



ANSALDO ENERGIA ANSWER TO MARKET CHALLENGES

Speaker:
Luigi Coltelletti
Marketing Director

CUSTOMER DAY - October 4th 2023

Ansaldo Energia for energy transition



Ansaldo Energia for energy transition



Ansaldo Energia offering ranges from **efficient low carbon gas turbine solutions** to **green technologies** and **nuclear applications**
We cover every stage of **design, construction, commissioning** and **service**.

Ansaldo Energia for energy transition

Ansaldo Energia offering ranges from **efficient low carbon gas turbine solutions** to **green technologies** and **nuclear applications**

We cover every stage of **design, construction, commissioning** and **service**.

ansaldo | energia

ansaldo | green tech

ansaldo | nucleare

Ansaldo Energia - Cutting edge technology on gas turbine

High technology product portfolio of gas turbines to fulfill a wide range of market requirements



AE64.3A



AE94.3A



GT36



GT26



AE-T100
Ansaldo Green Tech



AE94.2

Our gas turbines

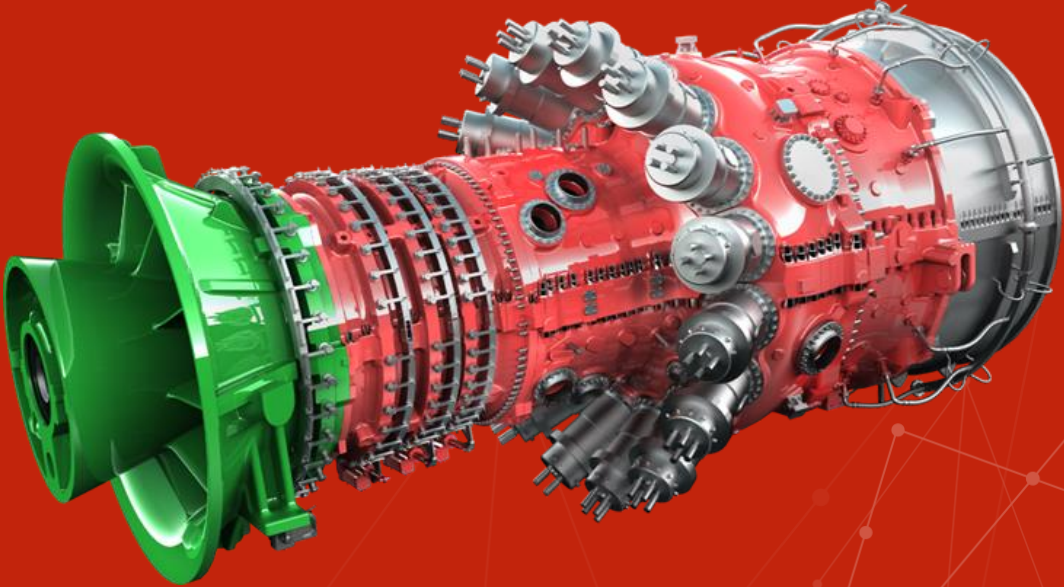
High technology product portfolio of gas turbines to fulfill a wide range of market requirements

H₂ ready to ensure low carbon transition via our unique combustion technologies

High **Flexibility** to cope with volatility of renewables thanks to high ramp rate and very low MEL

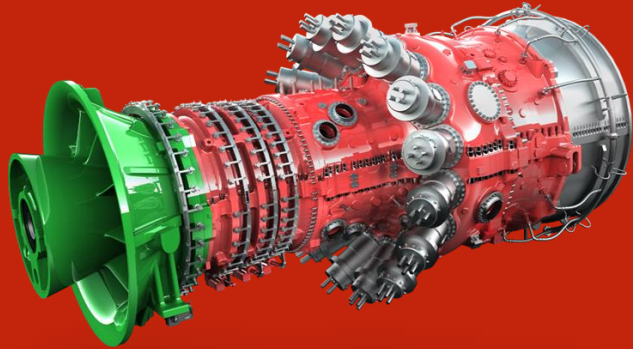
Low **Emissions** to guarantee compliance with the most strict emission standards thanks to high efficiency

