



## Operating Code OC2 – Operational Planning

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## Operating Code OC2 – Operational Planning

### OC2.1 Introduction

Operating Code OC2, Operational Planning is concerned with the;

- provision of data by Users to OETC for Operational Planning purposes
- procedures relating to the coordination of Outages for construction, repair and maintenance of Plant on the Transmission System.

Code OC2 covers planning procedures through various timescales for matching Capacity with forecast Demand plus Operating Margin on the Total System. The procedures coordinate Outages of CDGensets and Outages of and constraints on parts of the Transmission System and of the Distribution System to achieve, so far as possible, the Transmission Security Standards.

The Code sets out the data required by OETC from Power Producers in order to conduct the Operational Planning process, and the procedures to be adopted by OETC in the planning and coordination of Outages of CDGensets and of the Transmission System.

### OC2.2 Objective

The objective of this code is to ensure, as far as possible, that OETC co-ordinates and approves Outages of CDGensets, taking into account Demand forecasts, desalination requirements, Transmission System Outages and Distribution System Outages in order to minimise the overall costs of Total System Operation and in order to ensure that forecast Demand plus the Operating Margin is met in accordance with the Transmission Security Standards.

### OC2.3 Scope

In addition to OETC and PWP, OC2 applies to;

- Power Producers;
- Licensed Distributors;
- Directly Connected Consumers;
- International Interconnected Parties;
- Internally Interconnected Parties;
- PAEW; and
- RAEC if Connected to the Total System.

### OC2.4 Procedures

The procedures in this code cover details of the data required and the time at which the data needs to be provided to OETC to allow co-ordination of Outages. An overall timetable for the Operational Planning process is presented in Appendix A.

## **OC2.5 Planning of CDGenset Outages**

The procedure set out below is to be followed in each Operational Year.

OETC will indicate to each Production Facility criteria on which the Proposed Station Outage Schedules should be submitted. The format of the submission is shown in Appendix B.

### **OC2.5.1 Planning for Operational Year 2**

#### **(i) By the end of January**

Each Power Producer will provide to OETC and PWP a Proposed Station Outage Schedule for Operational Year 2 in writing, which will contain the following information in relation to each proposed Planned Outage;

- (a) identity of the CDGensets concerned
- (b) MW concerned (ie MW which will not be Available as a result of the Outage and that which will, notwithstanding the Outage, still be Available,)
- (c) required duration of Outage
- (d) preferred start date and start time or range of start dates and start times
- (e) whether the Outage is a Flexible Outage or an Inflexible Outage, provided that the Power Producer must not declare an Outage to be an Inflexible Outage unless prudent operating practice would not permit the Outage to be declared as a Flexible Outage
- (f) If it is a Flexible Outage, if;
  - the period for which the Outage could be deferred at the request of OETC, which period shall not be less than 30 days in length;
  - the period for which the Outage could be advanced at the request of OETC, which period shall be not less than 10 days in length.

In relation to sub-paragraph (e) above, the Power Producer must provide OETC with such evidence as it may reasonably require in order to substantiate the declaration as an Inflexible Outage and, if the Power Producer fails to establish to OETC's reasonable satisfaction that the Outage is required to be an Inflexible Outage, the Outage shall be deemed to have been submitted as a Flexible Outage with an attendant Flexible Outage period of 10 days for advancement and 30 days for deferral.

#### **(ii) Between the end of January and the end of July**

For each week of Operational Year 2, OETC will forecast the maximum Capacity that may be required from CDGensets, taking into account insofar as OETC may consider appropriate;

- Demand forecasts
- OETC estimate of Demand Control
- the Operating Margin as set by OETC
- Transmission System and Distribution System constraints
- Transmission System and Distribution System Outages
- Transmission System losses



During this period OETC may, as appropriate, contact each User which has supplied information to seek clarification of information received or such additional relevant information as is reasonable.

OETC will on the basis of (i) the maximum Generating Capacity required each week (ii) the Proposed Station Outage Schedules and (iii) the total Available Capacity develop a Proposed System Outage Schedule.

