

Minutes

WEM Reform Implementation Group – Meeting 7, 2021

Time: 9:30am – 12:00pm

Date: 5 August 2021

Venue: Teleconference

Attendees:

Name	Organisation	Name	Organisation
Adrian Theseira	ERA	Paul Elliott	AEMO
Alan McDonald	Bluewaters	Peter Huxtable	Water Corporation
Ben Connor	Synergy	Rebecca Petchey	AEMO
Ben Tan	Tesla	Rebecca White	Collgar
Benjamin Hammer	Western Power	Rhiannon Bedola	Synergy
Brad Huppatz	Synergy	Richard Pepler	Western Power
Carlberg, Oscar	Alinta	Rob Chandler	Western Power
Clayton James	AEMO	Sally Campbell	Western Power
Dino Perumal	AEMO	Shannon Hewitt	Clean Tech Energy
Erin Stone	Point Global	Teresa Smit	AEMO
Geoff Gunner	AEMO	Tinna Needham	Western Power
Gerrymaine	Guest	Varma, Aditi	EPWA
Graham, Sarah	EPWA	Victor Francisco	Psc Consulting
Guzeleva, Dora	EPWA		
Harry Street	Entego		
Jo-Anne Chan	Synergy		
Johnathan Adams	Synergy		
Judy Hunter	Western Power		
Kaur, Sumeet	Shell		
Kristy McGrath	AEMO		
Lane, Jeremy	South 32		
Lei, Sam	Alinta		
Liam Staltari	AEMO		
Liz Aitken	Aitken Energy		
Lynda Venables	Synergy		
Mariusz Kovler	AEMO		
Mark McKinnon	Western Power		
Mark Riley	Perth Energy		
Melinda Chapple	Synergy		
Mike Chapman	Western Power		
Mike Hales	AEMO		
Mike Reid	AEMO		
Ng, Wendy SG	Shell		

Slide No.	Issue
WEM Procedures Update (Mike Hales, AEMO, standing in for Alex Gillespie)	
5-6	<ul style="list-style-type: none"> • Mike Hales (MH) relayed the current schedule for bringing WEM Procedures to the WRIG • The next WRIG meeting scheduled for 2/09 (previously scheduled for 26/08) will see: <ul style="list-style-type: none"> ○ three detailed procedure presentations on: <ul style="list-style-type: none"> • Real-Time Market Timetable • ESS Accreditation • CRC Part 2 – Linearly De-rating Methodology ○ Four updates on feedback received on procedures out for consultation: <ul style="list-style-type: none"> • Facility Sub Metering • Credible Contingency Events • Data and IT Interface • Indicative Facility Class and RCM Facility Class Assessment • procedures published on 29 July: <ul style="list-style-type: none"> ○ Indicative Facility Class and RCM Facility Class Assessment ○ Credible Contingency Events ○ Data and IT Interface Requirements • Procedures coming up for consultation: <ul style="list-style-type: none"> ○ Communications and Control System Requirements ○ ESS Accreditation – Clayton James clarified that the procedure would cover both co-optimised and non-co-optimised ESS. ○ Certification of Reserve Capacity • Rebecca White (RW) from Collgar asked whether Western Power would be consulting on its Relevant Generator Modifications guideline through the WRIG or another forum. MH responded that AEMO would discuss with Western Power opportunities to bring briefings on WP procedures to future WRIG meetings.

Joint Industry Plan – Plan and Progress Updates (Dora Guzeleva, Mariusz Kovler, Tinna Needham, Ben Connor)

