

## **Demand Response Competitive Round FAQ's**

Version 2

22 June 2017

### ***What is demand response?***

Demand response (**DR**) involves paying energy users - including commercial, industrial and residential consumers - to reduce energy consumption, free up stored supply or switch to distributed generation when reserve capacity falls to critically low levels.

Please refer to the ARENA DR Competitive Round Funding Announcement (**Funding Announcement**) for a formal definition and technical requirements to participate in the DR Competitive Round (**Competitive Round**).

### ***What does DR have to do with renewable energy?***

ARENA and AEMO have developed the Competitive Round to drive innovation in grid management, particularly in the current context of increasing output from variable renewable energy generators. A flexible and responsive set of demand side resources will be integral to managing an energy system increasingly powered by renewable energy.

The Competitive Round supports ARENA's investment priority of delivering secure and reliable energy by encouraging innovation in managing the electricity system with an increased proportion of renewables.

### ***How much DR reserve is ARENA seeking?***

The Competitive Round seeks to demonstrate approximately 100 megawatts (**MW**) of reserve capacity which can be called upon during grid emergencies and extreme peak demand days in order to avoid involuntary load shedding.

### ***When can I apply?***

The Competitive Round will be open for applications from 8 June 2017 and will close at 5pm AEST on 10 July 2017 (**Application Due Date**). Applications will not be accepted after the Application Due Date.

### ***How do I apply?***

All applications for funding must be made through [ARENANet](#), ARENA's online application portal.

A checklist of supporting documents which must be included in your application is provided in Attachment A of the Funding Announcement.

***What are the DR product specifications?***

ARENA is seeking applications that will deliver one of two standard products:

- Product 1: 60 minute notification
- Product 2: 10 minute notification

Note that ARENA requires separate applications for each product.

The full list of product specifications is set out in [Attachment C of the Funding Announcement - Product Scope and Specification](#). The specification covers items such as notification time period, duration of DR events, availability periods, and activation triggers.

***Are there size limits on the reserve offered under the Competitive Round?***

A minimum reserve of 5MW in year one in a single national electricity market (NEM) region may be offered by applicants. The smallest increment of capacity above this minimum is 1MW. This means that ARENA could fund an activity with 6MW of DR capacity, but one with 5.5MW would be treated as 5MW of capacity.

ARENA will not provide funding for more than 30MW of reserve per annum across the NEM:

- (i) per applicant; or
- (ii) if any related parties of the applicant are successful in the Competitive Round, per applicant and any related parties of the applicant,

including where an applicant and any related parties have submitted more than one application under the Competitive Round.

***Can we scale up the reserve amount provided over time? Can we bid 0MW of reserve in the first year of the ARENA Funding Agreement?***

ARENA will allow recipients of funding under the Competitive Round to vary the volume of reserve offered across the three years of their Funding Agreement. However, applicants must have at least 5MW of reserve capacity in one NEM region in the first year of their proposed activity.

***What happens if we deliver more reserve than contracted?***

Where an applicant is successful under the Competitive Round, ARENA will provide funding for reserve up to the level indicated in the applicant's funding application. If an activity subsequently delivers more reserve than was agreed under the ARENA Funding Agreement, ARENA will not provide additional funding.

***How is ARENA assessing the different DR Products?***

All applications will be assessed against ARENA's Advancing Renewables Program (ARP) merit criteria. The ARP Guidelines are available [here](#). The Funding Announcement provides further clarification of the merit criteria in section 7.

In order to make a fair comparison of applications that involve different product specifications, ARENA requires separate applications for each product type (Product 1 being for 60 minute DR notification and Product 2 being for 10 minute DR notification), noting that the minimum reserve threshold of 5MW still applies for each project.

***Is there any technology that is ineligible?***

The Competitive Round is open to a wide range of DR technologies and methods including DR aggregators, smart thermostats, battery storage and behavioural demand response projects.

