

# The Future of Gas Turbine Technology

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# What challenges face Gas Turbine Technologies ?

## 1. Current and Future Market ?

- Renewables & Storage :
- Coal :
- Nuclear :

## 2. Gas Turbine Challenges ?

- CCGT :
  - Operational flexibility
  - Fuel flexibility
  - High reliability and low lifecycle cost
- Cycle Innovation :

## 3. Expected Technology Advancements ?

- Material :
- Process :

## Post COP 21

Large expansion and reduced costs.

Steady and slowly entering retirement.

Potentially unpredictable.

## High Efficiency & Flexibility

65% efficiency

Turn down, fast-start up and load frequency.

IGCC, Biomass and LPG.

SOFC triple combined cycle.

## TIT > 1,700°C in 2020

Application of CMC and innovative super alloy.

Seal & cooling technology by additive manufacturing.

Asset management by IoT/big data analysis.