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Hydro Québec TransÉnergie ("HQT") Contribution Policy
Docket No. R-3888-2014
Opening Statement of Robert D. Knecht

Good morning Madame Chair, and members of the panel. I would like to summarize the major issues in my pre-filed evidence, as updated based on the additional understanding I have gained since it was filed.

The objective of this proceeding is to establish policies regarding customer contribution requirements for incremental investments made by HQT. The basic principles for such a policy that I lay out are:

- Economic efficiency: For new projects, economic efficiency is best achieved when the charges for each new project are set equal to the incremental cost for that project. In that way, the proponent of the project is given the correct economic signals regarding the investment.
- Equity: While fairness is always in the eye of the beholder, a common view is that customers should contribute to the costs for the assets from which they benefit. Thus, many customers feel that new customers should contribute something to the existing system from which they benefit.
- Avoidance of undue discrimination: The contribution requirements among different customers and customer classes should be conceptually comparable.

At various different kinds of utilities, the object of customer contribution policies is often a balance of the economic efficiency and equity considerations. This balance often takes the form of the "higher of" policy to which Ms. Chang refers, wherein some customers will pay regular tariff rates which exceed incremental cost (thereby contributing to the fixed costs of the existing system) and some customers pay rates based on the incremental costs they cause.

However, if the only objective of this proceeding is to ensure that the total incremental revenues from any particular new customer are at least as large as the total incremental costs incurred by HQT on behalf of that customer, I believe that the HQT proposal should, if correctly implemented, achieve that objective.

Both the maximum investment test as applied to native load and the combination of the maximum investment test and revenue sufficiency test (aka levelized cost test) which applies to PTP customers should generally protect existing customers from excessive incremental costs related to new customers. As proposed, the maximum investment test appears to provide more protection than the levelized cost test, based on my understanding of the purpose of the levelized cost test. However, limiting the objective of this exercise to just meeting this one criterion does not address equity issues, non-discrimination issues and certain economic efficiency issues.

Before getting into some of the details, let me first address avoidance of undue discrimination between native load and PTP load in customer contributions. As you have heard over the past few days, these two services are fundamentally different. Establishing a customer contribution policy for native load is difficult by itself, and establishing a policy that is comparable to that for PTP load is that much harder. As HQT very correctly points out, native load growth is gradual and transmission investments are lumpy. This makes it very difficult to accurately match loads and incremental costs. Therefore, it is not surprising that there is some significant debate in this proceeding as to exactly how to define the incremental native load whose revenues can be applied to offset incremental costs. It is therefore also not surprising that customer contribution policies often are not applied to native load in the U.S. I don't think there's a perfect answer to this question, and various parties have offered alternatives worthy of consideration. From a general perspective, I am limiting my recommendation in this respect to encouraging the Régie to try to apply reasonably comparable standards to native load and to PTP load in this respect.

The first issue I want to address is the mechanics of the maximum investment test. In general, such a test is a common method for utilities to ensure that new load does not impose excess costs on existing load. The basic idea is that the utility sets a maximum amount that it will invest for a new customer based on the present value of the regular tariff revenues that the customer will pay. Any incremental costs in excess of that amount become the responsibility of the customer, in the form of a required contribution.

HQT proposes to retain the existing maximum investment calculation as it was approved by the Régie in Decision 2002-95. HQT describes this test as "conservative," in that it provides substantial protection to existing load from

incremental costs caused by new load. As presently calculated, HQT will invest up to $598 per kW of new revenue-producing load. Including O&M, the annualized cost of that $598 per kW is $60.34 per kW per year if amortized over 20 years. Since the current tariff charge is $74.65 per kW per year, this mechanism will almost certainly ensure that new load covers incremental costs, and in fact essentially mandates that the new customer make a contribution to the costs of the existing grid. This mismatch between annualized costs and revenues occurs because the arithmetic of the test sets the maximum investment based on matching revenues with the *first year* costs of the project, rather than the *levelized* costs of the projects. Under normal utility accounting, *first year* costs are materially higher than *levelized* costs. While this is not necessarily an unreasonable approach, it is quite "conservative" and may discourage some economically efficient projects.

The second issue that I want to address today is the carry-forward or aggregation of unused maximum investment credits. Or, in other words, should the contribution policies be applied on a project by project basis, or should customers be permitted to aggregate various projects? As I indicate in my evidence, there are conceptual similarities between HQT's proposed approach for native load and PTP customers. Unused native load maximum investment credits may be carried forward. Similarly, revenues generated by PTP customers in excess of *levelized* costs may be applied to new projects. It is my understanding that HQT proposes that this policy will apply to both the transitional regime and the permanent regime.

I have two concerns with this proposal.

