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Request for Information – Non-market Ancillary Services – Absorbing reactive power support

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| **Project:** | Non-market Ancillary Services – Absorbing Reactive Power Support |
|  |  |
| **AEMO Project Manager:** | Name: Natasha Thompson  Senior Engineer, Planning  Email: natasha.thompson@aemo.com.au |
|  |  |
| **Closing Date:** | Responses due by 5.00 pm (Melbourne time) 13 August 2018  Responses to be returned to the AEMO Project Manager. |
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1. INTRODUCTION
   1. About AEMO

Australian Energy Market Operator Limited (AEMO) is an independent organisation responsible for operating eastern, south-eastern and western energy markets and systems in accordance with the National Electricity Rules, National Gas Rules, Wholesale Electricity Market Rules and Gas Services Information Rules.

In addition to the day-to-day management of wholesale and retail energy market operations, AEMO operates the power system for the National Electricity Market (NEM) and the Victorian gas declared transmission system, is the energy market operator and power system operator for the South West Interconnected System in Western Australia, and undertakes ongoing market development and long-term system planning.

In Victoria, AEMO also plans and procures services for the operation and development of the shared electricity transmission network, and provides shared transmission services to network users.

With its broad national focus for the future, AEMO’s objectives are to promote efficient investment in and operation of Australia’s electricity and gas services for the long-term interests of consumers with respect to price, quality, safety, reliability and security of energy supply.

* 1. Request for Information

AEMO is currently conducting a Regulatory Investment Test – Transmission (RIT-T) to identify the preferred option, network or non-network, for maintaining voltages within operational and design limits during low demand periods. The Project Specification Consultation Report (PSCR) for the Victorian Reactive Power Support RIT-T was published on 15 May 2018. This Request for Information (RFI) seeks non-network options to relieve the high voltages in the Victorian transmission network during low demand periods.

Recipients of this RFI are invited to submit a proposal to AEMO for the provision of the following:

* Non-market Ancillary Services (NMAS) from NEM registered participants with generating units, dispatchable load, storage or any other equipment located around Moorabool, South Morang, Geelong, Sydenham or Keilor terminal stations that have the capability to be dispatched to suppress high voltages during low demand periods.

AEMO intends to use the Proposals to identify potential investment options for the Victorian Reactive Power Support Regulatory Investment Test – Transmission (RIT-T).

* 1. Glossary

The following definitions apply to the terms listed below:

|  |  |
| --- | --- |
| **Term** | **Definition** |
| **Addendum** | Any document issued after the date of this Request for Information and labelled as an “Addendum” to this Request for Information; collectively known as “Addenda”. |
| **AEMO** | Australian Energy Market Operator Limited ABN 94 072 010 327. References to AEMO include, where the context requires, AEMO’s employees, officers, contractors, consultants, advisers and other persons authorised to act for AEMO. |
| **AEMO Project Manager** | The person specified on the cover of this RFI. |
| **Closing Date** | The date specified on the cover of this RFI. |
| **Proposal** | The proposal submitted by a Recipient in response to this RFI. |
| **Recipient** | Any person in receipt of this RFI. |
| **Services** | The services described in **Section C3.** |

1. ABOUT THIS REQUEST FOR INFORMATION
   1. Legal Status

Neither this RFI (comprising this document, its schedules and attachments, and any Addenda), nor a Proposal submitted by a Recipient, has any contractual effect. AEMO is not obliged to complete the process outlined in this RFI or to acquire any Services. AEMO may change the process or the description of the Services outlined in the RFI at any time by issuing an Addendum to Recipients.

* 1. Confidentiality

This RFI may contain confidential information about AEMO or its operations or markets, and is provided solely to enable Recipients to submit Proposals. Recipients must not use information in this RFI for any other purpose without AEMO’s prior written consent. Recipients must take all reasonable steps (both physically and electronically) to protect the confidentiality of this RFI and all communications relating to it.

* 1. Intellectual Property Rights

### Unless otherwise indicated in this RFI, AEMO owns the intellectual property rights in this RFI. Recipients are permitted to use and copy this RFI for the purposes of submitting a Proposal.

* 1. No Warranty

Except to the extent required by law:

* AEMO makes no warranties or representations about the accuracy, adequacy or completeness of the RFI or other information provided to Recipients.
* AEMO is not liable in any way for any loss or damage of whatever kind (whether foreseeable or not) however arising (including, by reason of any negligence), incurred by any person in connection with this RFI or other information provided by AEMO in relation to the Services.
  1. Requests for Further Information

Recipients must address any queries or clarification requests to the AEMO Project Manager by email at natasha.thompson@aemo.com.auat least 10 days before the Closing Date. AEMO may issue an Addendum to all Recipients in response to that query or request.

