Communicating with the IESO – Dispatchable Loads

IESO Training

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AN IESO MARKETPLACE TRAINING PUBLICATION

This guide has been prepared to assist in the IESO training of market participants and has been compiled from extracts from the market rules or documents posted on the web site of Ontario's Independent Electricity System Operator. Users of this guide are reminded that they remain responsible for complying with all of their obligations under the market rules and associated policies, standards and procedures relating to the subject matter of this guide, even if such obligations are not specifically referred to herein. While every effort has been made to ensure the provisions of this guide are accurate and up to date, users must be aware that the specific provisions of the market rules or particular document shall govern.

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1. Introduction

Effective communication is the most important tool the IESO has in maintaining the reliability of the IESO-controlled grid¹ and operating the markets. Information exchange is key.

Although the IESO receives thousands of bits of data every few seconds, there are many situations that only Market Participants (MPs) can see. The MP's information can alert about, or can confirm the seriousness of, a situation and can help the IESO make the right decision as quickly as possible. Examples of this type of information include local electrical storms, grass fires, high winds, and ice build- up on structures. It is also essential for the MP to inform the IESO about circumstances that have the potential to impact the future operation of their facilities.

This guide covers:

- Timelines and reasons for these timelines
- Communication principles and protocols
- Communication requirements during normal and abnormal operating states
- How the IESO and Market Participants communicate in real-time

 $^{^1}$ In this document, 'grid' means the IESO-controlled grid. 'Markets' means the IESO- administered markets.

2. Communication Timelines

Events on the power system happen quickly. When the IESO there is an unexpected event on the power system (a 'contingency'), the system is not as strong as it was before the event. The IESO needs to re-prepare, i.e., get ready to face the next event as soon as possible.

The longer the system spends time in a degraded state, the more vulnerable it is to the effects of another contingency. Often, contingencies take place during severe weather, so the likelihood of another event is higher than normal.

2.1 Reliability standards

Reliability standards require the IESO to re-prepare the system within 30 minutes during normal conditions and within 15 minutes during high-risk conditions, such as an electrical storm. In these short periods, the IESO must gather information from MPs, make a plan and execute it. As users of this guide can see, timely communication from the involved participants is key if the IESO is to meet required re-preparation times and minimize exposure to this increased risk.

2.2 The Market Participant's role

The IESO may direct an MP to take an action 'promptly' or 'immediately'. When the IESO uses these terms, it means:

As soon as possible, but no longer than 5 minutes after receiving direction or recognizing the need to take an action².

The IESO will communicate this type of direction to the MP by telephone.

² As outlined in the Market Rules: Chapter 5, Section 1.2.5.

3. Communications Principles and Protocols

The IESO's goal is to facilitate open, timely communication. Clear communication is paramount during both normal and abnormal conditions. It is important that both the IESO and MPs understand all communications.

Because of unconscious editing, technical term misunderstanding, or technical problems, the receiver (whether the IESO or an MP) must repeat the message back to the sender to ensure that the message has been received and is understood correctly.

Some, or all of an MP's load may be dispatchable, this is determined by the way the MP bids into the market. The MP is required to submit bids to buy energy for the dispatchable portion of their load – they cannot simply withdraw energy from the grid as they need it. MPs with dispatchable load can also submit operating reserve (OR) offers as long as their facility qualifies to supply it.

The IESO uses these energy bids and OR offers to determine dispatch instructions for the MP's facility. The MP needs to communicate with the IESO throughout this entire process.

(For more information about dispatchable load energy bids and operating reserve offers, please see the Introduction to Ontario's Physical Markets, available on the IESO <u>Training Materials</u> web pages.)

3.1 Guidelines

- Avoid using first names on a conference call address individuals by station or site name.
- Be concise and precise provide only the information that is related to the purpose of the call.
- Give complete attention to the call.
- To avoid any misunderstandings, use official industry operating terminology.
- Avoid using jargon that may only be understood within the MP's own company Please refer to <u>Market Manual 7.6: Glossary of Standard Operating Terminology</u> for a list of approved operating terms.
- An MP should identify their company and the location they are calling from (since some MPs have more than one location).
- Avoid discussions about real-time price, market conditions, and other confidential/sensitive information.

