



OCS-Office of the
Chief Scientist
MINISTRY OF INDUSTRY, TRADE & LABOR



State of Israel

Israel : OCS Activity in the CleanTech Sectors

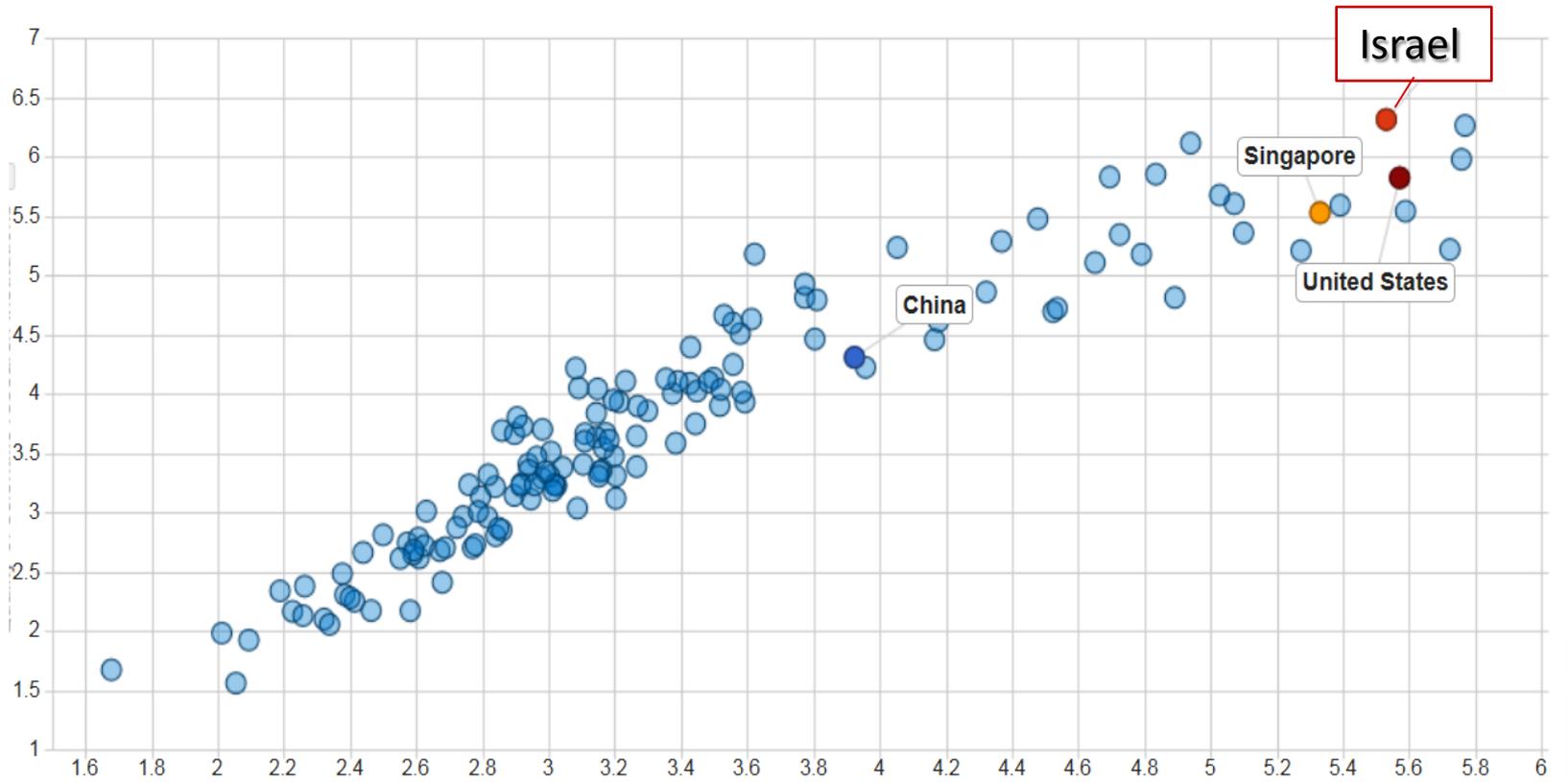
Abraham Gross | Deputy Chief Scientist, Ministry of Industry, Trade and Labor



