



Reduction of Prudential Exposure Working Group

11 April 2019

Agenda

1. Removal of Resource Plans (RC_2014_06)
 1. Project Status
 2. Rule Change Overview
2. ROPE (RC_2017_06)
 1. Phase 1 Testing and Deployment
 2. Phase 2 Design and Development

Removal of Resource Plans (RRP)

Rule Change: RC_2014_06

RRP Project Timeline

		2019															
Team	7-Jan	21-Jan	4-Feb	18-Feb	4-Mar	18-Mar	1-Apr	15-Apr	29-Apr	13-May	27-May	10-Jun	24-Jun	8-Jul	22-Jul		
Project Management	Assmnt	Contract	Project Management										MKT	Prod	MKT - Clean-up Release	Prod - Clean-up Release	
Vendor (PSC)			Elaboration			Develop and Test				Integration Test							
Western Power						Develop and Test											
Brady						If required: Develop and Test											
RBP											Cert						
AEMO Teams									UAT								
			Market and PSOP Procedures					APCWG	Submit Window	Respond & Update							
			Internal Procedures and Work Instructions									Apprv					

Indicative Deployment Schedule:

Rule Change Functionality

Market Trial – 12 June

Production – 26 June

Application Clean-up

Market Trial – 10 July

Production – 24 July

APCWG
2 May

Procedures
Effective 1 July

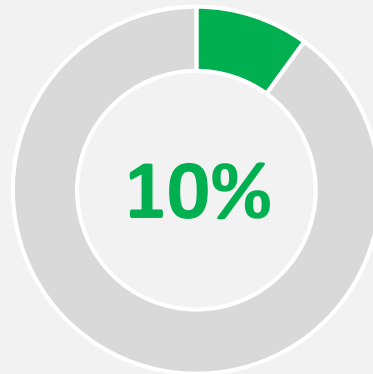
RRP Project Status

Overall status



- G** Schedule – under control
- G** Cost – slightly ahead
- G** Scope - on track
- G** Resourcing – suitable
- G** Issues – under control
- A** Risk – under control

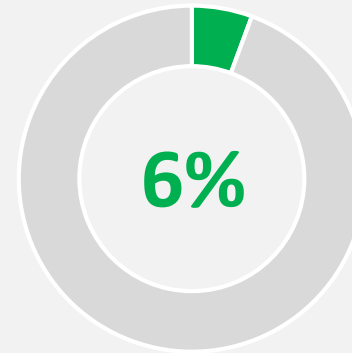
Progress



Execution Stage

- Project Scope is agreed
- Market Procedures have been allocated to resources for modification.
- Power System Operation Procedures will be managed in separate procedure change working groups

Cost



- Project is on budget

Count Down

Market Trial

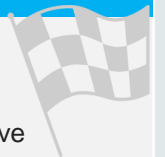
62

Days to go-live

Production

76

Days to go-live



Milestones:

Deployment (indicative)

- Market Trial: 12 Jun
- Production: 26 Jun

RRP Market Procedures

Procedures	Priority (1 July 2019)	Supplementary (post 1 July 2019)
Market Procedures	<u>Market Procedures</u> <ul style="list-style-type: none"> Balancing Facility Requirements Determining Loss Factors Settlement Determination of DSM Dispatch Payment Tranches and Adjustments <u>Admin Procedures</u> <ul style="list-style-type: none"> Information Confidentiality Data and IT interface requirements <u>Reserve Capacity</u> <ul style="list-style-type: none"> Certification of Reserve Capacity 	<u>Reserve Capacity</u> <ul style="list-style-type: none"> Reserve Capacity Testing
Power System Operations Procedures	<u>System Management Operations</u> <ul style="list-style-type: none"> Commissioning Tests Short Term PASA Dispatch 	<u>System Management Operations</u> <ul style="list-style-type: none"> Ancillary Services Power System Security Facility Outages Communications and Control Systems

Market Procedures will progressed in a single APCWG. Changes are relatively minor.

PSOPs will be progressed in separate APCWG. The listed PSOPs will be addressed in the current consultation

Note: Procedures marked as Supplementary will be progressed after 1 July as they require additional changes in addition to the RC_2014_06 changes.