3.2 Where to find communications protocols

Communication protocols with the IESO are in the market rules and market manuals:

- Market Manual 7.1 contains much of the material covered in this guide
- Market Manual 7.6 lists approved operating terms

4. Communicating During a Normal Operating State

4.1 Normal Operating Conditions

The IESO is in a normal operating state when the IESO has:

- Fair weather conditions
- No security limits or thermal limits being exceeded
- Sufficient energy and capacity to meet the forecast demand
- No emerging reliability concerns within Ontario or in neighbouring jurisdictions that could affect our area

The grid is in the normal operating state most of the time.

4.2 Communicating with the transmitter?

The MP has communication obligations with their transmitters, as outlined in their connection agreement. These obligations include coordination of switching or outage timing requirements and work protection. The IESO may also be involved in some of these discussions.

4.3 Communicating to the IESO?

There are things that an MP must communicate directly to the IESO – even if the MP also communicate them to their transmitter – such as:

- System reliability information
- Outage notification
- Approvals for switching equipment in and out of service
- Market dispatch information

The MP is encouraged to contact the IESO whenever they have something relevant to communicate.

4.4 When to Call Markets or System

The IESO control room has two broad areas of responsibility. Both sides of the room deal with different aspects of operating the markets and power system, but work together to ensure they are integrated:

- **Markets**: maintains the balance between supply and demand through market mechanisms and manages generator outages
- **System**: maintains transmission system reliability and/or recovery following disturbances and manages transmission equipment outages

Note: Markets and System have different phone numbers. The IESO supplies them to MPs upon market registration — MPs can also get them by contacting their Business Advisor.

Markets

Call the IESO Market operators immediately for the following events:

- An MP is unable to follow their dispatch target there are times when processes or equipment may limit the MP from following their dispatch instructions. When this happens, the IESO's algorithm needs to dispatch other resources up or down to make up the difference.
- An MP is unable to supply operating reserve according to their schedule for example: the MP is scheduled to supply 25 MW of 30-minute operating reserve. A production problem develops that would prevent the MP from reducing their plant demand for the next 45 minutes. The IESO needs to know about this situation to take immediate action so that market mechanisms can schedule replacement reserve.
- Dispatch data inquiries or changes within the mandatory window.
- For potential operating concerns that will affect the MP's consumption level, or due to production equipment malfunctions, they expect to be non-dispatchable in the near future.

System

Call the IESO System operators immediately for the following events:

- An MP has a planned single-point pickup of the non-dispatchable portion of their load or if all of their load has become non-dispatchable:
 - 100 MW (if facility south of Barrie)
 - 50 MW (if facility north of Barrie)

Note: Exceptions exist for large industrial customers who routinely exceed these levels of non-dispatchable load.

• A planned operation of any breakers that can cause a parallel between multiple connection points to the grid — for example, operation of bus tie breakers that could allow back-feed into the grid.

- Request approval to return grid-connected equipment to service.
- To report any reliability-related information (e.g., grass fires, electrical storms, ice build-up).

Note: Often an MP is the only one who knows of the specifics of a particular situation. The MP's prompt communication to the IESO can help avert an event that would otherwise adversely affect the grid.

5. Communicating During an Abnormal Operating State

5.1 Abnormal Operating Conditions

An abnormal operating state exists any time the IESO is not in a normal condition, including when:

- The IESO declares an emergency, or
- The IESO declares a high-risk operating state, or
- After a contingency (i.e., an unexpected event on the power system).

5.2 Who to communicate

In abnormal operating conditions, such as after a contingency, the IESO is an MP's first point of contact.

The IESO will assess, co-ordinate and direct the restoration of equipment when it is safe to do so, conferencing all involved parties.

