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Do We Need a Forum Within Which to Discuss Issues of Electricity Law and Policy in Alberta?

By: Nigel Bankes

I am not a technical electricity expert and I do not have day-to-day access to technical experts, but I have been following some of the law and policy issues in the electricity sector in Alberta over the last decade or so. I am concerned that we don't have a suitable forum within which to publicly discuss and develop electricity law and policy for an increasingly decentralized electricity system that continues to decarbonize and has access to a greater diversity of generation. On top of this is the emerging policy of the "electrification of everything". There is massive complexity here, but the public deserves to be involved in a discussion of the relevant issues.

A central problem is that governance responsibility for the electricity sector is very diffuse. No person or agency seems to be prepared, or has the legal authority, to look at the big picture in order to develop the necessary suite of measures that we will need to meet the challenges of an evolving and increasingly distributed system (with new assets such as storage), while making the most efficient use we can of existing and anticipated investments in transmission infrastructure, all while seeking to attain net zero (see AESO, Net-Zero Emissions Pathways Report (June 2022).

Regulatory and governance responsibility for Alberta's electricity sector is divided between a number of different regulatory actors. The principal governmental actors are the Department of Energy, the Alberta Utilities Commission (AUC), the Alberta Electric System Operator (AESO or ISO), and the Market Surveillance Administrator (MSA)). In addition, the Utilities Consumer Advocate (UCA) plays an important information and advocacy role. All of these bodies exercise some statutory authority over part of the electricity system.

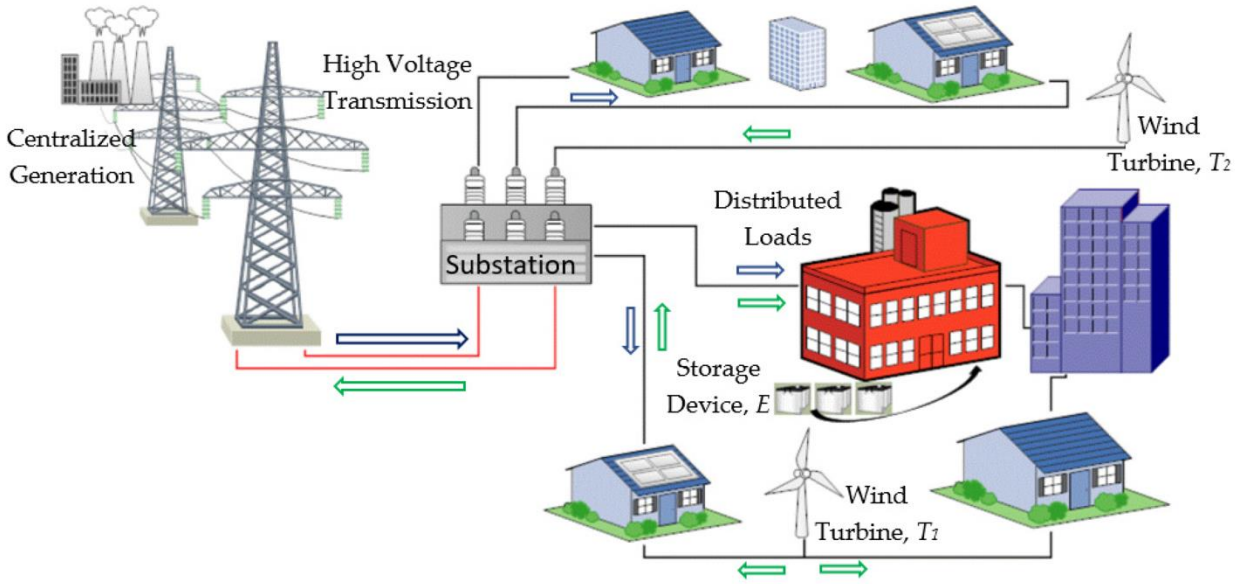
Others who have important roles to play include the regulated monopoly providers of transmission and distribution services (transmission facility owners (TFOs) and distribution facility owners (DFOs)). These parties are investor or municipally owned utilities who provide crucial public services in return for a regulated rate of return.

Other directly interested parties include generators, retailers, municipalities, and of course all of us who pay utility bills.

