

## WHY HYDROGEN FROM RENEWABLES MAY HOLD THE KEY TO A LOW-CARBON FUTURE\*

As the world strives to reduce emissions, power generation from renewables has emerged as a front runner in the low-carbon energy transformation. Today, renewables account for around a quarter of global power generation and 167 GW (more than the total installed electricity capacity of Brazil) were installed in 2017. Yet renewable energy's role in sectors such as transportation and industry lags.

While electric vehicle (EV) sales continue to rise (IRENA believes more than one billion EVs may be on our roads by 2050 under a climate-safe path) electrifying transportation beyond cars, buildings and industry is less viable, thus hindering the role renewable energy can play in these sectors. Hydrogen produced by renewable energy may hold the key to successfully overcoming this challenge and reducing end-use emissions.

Launched during IRENA's Innovation Week, the agency's latest technology outlook 'Hydrogen from Renewable Power' outlines the potentially pivotal role hydrogen may play in a deeper energy transition. And, while hydrogen is already widely used in facilities such as chemicals plants and refineries, by switching the fuel used to produce it from hydrocarbons to renewable electricity, it can become a carrier of renewable energy, complementing the role solar and wind play in power production.

Here's why hydrogen could be critical:

- No economically viable option exists to reduce the carbon emissions produced by around one-third of the energy sector.
- Hydrogen from renewable energy can support higher shares of wind and solar energy in power sectors all over the world.
- Hydrogen can take advantage of existing energy infrastructure.
- Fuelled by hydrogen, fuel cell electric vehicles (FCEVs) offer consumers a low emission driving performance similar to a conventional vehicle when the hydrogen is produced from renewable energy sources
- Hydrogen may become a key contributor to a potential 100 per cent renewable energy future.