



## Minutes

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| <b>Meeting Title:</b> | Essential System Services Framework Review Working Group (ESSFRWG) |
| <b>Date:</b>          | 6 November 2024  |
| <b>Time:</b>          | 3:00pm – 4:02pm  |
| <b>Location:</b>      | Online, via TEAMS  |

| Attendees           | Company                                  | Comment |
|---------------------|--|---------|
| Dora Guzeleva       | Chair, Energy Policy WA (EPWA)           |         |
| Alex Gillespie      | Australian Energy Market Operator (AEMO) |         |
| Christopher Wilson  | AEMO                                     |         |
| Oscar Carlberg      | Alinta Energy                            |         |
| Andrew Scarfone     | AGL                                      |         |
| Dimitri Lorenzo     | Bluewaters Power                         |         |
| James Eastcott      | Clean Energy Council                     |         |
| Julian Fairhall     | Economic Regulation Authority (ERA)      |         |
| Bronwyn Gunn        | EPWA                                     |         |
| Shelley Worthington | EPWA                                     |         |
| Noel Schubert       | Expert Consumer Panel                    |         |
| Ali Kharrazi        | GHD                                      |         |
| Christian Schaefer  | GHD                                      |         |
| Paul Espie          | GHD                                      |         |
| Jesse Singh         | GHD                                      |         |
| Dennis Stanley      | GHD                                      |         |
| Daniel Cooper       | GDD                                      |         |
| Mark Lee            | GridBeyond                               |         |
| Mark McPartland     | Nomad Energy Pty Ltd                     |         |
| Sean Lim            | Shell Energy                             |         |
| Graeme Ross         | Simoca                                   |         |
| Bobby Ditric        | Summit Southern Cross Power              |         |
| Brad Huppertz       | Synergy                                  |         |

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|-----------------|-------------------|----------------|
| Rhiannon Bedola | Synergy           |                |
| Peter Huxtable  | Water Corporation | Left at 3.30pm |
| Mark McKinnon   | Western Power     |                |
| Reece Tonkin    | Woodside          |                |

## No Apologies

### 1. WELCOME

The Chair opened the meeting with an Acknowledgement of Country. The Chair noted there were additional members added to the Essential System Services (ESS) Framework Review (the Review) Working Group (ESSFRWG) since the papers went out and asked members to note the Competition and Consumer Law obligations circulated with the meeting agenda.

### 2. INTRODUCTIONS AND ATTENDANCE

The Chair invited members of the ESSFRWG to briefly introduce themselves.

### 3. ESSENTIAL SYSTEM SERVICES FRAMEWORK REVIEW

The Chair opened the discussion noting that:

- The Coordinator of Energy (Coordinator) is required by Section 3.15 of the Wholesale Electricity Market (WEM) Rules to undertake a review of the Essential System Services (ESS) Process and Standards within two and a half years of new WEM commencement.
- The focus of the Review will be on whether the ESS Standards and requirements are consistent with the WA State Electricity Objectives. This includes determining whether the ESS requirements in the WEM are set at their most efficient level and whether the ESS quantities that are dispatched to meet those requirements are being efficiently and effectively procured and scheduled, while maintaining security and reliability of supply at the lowest cost to consumers.
- A Frequency Co-optimised Essential System Services (FCESS) Cost Review has just been finalised, which was initiated in response to concerns about the unexpectedly high ESS costs since new WEM commencement on 1 Oct 2023.
- The FCESS Cost Review had a short timeframe and therefore did not address matters such as forecasting accuracy or whether the FCESS requirements are set at an efficient level. As such, this Review under section 3.15 has been brought forward to enable these matters to be considered.
- The Market Advisory Committee (MAC) supported the Scope of Work for the Review and established this working group. EPWA appointed GHD to provide technical analysis and support to the Review. AEMO will also support the Review.

The Chair presented slide 5 – ESSFRWG Terms of Reference noting that:

- Following discussion with the working group on policy matters, Energy Policy WA would consult with the MAC, publish a public Consultation Paper on policy proposals, consider submissions, develop an Information Paper and any WEM Amending Rules (if necessary).
- The ESSFRWG would generally meet every 4-6 weeks, or more often as required.

