

Fossil Fuel Generation To Stay

To meet future energy demand growth and replace older or inefficient units, a large number of fossil fuel-fired plants will be required to be built worldwide in the next decade, according to a report by the International Energy Agency. ‘Fossil Fuel-Fired Power Generation – Case Studies of Recently Constructed Coal and Gas-Fired Power Plants’ states that because carbon dioxide emissions from fossil fuel-fired power generation are a major contributor to climate change, new plants must be designed and operated at highest efficiency both to reduce carbon emissions and to facilitate deployment of carbon capture and storage in the future. The series of case studies in this report were conducted to illustrate what efficiency is currently achieved in modern plants in different parts of the world using different grades of fossil fuels. The plants were selected from different geographical areas, because local factors influence attainable efficiency. The case studies include pulverized coal combustion with both subcritical and supercritical steam turbine cycles, a review of current and future applications of coal-fuelled integrated gasification combined cycle plants, and a case study of a natural gas-fired combined cycle plant to facilitate comparisons. The results of these analyses show that the technologies for high efficiency (low CO₂ emission) and very low conventional pollutant emissions (particulates, SO_x, NO_x) from fossil fuel-fired power generation are available now through PCC, IGCC or NGCC at commercially acceptable cost.

[Source essa news]