5.3 When to call Markets or System

Markets

During abnormal conditions, MPs should call the IESO Market operators immediately whenever they experience problems with the dispatch communication system.

System

During abnormal conditions, MPs should call the IESO System operators whenever they experience:

- Partial or total loss of potential
- Any degradation of auxiliary equipment that reduces grid reliability (such as directly connected transformer alarms)
- Abnormal or fluctuating system voltage
- Operation of any protective relaying, special protection schemes or system auxiliaries
- If they experience a frequency excursion outside the range of 59.8 Hz to 60.2 Hz (frequencies outside this range usually indicate that they are part of an electrical island)
- If they are located south of Barrie, and they experience automatic loss of non-dispatchable load
 > 100 MW

- If they are located north of Barrie, and they experience automatic loss of non- dispatchable load
 > 50 MW
- Loss of any internal distribution lines that affect the output of an embedded generator of 20 MW or more

In abnormal operating conditions, the IESO is the MP's first point of contact. The MP may contact their own authority control centre as long as doing so does not delay the phone call to the IESO.

If an MP's call is due to a contingency, the IESO will assess, co-ordinate and direct the restoration of any equipment. Typically, the IESO will conference call with all affected parties, including the MP's transmitter or distributor if necessary.

5.4 Multi-party communications

Due to the integrated nature of the power system, there are many situations where the IESO needs to speak with a number of different participants at the same time via conference call.

As an involved party, it is essential that the MP remains on the line while these discussions take place. Failure to do so may delay restoration or prevent resolution of the operating problem.

For example, assume an MP is fed off a two-line supply, and one of them is automatically removed from service. For safety reasons, the IESO cannot restore the circuit until the IESO has spoken with all the tapped participants.

If an MP does not call the IESO and the IESO cannot reach the MP, the line will remain out of service, subjecting all the participants, including the directly impacted MP, to increased risk as the MP will remain on single line supply until the IESO can reach them.

5.5 Communicating with the IESO during a Contingency

Who to call

- Call the IESO system control room operator promptly when a grid disturbance occurs and provide information on the cause (if known) and effect of the contingency on the MP's facility and equipment.
- The IESO will conference all affected parties. During phone conferencing, MPs remain on the line until the IESO ends the call. Remember that your information is important to the IESO in building the plan for recovery to normal operation.

Note: The MP's information is important to the IESO in building the plan for recovery to normal operation.

Communicating with the IESO

Whether an MP speaks with the IESO operator or is re-directed to a voice mailbox³, the IESO needs key information from the MP:

- Identify the MP
- Identify the MP's company and facility location
- Identify the reason for the MP's call
- Have key information available (as outlined below)

The information the MP should provide

- Time of the event
- Status of the MP's facility and equipment
- What the MP observed were there any indications prior to the trip that something was happening on the grid
- If the MP has any indication of likely cause
- Any protection annunciations received
- Any concerns about returning equipment to service
- Other urgent equipment, safety, or environmental concerns

What to Leave on the IESO's voice mail

The IESO's telephone system prioritizes calls during disturbances. When this happens, an MP's call may be re-directed to voice mail:

- It is important to leave all the MP's information on the recording and the IESO will return the MP's call as soon as possible. Due to the volume of calls the IESO receives during disturbances, unless the MP's conditions change, one phone message is sufficient.
- An MP may elevate themselves in the IESO's phone queue if they have urgent information concerning public safety, danger to the environment, or risk of equipment damage.
- An MP may be directed to a voice mailbox only during large scale or widespread disturbances.

³ The MP may be directed to a voice mailbox only during large scale or widespread disturbances.

An MP's message should include:

- The MP's identity, company and facility location
- The reason for the call
- Information on the cause or impact of the disturbance and the status of the MP's equipment

Be prepared for the IESO's follow-up call.