RRP

Rule Change Overview

Rule Change RC_2014_06 was first introduced by IMO to remove two components of the WEM Rules that provided little function following the introduction of the Balancing Market introduced on 1 July 2012.

The 2015 Electricity Market Review slowed the progress of this rule change until it was progressed by the Rule Change Panel in January 2018.

Following on from two submission periods the Minister of Energy approved RC_2014_06 to become effective from 1 July 2019.

RRP

Removal of Dispatchable Loads

RC_2014_06 removes the concepts of Dispatchable Loads from the WEM Rules. This Facility type has not been registered in the WEM.

- Prevent the registration of a Dispatchable Load through the WEMS MPI
- Removal of Dispatchable Loads from the Non-Balancing Dispatch Merit Order
- Update Procedures to remove any reference to Dispatchable Loads

RRP

Removal of Resource Plans

RC_2014_06 removes all Resource Plan activities and any reference to Resource Plans from balancing submissions, dispatch planning and settlement.

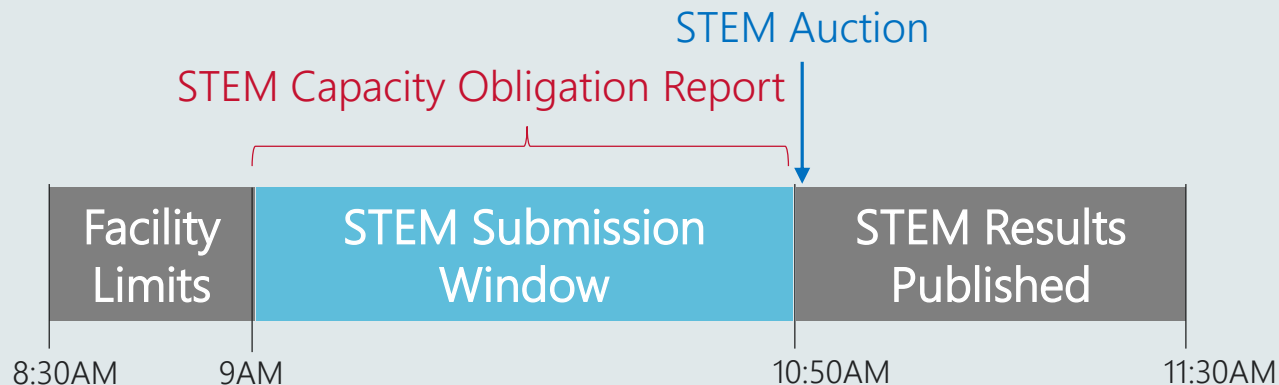
- Remove the Resource Plan submission window
- Prevent the use of *RPQTY* and *MAX-RPQTY* in Facility Balancing submissions
- Remove Resource Plan shortfall from net STEM shortfall settlement calculation
- Update Procedures to remove any reference to Resource Plans

RRP

Extension of STEM Window

RC_2014_06 extends the STEM window an extra hour and modifies STEM reporting requirements.

- Extend STEM submission window to open at 9am and close at 10:50am
- Single dynamic STEM Capacity Obligation report with latest available information for any STEM submission.
- Update Procedures to reflect the changes for STEM

