

Global Energy Markets and Northeast Asia

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Global view

World energy demand will continue to expand on account of economic growth to 2040. Average annual GDP increases are forecasted in the range of 4.1% and 1.7% for the non-OECD and OECD regions by key Energy Agencies. Forecasts show that petroleum, liquids and natural gas dominate growth, alongside renewables that will continue to show robust growth and may amount to around 17% to 25% of global energy consumption by 2040 depending on scenarios. Coal demand will plateau after 2020 and nuclear only shows modest growth comprising approximately 20% and 5% of the global energy mix each in 2040. While gas demand is the fastest growing fossil fuel, electrification of energy demand will account for 40% of growth; a new regional pattern that China and India lead with other non-OECD countries in Northeast Asia not far behind.

Investment in oil market stability

Though advances in new vehicle technologies command attention, by 2040 and beyond transportation will still be driven by the internal combustion engine. Oil demand growth may slow but remains robust in the industry and petrochemicals sector over most forecasts. Even with phenomenal growth in U.S. light tight oil production, investment in new conventional upstream production is essential to compensate for deepening decline rates and maintain secure supplies when tight oil production plateaus and non-OPEC production slows in the 2020s. After three consecutive years of investment declines, upstream investment in conventional oil has seen only a modest resurgence largely driven by National Oil Companies and remains well below levels last seen before the oil and gas market down-turn in 2014. More dialogue is needed to reduce volatility and resolve uncertainties stemming from the diverse policy and technology pathways that outlooks offer but leave the market directionless. This will improve stability and make the investment and policy environment more predictable over long-term project horizons.

Northeast Asia (China, Russia, Japan, South Korea)

As the global center of growth and innovation, Northeast Asia plays a leading role in energy sector transformations to achieve more secure and sustainable energy futures. Public Health, Energy Security, and Profitability are served in a mutually reinforcing manner by advancing new natural gas and renewable technologies such as LNG, Solar, Wind, Biofuels and Hydrogen, alongside the options that increased Electrification, Digitalisation, Carbon Capture Use and Storage and other innovations offer, to ensure that Northeast Asian energy systems exploit synergies and can respond to the challenges that population growth, urbanization and climate change impose. Maintaining energy market stability at affordable prices while reducing greenhouse gas emissions by advancing natural gas, renewables, and energy efficiency gains, across industry clusters, are key vectors in the energy policy and technology pathways that Northeast Asian countries follow. What does the data show so far - which lessons can be learnt, where will Northeast Asia create breakthroughs for the world?