

Transitional Demand Response Program

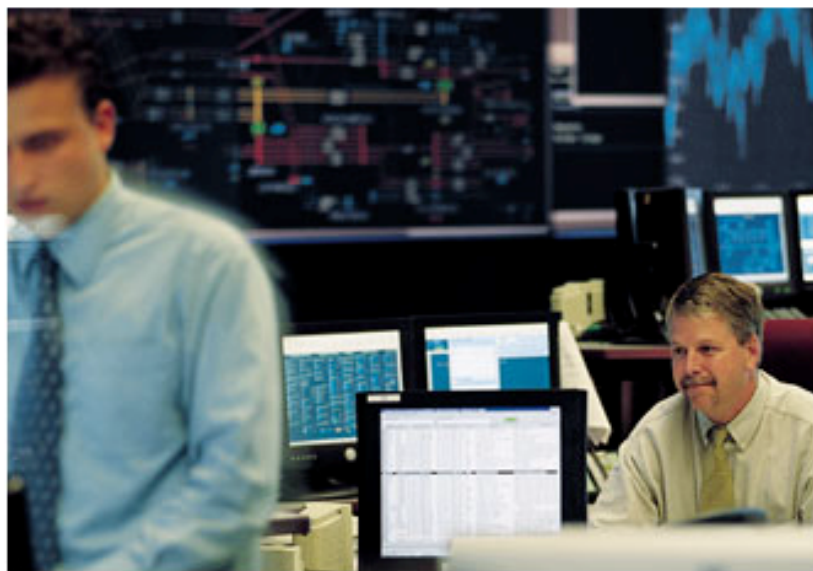
Workshop – August 18, 2004



Agenda

- What is the TDRP and How Does it Work?
- TDRP Application
- Market Entry for TDRP applicants

What is the TDRP and How Does it Work?



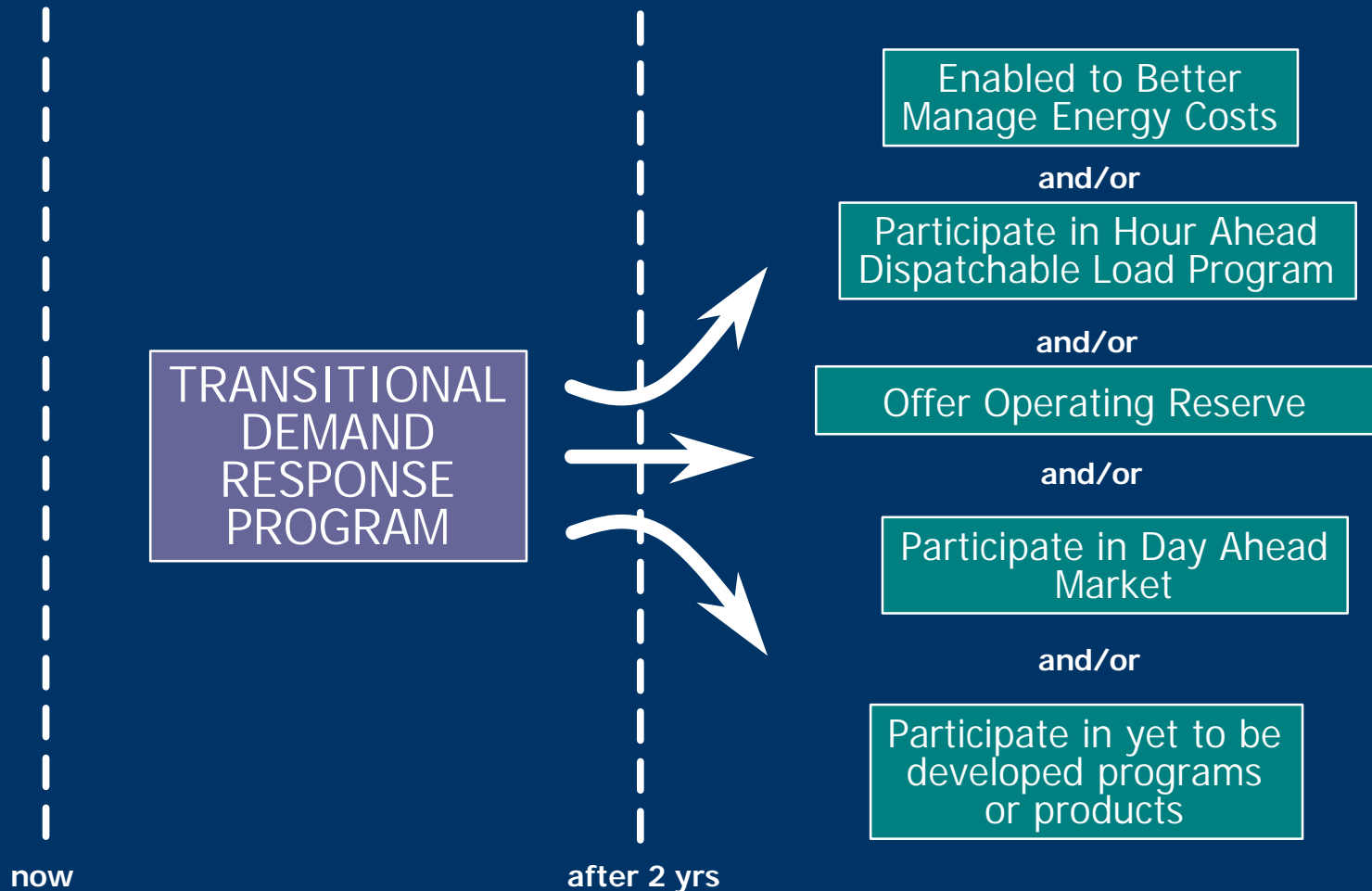
What is Demand Response?