Next Steps

The IESO will use all available information from an MP and other affected participants to build a plan for recovery to restore the system to normal operation as soon as possible:

- Follow the IESO's directions to restore equipment
- Resume normal operation when the IESO confirms it is safe to do so
- Call the IESO if an MP knows of any post-event issues that may affect the grid or the markets or if they discover anything that could help reveal the cause of the disturbance

The MP's information is a very important part of building the IESO's restoration plan. It is important that the IESO is able to communicate with every participant on a circuit before re- energizing that circuit.

If the IESO cannot speak with an MP, restoration may be delayed. That is why it is important that the MP's contact numbers are up to date in the IESO registration database. If the MP's information is not up to date, they need to contact their Business Advisor and update their information in <u>Online IESO</u>. An Applicant Representative of the registered organizations can add or remove contract roles in Online IESO. To update contact roles, please refer to <u>Step By Step For Adding a Contact Role</u> document.

5.6 Communicating when a Facility has a Loss of Potential

What happens if an MP's facility loses all potential? The blackout could be localized or could affect a large area. Regardless of the extent, they must call the IESO immediately.

Call the IESO System control room operator promptly, following the same steps as the MP would for a contingency. Keep in mind that:

- During a widespread disturbance MPs will probably be unable to talk with the IESO directly.
- The IESO's telephone system prioritizes calls during disturbances. When this happens, the MP's call may be re-directed to voice mail. As with contingencies, it is important that the MP leaves all their information on the recording and the IESO will return their call as soon as possible. The MP may also elevate themselves in the IESO's phone queue if they have urgent information concerning public safety, danger to the environment, or risk of equipment damage.
- In the meantime, take an MP's pre-approved independent actions on loss of potential following the Ontario Power System Restoration Plan. Inform the IESO promptly how much load the MP can put back on the system – the IESO needs to know the rate the MP can reload at (MW/min).

The IESO will call the MP when restoration has proceeded to the point where the IESO is able to allow some or all of their load back on the system. The IESO will either offer the MP a quantity to reload or ask them how much load the MP can put back on the system – in either case, the IESO needs to know what rate the MP can reload at (MW/min).

Resume normal operation when the IESO confirms it is safe to do so, and call the IESO if the MP knows of any post-event issues that may affect the grid or the markets

5.7 Post-contingency Communications

The information an MP provides is very important for system reliability. Post contingency, the IESO needs to know:

- **Equipment status or concerns:** Has the MP's equipment been forced out of service for a long period? Does the MP have any concerns about equipment damage?
- **System status:** Does the MP have any voltage or thermal concerns? Has the MP noticed any abnormal frequency excursions? Has the MP's facility suffered any load loss?
- What annunciations can the MP provide to the IESO such as relay protection sealed-in? This can help the IESO piece together the cause of an event.
- Has the MP had any operation of any special protection schemes or system auxiliaries (e.g., underfrequency load shedding)?
- Does the MP have any urgent environmental concerns that could become a major disaster?
- Indications of fault severity (if the MP has digital fault recorders installed within their operation, communicating this information is very important, e.g., how did the MP's equipment respond during this disturbance, etc.).
- The MP's assessment of return to service of their equipment and any potential causes, if they are known.
- Any information relevant to security of the grid or concerns before restoration attempt is made, e.g., equipment limitations, environmental conditions, etc.
- If the contingency involves other market participants' equipment the IESO will discuss with all parties before the restoration attempt (this is why it is important for the IESO's facility registration database to have the MP's up-to-date contact information).

6. IESO-initiated Communications

There are circumstances when the IESO may call an MP to do something during normal or abnormal conditions.

