

## **Fossil fuels – or: There’s life in the old dogs yet, isn’t it?**

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Shale gas in the deepness of the Vienna Basin – an obscure idea to satisfy Austria's need of natural gas for decades or just a drowning man's rather desperate clutch at a straw? Interestingly, this question is not owing to results of scientific research, it is based upon some people's memories back to 2012 when OMV was planning such research but was abruptly prevented from drilling a test well by local, regional and federal politicians and self-appointed activists. After wood and coal, petroleum has become society's fuel of choice over the last one and a half centuries. The petroleum industry has been remarkably successful in finding oil reserves, producing them and bringing them to the market. This success has powered tremendous global economic growth and unprecedented drives in living this conduct around the world. Technology and its progress have been and will be critical to satisfy our ongoing demand for petroleum products and the oil and gas industry has used to be among the top technology driven industries worldwide, right after military and space industry. In light of global warming, energy transition has become a main terminus with partly very ambitious targets for timing and development / utilization of renewable versus fossil energy sources. Unfortunately (or even tentatively?), consequences of this transition for and its impact on the environment and our future living conditions are in this discussion very often ignored. To say it with Scott Tinker, director of the Bureau of Economic Geology in Austin, Texas: there are two important reasons, why the often-proposed switch from dirty coal and oil to clean and renewable solar and wind contradicts all laws of physics: they are not renewable and they are not clean. Sure, during non-cloudy days and windy times, wind and sun can be captured and turned into electricity. But because the amount of energy is not "dense" it takes scads of land and collectors – solar panels and wind turbines – to capture it. Further, it also takes oodles of batteries to back up intermittent solar and wind to keep everything running uninterrupted. There is also replacement. The panels, turbines and batteries wear out after 10 to 20 years, and the metals, chemicals and toxic materials required to make them must be constantly mined, manufactured and disposed of in landfills. Coupled with some CO<sub>2</sub> emissions associated with those processes, solar and wind are neither renewable nor clean. During recent years, giant oil and gas fields around the globe have been discovered. Rystad Energy calculates that to meet the global cumulative demand over the next 30 years, undeveloped and undiscovered resources totaling 313 billion barrels of oil need to be added to currently producing assets. To match this requirement, exploration programs will have to discover a worthy-to-develop resource of 139 billion new barrels of liquids by 2050. Renewable energy sources will contribute a growing share to satisfy the world 's energy hunger, BUT they will, at least in foreseeable time, not be able to cover the full and growing energy demand especially that of energy-intensive industries. Most petroleum companies support and actively pursue steps in this diversification – they see here a number of complementary business opportunities where application of their petroleum-based experience and technologies provides additional income and employment for their professional staff.