**(iii) By the end of July**

OETC will, having taken into account the information notified to it and, having discussed it with Users and PWP, if appropriate, provide PWP, each Power Producer and User in writing with the Proposed System Outage Schedule showing the CDGensets that may be potentially withdrawn from service during each week of Operational Year 2 for a Planned Outage and showing the Flexible Outage periods, by way of amendment to, or confirmation of, the suggested Proposed Station Outage Schedule submitted by the Power Producers.

The Proposed System Outage Schedule may have deviations from the Proposed Station Outage Schedules as Flexible Outages and Inflexible Outages may have been moved to co-ordinate all Outage proposals received by OETC, or for reasons relating to the proper Operation of the Transmission System. OETC will give priority to facilitate proposed Inflexible Outages.

In addition, where in the opinion of OETC the Transmission Security Standards could not otherwise be met, OETC may request Users;

- to re-designate an Inflexible Outage proposed by the Power Producer to be a Flexible Outage
- to exclude a Flexible Outage or an Inflexible Outage from the Proposed System Outage Schedule.

**(iv) By the end of August**

Where a Power Producer, a User or PWP objects to the Proposed System Outage Schedule, it may contact OETC to explain its concerns. OETC, PWP, and that Power Producer or User will then discuss the problem and seek to resolve it.

OETC may need to convene meetings with PWP, other Power Producers or Users and joint meetings of the parties to resolve the problem. PWP, Power Producers or Users that notify OETC of objections may request that such a meeting be convened and OETC will give due and reasonable consideration to such request.

In the event of the above discussions not producing agreement, OETC will determine the Proposed System Outage Schedule by the end of September. However, the affected party, if dissatisfied, may raise the issue as a point of principle with the Regulatory Authority without prejudice to the OETC decision.

**OC2.5.2 Planning for Operational Year 1**

The Proposed System Outage Schedule will form the basis for developing the Final System Outage Schedule when on the first of April; Operational Year 2 becomes Operational Year 1.

**(i) By the end of January**

Each Power Producer shall provide OETC and PWP with its suggested Final Station Outage Schedule in writing (showing any amendments to the Proposed System Outage Schedule).

The Final Station Outage Schedule provided by the Power Producer will reflect only changes to the Proposed System Outage Schedule if the Power Producer has had to respond to changed circumstances. The Power Producer will have to provide sufficient evidence of such changed circumstances.

The Final Station Outage Schedule will contain the following information in relation to each proposed Planned Outage;

- (a) identity of the CDGensets concerned
- (b) MW concerned (ie MW which will not be Available as a result of the Outage and that which will, notwithstanding the Outage, still be Available,)
- (c) whether the Outage is a Flexible Outage or an Inflexible Outage
- (d) start date and start time
- (e) if it is a Flexible Outage;
  - the period for which the Outage could be deferred at the request of OETC, which period shall be not less than 30 days in length
  - the period for which the Outage could be advanced at the request of OETC, which period shall be not less than 10 days in length.

The Power Producer must provide OETC with such evidence as it may reasonably require in order to substantiate the declaration as an Inflexible Outage and, if the Power Producer fails to establish to OETC's reasonable satisfaction that the Outage is required to be an Inflexible Outage, the Outage shall be deemed to have been submitted as a Flexible Outage with an attendant Flexible Outage period of 10 days for advancement and 30 days for deferment.

**(ii) By the end of June**

OETC will have considered the Final Station Outage Schedule taking into account the following factors insofar as OETC may consider appropriate;

- Demand forecasts
- OETC estimate of Demand Control
- the Operating Margin as set by OETC
- Transmission System and Distribution System constraints
- Transmission System and Distribution System Outages
- Transmission System losses

OETC will provide to PWP, each Power Producer and User a draft Final System Outage Schedule in writing, showing the CDGensets which it is proposed to be withdrawn from service during each week of Operational Year 1 for a Planned Outage and showing Flexible Outage periods, by way of amendment to, or confirmation of, the Final Station Outage Schedule submitted by the Power Producer.



The draft Final System Outage Schedule may differ from the Final Station Outage Schedule as follows;

- Flexible Outages (and associated Flexible Outage periods) may have been moved to co-ordinate all Outage proposals received by OETC or generally for reasons relating to the Operation of the Transmission System; or
- a Flexible Outage may have been re-designated as an Inflexible Outage.

