



ONTARIO POWER AUTHORITY



Customer Entitlement Agents (CEA) Initiative
Presentation to IESO Stakeholder Advisory Committee

February 6, 2008

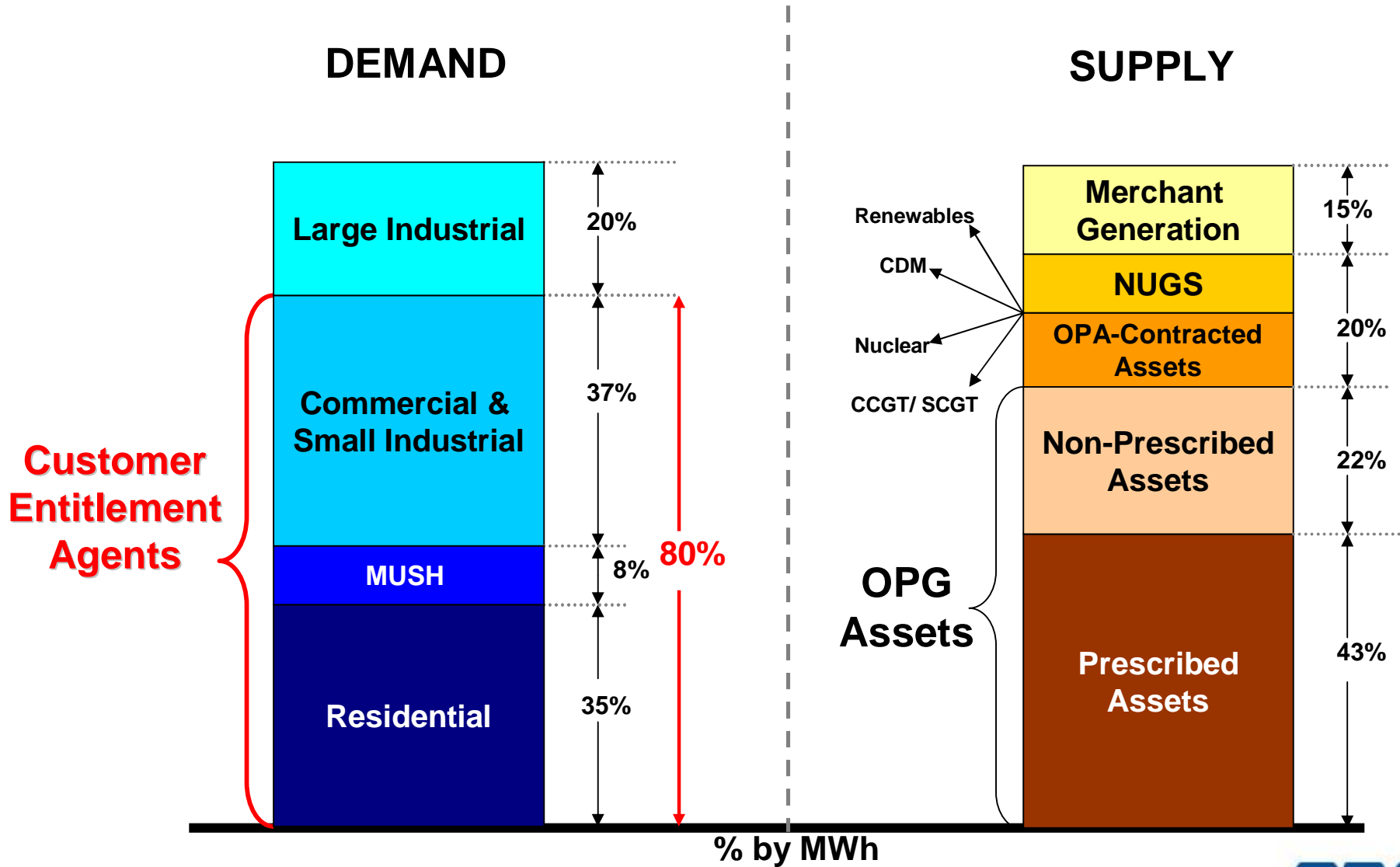
Presentation Outline

1. Background
2. Overview of Technical Papers
3. Potential Implementation Plan
4. Key Questions
5. Integration of 4 Key Initiatives

