



INDEPENDENT
MARKET
OPERATOR

Reserve Capacity Certification Workshop - 2016/17

Neetika Kapani
Acting Manager, System Capacity

28 April 2015



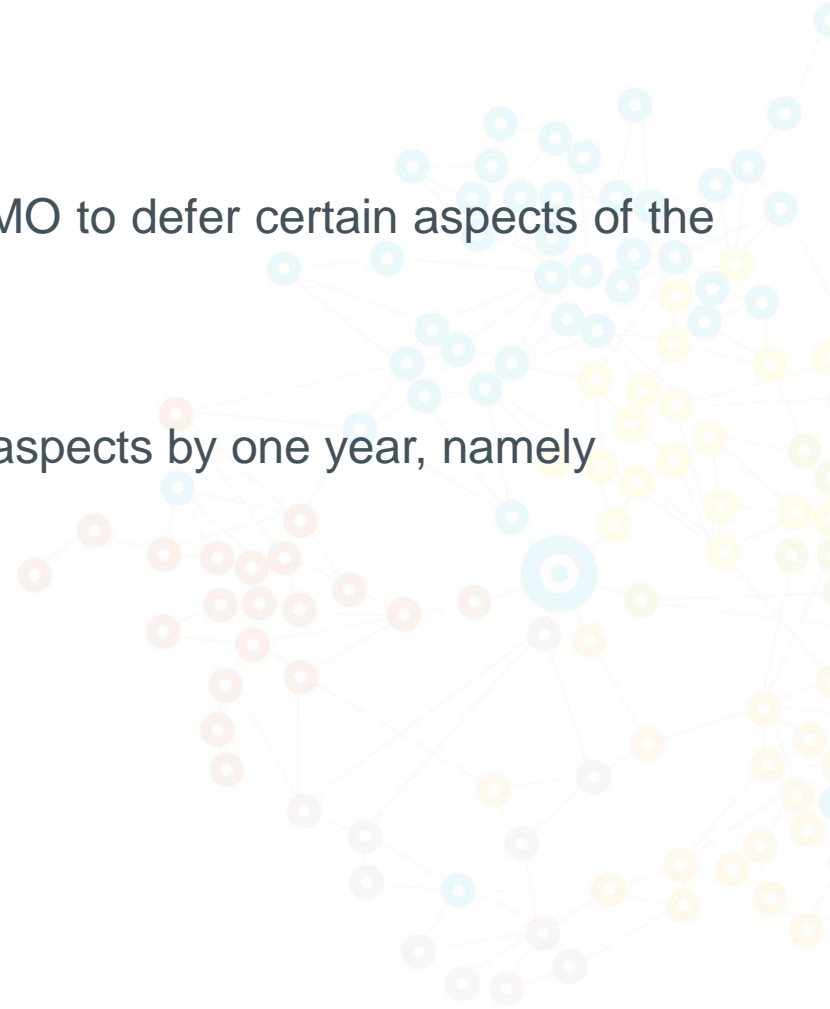
Background

20 April 2014 - Minister for Energy directs the IMO to defer certain aspects of the 2014 Reserve Capacity Cycle.

Direction becomes binding after 7 days.

IMO revises its timelines associated with these aspects by one year, namely

- Certification of Reserve Capacity
- Bilateral Trade Declaration
- Assignment of Capacity Credits
- Cancellation of Reserve Capacity Auction



Agenda

- Information required by the IMO for the Certification of Reserve Capacity
- Electronic submission of applications in WEMS
- Overview of the necessary approval requirements (Finances, Network Access, Environmental, etc.)
- Details of assessments for Committed status
- Potential Market Rule changes that may affect certified capacity for the 2014 Reserve Capacity Cycle

Overview of the Certified Reserve Capacity Process

- Allows new and existing capacity to apply for certification and be eligible for capacity credit payments
- Market Rules 4.10 & 4.11 define conditions for certification for existing, new and upgraded facilities on a yearly basis
- Certification requires a technical review of the facility capability during periods of peak demand, extensive investigation and due diligence assessment
- Determines maximum quantity of Capacity Credits a facility can be allocated