Israel is a global leader in research and innovation



Quality of Scientific Research



Level of innovation

Source: World economic forum, 2011

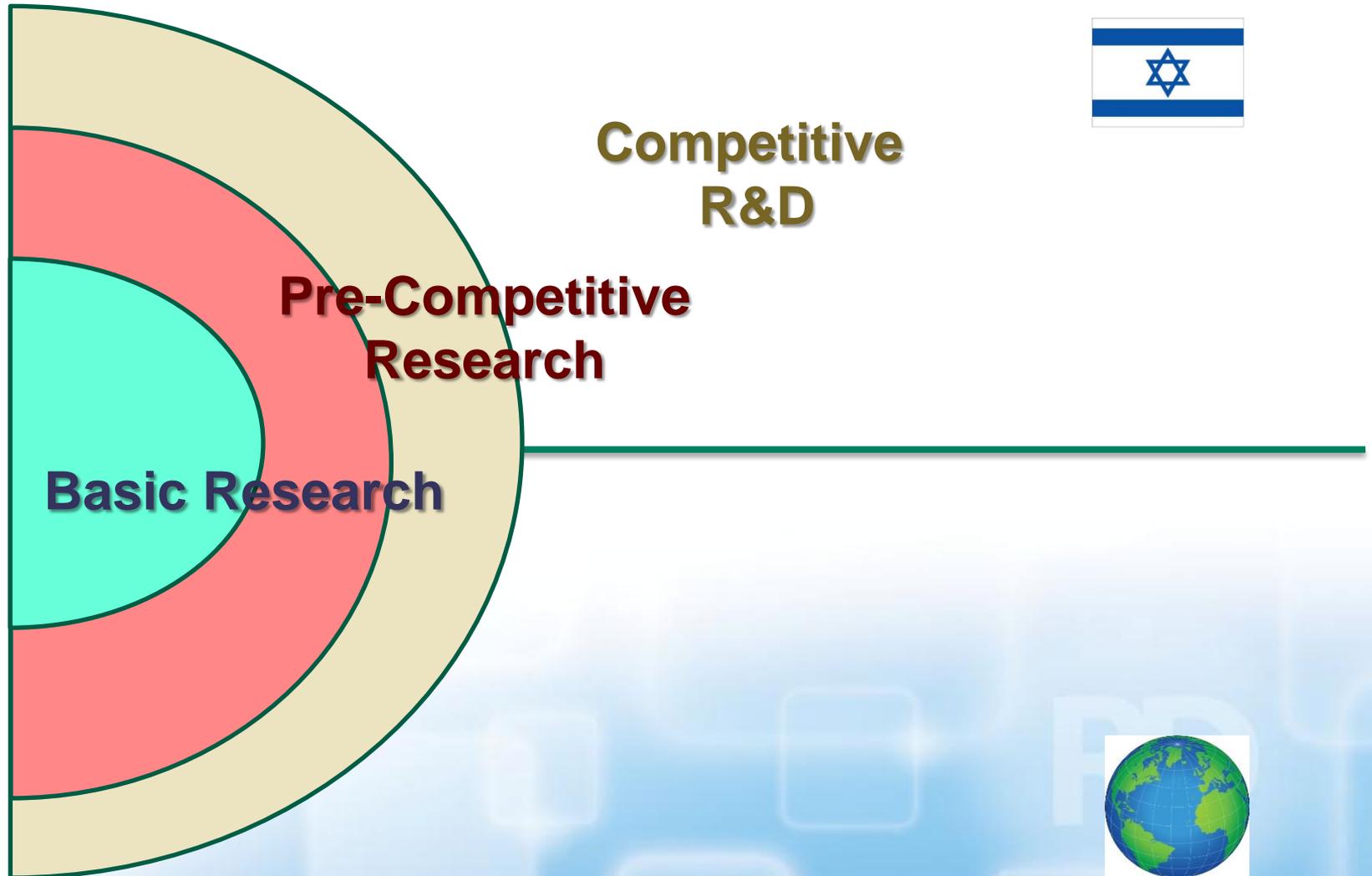
The Office of the Chief Scientist (OCS) implements the law for the encouragement of Industrial R&D to

Enhance, Strengthen and Improve:

- The development of local science-based industry
- Israel's balance of trade
- Employment opportunities in industry and exploit scientific labor force
- Profitability of the overall Israeli economy by investment in R&D
- Pre-competitive generic technologies of individual companies.