- It is important that the ESSFRWG come prepared for meetings in order to have fulsome discussion and analysis.
- Input and analysis provided by working groups in other reviews has been extremely useful.
- Mr Carlberg noted that the Review appears focused on process, standards and requirements and asked if other aspects, such as cost allocation or accreditation, would be considered.

The Chair explained that there had been a recent Cost Allocation Review and that, if new cost allocation issues were identified in this process, they would be logged and dealt with separately. With regard to accreditation, she noted that there is accreditation to provide ESS as well as accreditation for generators to be exempt from the requirement to pay for ROCOF, and that the former is within the scope of this Review and the latter is a cost allocation matter and is, therefore, out of scope.

- Mr Carlberg acknowledged the approach.

The Chair noted that Mr Huxtable had left the meeting.

Mr Schaefer presented slide 7 (GHD: Key Team Members)

Mr Schaefer introduced his team as presented on slide 7, noting that the team was made up of members throughout Australia and the UK.

Mr Kharrazi presented slide 8 (project scope) and 9 (project stages). He noted that:

- a combination of technical and economic analysis will be undertaken to assess the operation of the current ESS process, Standards and requirements;
- the assessment of the SESSM will be a desktop review because the mechanism has not yet been triggered; and
- throughout all of the Review stages there would be stakeholder engagement.

Mr Kharrazi presented slides 10 and 11 – Stage 1 Scope. He noted that detailed analysis will be undertaken on ten significant market events – this may include (for example) the largest frequency disturbance or Contingency Event, or periods during which market prices were significantly higher than average. This analysis will include looking at whether frequency is maintained consistent with the Frequency Operating Standard, and whether there are any constraint equations related to the FCESS market, such as Oscillation Control Constraint Equations.

Mr Kharrazi presented slide 12 – Economic Analysis.

- Mr Carlberg noted the need to:
  - be mindful of the differences in the market pre- and post- 1 October 2023 in the economic analysis, noting in particular that post new-WEM commencement Synergy's facility bidding is more cost reflective than in the previous portfolio approach, and that the ESS requirements are probably more reflective of the true requirements now;
  - account for any potential impacts following the commencement of the WEM Amending Rules set out in Schedule 2 of the WEM Amendment (FCESS Cost Review) Rules 2024 on 20 November 2024; and
  - consider different categories of costs, noting that cost that each type of Market Participant pays is different, for example:
    - plant that sets the highest contingency is often exposed to much more significant costs; and

- certain technologies are most exposed to certain costs, for example synchronous generators that run a lot are more exposed to ROCOF costs.

The Chair clarified that the focus for the Review was a comparison of the relevant ESS requirements before and after the start of the new market and what the relevant cost drivers are. The Chair confirmed that the Review will not revisit cost allocation.

- Mr Ditric asked if the intent was to consider what the cost of the requirements should be, taking into account the current technology and demand in the WEM. Mr Ditric noted that uplift payments were driving much of the cost in the WEM. Mr Ditric noted that it was his understanding that WEM Dispatch Engine (WEMDE) was, to an extent, limited in terms of co-optimisation and sought to clarify whether the economic analysis would take into account those WEMDE limitations.

Mr Schaefer:

- agreed with the Chair that the Review was not intended to review the cost, rather the factors that have the greatest impact on costs.
- noted that GHD would consider the operation of WEMDE with the assistance of AEMO, and that the focus of the analysis would be on when scarcity, high demand or other factors drive quantities, thereby increasing costs.
- confirmed the focus would be on the period from 1 October 2023 until present time.

The Chair agreed with Mr Schaefer and noted that the relevant WEM rules guide the Review and require sensitivity analysis on the effects of increasing or decreasing the requirements and assessing the effect of this on the overall cost and outcomes.