Communications from the IESO is normally via approved communication through the MP's authority centre, if they have one, in accordance with the market rules. However, there are reasons and situations where the IESO communicates directly with the MP. For example:

- The IESO will contact the MP when they are not following their dispatch instructions (the target the MP follows is their dispatch instruction). Dead-bands allow for discrepancies in plant processes that may alter the MP's ability to follow their dispatch. If the MP cannot follow their dispatch within the dead-band, they must call to let the IESO know.
- The IESO may receive a dispatch at mid-interval instructing the MP to increase or decrease their power consumption. Examples of these may be one-time dispatches or operating reserve activations.
- To maintain reliability or during emergency operating states, the IESO will take actions which could include:
 - Directing the MP to execute an action, or
 - The IESO could also implement rotational or block load shedding (please note that it is important that the MP can quickly calculate how many MWs a 10 % load reduction request would represent)

To request a load reduction, the IESO will either call the MP directly or via a recorded broadcast message. If the IESO calls the MP with a load reduction request, they should implement the requested actions, then call the IESO back. During these times, prompt response to the IESO's requests is important. Although it does not happen often, the IESO may request the MP to disconnect their station from the grid immediately.

The IESO issues <u>Advisory Notices</u> that also alert MPs to market and system related events, such as an <u>emergency operating state</u>.

6.1 How the IESO communicates

Telephone

The telephone is the IESO's most common means of communication.

The IESO does not physically operate equipment, rather the IESO directs the operation of the IESOcontrolled grid. It is through telephone communication with the MP, the participant, that the IESO gets things done. During the MP registration, the IESO provided all the phone numbers the MP needs to communicate with the IESO. If the MP wishes to confirm any of these numbers, they can contact <u>Customer Relations</u>.

Advisory Notices and Adequacy Reports

The IESO releases these reports and <u>Advisory Notices</u>, if required, at specific times daily throughout the day and post them on the IESO web site. These notices allow the IESO to present information to the market participants that is not addressed through the <u>Adequacy Report</u>. They are intended to provide this information for an event that is deemed significant or any change that is not captured through regularly scheduled publication of reports.

• System Status Reports (SSRs) and Adequacy Reports list the hourly forecast demand, system capacity and energy, as well as system advisories for the IESO-administered markets.

Adequacy Reports list the hourly forecast demand, system capacity, and energy, for the IESOadministered markets. Please refer to <u>Market Manual 7.2</u> on the IESO's Market Rules and Manuals Library web page, for details on the Adequacy Report and other Near-Team Assessments and Reports published

7. Skill Check

7.1 Skill Check: Questions

- 1. Under which of the following situations should an MP call the IESO?
 - a) The MP is planning to operate the tie circuit breaker that will parallel two connection points of the grid.
 - b) The MP is going to draw an oil sample from their facilities directly connected main transformer.
 - c) The MP will be performing some internal plant switching that will introduce a nondispatchable load pick-up of 40 MW to the system.
 - d) The MP's maintenance team is performing infrared scanning of their live transformer and overhead line switches.
 - e) Their facility, located in Toronto, suffers a sudden non-dispatchable load loss of 34 MW.
- 2. Assume an MP receives a high temperature alarm on their facilities directly connected main transformer. The MP's technician determines that the temperature switch is defective and needs replacement. What communication to the IESO, if any, does the MP need to initiate?
 - a) No communication is necessary since the MP's technician informs them that replacement of the switch can be done without de-energizing the transformer.
 - b) Replace the temperature switch promptly, then call to inform the IESO.
 - c) Call to inform the IESO promptly. Coordination through the IESO's outage management procedure is required.
- 3. An MP is currently scheduled for 25 MW of 30-minute operating reserve (OR). The MP is also experiencing some plant production problems that would limit their ability to provide the OR since they are unsure if the problems will last longer than 30 minutes. What is the correct response to this situation?
 - a) As long as this situation does not exceed 30 minutes, the MP can wait to let the IESO know.
 - b) Call the IESO immediately. Keep the IESO up-to-date as the situation unfolds.
 - c) No need to let the IESO know unless the MP gets an OR activation.