OCS Value Chain Support



The OCS programs



The R&D Fund

The R&D Fund is the main instrument of The R&D Law. It gives grants to “Approved R&D Programs”, to development of a new product or in a significant improvement to an existing product.

Technological Incubators

To transform innovative technological ideas, that are too risky and in too early stage for private investments, into viable startups. Support for up to two years (Biotech and Cleantech projects up to three years)

MAGNET Consortia

Supports the formation of consortia made up of industrial companies and academic institutions, in order to jointly develop generic, pre-competitive technologies. The duration of a MAGNET Consortium is 3-5 years.

International R&D cooperation between Israel and countries in the world.

OCS through MATIMOP acts with other governments, provinces and organizations to actively support and encourage industrial R&D cooperation between Israel and overseas industry.

Ecosystem

**Translational &
Applied Research**

Start-ups Generator

Smart Financing

**Beta &
Implementation**

**International
Cooperation**

OCS Activities

- 3 MAGNET consortia,
NOFAR, KAMIN

- R&D Fund
- Technological Incubators

- Technological Center
- Matching private
investments in Oil Alter.

- Supporting field trials
- 1st com. installations (GHG)

- Collaboration with MNC's
- Multi- & bi-lateral programs

Technological Center for Renewable Energies Solutions

Founded in the South of Israel. NIS 57 million allocated for the Center to be spent over a 5 year period.

Investment in Companies in The Field of Alternative Fuels for Transportation

Boost the investment in development of technologies of alternative fuels for transportation. NIS 400 million allocated for the period 2012-2020.

Reduction of Greenhouse Gas Emissions to encourage Innovation

Incentives for GHG programs to implement innovative Israeli technologies.

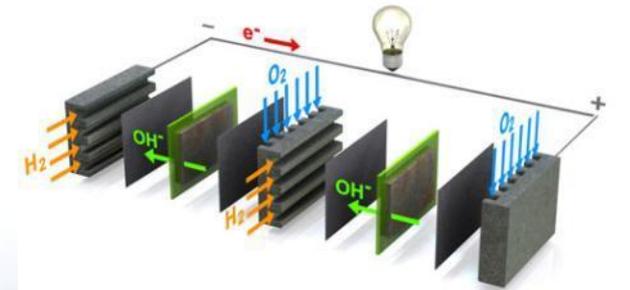
CleanTech: OCS Support Statistics



CleanTech 2011 OCS support

Funds Granted : NIS 135,000,000

Number of Projects: 100

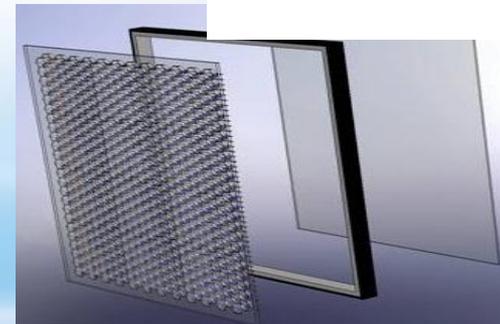


Energy Related Projects 2008-2012/Q1

Total Budget : NIS 476,297,819

Total Funds Granted : NIS 167,625,788 (35%)

Number of Projects: 120



•Solar

- Printing for solar cells, IBPV, ThermoSolar, water heating, novel PV technology and more

•Smart Grid and Efficient use Energy

- Control of power consumption and lightening, modems and remote meters, LED drivers, air-condition controllers

