Ontario Energy Board

Regulated Price Plan Working Group Meeting #1

September 30, 2004

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Discussion Outline

- RPP working group mandate
- Working group process and "rules of engagement"
- RPP requirements
- Members' concerns and objectives
- RPP objectives
- Tools available to working group
- Evaluation of strawmen
- Next steps – schedule, etc.

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Our Job

RPP Working Group Mandate

Develop an RPP for consideration by Board staff that satisfies the objectives as well as possible

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Working Group Process

- The working group is expected to have about six meetings. The actual number will depend on the amount of discussion and the issues that arise
- The purpose of the working group is to get input from a broad group of stakeholders into the design of the RPP
- Where a consensus does emerge from the working group discussions, the Board will welcome that result
- If a consensus does not emerge, the Board will consider all the options put forward
- Ultimately, the purpose of the Working Group is to advise Board staff. Board staff will make recommendations to the Board based on Working Group input. All final decisions are the Board's.

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"Rules of Engagement" for Working Group

- Strive for consensus. If consensus is not possible, present well defined options for Board consideration.
- Do not discuss "out-of-scope" issues
- Have respect for others. Each working group member was chosen to represent an important stakeholder group which should be heard
- Need to be willing to compromise (with the vast spectrum of stakeholders) to attain solutions
- Strive to attend all meetings
- This is a working group. Members should be willing to work .

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Working Group Agenda

A rough agenda for six working group meetings is

1. First meeting
   - Working group process
   - Understanding the working group's job
   - Objectives and tools
   - Introduction to issues
2. Further Issues Discussion
3. Initial Strawman Development
4. Further Strawman Development
5. Strawman Finalization and Initial Implementation Plans
6. Implementation Plans

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The RPP Process

What the RPP must do

The RPP must convert a forecast supply cost into rates that RPP-eligible consumers will pay for generation

Objectives for the RPP

- Reflect cost over time
- With stable prices
- With predictable prices
- Encourage conservation and energy efficiency
- Encourage demand response and load management
- Allow customer choice
- Support smart meters
- Consumer Acceptance
- Keep administrative costs low: OEB, IMO, OPA, LDCs

Tools for the Working Group

- Rate structure:
  - tiered or constant
  - seasonal or constant all year
  - time of use rates
  - critical peak period pricing
  - customer class differences
  - customer attribute differences (within classes)
- Conditions for price adjustment and true ups
  - automatic vs. manual price adjustments
  - frequency of true ups
  - period to recover variances
- Upward bias of price relative to forecast
- Conditions of entry and exit

Out of Scope Items

- Definition of eligible customers
- Term of plan: how long between rebasing?
- Customer bill content
- Load serving entities

