Ontario

MINISTRY OF
ENERGY

Debt Financing the Global Adjustment

January 10, 2017

Working Draft for Discussion Purposes Only

Purpose

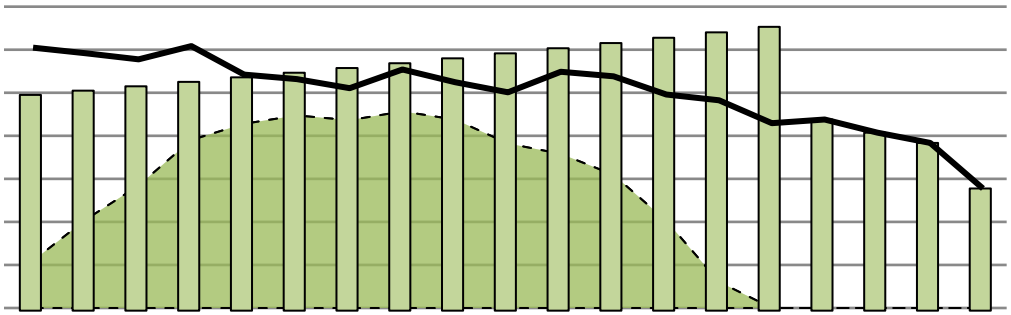
- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.

- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.

- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.



Sample debt financing: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

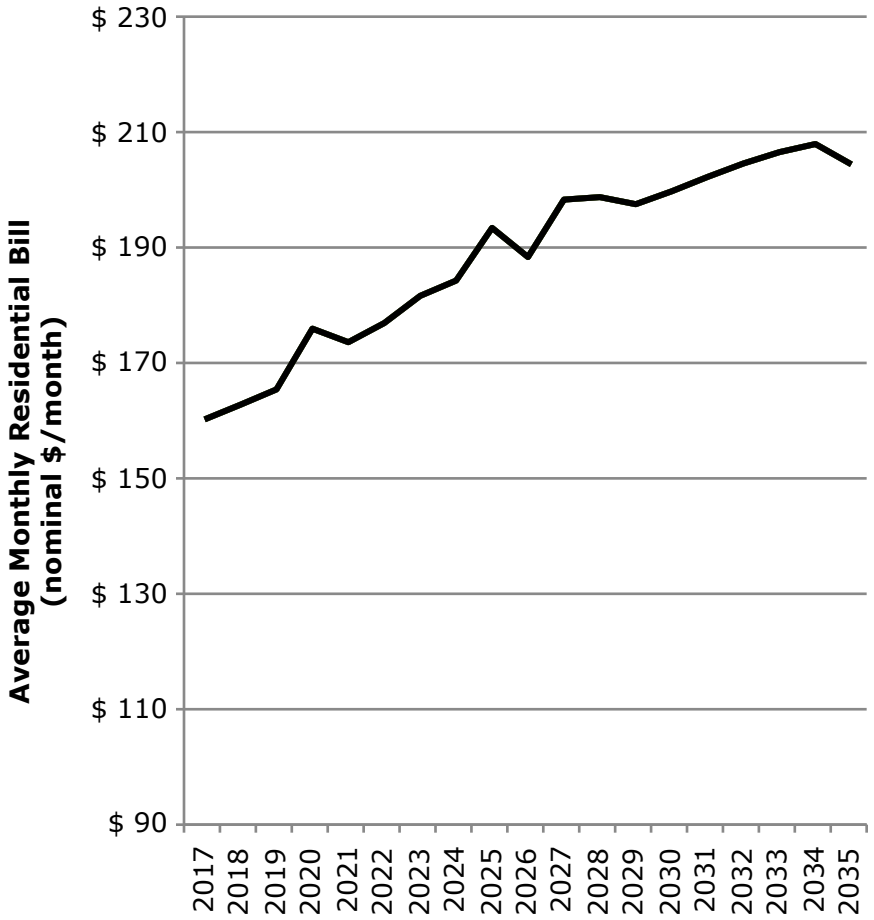
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