The following table offers an overview of the selected functions of these entities. It is by no means comprehensive.

Entity	Functions (selected)
AUC	• Provides the environmental, social, and legal review and approval of all new generation and connections to the grid.

	• Approves the need for new transmission. • Approves tolls and tariffs and rule changes for the AESO and for TFOs and DFOs. • Makes some policy choices, such as whether to apply cost-of-service or performance-based regulation. • Can convene generic hearings and may be directed by the Minister to inquire into a particular matter. • Considers 'prosecutions' brought by the MSA.
AESO	• Operates the power pool. • Provides independent system operator functions. • Proposes rules for system access and reliability and seeks AUC approval for those rules, as well as tolls and tariffs • Provides transmission system planning. • Identifies new transmission needs and directs a TFO to construct, once approved by AUC.
MSA	• Acts as the provincial competition authority for the electricity and natural gas sectors. • Issues quarterly market reports and annual offer control reports.
DoE	• Develops and proposes new regulations and statutes. • Makes important policy decisions: e.g. reliability standards, allocating costs of transmission, and any decision to add or not add a capacity market. • Encodes important policy directions in statute and regulations. • Makes appointments to the above regulators and gives direction to those regulators as permitted by legislation.
TFOs	• Build, own, and operate transmission facilities at the direction of the AESO. • Propose tolls and tariffs for AUC approval.
DFOs	• Build, own, and operate distribution facilities to meet the needs of customers within the DFO's service area. • Propose tolls and tariffs for AUC approval.
UCA	• Compiles and provides information on retailers for the general public. • Intervenes in AUC proceedings to represent residential, farm, and small commercial consumer interests.
Generators	• Bid power into the power pool on a competitive basis or provide ancillary services; or provide behind-the-fence power to industrial facilities. • Assume need and price risk. • May be connected to distribution or transmission.
Retailers	• Provide a variety of contractual offerings, including fixed and variable rate contracts of different duration.
Municipalities	• Exact franchise fees from DFOs (passed through to consumers) providing service within a municipal boundary.



Regulatory oversight and responsibility for the sector is further divided if we take into account international and interprovincial connections. International interconnections (such as Alberta's connection with Montana) are under the regulatory supervision of the Canadian Energy Regulator (CER), although many aspect of this supervision are delegated to provincial authorities as a result of the exceedingly complex delegation provisions of the *Canadian Energy Regulator Act*, SC 2019, c 28, s 10 at Part IV see *Sincennes v Alberta (Energy and Utilities Board)*, 2009 ABCA 167 (CanLII). Interprovincial interconnections are further complicated by the fact that such connections are only subject to federal regulation when specifically designated by federal Order in Council (which has never happened). Consequently, an interprovincial interconnection is functionally "regulated" by some combination of regulation on each side of the provincial boundary and by contract: *Fulton et al v Energy Resources Conservation Board et al*, 1981 CanLII 169 (SCC), [1981] 1 SCR 153 and *Summerside (Town) v Maritime Electric Co Ltd*., 1983 CanLII 2950 (PE SCTD.

There is of course nothing intrinsically wrong with dividing the regulatory pie. Indeed, some functional division of regulatory responsibilities may be crucial. For example, and as noted in the above table, the AUC performs adjudicative responsibilities in response to the investigative and prosecutorial responsibilities of the MSA. And the AESO somehow combines regulatory type responsibilities with provision of services - notably the power pool and system operator services. But dividing the regulatory pie may cause challenges if the slices do not make up the whole, or if the original slicing of the pie is overtaken by technological developments that render the original divisions inefficient or otherwise inapt.

Equally, earlier regulatory decisions and settlements may no longer send the appropriate signals to market participants with respect to things like the location of generation. For example, we might want to incent peaking facilities to locate next to windfarms so as to optimize the efficient use of

existing installed transmission capacity. The current rules do not allow for this, but it is unclear who has the responsibility to take the initiative to seek a change in the rules to accommodate such an incentive. The current rules are largely based on the Transmission Development Policy (2003) as encoded in the *Electric Utilities Act*, SA 2003, E-5.1 (*EUA*) and the Transmission Regulation, Alta Reg 86/2007 (TReg). Absent some comprehensive review and assessment of the role of transmission policy in Alberta's restructured electricity industry, there is a real concern of rising transmission costs due to system inefficiencies. These costs represent a serious burden for industry and individual consumers alike.

