental challenges.

First, forecasting electricity demand is inherently difficult. Forecasting demand involves assumptions of both future economic growth rates and how that forecast is likely to impact electricity demand. This proves complicated because, even apart from the challenges in forecasting economic growth, forecasting how the level of economic activity translates into electricity consumption requires assumptions about what types of industrial activities ultimately make up that demand. An economy that relies on manufacturing growth, for instance, will have higher growth in energy demand than an economy that is driven by the provision of services.

Even within these economic activities, forecasting consumption requires consideration of the technology and infrastructure behind this demand – the capital stock of factories, buildings, etc. and how that

stock will turn over during the period. So if a pulp and paper mill requires capital investment, will the investment be made in Ontario or will investors choose another location? If it is to stay in Ontario, what is the degree of productive efficiency that will come from that investment? Will processes change? The new machines can be expected to run more efficiently than the ones they replace, but by how much more?

Because these decisions may reflect the availability of subsidies for new investment (including subsidies for energy efficiency), even technical issues about electricity demand forecasting are highly influenced by other policy decisions and how they may change over a planning period.

The second challenge for planning is that future electricity demand is a normative as well as a technical exercise. This has always been a challenge in Ontario. Projecting demand is not just about accurately describing future electricity consumption, it is about proposing what that consumption should be. These decisions can involve a mix of technological futurism and political preferences.

In the late 1970s, Ontario Hydro predicted electricity demand to be 88,000 MW, by 2000. By 1981, it reduced that forecast to 38,000 MW.[7] Actual electricity consumption in 2019 was 21,791 MW.[8]

The primary driver for the expected increase in demand over this period was not what electricity consumption would be if left to its own devices. It was about Ontario Hydro's plan for electrification. Ontario Hydro had an ambitious plan to electrify the province through, for example, replacing natural gas for heating with electric heating. Nuclear power, it was argued, was too cheap to meter and a source of provincial economic advantage. Basically the higher projections for energy demand then were designed to justify investments in nuclear power.

More recently, in response to the province's decarbonization initiatives in 2015, the IESO issued a 20-year forecast in electricity demand using a number of scenarios ranging from a demand reduction of 9% to an increase in demand of 68%. The highest forecasted demand was again based on the premise of replacing gas heat with electric heat, and an increase in demand to meet a government target for electric vehicles.[9] For planning purposes, the IESO did not even try to forecast what was actually going to occur on the electrification front. It simply forecasted a range of potential electricity consumption levels and left it to the government to choose a forecast it preferred.

Given the issues of judgment and assumptions that go into planning, most jurisdictions have an open and transparent process where these issues may be debated and tested. Ontario does not. Even when such a process was established, neither the government nor the relevant agencies have been prepared to follow it.

This is problematic because poor forecasting (due to wrong or politicized assumptions) can set the procurement process on the wrong path from the beginning. Moving to an independent and transparent process for the forecasting of the province's electricity requirements ought to therefore be a no-brainer.

[7] Jamie Swift and Keith Stewart, Hydro: The Decline and Fall of Ontario's Electric Empire, Between the Lines (2004), P. 29.
[8] IESO, 2019 Year in Review, date unknown. http://www.ieso.ca/en/Corporate-IESO/Media/Year-End-Data.
[9] IESO Ontario Planning Outlook Technical Report, 2016, pp. 8 and 9.

How the Previous Procurement Model Failed

The previous section briefly described the challenges with forecasting electricity supply and demand. These challenges have historically been exacerbated in Ontario due to a combination of other factors including, of course, politics. This section of the policy brief will outline how the confluence of these factors has contributed to the province's electricity woes.

As indicated, in 2005, as part of its effort to replace its coal fired facilities, the legislature enacted a new method of electricity planning. The legislation required the planning authority (the then-OPA) to prepare a plan to remove and replace coal-fired electricity with a mix of nuclear, renewable and natural gas facilities plus conservation initiatives. It required the then-OPA to submit the plan to the OEB for approval which, if obtained, would form the basis for a new procurement process to meet forecasted demand.