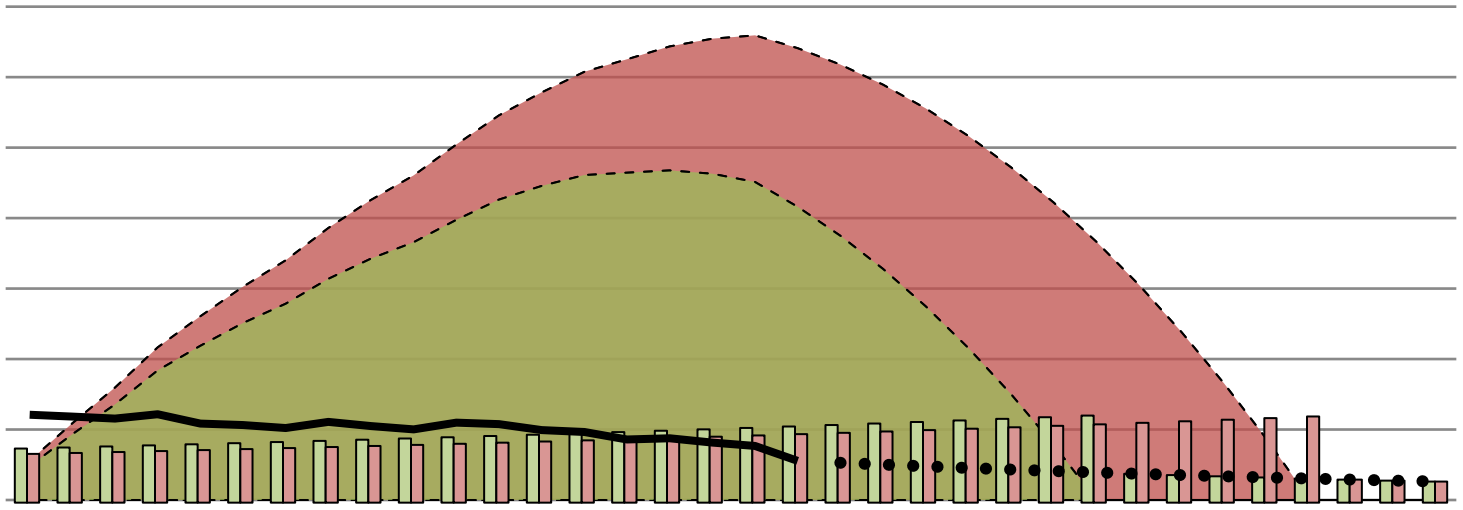
1. Status Quo – Global and Residential Impacts

- Ratepayers continue paying the true cost of GA.