AEMO is willing to meet with individual Recipients to clarify aspects of this RFI provided that:

* + Meetings are requested at least 14 days before the Closing Date.
  + There can only be one meeting per Recipient.
  + Recipients accept that, after any meeting, AEMO may issue an Addendum to all Recipients if issues raised at the meeting indicate a need to clarify this RFI.

No representation or explanation to Recipients as to the meaning of this RFI is taken to be included in this RFI unless it is contained in an Addendum.

1. SERVICES DESCRIPTION
   1. Need for Services

Studies have confirmed that there is a need for absorbing reactive power which can suppress the high voltages in the Victorian transmission network during low demand periods.

This need is driven by recent changes to the network operating conditions, as well expected changes in the planning timeframe, including:

* The closure of Hazelwood Power Station in March 2017, which removed 1,600 megawatts (MW) of brown coal generation capacity, together with its reactive power capability to regulate voltage.
* The reduction in operational demand during light load conditions and the predicted shifting of minimum operational demand time to middle of the day. The occurrence of these two phenomena is predicted to accelerate in the near future, mainly due to continued growth in rooftop solar PV installations.
* The expected increase in penetration of large-scale renewable generation and withdrawal of thermal power generating units will need non-synchronous generation replacing synchronous generation. If not managed, this transition will result in a reduction in overall reactive power capability in the transmission network due to the generally lower reactive capability of non-synchronous generation.
* Retirement of reactive power plant in Victoria, which was used for voltage support and control.
* Closure of Point Henry Smelter.

In addition to conventional network options to suppress high voltage, by use of reactive power plant such as reactors, SVC’s or synchronous condensors, non-network options, including demand response, load shifting and co-ordinated charging of decentralised storage during periods of low demand will equivalently increase the demand in Victoria thereby reducing the high voltages and the need for network options.

For the current Victorian Reactive Power Support Regulatory Investment Test – Transmission (RIT-T), AEMO have completed the first stage which is the Project Specification Consultation Report (PSCR)[[1]](#footnote-2) which was published on 15 May 2018.

AEMO is seeking information and proposals for Non Market Ancilliary Services (NMAS) from NEM registered participants with:

* grid-connected generating units with an absorbing reactive power capability higher than the requirement stipulated in the agreed performance standards that have the capability to provide additional absorbing reactive power; or
* dispatchable load, storage or any other equipment that have the capability to be dispatched or provide additional absorbing reactive power

to suppress high voltages during low demand periods in Victoria to facilitate the analysis of potential solutions in the RIT-T.

* 1. Description of Services

Power system studies have identified that the most effective locations for additional reactive power or dispatchable load, storage or any other equipment capable of managing high voltage issues in the Victorian transmission network are Moorabool Terminal Station, followed by South Morang Terminal Station, Geelong Terminal Station, Sydenham Terminal Station and Keilor Terminal Station. Other less effective locations may also be considered.

The NMAS would be required to suppress high voltages in the Victorian transmission network when dispatched by AEMO during periods of low demand.

This can be done, but is not limited to, generators providing absorbing reactive power, using dispatchable load or energy storage capacity.

The NMAS must be able to meet the minimum requirements in Section C.3.

AEMO is planning for the services to be available by December 2019.

* 1. Minimum Requirements

The proposed services must:

1. be able to be remotely dispatched using SCADA;
2. have a response time of 15 minutes or less;
3. meet the following requirements and acceptance criteria:

| Requirement | Description | Acceptance Criteria |
| --- | --- | --- |
| Response time | Time taken to provide the NMAS from the receipt of a request from AEMO. | Up to 15 minutes |
| Duration | Continuous time that NMAS may be provided. | 1 hour minimum |
| Minimum level | Minimum level of the NMAS | - 5 MVAr or eqivalent |
| Maximum level | Maximum level of reactive power producing capability for all units offered. | - 800 MVAr or eqivalent |

1. Proposal Requirements and Evaluation
   1. Submitting a Proposal

A Proposal must meet the following requirements:

* The form of Proposal must follow the structure and include the information requirements in **Section E**.
* If the Recipient cannot provide any of the required information, the Recipient must state this in the proposal, with reasons.
* The person submitting the Proposal must be authorised to do so on behalf of the Recipient.
* The Proposal must be submitted electronically in MS Word or Adobe PDF format.
* The Proposal and any additional supporting information the Recipient considers is necessary to understand the Proposal, must be sent by email to the AEMO Project Manager by 5:00pm (Melbourne) on the Closing Date.

AEMO may, at its absolute discretion, accept or exclude late or non-conforming Proposals.