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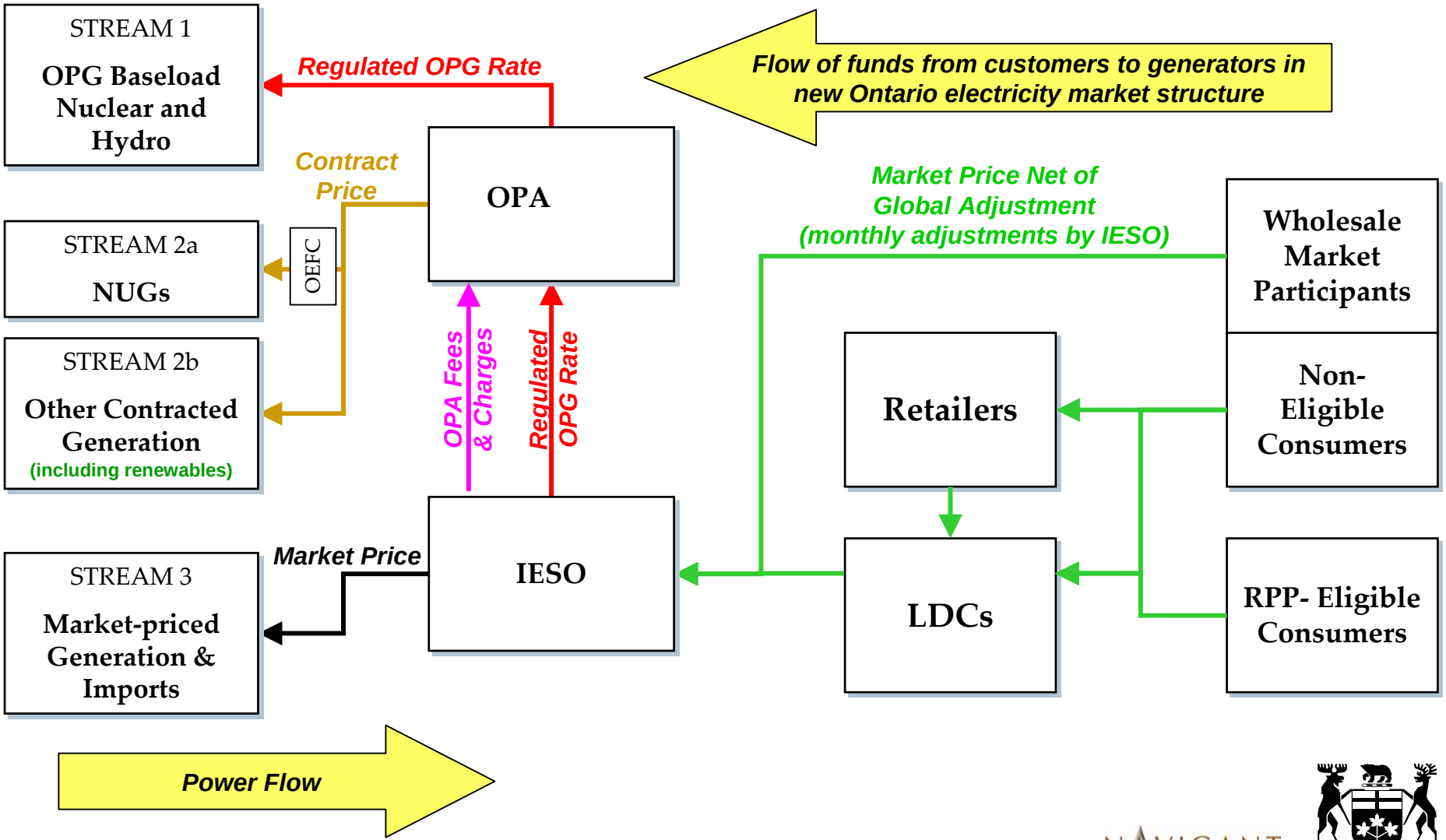
Market structure the RPP will operate within