The OPA followed the government's directive and submitted a plan to the OEB. But before the OEB could render a judgment on the plan's credibility, the government unilaterally announced that it was changing the targets that the plan was meant to achieve. The OEB application was withdrawn. Despite the statutory obligation to bring a plan to the OEB that remained in legislation until 2016, the OPA/IESO never filed another plan and the OEB never reviewed it.

During this period, the government also enacted the *Green Energy and Green Economy Act*, which included a feed-in-tariff. Under the feed-in-tariff, all renewable power (such as wind and solar) up to a certain MW level would have the right to connect to the system and obtain a fixed rate for power. The goal was to use auspicious procurement terms to catalyse new, renewable sources of energy in the province. Because it permitted developers to provide power to the system without any restrictions, the electricity planners could try to predict the growth in capacity but could not control it. It was the opposite of planning.

The result was that energy supply and prices got out of control. Just consider that, in 2015, Ontario generated 145.5 terawatt-hours just from waterpower, natural gas, and nuclear alone and excluding wind or solar.[10] Consumption in the same year was only 137 terawatt-hours.[11] This means that water, nuclear, and nuclear energy sources more than covered the province's entire demand. Yet Ontario also generated 14 terawatt-hours of wind or solar power that the province did not need and did not use. Ratepayers were still stuck paying high costs for this oversupply that flowed from the procurement failure.

[10] IESO, "2015 Year-End Data: Electricity Production, Consumption, Price and Dispatch Data, Accessed on February 20, 2020. http://www.ieso.ca/en/Corporate-IESO/Media/Year-End-Data/2015.
[11] Ibid.

In light of the oversupply and rising costs, successive governments have faced pressure to intervene in order to freeze prices and defer costs. One can agree or disagree with the goal of catalysing investment in new energy sources but the procurement process (that was a result in large part to politicization) has now led to even greater political intervention in the process to mitigate the negative effects. It has become a vicious cycle.

Most recently, in September, 2016, in response to public concerns about the rising cost of electricity, Ontario announced the Fair Hydro Plan, which reduced residential electricity bills by 25% – pushing the recovery of those costs into the future.[12] The annual cost of subsidizing electricity rates was forecasted to be $2.2 billion a year.[13] It is now $5.6 billion a year.[14] And that is before the current government fulfills its commitment to lower electricity rates even further by 12 percent.[15]

Incidentally, kicking the recovery of electricity costs down the road is not new in Ontario. The province did this in 1995, when, following double digit price increases, it reduced and froze electricity rates.[16] The 1995 price freeze resulted in an unfunded liability, or stranded debt, of $19.4 billion.[17] In May 2002, when the province lifted the 1995 price freeze and opened an electricity market, it was expected that the market would result in a lower price. Instead, the market price almost doubled in five months. In November 2002, the government reinstituted a price freeze. This was expected to be "revenue neutral"; it cost $730 million, in the first year alone.[18]

The main pattern underlying this series of price freezes (enacted by governments of all political stripes) was that the province committed through contracts to spend money on the costs of procuring electricity supply and, when electricity rates were increased on businesses and households to recover these costs, a political backlash resulted. Because the costs of these procurements were already committed, they could not be avoided short of expropriation. The response was to cut or freeze electricity prices, so the recovery of costs was deferred. Future customers (and taxpayers) were thus left to pay the bills created by historical procurements. This is the vicious cycle of political intervention referred to above.

The Ontario electricity procurement practice has been a text-book example of time-inconsistent preferences problem. What does that mean?

[12] Allison Jones, Ontario government's polling found 94% of residents wanted relief from hydro bills," CBC.ca, November 13, 2016. https://www.cbc.ca/news/canada/toronto/ontario-hydro-polling-1.3848893.
[13] Financial Accountability Office of Ontario, An Assessment of the Fiscal Impact of the Province's Fair Hydro Plan, May 24, 2017. https://fao-on.org/en/Blog/Publications/Fair_hydro.
[14] Robert Benzie, "Estimated cost of Ontario's hydro subsidies jumps $1.6B," Toronto Star, January 30, 2020: https://www.thestar.com/politics/provincial/2020/01/30/estimated-cost-of-ontarios-hydro-subsidies-jumps-16b.html.
[15] Rocco Frangione, "Fedeli says Tories remain committed to 12 percent electricity rate decrease," North Bay Now, November 18, 2019. https://www.mynorthbaynow.com/49882/fedeli-says-tories-remain-committed-to-12-percent-electricity-rate-decrease/.
[16] Neil Freeman, The Politics of Power: Ontario Hydro and its Government, 1904-1995 (University of Toronto, 1996), p. 178.
[17] Ontario Electricity Financial Corporation, Debt management, 2019: https://www.oefc.on.ca/debtmanage.html.
[18] Trebilcock and Hrab, Electricity Restructuring in Canada, in Electricity Market Reform 419, at p. 494.