In addition, where in the opinion of OETC the Transmission Security Standards could not otherwise be met, OETC may, by giving to the Power Producer and PWP a written notice request;

- that a Flexible Outage or an Inflexible Outage which was shown in the Proposed System Outage Schedule or is newly requested by the Power Producer be excluded from the Final System Outage Schedule; or
- that an Inflexible Outage which was shown in the Proposed System Outage Schedule, be re-designated as a Flexible Outage, or that its start date be moved.

### **(iii) By the end of July**

Where a Power Producer, a User or PWP objects to the Final System Outage Schedule, it may contact OETC to explain its concerns. OETC, PWP, and that Power Producer or User will then discuss the problem and seek to resolve it.

OETC may need to convene meetings with PWP, other Power Producers or Users and joint meetings of the parties to resolve the problem. PWP, Power Producers or Users that notify OETC of objections may request that such a meeting be convened and OETC will give due and reasonable consideration to such request.

In the event of the above discussions not producing agreement, OETC will determine the Proposed System Outage Schedule by the end of September. However, the affected party, if dissatisfied, may raise the issue as a point of principle with the Regulatory Authority without prejudice to the OETC decision.

### **(iv) By the end of September**

OETC will have considered the Final System Outage Schedule in the light of the factors set out in subsection OC2.5.2 (ii) (including the requirement for the Operating Margin to be met, and in particular during the period of Minimum Demand) together with any issues agreed with Power Producers in subsection OC2.5.2 (iii).

OETC shall issue to each Power Producer, User and PWP the Final System Outage Schedule showing

- (a) the CDGensets that will be withdrawn from service during each week of Operational Year 1 for a Planned Outage, and
- (b) the Flexible Outage periods.

### **OC2.5.3 Planning for Operational Year 0**

Throughout each Operational Year and from end of January of the preceding Operational Year OETC will monitor the Operating Margin continuously in the light of any movement of Planned Outages, the incidence of Outages other than Planned Outages and the requirement for Operating Margin including at times of Minimum Demand and taking into account the following factors insofar as OETC may consider appropriate the factors specified in subsection OC2.5.1 (ii), namely;



- Demand forecasts;
- OETC estimate of Demand Control;
- the Operating Margin as set by OETC;
- System and Distribution System constraints;
- Transmission System and Distribution System Outages; and
- Transmission System losses.

#### **(i) Flexible Outage movements**

In the case of a Flexible Outage, OETC may, upon giving a Power Producer and PWP written notice of not less than 7 days require the start date or start time of the Flexible Outage to be advanced or deferred within the Flexible Outage period the Power Producer will take that Outage in accordance with the revised timing set out in that notice.

#### **(ii) Amendments to Planned Outages**

In the cases of;

- a Flexible Outage which OETC would like to move outside the Flexible Outage period
- a Flexible Outage which OETC would like to move within the Flexible Outage Period at less than seven days notice
- an Inflexible Outage which OETC would like to move.

OETC may, upon giving a Power Producer and PWP written notice, request that the start date or start time of a Planned Outage be advanced or deferred.

If the Power Producer agrees to such advancement or deferral, or OETC and the Power Producer agree to some other advancement or deferral, the Power Producer will take the Outage in accordance with OETC's requirements.

If there is no agreement, then the Outage will not be taken by the Power Producer.

#### **(iii) CDGenset substitution**

A Power Producer may, on reasonable grounds, by notice submitted to OETC in writing and PWP at any time during Operational Year 0, request that a CDGenset for which there is a Flexible Outage, as specified in the Final System Outage Programme, remain in service and that one of the other CDGensets at the same Production Facility (having substantially the same Capacity and Operating Parameters) be permitted to be taken out of service during the period for which such Flexible Outage has been Planned. OETC shall not unreasonably withhold its consent to such substitution and, if OETC does consent, the Final System Outage Programme shall be amended and the Power Producer shall be entitled to take the Outage accordingly.

#### **(iv) Short Notice Outages**

At any time in Operational Year 0, a Power Producer may request from OETC, a Short Notice Outage, by giving not less than 48 hours notice before the earliest start date. The request notice must contain the following information;

- identity of the CDGenset(s) concerned;



- full details of the problem and the effect of the Short Notice Outage on the Operating Parameters and the equipment which is affected;
- the expected date and start time of the Short Notice Outage;
- the estimated date and time on which the CDGenset and/or Desalination Unit and/or the Plant is expected to return to commercial Operation; and
- full details of any restrictions or risk of trip of a CDGenset and/or the Plant caused by the problem associated with the Short Notice Outage.