Background

- **OPA Role** in CEA Concept?
 - Facilitator
 - Pilots
 - Research
 - Dialogue with Industry
- **Genesis** of OPA Interest?
 - Ontario Reg. 424/04
 - *“Identify and develop innovative strategies to encourage and facilitate competitive market-based responses and options for meeting overall system needs.”*
 - Continuation of original RPP transition
- Cognizant of **Industry Interests**
 - Viable market role
 - RPP is Default load
 - Pricing analysis has been focused on RPP load

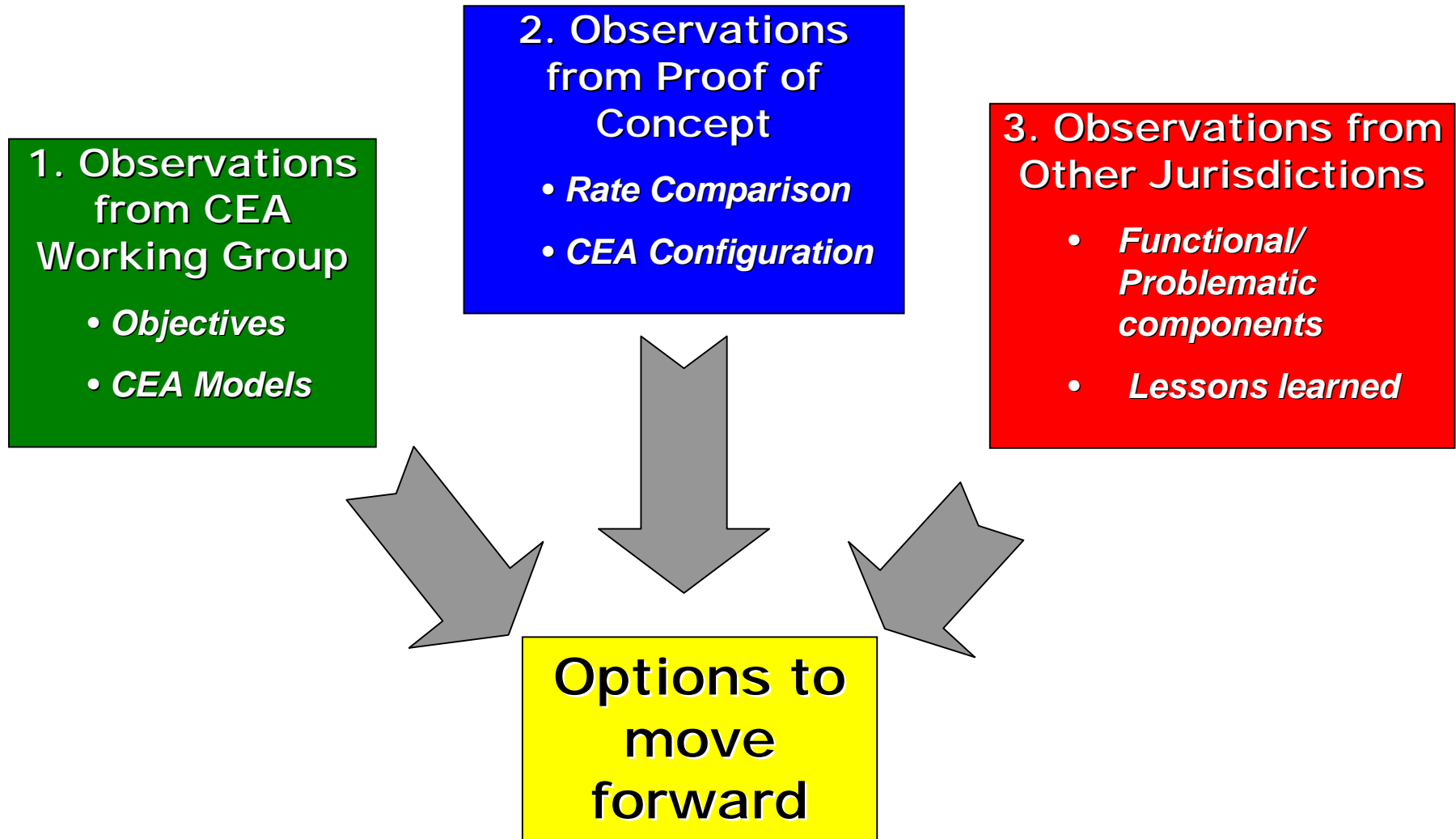
CEA Initiative Addresses Demand-side of ON Market



Why is Ontario Unique?