> "Time inconsistency 'occurs when the best policy currently planned for some future period is no longer the best when that period arrives'…[T]his need not be caused by unforeseen changes in the environment, nor by a subjective change in the preferences of the agent. It may be caused by the mere passage of time. This phenomenon is known as 'hyperbolic discounting' of the future, which means that 'individuals have a strong preference for the present compared to all future dates, but are much less concerned with the relative importance of future dates."[19]

This problem is especially acute for electricity projects, because the time between the announcement of a project or program and when the costs of the project or program have to be recovered, can be several years, even decades. This allows one government to announce a policy and another government to be in power when the projects have to be paid for.

The standard solution to the time-inconsistent preference problem is the creation of independent regulatory agencies with a mandate to review the cost of projects before they are undertaken and ensure that they are economically sustainable. If so, their costs can be recovered from customers. This works for both customers, who have an agency responsible for insulating them from overly ambitious and unplanned spending programs, and investors, who have confidence that the cost of approved projects can be recovered.

The creation and maintenance of independent regulatory agencies thus demonstrates a "credible commitment" that government policies will be sustained over the long term, creating an investment environment where private capital is prepared to invest in infrastructure on an ongoing basis: "Credible commitment capacity has been shown to be necessary for economic growth and investment, because it provides a guarantee against public expropriation for economic actors."[20]

The creation of independent agencies to review infrastructure investment is not foreign to Ontario and, indeed, is not foreign to the Ontario energy sector. The OEB, as mentioned earlier, provides economic regulation of gas and electricity infrastructure projects and costs. Under this regime, Ontario utilities procure billions of dollars of infrastructure a year, and the costs are reviewed and, if prudently incurred, collected from customers. However, Ontario has never adopted this model for electricity supply procurements. Instead, it continues to allow procurement choices to be dictated by the short-term desires of the government and its procurement agents.

[19] Fabrizio Gilardi, Institutional change in regulatory policies: regulation through independent agencies and the three new institutionalsims" in Jordanna, et al the Politics of Regulation.
[20] Ibid., at 72.

Ontario's Experience with Reviewing Electricity Plans

Under the current regime, Ontario has two methods of procuring supply: (i) formal directives from the government to the IESO, and (ii) IESO-led procurement initiatives under its Market Rules. The line between the two is fairly blurry, because there is no visibility into the role of the government in the Market Rule process. It is therefore not clear how IESO-led procurements are influenced or controlled by government.

The Directive Power

Since the directive power was introduced on a transitional basis in 2004 (and made permanent in 2016), the government has issued over 100 directives to the OPA/IESO.

The Auditor General has reviewed the experience with procurements under the government's directive power. It has noted that these procurements have often reflected political objectives more than electricity requirements. According to the Auditor General: "the Ministry did not fully consider the state of the electricity market or the long-term effects that different supply mix scenarios would have on Ontario's power system in making some of these decisions."[21] In all, the Auditor General reported that government directed procurements have resulted in over $11 billion in above market costs.[22]

In addition to the formal directive power, the government has used other methods of encouraging the IESO to procure resources. For example, in 2012, the government wrote the IESO requesting, but not directing, it to purchase electricity storage resources. The IESO complied.

IESO Led Procurements

In addition to implementing government procurement directives, the IESO has also developed its own methods of procuring electricity capacity. Its current preferred method of choice is through capacity auctions. Capacity markets have become popular among system operators in North America to address the challenges that electricity markets have faced in securing sufficient capacity.

