# PSP Activities with Respects to Ontario's Fair Hydro Plan

March 22, 2017

**Purpose:** Review of the work the Planning Division is doing with respects to the Ontario Fair Hydro Plan, identifies further questions required for modelling, and highlights some possible risks with the GA financing costs as it is based on a forecast.

**Planning Division's Work with Regarding the Ontario Fair Hydro Plan**

The Planning Division is working in understanding Ontario's Fair Hydro Plan (OFHP) in order to implement this mechanism into the residential rate projects for future long-term integrated resource plans; such as, the upcoming 2017 LTEP. In order to produce these future outlooks, the Planning Division has been in discussions with the Ministry of Energy to understand how they went about producing their proposal for the Ontario Fair Hydro Plan and the estimated GA financing costs they derived to subsidize the eligible Regulated Price Plan (RPP) customer bills.

In order to facilitate our understanding of the OFHP mechanism, the Ministry of Energy (MOE) provided us a spreadsheet with their calculation. Based on this data provided, the Planning Division's understanding of the calculation is a follows:

1) In the Ontario Planning Outlook (OPO), IESO's status quo outlook was the "Case B Outlook". Subsequent to the OPO release, changes to electricity sector occurred via the throne speech and various other announcements that resulted in a need to refresh the status quo outlook; referred to as "Revised Case B". The Revised Case B is the Case B Outlook in the OPO, updated to include the following:
    a. Throne speech announcement,
        i. ICI expanding to 1 MW,
        ii. 8% Rebate to be effective Jan 1, 2017,
        iii. Increased collection of Ontario Energy Savings Plan,
        iv. Increase to Rural Remote Rate Plan (RRRP);
    b. Cancellation of LRP II and EFW, and
    c. Updated Hydro Quebec Agreement

    MOE used the Revised Case B Outlook results to develop their proposal for the Ontario Fair Hydro Plan and estimated GA financing costs.

2) In the Revised Case B Outlook - IESO developed the ICI expansion to 1 MW from 3 MW based on the MOE report produced by Navigant on Feb 29, 2016 entitled "Industrial Conservation Initiative".

3) IESO provided MOE with the 20 year annual forecast (2017 to 2035) for HOEP, GA Class A and Class B rates, residential bills and industrial rates from this Revised Case B run.

4) MOE's OFHP analysis uses the following general assumptions to build the GA Financing Costs:

| | |
|---|---|
| Class B share of consumption | 0.82 |
| Class B share of GA cost | 0.88 |
| Annual interest on debt | 5.116% |
| Class B GA Rate - Average Growth Rate 2028-2034 - applied to future GA Rates (2036 – 2047) | -7% |
| Average monthly residential consumption (MW) | 0.75 |
| Average Demand Growth Rate 2026-2035 | 0.004 |
| Average Residential Bill Annual Growth Rate 2029-2035 | 0.005 |
| Assumed RPP Eligible Demand (TWh) | 72 |

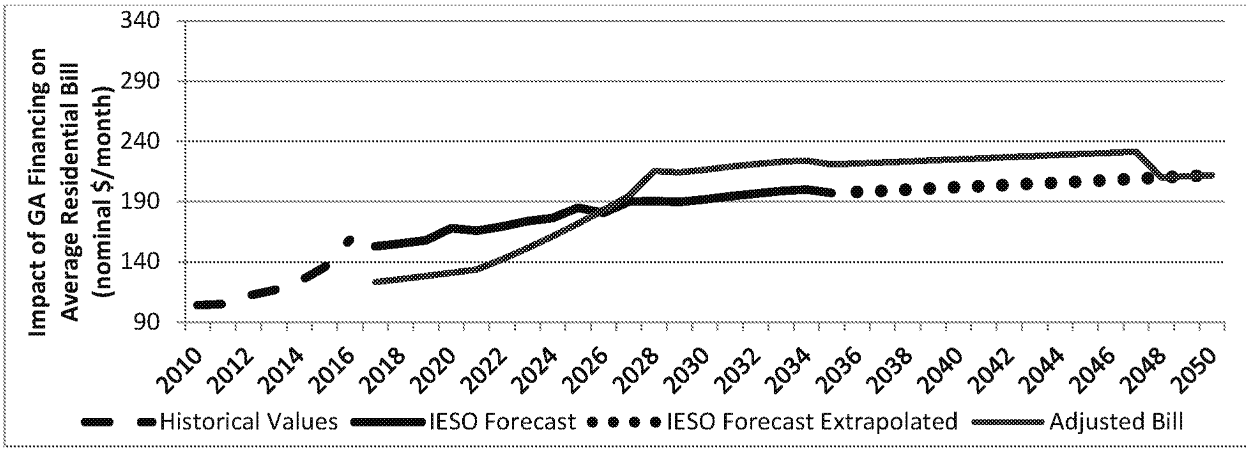
5) GA Rates provided by IESO and MOE's estimated GA rates are used by MOE to produce the GA costs for the period 2017 to 2047. The above cost shares and consumption shares assumed by MOE are used to calculate the GA costs and unit rate reduction required in the residential bill to achieve the 25% target in 2017 and the following year over year changes. The consumption share value for the Class B of 82% assumed by MOE is different from the Class B share consumption value used in the GA Class B rate calculation for the Revised Case B analysis by IESO. IESO's residential bill calculation relied upon a 77% consumption share to reflect a lower volume usage in Class B due to the expansion of the Class B eligibility from 3 MW to 1 MW. The Revised Case B run does not include an adjustment to the consumption for the Class A's further expansion from the 1 MW to the 500 KW, as this was announced is part of the new Ontario Fair Hydro Plan. Further discussions with MOE will be required to estimate any further share adjustments required to reflect the change from 1 MW to 500KW.