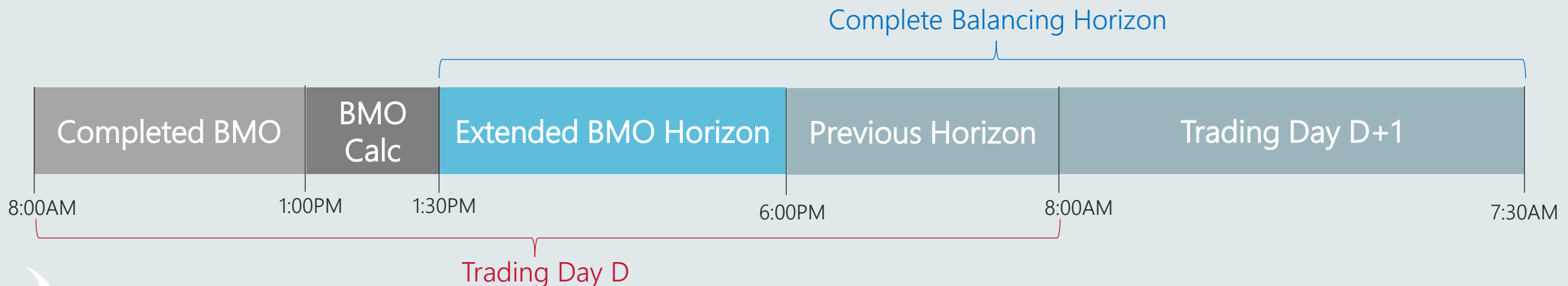


RRP

Extension of Balancing Horizon

RC_2014_06 extends the BMO horizon to generate 85 intervals at 1pm. The extended Balancing Horizon will be used by AEMO planning engineers in replacement of Resource Plans.

- Generate BMO for the next Trading Day from 1pm.
- Update Procedures to reflect the modified Balancing Horizon



RRP

Removal of Change of Fuel details

RC_2014_06 no longer includes the ability for generation systems to provide details of fuel in use where this differs from the STEM submission.

- Fuel submission through SMITTS will no longer be available

RRP

Transition provisions for RRP

RC_2014_06 contains no transitional provisions to allow AEMO or Market Participants to conduct scheduling day activities, on 30 June 2019, in the manner expected of the Rule Change, effective 1 July 2019.

To this end AEMO expects Market Participants to continue all STEM and Resource Plan activities on 30 June 2019 as per the existing rules. The modified STEM timeline will take effect on 1 July 2019.

Settlement for the month of July 2019 will be conducted using the rules effective 1 July 2019.

Scheduling Day Activities for 1 July

AEMO expects the following timeline will be used on 30 June 2019:

30 June 2019 (Scheduling Day for 1 July 2019)

- STEM window (for Trade Date 1 July)
 - STEM window opens 9:00am - closes 9:50am
 - STEM results published 10:30am
- Resource Plan window (for Trade Date 1 July)
 - Resource Plan window opens 11:00am - closes 12:50pm
 - Resource Plans provided to System Management 1:20pm
- Balancing Horizon (for Trade Date 1 July)
 - BMO is extended, to include trade day 1 July 8am – 7:30am, at 6:00pm

RRP

Scheduling Day Activities for 2 July

AEMO expects the following timeline will be used from 1 July 2019 onwards:

1 July 2019 (Scheduling Day for 2 July 2019)

- STEM window (for Trade Date 2 July)
 - STEM window opens 9:00am - closes 10:50am
 - STEM results published 10:50am
- Balancing Horizon (for Trade Date 2 July)
 - BMO is extended, to include trade day 2 July 8am – 7:30am, at 1:00pm

What's next for RRP?

Development of System Changes

- Changes to WEMS MPI
- Changes to RCM Settlements
- Changes to SMITTS

Updates to Procedures

- Procedure change consultation

Market Trial

- Deployment - 12 June 2019
- Market Participant Testing

Next Working Group – June 2019

ROPE Project

Project Overview

- The Reduction of Prudential Exposure (RoPE) project is to be implemented in 2 sequential phases:
- Phase 1: July 2018 – May 2019
 - Implementation of rule change RC_2017_06 which amends the Individual Reserve Capacity Requirement (IRCR) calculation, Capacity Credit Allocation and associated settlement & prudential processes.
- Phase 2: May 2019 – December 2019
 - Implementation of a change to Market Procedure: Prudential Requirements which aims to improve the responsiveness of the Outstanding Amount calculation and the efficiency and effectiveness of the prudential framework in the WEM.

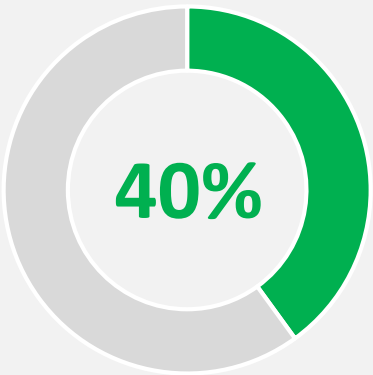
RoPE – Project Status

Overall status



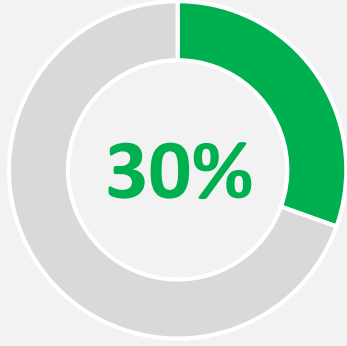
- Schedule** – on track
- Cost** – slightly ahead
- Scope** – on track
- Resourcing** – on track
- Issues** – unchanged
- Risk** – unchanged

Progress



- ROPE1 – Release is in Market Trial.
- ROPE1 Market Procedures are in consultation
- ROPE2 – Design is complete ready for development.