On receipt of a request notice for a Short Notice Outage, OETC shall consider the request and shall having discussed the position with the Power Producer (and Users in the case of an Embedded CDGenset), reply in writing indicating;

- acceptance of the request, confirming the requested start time and duration of the Short Notice Outage;
- proposals for the advancement or deferment of the Short Notice Outage if taken, indicating alternative start time and duration; or
- rejection of the request.

If OETC has accepted the request, the Short Notice Outage, if taken, must be taken by the Power Producer in accordance with OETC's requirements.

If OETC has indicated an alternative start time and/or duration, OETC and the Power Producer must discuss the alternative and any other options which may arise during the discussions. If agreement is reached, then the Short Notice Outage, if taken, must be taken by the Power Producer in accordance with OETC's requirements.

If OETC refuses the request or if agreement is not reached then the Short Notice Outage may not be taken by the Power Producer.

If, in respect of a particular CDGenset, OETC has rejected requests on two successive occasions, which were not less than 7 days apart, OETC may not reject a third request. However, OETC may require that such Outage, if it is to be during the Summer Period, be deferred if, in OETC's reasonable opinion, were the Short Notice Outage not to be deferred;

- the Transmission Security Standards might not be met; or
- there would otherwise be insufficient Generating Capacity to meet forecast Demand and the Operating Margin.

Any such deferral shall be for so long as the above circumstances exist, but shall not be beyond the end of the month following the end of the Summer Period.



In the event that a Short Notice Outage is scheduled pursuant to this subsection, OETC shall by notice in writing and copy to PWP confirm the details thereof within one day after the details of the Short Notice Outage have been settled. Such notice shall contain the following information;

- the identity and Capacity of the CDGenset(s) concerned;
- full details of the problem;
- maximum allowed duration of the Outage; and
- the start date and start time.

#### **OC2.5.4 Forced Outages**

In the event that a CDGenset suffers a Forced Outage, the relevant Power Producer shall immediately inform OETC (copied to PWP) by written notice and giving the Power Producer's best estimate of the date and time by which the CDGenset is likely to have been repaired and restored to its full level of availability.

A Power Producer shall following a Forced Outage and within 24hours of the commencement of the Outage, provide OETC with written notice of information and any updates to information as OETC may reasonably require, all copied to PWP. The Power Producer shall use all reasonable endeavours to ensure that the CDGenset is repaired and restored to its full level of availability as soon as possible and in accordance with Good Industry Practice.

#### **OC2.5.5 Release of CDGensets**

Power Producers may only undertake Planned Outages with OETC agreement in accordance with Outage programmes produced pursuant to this Operational Planning Code.

CDGensets must not be withdrawn for a Planned Outage or a Short Notice Outage without OETC's formal permission for such release according to the procedures set out below.

OETC's formal permission shall specify;

- the identity of the CDGenset and Capacity concerned (i.e. Capacity which will not be Available as a result of the Outage and that which will, notwithstanding the Outage, still be Available, if any);
- the duration of the Outage; and
- the start date and start time.

OETC may withhold its permission for the release of a CDGenset for a Planned Outage or a Short Notice Outage where such Outage has previously been planned in accordance with this Operational Planning Code where, in OETC's reasonable opinion (were such Outage not to be deferred);

- the Transmission Security Standards could not be met; or
- there would be insufficient Capacity to meet forecast Demand and the Operating Margin.

OETC may require the Power Producer to continue to defer such Outage for so long as the above circumstances exist.



### **OC2.5.6 Return to service and overruns**

In relation to a Planned Outage, not later than 7 days before the expiry of the Flexible Outage period or the Inflexible Outage period, the Power Producer must notify OETC and PWP either that its CDGenset is returning to service;

- (a) earlier than expected;
- (b) at the time and date expected;
- (c) later than expected; and
- (d) upon return, if it is expected to be fully Available.

Where a CDGenset is not expected to be fully Available upon its return to service, the Power Producer shall state the Active Power level at which the CDGenset is expected to be Available. In the case of a CDGenset that is capable of firing both on natural gas and on fuel oil, the Availability must be stated for each fuel.

