Business Process

BP_SO_3.1 Manage Events Impacting Scheduling & Dispatch

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EIRGRID SONI

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1 ASSUMPTIONS

Assumptions made during the design of this process include:

- This is an all-island business process, meaning the same process will be used across both jurisdictions on the island, Ireland and Northern Ireland. It can conducted by the relevant team in either Dublin or Belfast;
- The following business processes addresses all requirements, including roles, tools, and activities that will enable the TSO to achieve scheduling objectives; and
- All required systems, including MMS are in place. They offer all required functionalities to support business needs.

2 PROCESS REFERENCES

2.1 RELATED RULES REFERENCES

The following table provides references to the documents that govern the design of this business process.

Document Title	Relevant Section	Description
SONI Grid Code	SDC1 Scheduling and Dispatch Code No. 1 & 2	The SONI Grid Code sets out the principles governing SONI's relationship with users and technical standards to be complied with by SONI and users. The Code specifies procedures for planning, connecting to and operating the transmission system during both normal and exceptional circumstances.
EirGrid Grid Code	SDC1 Scheduling and Dispatch Code No. 1 & 2	The EirGrid Grid Code sets out the principles governing EirGrid's relationship with users and technical standards to be complied with by EirGrid and users. The Code specifies procedures for planning, connecting to and operating the transmission system during both normal and exceptional circumstances.

2.2 RELATED DOCUMENTS

The following table provides a list of documents that are related to this business process.

Document Title	Relationship	Description
Balancing Market Principles Statement	Information	Public guide to the scheduling and dispatch process.
MMS User Guide	System guide	ABB MMS OUI User Guide.
BP_SO_3.2 Issue Dispatch Instructions	Output of this process	Process document outlines how dispatch instructions are issued automatically and manually via EDIL. There may be a requirement as part of this process to issue an instruction manually via EDIL.

3 PROCESS CONTEXT

3.1 BUSINESS MODEL RELATIONSHIP

The ‘Manage Events impacting Scheduling & Dispatch’ process sits within ‘Dispatch’ process group within the Systems Operator processes. Dispatch is the process of balancing supply and demand in real-time. In general this happens after gate closure. Given the final PNs and the actual status of units, the dispatch process modifies the output of units in accordance with inc/dec offers to ensure system balance while meeting all the security constraints and maximising the output from priority units.

The scheduling processes which look at the positioning of available resources to enable the system to be securely dispatched are a key input into this process. The Perform Long Term and Short Term Scheduling processes will generate indicative schedules which will then be refined in the dispatch process.

3.2 BACKGROUND AND SCOPE

The ‘Manage Events Impacting the Scheduling and Dispatch Process deals with unscheduled or unplanned events, such as:

- an unplanned unit / interconnector availability change
- a forced transmission outage impacting production / consumption
- an event causing an unexpected deviation in demand or renewable generation

In the event of any of the above occurring this process outlines the actions that the TSO needs to take in immediate response to the event to ensure continued security of supply, it also covers any subsequent actions that may be required once the event has been dealt with.

Not within the scope of this process is the management of changes to planned outages that have been included within in the Committed Outage Programme, which is a programme of Outages of the Generator’s Generation Units and of Interconnectors prepared by the TSO covering year 1. Also falling outside the scope of this process are Interconnector Trips, which are dealt with as part of the ‘Interconnector Trips’ process.

4 PROCESS OBJECTIVE

The objective of this Business Process is to meet the following obligations under the EirGrid and SONI Grid Code, namely:

- SDC1 Scheduling and Dispatch Code No.1
- SDC2 Scheduling and Dispatch Code No.2

5 ROLES AND RESPONSIBILITIES

5.1.1 REAL TIME

The following table provides a summary of the obligations of Real Time relating to 'Manage Events Impacting Scheduling & Dispatch:

Team Name	Responsibility in relation to process	Timeline Associated
Real Time (Process Owner)	• Identify if any events occur/receive notification of events which may impact supply and identify immediate resolutions.	As events occur