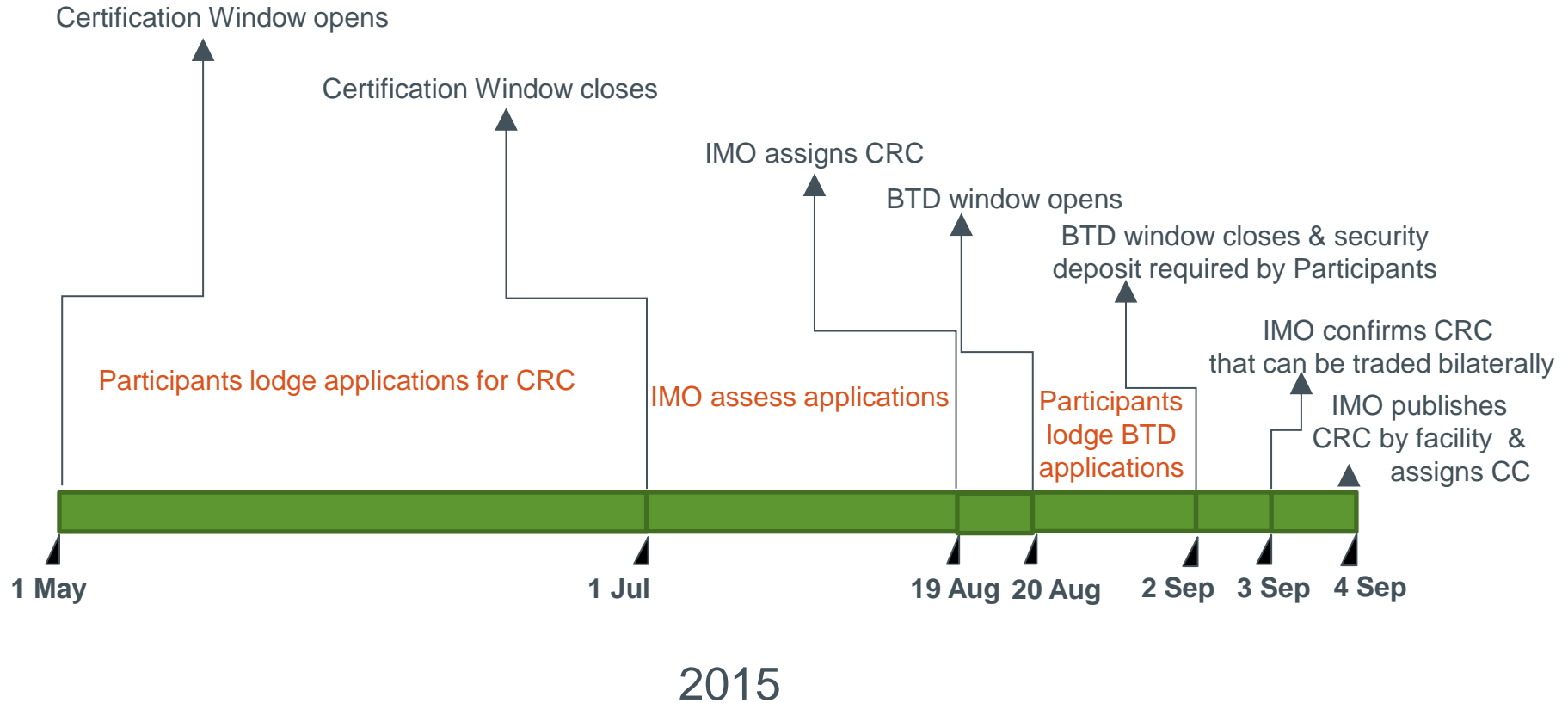
Responsibilities

Market Participants provide information required for the Certification of Reserve Capacity **as per MR 4.10**

IMO assesses and sets Certified Reserve Capacity (CRC) as per **MR 4.11**

2014 Reserve Capacity Cycle for 2016/17 Capacity Year

Key Certification Dates



CRC Applications – Information Requirements MR 4.10.1

All Facilities require:

- key project dates
- excel spread-sheet summarising required information recommended
- electronic submission in MPI

All generators (Scheduled & Non-scheduled) yet to enter service require:

- evidence that Environmental Approvals have been/are likely to be granted
- evidence of an Arrangement for Network Access

All scheduled generators require:

- evidence of Fuel Contracts

All intermittent generators require:

- Expert Report where less than 5 years old or for upgrades

DSP's require:

- hours and periods of availability
- evidence of current contractual positions or negotiations for new loads

Information Requirements - continued

Summary spreadsheet example

A	B	C	D	E
	Rule Requirement	Rule Requirement	Market Rule 4.10.1	Market Participant Response
All Facilities	Identity of Facility	Full Name WEMS Short name	(a)	
	Reserve Capacity Cycle	Relevant Reserve Capacity Cycle	(b)	
All Facilities		Level of Certified Reserve Capacity sought		
		Network Access	(bA) (i)	
		Environmental Approvals	(c) ii	
		For each of the following please enter the date where the key project deliverable will be completed and supporting documentation for each must also be provided.		
Facilities yet to enter service	Is the Facility or part of the Facility yet to enter service	All approvals finalised date	(c) iii 1	
		Financing Finalised Date	(c) iii 2	
		Site preparation start date	(c) iii 3	
		Construction Start Date	(c) iii 4	
		Generating equipment or DSM control equipment installation complete	(c) iii 5	
		Commissioning trials start	(c) iii 6	
		First capable of meeting Reserve Capacity Obligations	(c) iii 7	
Facilities due To Decommission	Planned Decommissioning Date		(d)	
All Facilities	Description of the Main Components		(dA)	
		Maximum Available Capacity (sent out)	(e) i	
		Temperature Dependence Of Facility	(e) i	
		Max sent out capacity @ 41 oC	(e) ii	
		Additional max sent out capacity @ 41 oC	(e) iii	
		Method of measurement of Ambient Temperature	(e) iv	
		Primary Fuel	(e) v	
		Secondary Fuel	(e) v	
		Any other factors that may effect fuel supply arrangements	(e) v	
		The expected forced outage rate based on manufacturer data:	(e) vi	
		The expected unforced outage rate based on manufacturer data: and	(e) vi	

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<http://www.imowa.com.au/home/electricity/reserve-capacity/certification-of-reserve-capacity>

Online Submissions in WEMS/MPI

Pre-requisites for WEMS submission:

- Registered Market Participant Status
- WEMS access
- Facility Candidate for registration including upgrade of facilities (Note that an upgrade to a facility must be created in the system prior to CRC submission)

User guide for submissions (CSV or XML):

<http://www.imowa.com.au/home/electricity/market-participants/guides-and-useful-information>

Templates for CSV submissions:

www.imowa.com.au/home/electricity/market-participants/market-forms-and-templates/file-exchange-templates

Electronic Data Submission

Via WEMS Interface

MPI → Reserve Capacity → File Exchange → Certification

The screenshot displays the WEMS File Exchange interface. The browser window title is "File Exchange - Mozilla Firefox". The address bar shows the URL: <https://wems.imowa.com.au/mpi-ui/reserveCapacity/fileExchangeRcCertification.action>. The page navigation includes: Home, Notifications, Energy Market, Reserve Capacity, Balancing, LFAS, Registration, Settlements, Reports, Configuration, Help, Logout. The user is logged in as GRUTHVEN@IMOWA.

The interface is divided into three main sections:

- File Exchange:** Contains an "Upload Type" dropdown set to "Certification", "Upload Format" radio buttons for XML (selected) and CSV, "Upload Options" (Download Acknowledgement), and a "Files" section with an "XML File" input field and a "BROWSE..." button. Below this are "Uploaded By", "Status", "Error Type", "Upload Type", "File Type", "Upload Format", and "File Name Search" filters, along with "ADVANCED OPTIONS", "CLEAR", and "GO" buttons.
- Upload History:** A table with columns: Date & Time, Participant, Uploaded By, Upload Type, File Type, File Name, Results File, Upload Format, Status, Intervals in File, Intervals with Errors, Intervals with Warnings, Gate Closure. The table is currently empty with the text "No data found."
- Detail History:** A table with columns: Date & Time, Message Code, Message Type, Message. The table is currently empty.

The footer features the **imo** logo (Independent Market Operator) and the text: "Balancing Gate Closure at: 03/09/12 16:30 for: 03/09/12 22:30 Portfolio Balancing Gate Closure at: 03/09/12 18:00 for: 04/09/12 02:00 - 04/09/12 07:30 Load Following Gate WEMS Market Time 16:04:17 ©2012 Independent Market Operator of Western Australia Contact Us | Disclaimer Done".