Let me provide a few examples of what we might think of as regulatory mismatch or uncertainty: the treatment of behind the fence generation, the treatment of distribution connected generation, and the AUC's 2022 decision on AESO rate design.

The Regulatory Treatment of Behind the Fence Generation (Self-Supply and Export)

The general rule is that all generation (power supply) that is connected to the high voltage transmission grid "must offer" into the power pool for dispatch in merit order by the AESO. But an industrial consumer might decide instead to supply its own needs. Many industrial consumers will also want to connect to the grid in order to access the security offered by grid supplies in the event that it loses its own generation. Such a consumer may also want to be able to sell any surplus generation into the power pool. This gives rise to a number of questions, such as the circumstances under which a party should be able to bypass the system and self-supply, whether such party should be permitted to export any surplus to the grid, and how the costs and benefits of a grid interconnection should be allocated.

Under the current rules, the circumstances in which a consumer can lawfully self-supply and offer the balance of any generation into the pool are limited by the terms of the *EUA* and the industrial system designation rules of the *Hydro and Electric Energy Act*, RSA 2000, c H-16, s 4. The AUC explored the parameters of these rules in a series of decisions beginning with its EL Smith Solar Power Plant decision in early 2019: AUC Decision 23418-D01-2019. I commented on the Smith decision here. Other decisions followed, and later that year the AUC engaged industry in a limited consultation through the issuance of Bulletin 2019-16 (commented on here). In doing so, the AUC recognized that it "has no authority to amend the statutory scheme. However, it can seek feedback on potential amendments to the statutory scheme which it can share with the Department of Energy." At the request of the DoE, the AUC then conducted a second round of consultations supported by an AUC discussion paper, Self-supply and export – Alberta Utilities Commission discussion paper, June 5, 2020. But from there, things went underground with an invitation-only stakeholder consultation in December 2020 conducted by the Department of Energy itself.

The ultimate outcome of all of this work eventually took the form of Bill 22, now *Electricity Statutes (Modernizing Alberta's Electricity Grid) Amendment Act*, 2022, SA 2022, c 8. Bill 22 obtained Royal Assent on May 31, 2022, but has yet to enter into force. Osler's has provided an unofficial consolidation here as well as an informative commentary here.

Amongst other things, the amendments, once they enter into force, will offer unlimited opportunities for self-supply and export subject to an exposure to pay a new AESO tariff designed

to allow the AESO to recover "a just and reasonable share of the costs associated with the transmission system from those engaged in self-supply and export" (a new s 122(2)) of the *EUA*.)

This narrative and chronology prompt several comments. First, it illustrates the point that governance and regulatory responsibility for the electricity sector is divided between a number of different actors. Second, it suggests that the array of regulatory responsibilities makes reform complicated and time consuming. This is significant given the rate of technological change that we are seeing in the industry, as well as the need to respond in a timely way to the challenges of decarbonization. In this case, problem identification occurred in early 2019, and yet, while the amending legislation is now in place, implementing measures (regulations and perhaps a new AESO tariff) are still required before the legislation can be proclaimed. Third, the process seems very *ad hoc*. While Bill 22 also addresses issues associated with energy storage (largely based on consultations conducted by the AESO not the AUC), the amendments do not address other systemic issues discussed in this post. And fourth, while the identification and early discussion of self-supply and export issues occurred through an open and transparent process, at some point the process became far more opaque and consultation was limited to invited stakeholders.

The Tariff Treatment of Distribution Connected Generation

Historically, the whole power system and transmission grids were pretty much unidirectional, with power flowing from large central generating facilities, through transmission lines, down to distribution lines, and then to end point consumers. But electricity systems are changing across the globe. Individual homeowners with a roof top solar array may be a 'prosumer' – that is both a producer and a consumer at different time of the day and year – and in some cases putting into the distribution system more than they take out. In addition, technological developments have permitted small scale generators to locate on a distribution system rather than on the transmission system (distribution connected generation or DCG). One of the implications of this latter development has been that it allows a distribution facility owner (DFO) to reduce the energy that it withdraws from the transmission system under its demand transmission service contracts (DTS) with the AESO.

