

ONTARIO POWER AUTHORITY

March 11, 2009



OPA Update

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About the OPA

- OPA performs four key functions:
 - Power System Planning – Integrated Power System Plan (IPSP)
 - Generation Development – procuring and contracting for new supply and demand resources
 - Conservation – developing and facilitating the management of conservation programs
 - Electricity Sector Development – market evolution

Presentation overview

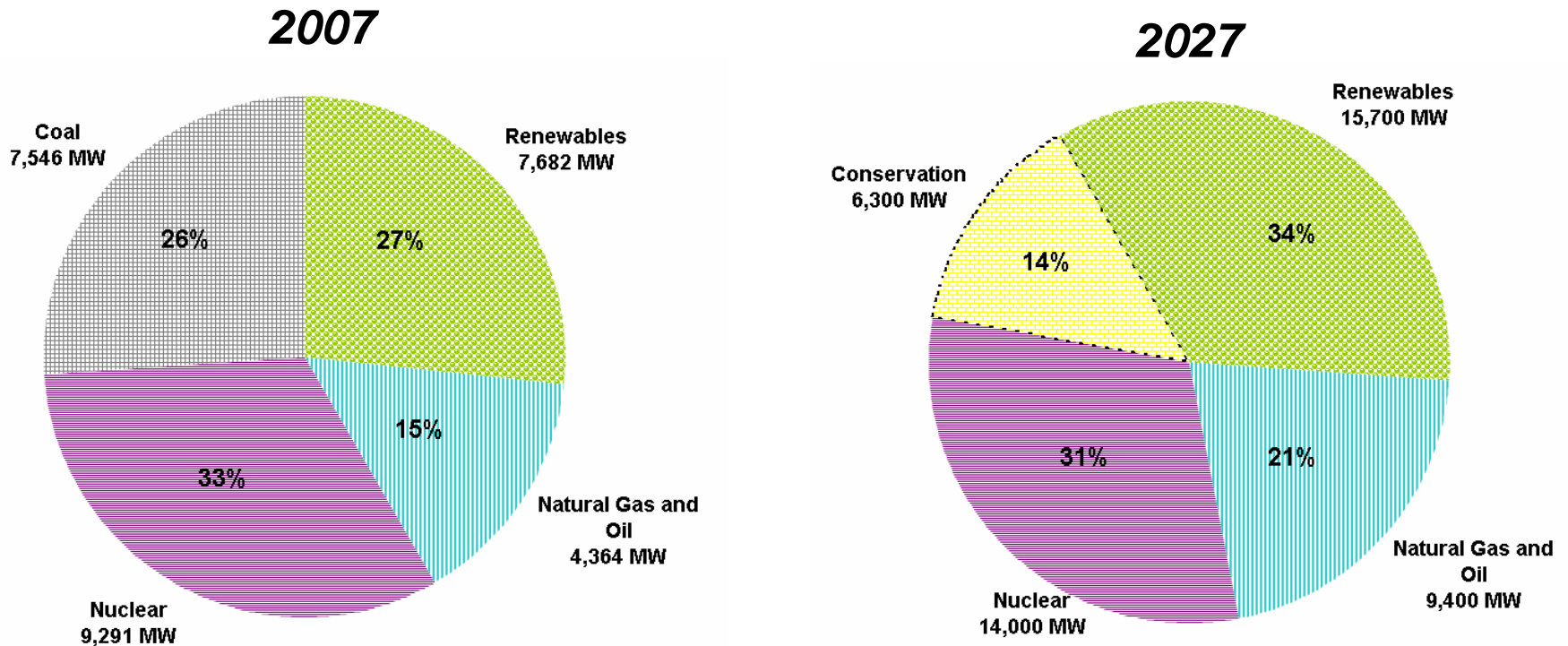
- The Integrated Power System Plan
- The Renewable Energy Standard Offer Program
- The OPA's role in the proposed Green Energy Act and Feed-in Tariff Program



The Integrated Power System Plan

IPSP History

- The OPA filed the IPSP on August 29, 2007 for approval of the Ontario Energy Board (OEB).
 - The OEB to examine the IPSP with regard to cost effectiveness and economic prudence.