To be eligible, the DR reserves:

- may involve aggregation of one or more customer loads across multiple sites within a NEM region;
- must be distribution system-connected unscheduled customer load;
- must be metered by a Type 1-4 Meter, or a Victorian AMI meter; and
- can involve use of a generator which is behind the meter, but:
  - cannot be a generator earning the NEM wholesale price; and
  - cannot be contributing to a small generation aggregator portfolio.

Projects will not be eligible for ARENA funding if they involve:

- reserves consisting of more than 20% fossil fuel generation; or
- new, or newly rented fossil fuel generators.

***What's the relationship between ARENA and the Short Notice RERT?***

ARENA funding will be provided to support technology for energy users to become demand response-enabled, including metering, monitoring, storage and distributed generation equipment and other set up costs. ARENA requires that any successful applicant under the Competitive Round enter into a Reliability and Emergency Reserve Trader (**RERT**) Panel Agreement with the Australian Energy Market Operator (**AEMO**) and be on standby to provide emergency DR services.

Where AEMO determines, using market forecasts, that it should procure reserve capacity within the next seven days, AEMO can tender for capacity from the members of the RERT Panel. If DR providers are activated, AEMO will also pay for usage through its existing Short Notice RERT scheme (**SN RERT**) under a SN RERT Reserve Contract.

In addition to delivering DR, recipients of ARENA funding must share data, lessons learnt, insights and knowledge from their DR activity to ARENA and AEMO.

Further detail is set out in [Attachment D - RERT Panel Agreement](#) of the Funding Announcement and the Knowledge Sharing Discussion Paper.

### ***What is the interaction between the ARENA Competitive Round and AEMO's Long Notice RERT?***

AEMO is currently running a parallel process for procurement under its Long Notice RERT (LN RERT). Applicants are welcome to apply under both the ARENA DR Competitive Round and LN RERT, however successful applicants under the ARENA DR Competitive Round would not be considered under the LN RERT. AEMO will have access to information on all applications (successful or otherwise) that ARENA receives. AEMO may choose to enter into discussion with unsuccessful applicants under the ARENA Competitive Round about participating in the LN RERT.

### ***How will I get paid?***

ARENA funding will be provided to successful applicants as set out in the Funding Agreement. In summary ARENA will pay:

- 5% of the total grant amount on execution of Funding Agreement;
- 25% of the total grant amount on completion of initial testing and satisfaction of all other conditions precedent in Funding Agreement; and
- 6 monthly installments paid in arrears comprising:
  - performance amount - a variable amount linked to testing results and activation performance; and
  - knowledge sharing amount - fixed at Funding Agreement execution.

If a recipient's reserves are activated by AEMO through the SN RERT Panel, the recipient will also be paid a usage charge by AEMO through its standard settlement process.

### ***Can applicants provide DR services to other parties during the period in which they are contracted with ARENA?***

Yes, except that during a period in which a SN RERT Reserve Contract is in place, a Recipient of ARENA funding cannot be providing the same DR capacity to any other party through any other mechanism or market (including the NEM spot market and ancillary services market).

### ***Can we change the customers in our aggregated portfolio? What about changing the technologies involved?***

ARENA recognises that in an aggregated portfolio the underlying customers may change over time. ARENA requires that recipients notify us of changes as set out in the Funding Agreement. However, while there can be changes to the customers in a recipient's portfolio there can be no material changes to the types of technologies delivering DR, or the customer types (ie. industrial, commercial or residential) represented in the activity.

ARENA wants to ensure that where it funds an activity involving a particular technology or customer type, the recipient delivers that technology or customer type.

### ***Is ARENA looking for DR activities in specific locations?***

Applications from all NEM regions are eligible, however, ARENA will take into account the

likelihood of an activity contributing reserves in a NEM region that is experiencing or is forecast by AEMO to experience reserve shortfalls.