Some DFOs (ATCO Electric, ENMAX, and Fortis), but not all (EPCOR), elected to recognize the benefit conferred by DCG by providing credits (DCG credits) through special AUC approved tariff provisions. The AUC described the crediting mechanism as follows in AUC Decision 26090-D01-202:

> The credits are calculated based on the electrical energy delivered by the DCG to the distribution system, and represent the difference between the AESO transmission charges (Rate DTS and Rate STS) the distribution utility must pay with the DCG in operation, and the hypothetical charges that would have been incurred if the DCG had not been in operation. The amounts are calculated manually for each DCG using actual hourly metering data. The calculated credits are then allocated to, and recovered from, all load customers of that distribution utility. (at para 9)

In that decision the AUC decided to phase out the DCG credit mechanism. That decision is under appeal with leave having been granted by the Court of Appeal: *WCSB Power Alberta Limited Partnership v Alberta Utilities Commission*, 2022 ABCA 177 (CanLII).

I won't go into the merits of that appeal here. Instead, I simply want to draw attention to the fact that the AUC made this important policy decision in the course of a tariff application brought by one DFO, namely Fortis (and Fortis was not asking for the DCG credit mechanism to be disallowed). Yet the decision has system wide application and implications. More fundamentally, it involves the interaction between the AESO tariff and the tariffs of TFOs and DFOs. These issues are hard to deal with fairly in a segmented regulatory system that contemplates separate processes for establishing the AESO tariff and for establishing the tariffs of individual DFOs and TFOs.

The AUC had identified issues with the DCG credits in previous proceedings going back to 2017, including the AUC's Distribution System Inquiry and an AESO tariff application, but the appeal means that the issue has yet to be definitively resolved. And there is a bigger issue here, that being the question of whether, and if so how, we want to incent generation to make the most efficient use of existing wires infrastructure (whether distribution or transmission lines). It is hard to have that discussion in the context of a DFO's tariff proceeding.

There is also the question of consistency. Before changing tack in this proceeding, the AUC had long endorsed the DCG credit provisions of various DFO tariffs, and this created an incentive for generation to locate on the distribution system. But if the AUC thought that that was a good idea (presumably in order to achieve efficiencies), why did the AUC not require all DFOs (including EPCOR) to include such an incentive?

The AUC's 2022 Decision on AESO Rate Design: AUC Decision 26911-D01-2022, November 10, 2022

Rate design for a regulated utility generally occurs in two phases. The utility application in Phase 1 is directed at assessing the total revenue requirement of a utility, while the Phase 2 of the application is concerned with the design of rates that will allow the utility the opportunity to recover its revenue requirements. In the case of a DFO's application, the Phase 2 determines how much of the revenue requirement is recovered from which customer group or rate class. Rate design principles are informed by the literature (e.g. Bonbright's often referred to 1961 treatise, Principles of Public Utility Rates) and by past practice and decisions. A leading principle is the cost causation principle (also known as the cost-based/user-pay principle), which requires that tolls should, to the greatest extent possible, be cost-based. According to this principle, those who impose costs on the system should expect to be responsible for those costs, and those costs should not be cross subsidized by others.

Legislation may further inform or constrain the choice of approach. In some cases, the legislation may only offer the most general guidance (e.g. rates must be just and reasonable and not unduly discriminatory, see *Canadian Energy Regulator Act*, s 230 and the *EUA*, s 121(2)(a)). But in other cases, and perhaps most commonly in relation to electricity, the legislator may further constrain the policy choices available to the regulator and the system operator. The *EUA*, together with the

Transmission Regulation (TReg) impose a number of constraints on the AESO's rate design including the following:

- Rates charged to load (consumers) must be location neutral (*EUA* at s 30(3)(a)).
- Line losses are to be recovered from generation - not load (TReg at ss 31 – 36).
- The ISO must recover local interconnection costs for new generation (Treg at ss 28 – 29).
- Other transmission costs are to be recovered from load (*EUA* at s 30).
- No property rights in transmission and no market for transmission rights (ie existing users have no preferential right of access to the transmission system and new generation must be accommodated in a timely manner (*EUA* at ss 29 & 30, and TReg at s 28(2)).