Cost



- Notes:
- Progress is ahead of budget

Count Down

Phase 1

28

days to go-live

Phase 2

308

days to go-live

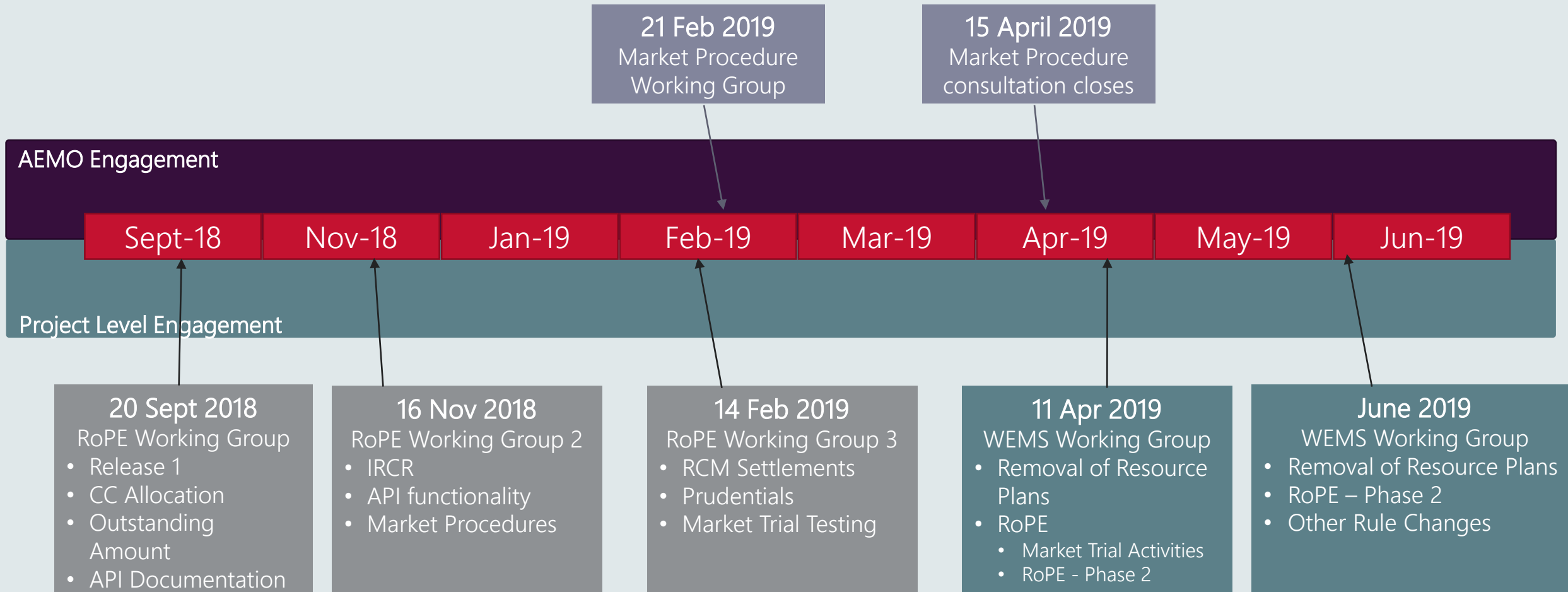


Milestones:

- Phase 1
 - Market Trial: Live
 - Go-Live: 9 May 2019
- Phase 2
 - Go-Live: Feb 2020

New schedule will delay Phase 2 MKT and Prod to after the Christmas period.