- **LDCs:**
 - Many entities
 - Range of sizes
 - Primarily municipally-owned
 - Essentially no ownership of generation assets
- **OPG:**
 - Crown-owned quasi-monopoly generator
 - 60-65% of base load generation
 - Supply compensation at prescribed rates
- **OPA:**
 - Contracting (primarily capacity)
 - IPSP
 - May 2011 à significant portfolio: approximately 30% of generation assets in operation

Process of Determining Path Forward



Requires Unique Ontario Solution

Under OEB oversight, CEAs:

- Would compete to serve LDC territories via contracting mechanism.
- Would have the capability to work with LDCs to provide accurate aggregated hourly load forecasts.
- Would procure forward electricity (full-load requirement product layered and staggered) on behalf of customers.
- Would be pro-active portfolio managers by purchasing the majority of supply through forward contracts (some generation can be self-supplied).
- Would accept procurement related risks associated with firm electricity rates determined through forward procurement.
- Would utilize transparent procurement practices.

Technical Paper #1

Assessment of CEAs for the Ontario Power Market

- Extensive consultation with broad range of market participants:
 - Series of working group sessions
 - Input from 60+ participants including: LDCs, wholesalers, retailers, consumer groups & government
 - Industry dialogue with IESO, Hydro One, consumer interest groups, EMIG, retailers, LDCs, and special interest groups.
- Role and benefits of CEAs identified:
 - Active management of customer loads within LDC areas at equivalent rates to current RPP
 - Natural buyers for on-peak generation, conservation and demand response in power markets
 - Provider of rate stability and transparency for customers
- Potential implementation and transition plan developed

Technical Paper #2

Proof of Concept Analysis

- Detailed analysis of cost implications for RPP customers through Proof of Concept projects that examined alternative implementation models and rate determination mechanisms

1. Richmond Hill and Aurora

- Customer data provided by PowerStream
- EPCOR as proxy CEA
- ~90% residential

2. Mississauga

- Customer data provided by Enersource
- Bruce Power as proxy CEA
- Diverse load shape

Technical Paper #2

Conclusions

- Six pricing scenario rates roughly equal to RPP rates - given the cost of shape and risk margin coverage based on the analysis provided.
- RPP can result in inter-class cross subsidization – potential for commercial and MUSH consumers to pay more \$/MWh compared to residential and multi-unit customers.
- RPP can result in inter-regional subsidization.
- A centralized procurement model is the least risky means of transitioning to CEA environment

Technical Paper #3

Load Serving Entity (LSE) Structures in Other Jurisdictions:

- Comprehensive review of roles, successes, and problems with LSEs in other deregulated electricity jurisdictions
- Undertaken to provide insight into what structures may and may not work in Ontario:
 - Literature reviews, interviews with market participants, and key learnings were identified
 - Detailed reviews for 9 jurisdictions:
 1. Illinois
 2. Maryland
 3. New Jersey
 4. Pennsylvania
 5. Maine
 6. Massachusetts
 7. New York
 8. Texas
 9. Alberta

Technical Paper #3

Key Learnings:

- Adequate market participation in competitive bidding process (auctions) is necessary
 - Observed in New Jersey, Maine, Maryland and Illinois
- To better manage load and protect customers, a layered and stacked diversified portfolio with some long-term product is necessary
 - Observed in Maine, New Jersey, Illinois, Massachusetts, Pennsylvania, and more recently Maryland
- LSEs should supply a full-load requirement product for customers
 - Observed in Illinois, Maine, PJM, and Alberta
- Adequate time is required to transition to LSE environment
 - Observed in Pennsylvania, Texas and Alberta
- Customer education is needed
 - Observed in Texas and Pennsylvania
- Heritage Assets could be provided as entitlements for customers
 - Observed in Massachusetts, New York and Maine