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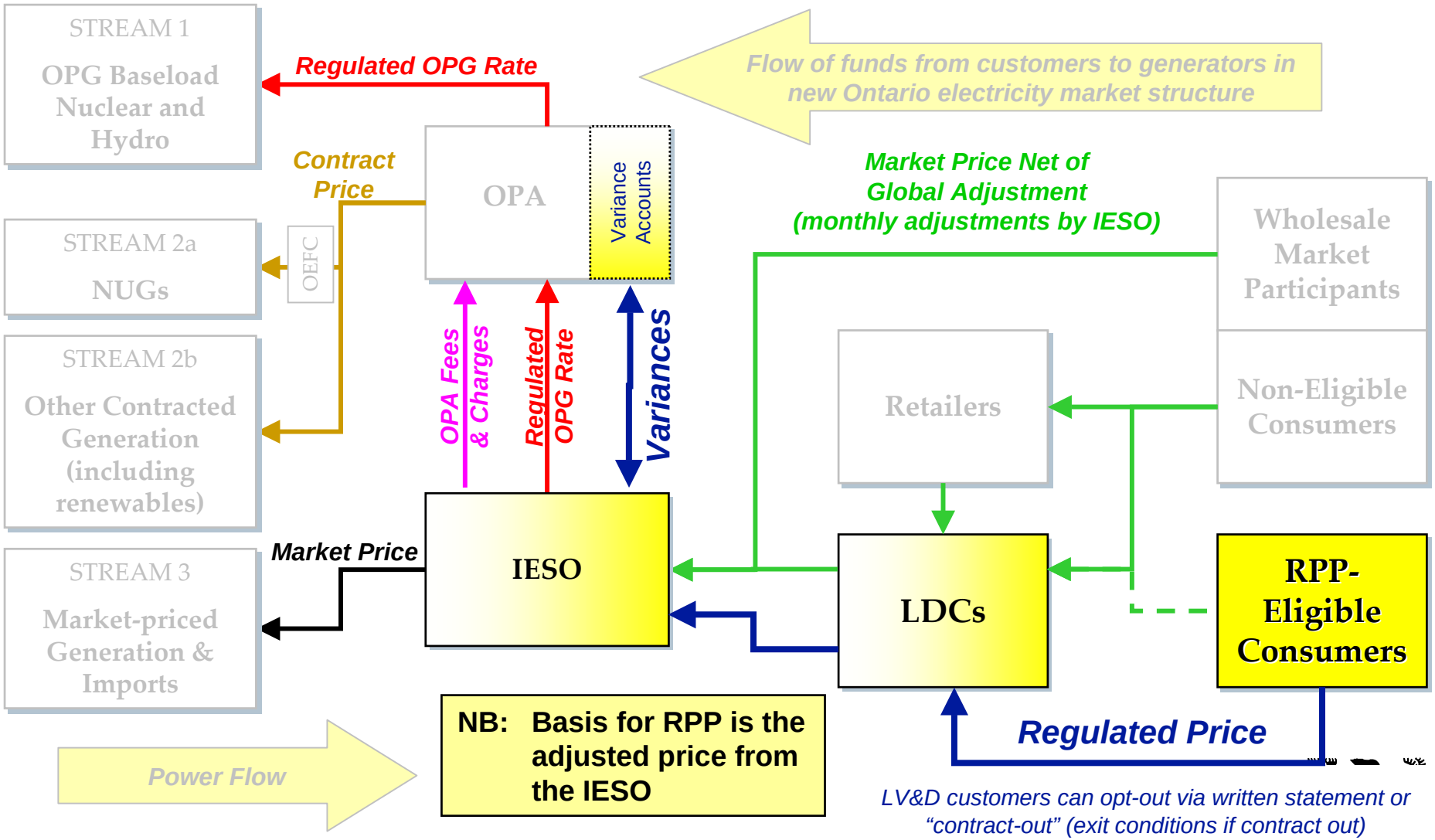
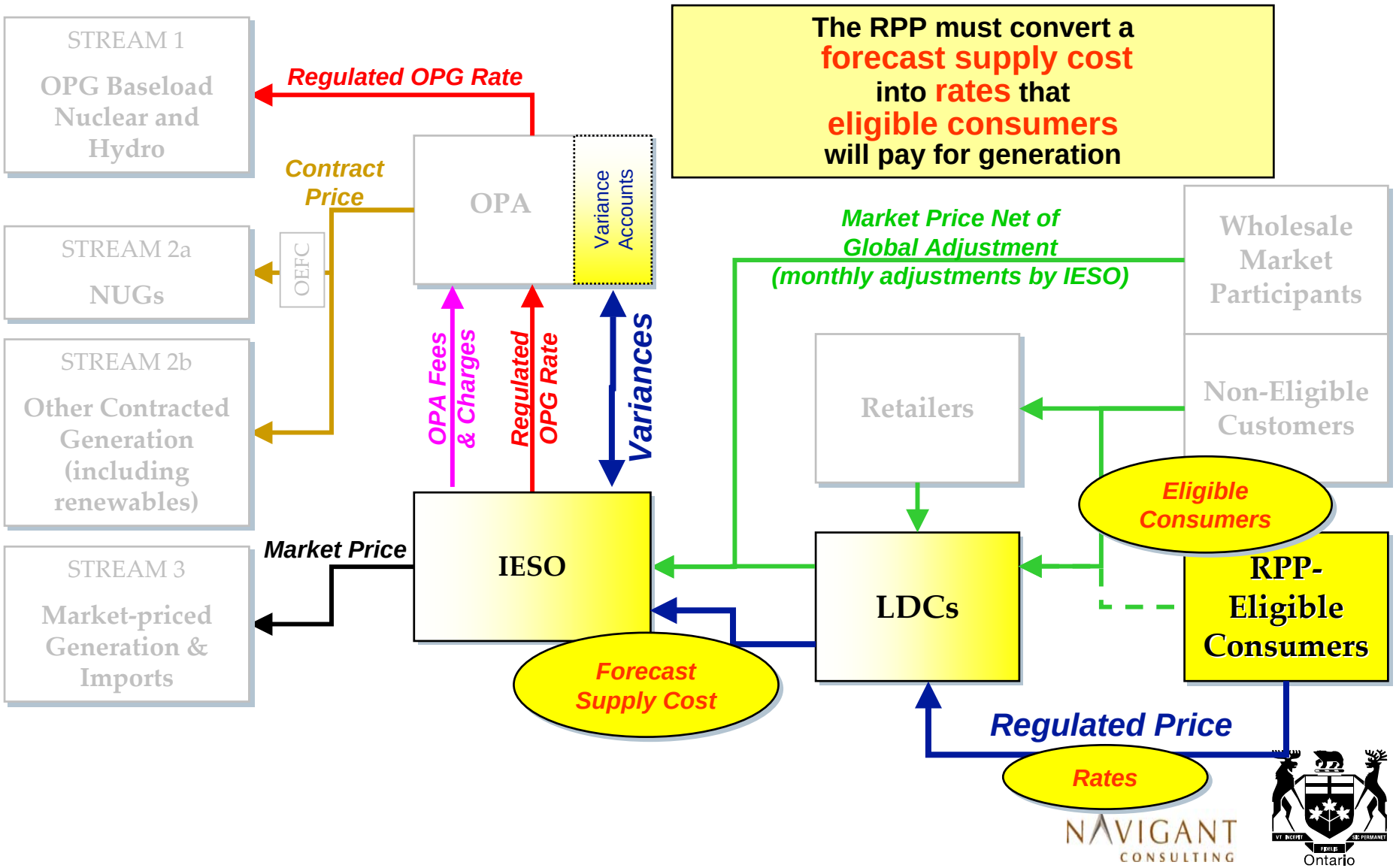
Overlay of RPP on new market structure



