

# EDAC Optimization

May 7, 2009



- Timeline
- Initial Results
- Report Content
- Revise Inputs
- Optimize ELR
- Subsequent Runs
- EDAC Results
- Notifications
- Submit Real-time Dispatch Data

- Validating Inputs, Running the Calculation Engine and Verifying Results can all occur within a 1 hour timeframe.
- The number of EDAC runs that can be performed in a day is based on these assumptions.
- Depending on the actual runtime of the Calculation Engine, the following timeline may have to be revised.

## Normal (Optimum) EDAC Scheduling Timeline

- 10:10 - Initial Run starts
  - Results Validated
  - Results Published (11:00)
- Accept Revised ELR Offers
  - ELR Window closes at 12:00
- 12:10 – ELR Optimization Run starts
  - Results Validated
  - Results Published (13:00)

In normal operation, by 11:00,

- the Initial Run will be completed
- The Results will be Validated, and
- The Initial Results will be Published

Report Content will be the same for:

- Results of Initial EDAC Run
- Results of ELR Optimization Run
- Results of Subsequent EDAC Runs
- Final EDAC Results (EDAC Schedule of record)
- Market Participants will receive schedules for their resources committed by the Calculation Engine
- EDAC Shadow prices for Energy and Operating Reserve will be published for informational purposes

- Changes to initial inputs that exceed the material change criteria discovered after the Initial Run, should result in repeating the Initial Run (time permitting)
- Material change known prior to 14:00 would drive a Subsequent Run

- capacity or energy shortfall
- generating unit change  $\geq 400\text{MW}$
- operating security limit change  $\geq 400\text{ MW}$
- intertie scheduling limit change  $\geq 400\text{ MW}$
- primary demand forecast change  $\geq 400\text{ MW}$
- reserve requirement change  $\geq 400\text{ MW}$

In any hour of the EDAC Day

- A System Advisory for under-generation has been issued and the new or revised *dispatch data* increase *offers* or decrease *bids* of energy;
- A System Advisory for over-generation has been issued and the new or revised *dispatch data* decrease *offers* or increase *bids* of energy;
- A System Advisory for an *operating reserve* shortfall has been issued and the new or revised *dispatch data* increase *offers* of *operating reserve*;

- Request from the *IESO* to submit *dispatch data* for *reliability* reasons;
- The *IESO* rejects, revokes or recalls an outage;
- Equipment is returning early from a planned or forced outage; or
- Changes in the operational status of the *generation facility* or the *dispatchable load facility* to prevent violation of any *applicable law*, endanger the safety of any person or damage property or the environment.

## ELR Optimization Window For Cascade Plants

Open from 11:00 until 12:00

- Revised ELR Offers accepted
  - Must have offer with Daily Energy Limit in prior to 10:00
- Will also include:
  - Revised Non-dispatchable generation schedules/forecasts
  - Material change
  - Approved Dispatch Data and Daily Generator Data
- ELR Optimization Run Initiated
  - Normally on a timer, unless a contingency occurs

*IESO* would execute a subsequent run (no later than 14:00)  
for the following:

- Failure of the Initial Run
- Failure of ELR Optimization Run
- Material Change

- Calculation Engine does not initiate
- Calculation Engine starts but does not produce results
- Calculation Engine produces obviously incorrect results of large magnitude
- Results based on inputs that are no longer valid, due to material change, does **not** constitute failure

- EDAC Results will be Published no later than 15:00
- Results may be Published earlier as ready
  - Normal completion time should be 13:00
- Notification of EDAC Failure
  - If Results are not available or they cannot be published to the Market Participants
  - Market participants will be advised as soon as we know, but no later than 15:00

- Notification of 'Initial Results' is by virtue of having received the Reports (version 1)
- 'Initial Results Delayed' and 'ELR Window Extended' should come as one notification including the time the window will remain open
- A notification of 'No ELR Optimization' would mean that 'Initial Results' would be used with text indicating that these are the 'EDAC Results'

- A notification of 'EDAC Failed' will be sent on the occasion that no EDAC Results have been produced, or that the Results cannot be published to the Market Participants
- System Advisories soliciting Bids/Offeres for:
  - over-generation, undergeneration, O/R shortfall
- Solicitation of dispatch data for reliability reasons.

- The incremental energy component of (new) Three-Part Offers accepted in EDAC will flow through to Real-Time
- Single-Part offers accepted in EDAC will flow through to Real-Time (as now)
- If Pseudo Unit Offers are used, there will be no translation of the PSU offers.
  - Offers for physical units will be required in Real-time

- Bids/offers for Dispatchable Loads, Imports, Exports accepted in EDAC will flow through to Real-time
- Forecasts/Schedules for Non-Dispatchable resources accepted in EDAC will flow through to Real-time

- Bids and Offers **not** accepted in EDAC will be flushed from the system at 14:00. They will **not** be carried forward for use in Real-time
- Daily Generator data accepted in EDAC will not be carried forward for use in Real-time  
(Registration data is used)

- Questions?