7 to 10

- Mariusz Kovler (MK) gave an update on the status of the Joint Industry Plan (JIP) from AEMOs perspective highlighting only two additional items:
 - GPS Repository Live date changed from 1/07/2021 to 28/07/2021
 - Settlement Enhancements Market Trial date changed from 1/06/2021 to 1/07/2021
 - Settlement Enhancements Go Live date changed from 1/07/2021 to 1/08/2021
- MK also provide an update on AEMO's Implementation activities, for which the following progress was highlighted:
 - WEM Dispatch Engine (WEMDE) project scope has been finalised and development work commenced.
 - Continued Constraint Management Sprints, including development of the public Congestion Information Resource.
 - Continued RTMS Sprints, WRIG-IT engagement and showcasing of the new API (AEMO adopted a hybrid API design for RTMS to accommodate participant preferences)
 - The GPS system is now live, noting that the Market Trial environment is still available.
 - Go live releases of Settlements Enhancements
 - Education session on framework for generator performance standards (including monitoring and compliance)
 - For RCM (Phase 1) – Sprint 6 of 18 commenced; RLM requirements scoping;
- Important next steps MK highlighted were:
 - Moving RTMS into the market test phase in September/October
 - RCM Phase 1
 - Publish Project Schedule & RLM Scope
 - go live later in November.
 - MK pointed out that more detail on the RCM timeline would be provided in the presentation at the WRIG-IT session scheduled for 5/08/2021
- Mark McKinnon (MM) gave an update from Western Power:
 - Western Power has been finalising changes related to customer connection processes and artefacts – principally changes to the AQP and ETAC that are now set up for constrained access.
 - Current status of GPS is as follows:
 - Established a single web page for all Western Power related GPS-related materials
 - Western Power has received 35 submissions for GPS and are currently working through assessments. Extension requests related to initial submissions have been agreed with Market Participants
 - Working with participants on submitted GPS and once finalised will get these uploaded into the GPS system.
 - Limits advice related WEM procedure – working to clarify with AEMO the process for updating limits advice development WEM procedure to accommodate RCM limit advice requirements
 - Facility readiness works (i.e. SCADA works for various participants) are proceeding and Western Power will continue to work with participants as needed.
 - Loss factors WEM - procedure will become a WP procedure and Western Power is planning to bring that to WRIG in early 2022.
- Ben Connor (BC) noted several minor updates:
 - Team changes have addressed some of the issues previously noted regarding rate of delivery of IT elements
 - Next 8 to 12 weeks targeting completion of back-to-back outages of all of the Pinjar units for work on SCADA Remote Terminal Units and related system changes
 - Synergy may move the timing of some of the outages necessary to complete this work back slightly.

9	<ul style="list-style-type: none"> • DG provided an update on the JIP Rule Drafting Timeline: <ul style="list-style-type: none"> ○ Tranche 4B <ul style="list-style-type: none"> • Was planned to be released by now but remains subject to extensive legal review. • Now planned to be gazetted end of August • Key changes went to TDWG • Thank you for your submissions - appreciated detailed comments on the drafting ○ Tranche 5 <ul style="list-style-type: none"> • Commenced drafting • Have drafted some parts of the non-co-optimised ESS framework • Working with AEMO on the registration part of the rules • Draft set will be consulted upon in September / October and EPWA regard it as important to get this done fast to ensure Gazettal in December • RW asked when the constraints library would be published? Noting that she could see the relevant procedures in the JIP, but not the actual constraints library. RW sought updates on that timing. Clayton James advised that AEMO is working through the constraints to identify those that won't affect dispatch and hence remains a month or two away before being ready to publish. <ul style="list-style-type: none"> ○ AEMO to provide an update at the next WRIG.
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Collaboration on the Synergy Control Room Transition (Paul Elliot AEMO and Ben Connor Synergy)

11 to 18	<ul style="list-style-type: none"> • Paul Elliot (AEMO) and Ben Connor (Synergy) co-presented on the collaboration between Western Power, AEMO and Synergy to transition the balancing portfolio away from direct control by AEMO to being controlled by Synergy itself. • PE provided a brief history of the development of arrangements that see AEMO currently responsible for planning, operating and controlling Synergy's balancing portfolio, noting that this will change from the start of the new market • BC elaborated on the current and future states. <ul style="list-style-type: none"> ○ Responsibility for the dispatch of Synergy's balancing portfolio will have shifted from WP -->IMO --> AEMO --> Synergy (see Slide 13) ○ Significant changes for both GTs and thermal plant ○ Synergy's operators will be receiving their instructions electronically like other facilities ○ Significant organisational and technical changes (see Slide 14) • PE then spoke to the linkages between the changes and the SCED reforms and explained the respective roles of AEMO, Western Power and Synergy <ul style="list-style-type: none"> ○ Synergy – building the capability to take direct control including some SCADA ○ Western Power – delivering the SCADA (RTUs) and comms to facilitate direct control and monitoring ○ AEMO – knowledge transfer and planning for a smooth transition • Scope of the coordinated activities is illustrated on Slide 16, which also illustrates those areas of activity that remain Synergy's exclusive responsibility.
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Update on Generator Performance Standards (Clayton James, AEMO)