[21] Ontario Auditor General, 2015 Annual Report, Electricity Planning, p. 213. http://www.auditor.on.ca/en/content/annualreports/arreports/en15/2015AR_en_final.pdf.

[22] This consists of $9.2 billion in procurements of renewable power that was above the price experienced in Ontario and elsewhere; approximately $1 billion in developing a hydro project at a price that was more than double the cost of hydro projects in Ontario and elsewhere; and $675 million for the cancelled gas plants. The Report identified, but did not quantify, additional questionable expenditures of a biomass facility that costs eight times more than similar facilities and conservation programs that are being funded at a time of surplus and not, in fact, displacing supply.

Starting in 2015, the IESO developed a demand response auction to purchase capacity from loads. Essentially, under this model, customers compete to offer to reduce their consumption in exchange for capacity payments. The IESO provides an activation in relation to a specified time, the load must be prepared to reduce its demand.

The effectiveness of the demand response auction was reviewed by the OEB's Market Surveillance Panel (MSP). The MSP, which has the authority to report on, but not rule on wholesale market issues, found that the IESO had been procuring capacity through its auctions at a time when capacity is not needed.[23] As a result, despite paying upwards of $73 million during the period 2016-2017, there were no demand response activations. According to the MSP: "it is unlikely that the current DR program will actually contribute to conservation or demand reduction."[24]

Despite the limited value of the demand response program, the IESO has decided to expand that program to include supply resources, as well as demand. This would be done by allowing electricity generators to participate in the program to provide electricity capacity.

The IESO's development of capacity auctions for electricity resources has been a work in progress for the last six years. It was initially proposed in 2014. The IESO put the project on hold in 2015 and then brought it back to life in 2016. At that time, the IESO called it an Incremental Capacity Auction (ICA).

In support of the ICA, the IESO published a report by its consultant, the Brattle Group, which concluded that the ICA would result in benefits of over $2.53 billion.[25] There was no opportunity to test these assertions or the assumptions that underlay them in an independent review. In 2019, the IESO announced that it was "shelving" the ICA. By this time it had spent $29 million in development costs in that year.[26]

The IESO later announced that the ICA will be replaced with a Transitional Capacity Auction, or TCA, which is to go into effect in 2020. The difference between the ICA and the TCA, and interaction between the TCA and the other procurement initiatives is not clear.

What is also unclear is how the TCA will interact with the government's directive power. A central assumption of the ICA/TCA model is that, once this model is in place, the IESO will purchase resources to meet electricity system needs, rather than political goals. However, there is nothing in the design of these programs that address this point. As this has been the central challenge in Ontario's procurement history, it is hard to see how any of this is likely to change. It frankly does not appear to be anything to support this view other than wishful thinking.

In any event, the IESO continues to resist independent review of its capacity auctions or other potential procurement mechanisms. This may be contrasted with other jurisdictions who conduct capacity auctions, all of which are subject to independent review.

[23] MSP Report November 2015-April 2016, p. 106.
[24] MSP Report November 2015-April 2016, p. 98.
[25] Brattle Group, p. X.
[26] OEB Decision and Order, IESO Application for Approval of 2019 Expenditure, Revenues Requirements and Fees, December 5, 2019.

Options for Governance Reform

The upshot is that the government is about to embark on a new set of electricity procurements due to the expiration of current supply contracts and the removal from service of the Pickering Nuclear Generating station and it is still, for all intents and purposes, using the same procurement model that has failed in the past.

This would be a mistake. Given the negative experience with electricity procurements, it is necessary to consider alternative procurement models that involve independent oversight. At least three options present themselves: (i) independent review of IESO procurements; (ii) moving procurement responsibilities to electricity distributors, and (iii) direct rate regulation of generators. Each will be addressed in turn in this section of the policy brief.

(i) OEB Review of IESO Procurements

The first and most obvious option for regulatory review of procurements is to keep the procurement power within the IESO but make that power subject to OEB oversight. Bringing IESO's procurement firmly under the OEB's oversight would bring Ontario's regulatory system in line with how other system operators in North America procure electricity.

