

Electricity Pricing and the Global Adjustment

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CONFIDENTIAL DRAFT

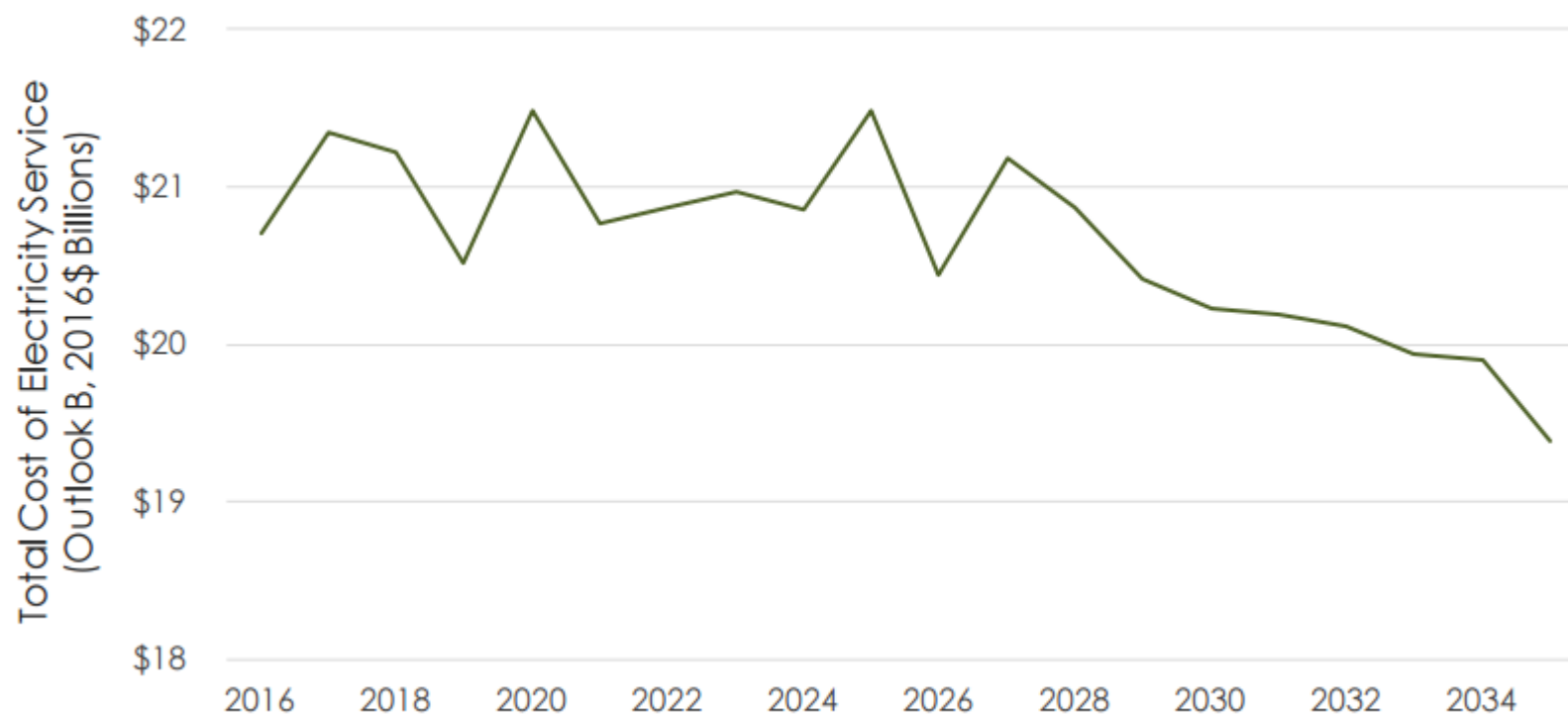
Outline

1. Overview of electricity pricing in Ontario
2. Generation costs
3. Global Adjustment financing proposal

Overview of Electricity Pricing in Ontario

- Electricity pricing is generally based on the principle of full cost recovery. Payments to the province's generation fleet are recovered as they are incurred.
- Prior to 2002, consumers were charged a fixed price per kilowatt hour (kWh) that bundled together generation, transmission and distribution costs.
- Today, bills break out the costs for generation, transmission and distribution; in general, prices reflect the cost to produce and deliver electricity.
- For the past several years, electricity prices have increased at a faster pace than the consumer price index as significant costs have been incurred to update generation, transmission and distribution infrastructure.
- Further, price increases are expected in the short term as additional renewable projects come on-line and nuclear units are refurbished.

