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# Greenhouse Gas Emission Reductions Action Plan for the State of Israel

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# Global Policy

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- Kyoto Protocol ratified by Israel in 2004
- Deliberations intended to reach “Post Kyoto” agreements (Copenhagen 2009, Cancun 2010, Durban 2011)
- Nations divided into 2 groups (Annex 1 and Non-Annex 1) according to their emissions reductions commitment
- Main issues –
  - Setting emission targets to reach a 2<sup>0</sup>c maximum warming goal;
  - Funding emission reduction programs in developing countries by developed countries, including emissions trading.

# Israel's Commitment

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- ❑ Israel is a **Non-Annex 1 nation** and as such is not obligated to reduce emissions.
- ❑ Israel's acceptance to **OECD** (at the end of 2010) does not officially alter this (non) obligation.
- ❑ At COP15 in Copenhagen President Peres declared that Israel *will do its best* to reduce GHG emissions by 20% compared to “business as usual”, by the year 2020.
- ❑ This declaration was formalized by a **government decision, in March 2010**, that also established an intergovernmental committee comprised of Directors General of relevant Ministries tasked with formulating a national plan to reduce GHG emissions.

# Examples: Developing Countries Reduction Goals

Country	Target Year (TY)	Commitment
Israel	2020	20% reduction from BAU in the target year – namely <b>22 million tons CO<sub>2</sub>e</b>
China	2020	40-45% Reduction below 2005
India	2020	20-25% reduction below 2005
Brazil	2020	36.1-38.9% reduction from BAU in TY
Mexico	2020	Up to 30% reduction from BAU in TY
Singapore	2020	16% reduction from BAU in the TY
South Korea	2020	30% reduction from BAU in the TY

# Israel's GHG Reduction Plan

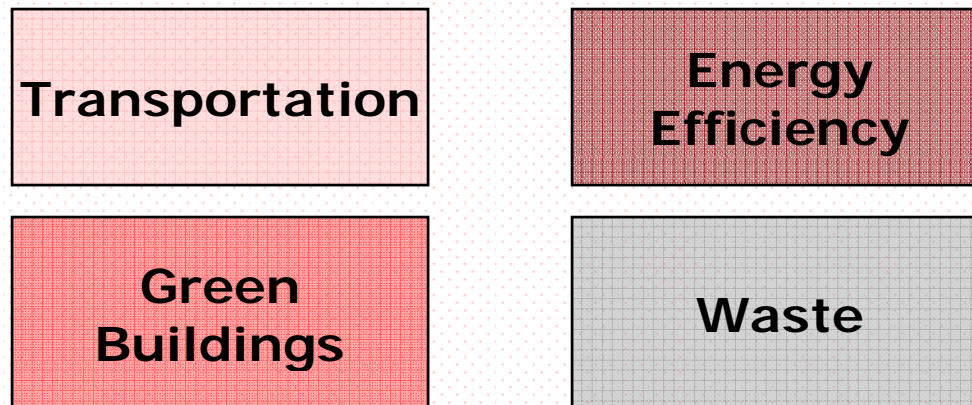
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- The intergovernmental committee was Chaired by the Director General of the Ministry of Finance and included:
  - Ministry of National Infrastructure,
  - Ministry of Environmental Protection,
  - Ministry of Transportation,
  - Ministry of Construction and Housing,
  - Ministry of Industry, Trade, and Labor,
  - Ministry of Interior
- It also cooperated with the:
  - National Economic Council, PM office
  - Public Utilities Commission – Electricity, and
  - Office of the Attorney General.

# Program Areas

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- The committee presented the program for government approval in November 2010 and the program was approved and budgeted with NIS 2.2 billion (~ Billion US\$ 0.6)\* for a decade



# Israel's GHG Reduction Plan Summary

Sector	Reduction by 2020 million tons CO2E	Funding level Million NIS	Net Benefit Million NIS
Energy Efficiency	10.59	2,088	22,198
Green Building	0.32	66.5	3,417
Transportation	2.37	12.5	8,357
Waste Management (organic)	2.66	(separately)	National plan
Support for Advanced Israeli Technologies	Not quantified	40	NA
<b>Total</b>	<b>15.95</b>	<b>2,207</b>	<b>33,976</b>