The Sept 2008 Directive from the Minister

The OPA is required to review:

- the amount and diversity of energy sources in the supply mix
- the improvement of transmission capacity in the “orange zones”
- the potential of existing coal-fired assets to be converted to biomass
- the potential availability of distributed generation
- the potential for pump storage to contribute to the energy supply during peak times
- the viability of accelerating the achievement of stated conservation targets (including smart meters)

The future of the IPSP

- After the September 2008 directive, the OEB hearings were put on hold while OPA planners revised the IPSP
- The September 2008 directive stated that the OPA is expected to provide the OEB with a revised IPSP within 6 months
 - Further updates are expected shortly

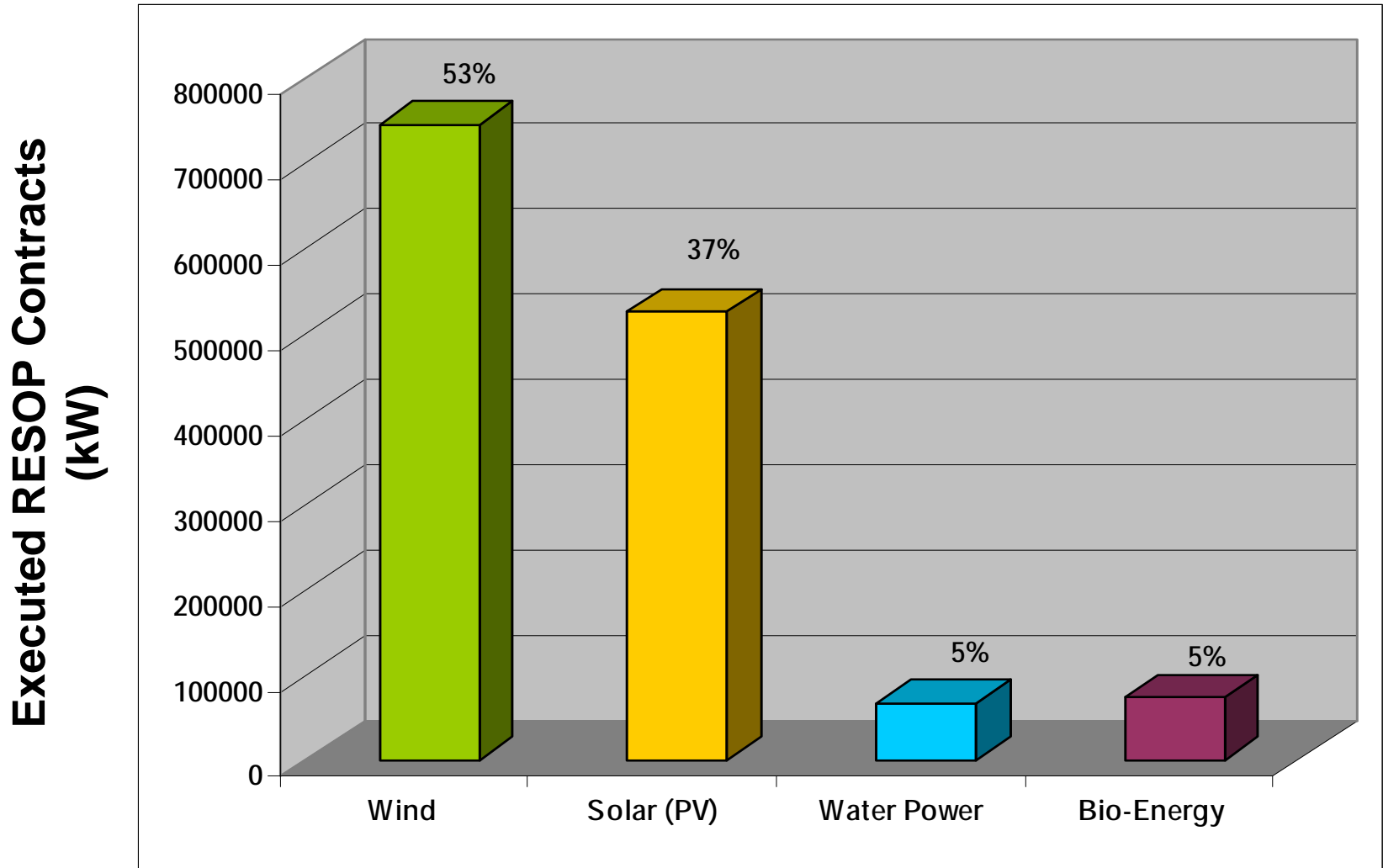
The Renewable Energy Standard Offer Program

RESOP History

- The Renewable Energy Standard Offer Program was launched in November of 2006
- First program of it's kind in North America
 - A guaranteed price for renewable generation from small renewable power producers (< 10 MW)
 - Solar PV projects offered 42cents/kWh
 - Wind, water and bio-energy projects offered 11 cents/kWh.
 - On-peak supplementary payment of 3.52 cents/kWh for qualifying projects
- The OPA commenced a review of the RESOP program in May of 2008 – issuance of new contracts was limited