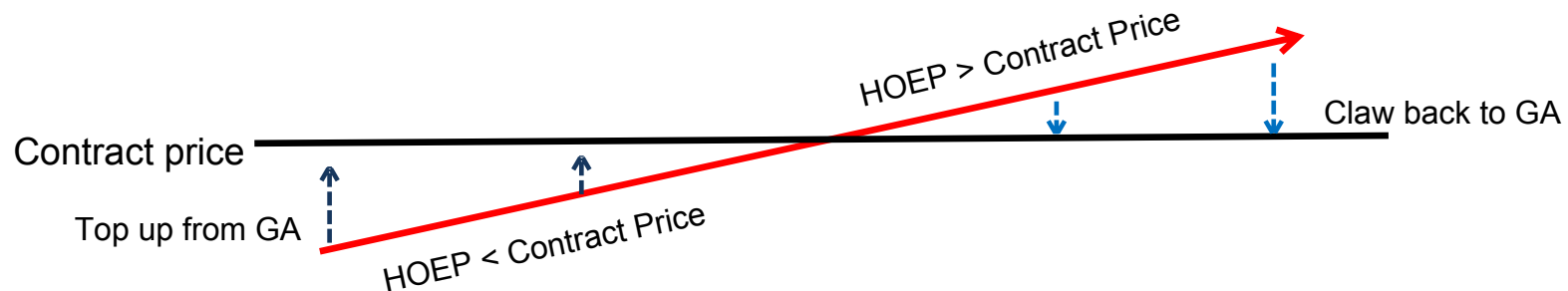
Projected Cost of Electricity Service 2016-2034