- 4. An MP's entire load is non-dispatchable. The MP has received a credible sabotage threat to their facility and they will be shutting down their facility resulting in a sudden load loss of 35 MW. Should the MP call the IESO about this?
 - a) No, this is a local problem within their facility.
 - b) No, since this causes a load loss of only 35 MW.
 - c) Yes. The IESO encourages communication of unusual events that could become bigger issues affecting grid reliability, public safety, equipment or the environment.
- 5. There has been a contingency on the grid and an MP's facility has lost all potential. The MP has no environmental, safety or equipment concerns. They wish to know what happened and how long it will be before power is restored. When the MP calls the IESO, they get a recorded message. What should the MP do next?
 - a) Elevate the MP's priority in the IESO's telephone queue to find out when the power will be restored.
 - b) Leave a detailed message, and implement the MP's independent control actions in preparation for the IESO's phone call.
 - c) Keep calling and leave as many messages as it takes.
 - d) Keep calling until the MP speaks with an IESO operator.
- 6. It is a normal day of reduced production at an MP's facility. The MP does not have any energy bids or operating reserve offers in the market. The MP receives a recorded message from the IESO control room requesting that they reduce their demand by 4% in 10 minutes. How should the MP respond?
 - a) Call the IESO back immediately at the number that was given to them on the recorded message and verify that it is not a simulated exercise.
 - b) Call the IESO back at the number provided on the recorded message and request an explanation.
 - c) Begin implementing the demand reduction, then call the IESO back at the number provided on the recorded message with an estimated MW reduction that the MP will achieve.
 - d) Look for a system status report for verification of an emergency condition and call the IESO back at the number provided on the recorded message.
 - e) Contact the MP's management staff and call the IESO back once the MP has contacted them to initiate a conference with the IESO.

- 7. An MP is experiencing fluctuating incoming voltages. The MP suspects it is caused by the neighbouring generation facility. Who does the MP call for more information about the cause?
 - a) The MP's transmitter
 - b) The IESO
 - c) The MP's local distribution company
 - d) The neighbouring generation facility
- 8. An MP has submitted a revised bid within the mandatory window. The MP does not need to call the IESO for approval.
 - a) True
 - b) False
- 9. When is the grid considered to be in abnormal conditions? (Choose all that apply.)
 - a) When the IESO has formally declared an emergency and posted a system status report.
 - b) When primary demand forecast adjustments are required due to revised weather forecasts.
 - c) When there is lightning activity in a local area of southern Ontario.
 - d) When system contingencies or unusual equipment behaviour threaten the reliability of the grid.
- 10. An MP has been dispatched to reduce their energy consumption even though their energy bid is much higher than the 5-minute Locational Marginal Price. The MP does not have reserve offers in the system at this time. The MP suspects that this is not a legitimate dispatch instruction based on their economic bids. What should the MP do?
 - a) Wait for a few more dispatches to see if the situation will correct itself.
 - b) Call the IESO control room operator to verify the instruction is legitimate before following the dispatch instruction.
 - c) Accept the dispatch instruction and follow the target immediately.

7.2 Skill Check: Answers

- 1. Under which of the following situations should an MP call the IESO?
 - a) The MP is planning to operate the tie circuit breaker that will parallel two connection points of the grid. \checkmark
 - b) The MP is going to draw an oil sample from their facilities directly connected main transformer.
 - c) The MP will be performing some internal plant switching that will introduce a nondispatchable load pick-up of 40 MW to the system.
 - d) The MP's maintenance team is performing infrared scanning of their live transformer and overhead line switches.
 - e) The MP's facility, located in Toronto, suffers a sudden non-dispatchable load loss of 34 MW
- 2. Assume an MP receives a high temperature alarm on their facilities directly connected main transformer. The MP's technician determines that the temperature switch is defective and needs replacement. What communication to the IESO, if any, does the MP need to initiate?
 - a) No communication is necessary since the MP's technician informs them that replacement of the switch can be done without de-energizing the transformer.
 - b) Replace the temperature switch promptly, then call to inform the IESO.
 - c) Call to inform the IESO promptly. Coordination through the IESO's outage management procedure is required. \checkmark
- 3. An MP is currently scheduled for 25 MW of 30-minute operating reserve (OR). The MP is also experiencing some plant production problems that would limit your ability to provide the OR since they are unsure if the problems will last longer than 30 minutes. What is the correct response to this situation?
 - a) As long as this situation does not exceed 30 minutes, the MP can wait to let the IESO know.

b) Call the IESO immediately. Keep the IESO up-to-date as the situation unfolds. \checkmark

c) No need to let the IESO know unless the MP gets an OR activation.

