

Short Term Forecasting Funding Announcement

ARENA is seeking expressions of interest (EOI) for projects able to demonstrate five-minute ahead forecasting for Market Semi-scheduled¹ wind and solar generation in the National Electricity Market (NEM). Applicants will be required to submit forecasts into a new IT interface² to be deployed by the Australian Energy Market Operator (AEMO) in 2018 that will facilitate self-forecasting by wind and solar Market Semi-scheduled Generators. Through supported projects, ARENA will explore the value proposition for Market Semi-scheduled Generators to invest in forecasting approaches.

EOIs are due **5pm AEST Wednesday 9 May 2018**.

ARENA will assess applications for funding under its Advancing Renewables Program (ARP) and this Funding Announcement should be read in conjunction with the ARP Guidelines. ARENA invites organisations with projects that fit within the scope described below to lodge an EOI through the [ARENANet Grants Management System](#).

Key Information

Activity scope	<p>ARENA is seeking proposals for projects that contribute to the short term forecasting initiative by:</p> <ul style="list-style-type: none"> ● Demonstrating ability for Market Semi-scheduled Generators to submit five-minute self-forecasts via AEMO's web based application programming interface (API) ● Demonstrating the ability for self-forecasting to be more accurate than the equivalent forecast produced by the Australian Wind Energy Forecasting System (AWEFS) or Australian Solar Energy Forecasting System (ASEFS) ● Exploring the potential commercial benefits for Market Semi-scheduled Generators of investing in forecasting approaches ● Examining factors that affect the accuracy of the forecasting approach trialed. e.g. in different weather, operational conditions or geographies ● Improving the commercial and technical readiness of forecasting providers and technologies ● Contributing to industry knowledge sharing
Project attributes	<p>This funding announcement is seeking projects that include the following attributes:</p> <ul style="list-style-type: none"> ● at least one Market Semi-scheduled Generator (wind or solar)

¹ Market, Semi-scheduled generator as defined by AEMO:

http://www.aemo.com.au/-/media/Files/Electricity/NEM/Participant_Information/Participant-Categories-in-the-NEM.pdf

²<http://www.aemo.com.au/Stakeholder-Consultation/Industry-forums-and-working-groups/Other-meetings/Market-Participant-5-Minute-Self-Forecast>

	<p>operating in the NEM wholesale market from July 2018</p> <ul style="list-style-type: none"> • can provide five-minute ahead generation forecasts • can comply with data standards, as determined by AEMO, in order to integrate into the specified API <p>Please note that consortiums are welcome to submit an EOI. The consortium may include multiple generators, forecasting technologies or other participants but there must be a single lead applicant.</p> <p>ARENA may also consider different innovative projects that advance approaches to forecasting (e.g. a data science and machine learning competition to test short-term forecasting approaches).</p>
Timeframes	<ul style="list-style-type: none"> • EOI submissions open: 28 March 2018 • EOI submission close: 9 May 2018 5pm AEST <p>EOIs may be submitted prior to the closing date and will be assessed as received. ARENA will notify applicants that have been successful at the EOI stage by 14 June 2018 and invite them to submit a Full Application.</p>
EOI assessment process	<p>EOIs will be assessed against the Merit Criteria as specified under the ARP Guidelines and with regard to the information contained in this Funding Announcement (note: each Merit Criterion will be weighted equally).</p> <p>Only EOIs that are assessed as being of overall high merit against the ARP Merit Criteria will be invited to submit a Full Application.</p>
Funding Agreement	<p>ARENA proposes to use the template Funding Agreement which is published on the ARENA website and available at https://arena.gov.au/funding/programs/advancing-renewables-program/</p> <p>Please note that the Funding Agreement template is subject to change; the final template version will be confirmed by ARENA to successful EOI applicants.</p>
'Out of scope' or ineligible projects	<p>As the Advancing Renewables Program is always open for submissions, high merit EOIs deemed 'out of scope' under this announcement may be directed to submit under normal ARP conditions. Contact proposals@arena.gov.au for more information on this option.</p> <p>Applications that are not of high merit will not be assessed further under any program by ARENA.</p>

Demonstrating merit in ARENA’s grant application process

The table below provides examples to show how you can demonstrate your short term forecasting project (or Activity) meets the ARP merit criteria. Applications must clearly address each of these merit criteria. This guidance should be read alongside the [ARENANet application form](#) and [ARP Guidelines](#).