Generation Costs

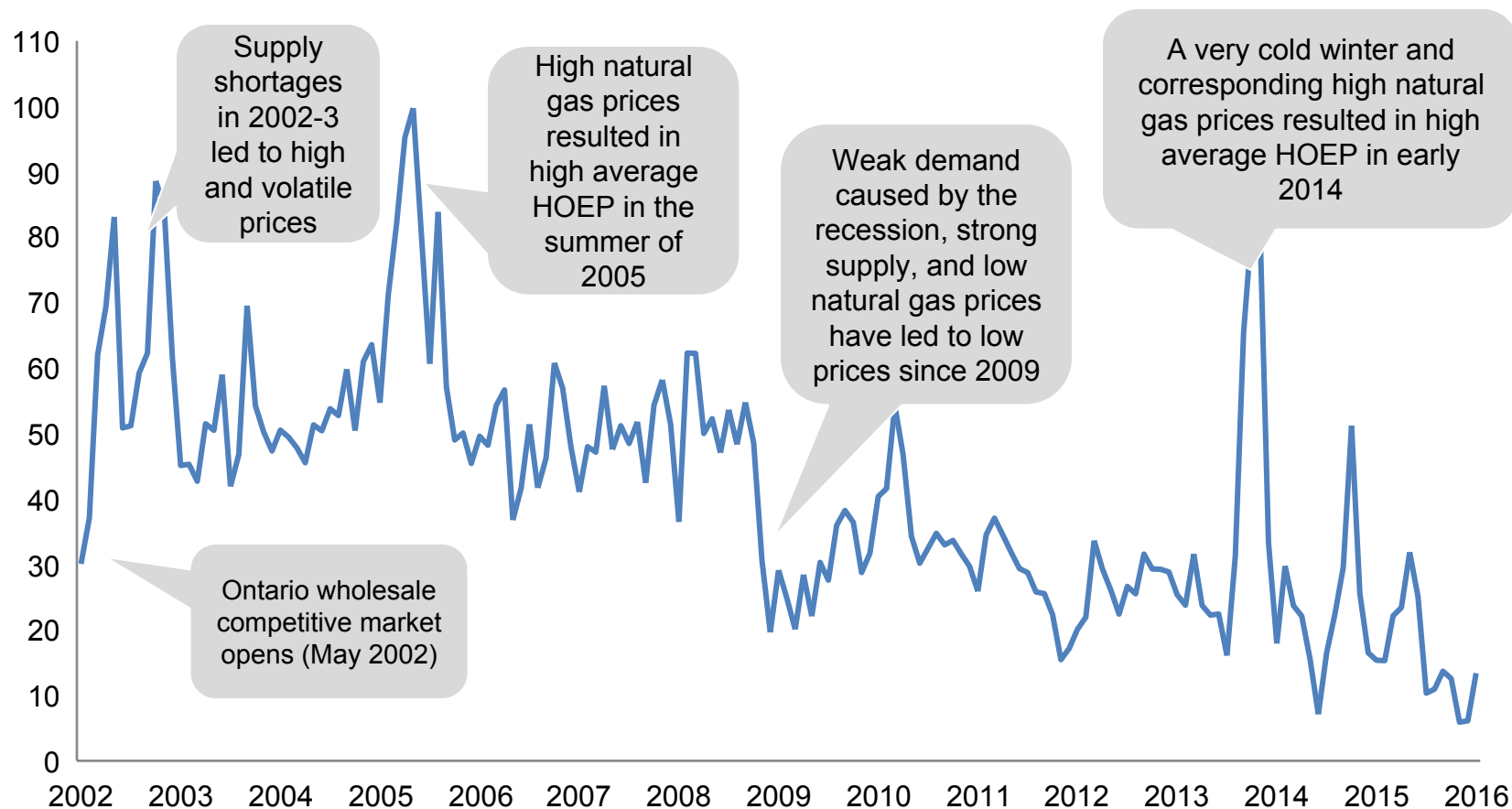
Paying for Generation

- Payments to generators are made up of two components:
 1. Hourly Ontario Energy Price (HOEP)
 - All generators receive HOEP for the electricity they supply. HOEP is determined by supply and demand conditions in the wholesale market. It generally reflects the marginal cost of electricity generation in the province.
 2. Global Adjustment (GA)
 - Contracted/regulated generators receive additional payments to make up the difference between the revenue generated through the wholesale market and their expected contracted/regulated revenue. This difference is recovered from/returned to the Global Adjustment (GA).
 - Virtually all generators in Ontario receive a contracted or regulated rate.
 - Conservation costs and funds such as the Aboriginal, Municipal and Community Fund are also paid for from GA.
- HOEP and GA are inversely related; as the market price increases, the GA payments decrease. HOEP is influenced by supply, demand and fuel costs.



