



Media Release

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NT study finds reliable way to feed extra solar PV into the grid

The Australian Renewable Energy Agency (ARENA) today released a study that shows how up to 10MW of extra solar photovoltaic (PV) could be installed in the Alice Springs grid without adversely affecting supply stability.

ARENA CEO Ivor Frischknecht said this additional PV would make a sizeable difference to the Alice Springs grid, which currently has 4.1MW of solar and a peak load of almost 55MW in summer.

“The findings of this study are timely and show how more solar PV could be reliably introduced into Australian electricity networks,” Mr Frischknecht said.

“ARENA provided \$242,625 towards the study which was conducted by Northern Territory (NT) engineering company CAT Projects, and investigated the impact of large amounts of solar PV on electricity grids and how to effectively manage it.

“One of the challenges involved in increasing grid-connected solar power in Australia is how to best manage the local weather impacts, such as cloud cover.

“CAT Projects used a network of solar monitoring stations to estimate the maximum number of solar power generators that can be connected to the Alice Springs electricity grid without energy storage.

Mr Frischknecht said the study found that dispersing solar PV across geographical locations can effectively counteract its variability within a network.

“The study shows that building a larger number of smaller installations and spreading them out, ideally 3-5 kilometers apart in Alice Springs, can reduce the impact of local cloud cover and smooth overall solar energy output,” Mr Frischknecht said.

“This analysis is very relevant to solar projects currently being planned in the NT and elsewhere in Australia, and could allow network planners to increase the amount of solar PV that can be connected to the network.

“The findings should also allow performance-based Power Purchase Agreements to be more accurately formulated, potentially lowering the cost of renewable energy generation.

“Studies like this have a vital role to play in helping to increase confidence in renewable energy, overcoming barriers and encouraging more renewables into electricity grids.”

The study is now publically available in line with ARENA’s commitment to advance competitive renewable energy technologies and solutions through knowledge sharing.

The results are available on www.arena.gov.au/catprojects.

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About ARENA

ARENA was established by the Australian Government to make renewable energy technologies more affordable and increase the amount of renewable energy used in Australia. ARENA invests in renewable energy projects, supports research and development activities, boosts job creation and industry development, and increases knowledge about renewable energy. ARENA is currently supporting more than 200 projects and is actively seeking new projects to support.

About CAT Projects

CAT Projects is an engineering firm that offers services including power systems and renewable energy engineering, advice, project management and feasibility studies. Our work enhances the sustainability of remote and urban communities. CAT Projects is based in Alice Springs and draws on the 30 year heritage of its sole share holder the Centre for Appropriate Technology, the national Aboriginal Science and Technology organisation.