5.1.2 MARKET PARTICIPANT

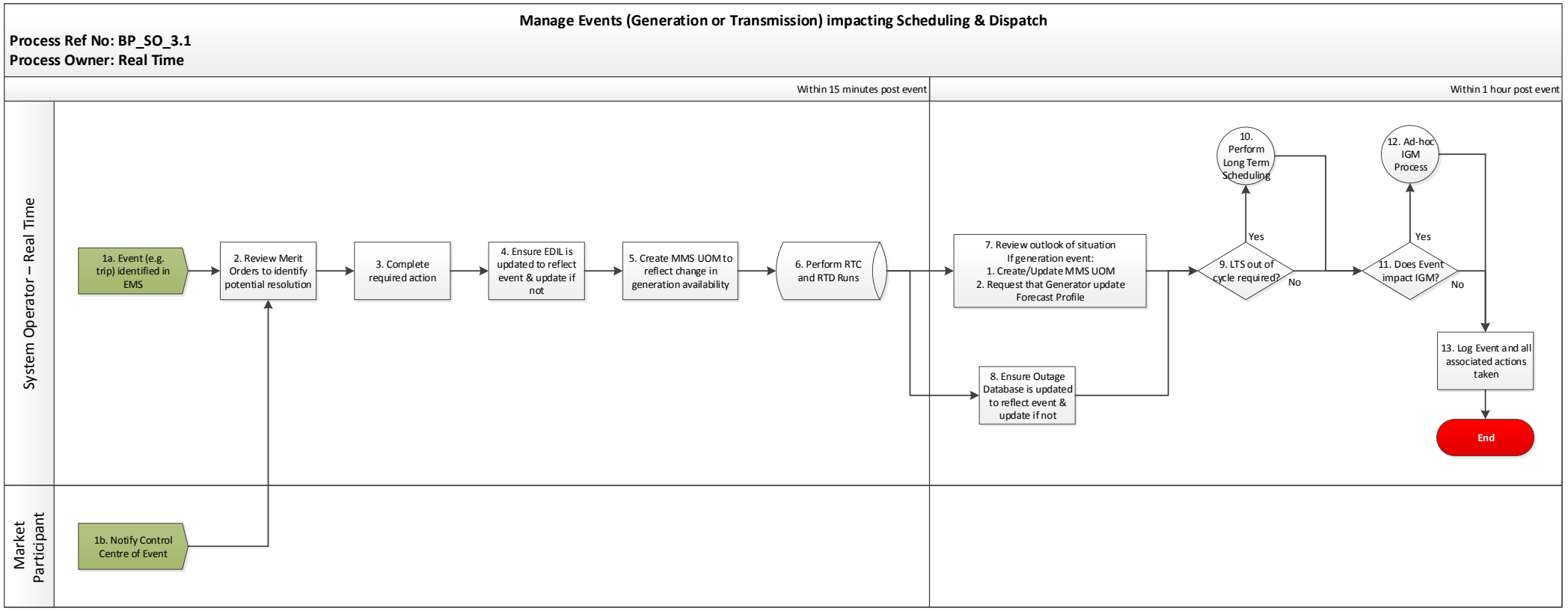
The following table provides a summary of the obligations of Market Participants relating to 'Manage Events Impacting Scheduling and Dispatch':

Team Name	Responsibility in relation to process	Timeline Associated
Market Participant	• Notify Control Centre if they experience a significant event	As close to the time of event as possible

6 PROCESS DESCRIPTION

6.1 LEVEL 3 PROCESS

6.1.1 PROCESS MAP



6.1.2 PROCESS STEPS

#	Step	Step Description	Responsible Role	Outputs	Indicative Timing/ Frequency	System
1	Event identified in EMS Or Notify Control Centre of Event	This process has 2 potential triggers: 1. An Operator may see the availability of a unit unexpectedly drop. 2. By a Market Participant notifying the Control Centre (either by phone or email) that they have had significant system incident or a forced outage which will cause them to declare a reduced availability or reserve provision. Where possible the Market Participant should provide as much detail relating to the event as possible, including the expected duration their availability will be affected. If they cannot provide this information to do so initially they should provide at their earliest opportunity thereafter.	Real Time User Or Market Participant	Alarm Notification	As required	EMS Or Phone/ Email
2	Review Merit Orders to identify potential resolution	Review the Online Merit Order to identify the most secure and economic alternative to replace the lost availability on the system. The Online Merit Order will show price stacks based on inc/dec costs and availability MW for generating units or demand side units for the current time. A 'Short Notice Offline Merit Order' will also be available, which will show inc costs and availability from offline generator units and demand-side units that can deliver MW within a certain time. The list will be sorted based on the cost per MWh, taking into account Inc break points with the lowest cost first.	Real Time User	N/A	As required	MMS

