

### **L1.INTERROGATORY SEC-13**

Reference: Exhibit M1 [p. 66]

Please provide an example of how a materiality threshold and dead zone for capital could be added to Toronto Hydro's proposal, and what the impact would be of doing so.

**Response to SEC-13:** The following response was provided by PEG.

Toronto Hydro proposes to receive, through a C factor term in its price cap index ("PCI"), supplemental revenue for the shortfall between its proposed capital revenue requirement and the growth in revenue which would otherwise result from growth in the PCI and billing determinants. Assuming a 0.45% stretch factor, the capital revenue requirement in index year 1 would, for example, effectively be

$$RK_1 = CK_0 \times [1 + (I - X - g) + g] + [CK_1 - CK_0 \times (1 + I)] \quad [1a]$$

$$= CK_0 \times (1 + I - X) + [CK_1 - CK_0 \times (1 + I)] \quad [1b]$$

$$= CK_1 - 0.0045 \times CK_0. \quad [1c]$$

Here

RK = Allowed capital revenue

CK = Capital revenue requirement

I = growth in the PCI inflation measure

X = productivity factor (including stretch)

g = growth in billing determinants (assumed for simplicity to equal forecasted growth)

The cost saving from any cumulative net capex underspend would be returned to customers in full. The depreciated cost of any capex overspends would potentially be eligible for recovery in future rebasings. The OEB granted Hydro One Networks Inc. Distribution this ratemaking treatment of capex overspends in EB-2017-0049.

PEG has criticized Toronto Hydro's proposed C Factor approach on various grounds. We believe that it would weaken capex containment incentives since (a) there would be dollar for dollar recovery of any approved capital cost that exceeds  $CK_0 \times (1 + I)$ , (b) the cost savings from capex underspends would be returned, (c) some portion of overspends might be recoverable and (d) incentives to contain OM&A expenses are stronger. Regulatory cost would be higher, and exaggerated capex requirements and strategic "bunching" of capex to bolster supplemental revenue would be encouraged. Customers would be denied the benefits of industry productivity growth, even in the long run and even if it is achievable. PEG has also expressed concern that a more favorable ratemaking treatment of capex in Custom IR than in 4GIRM can encourage utilities to

embrace Custom IR, with its many disadvantages.

The EB-2017-0049 decision also included a reform of the C factor mechanism that merits consideration for Toronto Hydro's new plan. The total capital cost eligible for supplemental revenue was reduced by a further stretch factor that we denote by "S". The value of S was set at 0.15%. Assuming once again a 0.45% stretch factor, the capital revenue requirement in index year 1 would effectively then be

$$RK_1 = CK_0 \times (1 + I - X - g + g) + [CK_1 - CK_1 \times (1 + I + S)] \quad [2a]$$

$$= CK_1 - (X+S) \times CK_0 \quad [2b]$$

$$= CK_1 - 0.0060 \times CK_0. \quad [2c]$$

PEG acknowledges that the  $0.0060 \times CK_0$  term in [2c] (and the  $0.0045 \times CK_0$  term in [1c]) both provide a materiality threshold and dead zone for capital revenue. Our concern is that the threshold and dead zone are not ideal.

- We believe that 0.0060 does not establish parity with the materiality threshold for supplemental capital revenue in 4GIRM. One problem is that the effective capital revenue markdown depends on the base productivity trend, which is 0. In contrast, the 10% deadband factor for the ACM/ICM in 4GIRM is not linked to the base productivity trend. Our preliminary research on this issue, which is more complicated than it first appears,<sup>1</sup> suggests that an S factor of around **0.6%** would achieve rough parity between the Custom IR and ACM/ICM markdowns.<sup>2</sup> A substantially more exact estimate of a parity value for S is beyond the scope of this project, as is PEG's assessment of the ideal materiality threshold and dead zone for supplemental capital funding.
- A straightforward way to sidestep this calculation is to abandon the current C factor mechanism and to instead use the current ACM/ICM mechanism to determine the capex that is eligible for supplemental revenue. Alternatively, the ACM/ICM mechanism might be used to determine incremental capex eligible for supplemental revenue, which would then be used to determine the C-factor for the rate adjustment in each year. This might require some adjustments to the C-factor formula to maintain parity with the ACM/ICM.
- Even if parity was established between Custom IR and 4GIRM markdowns, the

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<sup>1</sup> The complexity arises as one is trying to balance considerations of performance incentives, regulatory cost, and fairness to customers with the legitimate need of some utilities for capital spending surges.

<sup>2</sup> Our analysis identified the value of the supplemental stretch factor "S" that would cause the C-factor to yield a similar outcome to the ACM/ICM materiality threshold given some mathematical simplifications and the capital cost data that Toronto Hydro has used in its C-factor proposal.

markdowns would likely not be enough to address all of our concerns (noted above) about supplemental capital revenue. Determination of a more optimal markdown is also beyond the scope of this project.

- Neither the C factor nor the 4GIRM approach strengthen incentives to contain *incremental* capex once the materiality threshold is exceeded. The following alternative approach to calculating the C factor has better incentive properties than [2a-c].

$$RK_1 = CK_0 \times (1 + I - X - g + g) - [CK_1 \times (1-S)] - CK_0 \times (1 + I) \quad [3a]$$

$$= CK_1 \times (1-S) - CK_0 \times X \quad [3b]$$

Another way to incentivize containment of incremental capex is to permit the Company to keep a share (say 10%) of any cumulative CRRVA balance at the end of the next plan. An analogous share of capital cost overruns could, similarly, be ineligible for supplemental revenue at the end of the plan. The OEB took a step in the direction of sharing variances with the approval of Hydro One Networks' Capital In-Service Additions Variance Account, which only requires refunds when capital spending is 98% or less of the OEB's approved amount. Actual additions are compared to the amounts approved by the OEB in each year, and the account will be cleared at the end of the Custom IR plan.