18	<ul style="list-style-type: none"> • CJ updated WRIG on the GPS project • AEMO and Western Power jointly held an information session on the 29th of July, noting that the session provided a summary of the changes introduced for the GPS Framework on the 1st of February 2021, including transitional provisions • the slides for the session were circulated to attendee's, but if anyone else would like a copy of the slides or would like to ask any follow up questions please send a request through to the WRIG mailbox • AEMO and Western Power are progressing registration of Generator Performance Standards and approval of Generator Monitoring Plans with participants • AEMO is also engaging with the ERA on processes for GPS compliance monitoring and data access • The following key dates were highlighted: <ul style="list-style-type: none"> ○ New WEM Rules Framework "Live" February 2021 ○ Deadline for establishing registered GPS 31 January 2022 ○ Deadline for submitting proposed GMP 1 November 2021 ○ Deadline for establishing approved GMP 3 November 2022
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Results from the First Market Readiness Report (Mike Reid, AEMO)

19 to 31	<ul style="list-style-type: none"> • Mike Reid (MR) presented an abridged version of the first Market Readiness Report. • MR noted that
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	<ul style="list-style-type: none">○ the survey response rate was relatively high in terms of coverage of energy and capacity supplied to the market, though few than half of all invitees responded. Further, participation levels were better among generators than among retailers.○ Only one large industrial customer responded to the survey.● Regarding program establishment:<ul style="list-style-type: none">○ Most respondents have established their work programs or made good progress○ Governance and staffing are better progressed than funding and planning○ More than half consider project planning to be late or at risk.○ Many respondents stressed:<ul style="list-style-type: none">● The need for detailed specifications before they would commence or progress their work planning.● the lack of visibility of AEMO's forward program● Regarding the early execution of work programs:<ul style="list-style-type: none">○ Most respondents have made limited progress towards executing early stages of their work programs○ Most respondents have commenced their work programs○ A third are yet to start○ Despite limited progress, more than 40% regard their execution as on-track○ Respondents emphasised the impediments imposed by not having detailed specifications● Respondents stressed as key risks the lack of technical information arranged in an accessible form and the lack of time to deliver.● Overall insights from the first Market Readiness Report were summarised as:<ul style="list-style-type: none">○ This is strong engagement with reform among participants and there has been some progress in establishing work programs○ Engagement ≠ progress○ Execution of work programs remains in a very early stage○ Significant barriers to establishing and progressing work programs including:○ Work program risk assessments remain quite preliminary
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Market Participant Training (Kristy McGrath, AEMO)