File (csv) sample to be uploaded

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	action	facility name	capacity year	project approval date	project financing date	project site prep date	project construction start date	equipment installation date	commissioning trials date	full capacity obligation date	decommission date	forced outage rate	unforced outage rate	actual forced outage rate	actual unforced outage rate	conditional confirmation	certification methodology	ncs contract	available capacity mw	available capacity mw hot
2																				
3																				
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10																				
11																				

Assessment Process Overview

Key considerations for all Scheduled Generators

Fuel

Assess fuel arrangements by reviewing and analysing:

- Gas supply and transport contracts
- Liquid fuel supply, delivery, and resupply arrangements
- Liquid fuel storage capability
- Minimum 14 hours of continual operation required, with 1 day resupply

Environmental Approvals

- Has the company progressed environmental approvals process?
- Are there any issues that have been identified?
- Noise considerations
 - e.g. Discussions with local council, EPA, DEC, noise experts

Assessment Process Overview-continued

Financing

- What financing structures are in place?
 - How is financing structured?
 - How much financing has already been sourced?

Transmission/Network Access

- DSOC limits and runback schemes may result in generators being certified for less than their nameplate capacity
- Static system studies to be completed for new generation facilities/upgrades

Intermittent Generators

- CRC based on actual/estimated output of candidate facilities in peak trading intervals from prior 5 years
- Expert report to be provided in facility in operation for less than 5 years
- Note changes to K and U parameters in the Relevant Level Methodology take effect from 2017/18 Capacity Year

Demand Side Management (DSM)

- Look at load characteristics and possible levels of reduction capability – Relevant Demand
- Look at contracts or agreements in place between DSM provider and their customers
- History of Market Participant in procuring DSM Capacity



Committed Status

- New Facilities wishing to be assured Capacity Credits need to **apply for Committed Status**
- **IMO approval decision made prior to BTD Stage**
- The IMO cannot assign CRC to a Facility that is not expected to **be a Registered Facility by 1 October 2016**
- Made as a Separate Application to CRC
- Submission must present a case as to how the project has progressed further than a “Proposed” Facility and what irrevocable commitments have been made
- Guidelines and examples are in the Market Procedures

Bilateral Trade Declaration (BTD)

Market Participant Nominates:

- Amount of CRC made available to Reserve Capacity Auction
- Amount of CRC covered by pre-existing Special Price Arrangement
- Amount of CRC intended to trade Bilaterally
- Amount of CRC not made available



BTD continued- WEMS Declaration

MPI → Reserve Capacity → File Exchange → Bilateral Trade Declaration

The screenshot shows the WEMS File Exchange web application interface. The browser window title is "File Exchange - Mozilla Firefox". The address bar shows the URL: <https://wems.imowa.com.au/mpi/mpe-ui/reserveCapacity/fileExchangeRCbilateral.action>. The page has a dark navigation bar with the WEMS logo and the text "Wholesale electricity market system". The user is logged in as GRUTHVEN@IMOWA.

The main content area is divided into several sections:

- File Exchange:** Includes an "Upload Type" dropdown set to "Bilateral Trade Declaration", an "Upload Format" radio button group with "XML" selected and "CSV" unselected, and a "Download Acknowledgement" checkbox.
- Files:** Features an "XML File" input field with a "BROWSE..." button, and "CLEAR" and "Go" buttons.
- Search:** Includes a "From / To Date" range selector set to "2/09/2012" to "2/09/2012", and "ADVANCED OPTIONS", "CLEAR", and "Go" buttons.
- Upload History:** A table with columns: Date & Time, Participant, Upload By, Upload Type, File Type, File Name, Results File, Upload Format, Status, Intervals in File, Intervals with Errors, Intervals with Warnings, and Gate Closure. The table is currently empty with the text "No data found."
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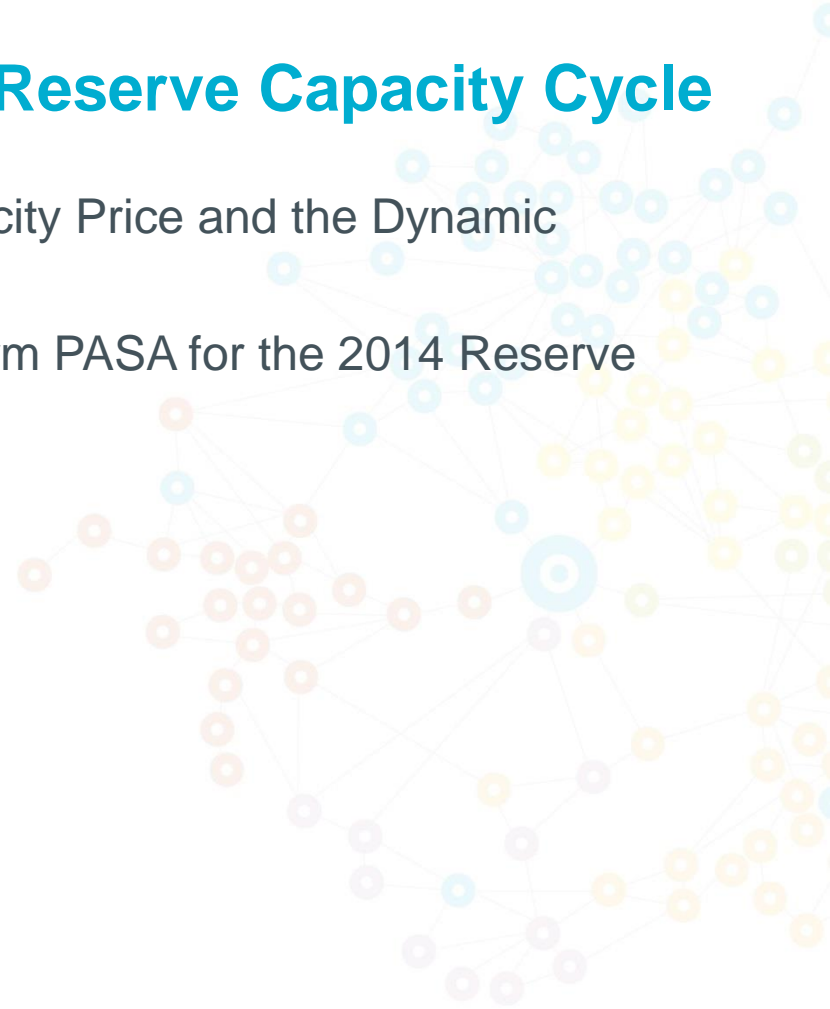
The footer contains the iMO logo, "Powered By LFAS Down Requirement", a list of time intervals (04/09/12 2-1: 80.000, 2-2: 80.000, 3-1: 80.000, 3-2: 80.000, 4-1: 80.000, 4-2: 80.000, 5-1: 80.000, 5-2: 80.000), "Last LFMO/Prices Published at 03/ WEMS Market Time 16:11:08", "©2012 Independent Market Operator of Western Australia", and "Contact Us | Disclaimer".

Reserve Capacity Security

- Reserve Capacity Security Payment required for all new Capacity
 - New Facilities
 - Upgrades
 - New DSM/DSM Programs
- Security Deposit required at time of Bilateral Trade Declaration if intending to trade bilaterally
- Equals $\frac{1}{4}$ of the MRCP per MW of Certified Capacity
- Security Deposit returned if Facility performs at required standard
- If Facility does not perform to the required standard then security amount is:
 - Used for Supplementary Capacity Contracts; or
 - Any left over to rebate to Market Customers

Rule changes affecting the 2014 Reserve Capacity Cycle

- RC_2013_20: Changes to the Reserve Capacity Price and the Dynamic Reserve Capacity Refunds Regime
- RC_2015_04: Documentation of the Long Term PASA for the 2014 Reserve Capacity Cycle



Rejected or deferred rule changes

Rule Change Proposals were proposed to apply to the 2014 Reserve Capacity Cycle but rejected on the basis of the Electricity Market Review or have been subsequently deferred by the IMO:

- RC_2013_09: Incentives to Improve Availability of Scheduled Generators - rejected
- RC_2013_10: Harmonisation of Demand-Side and Supply-Side Capacity Resources - rejected
- RC_2013_21: Limits to Early Entry Capacity Payments - deferred



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Questions / feedback

General

imo@imowa.com.au

(08) 9254 4300

Market Operations

operations@imowa.com.au

(08) 9254 4336

System Capacity

system.capacity@imowa.com.au

Market Development

market.development@imowa.com.au