RoPE - Stakeholder Engagement



ROPE 1

Market Trial Activities

Phase 1 Release

Timeline for Market Trial activities

	March 19	April 19				May 19	
	Week 4	Week 1	Week 2	Week 3	Week 4	Week 1	Week 2
Environment Activities	Deploy Release						9 May - Production Deployment
IRCR Activities	Indicative IRCR				Initial IRCR		
CCA Activities		April CCA Open (New Rules)					
		March CCA Open (Existing Rules)					
Settlement Activities			New Prudential Display				

Phase 1 Release

Details of Market Trial

- Phase 1 software is deployed to Market Trial.
- System is configured with 1 April effective date for ROPE functionality:
 - Indicative IRCR and artefacts published for April 2019
 - Capacity Credit Allocation window for March 2019 now closed (existing rules)
 - Capacity Credit Allocation window for April 2019 still open (new rules)
 - Prudential management for CCA in effect from 8 April
 - Initial IRCR and publish artefacts to occur on 29 April 2019

Phase 1 Release

Market Trial Testing Considerations

- AEMO will be available to assist Market Participants where possible with testing scenarios. However it is recommended that Market Participants conduct testing in a manner that replicates existing bilateral capacity arrangements.
- Recommended scenarios (as per [WEMS 3.30 Release Notes](#)):
 - Market Generator makes Capacity Credit Allocation to Market Customer
 - Market Generator withdraws Capacity Credit Allocation to Market Customer
 - Market Customer accepts Capacity Credit Allocation from Market Generator
 - Market Generator requests reversal of Capacity Credit Allocation from Market Customer
 - Market Generator amends Capacity Credit Allocation after Capacity Credit reduction
 - Market Generator makes Capacity Credit Allocation for March (existing rules)