- Kristy McGrath (KM) provided an update on AEMO's WEM Reform Training strategy:
- KM summarised AEMO's training objectives as follows:
 - Create awareness and understanding of the new market design;
 - Support the development of the knowledge, skills and capabilities required to participate in the new market;
 - Support Market Participant technical teams to develop systems that interact successfully with AEMO market systems;
 - Ensure the security and reliability of the SWIS by supporting a smooth transition to the new market.
- KM then displayed a preliminary high level training needs assessment for a generator, illustrating how AEMO is thinking through where it will need to focus training effort. [Slide 34]
 - KM laid out specific examples of training and education outcomes that are likely to be required for each work package
 - the SCED workstream has the highest impact on participants, suggesting significant training needs
 - some of the training needs involve knowledge and understanding, whereas others will require the development of new skills
- KM reiterated the WEM Reform Training Skills Ladder which emphasises building the skills cumulatively and at the right time [Slide 35]
 - Socialisation - raising awareness of new rules, procedures and systems
 - Education - provide stakeholders with an understanding - WRIG-IT and technical showcases
 - Familiarisation - structured testing with working components - sandbox environment supported by walk through guides
 - Formal Training – involving detailed step-throughs of new systems and processes, both individually and in groups
 - Scenario-Based Training session - parallel operational practice environment, building confidence, simulations, end-to-end scenario testing,
 - Post GO-Live On-demand video walk-throughs
- KM spoke to the key training themes [Slide 36]]
 - How the Market Works
 - What our Projects are Delivering
 - How to use our Products
- Next KM used the RTMS Project as an example to illustrate AEMO's training approach, in particular to show when in the project life cycle, these different training elements are being deployed. [Slide 37]
 - Initially the project spent 5 months on planning, scoping and resourcing – this stage was very internally-focussed.
 - During the elaboration and preliminary testing stage of the project, socialisation started, with RTMS sharing details with participants through WRIG-IT
 - Then, through June, July and August, RTMS undertook extensive engagement with stakeholders through WRIG-IT, seeking to educate participants with detailed explanations of the schema, the web services, validation rules and the UI.
 - In September/October, Primer training will be undertaken in preparation for participants having access to the API and the UI in a Market Test environment, which allows participants to start familiarising themselves.
 - In the case of RTMS, because the project delivers substantially in advance of the start of the Market Trial stage, AEMO envisages running “refresher training” prior to Market Trial, giving participants formal training in how to use the UI; understand any changes to RTMS schema, UI, API or validation rules.
 - Finally the Market Trial stage will provide all participants with the opportunity for end-to-end testing and to confirm that they can interact successfully with the fully integrated Security-Constrained Economic

	<p>Dispatch solution (which includes RTMS). This will include scenario-based training and multi-party test exercises.</p> <ul style="list-style-type: none"> • KM showed AEMO’s current timeline for developing a Formal Training Plan (Slide 38), which comprises: <ul style="list-style-type: none"> ○ Discovery: conducting impact assessments and training needs analysis and seeking feedback from participants ○ Analysis: defining skills gaps, KSAs and creating training stories / journeys ○ Planning: the detailed training program and calendar specifying what, when and how to train participants ○ Proposal: presenting to WRIG a detailed training proposal including a training calendar ○ Design: commencing formal training modules and designing materials ○ Announce: calling for participants to register with the AEMO Learning Management System for e-learning and facilitated training sessions. ○ Deliver: delivering training to required specifications as systems are developed. ○ Market Trial: coordinating end-to-end scenario testing and training. • Finally KM gave a short overview of learning theory as a precursor to requesting feedback from participants on their respective learning styles and hence preferences for training modes. The four main styles highlighted were: <ul style="list-style-type: none"> ○ The Activist – emphasising learning through concrete experience ○ The Reflector Activist – emphasising learning through reflective observation ○ The Theorist - Activist – emphasising learning through abstract conceptualization ○ The Pragmatist Activist – emphasising learning through Practical experimentation • Details for a Slido survey were provided and participants were requested to indicate their training preferences to inform AEMO’s training design.
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WEM Procedure Updates (Rebecca Petchey)