- Mr Fairhall noted that Regulation was the only service that was analogous between the new market and the old market and that Spinning Reserve and Load Rejection Reserve were both administered pricing mechanisms. He noted that the ERA had undertaken modelling to support the Spinning Reserve and Load Rejection Reserve cost determinations and was happy to share that with GHD. Mr Fairhall added, with regard to comparing Load Following Ancillary Services (old market) and Regulation (new market), that the way the services were actually dispatched made it very difficult to accurately measure how much of what was scheduled was actually used.

The Chair clarified that the intent was not to compare costs for any of those services between the old market and new, but rather the requirements for those services.

Mr Schubert:

- suggested that the Review considers:
  - how the participation of generators in the SWIS can be optimised noting that, if generators were contributing to Regulation services through an automatic response, then less would need to be dispatched;
  - the ability of inverter based resources to provide a fast frequency response; and
  - the current accreditation rules to determine if there are any impediments to intermittent generators providing ESS, such as Contingency Raise and Lower services.
- noted that there was scope to introduce more competition in the provisions of these services and added that generators did not necessarily have to be dispatched by Automatic Generator Control but could be automatically controlled.

The Chair noted that Mr Schubert comments raised three different points:

- why more generators are not accredited to provide the services;
- the ability to provide services by automatic response in a self-commitment market and the compensation that would apply;

- the efficiency of multiple facilities providing a small service amount (1-2 MW) at any one time.

The Chair noted that the FCESS Cost Review had recently introduced a new tiebreaking rule to avoid numerous facilities being dispatched for small quantities, for the same service, as this was not an efficient outcome.

- Mr Schubert agreed and noted that, with regard to automatic response, facilities do not need to be dispatched to provide the service but can be configured to automatically respond to frequency excursions. Mr Schubert noted that he was puzzled why the WEM was reliant on just a few generators for system security, particularly in the transition toward a power system that will be increasingly dominated by variable renewables and demand.
- Mr Schubert considered that in light of the increasing variability, in order to achieve a robust system, it would seem important to have more generators that are online automatically responding to frequency variations, to the extent of their differing ability to do so, as part of their primary frequency response. This is the case in small, isolated grids where a single power station is solely responsible for managing frequency and reliability in the face of all faults and contingencies. All online generators automatically respond, which provides a more robust response.

Mr Schaefer noted that Mr Schubert raised a good point, adding that GHD had some experience in assisting the Australian Energy Market Commission with a Rule Change Proposal on mandatory primary frequency response, triggered by excessive use of Regulation. He agreed that variable renewable generation can respond (subject to energy availability) very quickly and noted that this could be considered as discussion progressed.

- In response to Mr Schubert's point on accreditation, Mr Wilson advised that the Kwinana Battery Energy Storage System was currently accredited for both Regulation and Contingency in both directions.

The Chair noted that more competition as a result of this Review would be a very good outcome, but that there was a process to follow and various things to consider, including accreditation, provision of services, how many facilities actually provide services in real-time and ensuring the mechanism does not become inefficient.

- Mr Epsie added that there was a Generator Performance Standard (GPS) component as well and that there is trade-off between mandated automatic response from plant as part of GPS, over which there is limited visibility and control, and primary frequency response. He noted that this is an area in which the rules in all jurisdictions are just catching up with the technology capabilities and is an area that will continue to evolve over time.
- Mr Carlberg agreed with Mr Ditric that uplift payments should be incorporated, noting that high additional RoCoF requirements have driven high uplift payments.

The Chair confirmed that the ESS requirements, including those for RoCoF, were within the scope of the Review. She noted that the rules have just been changed to address the high uplift payments and this would not be revisited as part of this Review.

Mr Epsie provided a brief overview of slide 13 (jurisdictional comparison) and noted that most jurisdictions are making changes to their ESS regimes based on increasing renewables and advised that GHD would be looking into other jurisdictions to compare different procurement approaches and uncover any learnings that are relevant for the WEM.

The Chair noted that the Review timeline was included on slide 17.

No further slides were discussed at the ESSFRWG meeting due to time constraints.

#### **4. GENERAL BUSINESS**

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No general business was discussed.

## **5. NEXT STEPS**

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The Chair advised that the next meeting would be scheduled once some analysis had been completed and closed the meeting.

**The meeting closed at 4:02pm.**