



Ontario Power Authority™

# Quantifying the T&D Benefits of Distributed Energy in Ontario

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# OPA Activities

- Integrated Power System Plan – Procurement Options
- Standard Offer Programs
- Major Conservation and Demand Management Targets - 6300MW of Peak Electricity Savings by 2025.

# Renewable Energy Standard Offer Program

- Renewable Energy Initiatives.
- Limited to distribution connected projects of up to 10MW.
- Program will gain momentum over time.
- Many projects will likely start in regional areas, but over time, more projects may appear in local communities.

# Demand Response Program #3

- Program under design.
- Contractual Peak Load Shedding Program.
- Must be available up to 1600 hours per year.
- Frequency of dispatch up to 250 hours per year.

# Clean Energy Standard Offer Program

- Program under design.
- Primary focus on combined heat and power applications.
- Will result in displacement of customer load as most projects likely to be embedded.
- Will gain momentum over time as proponents come to fully understand the benefits of combined heat and power.

# What Does This Mean

- Significant Impact on System Load.
- Change in thinking from one of purely load growth to considering the potential for load stabilization and possibly load reduction.
- Impacts and Benefits of Programs will be felt provincially, but no more significant than at the local level.

# Preparing for the Future

- An increase in the number of system impact assessments.
- Need to understand the issues.
- Determine how best to take advantage of DE for planning purposes
- Determining the benefits of DE.

# Quantifying the Value of DE

- Reliability impacts.
- Impact on distribution system marginal losses.
- Opportunity to defer local infrastructure changes.
- Project size and location can make process of valuation complex.