In the case of a return from a Planned Outage earlier than expected, notice of return to service must be given as far as possible in advance of return but in any event not later than 7 days before the expiry of the Planned Outage period.

In the case of a return from a Planned Outage later than expected, notice of return to service must be given not later than 7 days before the expiry of the Planned Outage period and shall state the reason for the delay in the return of the CDGenset to service and the Power Producer's best estimate of the date and time at which the CDGenset will return to service.

A Power Producer must use all reasonable endeavours to ensure that, in respect of each Planned Outage of the its CDGensets, the Outage as included in the Final System Outage Schedule (or as moved in accordance with this code) is followed.

Before returning from any Outage other than a Planned Outage, a Power Producer must inform OETC and PWP, as far in advance as reasonably possible that its CDGenset is returning to service. The Power Producer must, in addition, provide an Availability Notice in accordance with the Scheduling and Dispatch Code 1 on the day prior to the Schedule Day on which the CDGenset is to return to service.

If at any time during an Outage the Power Producer becomes aware that its CDGenset will not be Available by the expiry of the period specified for the duration of the Outage in the Final System Outage Programme or as otherwise notified in the case of Outages other than Planned Outages, the Power Producer shall notify OETC and PWP immediately in writing stating the reason for the delay and the Power Producer's best estimate of the date and time by which the CDGenset will actually have been maintained, repaired or restored to be Available in accordance with the Scheduling and Dispatch Code.

### **OC2.6 Planning of Transmission System Outages**

The procedures set out below are to be followed in each Operational Year.

Transmission System Outages required in Operational Year 2 will be those resulting from construction or replacement works and will take due account of known requirements and the Proposed System Outage Schedule.

Transmission System Outages required in Operational Years 1 and 0 will, in addition, take into account Transmission System Outages required as a result of maintenance.

### **OC2.6.1 Planning for Operational Year 2**

OETC shall plan Transmission System Outages required in Operational Year 2 as a result of construction or replacement works taking due account of known requirements and the Proposed System Outage Schedule.

#### **(i) By the end of July**

OETC will have drawn up for OETC internal use, a draft Transmission System Outage Plan covering the period Operational Year 2. OETC will notify PWP in writing of the complete plan, and will notify each User in writing of those aspects of the draft plan which may operationally affect such User including, in particular, proposed start dates and end dates of relevant Outages of the Transmission System. OETC will indicate to PWP and Power Producers where a need may exist to place restrictions on the Scheduling and Dispatch of CDGensets to allow the security of the Transmission System to be maintained within the Transmission Security Standards.

### **OC2.6.2 Planning for Operational Year 1**

The plan produced pursuant to subsection OC2.6.1 will become the draft Transmission System Outage Plan for Operational Year 1 when on the first of April Operational Year 2 becomes Operational Year 1. OETC shall update the draft Transmission System Outage Plan and shall, in addition, take into account Outages required as a result of maintenance work.

#### **(i) By the end of July**

OETC will update the draft Transmission System Outage Plan for Operational Year 1 and will inform PWP in writing of the complete plan and will inform each User of any potential restrictions that may affect it and of any general implications for the Transmission System.

#### **(ii) By the end of August**

Where a User objects to the proposed restrictions or impact notified to it under subsection OC2.6.2 (i) above, equivalent provisions to those set out in subsection OC2.5.1 (iv) will apply, namely: the User shall contact OETC to explain its concerns. OETC, the User and any other affected party including PWP will then discuss the problem and seek to resolve it.

In the event of the above discussions not producing agreement, OETC will determine the requirements of the Transmission System Outage Schedule by the end of September. However, the affected party, if dissatisfied, may raise the issue as a point of principle with the Regulatory Authority without prejudice to the OETC decision.

#### **(iii) By the end of September**

OETC will issue the final Transmission System Outage Plan for Operational Year 1.

OETC will notify PWP in writing of the complete plan and each User in writing of those aspects of the plan which may operationally affect such User including, in particular, proposed start dates and end dates of relevant Outages of the Transmission System. OETC will also indicate where a need exists to use intertripping, emergency switching, emergency Demand management or other measures including restrictions on the Scheduling of CDGensets to allow the security of the Transmission System to be maintained within the Transmission Security Standards.