Potential Implementation of CEA Initiative

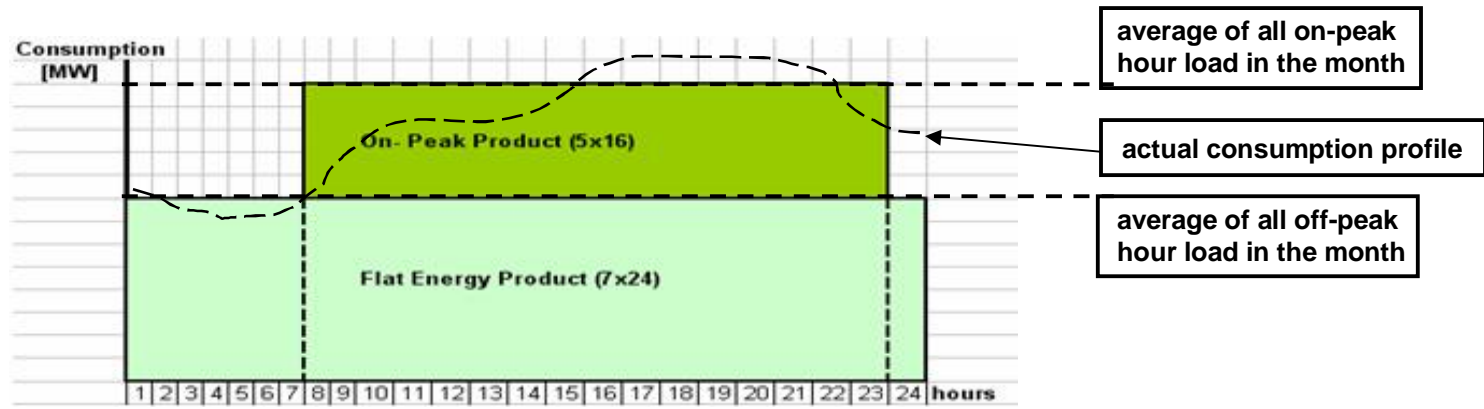
- Recommend minimum 3-year transition with oversight by the OEB: 2008 - 2011
- Options exist in the transition period such that the process and path can continually be modified to better fit in Ontario
- Regulator oversight would ensure the contracting and auction processes are fair and competitive
- Unsolicited interest from several entities that could meet CEA criteria in Ontario
- Initially 6-month rates during displacement process
- Begin with centralized model to displace RPP forecast prices with forward procured prices from CEAs

A Look Forward – Post-2011

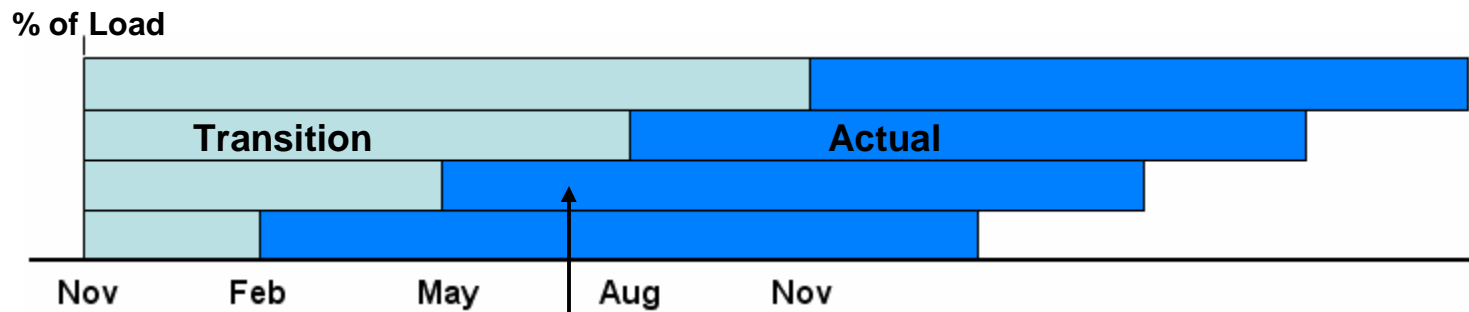
- CEAs actively buying full-load product (100% of portfolio)
- CEAs earn a fee for service
- Each LDC has a unique rate
- Licence term of CEA = 5 to 7 yrs
- Maximum per CEA = 25% of RPP load
- 6-month rates for transition period
 - Blend of forecast and procured, phasing out forecast portion by 2011
- Quarterly and TOU Rates derived from procurement
- Continuous process of layering full-load requirement product for multi-year terms via periodic auctions:
 - 1 to 3 year for first 3 years (2008, 2009, 2010) of transition period
 - 4 and 5 year product for 2010 and 2011...

