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| Request for Expressions of Interest –System Restart Service – Wholesale Electricity Market |

20 December 2019

Important notice

PURPOSE

AEMO has prepared this document to invite Rule Participants to provide Expressions of Interest regarding the possible provision of a System Restart Service in the Wholesale Electricity Market in Western Australia, commencing from July 2021.

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Executive summary

This Request for Expressions of Interest (REOI) invites Rule Participants to provide information to the Australian Energy Market Operator (AEMO) regarding the possible provision of a System Restart Service (SRS) in the Wholesale Electricity Market in Western Australia, commencing from July 2021. AEMO invites Expressions of Interest (EOIs) from Rule Participants regarding the possible provision of SRS in the North Metropolitan and/or South Metropolitan subnetwork areas of the South West interconnected system (SWIS).

EOIs, with accompanying supporting documentation, are due to be submitted to AEMO by **5:00 PM** (Australian Western Standard Time) on 31 January 2020**.**

AEMO proposes to carry out a competitive tender process for SRS commencing in early 2020. Rule Participants who submit EOIs will receive all information and updates relating to the tender process. Rule Participants who elect not to submit EOIs will not be excluded from participating in the tender process but are requested to notify AEMO of their intention to participate by 31 January 2020, so that the relevant administrative processes can be completed to enable them to receive an invitation to tender document.

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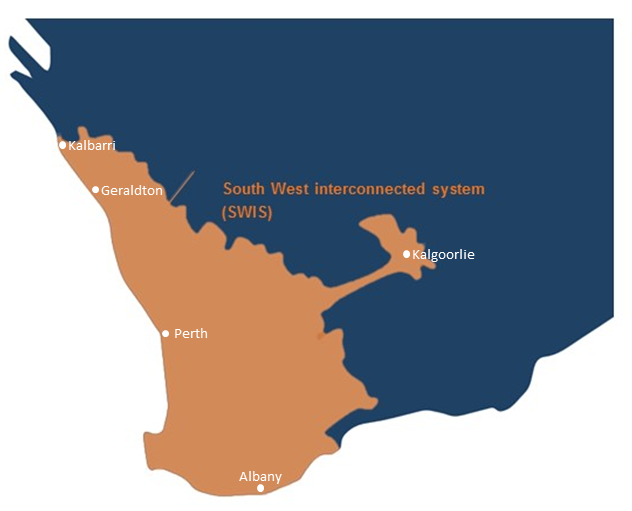
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# Introduction

This Request for Expressions of Interest (REOI) relates to the Wholesale Electricity Market (WEM) that operates in relation to the South West interconnected system (SWIS) in Western Australia. The SWIS covers the south-west area of Western Australia, extending north to Kalbarri, south to Albany, and east to Kalgoorlie, as shown in Figure 1 below.

Capitalised terms in this document have the meaning given in the Wholesale Electricity Market Rules (WEM Rules) unless otherwise stated.

1. Map of the South West interconnected system



## System Restart Service

Clause 3.11.8A of the WEM Rules states that AEMO may enter into an Ancillary Service Contract with a Rule Participant for the provision of a Load Rejection Reserve Service, **System Restart Service** or Dispatch Support Service.

AEMO invites Rule Participants to submit Expressions of Interest (EOIs) regarding the possible provision of a System Restart Service (SRS), commencing from July 2021, for the purpose of:

* assisting AEMO in identifying Rule Participants who are interested in participating in a competitive tender process to provide SRS in the North Metropolitan and/or South Metropolitan subnetwork areas of the SWIS.
* conducting a preliminary assessment of those Rule Participants’ ability to meet the relevant technical criteria for the provision of SRS.

AEMO has identified a need for SRS in the areas shown in Figure 2 below, which correspond to the North Metropolitan and South Metropolitan subnetwork areas of the SWIS. It is expected that this need will exist for a minimum period of five years. However, a Rule Participant may indicate a different period and the reasoning for this different period, in its EOI.



1. SWIS – areas with identified need for SRS

# EOI requirements

## Submitting an EOI

To submit an EOI regarding the possible provision of SRS, commencing from July 2021, a Rule Participant is required to provide the following:

* A completed EOI form for each Facility, available in Appendix A1 of this REOI.
* Relevant supporting documentation, as desired.