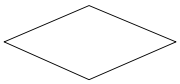
#	Step	Step Description	Responsible Role	Outputs	Indicative Timing/ Frequency	System
		Tie line flows must be considered when dispatching plant using the merit orders. An event in one jurisdiction may require units in that area to resolve the problem requiring out of merit running.				
3	Complete required action	From the Online Merit Order/Short Notice Offline Merit Order, users will be able to select one or a group of Generator Units they wish to dispatch. After selecting the units, a running total of the selected Units prior to confirmation (based on the Maximum Availability of each selected Unit) will be provided. Once confirmed, the EDIL Quick Code Dispatch Instructions for the selected units will be created to dispatch to the maximum availability and then issued to EDIL).	Real Time User	DI issued	As required	MMS
4	Ensure EDIL is updated to reflect event & update if not	Real Time User should perform a check in EDIL to ensure that (if they are dealing with Generator who has experienced an event reducing their availability) the Generator/ Market Participant has declared the latest availability (as per their notification) correctly in EDIL. There may be occasions, particularly if the Generator is dealing with a trip that they have not updated the availability in EDIL correctly and be reflecting their availability as if there had been no trip. If this is the case the Real Time User should update their availability in EDIL on their behalf to reflect the reality of their current situation. Real Timer User to consider creating a constraint within Unit Override Management (UOM) in the MMS.	Real Time User	EDIL Declaration corrected	As required	EDIL/MMS

#	Step	Step Description	Responsible Role	Outputs	Indicative Timing/ Frequency	System
5	Create MMS UOM to reflect change in generation availability	Real Time User to consider creating a constraint in MMS using Unit Override Management (UOM). This change in availability will be reflected in imminent schedules.	Real Time User	N/A	As required	MMS
6	Perform RTC/RTD Run (system step – scheduled to run every 15 mins)	The system will automatically run the RTC (Real Time Commitment) and RTD (Real Time Dispatch) scheduling runs, as it will be configured to run these runs every 15 minutes and 5 minutes respectively.	N/A- System Step	Advisory Schedule and updated COP	As required	MMS
7	Review outlook of situation and create MMS UOM if required.	Review the outlook of the situation to understand how big of an incident it is. If this has been a generation event discuss the outlook of unit with Generator to understand how big of an incident it is and how long the unit is likely to be out for. If Generator is remaining out for a substantial period, create an associated constraint within Unit Override Management (UOM) in the MMS. Check that Generator has updated Market Information with resultant forecast profile.	Real Time User	N/A	As required	Phone/MMS
8	Ensure Outage Database is updated to reflect event & update if not	For a transmission event, the Real Time User should refer to the Outage Database to ensure it has been updated to reflect the event.	Real Time User	Outage database updated	As required	Outage Database
9	LTS out of cycle required?	If the unit is likely to be out of for significant period then an LTS (Long Term Scheduling Run) run may be required out of cycle to identify a new schedule reflecting the current system conditions.	Real Time User	N/A	As required	N/A

#	Step	Step Description	Responsible Role	Outputs	Indicative Timing/ Frequency	System
		If yes go to step 10, if no go to step 11.				
10	Perform Long Term Scheduling (LTS Run)	Once the issue has been dealt with and system security restored, an ad-hoc LTS run should be initiated by the User to ensure that the indicative schedules generated from it reflect the impact of the event. This will trigger the 'Perform LTS Run'.	Real Time User	LTS run – Advisory Schedule and updated COP	As required	MMS
11	Does Event impact IGM?	Once notification of an event has been received by the Real Time User, Near Time need to assess whether the event has an impact on the Individual Grid Model which is used for the Cross Zonal Capacity Calculation and if it requires for the IGM to be generated again for the D-2/ D-1 timeframes. If it does impact the IGM, go to step 12. If it does not impact the IGM, go to step 13.	Near Time User	N/A	As required	N/A
12	Ad-hoc IGM Process	The ad-hoc IGM process is triggered if there is a requirement to regenerate the IGM for the purposes of the Cross Zonal Capacity calculation.	Real Time User/ Near Time User	Ad-hoc IGM created	As required	IGM Generator
13	Log Event and all associated actions taken	All details of the event and associated actions taken as a result of the event should be logged in the All-Island Control Centre Log. Process ends.	Real Time User	N/A	As required	All Island Control Centre Log

7 APPENDICES

7.1 PROCESS FLOWCHART KEY

FLOWCHART KEY	
	Trigger
	Process step
	Process decision / question
	Reference to another process
	Another business process to be implemented following current step (current step is a trigger for another process)
	Process end
	System (automatic step)