REQUIREMENTS

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Outage Management Replacement Project Phase 1 Functional Requirements

Draft - Issue 1.0

This document details the functional requirements of phase 1 of the Outage Management Replacement Project

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Related Documents

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Distribution List

Name	Organization

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List of Figures

None.

List of Tables

None.

Table of Changes

Reference (Section and Paragraph)	Description of Change

1.   Introduction

1.1   Purpose

1   This document defines the functional requirements for the first phase of the Outage
Management Replacement (OMR) project. Phase 1 of the OMR project is to provide users with
the ability to submit outage requests via an electronic outage request form.

1.2   Scope

2   The in-scope items for phase 1 of the OMR project are as follows:

3   Provide you with the ability to submit outage requests via an electronic form. The electronic
outage request form shall be designed so that it is similar to the existing outage request form
IMO-FORM-1360.

4   Provide the necessary business logic in the electronic outage request form to improve the data
entry process.

5   Phase 1 of the OMR project will use the existing IOMS database to receive and store outage
data submitted via the electronic form.

6   The IESO portal shall be used to authenticate users and to provide a secure environment to
submit outage requests.

1.3   Who Should Read This Document

7   This document is for the use of business and/or systems analysts in preparing specifications for
the OMR project.

8   This document will also be used to communicate the scope of the project to the Steering
Committee and as such will be modified if the scope changes throughout the project.

9   In this document, 'you' and 'your' refer to market participants (i.e. external users), while 'we',
'us' and 'our' refer to the IESO.

- End of Section -

2.   Outage Process

10   Under the market rules, you are required to report any changes to the normal status of your equipment that would affect the reliability of the IESO controlled grid (ICG). Refer to Market Manual 7.3, Appendix B for outage reporting requirements. For the purpose of this document, these changes will be referred to as outages.

3. Functional Overview

3.1 OMR Phase 1 – Electronic Outage Request Form

3.1.1 Purpose

11 The electronic outage request form will be developed for the purpose of automating the transfer of outage information to the existing IOMS system.

3.1.2 User Groups

12 The outage submission electronic form is designed for external participants, thus the only users expected to interact with it are market participants.

3.1.3 Design

13 We will design the new electronic form so that it provides a similar look and feel as the existing Outage Request form (IMO-FORM-1360). The new electronic form will allow you to submit outage data more efficiently, consistent with what is expected in using an electronic submittal process.

14 It should be noted that there are some market participants that have developed their own outage systems that use the existing API to submit outage data. This capability will remain in place, and will not be enhanced in this phase of the project.

15 Screen mock-ups and field descriptions are included in the appendix.

3.1.4   Functions

16   You will be able to use the electronic form to create, submit and update outage information, within the IOMS, based on permissions.

17   You will have the ability to view a summary report of your outage submissions.

18   You will have the ability to search from amongst your submitted outages based upon search criteria that you can specify. To increase efficiency, the search operation might potentially only retrieve a specific number of outages with any given query.

19   When submitting outages, you will choose equipment from a pre-defined list stored within IOMS. This will allow us to more easily maintain the IOMS equipment list.

20   We will maximise the number of outage properties that are explicitly defined via pick lists in order to minimize input data errors, facilitate error checking, standardize the data, and to facilitate automated tasks.

21   The electronic form shall report data validity errors to you.

22   Any outages that you might continue to submit via fax or e-mail (for example, in an emergency if the Portal was not available) will not be accessible through any of the functions added through Phase 1 of the OMR project.

3.1.5   Rules

Planned Outages

Draft

Form behavior

23   The "confirm on submission" check-box is only available (and defaulted to checked) when the outage start date is less than 33 calendar days from commencement.

User actions

24   Save draft: Saves the outage request in a "draft" format before it has been submitted, creating a "Draft ID" on the request. No validations are performed.

25   Submit: Submits the outage request to IOMS following data validation. This action replaces the "Draft ID" (if present) with an "Outage ID". If the "confirm on submission" box is checked, request is placed in **confirmed** state; otherwise, it is placed in the **unconfirmed** state.

26   Delete: A user is able to delete a draft which had previously been saved, but not submitted to IOMS.

Unconfirmed / confirmed

Form behavior

27   The "confirm on submission" check-box is only available (and defaulted to 'checked') when the outage start date is less than 33 calendar days out and the outage is in the **unconfirmed** state

User actions

28   Submit: Submits the outage request to IOMS following data validation. On submission, a previously assigned timestamp can potentially be overridden with a new timestamp as described in Chapter 5, section 6.4.13-6.4.18 of the Market Rules.