What the RPP Must Do



What the RPP Must Do (cont'd)

- The RPP must convert forecast supply costs into the rates that eligible consumers will pay for generation
- Forecast supply costs
  - Payments to some generators are cost or contract based (some will vary with market prices), payments to some generators are market based
  - All payments will be forecast in advance
  - Total of payments to generators will be forecast but will not be known with absolute certainty in advance (equivalent of forecast supply costs)
- Rates
  - The required revenue will be collected from customers through the prices they pay for electricity
  - Many options for rate structure
- Eligible Consumers
  - To be fully defined by government
  - Will at a minimum include residential consumers, plus possibly
    - Small businesses (likely to be included, small to be defined)
    - MUSH sector (now included, future uncertain)

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Members' concerns

Identify your group's primary concern regarding RPP

Objectives

- Reflect cost over time
- With stable prices
- With predictable prices
- Encourage conservation and energy efficiency
- Encourage demand response and load management
- Consumer choice
- Support smart meters
- Consumer acceptance
- Keep administrative costs low: OEB, IMO, OPA, LDCs

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Objectives: Cost Reflective Pricing Over Time

- Electricity generation costs vary over time for many reasons, including fuel costs and generation mix
- Prices can be made stable and predictable only through some mechanism to absorb the inevitable cost variance
- The mechanism will be a variance account, probably maintained by the OPA
- Prices reflect cost over time by variance account true-ups, which assign the accumulated variances to customers
- After the true ups, the prices reflect historical cost, but do make consumers pay for the costs

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Objectives: Price Stability

- Completely stable prices are frozen
- Unstable prices change every five minutes
- Price stability in this context means having a price that can respond to changes in cost conditions, but that does so in some measured way
  - Does stability refer to the size or the frequency of price changes?
- Stable prices are not necessarily static; they could change during a period (seasonally, for example)
- Keeping prices stable requires a mechanism to absorb cost variances
- Trade off with cost reflective pricing

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Objectives: Price Predictability