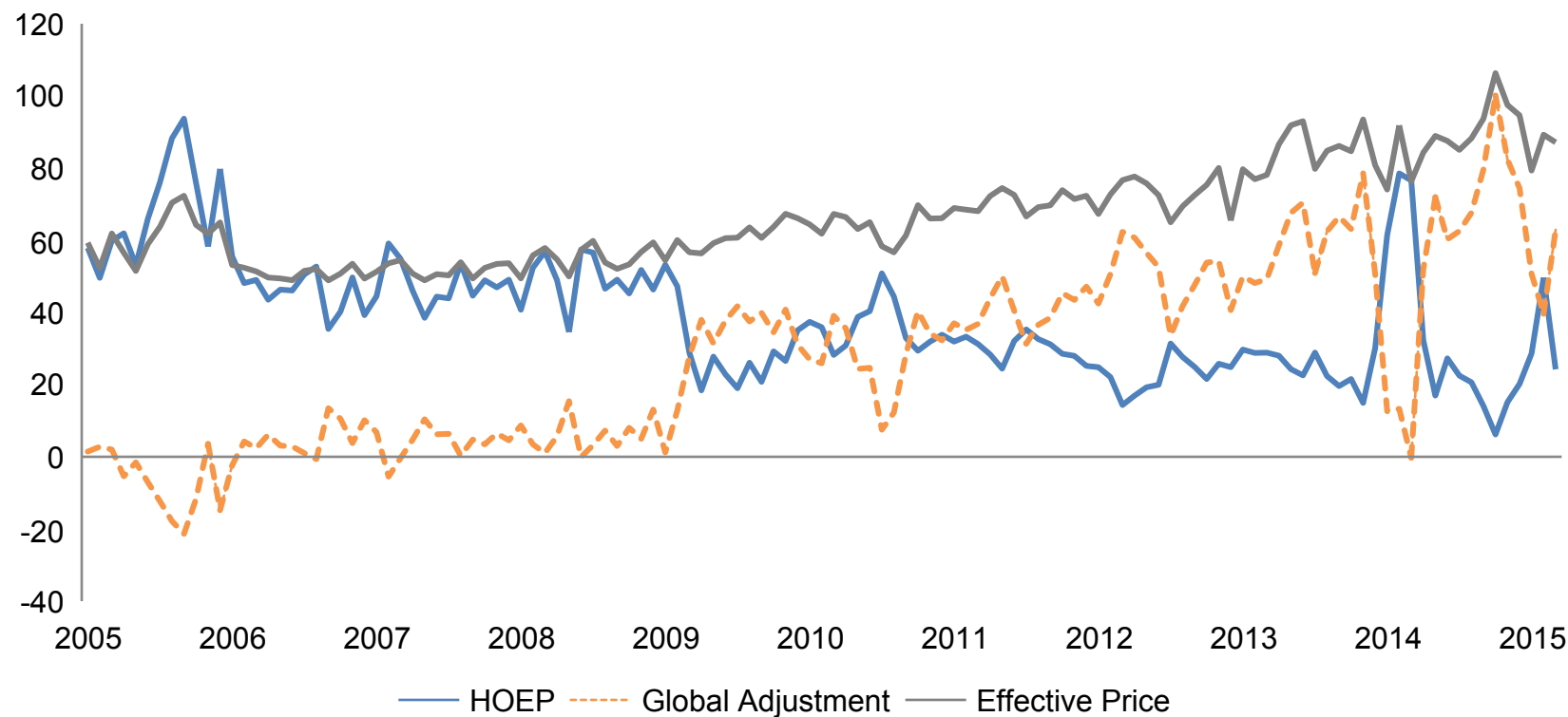
Historical Market Prices

Weighted Monthly Average Hourly Ontario Energy Price (\$/MWh)



Historical Global Adjustment

Commodity Cost of Electricity (\$/MWh)



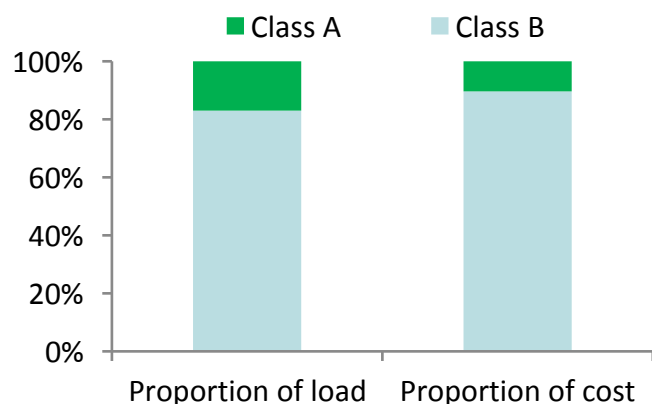
- Global adjustment experienced significant growth beginning in early 2009 as HOEP declined and IESO-contracted energy production increased.

How Global Adjustment is Applied to Consumers

- Global adjustment costs are charged differently depending on the size of the consumer.
- In January 2011, the province introduced the Industrial Conservation Initiative (ICI), establishing two classes of consumers: Class A and Class B.