While this model may be the most obvious option, there is reason to believe that it would not work in the absence of new and clear policy direction from the government. It is worth explaining why this is the case.

Even though the OEB currently has authority to review some IESO activities, it has been reluctant to do so. It is partly a function of how the IESO and OEB view their respective roles in the system.

In other North American jurisdictions, system operators such as IESO are treated as public utilities and subject to regulatory oversight on that basis. The reason for this status is that system operators essentially provide transmission operations services on a monopoly basis. As a result, the rules around independent system operators are treated as tariffs that are subject to public utility regulation.

The IESO has resisted this characterization and the OEB has done little to act on it. Instead of being treated as a utility, the IESO has characterized itself as a co-regulator with the OEB of the Ontario electricity system. For example, in a recent OEB proceeding, the IESO took the position that:

> "it is a public authority impressed with the public interest, and that it has primary legislative responsibility to make market rules in accordance with its legislative mandate and objectives. The IESO argued that the OEB should show deference to its decisions and, absent

evidence to the contrary, they are entitled to deference and must be presumed to be in the public interest."[27]

Although the OEB did not formally accept this submission, it does reflect the IESO's stance towards the OEB and provides a fairly accurate description of how the OEB has actually treated the IESO. There are various examples of how this has played out in practice including:

- Although the OEB has had a statutory obligation to review the IESO's system plan, as mentioned above, the IESO withdrew its one filed and plan and did not bring another forward and the OEB did nothing to require it to do so.[28]
- While the OEB has had statutory authority to review the OPA/IESO's market operations fees for roughly twenty years, it has not disallowed any of these fees. This contrasts with the OEB's practice of routinely disallowing approximately 10 per cent of revenues applied for by the other companies its regulates.
- The OEB has refused to apply its authority over these fees to review the IESO's procurement costs even when it has done so under the Market Rules and without an explicit government directive. [29]
- The OEB has the authority to review the IESO's market rule amendments and send them back if the market rules, among other things, "unjustly discriminate" against market participants. However, the OEB has taken an extremely narrow view of the meaning of "unjust discrimination" in its dealings with the IESO. It has chosen to narrow its mandate to "economic" discrimination and not consider whether the IESO treats market participants fairly.[30] This is similarly a much different approach than the OEB takes with respect to the other companies that it regulates.

Given the OEB's history of unwillingness to review IESO procurement decisions, it cannot be simply assumed that it will be willing to do this in the future. Even a previous change in legislation mandating an OEB review ultimately proved to be ineffective to change this approach.

This is likely to persist as long as the OEB views the IESO as an agent of the government and the OEB does not view itself as in the position to question the IESO's actions. The OEB is therefore not prepared to exercise meaningful regulatory oversight over centrally controlled procurements, whether initiated by the government or where the IESO ostensibly acts independently.

Moving in this direction would therefore require an explicit policy direction of the government for the OEB to take up the task of effective regulation of IESO procurements. This direction would bring Ontario into the mainstream in North America where market rules, including rules for procurement, such as capacity markets, are reviewed on a just

[27] OEB Decision on AMPCO stay motion (EB-2019-0242), pp. 3-4, November 25, 2019.
[28] OEB Decision and Order on OPA Licence Renewal (EB-2010-0220), December 1, 2010.
[29] OEB Decision on Issues List, Independent Electricity System Operator Application for approval of 2017 revenue requirement, expenditures and fees, August 4, 2017 (in EB-2017-0150).
[30] See OEB Decision and Order on Application by AMPCO to review Transitional Capacity Auction Market Rule Amendment (EB-2019-0242), January 23, 2020.

and reasonable standard. Ontario now operates the only market without such a requirement.

(ii) Local Distribution Procurement

An alternative to the OEB's review of IESO procurements is to transfer the procurement responsibility from the IESO to the 60 local distributors across the province. Procurement would come to be focused on meeting local demand. Large central facilities (such as nuclear and large hydro assets) would continue to be centrally regulated or contracted for.[31]

This is aligned with current regulatory practice as local electricity distributors are currently responsible for ensuring there is adequate delivery capability to its customers. That obligation can be extended to ensuring that they supply adequately as well. This is similar to the obligations put on gas distributors in Ontario: they must have both sufficient pipeline capacity and sufficient gas supply.