- Predictable prices are known in advance
- Prices could be predictable and not constant
  - Seasonal variation, for example
  - Pre set changes over a period
- The more predictable the price, the less it can respond to actual events
- Keeping prices predictable requires a mechanism to absorb cost variances
- Trade off with cost reflective pricing

Objectives: Encourage Conservation and Energy Efficiency

- Consumers can reduce consumption by changing how they use their existing equipment or changing equipment
- The most important motivator of such change is price: the higher the price, the greater the incentive to change
- RPP prices will be designed to reflect costs
- To the extent that cost reflective prices encourage conservation and energy efficiency, these objectives do not conflict
  - If prices being replaced are less than cost, moving to cost-reflective pricing will increase conservation incentive
- Price on the margin should determine marginal behavior like energy conservation, so price structure could also encourage conservation (for example, tiered pricing)

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Objectives: Encourage Demand Response and Load Management

- Load management reduces consumer load by pre-arrangement in response to market conditions
  - Load management can be done by consumers, LDCs or by third parties
  - LDCs and third parties can have incentives to manage load even if consumers do not see peak/off peak price differentials
- Load shifting occurs when consumers shift load from peak to off peak in response to market conditions
  - Consumers are not incented to shift or manage load unless they see some differential in prices between the peak and off peak periods
- The time structure of RPP could encourage load shifting by providing signals about current market conditions

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Objectives: Consumer Choice

- The RPP will also set the price against which purchases from competitive retail suppliers would be measured
- Retail systems in Ontario are already set up to allow consumers to buy their electricity from competitive suppliers
- A cost-reflective price signal encourages rational and informed consumer choice

Objectives: Supporting Smart Meters

- Smart meters can record the time that consumers use electricity
- They may also be capable of (or coupled with a way of) telling consumers what the current price is, or whether it is over some threshold value
  - This can provide a direct price signal to consumers, who can then adjust their consumption (energy conservation or load shifting)
- For these capabilities to be useful, consumers must face some sort of pricing related to the time of use information collected by the smart meters
- Meter technology and costs are changing; RPP may need to accommodate possible new (and existing) technology

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Objectives: Low Administrative Costs

- This objective was mentioned in the stakeholder session
- It is important to keep in mind that changes to LDC billing systems are costly and they should not be made unnecessarily
- The regulatory burden falls on the OEB and the regulated or licensed entities (mostly LDCs, but including the competitive retailers). The RPP should not unnecessarily impose administrative costs on them.

Objectives: Other Considerations

- Fairness
  - Basic to good ratemaking
  - Among other principles: consumers in the same situation should be treated the same
- Minimize risk to LDCs
  - Implicit in legislation and in practice
- Compatibility with future market developments
  - Most likely future market developments would involve some changes to the revenue requirement for the RPP (e.g., auction of RFP contracts with more spot market procurement, procurement of RPP supply for greater price certainty, etc.)
  - Must determine whether RPP should readily handle these developments, but cannot plan for every possible market development
- ANY OTHER OBJECTIVES/CONSIDERATIONS TO ADD?