Customer Type	Size	Current Consumers	GA Treatment
Class A	Monthly peak demand exceeding 1 MW	Nearly 300*	Charged GA on the basis of their contribution to system peak demand during the highest 5 system demand hours of the year.
Class B	All other consumers	About 5 million	Charged GA as a flat rate applied to their consumption.

*Following the September 15, 2016 announcement of the proposed ICI expansion, government forecasts over 1,000 additional businesses will be eligible to participate as Class A consumers.



- Class A is currently reserved for customers with monthly average peak demands greater than 3 MW.
- With the 2014 expansion of ICI, in July 2015, Class A includes consumers with monthly average peak demands greater than 3 MW in certain industries.**
- On September 15, 2016, the government proposed to reduce the Class A threshold to 1 MW, down from the current threshold of 3 MW. Sector restrictions would also be removed and smaller institutional and commercial businesses would be eligible to participate.

**3-5 MW consumers in the manufacturing, mining, refrigerated warehousing, data processing and greenhouse sectors

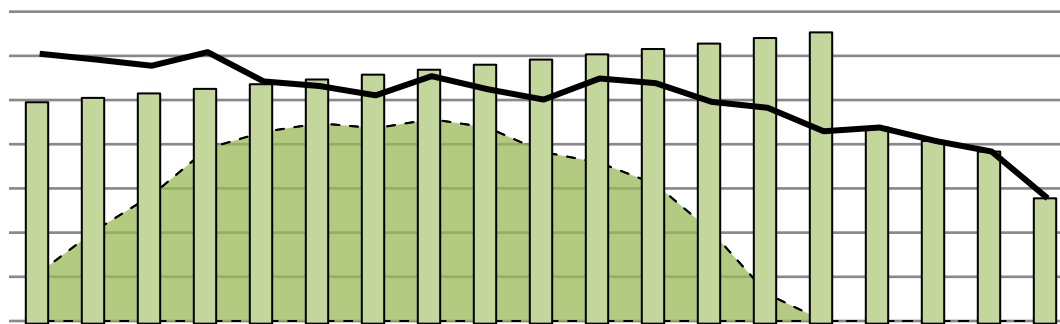
Global Adjustment Financing Proposal

Rationale for Financing the GA

- The GA is comprised of costs for regulated and contracted generation, as well as conservation.
- Some contracted generation assets are expected to have a useful life that extends beyond the term of their current financial contracts (typically 20-years).
- Similarly, conservation costs are recovered through the GA on an annual basis while conservation initiatives provide benefits to the electricity system over the course of many years.
- Since the GA only includes costs related to the contractual life of these assets, there may be an opportunity to recognize the longer-term benefit of these assets to the electricity system and “bring forward” that benefit for ratepayers today, while deferring some of the current costs.
- An indicative GA financing proposal is presented that lowers ratepayers costs over the short term by borrowing money but increases costs over the long term when GA costs are forecast to be lower.
- Note that not all generating assets will continue operations at the end of their contract term. Regulatory constraints (i.e., nuclear licences) or low demand conditions (i.e., as experienced with current expiring NUGs) would mean that some generators will shutdown at the expiry of their contract. Future ratepayers would be paying for these assets that are no longer producing power.

Indicative Proposal to Finance the Global Adjustment

- For the purpose of discussion, it is proposed that the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the total amount of money borrowed has been completely paid back.
- Financing is assumed to begin January 1, 2017, setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount according to a pre-defined schedule until the debt has been paid off.
- In this way, GA costs will be “smoothed” over time by lowering costs in the short term and increasing costs in the long term.
- 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.
- All analysis is based on forecasts from Independent Electricity System Operator, assumes a 5% annual borrowing interest rate and an inflation rate of 2% per year.



Sample financing: Ratepayers pay less than the cost of GA in early years, borrowing up to \$9 billion that is fully paid off in 2031 by charging ratepayers more than the cost of GA in later years.