The best in class of Ansaldo Energia's portfolio



The best in class of Ansaldo Energia's portfolio

GT36



H₂

Flexibility

Emissions

**Not just new
installations,
we also take
care of
installed
fleets**

H₂

Flexibility

Emissions

**Not just new
installations,
we also take
care of
installed
fleets**

Increase **H₂** capabilities

Improve **Flexibility**

Reduce **Emissions**

**Not just new
installations,
we also take
care of
installed
fleets**

**Part of a wide portfolio of
service solutions**

Performance
Upgrades

Flexibility

Digital

Optimization/
Reliability

**Not just new
installations,
we also take
care of
installed
fleets**

Brindisi case study



Brindisi case study

Increase H2 capabilities



AE94.3A

H₂

2006

2010

2017

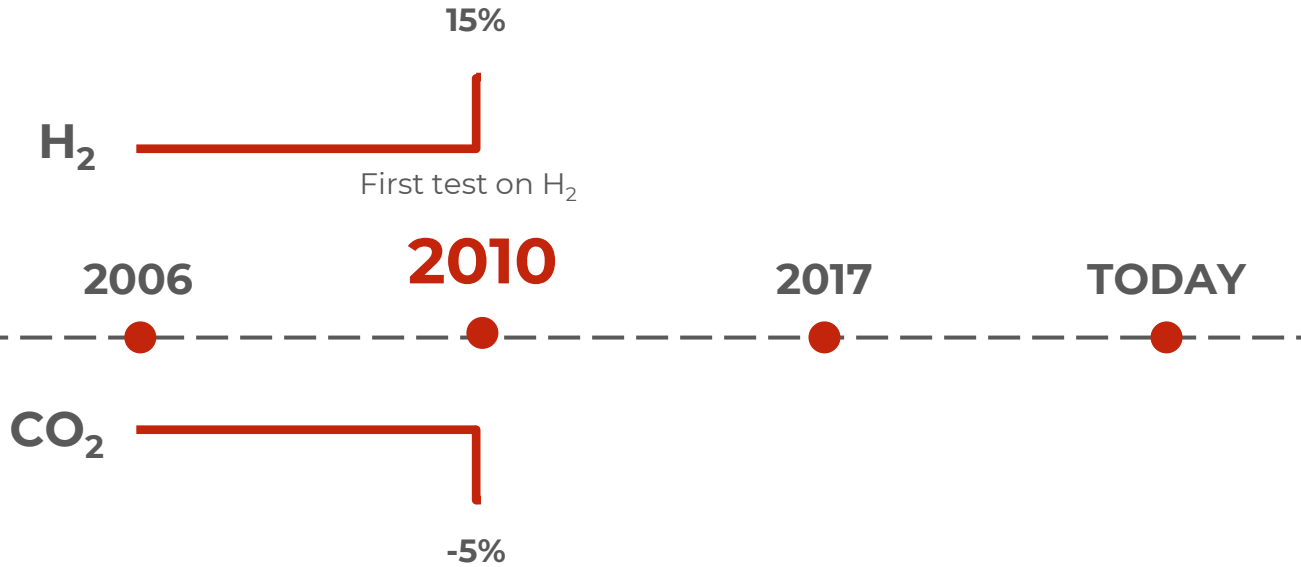
TODAY

CO₂



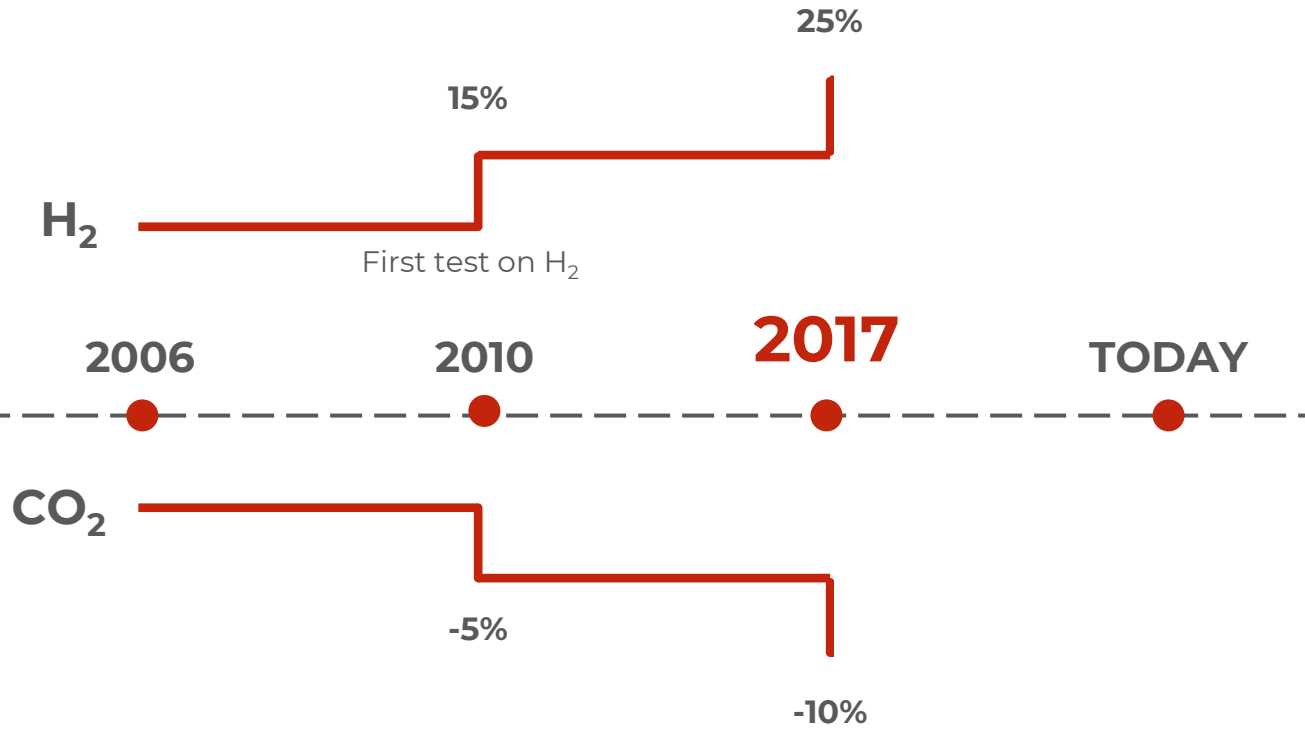
Brindisi case study

Increase H2 capabilities



Brindisi case study

Increase H2 capabilities

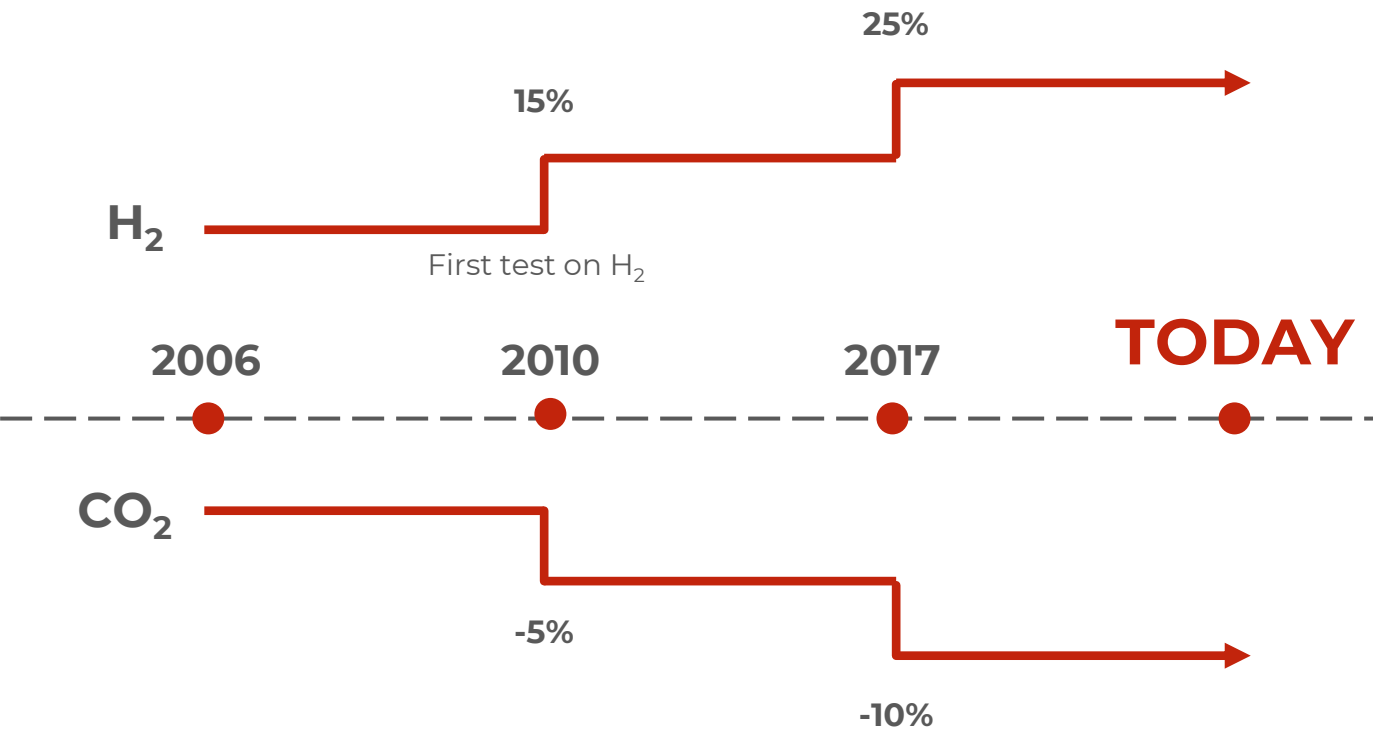


Brindisi case study

Increase H2 capabilities



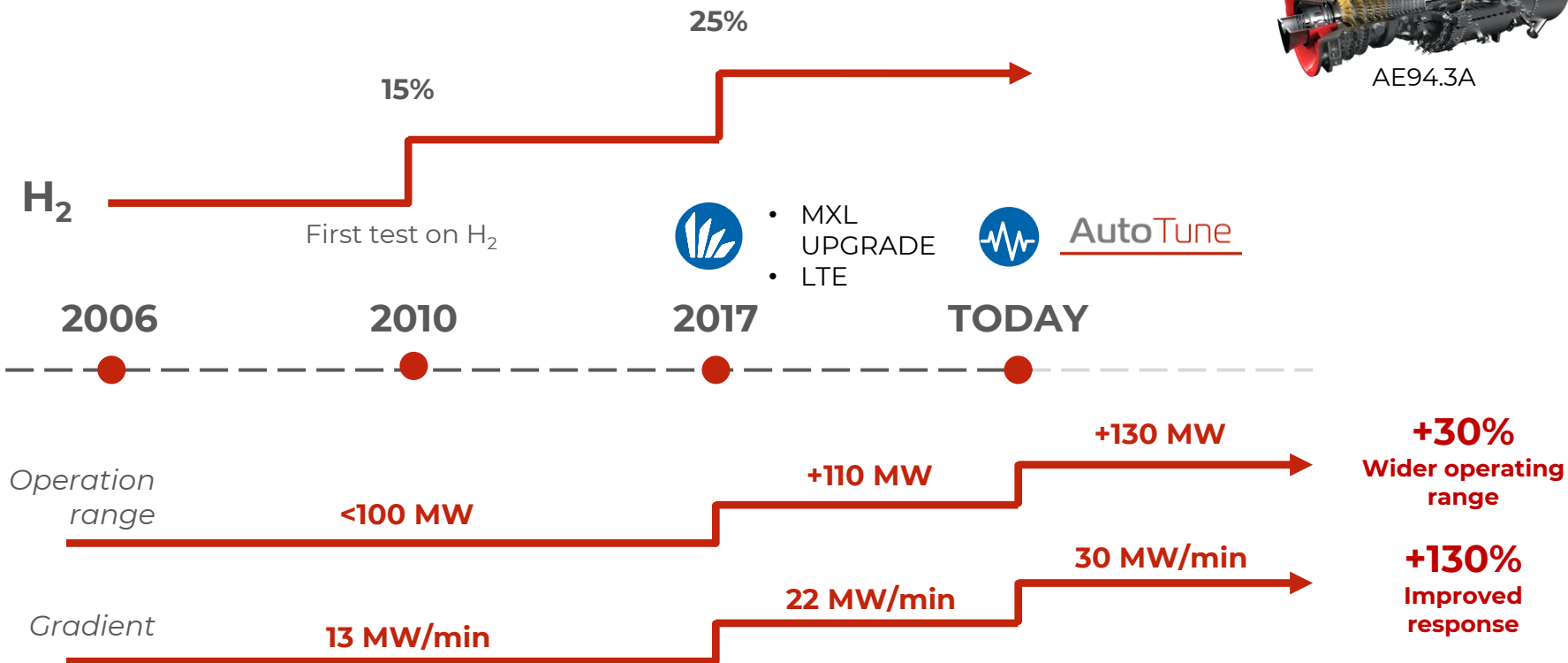
AE94.3A



Potential saving of **40,000** tons of CO₂ per year

Brindisi case study

Improve Flexibility

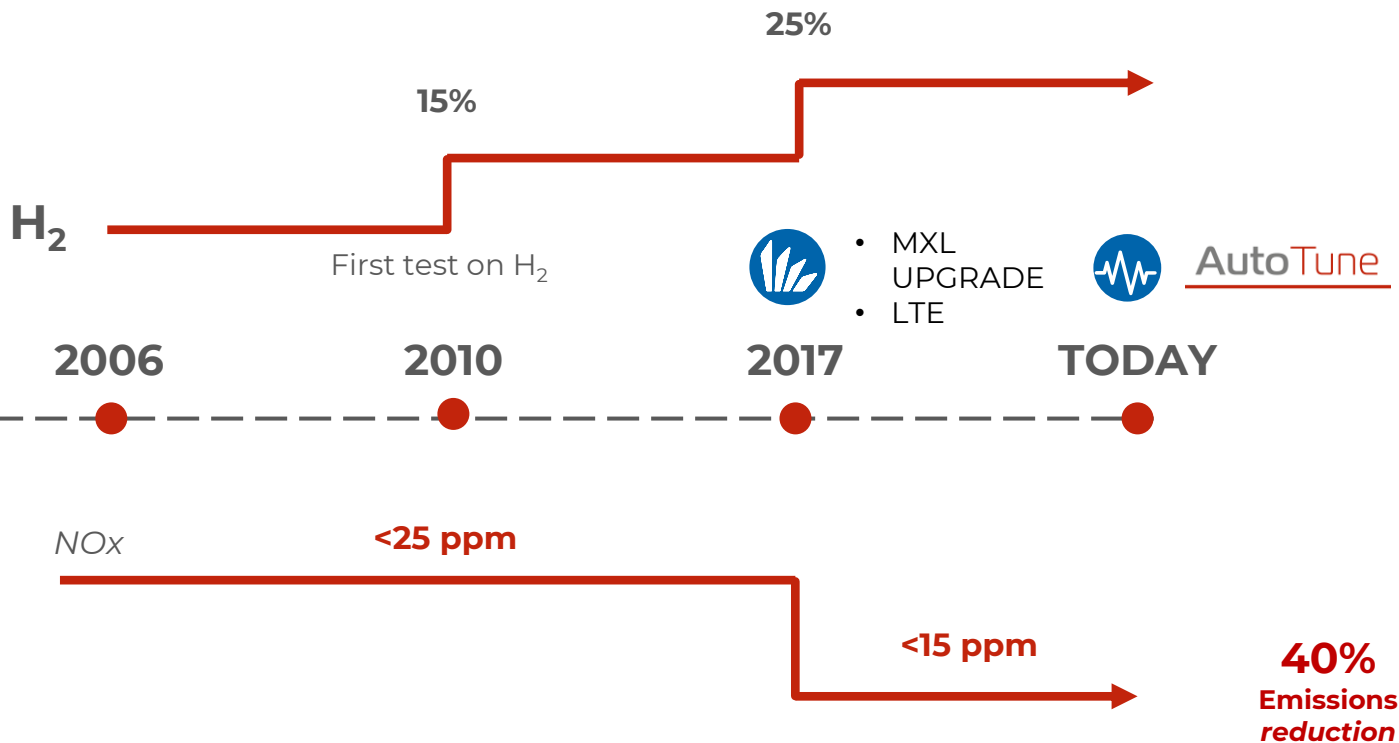


Brindisi case study

Reduce Emissions



AE94.3A



The background is a solid green color. In the top-left and bottom-right corners, there are decorative white wavy lines that curve across the frame.

**Ansaldo Energia and hydrogen,
a story started 30 years ago**