<p>AEMO SLIDE DECK</p>	<ul style="list-style-type: none"> • Rebecca Petchey (RP) gave an overview of the CRC WEM Procedure, focussing on the 2021 Reserve Capacity Cycle, noting that her presentation would not cover the approach to linearly capacity derating, which will be covered at the next WRIG. • RP noted that the Certified Reserve Capacity (CRC) process determines the quantity of capacity that can be delivered during peak periods and this process is changing in several important ways, in particular: <ul style="list-style-type: none"> ○ Expressions of Interest (EOI) for all new facilities or upgrades must be submitted before applying for CRC. ○ Assessment completed at a Component level. ○ New methodology (Linearly Derating Capacity) for Electric Storage Resources (ESR). • AEMO must take a staged approach to amending the procedure because the rules are coming through in tranches. It will, therefore, develop and consult on at least two versions of the Procedure. <ul style="list-style-type: none"> ○ Key changes in 2021 will be: the ESR methodology, the introduction of facility components and the mandatory EOI requirement; ○ Key changes in 2022 will be the removal of the concepts of a <i>Constrained Access Facility</i> and <i>Constrained Access Entitlement</i> and the introduction of the concept of <i>Network Augmentation Funding Facilities</i>. • The commencement dates for the two versions of the Procedure are: <ul style="list-style-type: none"> ○ 1 November 2021 for the 2021 Reserve Capacity Cycle version. ○ 1 March 2022 for the 2022 Reserve Capacity Cycle version. ○ AEMO intends to release the 2021 Reserve Capacity Cycle version for consultation in September 2021. ○ The 2022 Reserve Capacity Cycle version is expected to be released for consultation in early 2022. • RP then gave further details on the 2021 Reserve Capacity Year version of the procedure • Prerequisites for the 2021 Reserve Capacity Cycle – new Facilities and upgrades <ul style="list-style-type: none"> ○ Any person intending to apply for CRC for a new Facility or upgrade must submit an EOI. Window closes on 16 August 2021 ○ AEMO will complete an Indicative Facility Class/Indicative Facility Technology Type assessment in accordance with the WEM Procedure: Indicative Facility Class and RCM Facility Class assessment. ○ The project proponent must become a Market Participant and create the new Facility in WEMS Registration at least 10 Business Days before the opening of the CRC window (1 December 2021). • The Application process will: <ul style="list-style-type: none"> ○ Include new arrangements for “Components”, where Component means a part of a Facility that is either an Electric Storage Resource, an Intermittent Generating System, or a Non-Intermittent Generating
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	<p>System. Each Facility that is not a Demand Side Programme must consist of at least one component, where each component is subject to a different certification methodology.</p> <ul style="list-style-type: none"> ○ Require Market Participants to submit all information required under clause 4.9.3 and 4.10.1 for the relevant Facility Class/Facility Technology Type for each Component. ○ Require some information at a Facility level (e.g. network access arrangements). <ul style="list-style-type: none"> ● RP stepped through the component-specific assessments that would apply in various cases (see Slide 7 of the AEMO Slide Pack): <ul style="list-style-type: none"> ○ Where the Facility Class (or IFC) is a Scheduled Facility or a Semi-Scheduled Facility and the Component is a Non-Intermittent Generating System then the Certification method will be: Capability at 41°C ○ Where the Facility Class (or IFC) is a Scheduled Facility or a Semi-Scheduled Facility and the Component is a Intermittent Generating System then the Certification method will be: Relevant Level Methodology (RLM) ○ Where the Facility Class (or IFC) is a Scheduled Facility or a Semi-Scheduled Facility and the Component is a Electric Storage Resource then the Certification method will be: Linearly Derating Capacity ○ Where the Facility Class (or IFC) is a Non-Scheduled Facility and the Component is a Non-Intermittent Generating System, or a Intermittent Generating System, or a Electric Storage Resource then the Certification method will be: RLM ○ Where the Facility Class (or IFC) is a Non-Scheduled Facility comprising only Electric Storage Resources and the Component is a Electric Storage Resource then the Certification method will be: LDC (if not in operation for the full period under step 1(a) of Appendix 9) ○ Where the Facility Class (or IFC) is a Demand Side Programme and the Component is a NA – assessed as a Facility then the Certification method will be: Relevant Demand ● RP concluded by noting further changes to the procedure: <ul style="list-style-type: none"> ○ Inclusion of a section to specify factors AEMO will take into account when deciding eligibility for Early CRC (e.g. requirement for infrastructure or specialist labour). ○ Moving outage rate calculation formulae from the Power System Operation Procedure: Facility Outages, into the CRC WEM Procedure. ● Next Steps <ul style="list-style-type: none"> ○ AEMO will present on the Linearly Derating Capacity methodology for Electric Storage Resources at the next WRIG. ○ Aiming to release the 2021 Reserve Capacity Cycle version for consultation shortly afterwards in September
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Next Steps (Marius Kovler)

<p>19</p>	<ul style="list-style-type: none"> ● MK gave an overview of the next steps: <ul style="list-style-type: none"> ○ Next WRIG 9:30am Thursday 2 September 2021 ○ Next WRIG-IT meetings scheduled: <ul style="list-style-type: none"> ● 5 August 2021: DSP schema and Web Services updates ● 19 August 2021: Consultation on Developer Support ● 26 August 2021: Submission validation rules and Market Participant testing ○ Readiness Working Group #4 scheduled for 17 August.
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