- 4. An MP's entire load is non-dispatchable. The MP has received a credible sabotage threat to their facility and they will be shutting down their facility resulting in a sudden load loss of 35 MW. Should the MP call the IESO about this?
 - a) No, this is a local problem within the MP's facility.
 - b) No, since this causes a load loss of only 35 MW
 - c) Yes. The IESO encourages communication of unusual events that could become bigger issues affecting grid reliability, public safety, equipment or the environment. \checkmark
- 5. There has been a contingency on the grid and an MP's facility has lost all potential. The MP has no environmental, safety or equipment concerns. They wish to know what happened and how long it will be before power is restored. When the MP calls the IESO, they get a recorded message. What should the MP do next?
 - a) Elevate the MP's priority in the IESO's telephone queue to find out when the power will be restored.
 - b) Leave a detailed message, and implement the MP's independent control actions in preparation for the IESO's phone call. \checkmark
 - c) Keep calling and leave as many messages as it takes.
 - d) Keep calling until the MP speaks with an IESO operator.
- 6. It is a normal day of reduced production at an MP's facility. The MP does not have any energy bids or operating reserve offers in the market. The MP receives a recorded message from the IESO control room requesting that they reduce their demand by 4% in 10 minutes. How should the MP respond?
 - a) Call the IESO back immediately at the number that was given to the MP on the recorded message and verify that it is not a simulated exercise.
 - b) Call the IESO back at the number provided on the recorded message and request an explanation.
 - c) Begin implementing the demand reduction, then call the IESO back at the number provided on the recorded message with an estimated MW reduction that the MP will achieve. $\sqrt{}$
 - d) Look for a system status report for verification of an emergency condition and call the IESO back at the number provided on the recorded message.
 - e) Contact the MP's management staff and call the IESO back once the MP has contacted them to initiate a conference with the IESO.

7. An MP is experiencing fluctuating incoming voltages. The MP suspects it is caused by the neighbouring generation facility. Who does the MP call for more information about the cause?

- a) The MP's transmitter
- b) The IESO $\sqrt{}$
- c) The MP's local distribution company
- d) The neighbouring generation facility
- 8. An MP has submitted a revised bid within the mandatory window. The MP does not need to call the IESO for approval.
 - a) True
 - b) False √
- 9. When is the grid considered to be in abnormal conditions? (Choose all that apply.)
 - a) When the IESO has formally declared an emergency and posted a system status report. \checkmark
 - b) When primary demand forecast adjustments are required due to revised weather forecasts.
 - c) When there is lightning activity in a local area of southern Ontario.
 - d) When system contingencies or unusual equipment behaviour threaten the reliability of the grid. \checkmark
- 10. An MP has been dispatched to reduce their energy consumption even though their energy bid is much higher than the 5-minute locational marginal price. The MP does not have reserve offers in the system at this time. They suspect that this is not a legitimate dispatch instruction based on their economic bids. What should the MP do?
 - a) Wait for a few more dispatches to see if the situation will correct itself.
 - b) Call the IESO control room operator to verify the instruction is legitimate before following the dispatch instruction.
 - c) Accept the dispatch instruction and follow the target immediately. \checkmark

8. Summary

In summary:

- MPs are encouraged to contact the IESO any time they have something relevant to inform
- MPs' timely communication during normal and abnormal conditions allows for more options
- Be aware of the types of situations that require MPs to call the IESO promptly
- MPs' participation in conference calls is an important part of a prompt recovery plan
- Provide the IESO with key information following contingent events
- The IESO may request MPs to initiate a control action during abnormal operating conditions

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