CEA Portfolio Structure

On-Peak product & Flat Energy (Base) product:



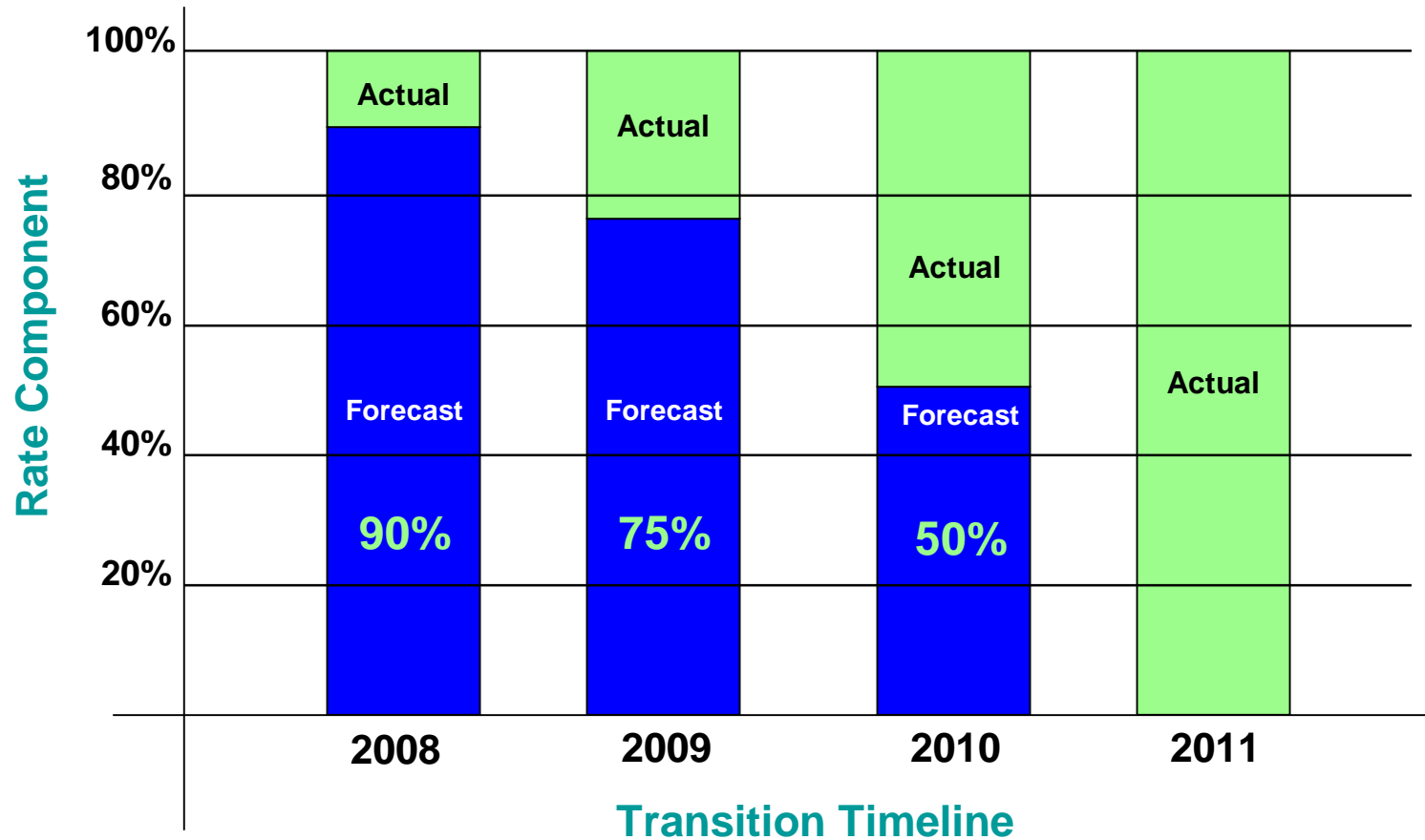
Forward Product “Stack”:



ex. Forward product block from May to November.

Price of each product is the blended cost of procuring on-peak product & flat energy product for each month during the period

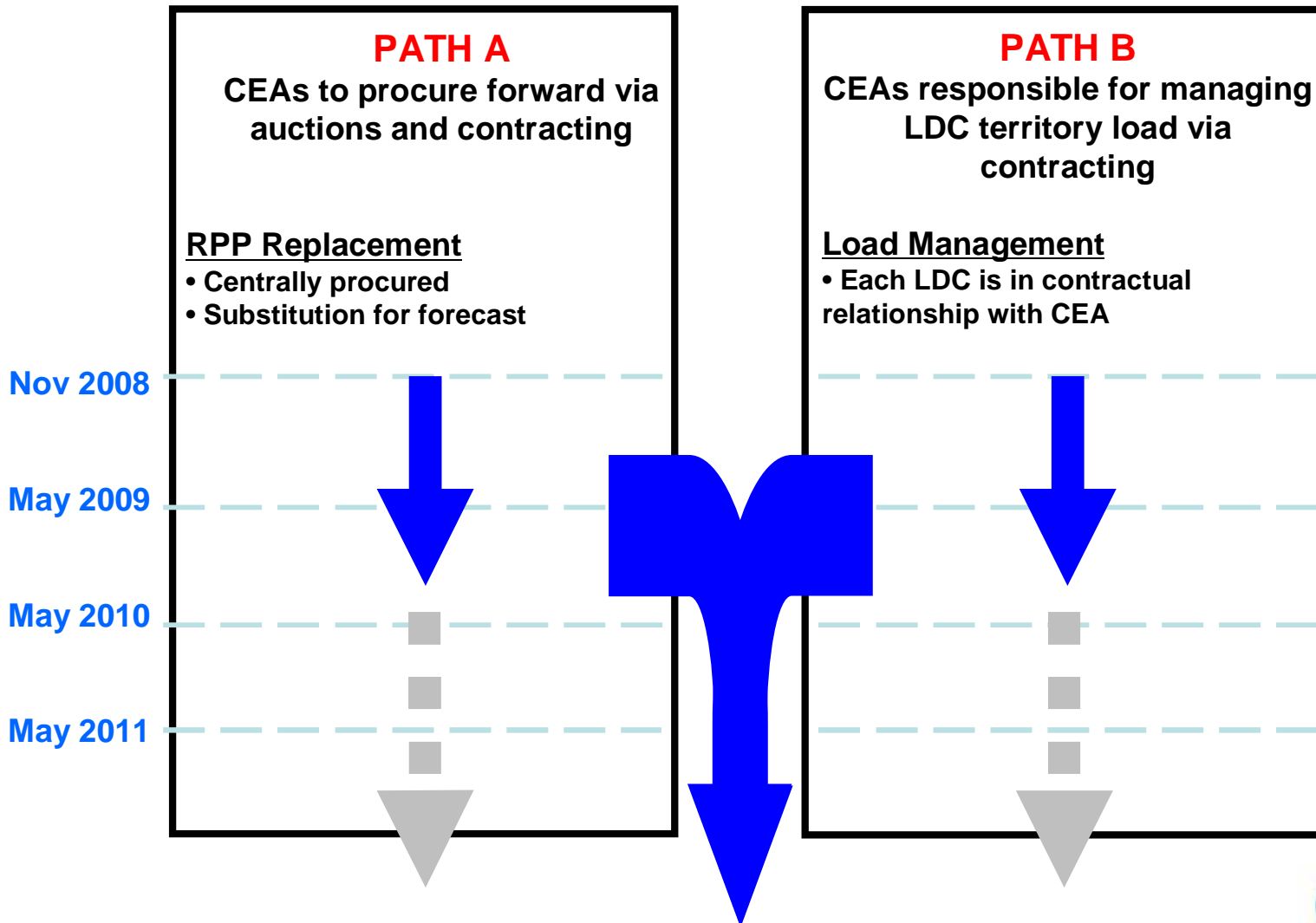
An Example - RPP Displacement via Portfolio