ARP merit criterion	How the criterion applies to this funding announcement
<p>A – Contributes to the Program Outcomes (clauses 1.5, 3.3 and 3.4 of the ARP Program Guidelines)</p>	<p>This criterion assesses how well the proposed project contributes to the ARP Program Outcomes, taking into account the investment priorities in the ARENA Investment Plan and any relevant funding announcement documentation (<i>such as this document</i>).</p> <p>You can demonstrate merit against this criterion by describing:</p> <ul style="list-style-type: none"> (a) how your proposed forecasting approach is expected to improve on the accuracy of the unconstrained intermittent generation forecasts (UIGF) created through the Australian Wind Energy Forecasting System (AWEFS) or Australian Solar Energy Forecasting System (ASEFS) (b) your approach to validating the self-forecast and measuring its degree of accuracy (c) how your proposed approach is novel, whether it is a first-of-a-kind approach, or how the approach builds on existing work or techniques used in Australia or overseas (d) a credible path to commercialisation or wider market adoption of your proposed approach. Evidence of credibility could include interest from, or involvement of, one or more end users of the proposed approach.
<p>B - Applicant capability and capacity (clauses 3.5 and 3.6 of the ARP Program Guidelines)</p>	<p>This criterion assesses your capability and capacity, as well as that of any Activity partners to, deliver the Activity. You should refer to the ARP Guidelines for further information.</p> <p>Applications which include a Market Semi-scheduled Generator and the other Project Attributes defined above will be considered of higher merit.</p>
<p>C – Activity design, methodology, risk and compliance (clauses 3 .7 and 3.8 of the ARP</p>	<p>This criterion assesses the Activity design and implementation approach, as well as risk and compliance matters. Applicants are requested to specifically address:</p> <ul style="list-style-type: none"> (a) their ability to collaborate with AEMO to enable forecasting data to be integrated via the application programming interface (API) (b) provide an overview of any cybersecurity risks, and associated mitigation

<p>Program Guidelines)</p>	<p>(c) outline any scheduled maintenance to the generator, and the risk of unscheduled outages in associated generating units in the operating period of the project</p> <p>You should refer to the ARP Guidelines for further information.</p>
<p>D – Financial viability and co-funding commitment (clauses 3.9 and 3.10 of the ARP Program Guidelines)</p>	<p>This criterion assesses your financial capacity to deliver the Activity and whether the amount of ARENA funding sought and the total cost of the Activity are appropriate. You should refer to the ARP Guidelines for further information.</p> <p>You may wish to demonstrate merit against this criterion by describing the improvement in forecasting accuracy against the level of investment required.</p> <p>If you have received funding from any other government or regulatory sources you should demonstrate the need for additional funding from ARENA.</p>
<p>E – Knowledge sharing (clauses 3.11 and 3.12 of the ARP Program Guidelines)</p>	<p>This criterion assesses the knowledge generated by the Activity in contributing to the ARP Outcomes.</p> <p>Applicants are also requested to outline the type of data that will be made available, and the ability of the applicant to collaborate with ARENA, AEMO and their knowledge-sharing partners.</p> <p>You can demonstrate merit against this criterion by describing:</p> <ul style="list-style-type: none"> (a) the value of the knowledge expected to be generated by the Activity and its contribution to industry understanding of short term forecasting accuracy; (b) the types of data, including forecasting, generation, accuracy and performance data, that will be made available to AEMO, ARENA and other industry stakeholders as part of the project; and (c) how knowledge and insights generated from your project will be shared with relevant audiences.