

Despite Rise of Renewables, Fossil Fuel Still Fastest Growing Energy Source

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- [New report](#) analyses how the world consumes energy over the past 100 years through post-2030
- Growing energy demand in emerging markets is the biggest challenge for the energy sector
- In the last decade, demand for coal grew 10 times more than renewables, twice more than for oil and three times more than for gas
- Wind, solar and other non-hydro renewable resources provide only 1.6% of total world energy

Houston, USA, 5 March 2013 –The biggest energy challenge facing the world today is meeting the rapidly growing energy needs of emerging market nations, including the 1.3 billion people that have little or no access to modern energy, according to the World Economic Forum ' [Energy Vision 2013 – Energy Transitions: Past and Future](#) report launched today at the IHS CERAWEEK Conference.

In response to this challenge, policy-makers are looking towards low-carbon and renewable sources of energy. However, 87% of total world primary energy demand is met by oil, coal and natural gas; more than 92% with nuclear energy. Wind, solar, geothermal and other non-hydro renewable resources provide just 1.6% of total world energy.

Today, there is a renewed and much more intense focus on what kind of energy transition might be ahead and what the timing might be. Trade, globalization, energy storage and transmission, as well as policies and pricing of carbon, will be among main factors influencing the changing mix. The shifts in balance within the mix will have direct consequences for all society.

“ The general assumption is that we will gravitate towards a world dominated by renewables, ” said Roberto Bocca, Senior Director, Head of Energy Industries, World Economic Forum. “ Surprisingly though, this transition will be different than in the past where the energy mix moved from one fuel to another, like from wood to coal. What we ' ll see in the future instead will be a transition from some energy sources to many energy sources, for example, from a diverse energy mix to a set of diversified energy mixes. ”

The report, written in collaboration with IHS Cambridge Energy Research Associates (IHS CERA), aims to provide a framework for understanding the potential for changes in the energy mix and how an energy transition could unfold. Without attempting to predict a specific future, it analyses factors that may drive changes in the energy mix in the coming decades. Although energy efficiency and other demand-side issues are critical to future energy systems, the report focuses on the supply side of the equation and how society will meet its ever-growing energy needs.

“ Transitions in the energy industry unfold over decades, owing to the large scale of the industry and the size

and longevity of the infrastructure involved, ” said Daniel Yergin, IHS Vice Chairman and the Forum ' s Oil and Gas

Community Leader 2012. “ However, shifts in the energy mix will have direct consequences for all participants in the world ’ s energy industry – incumbents, new entrants and innovators, governments and, of course, for all society. ”

In the report ’ s analysis, the following conclusions and observations stand out:

- The beginning of this century has seen a rebirth of renewables. Renewable power has become a significant

and highly visible global industry, with revenues totalling US\$ 184 billion in 2012. Its growth has been spurred

by the combination of research and development, innovation and government policies – mandates, subsidies

and incentives – aimed at promoting its market penetration. Parallel policies have promoted biofuels.

- Coal, however, has experienced the fastest growth of any energy source in absolute terms over the same time frame – almost 10 times that of renewables, nearly twice that of natural gas and nearly three times that of oil. Rapid growth in coal demand is the result of high economic growth rates in emerging market countries and the rapidly rising need for power.

- Price and value delivered will be key determinants in shaping the energy mix of the future. That price may be set in the competitive marketplace or may result from a price on carbon and/or government incentives and

subsidies. New technology will likely have a major impact on the energy mix, but probably not until the 2030s,

owing to lead times.

- Perceptions of shortages and scarcity of oil and natural gas, so prevalent a few years ago, have

now receded. Technological advances that deliver relatively low-cost oil and gas are likely to extend the

competitive position of these fuels for much longer than had been anticipated a few years ago.

- The last half decade has seen an acceleration of government policies aimed at spurring a shift to renewable electricity and the development of the electric car. If the electric car becomes a mass market rather than a niche product, it would erode oil ' s dominance of the transportation sector.

The [report](#) offers an outlook on the next energy transition. More efficient energy use and changes in how transport is powered will be important elements of that transition. It cautions, however, against a tendency to consider a future world that looks very much like the one we live in today.

Transition from wood to coal to oil and the rise of electric power were accompanied by sweeping technological, sociological and economic changes. More concentrated energy sources enabled the industrial revolution and facilitated mass migration to cities. Electricity allowed the rise of appliances in the home and workplace, automating and simplifying many tasks and increasing productivity, and now enabling the digitization of the world. Understanding the dynamics of energy transitions requires respect for innovation and its unexpected impact, and indeed some imagination about the future.

Energy Vision 2013 – Energy Transitions: Past and Future includes perspectives from key representatives of industry, government, non-governmental organizations and academia. Report [contributors](#) are available for interview.

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