- Actual cost of procured energy (based on auctions) for default supply
- Forecast costs of energy for default supply (current RPP mechanism)

CEA Transition Plan

IMPLEMENTATION PATHS



Myths about CEA Concept

- Customers will pay more than the RPP
- Rates from CEAs are designed to compete with rates from Retailers
- Significant changes to regulations are required
- Amalgamation of LDCs is required
- Rates from CEAs would replace the flow-through rates for non-RPP customers

Impact on Customers

- Customers continue to receive a fixed 6-month RPP rate
- New calculation of RPP rate, based on long-term stable forward procurement instead of short-term forecasts and adjustments
- Majority of risks associated with electricity procurement would be transferred from customers to entities who will manage risk effectively
- Rate stability, transparency and sustainability
- CEA structure enables positive incentives for conservation, demand response and TOU-responsive behaviour from consumers:
 - e.g. CEA procurement of demand response from customers during peak times in transmission-constrained areas

Impact on LDCs

- Most functions remain the same – RPP forecast calculation being replaced with forward procured price
- Only difference is that LDCs gain a relationship with the CEA who wins the contract to serve the LDC territory
- Initiation of load management for LDCs by CEAs could begin as early as 2009
- LDC would improve forecast of load which would be provided to CEAs
 - The better the forecast, the lower the cost to customers
 - LDCs may be rewarded for good forecasting
- LDCs continue to provide the 6 month rate to customers

Impact on Retailers

- The non-hedgeable Global Adjustment cost that has been and is increasing on Retailers' customer bills and all customer bills will stabilize
- Value-added DR and TOU products becomes economical to offer to customers.
- CEA Concept results in some regional and customer class pricing, solving part of the regional cross-subsidization problem.
- New business opportunities
- CEAs/Retailers are an effective mechanism to address renewable energy policy requirements

Impact on Market

- Forward price curve strengthened and enhanced market liquidity due to forward contract procurement
- Market efficiencies enhanced as a result of increased competition
- Produces effective mechanism to address renewable energy policy requirements
- Complements the path towards a Day-Ahead Market, allocation of OPG assets that are under cost of service and supports transitioning of OPA conservation and generation contracts
- Conservation, demand response and Time of Use initiatives more effectively achieved

CEA Initiative is only 1 Piece of the Puzzle...

... Additional benefits realized if simultaneously implemented with 3 other key initiatives...



