



ISRAEL'S INTENDED NATIONALLY DETERMINED CONTRIBUTION (INDC)

Submission to the ADP

29 September 2015

In accordance with Decisions 1/CP.19 and 1/CP.20, Israel hereby communicates its Intended Nationally Determined Contribution (INDC) to contribute to the global effort for achieving the objective of the United Nations Framework Convention on Climate Change.

Israel is committed to working towards an ambitious international agreement on climate change, applicable to all Parties and in line with the objective of an average global temperature increase below two degrees Celsius.

Mitigation target



Israel intends to achieve an **economy-wide unconditional** target of reducing its **per capita greenhouse gas emissions to 7.7 tCO₂e by 2030** which **constitutes a reduction of 26% below the level in 2005 of 10.4 tCO₂e per capita**. An interim target of **8.8 tCO₂e per capita** is expected by 2025.



According to the most recent national greenhouse gas inventory prepared by the Israeli Central Bureau of Statistics, Israel's greenhouse gas emissions in **2012 were 83.04 MtCO₂e**, which is equivalent to **10.5 tCO₂e per capita**. Under an updated **Business as Usual (BAU)** scenario greenhouse gas emissions are **expected to increase to 105.5 MtCO₂e in 2030**. This will be equal to **10.0 tCO₂e per capita**. Implementation of Israel's national target will result in a **reduction of 23.85 MtCO₂e in 2030** bringing **total emissions down to 81.65 MtCO₂e**.



Information to facilitate understanding

Scope of INDC

6 Greenhouse gases: Carbon Dioxide (CO₂), Methane (CH₄), Nitrous Oxide (N₂O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulphur Hexafluoride (SF₆)

Time period for implementation

2016 – 2030

Coverage

Sectors: Electricity generation, other energy sources, transportation, industrial processes, buildings, waste and agriculture

Metric applied

The revised 1996 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories and the Global Warming Potential (GWP) values from the IPCC Second Assessment Report (1995)

Methodology

The scenarios (BAU and abatement) were developed using the Long range Energy Alternatives Planning System (LEAP model). A cost benefit analysis was carried out on a range of abatement measures and technologies in various sectors. Mitigation potential was assessed in those sectors and combined for the whole economy.

Planning process

An inter-ministerial committee, chaired by the Director General of the Ministry of Environmental Protection, examined the potential for reducing greenhouse gas emissions in 2030. The committee consisted of representatives from all relevant government ministries, public utility companies, industry and commerce, local government, environmental and non-governmental organizations, academia and other national and international experts from various disciplines. Specific working groups assessed and quantified the costs and benefits of over a hundred different abatement measures in each of the main sectors in the economy, including energy, transportation, buildings, industry and

waste. At the same time, removal of obstacles to implementation was examined.

Based on the comprehensive work and findings of the committee, a national emissions reduction target for Israel was formulated and is expected to yield significant benefits to the economy. Submitted jointly to the government by the Ministers of Environmental Protection, Finance and National Infrastructures, Energy and Water Resources the target was approved and **includes sector specific targets:**

- **Energy efficiency - 17% reduction in electricity consumption relative to BAU scenario in 2030**
- **Renewable energy – 17% of the electricity generated in 2030 will be from renewable sources**
- **Public transport – 20% shift from private to public transportation.**

Future development

The government decision for the national target stipulates that within 45 days of approval, the relevant ministries are to submit to the government an outline of economy wide measures to be taken. It is anticipated that the implementation plan will consist of, inter alia, the following:

- The establishment of mechanisms leveraging large scale private funding together with public funding of energy efficiency projects;
- A program of tenders for renewable energy. The 17% renewable energy target is substantially more ambitious than Israel's current 10% target for 2020;
- Removal of barriers for the uptake of renewable energy;
- Measures to increase the use of natural gas. The recent discovery of additional natural gas reserves off the coast of Israel has and will continue to contribute to a partial switch from coal to natural gas in Israel's fuel mix and which contributed to GHG emissions reduction between 2012 and 2015. The government is now working on the further development of gas fields, expected to have significant mitigation potential;
- Further development of public transport systems in major metropolitan areas such as the construction of the Tel Aviv metropolitan light rail; the extension of the intercity rail system and of the Jerusalem light rail.

Initial steps have begun for the establishment of a national system for managing and monitoring greenhouse gas emissions. Quantitative and qualitative data collection and analysis will be carried out in order to track and record headway on implementation of the abatement measures. The inter-ministerial committee will perform a regular review process of the national strategy and recommend new policy instruments where necessary.

Consideration of fairness and ambition

Taking into consideration its national circumstances, Israel believes its target to be fair and ambitious reflecting genuine efforts to move forward in a sustainable manner to facilitate the transition to a low-carbon and climate-resilient economy.

Israel contributes about 0.2% of global emissions. Israel's projected annual population growth is 1.8%, which is considerably higher than the OECD average. The assumption is that by 2030, Israel's population will be approximately 10.6 million as compared to 7 million in 2005 and 8.4 million in 2015. The annual GDP growth per capita is currently 1.7% and is also growing at a faster rate than the OECD average.

Considering this projected growth in population and GDP, we believe that a per capita target for GHG emissions reduction is fair and appropriate for Israel.

Israel is a small and densely populated country characterized by an expanding population and economic growth, facing land and water scarcity. Arid zones comprise over 45% of the area of the country while there is an exceptionally high degree of biological diversity that must be protected.

Electricity generation has been largely based on imported fossil fuels as Israel has no access to a number of widely used low-carbon sources of energy such as nuclear, hydro-electric and geothermal power. The country is an energy island, without the possibility of grid interconnectivity. There is limited surface area available for large-scale energy installations. The few available areas are subject to competing uses such as industrial development and housing, bio-diversity preservation, habitat conservation, agriculture and defense.

For many years, there has been significant use of solar heaters for water heating and greenhouse gas emissions from this source are substantially lower than the global average. An additional factor limiting Israel's abatement potential is its small heavy industry sector with relatively low emission levels.

Israel attains extremely high levels of water reuse (85%). However to meet increasing water demand several desalination plants have been constructed. These installations are comparatively energy efficient and currently account for 5% of energy consumption. Water scarcity may necessitate the construction of additional plants in the future.

Adaptation

Israel is currently in the final stages of drafting its National Adaptation Plan which is the result of an inter-ministerial and non-governmental sectorial consultative process.

An Israeli Climate Change Information Center (ICCIC) was set up in cooperation with leading academic institutions. Its mandate is to compile a national scientific base on the impact of climate change on areas such as, water resources, biodiversity, public health and urban planning. The Center will prepare policy recommendations to be integrated into national and local adaptation plans and which will be relevant to the challenges being faced in the region as a whole.