### **OC2.6.3 Operational Year 0 through to the Programming Phase**

The Transmission System Outage Plan for Operational Year 1 issued under subsection OC2.6.2 (iii) shall become the final plan for Operational Year 0 when on the first of April Operational Year 1 becomes Operational Year 0.

### **OC2.6.4 Programming Phase**

#### **(i) By 11:00 hours each Wednesday**

OETC shall update the Transmission System Outage Plan for the following one-week period beginning on the Friday.

OETC will notify PWP in writing of the complete plan and each User in writing of those aspects of the plan that may operationally affect such User including in particular proposed start dates and end dates of relevant Transmission System Outages. OETC will also indicate where a need exists to use intertripping, emergency switching, emergency Demand management or other measures including restrictions on the Dispatch of CDGensets to allow the security of the Transmission System to be maintained within the Transmission Security Standards.

When during the Programming Phase, OETC become aware of the possible need for manual Demand shedding, advance warning shall be given to the potentially affected parties and preliminary manual Demand shedding programmes prepared in accordance with the procedures of OC4.6.

#### **(ii) During the Programming Phase**

Each User and OETC will inform each other immediately and confirm in writing, copied to PWP if there is any unavoidable requirement to depart from the Outages and actions determined and notified under this subsection.

### **OC2.7 Data requirements**

Each Power Producer shall submit in writing to OETC by the end of January for each Operational Year in respect of each CDGenset;

- the Generator Performance Chart; and
- the Operating Parameters to be applied from the beginning of January onwards.

The submissions shall be in the format indicated in Appendix C and Appendix D (copied to PWP). The data shall be reconfirmed annually even where it has already been provided or specified under a PPA.

OETC shall use the Operating Parameters for Operational Planning purposes only and not for Scheduling and Dispatch. These data will however, form the basis for Operating Parameters that Power Producers will submit/update within the Scheduling and Dispatch Codes.

In the case of a CDGenset which is capable of firing on two different fuels, the Power Producer must submit to OETC (copied to PWP), by separate written notifications, the Operating Parameters in respect of each fuel, each clearly marked to indicate for which fuel it applies.

The Generator Performance Charts must be submitted for each CDGenset separately showing output at the Genset terminals under reference conditions. They shall include the details shown in Appendix D.



The Generator Performance Chart shall be supported by correction curves or formulas to enable OETC to assess the variation in performance over expected ambient temperatures and for other parameters that could affect the output of the CDGenset from reference conditions.

For each Production Facility with both Desalination Units and CDGensets, Power Producers shall submit in writing to OETC and PWP the combination of Desalination Units and CDGensets that could be running for any given combination of Capacity and Desalinated water outputs.



## Appendix A Timetable For Main Actions: OC2 – Operational Planning

(Note: The following are summaries only and reference should be made to OC2 for full details.)

(Months refer to month end)

In Operational year 0	January	Feb	Mar	Apr	May	Jun	July	Aug	Sept
<b>Planning for Operational Year 2</b>									
Each Power Producer will provide OETC and PWP in writing with -	Proposed Station Outage Schedule for Op Yr 2 <sup>(1)</sup>								
OETC will provide -	Forecast of maximum Capacity required from each Genset for each week of Op Yr 2 <sup>(2)</sup>								
OETC will prepare and send to PWP and affected Users draft Transmission System Outage plan									
OETC will provide PWP, each Power Producer and Other Users in writing with -							Proposed System Outage Schedule for each week of Op Yr 2		
PWP, Power Producers and Other Users will raise any objections to Proposed System Outage Schedule								Any objections to be raised and resolved with OETC	
OETC will determine -									Proposed System Outage Schedule No.1



In Operational year 0	January	Feb	Mar	Apr	May	Jun	July	Aug	Sept
<b>Planning for Operational Year 1 - Proposed System Outage Schedule No.1 forms basis for OP 1 planning</b>									
Each Power Producer will provide OETC & PWP in writing with -	Final Station Outage Schedule for Op Yr 1 <sup>(3)</sup>								
OETC will provide PWP, each Power Producer and Other Users in writing with -						Draft Final System Outage Schedule for each week of Op Yr 1 <sup>(2)(4)</sup>			
PWP, Power Producers and Other Users will raise any objections to Draft Final System Outage Schedule							Any objections to be raised and resolved with OETC (as in OC2.5.1)		
OETC, after considerations, will issue schedule -									Final System Outage Schedu