Once a regulator has approved a rate design for a system operator, future applications for tariff approvals typically involve adjustments at the margins. A tweak here and a tweak there. But, from time to time, the utility/system operator, or the regulator itself, may invite a more fundamental re-consideration of rate design.

Such was the case with respect to the AESO's most recent application to the AUC to have the AUC approve its proposed bulk and regional rate design application. As the AUC noted, the application constituted a significant departure from past applications. The AESO had concluded that its current rate design approach was no longer valid since it failed to recognize that "an increasing amount of transmission investment is being driven by investments to accommodate the flow of in-merit energy" and also because it allowed customers to avoid charges by reducing demand at peak times, thereby unreasonably shifting costs to other users (at 1).

This is not the place to explore the details of the AESO's application, or the AUC's decision on that application. But the AUC's own summary does, I think, confirm the challenges facing the AESO, and the industry, in responding to changing circumstances *when constrained by the legislation and regulations*.

> In the Commission's view, the bulk and regional rate design should incent the most efficient and cost-effective use of the transmission system already in place, with a view to forestalling further transmission build and costs to the greatest degree possible. However, within the current framework this may be possible only to a modest degree, particularly in the short term. The Commission is limited by legislative requirements in approving just and reasonable rates so that, in general, only consumers pay for the costs of the transmission system, and rates in the Independent System Operator (ISO) tariff cannot vary as a result of the location of a consumer on the transmission system. Consumers, in turn, cannot effectively influence most transmission costs, especially those costs incurred to integrate generation. Recognizing these constraints, the Commission is extremely limited in its ability to direct effective price signals to consumers. (at para 5)

In my view, the AUC is saying two things here. First, the AUC acknowledges that the AESO's hands are tied by its legislation. Second it is effectively a plea by the AUC to have the DoE (re)consider the suitability of the existing rules.

The AUC went on to comment that the AESO's application had placed too much emphasis on general cost causation principles and should instead shift to

> … a more narrow application of cost causation focused on the efficient use of surplus off-peak transmission capacity as well as fairness in sunk cost recovery. The Commission finds that the rate design should, to the degree possible, recover costs in a manner that minimizes inappropriate price signals, particularly those that enable avoiding payment for the sunk costs of the system, and that encourages use of surplus off-peak system capacity. The Commission also considers that in order for the rate design to be fair, consumers who benefit from using the transmission system should contribute to recovering its costs, and consumers who benefit similarly should contribute similarly. (at para 7)

In the end, the Commission substantially rejected the AESO's proposed tariff redesign while acknowledging the legitimacy of the AESO's concerns.

This had been a long process covering some four years. The AESO is now effectively back to square one and yet there is no clear way forward. The AESO hosted an open discussion session on Valentine's day to discuss this: Tariff Evolution Roundtable and World Café Forum.* Key questions at the beginning of the Roundtable included whether "somebody" (the AESO, other parties?) should seek to re-open the TReg and whether the AESO should defer embarking on a new rate design exercise until a TReg review was completed. There was no consensus on either question. Some thought that it was not the job of the AESO to take the initiative in re-opening the regulations. Others thought that it was not necessary to await review of the TReg, or were concerned that, if we did wait, it would not be possible to meet the deadline set by the AUC for a renewed tariff application from the AUC.

One of the things that I learned in the course of the roundtable discussion was that the industry representatives present suggested that there had actually been three consultations on the TReg over the last two years. That was news to me. But it reinforces a concern I have which is that while the processes of the AESO and of the AUC are open, transparent, and inclusive, DoE's consultations with industry are typically the reverse: highly selective, opaque, and non-inclusive.

Given the importance of these issues to every single resident of the province, this is simply wrong.

* I drafted most of this post in early January 2023 and then put it on the back burner. I decided to bring it forward having participated, mutely and remotely in the AESO-led Tariff Evolution Roundtable. My only contribution (in the chat) was to suggest that questions of process in relation to any possible review of the TReg were important, and that one possible way forward would be for the Department (aided by appropriate consultants) to commission an options paper (a white paper) on the implications of maintaining the status quo of the TReg versus a range of possible adjustments to incent more efficient use of the grid on the road to net zero.

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