

ON THE LINK BETWEEN USING LOW CARBON FUELS AND ENERGY EFFICIENCY IMPROVEMENTS FOR ATTAINING GREENHOUSE GAS EMISSIONS REDUCTION GOALS

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Overview

Israel has set up two concurring national goals for its Energy Roadmap, consisting of improving energy efficiency and reducing greenhouse gas emissions. These goals are based on a 2008 government decision, targeting the improvement of national energy efficiency and reducing energy consumption by 20% by 2020 from the national baseline of 2006. This was followed in 2009 by a declaration by the President of Israel at COP-19 in Copenhagen that the State of Israel will do its best to reduce 20% of its 'business-as-usual' greenhouse gas (GHG) emissions, by 2020. Since these were initially viewed as complementary targets, Israel's national GHG Action Plan includes, as its main pillars, measures for improving energy efficiency in households, in industry, in municipalities and in commercial businesses.

Methods

The state of Israel has allocated more than 2 billion ILS (over 500 million US\$) for a period of a decade, out of which 534 million ILS (about 140 million US\$) were allocated for various activities in the first two-year phase (2012-2013). However, in 2013, the national plan was suspended for three years, nominally due to the growing national budget deficit. The flip side of this is that Israel is still expected to achieve substantial GHG emissions reduction by 2020 due to the discovery, development and increased low-cost availability of natural gas resources (off shore) in Israel. This enables the expansion of the use of low carbon fuel in the Israeli electricity mix and the economy at large.

Results

We focus our evaluation on programs that were designed to move Israel to a low carbon economy via governmental financial assistance. We are also presenting a possibly revised planning scenario due to interim postponement of the original plan. We have also evaluated the impact of introduction of large quantities of natural gas into the power generation market. Interim results demonstrate that under this new scenario Israel may achieve only a 10% of greenhouse gas emissions reduction by 2020 but would be far from achieving its improved energy efficiency and energy conservation goals.

Conclusions

The use of low carbon fuel such as natural gas contributes to overall greenhouse gas emissions reduction and has other co-benefits such as reducing local air pollution. However, changes in the fuel mix should not be a substitute to continued actions to conserve energy and improve energy efficiency of the economy.

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