

Hydrogen-Ready Power Generation



The Building Blocks

Delivering a decarbonised and integrated energy system

The decarbonisation of our power system will increase both electricity demand and system flexibility needs. Dispatchable hydrogen-ready power plants complement variable renewables by ensuring that the electricity system remains stable. They balance electricity demand and supply and bring efficiency and flexibility to the system in a sustainable manner.

Leading the transition with hydrogen-ready plants

Until larger shares of hydrogen become available, the hydrogen-readiness of new equipment guarantees that investments in gas power generation are future-proof and do not lead to a carbon lock-in. Different hydrogen-readiness levels may be needed during the transition: the EUGINE & EUTurbines common definition enables having the same understanding among stakeholders.

Recognising the value of hydrogen power plants

EU and national policies should recognise the role of hydrogen power plants in the future integrated energy system by ensuring that power plants have access to hydrogen and that hydrogen power is attractive for investors and power plant operators. At the same time, the future legislative framework should facilitate the quick decarbonisation of the gas network through the ramp-up of hydrogen production.

Making hydrogen power generation a reality

An ambitious timeline for the decarbonisation the electricity system requires the fast availability of hydrogen power plants as reliability insurance. As the gas market decarbonisation policy is evolving, it is essential that the integrated energy system planning adequately considers the needs of the electricity system now, not in 10 years.

The hydrogen-readiness of the technology, the availability of hydrogen for power plants and supportive business models are the essential blocks to make hydrogen power generation a reality:

H2 supply to Power Plants

Access to H2 in sufficient quantities

H2-Ready Power Plants

Future-proof technology

Supportive Business Model

Attractive for investors and power plant operators

Integrated & Decarbonised Energy System