The first is that of economic efficiency. When you carry forward a credit, economic price signals can easily be distorted. For native load, this distortion is less of a problem, because native load investments are generally required by the Distributor to fulfill its service mandate or are otherwise required by law. For PTP projects however, particularly under long-term agreements, any revenues above incremental costs effectively become a free resource for the customer. Thus, if a PTP customer is generating revenues in excess of costs, that customer will continue to pay those revenues, whether or not the customer has projects in which it would like HQT to invest (on its behalf). Therefore, from that customer's perspective, the customer can use those revenues at no net cost to itself to justify future investments made by HQT. However, those incremental

costs are real, and are implicitly passed on to all ratepayers if they are incurred by HQT. Thus, this approach may induce PTP customers to invest in projects which would otherwise be uneconomic, as they have a fairly strong economic incentive to use this resource.

Second, regarding equity, when you allow aggregation of projects across long time periods and varied projects, particularly when you have only a few large customers, you lose much of the balance between efficiency and equity that is part of the nature of the "higher of" policy. If each project is evaluated separately, some projects will produce revenues at tariff rates in excess of incremental costs, and provide a benefit to the system. Some will require a contribution, and will essentially provide revenues equal to incremental costs. However, if all of these projects are aggregated, the benefits to the existing system will be reduced, because the benefits from the low cost projects will serve to offset the contribution requirements of the high cost projects, rather than serving to provide some compensation for the new customers' use of the existing system.

Therefore, by allowing an aggregation of projects for its very large customers, HQT's proposal focuses very heavily on ensuring that overall incremental revenues recover overall incremental cost, and much less heavily on providing a means by which some new projects contribute to the costs of the existing system.

In addition, as I understand it, HQT's proposal regarding complementary repayments will exacerbate this issue, and may very well serve to further reduce the amounts by which HQP contributes to the cost of the existing system.

[Discussion regarding HQT-1, Document 1, Annexe 2]

For those reasons, I think that the Régie would be better served by adopting a customer contribution approach that is calculated on a project by project basis, rather than allowing extensive aggregation of projects and carryforward of credits.

The last issue that I want to address is the mismatch between the economic parameters that are used in the maximum investment test as applied to new native load customers and those used in the proposed levelized cost test which applies to PTP customers. And, to be clear, this mismatch is only a major concern if revenues generated by one PTP project are allowed to be carried

forward and used to justify HQT investment in other projects. As I mentioned earlier, under the maximum investment policy, revenue of $74.65 per kW per year will justify an investment with a 20-year levelized cost of $60.34 per kW per year. Thus, without carryforward, the levelized cost test has no real purpose, since the levelized costs of the investments allowed by the maximum investment test will generally be well below the rates paid.

While it is not totally clear how HQT will implement this policy, if carryforward (or project aggregation) is prospectively allowed, I would expect that PTP customers will argue that the $14.31 per kW per year in revenues that they pay in excess of *levelized* cost can be used as revenues which justify incremental investments by HQT on their behalf. If this is permitted, PTP customers will likely strive to use their revenues to their maximum advantage, and will effectively only pay the incremental costs as defined in the levelized cost test. Thus, under these conditions, the principle of avoiding undue discrimination would imply that the economic parameters in the levelized cost test should be the same as those used in the maximum investment test.

The two major inconsistencies between economic parameters in the maximum investment test and the levelized cost test are (a) the use of a *first-year cost* standard versus *levelized cost* standard, and (b) the term over which the tests apply. As I've discussed, the maximum investment test uses a first year standard, which is more "conservative" than the levelized cost standard. Second, as I understand it, revenues under the levelized cost test would continue to apply for the duration of the contract, including the 35- and 50-year agreements into which HQP has entered, whereas revenues from the maximum investment test are limited to 20 years.

In my evidence, I argued that this inconsistency should be eliminated on the grounds of avoiding undue discrimination. For the reasons I've discussed today, I think this inconsistency need only be eliminated if the carryforward of excess revenues from one project to another continues to be permitted.

If that is the case, I suggested in my evidence that consistency could be achieved by modifying the maximum investment test to be based on (a) the levelized cost arithmetic rather than first year arithmetic, and (b) the use of a maximum 40-year period to be more consistent with the longer-term PTP contracts. This approach has the advantage that the maximum investment test will more closely

match revenues with the incremental costs of a maximum investment, and thereby be modestly more economically efficient.

There is, however, an alternative way to harmonize the economic parameters between the two tests, which would involve modifying the levelized cost test. Rather than comparing revenues to levelized costs, the test could simply compare revenues to first-year costs. And, rather than allow revenues to be used for the life of the contract, revenues would be limited to the first 20-year of the contract, after which revenues could no longer be used to justify future investments by HQT for the customer.

Overall, my recommendations are the following:

- The policies adopted in this proceeding should reflect more than just protecting existing customers from negative rate impacts caused by new customers.
- Recognizing that it is difficult, the contribution requirements for native load and PTP customers should be comparable.
- The Régie should consider whether the existing maximum investment test is unduly conservative.
- Customer contribution requirements should be established on a project by project basis, rather than broadly aggregated across a wide array of projects and time. Maximum investment levels should only be established for revenue-producing projects.
- If project aggregation is permitted to continue, the economic parameters used in the maximum investment test and the levelized cost test should be harmonized.

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