Applicants should refer to AEMO’s [Energy Supply Outlook](#) reports, as well as public announcements on any forecast reserve shortfalls. AEMO has indicated forecast shortfalls in Victoria (up to 600MW) and South Australia (up to 70MW) for summer 2017/18.

***When considering applications, will ARENA take into account the Usage Charge under the RERT arrangement?***

The Usage Charge is a \$/MWh payment for DR payable by AEMO and available upon activation under the SN RERT mechanism. For load reduction, this is calculated as the reduction in energy usage by the relevant load. Aside from the requirement that the Usage Charge must not exceed \$1,000/MWh, ARENA will not take the proposed Usage Charge into account when assessing applications.

The table below outlines how ARENA would evaluate two hypothetical applicants’ pricing for ARENA funding where their applications otherwise score equally against the merit criteria. It shows that ARENA would rank Applicant B more highly than Applicant A because, despite Applicant A having a lower AEMO Usage Charge, Applicant B proposes a lower amount of ARENA funding in relation to the volume of Demand Response services provided.

Applicant	ARENA Funding (\$/MW/year)	AEMO Usage Charge (\$/MWh)	Merit criteria assessment	Overall ARENA ranking
A	\$100,000	\$500	High merit	2nd
B	\$50,000	\$900	High merit	1st

When considering whether to activate reserves on its RERT Panel, AEMO will take into account the cost of activation and therefore applicants are encouraged to consider the Usage Charge bid in the context of likelihood of being deployed.

***What does ARENA do to establish that the reserve is available?***

Evidence that DR reserve is available must be established for each 6 month payment period. The testing process is set out in [Schedule E - Testing, Activation and Settlement](#) of the Funding Announcement.

Evidence of reserve must be established for each 6 month payment period. This may be achieved by activation under a SN RERT Reserve Contract or by testing. Where evidence of reserve is not obtained by activation within the relevant test window, projects must request testing by AEMO in accordance with the testing provisions in the RERT Panel Agreement.

Testing will be coordinated by AEMO and results will be made available to ARENA. Each test will last for a period of up to 2 hours, with notification and other requirements as per the product specifications detailed in the Funding Announcement.

***How will ARENA and AEMO know if load has actually been reduced in a DR activation?***

The DR program under the Competitive Round will utilise a baseline methodology that seeks to represent what would be expected to have happened without a DR event. The delivered reserve provided by the DR is based on the difference between the baseline and the actual metered consumption.

The baseline calculation methodology can be found in [Attachment F - Baselines](#) of the Funding Announcement.

***What happens if the reserve is not available when called?***

The Funding Announcement provides an overview of the consequences of a failure to deliver its contracted reserve during an AEMO activation. Please refer to the Funding Agreement and RERT Panel Agreement for further detail.

***How many consecutive days can reserve be activated?***

There is no limit on consecutive days that DR reserves can be activated by AEMO. However, as per the product specifications (set out in [Attachment C - Product Scope and Specifications](#) of the Funding Announcement) AEMO may only activate reserves on business days and a maximum of 10 activations per year.

***How do I provide feedback on the Funding Agreement and Knowledge Sharing Plan?***

ARENA is seeking feedback on the Template Funding Agreement and Knowledge Sharing Plan by 5pm AEST on 16 June 2017. ARENA will then review the feedback and where appropriate incorporate into the final documents which will be released on 23 June 2017.

***Do I need to submit an Expression of Interest to AEMO for the purpose of applying to the SN RERT Panel***

Applicants under the Competitive Round are not required to submit a separate expression of interest to AEMO for the purpose of applying to the SN RERT Panel. However applicants should notify AEMO of their intention to apply for Competitive Round funding if they have already submitted an expression of interest for the SN RERT Panel prior to submitting their application under the Competitive Round.