•Battery & Fuel Cells

- New catalysts, electrolytes, supper capacitors

•Bio Fuel

- New Enzymes for transformation, plant engineering, Algae

•Wind - turbines: new design, vertical

•Oil & Gas – DME

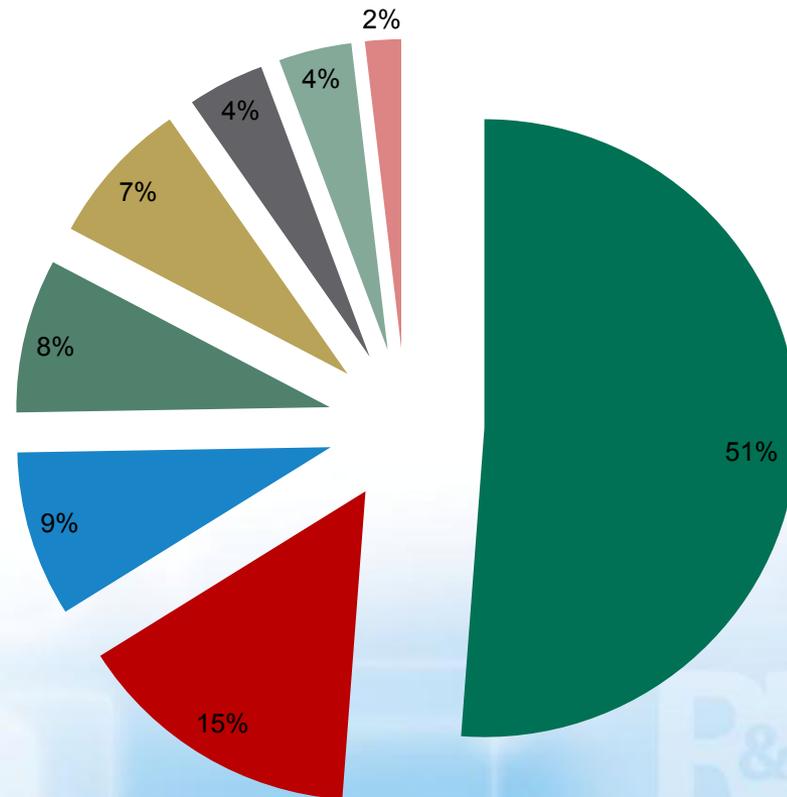


CleanEnergy Support by the OCS



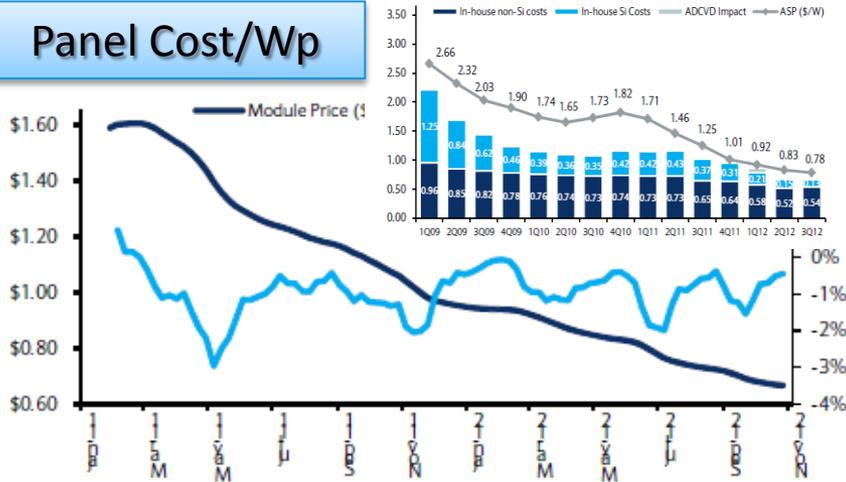
Approved R&D Grants (08-Q112)

- Solar
- Smart Grid
- Battery & Fuel C
- Efficiency
- Bio Fuel
- Wind
- Other
- Oil & Gas