The proponent’s EOI must be submitted by **5:00 PM (Australian Western Standard Time)** on **31 January 2020**.

EOI forms must be submitted electronically via email to [**TenderBox@aemo.com.au**](mailto:TenderBox@aemo.com.au), with ‘WEM System Restart Service’ in the subject line.

## SRS procurement

Clause 3.11.9(b) of the WEM Rules requires AEMO to consider using a competitive tender process when it intends to enter into an Ancillary Service Contract, unless AEMO considers that this would not meet the requirements of clause 3.11.9(a).[[1]](#footnote-2) Step 5.1.4 of the Power System Operation Procedure: Ancillary Services relevantly states that, when AEMO uses a competitive tender process, AEMO must use all reasonable efforts to maximise the number of potential providers of the relevant Ancillary Service, including seeking expressions of interest, such as under this REOI process.

**AEMO proposes to carry out a competitive tender process for SRS, commencing in early 2020. The tender process, not this preliminary REOI process, will be used to award Ancillary Service Contracts. Accordingly, this REOI process is for informational purposes only and is not binding on any party. AEMO is under no obligation to take any action in relation to EOIs that it receives in response to this REOI.**

# General information

## SRS payments

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| Payments for SRS are likely to include three components, which are anticipated to be reflected in Ancillary Service Contracts (if awarded):   * Availability component – where a SRS provider is compensated for making its generating unit available for the provision of SRS (and, in this context, SRS will be taken to be unavailable during periods of Planned Outages, Forced Outages, Consequential Outages and Commissioning Tests); * Utilisation component – where a SRS provider is compensated for actual services provided during a black start event; * Testing component – where a SRS provider is compensated for demonstration and validation of its ability to provide SRS. |

## Requirements to provide SRS

Clause 3.9.8 of the WEM Rules states that SRS is the ability of a Registered Facility which is a generation system to start without requiring energy to be supplied from a Network to assist in the re-energisation of the SWIS in the event of system shut-down.

An Ancillary Service Contract for SRS will include the following requirements:

* General Requirements:
  + Facilities must be connected to a transmission or distribution system; and
  + The SRS provider must be (or intend to be) registered as a Market Participant under the WEM Rules.
* Communication Requirements:
  + Be available for 24 hours per day, 7 days per week (except when on an Outage)
  + Notify AEMO of all Planned Outages, Consequential Outages and Forced Outages.
  + Be connected to Western Power’s SCADA system and be visible and controllable by AEMO.[[2]](#footnote-3)
  + Be capable of receiving and responding to Dispatch Instructions and Operating Instructions issued by AEMO.
* Technical and Operational Requirements:
  + Have a minimum Facility size of 20MW real power capacity.
  + Ability to start the Facility when isolated with no support from the grid (SWIS).
  + Ability to energise the restart path and maintain voltages within the limits specified in the Technical Rules.
  + Ability to accept instantaneous loading of block loads and control frequency and voltage levels within acceptable limits during the block loading process.
  + Ability to provide sequential system restarts to allow for tripping of the transmission elements during the restart process.
  + Have adequate backup fuel supplies to enable the power station to run after being called upon by AEMO.
  + Ability to provide SRS at all times except for periods when the Facility is on a Planned Outage or carrying out a Commissioning Test,

Note that more detailed technical and operational requirements will be included as part of the tender process. The provision of SRS does not exempt the Rule Participant’s Facility from fulfilling its obligations under the Technical Rules.

Any planned or unplanned unavailability of SRS will be required to be communicated to AEMO, as per the Power System Operation Procedure: Facility Outages.

# Procurement Timetable

The proposed timetable for the SRS procurement process is shown in Table 1 below.

