

Opportunities in renewable energy generation and storage

CHEM
NAYAR



Providing reliable and cheap electricity across Western Australia is a fascinating but complex task.

While there are many challenges in reaching customers spread out over thousands of kilometres, the moment

has come to provide the State with more options for renewable energy generation and storage.

A co-ordinated approach to solar energy generation and battery storage is one way to accomplish this.

Over 30 per cent of houses in WA already have solar, and batteries are critical to store our excess solar energy for use at peak times, and to connect Western Australia to a more sustainable energy future.

While residential batteries enable consumers to store extra solar energy and use it later during times of peak energy demand, community batteries benefit everyone.

These would be located where the network must be upgraded to preserve reliability.

The battery absorbs excess solar energy and smooths the flow which improves the quality of power sent to customers.

The key barrier for the widespread usage of batteries has been capital cost.

Rebate programs for battery storage are gaining traction throughout Australia, but not so much in Western Australia.

The next opportunity for the State Government is to consider a home battery subsidy.

In other jurisdictions this has led to savings of up to 80 per cent in electricity costs for the average home.

States such as South Australia, Queensland, and Victoria have battery rebate programs, with residents receiving up to \$5000 for the installation of new lithium-ion battery systems.

This scheme has supported a higher uptake of renewable energy, allowing more homes to install solar panels.

While we have a lot of work to do in renewable energy generation and storage, Western Australia can be proud of how far we've come in a short space of time.

Professor Chem Nayar is Curtin University chair and professor in electrical and renewable energy engineering and a finalist in the West Australian of the Year Award. This week The West Australian has run opinion pieces from some finalists in answer to the question "what is the one thing you would change about WA?"