29   Cancel: Cancels the outage

Rejected

User actions

30   Force: Sets the outage type to forced

31   Cancel: Cancels the outage

Advance Approved

User actions

32   Cancel: Cancels the outage

Revoked

User actions

33   Force: Sets the outage type to forced

34   Cancel: Cancels the outage

Final Approved

User actions

35   Request planned extension: Creates a new draft based on the current request, with the start time of the new request set to the end time of the current request and the comments pre-filled with the text "Extension to outage #", with # being the ID of the current outage.

36   Add forced extension: The user is able to submit a new end time and the outage type is set to forced.

Forced outages

Draft

User actions

37   Save draft: Saves the outage request in a "draft" format before it has been submitted, creating a "Draft ID" on the request. No validations are performed.

38   Submit: Submits the outage request to IOMS following data validation. This action replaces the "Draft ID" (if present) with an "Outage ID".

39   Delete: A user is able to delete a draft which had previously been saved, but not submitted to IOMS.

Forced Pending

40   Submit: Resubmits the outage request to IOMS following data validation

41   Cancel: Cancels the outage

Forced In-progress

42   Submit: Resubmits the outage request to IOMS following data validation

3.2   Documentation

43   A user manual shall be produced.

44   A process document shall be produced.

3.3   General Requirements

45   Regular database maintenance functions shall not affect the performance of the OMR Phase 1
      functions.

46   All user interfaces shall be integrated into the IESO web portal.

47   All times are in EST.

48   Upgrades shall be done with minimal interruptions to the users.

- End of Section -

4.   Availability and Reliability

4.1   Availability

49   The OMR electronic form shall be available 24 hours a day, seven days a week, 365 days a year 99.95% of the time, excluding planned outages to the system (or, the OMR electronic form shall be unavailable no more than about 4 hours per year as a result of unplanned outages).

4.2   Reliability

50   There should be no more than 4 service breaks (or unplanned outages) that exceed 30 minutes per year.

4.3   Security

51   Only authorized users of the OMR will be able to use the system. Users will be authenticated through the IESO Identity Management System.

52   All data transmitted on the public internet and will not be encrypted.

53   The functions delivered by the OMR project shall conform to the IESO security standards which includes user authentication for each individual user. Each user will be required to use their account and password.

- End of Section -

5. Appendix

5.1 Request Screen

Outage request screen mock-up

5.1.1   Field descriptions

Single Point of Contact

Organization

The organization this outage request pertains to. This is a drop-down field for all market participants the user is eligible to submit on behalf of.

Contact

The name of the contact person, defaults to the user who creates the request, but can be overridden.

Phone

The phone # of the contact person, defaults to the user who creates the request, but can be overridden.

Fax

The fax # of the contact person, defaults to the user who creates the request, but can be overridden.

eMail

The eMail of the contact person, defaults to the user who creates the request, but can be overridden.

Submitter

The user who *last* submitted the form.

Outage Request

Draft ID

The id for this draft outage request. This field is only generated on an outage request being saved as a draft.

Outage ID

The record id of any request following its submission to IOMS. This field replaces any assigned Draft ID.

Status

The state of the outage (draft, submitted, confirmed etc.).

Submit date/time

When the outage was last submitted.

Last saved

When the outage was last saved (all user-initiated state changes are considered to be saves as well).

Type

Planned, forced, test or information.

Purpose

A brief description of the outage (also used for searching later).

Start date/time

When the outage is proposed to start.

End date/time

When the outage is proposed to end.

Cycle

Daily or continuous.

Includes weekends

Whether the outage duration is to include weekends or not.

Cancellation ($)

Cost to cancel the outage.

Deferral ($/hr)

Hourly cost to defer the outage.

Recall ($)

Cost to recall the outage.

Cost comments

Justification/comments for costs provided.

MP comments

Any comments the MP has regarding the outage. This section is to be used to provide the IESO with any pertinent information that will assist the IESO in performing an assessment. The IESO cannot edit this field. Refer to Market Manual 7.3, section 1.3.5.1 for details.

IESO comments

Any *notification* comments the IESO has made regarding this outage. This data will need to be pulled from IOMS when the form is loaded - MPs cannot edit this field

Equipment Condition Plans

Station

Informational, used in conjunction with eqp. type to help select a piece of equipment.

Eqp. type

Informational, used in conjunction with station to help select a piece of equipment.