6) The MOE spreadsheet analysis for the Ontario's Fair Hydro Plan assumes the 25% residential bill reduction will be from the proxy Toronto Hydro forecast of a residential monthly bill (assuming 750KWh) in 2017 (from the Revised Base Case Model) prior to the following adjustments:
   a. OESP movement from ratepayers to government funding
   b. RRRP movement from ratepayers to government funding
   c. 8% Rebate from government funding

   As a result, the further reduction to achieve the 25% reduction will be via the GA Financing; taking into consideration the OESP, RRRP and 8% Rebate will assist in forming part of the 25% bill reduction.

For years 2018, 2019, 2020 and 2021, the residential bill will only be allowed to escalate by 2% per year as indicated in the Ontario Fair Hydro Plan. The GA Financing will fund the additional money required to maintain the 2% annual bill increases.

7) MOE's spreadsheet indicates that additional funds are needed from the GA Financing Fund from 2021 to 2025, to limit the residential average annual increase to about 6% per year. Commencing 2026 there will be repayment of the GA Financing Fund by ratepayers to achieve a zero balance by 2047. The MOE graph of residential bill impacts for collection and payment are shown below.




The graph indicates that residential bills would be lower in the 2017 to 2024 period (by about -16% on average) with the OEHP in place and higher for 2026 to 2047 (by about 10%) versus a bill absent the OEHP. From 2021 to 2025, there is an annual average increase of about 6% per year. The 6% annual increase will establish 2025 to be the inflection or cross-over year when the residential bills will be the same for the customer if the OEHP was not in existence. A further discussions with MOE for planning purposes is required to understand if there are any specific criteria or objectives IESO should be aware of regarding the period of 2021 to 2047 associated with the GA financing plan; such as, "Is there a requirement for 2025 to be the inflection point year?" or "Is there annual average rate impact limitations on the residential bill?"

From MOE's model the GA financing plan will fully balance in the 30 year period and there will be reasonable annual bill impacts below 10%[1]. However, given that this analysis is based entirely on a specific forecast; whereby, there are underlying assumptions such as demand levels, natural gas prices, carbon prices, market clearing prices, cost of generation after contract expiry, cost of annual interest (5%), and etc there maybe risks to that conclusion. As reality unfolds there will likely be changes that are not consistent with the forecast; thus, generating potential risks to the payment plan.

[1] Generally, the Ontario Energy Board views a bill increase in excess of 10% to be a rate shock, and would consider the implement of a rate mitigation plan to smooth the bill impacts to customers.

Some Potential Risks:

- Eligible RPP volumes, if higher volumes – the GA Financing amount will be greater
- Load forecast could change dramatically from the projection which impacts the total costs
- Distribution cost increases in the proxy LDC (i.e., Toronto Hydro) may cause addition cost to the GA financing
- Generation supply mix and the cost for that supply will differ
- Assumes no change for a movement to a decentralized electricity market
- Natural gas and carbon prices may vary from the outlook that could drive up total costs and thus residential bills and the amount of GA financing
- Interest rates to finance the plan could be different from 5%