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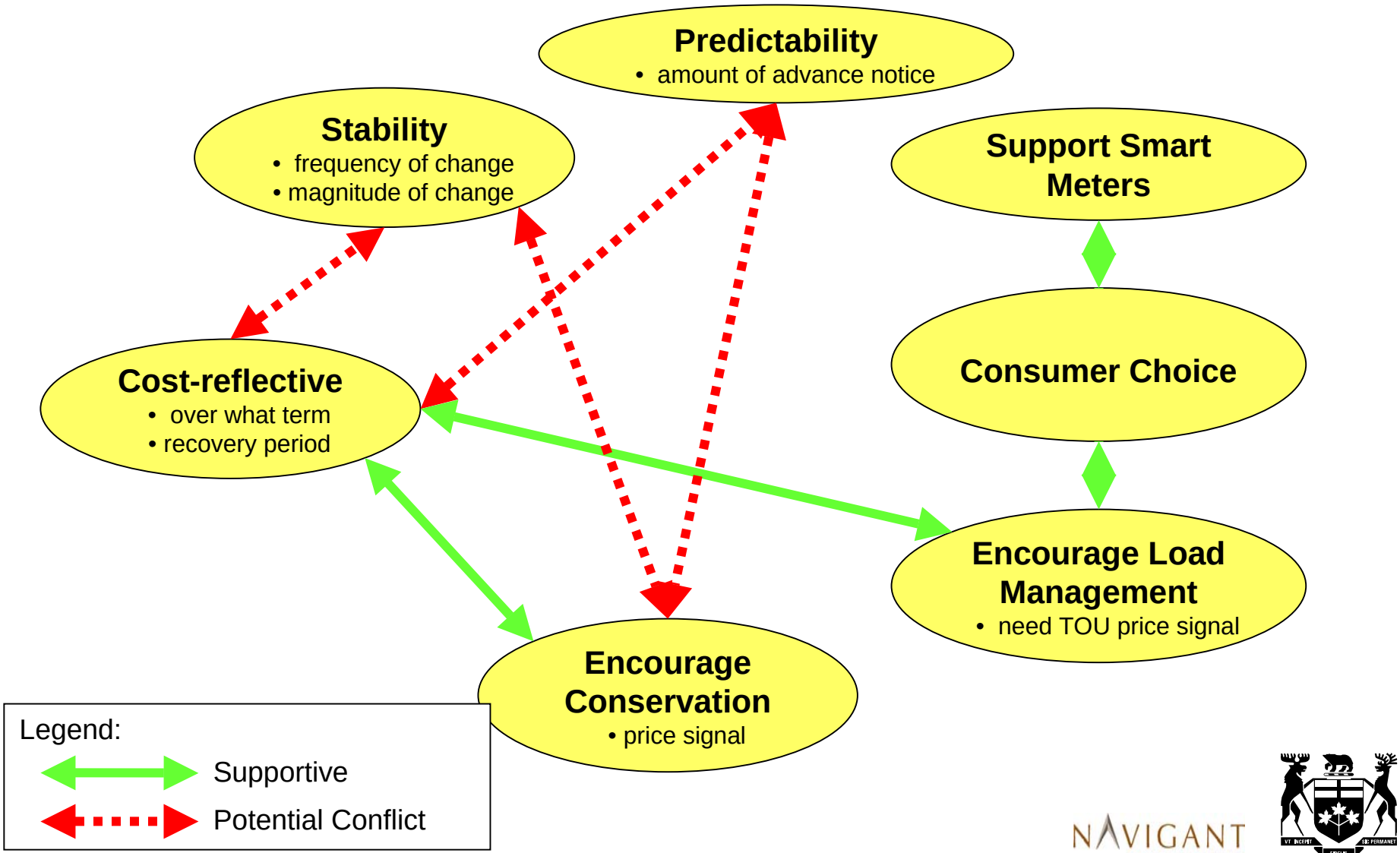
Inter-relationship between RPP Objectives



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Conflicts and Consistency Between Objectives

- The preceding slide shows some thoughts on conflicts between objectives and consistency between them
- It is intended as a high-level illustration for discussion

Tools for the Working Group

- Rate structure:
  - tiered or constant
  - seasonal or constant all year
  - time of use rates
  - critical peak pricing
  - upward bias of the price relative to the forecast
  - customer class differences
  - customer attribute differences (within a class)
- Conditions for price adjustment and true ups
  - automatic vs. manual price adjustments
  - frequency of true ups
  - period to recover variances
- Conditions of entry and exit

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Tools: Tiered Rate Structure

- RPP prices could be flat (constant for any level of consumption) or tiered (rise or fall with increasing consumption)
  - Current price at 4.7/5.5 cents per kWh is tiered upward
- An increasing price means that the marginal unit costs more than the average unit
- The RPP could have no, one, or more tiers

Tools: Rate Structure: Seasonality

- RPP prices could be the same (whether tiered or not) at all times of the year, or they could vary by season
  - Ontario has a double peak in electricity demand, with the summer peak now higher than the winter peak (under normal weather conditions)
  - Hourly prices can be expected to be higher at peak times than at off-peak times
- A seasonal price structure would have to rely on averaging prices over the differentiated periods (probably the length of a meter reading cycle.)