In Operational year 0	January	Feb	Mar	Apr	May	Jun	July	Aug	Sept
<b>Planning for Operational Year 1 - Transmission System Outage plan</b>									
OETC will update draft Transmission System Outage plan							Send to PWP and affected Users		
PWP and Other Users will raise any objections to Draft Transmission System Outage Plan								Any objections to be raised and resolved with OETC	
OETC, after considerations, will issue plan									Final Transmission System Outage Plan

**Abbreviations:**

Op Yr 1 – Operational Year 1

Op Yr 2 – Operational Year 2

**Notes:**

The following notes are summaries only of actions and reference should be made to OC2 for full details

1	Data from Power Producers will include	Identity of CDGenset/Desalination Unit MW Available/not Available Required duration of outage Preferred start date/time or range Flexible/Inflexible outage If flexible, scope for change Proposed timing of Winter downtime
2	OETC forecast will be based on	Demands forecasts OETC estimate of Demand Management Operating Margins as set by OETC Transmission & Distribution System constraints Transmission & Distribution System outages Transmission System losses Forecast imports/exports from Internally/International Connected Parties
3	The Final Station Outage Schedule produced by Power Producers will reflect changes to Proposed Station Outage Schedule only if Power Producer has had to respond to changed circumstances for which sufficient evidence must be provided	



4	Draft Final System Outage Schedule may differ from Final Station Outage Schedule due to;	<p>Flexible outages may have moved to coordinate all outage proposals</p> <p>A flexible outage may have been re-designated as an inflexible outage</p> <p>Timing of a Winter outage may have changed</p>
	In addition, where in the opinion of OETC, the License requirements could not be met OETC may provide to PWP and the Power Producer a written request that;	<p>A flexible or an inflexible outage originally shown may be excluded from the Final System Outage Schedule.</p> <p>An inflexible outage in the Proposed System Outage Schedule may be re-designated as flexible or its start date moved.</p>



**Appendix B Format for Submission of Proposed Station Outage Schedules from Power Producers**

<b>To OETC CONTROL CENTRE</b>		<b>Fax No:</b>	<b>Copy to PPW</b>	<b>Fax No</b>
<b>FROM:</b>	<b>PRODUCTION FACILITY</b>			
<b>PROPOSED STATION OUTAGE SCHEDULE FOR</b>		<b>YEAR</b>	<b>Date sent:</b>	

CDGenset No	Registered Capacity MW	Unavailable Capacity MW	Outage duration	Preferred start date or range of start dates	Flexible outage or not	If outage flexible. Period outage could be	
						deferred	advanced
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							





## Appendix C Operating Parameters

The following parameters are required for each CDGenset

Registered Capacity under reference conditions supported by correction curves showing changes in;

- Output versus heat rate;
- Output and heat rate versus ambient air temperature; and
- Output and heat rate versus ambient air pressure;

For each CDGenset;

- (a) the minimum notice required to synchronise the CDGenset or a CCGT Module from a condition of De-synchronisation;
- (b) the minimum time between synchronising different CDGensets or CCGT Module in a Production Facility;
- (c) the minimum CDGenset Active Power requirements on synchronising, expressed as a block Load in the case of a Gas Turbine Genset or a Steam Turbine Genset;
- (d) maximum CDGenset, or CCGT Module, loading rates from synchronisation for the following conditions;
  - Hot;
  - Warm; and
  - Cold;
- (e) maximum CDGenset, or in the case of a CCGT Module, deloading rates;
- (f) minimum time off load;
- (g) maximum CDGenset, or in the case of a CCGT Module, time to Synchronise for the following conditions;
  - Hot;
  - Warm;
  - Cold;
- (h) Primary Response, MW in 5 Seconds;
- (i) Secondary Response, MW in 30 Seconds;
- (j) Tertiary Reserve, Time to reach Available Capacity from minimum load;
- (k) Tertiary Reserve, Time to reach Available Capacity from 80% of Capacity;



### Appendix D Typical Generator Performance Chart