1990-1992

Our first steps with H₂

Portable fuel cell generator

*Ansaldo founding member of the "Italian Hydrogen Forum"
First European industry association*



1992 -2002

Prototypes and pilot projects

*Hydrogen bus
Hydrogen boat*

Ansaldo builds its first hydrogen fuel cell for a car



1990-2010

Ansaldo Fuel Cell

Ansaldo proprietary technology

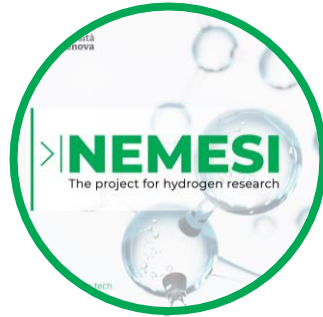
First high temp fuels cells factory in EU



2021

**Ansaldo
Green Tech**

*Incorporated to differentiate
Ansaldo Energia portfolio for
the energy transition*



2022

Nemesi
project started

*Anion exchange membrane
electrolyser development*



2023

Electrochemical
Labs set-up

*First AEM Electrolysis test
campaign*

ansaldo | green tech

ANSALDO GREEN TECH ELECTROLYSERS

PROPRIETARY AEM TECHNOLOGY

DESIGN



TESTING



PRODUCTION



SALES



SERVICE





Not only H₂
**Our contribution to the future
of nuclear**

Nuclear energy is an **essential component** of the low-carbon economy.

A large proportion of the CO₂-free electricity generated in the EU comes from its 100+ nuclear reactors.

Ansaldo Nucleare is leading research and development in a number of innovative fields.

Nuclear energy is an **essential component** of the low-carbon economy.
A large proportion of the CO₂-free electricity generated in the EU comes from its 100+ nuclear reactors.

Ansaldo Nucleare is leading research and development in a number of innovative fields.



As Ansaldo Nucleare we are working on the future of nuclear

Small Modular Reactors and Advanced Modular Reactors open new opportunities in future hybrid energy systems, in terms of both integration with intermittent renewable energy sources and co-generation applications, including hydrogen production.



NUWARD SMR



UK SMR



LEAD FAST
REACTOR

That's why we continue to support the development of a range of different concepts:

- **Modularity**

Standardized and modularized construction allows better control of time and cost

- **Cost-effectiveness**

Lower capital cost due to smaller size facilitates bankability

- **Safety**

Small size facilitates the use of passive systems to ensure better safety



THANK YOU FOR YOUR ATTENTION

ansaldo | energia