1. Procurement of System Restart Service - timetable for the Wholesale Electricity Market

|  |  |  |
| --- | --- | --- |
| Date | Time | Action |
| 20 December 2019 | 5:00 PM | AEMO publishes REOI. |
| 31 January 2020 | 5:00 PM | Closing date for EOI submissions. |
| Early 2020 | TBA | AEMO will initiate the tender process for SRS. |

1. Expression of Interest form

**Important Note: As part of an EOI submission, please provide any additional accompanying documentation and relevant information (as desired) that supports the information provided, in addition to the completed EOI form. Note: it is not mandatory to provide additional accompanying documentation and relevant information.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Overview** | | **Response** | |
| Market Participant | |  | |
| Contact person | |  | |
| Contact person’s position | |  | |
| Address of company | |  | |
| ABN | |  | |
| Phone | |  | |
| Email | |  | |
| **General** | | **Option** | **Response** |
| Describe your level of interest in participating in the procurement of System Restart Services (SRS) | | Low/Medium/High |  |
| Which SWIS subnetwork area would you be interested in providing SRS to? | | Specify substation that generator is connected to |  |
| Does your company have experience of providing SRS? | | Yes / No |  |
| If Yes, please provide details of the service? | |  |  |
| Does your Facility require capital upgrades to provide SRS? | | Yes / No |  |
| If Yes, please briefly outline the required upgrades. | |  |  |
| The target timeline for the commencement of SRS is 1 July 2021.  Do you foresee any issues with meeting the timeline? | | Yes / No |  |
| If Yes, please explain why and give an indicative timeline when your Facility can be ready to provide SRS. | |  |  |
| Are you interested in future SRS opportunities in other areas of the SWIS? | | Yes / No |  |
| **Technical capability** | | **Response** | |
| Name of Facility | |  | |
| Main generator unit fuel type  (state both fuel types if dual) | |  | |
| Black start unit fuel type | |  | |
| Is the black start unit connected at the same substation as the main generator? | |  | |
| If not, please state the connection point of the black start unit. | |  | |
| Maximum real power capacity (MW) for continuous operation | Summer |  | |
| Winter |  | |
| Maximum reactive power capability (MVAr) for continuous operation | Summer | Maximum MVAr export: | |
| Maximum MVAr import: | |
| Winter | Maximum MVAr export: | |
| Maximum MVAr import: | |
| Does the Facility currently provide other Ancillary Services? If Yes, please state the ancillary service. | |  | |
| Is the Facility staffed or not (Yes/No) | |  | |
| What is the minimum response time within which your Facility can respond when called upon by AEMO to provide SRS? | |  | |
| What is the synchronisation time from when the system restart sequence has been initiated by AEMO? | |  | |
| Maximum instantaneous network feeder block loading capability (MW)\* | |  | |
| Maximum power station auxiliary motor block loading capability (MW) | |  | |
| Minimum stable load (MW) | |  | |
| Facility’s frequency continuous operating range (Hz) e.g. 47-52Hz | |  | |
| Maximum number of sequential restarts\*\* | |  | |
| Maximum duration of backup fuel supplies (days)\*\*\* | |  | |
| Minimum annual service availability (%) | |  | |
| Is the Facility capable to operate in both isochronous and droop mode? | |  | |
| \*This is the maximum instantaneous block load that the Facility is able to supply.  \*\*This is the maximum number of times the Facility can sequentially attempt to energise the restart path or pick up a block load.  \*\*\*This is the maximum number of days of uninterrupted operation at the contracted capacity from the time the service is called upon by AEMO. | | | |

1. References, measures and abbreviations

#### Units of measure

|  |  |
| --- | --- |
| Abbreviation | Unit of measure |
| Hz | Hertz |
| MW | Megawatts |
| MVAr | Megavars |

#### Abbreviations

|  |  |
| --- | --- |
| Abbreviation | Expanded name |
| AEMO | Australian Energy Market Operator |
| EOI | Expression of Interest |
| REOI | Request for Expressions of Interest |
| SRS | System Restart Service |
| SWIS | South West interconnected system |
| WEM | Wholesale Electricity Market |

1. Clause 3.11.9(a) requires AEMO to seek to minimise the cost of meeting its obligations under clause 3.12.1. Those obligations are to schedule and dispatch facilities (or cause them to be scheduled and dispatched) to meet the Ancillary Service Requirements in each Trading Interval in accordance with Chapter 7 of the WEM Rules. [↑](#footnote-ref-2)
2. Facilities that do not provide SRS will not have all the SCADA points required for the service. Additional SCADA points specific to SRS will be specified at the tendering stage. [↑](#footnote-ref-3)