



AnsaldoEnergia

A Finmeccanica Company

Upgrades



UPGRADES

One of the services in which Ansaldo Energia can claim the vastest experience is the recovering and optimisation of active plants.

The power market liberalisation makes it even more important to exploit the existing plants at their best and to condition them to comply with the new environmental standards.

After Rehabilitations or Revampings, the plant/equipment recovers its original efficiency and effectiveness, or even achieves better performances.

In Retrofits and Repowering, innovative modifications obtain substantial performance improvements. These upgrades often couple complex rehabilitation and retrofit actions targeted at recovering operational plants and improving the overall performances.

In these areas, Ansaldo Energia's experience has been growing year after year involving both proprietary technology and the most diverse and widespread technologies from other suppliers, both in the turbogenerator and in the steam and gas turbine fields.

Many aged machines, after decades or more of useful life, are at or under the lower edge of the market efficiency, but often still in mechanical good condition.

Based on the over 160,000 MW of installed equipment around the world in the last 60 years, Ansaldo Energia has developed various

packages of Retrofits and Upgradings in order to extend and/or improve the plant operational life and to get the benefits of a virtually new turbine without the drawbacks of high investments, high technical risks and long realisation times.

In this scenario, Repowering applications are quite typical: existing steam power plants are transformed into combined cycles, thus increasing the overall efficiency from less than 40% to 58%. Various possible Upgradings are also available for heavy duty gas turbines: e.g., turbine inlet temperature increase, output power increase, heat rate reduction, new burner installations (for lower NOx emissions and premix flow stability), extension of the mean time between overhauls to over 40,000 Equivalent Operating Hours, availability improvements and maintenance cost reductions. Rehabilitation and Revamping activities can vary significantly according to individual customers' constraints, involved technologies, improvement objectives, etc.

In such an environment, the comprehensiveness of Ansaldo Energia's capabilities are key to guarantee customers with swift, successful, all-inclusive rehabilitation services.

When necessary, Ansaldo is capable of adopting original solutions, e.g.: identification of unique, suitable materials, consequent purchase or even possible in-house development when needed; specific design and realisation of dedicated solutions; cleaning cycles with working machines; specialised start-up and operating tests; etc.



In some outstanding, complex cases, the equipment was put back into full operational service ahead of schedule by 30%, to the full satisfaction of the customers, thus mitigating production losses.

For an extensive reference list of Upgrades, please refer to the relevant add-on.