# Energy Efficiency: GHG Reduction Cost-Benefit

Energy Efficiency Sector	Reduction by 2020 million tons CO2E	Funding level Million NIS	Benefit Million NIS
Private	4.89	1,198	11,283
Industrial	3.24	667	4,652
Commercial	0.29		933
Government	0.94		3,020
Municipal	0.67		1,755
Agriculture and water	0.56		555
Education and information on	Not estimated	201	Not estimated
Energy efficiency regulations	Not estimated	27	Not estimated
<b>Total Energy Efficiency</b>	<b>10.59</b>	<b>2,088</b>	<b>22,198</b>



# Green Buildings: GHG Reduction Cost-Benefit

<b>Green Building Sector</b>	<b>Reduction by 2020 million tons CO2E</b>	<b>Funding level Million NIS</b>	<b>Benefit Million NIS</b>
<b>New residential buildings – pilot program</b>	0.04	38.5	599
<b>New commercial buildings – pilot program</b>	0.28		2,818
<b>Retrofit – pilot program</b>	Not estimated	7	Not estimated
<b>Academic and professional training</b>	Not estimated	21	Not estimated
<b>Total Green Building</b>	<b>0.32</b>	<b>66.5</b>	<b>3,417</b>

# Transportation: GHG Reduction Cost-Benefit

Transportation Sector	Reduction by 2020 million tons CO2E	Funding level Million NIS	Benefit Million NIS
Low wind resistance aerodynamic fittings for trucks	0.69		2,328
Low rolling resistance tires	0.38	Incentives through green taxation and not by direct financing	2,360
Tire air pressure control systems in new vehicles	0.28		737
Stop-start systems in new vehicles	0.18		446
Dual clutch transmission in new vehicles	0.12		164
Dual clutch transmission in new heavy vehicles	0.06		172
Stop start systems in new heavy vehicles	0.50		1,578
Low resistance oils	0.16		572
Eco-drive education and information programs	Not estimated	12.5	Not estimated
<b>Total transportation</b>	<b>2.37</b>	<b>12.5</b>	<b>8,357</b>

# Funding Allocation for 2011-2012 (million NIS)

	MNI	MOEP	Constr. & housing	Transport	MOITAL
	<b>314M</b>	<b>171M</b>	<b>7M</b>	<b>5M</b>	<b>42M</b>
Domestic electricity consumption	269				
Reduction in Industry & Trade sectors		114			
Information & education	30	11		5	
Support for Israeli Tech.					40
GB (PILOT ONLY)		16			
Building survey		16			
Training - GB		9			2
BG (retrofit pilot)			7		
Energy audits	8	5			
Energy efficiency regulations	7				

# What's in the Plan?

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- A start.
- A mechanism, operated by the Ministry of Industry Trade and Labor and the Ministry of Environmental Protection has been created to support GHG reduction projects.
- A budget of NIS 111 million was set aside for the years 2011-2012 for investments in various projects: Industry and Agriculture NIS 43 million; Trade and Services NIS 43 million; Local Authorities NIS 15 million; Transportation Sector NIS 10 million.
- In addition, NIS 40 million were designated for projects utilizing Israeli companies' technologies which would be commercially installed for the first time.

# What's in the Plan? (2)

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- The Ministry of National Infrastructure issued tenders:
  - Consulting services and recommendations for upgrading regulations for home appliances;
  - Providing new and efficient refrigerators and the scrapping of old ones;
  - Performing comprehensive surveys to locate potentials for energy conservation in businesses, factories and institutions; and,
  - Sale of energy-saving light bulbs.
- Regulation of Energy Resources by setting limits for maximum electricity consumption for a myriad of instruments and appliances.
- A voluntary GHG reporting and registry system to encourage companies to report their GHG emissions voluntarily

# Israel Voluntary GHG Reporting Program



- A national voluntary program launched by the Ministry of Environmental Protection, assisted by the Samuel Neaman Institute
  - Provide data for future government actions
  - Inform reporting entities and the public at large
- Reporting consists of both direct and indirect emissions
  - Reporting protocol provided to participants
  - Consistent with the GHG Protocol and ISO 14064.1
- Platform was launched on July 1, 2010
  - 24 Companies joined the 'pilot program'
  - 21 companies reported their 2010 emissions