***Can a spot exposed customer, or an activity providing network support participate in the DR Competitive Round?***

Yes. However, participants in the SN RERT Panel should be aware of the restrictions on use of reserves in multiple markets. During the period for which reserve is contracted under a SN RERT Reserve Contract, it cannot also be:

- offered to the market through other means; or
- be subject of any offers, bids, or payments

Participants should note that a SN RERT Reserve Contract formed under the SN RERT Panel Agreement will be in place for a maximum of 7 days. Outside the period of the SN RERT Reserve Contract, DR providers are free to participate in other markets.

***What if a portfolio of reserve is dominated by thermal load reduction and cannot deliver the same reserve in summer and winter?***

The two testing periods allow for the contracted reserve to be adjusted to reflect the seasonal capability. The customer or representative aggregator can also choose to replace the thermal load with load reduction capabilities from an alternative industry/technology to ensure it meets its contracted amount year-round. Applicants should signal this intent in their application so that ARENA is aware of the type of demand response it is funding.

***Given the short period to submit an application, is ARENA seeking from applicants an indicative portfolio composition, without any need for letters of intent from customers that may become part of the program?***

Merit criterion C relates to activity design, methodology, risk and compliance (clauses 3.7 and 3.8 of the ARP Program Guidelines). In assessing an application against this merit criterion, ARENA will consider the likelihood of the applicant delivering the proposed reserve by the 1 December 2017 commencement date. This includes consideration of the extent to which the the applicant has engaged with potential providers of reserve (e.g. end-use consumers). Finalised contracts, letters of intent, and demonstration of a robust customer acquisition process are examples of evidence demonstrating varying levels of capability against this assessment criteria.

***Can ARENA clarify the degree of uncertainty it would find acceptable where an applicant might need to undertake customer acquisition to meet the full DR potential? It might be the case that some innovative DR is not available until customer internal approval is achieved. For most commercial and industrial customers this approval may not be achieved until firm costs and benefits are set out in a business case, which will be after the DR tender is due.***

Answer as per the question immediately above.

***On page 6 of the funding announcement document ARENA mentions that the limit for using industrial customers is 50%:***

***Since the limit for usage of fossil fuel generators is up to 20%, we could have a portfolio with 50% industrial loads and 20% of existing backup generators, as long as the latter weren't installed in industrial customers. Is this correct?***

The 50% limit on industrial loads relates to the entire ARENA portfolio. This limit does not preclude a single application being comprised of 100% industrial load, or the use of diesel generators at an industrial customer site.

If a diesel generator is installed at an industrial customer site, then this would be considered an industrial customer for the purposes of assessing merit criterion A.

***What do you consider industrial customers?***

For the purposes of the Competitive Round, industrial customers are defined as industries that fall under ANZSIC codes B, C, D and E. For a complete list of industries that fall under this classification please refer to the following link:

<http://www.abs.gov.au/ausstats/abs@.nsf/0/20C5B5A4F46DF95BCA25711F00146D75?openDocument>

***What do you consider residential customers?***

For the purposes of the Competitive Round, a residential customer is as per the definition in the [National Energy Retail Rules](#) and means a person who purchases energy principally for personal, household or domestic use at their premises.

***Is an application that has previously received ARENA funding eligible for funding under the Competitive Round?***

If the Activity proposed under the Competitive Round is related to a project or activity which previously received funding, the proposed Activity would be eligible so long as ARENA funds are not utilised for the same purpose previously funded. For example, if ARENA contributed to the deployment of behind-the-meter storage, then this storage could form part of an application, subject to it meeting the other criteria set out in the Funding Announcement.

***Could you please advise the level of accuracy required for costs and expenditure in the budget for more innovative DR response mechanisms, given the timeframe of the tender?***

ARENA requires a fixed funding request amount to be included in all applications. Where there are uncertainties regarding final costings of different elements of a project, the assumptions and inputs put forward to ARENA must represent best estimates and must have a reasonable basis. ARENA is aware that there may be inherent uncertainty, however, where there are assumptions made please set out the basis on which these have been made.