Equipment

The equipment this ECP is referring to; only selectable after station and eqp. type have been selected.

Protection only?

Yes/no if only the protection sections of the equipment are relevant to the ECP.

Eqp. Information

Any relevant information for the equipment selected, this includes:

> Second station (lines only)
>
> Voltage
>
> MW Max Cap. (generators only)
>
> MX Max Cap. (generators only)

Can be recalled?

Yes/no if this ECP can be recalled.

Recall time

Number and units (minutes, hours or days).

Type

Derating, outage, in-service or hold-off.

Derate to MW

MW derating (always 0 for outages).

Derate to MX in

MX in derating.

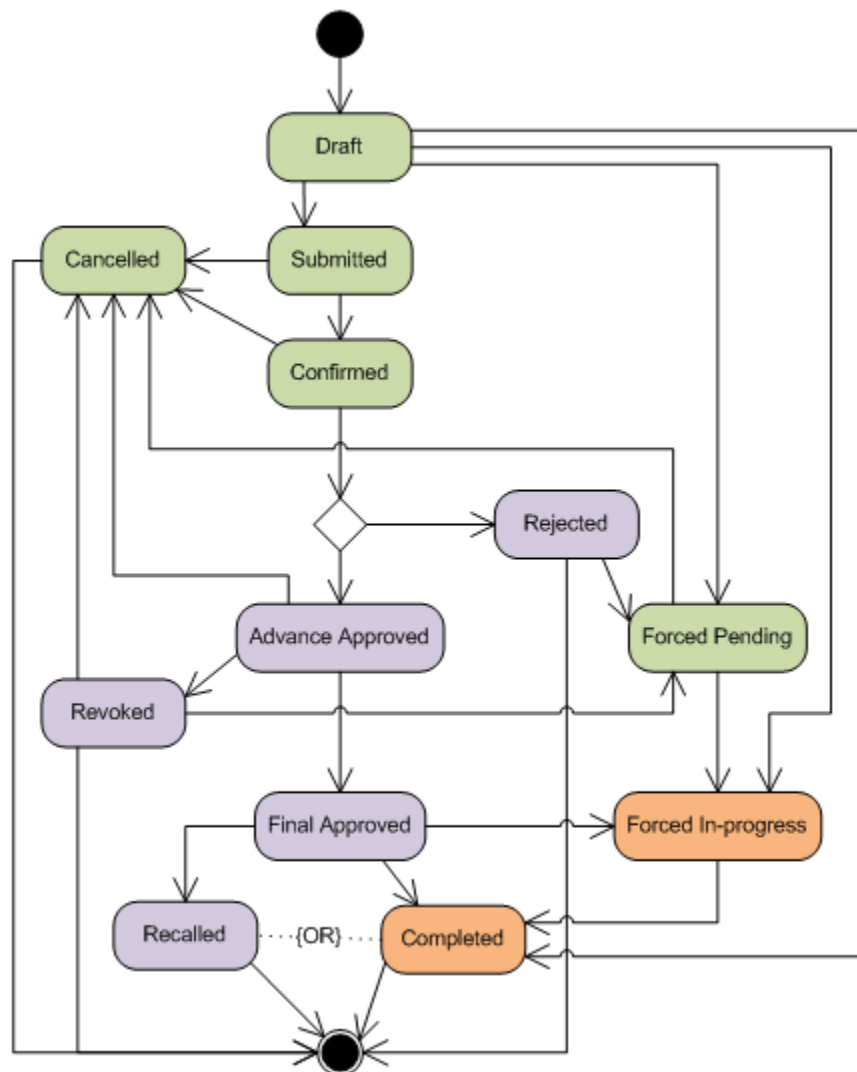### Derate to MX out

MX out derating.

5.2   Search Screen

The outage search screen mock-up

5.2.1   Field detail

- All fields, with the exception of the "Status" (either "Draft" or "Submitted") are optional.

- The Equipment column of the search results contains a bulleted list of the equipment which is contained in the outage request.

5.3   Outage request state-flow

*Request state-flow: green is an MP-driven state, purple is an IESO-driven state
and orange is dependent on the preceding state*

5.4   Request type - ECP type matrix

Below is a matrix of which ECP types are available for each outage request type.

Request / ECP	Outage	Derate	In-service	Hold-off
Planned	✔	✔	✔	✔
Forced	✔	✔	✔	✔
Test	✖	✔	✔	✖
Information	✖	✖	✔	✖

6.   References

Document Name	Document ID

– End of Document –