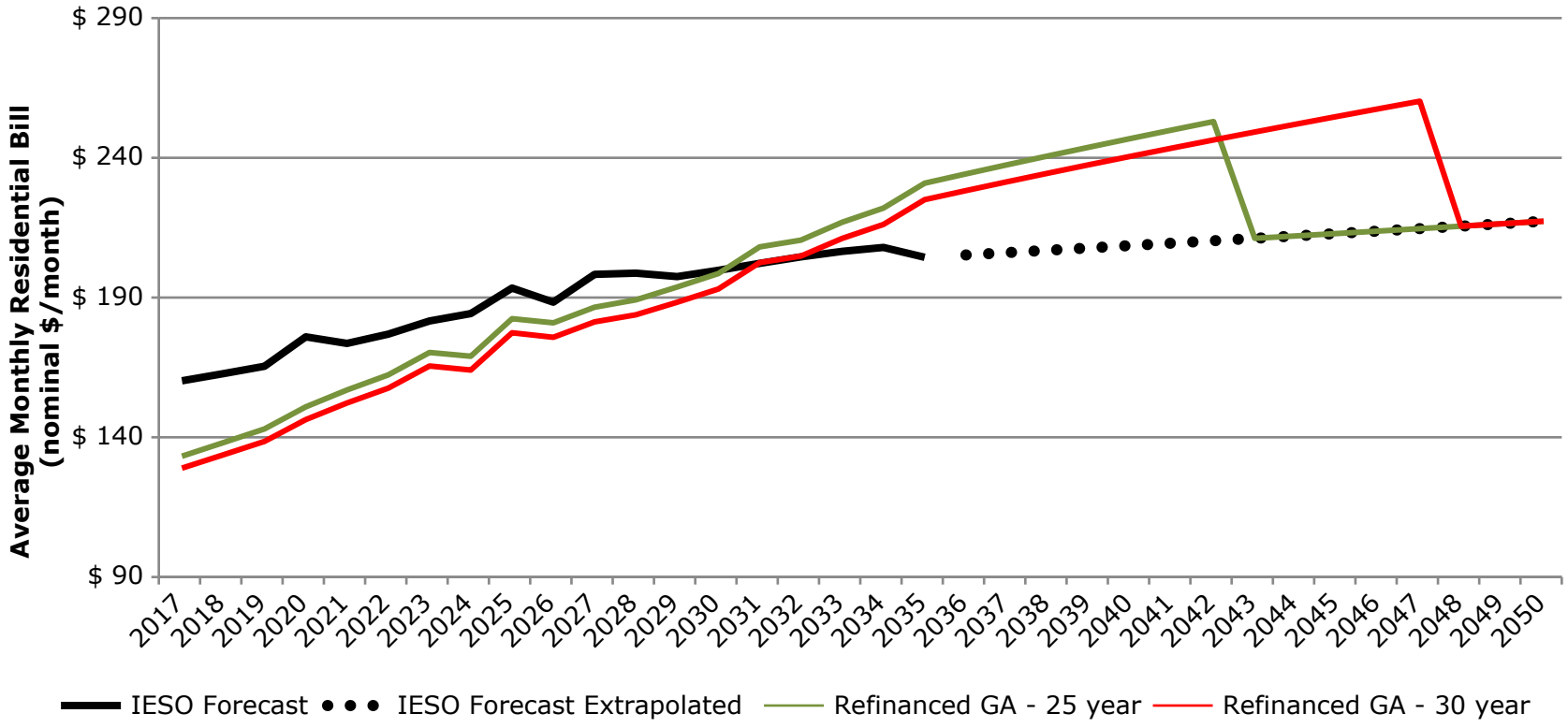
2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.



- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

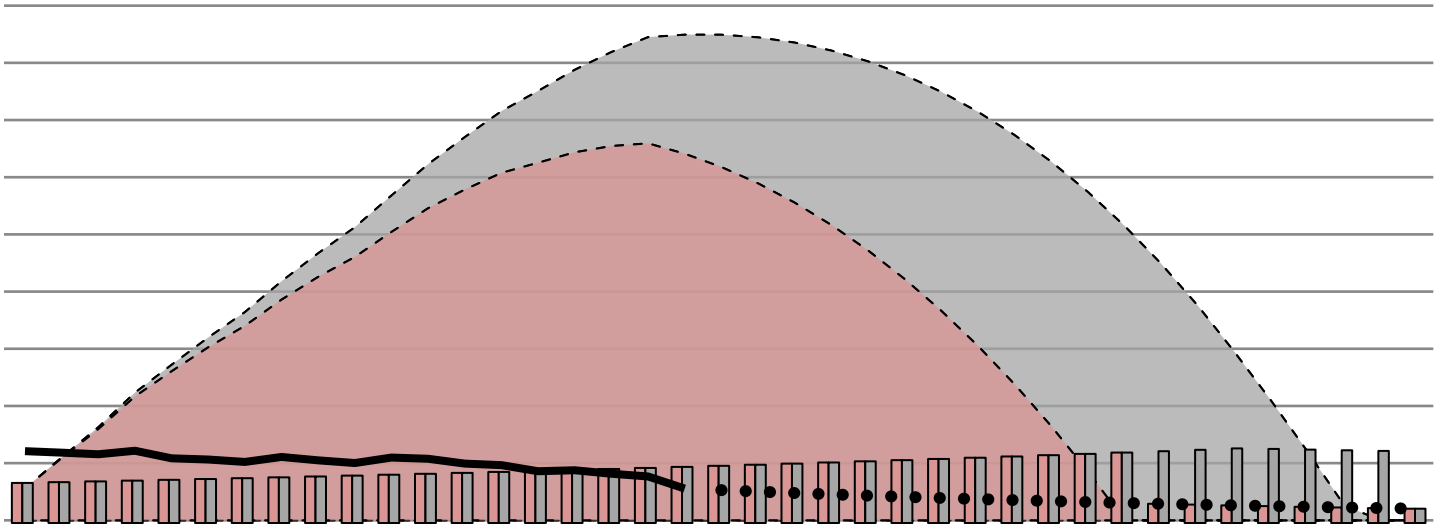
2. Maximize Short-term Cost Reduction – Residential Impacts



- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

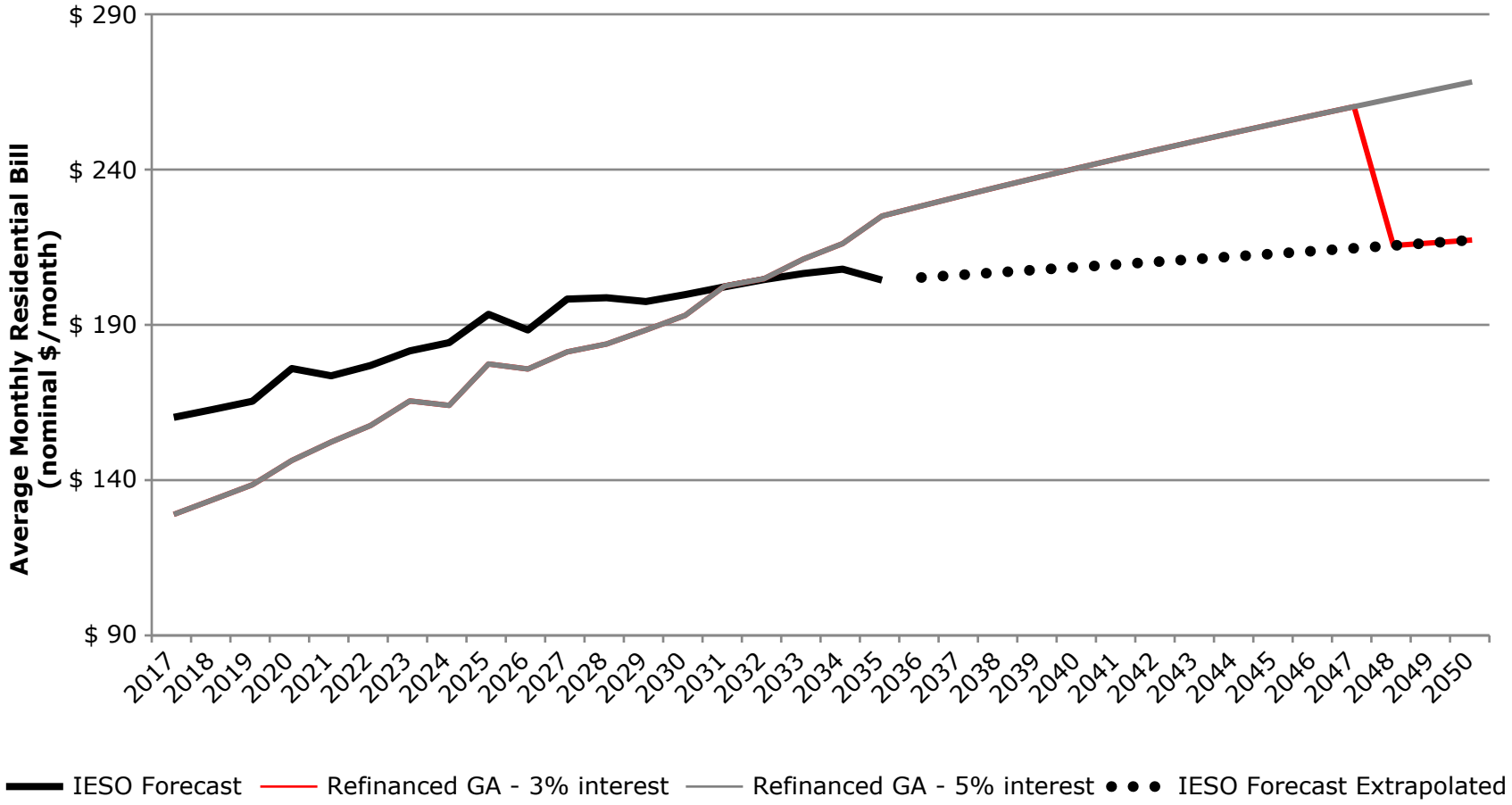
3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).



- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

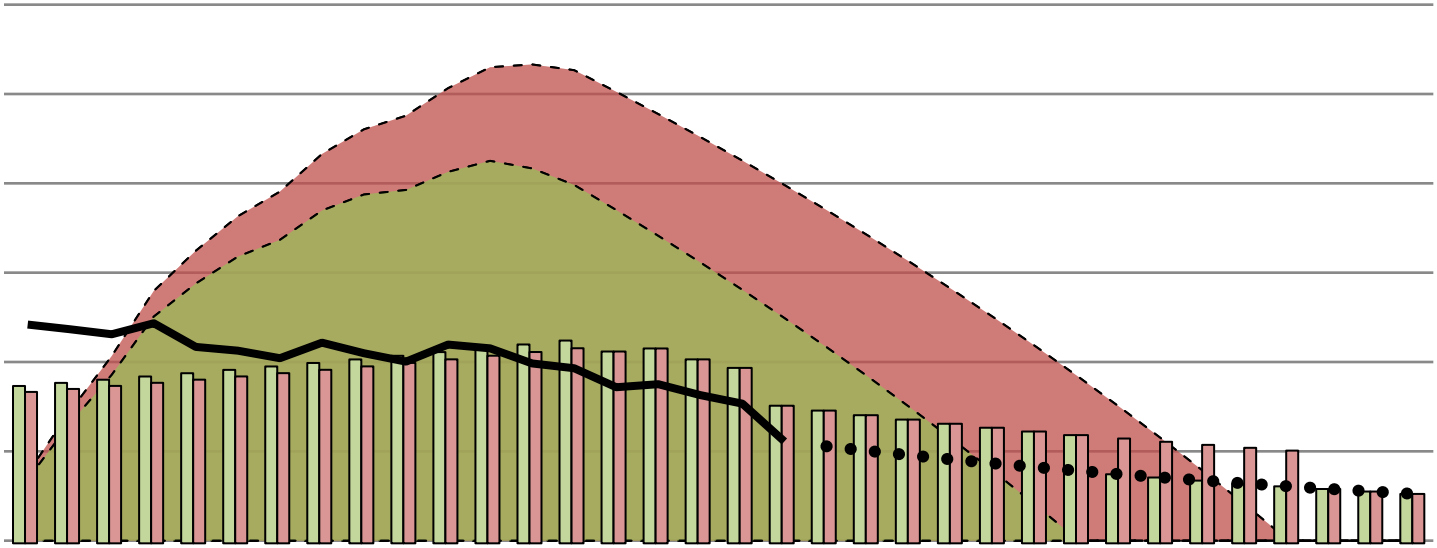
3. Interest Rate Risk – Residential Impacts



- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

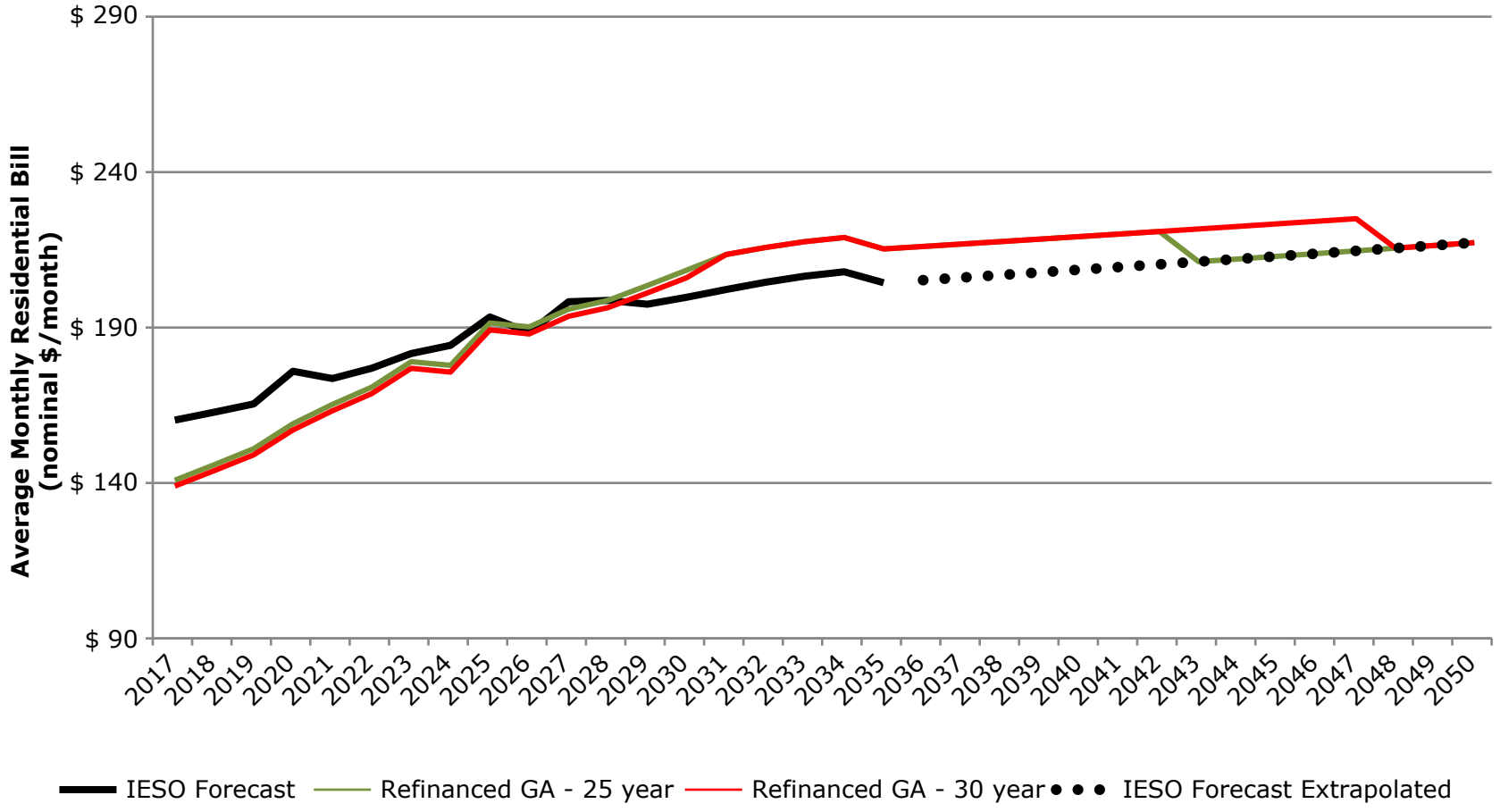
4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.



- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

4. Maximize Short-term Cost Reduction with Limits – Residential Impacts



- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.