This is also the practice in for many electricity distributors in many other North American jurisdictions, some of which have independent system operators and some of which do not. The former operates under a Joint Dispatch Model; the latter under a Bilateral Contract Model.[32]

The Joint Dispatch Model puts local distributors in charge of supply adequacy, but the generation dispatch is still controlled by an independent system operator. This model is used by utilities in the Midcontinent Independent System Operator, Southwest Power Pool, California, and some members of PJM (e.g., AEP, FirstEnergy, Dayton Power & Light, Duke Energy Ohio & Kentucky, Buckeye Power and East Kentucky Power Cooperative) and ISO-New England.[33]

Under the Bilateral Contract Model, utilities serve load through a bundled combination of generation and distribution; purchases for electricity supply are made bilaterally from suppliers, not through an organized energy market. Distributors engage in integrated resource planning to determine resource adequacy. This is the practice in the U.S. Southeast and most of the West.

Adopting either practice in Ontario would involve the OEB reviewing distribution procurement arrangements set up by local distributors, likely as part of the Distribution System Plans that distributors must currently file and obtain regulatory approval for distribution infrastructure.

This current model for distribution infrastructure has generally worked well free of political intervention. Currently, to ensure that infrastructure is grounded in meeting electricity needs, the OEB conducts reviews of capital plans of electricity and gas distributors and transmitters as well as Ontario Power Generation with

[31] It would be worth considering the value of other centrally managed procurement agents, such as Infrastructure Ontario, who have a history of effective procurements.
[32] See, generally, Tony Clark, Regulation and Markets, July 2017.
[33] See submission of AEP, FirstEnergy, Dayton Power & Light, Duke Energy Ohio & Kentucky, Buckeye Power and East Kentucky Power Cooperative to PJM Board of Directors re: Resource Investment in Competitive Markets, May 19, 2016.

respect to its nuclear and baseload hydro assets. These reviews are carried out through public hearings with the opportunity for parties and OEB staff to test evidence and an obligation on the OEB to make decisions on the basis of an evidentiary record. It provides funding to intervenors, who range from representatives of small, medium and large customers to environmental NGOs to so that they have resources to test the evidence and provide their views to the Board.

The OEB has also been effective in setting rates in a way that balances utility returns and ratepayer protection. Over the last ten years, distribution revenues have average annual increases of approximately 3%.[34] It a sign that the model has achieved a degree of stability – especially relative to the current model for electricity procurement.

Current Ontario legislation does not permit distributors to procure electricity capacity, except in very small amounts. There is a good case to be made for reconsidering these restrictions. Pursuing this approach would also require legal and policy amendments to grant distributors the ability to develop or contract for supply procurement expertise. This is likely only to be developed by larger urban or suburban distributors, but that is where demand growth is found in the province.

A reconsideration of this restriction is timely given the evolution of the electricity system. The prohibition on utilities owning generation is premised upon the idea that generation should be invested in on a competitive basis, with market prices replacing regulation to set price. However, in Ontario, virtually no generation has been invested in on a competitive basis. It has been contracted with the IESO or regulated by the OEB. Further, the government effectively controls the price of electricity to most customers. It is therefore difficult to justify the restriction on the grounds that it may distort a "market."

More generally, despite the nomenclature, capacity "markets" are not really markets. Capacity markets do not resemble normal markets where buyers and sellers interact to create products, services and price. It is more accurate to characterize capacity markets as administrative constructs where system operators determine demand and create complex rules of participation. According to one U.S. observer:

> "The restructured administrative markets long ago lost the thread of competitive 'market' outcomes. Divergent policy preferences, real world economic consequences, local political realities, and the sheer amount of capital involved to generate electricity create political demand for the price system to give way or be distorted to serve other values."[35]

In other words, despite their label, capacity markets are not an alternative to regulation. They are a type of regulation. The question is whether they provide good or bad regulation. As Joskow has observed,

> "The move to liberalizing the electricity sector in this way was

[34] See OEB distribution handbooks, 2008-2018.