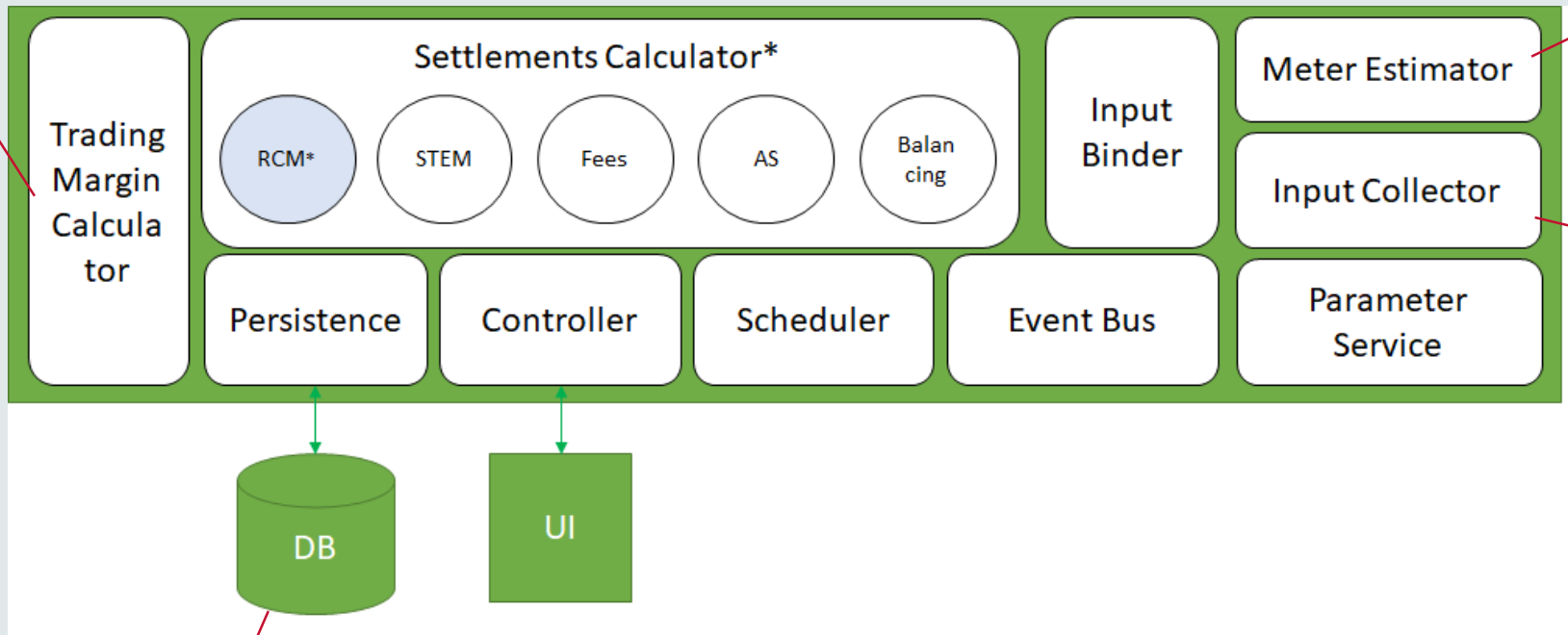
ROPE 2

Project Overview

ROPE - Phase2

Outstanding Amount Calculator Design

Dynamic calculation of Outstanding Amount to be provided to Market Participants in new Prudential Dashboard.



Use of latest available meter data or estimation of data based on like period estimation.

Input information from STEM, Balancing Market, System Management, etc. Use of available data or estimate.

Information from the calculation to be available for participant consumption.

AEMO will be discussing the estimation aspects and integration points for Market Participants further in future Working Groups.

ROPE – Phase2 High Level Timeline

Market Trial to occur following the Christmas period.
Further details on Market Trial activities to follow.

		2019																			2020			
Fortnight	18-Mar	1-Apr	15-Apr	29-Apr	13-May	27-May	10-Jun	24-Jun	8-Jul	22-Jul	5-Aug	19-Aug	2-Sep	16-Sep	30-Sep	14-Oct	28-Oct	11-Nov	25-Nov	9-Dec	Break	6-Jan	20-Jan	3-Feb
Project Management	Project Management																					MKT	Prod	
Vendor	Meter Estimation				Balancing Settlement						GST & Interest				SIT									
	Ancillary Services								RCM Settlement				Parameter Function			Prudential User Access								
	Market Fee									STEM Settlement			Trading Margin Calculator											
RBP																Certification								
AEMO Project Team	Discovery		UAT		Discovery						UAT	Discovery		UAT		SIT								
	Discovery		UAT						Discovery	UAT		Discovery	UAT	Discovery	UAT	Discovery	UAT							
	Discovery						UAT			Discovery		UAT		Discovery		UAT								
	Market Procedure: Prudential Requirements									APCWG	Proposal	Submission Window						AEMO Response	Appv					
	Internal Procedures and Work Instructions																							
																							Effective	
																							Effective	

AEMO will discuss the concepts within the Market Procedure at future Working Groups prior to commencing the Procedure Change Process.



Meter Estimation Proposed Methodology

- Meter Data is estimated on a NMI level as follows:
 - If meter data is available to AEMO use it
 - Else if SCADA data is available, use it
 - Else, estimate the meter data using like day like period (LDLP) methodology
- LDLP uses the last known meter data for a NMI based on a similar interval on a similar day and scales it by the system Relevant Demand Quantity (RDQ).

Like Day Like Period (LDLP)

Trading Interval	NMI 8001000000	System RDQ
Mon, 9 Oct 17 8:30am	1 MWh	1500 MWh
Mon, 9 Oct 17 9:00am	1.1 MWh	1550 MWh
Mon, 9 Oct 17 9:30am	1 MWh	1450 MWh
⋮	⋮	⋮
Mon, 16 Oct 17 8:30am	x	1600 MWh
Mon, 16 Oct 17 9:00am	y	1550 MWh
Mon, 16 Oct 17 9:30am	z	1400 MWh

$$x = \frac{1 \text{ MWh}}{1500 \text{ MWh}} \times 1600 \text{ MWh} = 1.067 \text{ MWh}$$

$$y = \frac{1.1 \text{ MWh}}{1550 \text{ MWh}} \times 1550 \text{ MWh} = 1.100 \text{ MWh}$$

$$z = \frac{1 \text{ MWh}}{1450 \text{ MWh}} \times 1400 \text{ MWh} = 0.966 \text{ MWh}$$

What's next for RoPE?

Phase2 – Dynamic Prudential Estimation

- Elaboration
 - Determine Settlement calculations
 - Determine data requirements
 - Determine estimation process
 - Understand business processes
 - Understand user processes
- System Development
 - Meter data and interval estimation
 - Ancillary Services

Phase1

- Market Participant Testing - Now
- Production deployment – 9 May

Next Working Group – June 2019

Questions and Feedback

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