המשרד להגנת הסביבה  
وزارة حماية البيئة  
Ministry of Environmental Protection



שלום עם הסביבה

# Pilot Program: Reporting 2010 Data

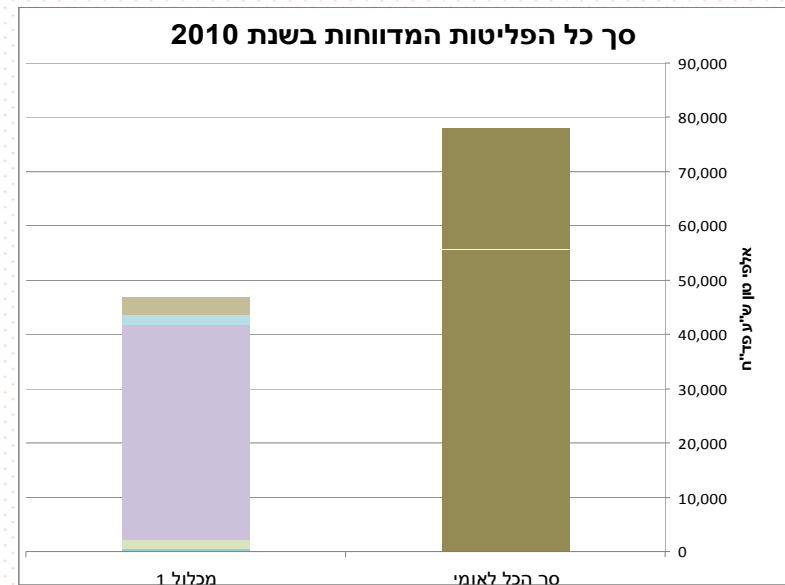
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- The Israel GHG Registry Program includes a 3-tier recognition awards system
  - Level 1 – reported
  - Level 2 – reported and verified
  - Level 3 – reported, reduced, and verified emissions
- First awards presented on November 8, 2011 by the Minister of Environmental Protection to the 21 companies that participated and reported their 2010 data
  - Only Level 1 awards were presented for 2010



# Preliminary Results for 2010

- Israel's 2010 nationwide emissions 78 million tons CO2E
- 21 companies participated in 2010 pilot
- Total direct emissions GHG reported 46 tons CO2E
- About 60% of nationwide emissions
- Almost half of the emissions due to power sector
  - Electricity mix, Coal and Natural Gas

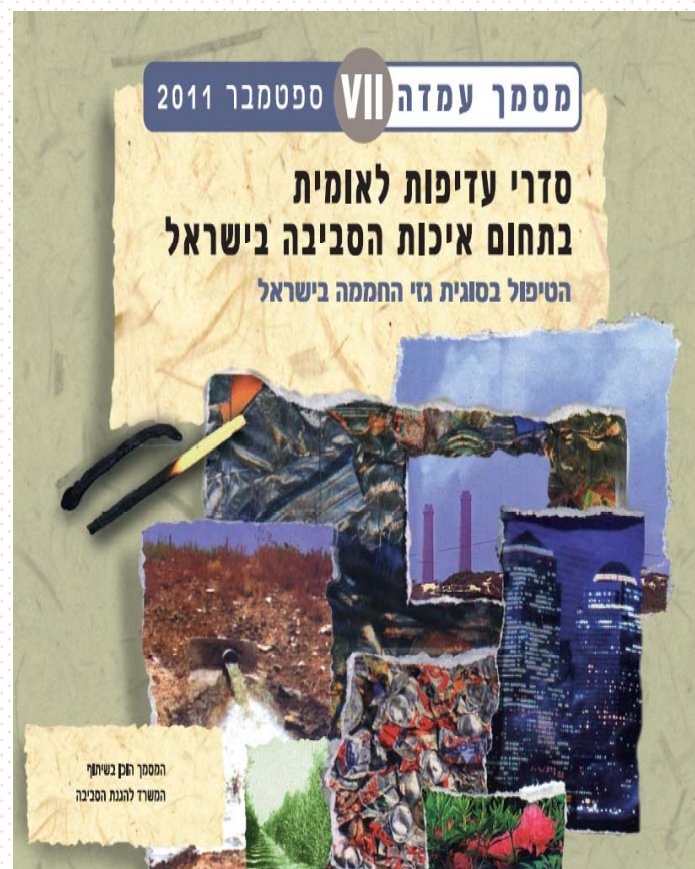


- Other significant emitters include the cement industry, petroleum refining, chemicals and fertilizers manufacturing



# In Summation

- This program is an important beginning for GHG emissions reductions, yet, it is not sufficient
- Israel needs to deal with the fuel mix in its economy in order to reach its GHG reductions target
- A policy document, summarizing the national plan and its gaps, was prepared in close cooperation with the Ministry of Environmental Protection
  - This document aims to serve not only the academic community and environmental advocates but also national leaders as well as public and private sector decision makers.



# Final Thought

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**Operations at both levels –  
Emissions Reductions (mitigation) and  
preparing for Climate Change (adaptation)  
require courage and vision!**

**..Thank you for your attention**