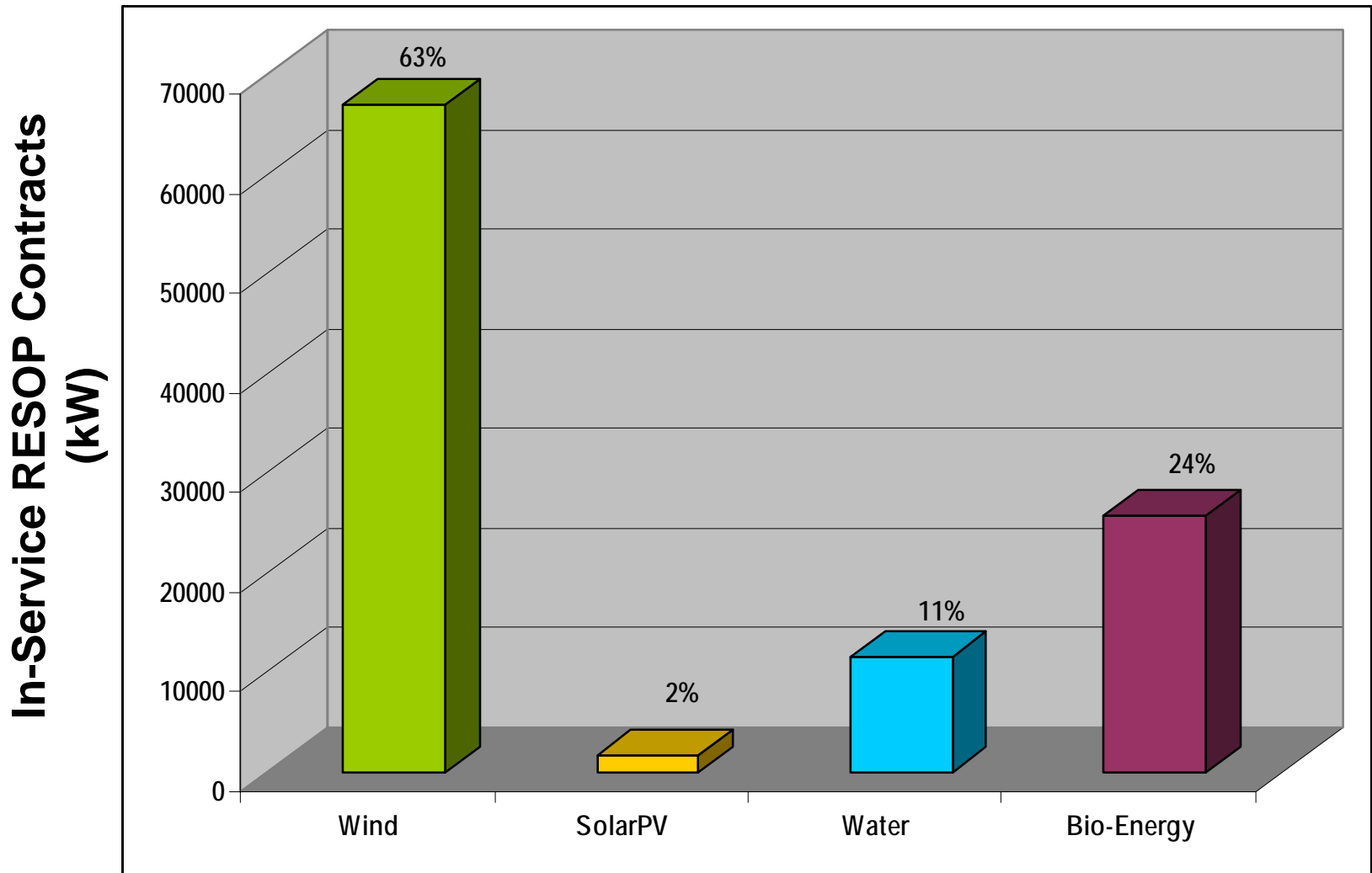
RESOP Results

RESOP Contracts (January 31, 2009)



RESOP Results

Contract reaching commercial operation (January 31, 2009)



RESOP - Wind

- Mid-size energy companies developing commercial projects instead of local proponents building community-based projects
- In some cases larger projects divided up into Standard Offer size projects to qualify for contracts
- In areas of the province with good wind resources, demand for RESOP far exceeds the local Distribution System capability.