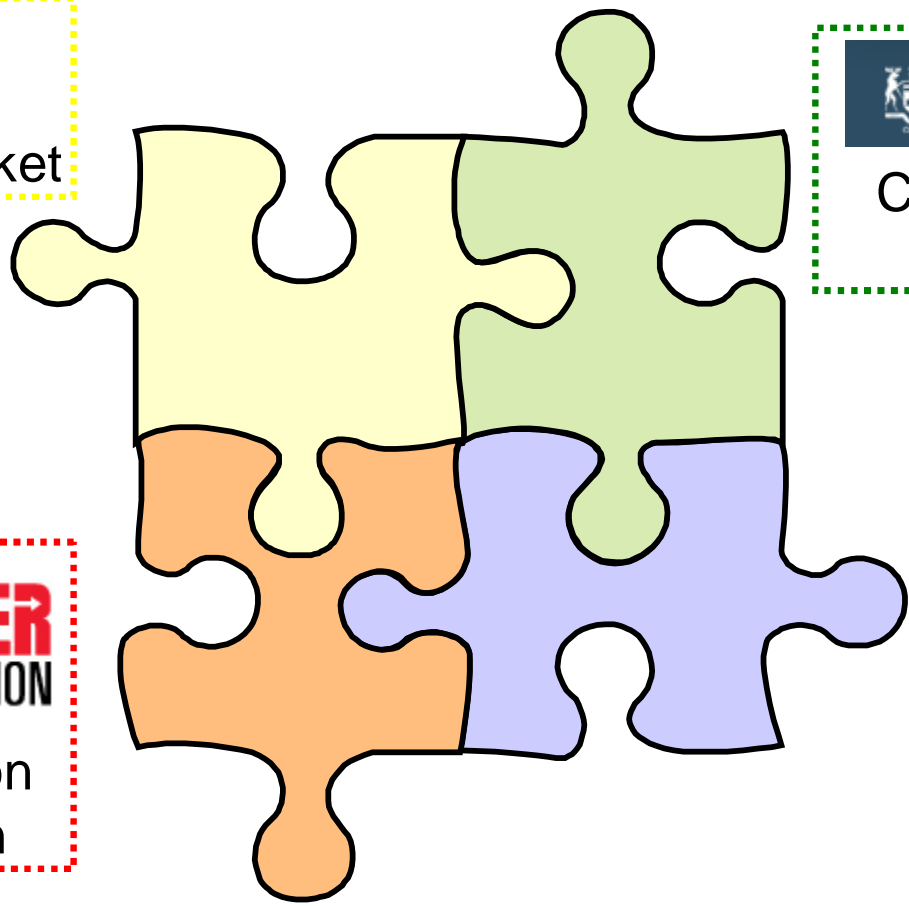
Day-Ahead Market



Ontario Energy Board
Customer Entitlement Agents

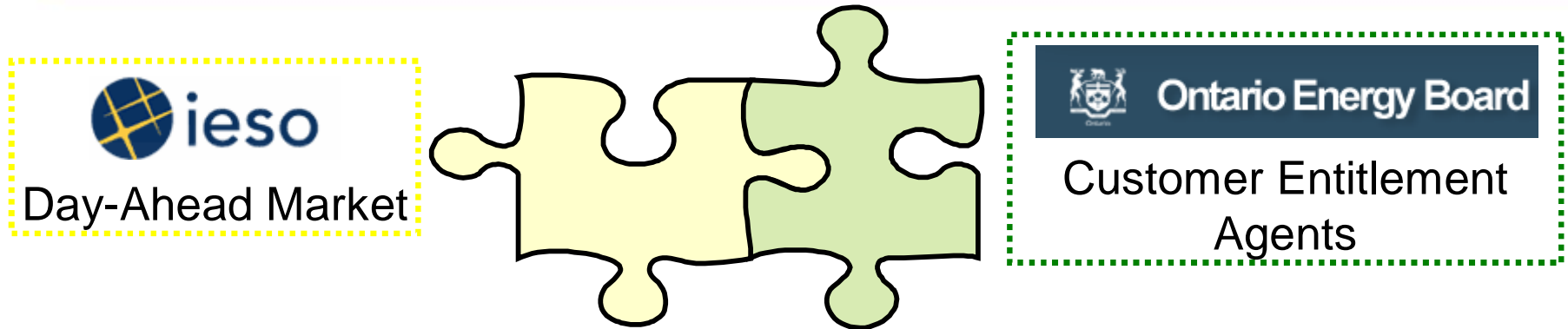


OPG Regulation and Allocation



Ontario Power Authority
OPA-Contracted Energy

Market Evolution Synergies: CEAs & DAM



Volume

- CEAs provide default buy-side representation in DAM
- DAM load is dependent on accurate at-risk forecast by CEAs

Price

- DAM participation could allow for potential avoidance of reliability charges (IOG, CMSC, etc)

Heritage Benefit

- DAM participation would be required in order to acquire allocation

Risk Transference

- CEAs could manage their portfolios in the forward and DA markets and use the spot market for balancing purposes only