## How Natural Gas Stabilises Renewable Energy Supply

As the world's population grows and climate change becomes an increasingly real threat, cutting greenhouse gas emissions is a cause we all can and should support. Renewable energy sources are vital to a sustainable future our earth.

But what happens when the sun doesn't shine enough or the wind doesn't blow?



Gas generators, which are inherently flexible technologies that can be easily ramped up and down to meet demand, are natural counterparts for variable resources such as wind and solar."

- The Business Council for Sustainable Energy

Shale gas at low cost can help to create a hybrid system,' whereby more gas-fired power is fed to the grid, supplanting coal, and augmented by wind and solar."

 Adnan Amin, Director-General of the International Renewable Energy Agency

Substantial GHG emissions reductions would be possible if gas was used to provide baseload and peak electrical power generation in Australia under scenarios of higher intermittent renewables energy and gas use."

- Engineering Energy: Unconventional Gas Production, A study of shale gas in Australia, The Australian Council of Learned Academies In the short to medium term, the Australian National Electricity Market is likely to require higher levels of flexible, gas fired generation, which can provide a reliable low emissions substitute for ageing coal fired generation and can provide essential security services to rapidly respond and complement variable renewable electricity generation."

- Scientific Inquiry into Hydraulic Fracturing in the Northern Territory, Final Report

The role that natural gas can play in the future of global energy is inextricably linked to its ability to help address environmental problems... This is especially true given limits to how quickly renewable energy options can be scaled up and that cost-effective zerocarbon options can be harder to find in some parts of the energy system. The flexibility that natural gas brings to an energy system can also make it a good fit for the rise of variable renewables such as wind and solar PV."

- The Environmental Case for Natural Gas, International Energy Agency