RESOP – Solar PV

- Residential uptake was limited
 - 134 in-service projects 10 kW or less, additional 104 projects with contracts
 - Some barriers due to connections
- Unanticipated number of utility scale projects greater than 1 MW
 - 55 projects greater than 1 MW
 - Only one phase of one project is in-service

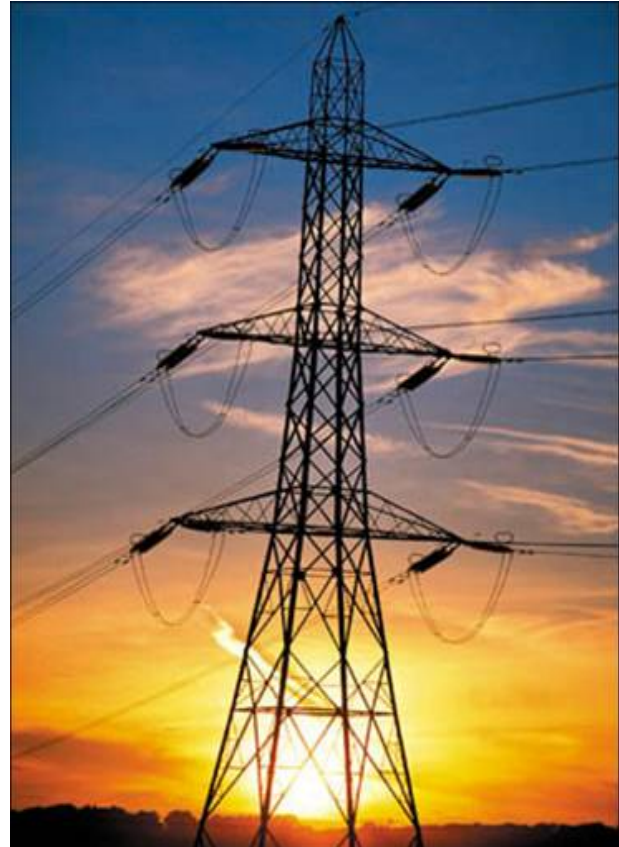


RESOP – Waterpower and Bio-Energy

- Commercial proponents have locked up grid capacity at the expense of smaller and community-based projects.
- In particular, this has been a challenge faced by farm-based biomass projects. Over 95% of overall contract capacity to date is from commercial wind and solar facilities.
- Waterpower projects have different development timelines and stricter permitting. In the North, First Nations consultation and accommodation lengthens development cycle.

RESOP Challenges

- The distribution system (and in some cases, Tx) has limited capacity.
 - First-come, first-served approach created a race for the queue.
- RESOP offered developers a “free option”
 - too easy to get queue position/contract
 - too easy to keep queue position/contract



RESOP Next steps

- RESOP contract holders will continue with their contract
- New procurement initiatives will incorporate lessons learned from the Renewable Energy Standard Offer Program



The OPA's role in the proposed Green Energy Act and Feed-in Tariff Program

The proposed Green Energy Act (in brief)

- Culture of Conservation
 - Energy efficiency in the building code
 - Energy efficiency standards for appliances
 - Home energy audits
 - Conservation targets for utilities
 - Industrial sector conservation
 - Measures for low-income customers
- More Renewables
 - Feed-in Tariffs
 - Improving connections
 - Streamlining approvals
 - Transmission and Distribution System upgrades

The proposed GEA and FIT Program

- The proposed Green Energy Act sets the framework for a new Feed-in Tariff (FIT) program
- The FIT program would open to large and small renewable projects and will allow generators to connect to both the distribution and transmission system.
- Prices would vary by technology and by project size to ensure that a broad range of projects are encouraged.

Improved Connections

- Generators would have improved access to the Transmission or Distribution system where the applicable technical, economic and other requirements have been met.
- The GEA would provide a mechanism by which the costs of connecting to the grid are shared between the generator and the rate-payer.

Approval Process Streamlining

- Proposing a one stop streamlined approvals process, providing service guarantees for renewable energy projects that meet regulatory requirements
- Environmental Protection Act and Environmental Assessment Act are proposed to be amended for the process of obtaining renewable energy permit
- Establishing the right to connect to the electricity grid for projects that meets requirements
- Exemptions for renewable energy projects from official plan and specific by-laws/ regulations

Procurement Initiatives Update

- The Feed-in Tariff Program will replace the RESOP Program and RES Request for Proposals
 - New method of procuring renewable energy projects moving forward
- Alternative methods of procurement may be used for:
 - Geothermal
 - Concentrated solar power or thermal electric solar
 - Pumped storage
 - Large waterpower
- Clean Energy Standard Offer Program
 - Align with government's policies for clean energy development, renewable energy development, and distributed generation

OPA's Role: Development of a FIT Program

- **Renewable Energy Supply Integration Team (RESIT)**
 - Provide recommendations to the Minister of Energy and Infrastructure on the development of the FIT Program
- **Draft Program Rules and Contract**
 - Streamlined application process for small and micro-generators
- **Conducting Stakeholder Engagement Sessions**
 - Expected participants: government, local distribution companies, industry organizations, community representatives, municipal representations, Aboriginal representatives
- **Developing Detailed Implementation Plan**
 - Working with agencies and stakeholders to meet aggressive implementation timeline

Questions???

- OPA website: www.powerauthority.on.ca
- MEI website: www.mei.gov.on.ca
- OEB website: www.oeb.gov.on.ca

Thanks!