

# System Operations – Managing Minimum Generation Conditions

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Market Operations Awareness Session  
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- **Market Operations:**
  - Economic dispatch of Ontario resources for energy and operating reserve
  - Facilitate imports and export transactions with neighbouring markets
  - Demand forecasting for day-at-hand
- **System Operations:**
  - Assessing operating conditions and ‘what ifs’ for loss of transmission or generation
  - Final assessment and approval of planned outages
  - Real-time monitoring and response to system events
  - Direct reliability actions of market participants

- Control Room operates within two time-frames:
  - **Pre-Dispatch:**
    - Hourly look ahead to assess and provide a schedule of resources (generation, imports, and exports) to the end of the day (or next day after DACP is complete at 15:07)
  - **Real-time:**
    - Current to 60 minutes ahead operation of the power system

- Reduced exports
- Ontario demand forecast error
- Reduced hydro-electric generation flexibility (i.e., freshet)
- Non-quick start units coming in to service
- Wind forecast error
- Sudden change in demand (i.e., load loss)
- Transmission outages
  
- Key to successful operations:
  - Communicate, communicate, communicate...

- If economic reductions of baseload generation are expected:
  - Issue SSR indicating Minimum Generation Alert
  - Stop inadvertent payback coming into Ontario
  - Use average Demand rather than peak for ramp up hours
  - Confirm with nuclear generation facilities their preferred order to manoeuver and/or shutdown
  - Curtail import transactions equal to the total MW reduction amount of the nuclear units
  - Publish an SSR opening the mandatory bid/offer window
  - Expand the Net Interchange Scheduling Limit (NISL) from 700 MW to 1000 MW and publish SSR with new limit
  - Advise the nuclear generator owner that manoeuvres may be required and develop a schedule

- If economic reductions of baseload generation are required:
  - Finalize the magnitude of expected SBG (assessing exports, demand, wind and solar forecasts, etc.)
  - Curtail import transactions equal to the total MW reduction amount of the nuclear units
  - Issue SSR indicating Minimum Generation Event
  - Direct the required nuclear reductions
  - Monitor anwind generation response to allow nuclear reductions and avoid nuclear shutdowns
  - Direct the required nuclear shutdowns

- When economic reductions of baseload generation are no longer forecast:
  - Monitor actual vs. forecast demand ramping
  - Work with nuclear units to develop a ramp up schedule
  - Maintain or reduce import curtailments as required
  - Monitor non-quick start generation starts
  - Direct the required nuclear increases
  - Monitor wind generation response to allow nuclear increases
  - Issue SSR ending the Minimum Generation Alert and/or Event

Thank you