[35] Ray Gifford, "FERC gets around: PJM super MOPR — an around-market solution for the around-market solutions," Utility Drive, January 21, 2020. https://www.utilitydive.com/news/ferc-gets-around-pjm-super-mopr-an-around-market-solution-for-the-around/570699/.

> effectively a bet that the costs of any residual imperfections in competitive wholesale markets are smaller than the costs of imperfections associated with the behaviour of vertically integrated regulated monopolies."[36]

The evaluation of these two models should be determined by reference to the results they have achieved in Ontario, not by the use of buzzwords such as "markets."

Extending the procurement responsibilities of distributors to apply to supply could move supply procurement decisions into the mainstream as a way to meet customers' reliability requirements, and not political agendas should be seriously considered.

(iii) Regulation of Generation Charges

As an alternative to procurements by the IESO or local distributors, another model that contains independent oversight is the direct regulation of rates that may be charged by generators. The OEB now does this with respect to the Ontario Power Generator's nuclear and baseload hydro assets, which currently make up approximately 38% of Ontario's installed capacity.

Under this model, a generator who seeks recovery from consumers for the cost of their power would be subject to OEB regulation like other utilities. The Board's current approach to regulating rates would set these amounts on the basis of a determination of a base rate (representing the cost of capital and OM&A expenditures) and adjusted on an annual basis using a formula which largely reflects inflation less a productivity factor.

The model here is similar to OEB's regulation of distribution activities but extended to generators directly.

Again, the argument could be made that generation is not a natural monopoly and therefore should not be regulated. The Board recognized the difference between the regulation of natural monopolies and generation and identified several goals that it sought to achieve in regulated prescribed generation assets. Following a consultation, the Board addressed this as follows:

1. To allow for an open and transparent examination of OPG's financial and cost accounts with the expectation that the Board will find cost efficiencies that will allow payments to be lower than they might be if set through another process.
2. To use the Board's expertise to set "just and reasonable" payments that will drive operational efficiencies.
3. To ensure that Ontario consumers benefit from OPG's "heritage assets" through administered price setting.

[36] Paul Joskow, "Challenges for wholesale electricity markets with intermittent renewable generation", Oxford Review of Economic Policy, Volume 35, Number 2, 2019, pp. 291–331.

4. To limit the potential financial benefits to OPG of exercising its market power.
5. To provide an objective decision-making process for setting OPG payments.[37]

While this list of factors applied to OPG in particular, they can also to generators across the sector. Rationales 1, 2, and 5 are clearly relevant to generation costs generally and would be an improvement to the current lack of transparency.

Rationale 3, while specifically addressing OPG's nuclear and baseload hydro assets also apply to currently contracted generators. Their assets have also been paid for by electricity customers and can be seen as heritage assets that customers have invested in.

Rationale 4 may in fact be even more relevant to gas-fired generation assets than OPG baseload assets, because gas fired generation assets set the price for electricity while baseload assets are price takers.

Again, this approach has the potential to be much more promising than the current method of procurements. It is clearly worth exploring.

[37] Ontario Energy Board Report: A Regulatory Methodology for Setting Payment Amounts for the Prescribed Generation Assets of Ontario Power Generation Inc., November 30, 2006, pp. 3-4.

Conclusion

As the province moves forward with another round of electricity procurements, it must get back to basics and reform its procurement system. Much of Ontario's energy woes in the past few decades have been a direct result of a lack of oversight and poor governance. Fixing the procurement process therefore is critical to producing better outcomes with respect to forecasting, costs, and ultimately business and household prices.

Ontario's current system for electricity procurement makes us an outlier with comparable jurisdictions. A lack of proper regulatory over procurements is a governance problem that has contributed to too little scrutiny of procurement assumptions and decisions.

There are a number of options to reform the governance and procurement process based on models that are currently in use elsewhere in North America. All three of the options presented in this policy brief would be an improvement compared to the status quo.

On balance, this policy brief argues that moving procurement responsibilities to distributors and transmitters under OEB oversight is the best option because it focusses electricity procurement decisions to the local level, where they can be made to address actual customer needs and will be less prone to pursuing the political and bureaucratic ambitions of provincial governments and central agencies.

ONTARIO 360

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