

# Something New Under the Sun

By

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The decline in global oil and gas prices is threatening the renewable energy industry. The United States - the country which triggered the drop in gas prices - is also the country which in 2015 had the greatest solar installation capacity, with more than 7 GW of photovoltaic solar installations constituting approximately 30% of the added electric generating capacity in 2015. The decline in prices for solar systems, supportive governmental policies and the expectation of continued policy support for reducing greenhouse gas emissions, are the main factors which brought about this record in installations.

The U.S. case is an indication that there is no "war" between gas and renewables. On the contrary, synergy between them is possible and even worthwhile especially due to the risk factors relating to the price of fuel energies. Natural gas prices are low now, but experience has shown that fluctuation is high, a risk that is non-existent in renewable energy systems which are free of the dependence on fuel prices. Thus, a combination of natural gas and renewable energy is the way to energy independence and to achieve the goals of reducing greenhouse gas emissions.

In order to achieve the goals of emission reduction the world must increase the use of renewable energy. The Israeli Government adopted this approach when it decided in November 2015 to set a target of 17% renewable energy by the year 2030 (with an interim target of 13% by the year 2025).

If this target does not seem ambitious enough, we should recall that despite Israel's image worldwide as a leader in the field of solar energy, renewable energy currently accounts for only 2% of electricity production in Israel (according to The Electricity Authority report of November 2015). The glamorous image of Israel as a solar energy superpower is probably due to the view the tourist sees when looking at the skyline of Tel Aviv – thousands of solar water heaters on the rooftops of the city and its surroundings.

In the United States, despite the bitter political battles between members of the Democratic and Republican parties, there are issues which unite the conflicting sides and have resulted in the passing of impressive legislation. The issue of energy is one such example which brought an absolute majority of the members of the Senate to vote in favor of a comprehensive bill known as the "The Energy Policy Modernization Act of 2016." The proposed bill encourages renewable energy by requiring upgrades to the power grid, including energy storage systems.

Interesting and very relevant to the technology capabilities existing in Israel, is the reference to water issues that are related to energy, referred to in the bill as "Energy-Water Nexus", that is, the water required for the production of fuels, electricity and other forms of energy and the energy required to transport and treat water and wastewater.

The United States considers the cooperation with Israel in research and development on energy issues to be of great importance. About a month ago U.S. Secretary of Energy, Dr. Ernest Moniz, visited Israel, and during the visit an agreement was signed to expand cooperation between Israel and the United States in energy technologies, including renewable energy, security of the power grid, fuel production from natural gas and from biomass, water and more. Dr. Moniz praised the cooperation in research and development that has been in existence since 2009 with the Ministry of National Infrastructures, Energy and Water.

Regarding the energy cooperation with Israel, it should be noted that the U.S. Congress initiated a significant extension of the existing collaboration in legislation known as "The United States-Israel Strategic Partnership Act of 2014", signed by President Obama in December 2014. This legislation promotes the synergy between natural gas and renewable energies by adding natural gas technologies to the existing cooperation (which is focused on renewable energy and energy efficiency). As a result, the Israeli Government approved an increased budget for cooperation with the U.S. which as in the U.S. legislation, is valid until 2024.

In light of these trends, there are many opportunities for innovation and entrepreneurship in the fields of clean energy and natural gas and the relationship between them, including cooperation between companies and academia in Israel and the United States. Beyond the commercial benefits, both countries recognize that this is a long-term endeavor with important significance for mankind and the world in general.

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