* 1. Recipients to Perform Own Due Diligence

By submitting a Proposal, a Recipient is taken to have:

* satisfied itself of the requirements of this RFI;
* made all reasonable enquiries, investigation and assessment of available information relevant to the risks, contingencies and other circumstances relating to the Services; and
* Satisfied itself as to the correctness and sufficiency of its Proposal.
  1. Proposals Commercial-in-Confidence

AEMO will retain all Proposals lodged as a result of this RFI and may copy and distribute Proposals for the purposes of evaluation.Proposals will be treated as confidential and will not be disclosed outside AEMO unless it is:

* required by law, or in the course of legal proceedings;
* requested by any regulatory or other government authority having jurisdiction over AEMO, or its activities; or
* to AEMO’s external advisers, consultants or insurers.
  1. No Reimbursement of Costs

No Recipient is entitled to be reimbursed for any expense or loss incurred in the preparation and submission of its Proposal or for any costs incurred in attending meetings with AEMO during the Proposal evaluation process.

* 1. No Publicity

Recipients must not make any public or media announcement about this RFI or the outcome of this RFI without AEMO’s prior written permission.

* 1. No Anti-Competitive Conduct

Recipients must ensure that they (and their officers, principals, employees, agents and contractors) do not:

(a) discuss this RFI with any other person they know has received this RFI or might reasonably be expected to have received this RFI; or

(b) engage in any conduct that is designed to, or might have the effect of, lessening competition in the supply to AEMO of the Services.

* 1. Proposal Evaluation

AEMO’s assessment of Proposals will be in line with the requirements for a RIT-T, as outlined in the National Electricity Rules.

* 1. No Obligation to Debrief

AEMO is under no obligation to debrief any Recipient as to AEMO’s evaluation of Proposals, or give any reason for the acceptance of or non-acceptance of any Proposal.

* 1. Timetable

This timetable is provided to give Recipients an indication of the anticipated timing for the RFI process:

|  |  |
| --- | --- |
| Milestone | Date |
| Request for Information released | 12 July 2018 |
| Proposals received | 5:00pm, 13 August 2018 |
| Decision as to proposal | 10 September 2018 |

1. STRUCTURE AND CONTENT OF PROPOSAL

Recipients must supply the information set out below in this Section E and any associated attachments. Proposals should be in the form specified in this section. Any assumptions made should be clearly stated in the Proposal. AEMO reserves the right to verify claims made in any Proposal. Any material misstatement of experience or capability is likely to result in exclusion from the RIT-T analysis.

Section I: Overview

1. Provide the following organisational information:
2. Name of Company (the entity who would enter into any contract for the Services if awarded);
3. Contact name;
4. Address;
5. Telephone number;
6. Facsimile number;
7. E-mail address;
8. Company registration number;
9. Date of registration;
10. Jurisdiction (place) of registration
11. Website address.
12. Provide a brief introduction of your organisational team, including:
13. Brief background of your organisation, and the business unit (if applicable) that would provide the Services.
14. Your proposed project team, identifying any third parties that may be involved and what roles they would have.

Section II: Your services

1. State your experience delivering services with requirements similar to those outlined in this RFI and provide client references and contact details.

Section III: Your services

1. Describe in detail your methodology or approach to providing the proposed Services
   1. This should be in either word or PDF format.
   2. Include a time frame for delivery of the proposed service.
   3. Include details of AEMO and other support requirements for stage of the service.
   4. Including any prerequisites to enable the supplier to commence work.
   5. Indicate how long will it take for your company to be set up and ready to provide goods/services to AEMO
   6. How much of the work is performed at your site? The client’s site? Other sites?
2. Describe in detail how your Proposal meets the requirements for the Services and meet or exceed any applicable standards. Describe any additional services you may be able to provide that would be relevant to AEMO
3. Describe the average annual availability of the Services, and the likely availability.

Section IV: Statement of Costs

1. Provide an indicative statement of costs for the Proposal, and identify the error band. Any assumptions or exceptions must be clearly identified.

Section V: Confirmation of Timelines

1. Confirm your ability to commence the provision of the Services within the timeframes identified in this RFI, or identify any contingencies, dependencies or extensions that apply.

Section VI: Additional Information

1. State whether the provision of the proposed Services to AEMO may give rise to a potential conflict of interest for your organisation or any key personnel.
2. Provide a high level overview of your Project Management and Quality Assurance methodologies. This should be limited to two pages.
3. Provide details of any other experience or information you feel may be relevant. This should be limited to two pages.

1. https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/Victorian-transmission-network-service-provider-role/Regulatory-investment-tests-for-transmission [↑](#footnote-ref-2)