- Demand Response (DR) can be defined as "actions that result in short-term reductions in peak energy demand."
- In a competitive electricity market, DR typically occurs in response to price signals
- Many companies are not currently demand responsive because of perceived or real barriers

Objectives of the TDRP

- The Transitional Demand Response Program is designed to:
 - Overcome barriers to (“natural”) price responsiveness in Ontario’s competitive electricity market
 - Build DR capability and infrastructure
 - “Kick start” demand response

Beyond TDRP



How does the TDRP Work?

- Participants can receive revenue based on their measurable demand response when the three-hour ahead pre-dispatch price meets or exceeds \$120/MWh
- Program availability – 2 years from project commissioning

How does the TDRP Work?

- The program will proceed as follows:
 - Program participants will monitor the Predispatch Unconstrained Energy Price report
 - If the three-hour ahead price meets or exceeds \$120, they can choose whether to reduce demand during the trading hour and if so, by how much. Examples:
 - If the report published during HE 1 shows a price of \$100 for HE 4, no action is required
 - If the report published during HE 1 shows a price of \$200 for HE 4, participants can choose to reduce demand

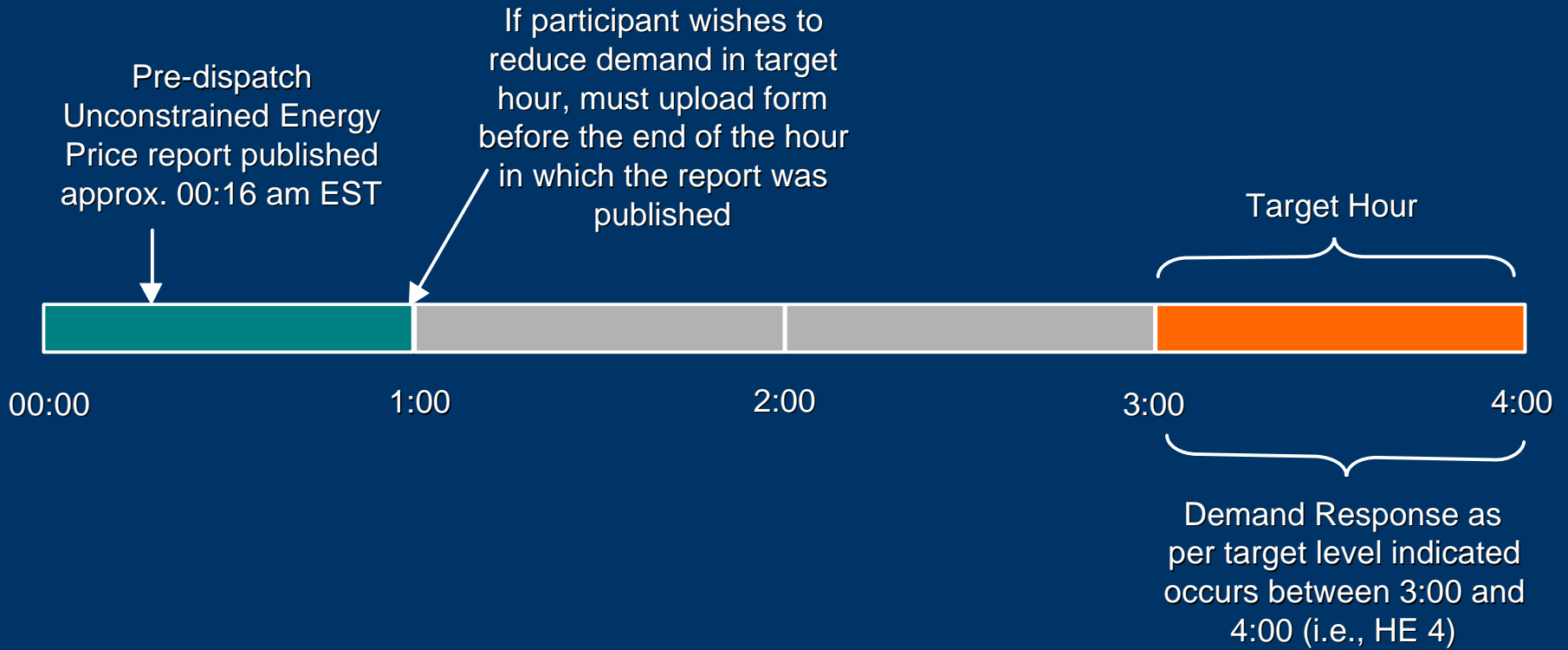
Sample TDRP Timeline



How does the TDRP Work?

- Participants choosing to reduce will notify the IMO at least two hours prior to the trading hour by completing the form "Notification of Intent to Participate in the TDRP" and uploading it to the MPI.
 - Example: If a participant wants to respond in HE 4, they must upload the form before the end of HE 1
- During the trading hour, the participant will reduce their load as per their submission

Sample TDRP Timeline



How does the TDRP Work?

- Once measurement data is available, participants will download, complete and upload the form "Request for Payment for TDRP". This must be done no later than four business days after the last trading day of the month following the month in which the demand response was provided
