**evolve DER Project**

* <https://arena.gov.au/projects/evolve-der-project/>

**$4.29m** Funded by ARENA

**$12.94m** Total project cost

* **Lead Organisation** Zeppelin Bend Pty Ltd

**Location** Australian Capital Territory, New South Wales, Queensland

* **Start Date** February 2019
* **Project Partners** The ANU, Energy Queensland, Ergon Energy, Energex, Essential Energy, Endeavour Energy, Ausgrid, Reposit Power, Evergen, Redback Technologies, SwitchDIn, NSW Government

**Summary**

The *evolve* DER project aims to increase the network hosting capacity of distributed energy resources (DER) by maximising their participation in energy, ancillary and network service markets, while ensuring the secure technical limits of the electricity networks are not breached.

**How the project works**

The *evolve* DER project by [Zeppelin Bend](http://zepben.com/) is a collaboration between industry, academia and government. It has a strong focus on the development of working software systems that will be integrated with the operational technologies used by distribution networks, and the systems used by aggregators to manage [DER](https://arena.gov.au/renewable-energy/distributed-energy/) under their control. Through multiple demonstrations and trials, the *evolve* project will develop new algorithms and capabilities to identify and ease congestion within the distribution network. This will be achieved through the calculation and publication of operating envelopes for all DER connected to the distribution network.

**Area of innovation**

The primary innovation of the *evolve* project will be to demonstrate scalable capabilities and systems for coordinating DER throughout the distribution network. These capabilities are important for the development the Distribution System Operator (DSO) function within the electricity system. To support this, advances in data ingestion, forecasting and analysis will be demonstrated so the solution can be deployed in practical terms.

**Benefit**

The *evolve* project will show how more customers can connect solar PV and storage to the distribution network. This could mean that envisaged limitations of DER connection to electricity networks will be relaxed. In future, the *evolve* project could also support increased uptake of electric vehicles without major investment in the network poles and wires. Ultimately, this project will develop technologies that will allow distribution networks to *evolve* with the changing mix of renewables and DER.

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Last updated 17 January 2020

**This project consists of:**

* [**Distributed energy resources** (Primary)](https://arena.gov.au/renewable-energy/distributed-energy-resources/)

[**Resources**](https://arena.gov.au/projects/evolve-der-project/)

* [ARENA media release 11/02/19](https://arena.gov.au/news/distributed-energy-projects-awarded-nearly-10-million/)

[**Contact**](https://arena.gov.au/projects/evolve-der-project/)

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We do this by funding projects and sharing knowledge that drives innovation and commercialisation of renewable energy technologies.

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