Natural Gas For Sustainable Development

#GECFatCOP28

30 Nov - 12 Dec 2023
Visit us at COP28, Blue Zone GECF Pavilion
Energy powers our lives and is crucial for sustainable development, encompassing its three intertwined and mutually supportive pillars: economic development, social progress, and environmental protection. Over the last four years, the crucial importance of energy, along with the diversity of national circumstances and priorities, has been further emphasised. This period has starkly highlighted the energy trilemma, a multi-faceted challenge involving the simultaneous pursuit of energy security, equity, and sustainability.

2023 is a critical year. It marks the midpoint in the UN 2030 Development Agenda and the first-ever Global Stocktake under the Paris Agreement. A recent UN assessment report indicates that the majority of the 140 targets associated with the 17 Sustainable Development Goals, adopted in 2015, are off track. Alarmingly, many are even falling below the benchmarks set in 2015. With regard the Paris Agreement, despite some progress, substantial implementation gaps exist, particularly in mitigation, adaptation, and the provision of financial resources and technology transfer to developing countries. Unfortunately, pledges have not been fulfilled.

Now is the time to transform pledges into actions and prioritize realistic approaches over dogmatic ones. There is no silver bullet. Pathways to sustainable development and climate change must be nationally determined, while adhering to the principles of equity, and common but differentiated responsibilities and respective capabilities.

This brochure showcases that natural gas is an important part of the solutions to lift people out of poverty, create decent jobs, eliminate hunger, expand prosperity, reduce household air pollution, improve air quality in cities, mitigate deforestation, and combat climate change. Available, affordable, reliable, flexible, and versatile, it is a sustainable energy source as well as a key feedstock for petrochemicals and fertilisers. It offers unwavering support for the substitution of carbon-intensive fuels. It assumes paramount significance as a cornerstone of future low-carbon energy systems, seamlessly enabling the integration of intermittent renewable sources, switching from coal to gas in the power sector, and transitioning from traditional biomass to LPG for clean cooking. It also serves as a fundamental source of affordable blue hydrogen, and a raw material for the production of e-kerosene and low-carbon ammonia. These attributes collectively position natural gas as a lynchpin in steering a just, inclusive, and pragmatic transition toward a low-emissions economy.

As the Gas Exporting Countries Forum, our objective is to leverage our presence at COP28 as a catalyst for fostering dialogue, facilitating knowledge exchange, and showcasing an array of cutting-edge technological advancements in lower-emissions pathways.

Thank you for visiting the GECF Pavilion in the Blue Zone of Expo-City in Dubai.
The GECF Objectives at COP28

- **Highlighting Natural Gas’s Environmental Merits:**
  To underscore the environmental credentials and advantages of natural gas in realizing the objectives outlined in the Paris Agreement and in the UN 2030 Development Agenda.

- **Promoting Natural Gas as a Sustainable Resource:**
  To advocate for natural gas as an available, affordable, reliable, flexible, versatile, sustainable energy source, and feedstock for equitable, inclusive, and resilient low emission development.

- **Showcasing Technological Progress and Effective Decarbonization Strategies:**
  To exhibit cutting-edge technological advancements and effective strategies for mitigating the environmental footprint of the natural gas supply chain.

- **Facilitating Dialogue and Knowledge Exchange:**
  To serve as a platform for fostering dialogue, sharing knowledge, and exchanging best practices while disseminating our perspectives to promote the advantages of natural gas as a clean and sustainable energy solution.
The Special Edition of the SDG Progress Report at the mid-journey in the UN 2030 Development Agenda: “Progress on over 50% of the Sustainable Development Goals (SDGs) targets is either weak or insufficient. Alarmingly, for 30% of the targets, progress has either stalled or regressed.”

2.3 billion people, 29% of the world's population, still use polluting cooking methods. Global access to clean cooking fuels and technologies increased only slightly since 2015. If trends continue, by 2030, only 77% of the global population will have clean cooking solutions, leaving about 1.9 billion people, including 1.1 billion in sub-Saharan Africa, without access.

Article 2 paragraph 2 of the Paris Agreement: “This Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.”
Coal to Gas: Picking Low-Hanging Fruit on the Decarbonization Tree

Coal-to-gas switching in the power sector is a key driver of greenhouse gas emissions reduction. In the US, CO₂ emissions fell by 35% between 2005 and 2021. About two-thirds of this were the direct result of switching from coal-fired power generation to natural gas.

Renewables and Gas: Partners for a Cleaner Tomorrow

As intermittent renewable energy capacity grows and electrical systems become more intricate, natural gas emerges as a sustainable source for meeting the rising demand for grid flexibility. Its capacity to deliver swift and large-scale responses over extended periods addresses both short-term power variations and seasonal shifts in supply and demand.

Natural Gas: The Cleanest Hydrocarbon, Striving to be Cleaner

Natural gas emits approximately 50% less greenhouse gases than coal and roughly 20% less than liquid fuels. Further reduction of its carbon footprint can be achieved through various means, including CCUS, blue hydrogen, methane emission reduction, gas flaring reduction, and renewables integration into the natural gas supply chain.
Beyond its fundamental role in powering industries, heating homes, and fueling transportation, natural gas plays a crucial and often overlooked role in supporting the global food supply chain, enhancing both its efficiency and sustainability.

Almost one third of the global population relies on traditional biomass for cooking and household heating, resulting in the release of CO₂ and harmful gases. According to the WHO, this practice contributes to approximately 3.7 million premature deaths annually, disproportionately affecting women and children.
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