 - Example: If you provide DR under the program in October, 2004, you must upload the form no later than December 6, 2004 (the fourth business day of December, 2004)

How does the TDRP Work?

- Payment will be calculated by multiplying the three hour ahead pre-dispatch price in Ontario (to a maximum of \$500) by the verified demand response
- Demand response up to the lesser of the accepted project size or 5 MW will be compensated

How does the TDRP Work?

– Examples:

- If the pre-dispatch price was \$200/MWh, the accepted project size was 3MWh, and the verified demand response was 2MWh, the participant would receive $\$200 \times 2\text{MWh}$, or \$400
- If the pre-dispatch price was \$700/MWh, the accepted project size was 3MWh, and the verified demand response was 3MWh, the participant would receive $\$500 \times 3\text{MWh}$, or \$1,500
- If the pre-dispatch price was \$200/MWh, the accepted project size was 3MWh, and the verified demand response was 5MWh, the participant would receive $\$200 \times 3\text{MWh}$, or \$600

How does the TDRP Work?

– Examples:

- If the pre-dispatch price was \$200/MWh, the accepted project size was 5MWh, the verified demand response was 5MWh, but the submitted target DR for the event was 3MWh, the participant would receive \$200 X **5MWh**, or \$1,000

How does the TDRP Work?

- Payments will appear as a manual line item on the preliminary and final settlement statements for the last trading day of the month following the month in which the demand response was provided

Settlement

Last Trading Day of the month following the month in which DR was provided

4 Business Days

Upload completed "Request for Payment for TDRP" form

6 Business Days

Preliminary Settlement Statement issued *and* Invoice

4 Business Days

Payment

6 Business Days

Final Settlement Statement

How does the TDRP Work?