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Tools: Rate Structure: Time of Use

- Time of use (TOU) rates vary according to the time of day and of year
- TOU rates can be stable and predictable
  - set the rate for each TOU period at the beginning of the rate period
- TOU rates require either smart meters or customer profiling
- TOU rates benefit consumers only when they have smart meters
  - If customers are load profiled, any change in their own usage patterns will not affect their bill
  - The RPP may need to provide for TOU rates that could be introduced only when RPP consumers have smart meters

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Tools: Rate Structure: Customer Class

- The RPP will likely cover at least residential and small business consumers
- Typical utility price structures differentiate between these two kinds of consumers
  - Depending on definition and eligibility, small business consumers are likely to be larger than residential consumers
- The RPP could have separate rates for different customer classes

Tools: Rate Structure: Customer Attributes

- Some LDCs have differentiated between customers in the same class based on the size of their load or other characteristics, such as electric heating
- The RPP could have separate rate structures for different metering technologies
- RPP could differentiate based on customer characteristics
  - Such differentiation could increase administrative complexity

Tools: Automatic vs. Manual Price Adjustments

- RPP prices could respond to certain events
- Automatic price adjustments would be triggered by particular extreme events
- These would be price adjustments during the period of the price regime
  - Adjustments relating to the variance account would likely be considered true ups, not automatic adjustments

Tools: Frequency of True Ups

- The RPP will charge customers based on a forecast price
- Actual prices will differ from forecasts, which will produce a variance account that must be carried
- For prices to be fully cost-reflective, the variances must be added back into (or subtracted from) the price
- A key feature of the RPP will be how long between true ups of the variance account
  - Would expect no less frequently than annually
  - Could be more frequently
  - Could be based simply on time, and/or could have a trigger value (for example, the size of the accumulated variance account)

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Tools: Recovery Period for True Ups

- When the variance account is trued up, the per-customer variance can then be collected in several ways
  - It could be retroactive, collecting at one time the accumulated variance from the customers for whom it was accumulated
  - It could be future oriented, collecting (or crediting) the accumulated variance over time
- If it is collected over some future period, the RPP should specify how long that period is

Tools: Conditions for Entry and Exit

- What conditions will be imposed on consumers who choose to leave the RPP supply or those who, having left, want to return to it
  - Some jurisdictions impose different terms on those who stay on standard supply from those who leave and return (i.e., provider of last resort)
  - If the RPP price is fixed over the whole year, customers could game the plan by leaving it in the shoulder months, when its prices are likely to be higher than market, and returning to it in peak months. Minimum periods for leaving and returning can be imposed to prevent such gaming
- The customer who leaves might be held responsible to pay its share of the accumulated variance

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Out of Scope

- Term of the plan (period between rebasing). The amended legislation sets a term of one year for the first RPP, and a yearly reset period after that, or more often if directed by the Minister
- Content of the consumer bill. The form of the bill is not part of this process, including whether the regulated asset adjustment is shown on the bill
- Load serving entities. There is no provision in this consultation for creation of load serving entities.
- Customer eligibility for RPP

Tools: Other

ANY OTHER TOOLS AVAILABLE TO THE WORKING GROUP?

Criteria Development

- The number of objectives and the fact that some conflict with each other means that there must be tradeoffs between some of them
- The strawmen will be developed to emphasize those tradeoffs
- The working group members will want to compare different strawmen
- One way to formalize this is to use a structured scoring system
- The next slide shows a scoring system that was used by the New Brunswick Market Design Committee. It allowed comparison of several strawmen with respect to the objectives for the Committee

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Scoring Strawmen

COMPARATIVE MARKET PERFORMANCE				
	Market Model			
Criterion	Minimal Strawman	MEU Strawman	Proposed Strawman	"Maximal" Strawman
Efficiency	+	+	+	++
Price Performance	+	0	+	++
Investment Incentives	-	-	+	++
Administration Cost	-	--	-	-
Reliability	+	+	+	+
Transparency	0	0	+	++
Fairness	+	+	+	+
Robustness	-	-	0	+
Enforceability	0	0	0	0
Environment	0	0	+	+
Protecting SOS customers	++	+	+	0

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