- The demand data provided by the participant will be subject to audit and possible over-payment recovery
- Demand data must be collected, analyzed, and maintained as per the accepted Measurement and Verification plan submitted with your application

Participant Eligibility

- Must be authorized as a market participant by the IMO *before* commencement in the program:
 - This includes having an appropriate Ontario Energy Board license:
 - If you are representing only yourself, a Wholesaler license
 - If you are representing others, a Retailer license

Project Eligibility

- The proposed DR activities must be incremental to any current DR activities. Applicants must provide evidence thereto:
 - For applicants with interval meters:
 - A baseline for each of five days specified on page 7 of the Application form
 - Description of current price response activities for each of the five days
 - For applicants representing customers without interval meters:
 - A description of the customer's current behaviour and current price response activities

Project Eligibility

- Project size:
 - Minimum of 250 kW
 - Maximum of 5 MW
- Eligible load types:
 - Wholesale loads with interval metering
 - Retail loads with interval metering
 - Aggregated retail loads

Project Eligibility

- Participation in the program must overcome one or more 'barriers'
- Cited barriers must include at least one of the following:
 - DR is not economic or the benefits are too uncertain without participation in the TDRP
 - Existing market rules or regulations impede provision of DR
 - The consumer currently lacks the infrastructure needed to enable DR
 - Lack of awareness of potential to provide DR including lack of awareness amongst groups of consumers who may be aggregated to provide DR

Barrier 1: DR is not Economic or Benefits too Uncertain

- DR is not economic or the benefits are too uncertain without participation in the TDRP
- Submissions should include concise details of:
 - Any capital investment required
 - Any costs incurred for the provision of DR
 - The expected benefits from the proposed DR (including avoidance of high energy costs). Benefits should reflect your estimate of the number and duration of $> \$120/\text{MWh}$ events and the number of these events the DR can capture
 - The applicant's required financial criteria (e.g. target payback, etc.)

Barrier 2: Existing MRs or Regulations Impede DR

- Existing market rules or regulations impede provision of DR
- Submissions should include concise details of:
 - The specific market rules and / or clauses in a code or regulatory instrument that the applicant believes impedes DR provision
 - How these rules and / or clauses are an impediment to the provision of DR
 - How participation in the TDRP helps to overcome this impediment

Barrier 3: Lack of Infrastructure

- The consumer currently lacks the infrastructure needed to enable DR
- Submissions should include concise details of:
 - Any existing infrastructure available to support the provision of the proposed DR
 - The required infrastructure needed
 - How the required infrastructure would complement and augment the existing infrastructure

Barrier 4: Lack of Awareness

- Lack of awareness of potential to provide DR including lack of awareness amongst groups of consumers who may be aggregated to provide DR
- Submissions should include concise details of:
 - The specific customers being targeted
 - The specific DR these customers could provide
 - Steps the applicant will take to increase DR awareness among this customer group

Project Eligibility

- The DR provided must be measurable
- Must submit a Measurement and Verification plan with your application

Project Eligibility

- Actual DR will be determined against a baseline:
 - If the participant has an interval meter:
 - If event occurred on a business day, the baseline will be the average of the highest ten meter readings during the same hour of the day on ten of the last eleven business days, if (excluding any hours during which a TDRP event occurred)
 - If the event occurred on a Saturday or Sunday, the baseline will be based on the same hour of the day on the last five Saturdays or Sundays respectively (excluding any hours during which a TDRP event occurred)
 - If there is no interval meter, the participant must develop a measurement and verification plan that will allow for statistical sampling to determine the baseline

Project Eligibility

- Participants must provide assurance that the proposed demand response will endure beyond the program period. Applicants should:
 - Indicate whether the demand response will continue even in the absence of Market Rule, code or rate structure changes
 - Estimate the demand response capacity that would be available after the end of the program
 - Explain what changes in the Market Rules, codes or rate structures would help make demand response permanent

Program Parameters

- Program cap of 100 MW
- Targeted make-up:
 - 40 MW industrial
 - 30 MW commercial
 - 30 MW residential
- There will be two rounds of applications. Up to 50% of these goals will be selected in the first round. The remainder will be selected in the second round

Project Ranking

Evaluation Factor	Weighting
Significance of barriers to be overcome	25
Overall fit with TDRP objectives (including permanence)	25
Expected ability to leverage to other consumers and sectors	20
Degree to which proposed DR addresses an “underserved” market segment or sector	15
Innovative approach	15
Total	100

Current Timelines

- Round One:
 - Deadline for first round of applications – September 15, 2004
 - IMO announces accepted applications – October 15, 2004
 - Program active – October 15, 2004
- Round Two:
 - Deadline for second round of applications – December 1, 2004
 - IMO announces accepted second round applications – January 15, 2005
 - Second round active – January 15, 2005

Current Timelines

- Projects accepted in the first round have 6 months to commence operations; those in the second have 3 months

Contacts

- IMO
 - 1 (888) 448-7777 or (905) 403-6900
 - Email – Helpcentre@theimo.com