Fast Changing Factors

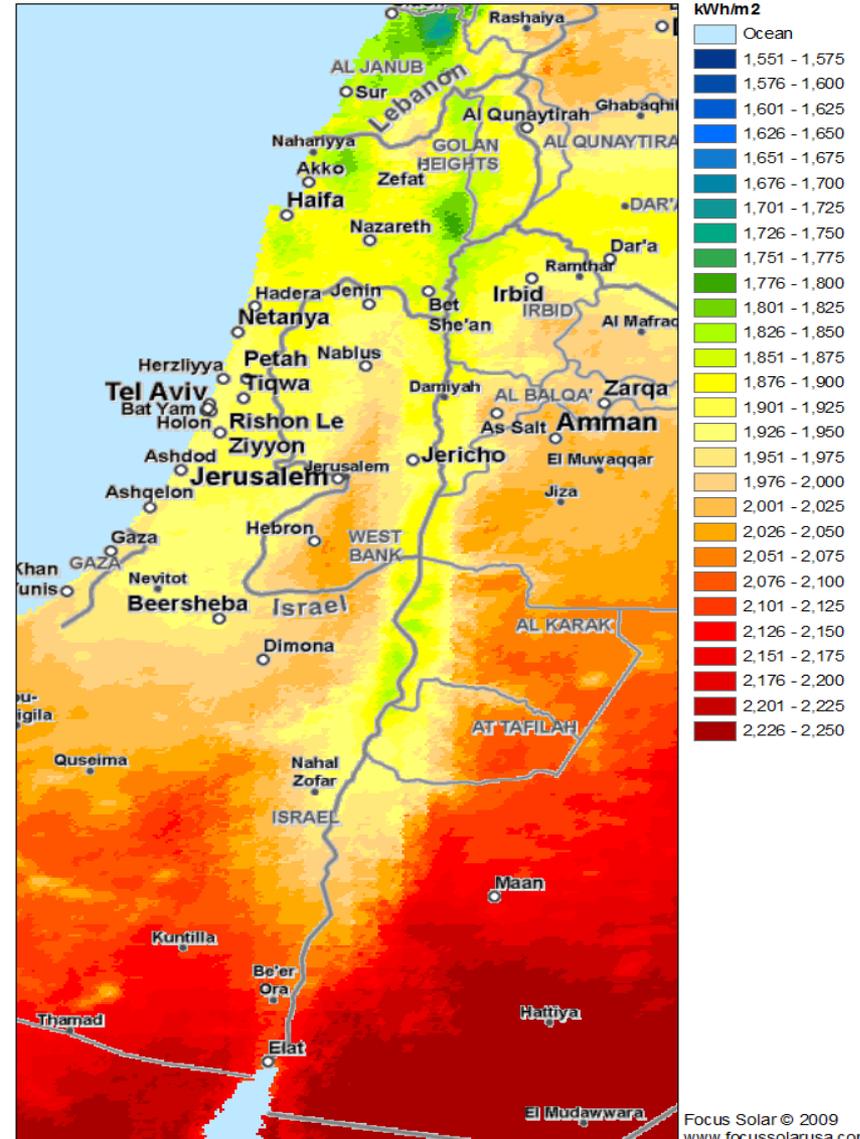
Panel Cost/Wp



The Result

PV Instalation MWp	1000	MW
Negev Sun hrs/yr	2000	Hrs
Panel area km ²	6.92	km ²
Cost of Modules \$M	\$ 800.0	M
Equivalent Fuel cost Tamar Gas	\$ 101.4	M
Equivalent Fuel cost LNG	\$ 312.0	M
Equivalent Fuel cost Avg 2011	\$ 127.1	M

The Constants Factors



How to adapt to global trends in the PV industry?

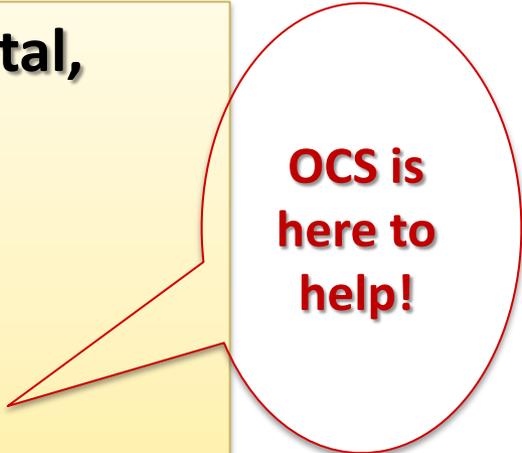
To Bring:

- Localization of Production
 - Innovation
 - Export
- Job creation

Israel plenty of highly skilled human capital, scientific and technological proficiency.

How can this add value in:

- Improving cell and module efficiency
- Improve BOS conversion efficiency
- Energy Storage
- Smart grid

A red-outlined speech bubble with a tail pointing towards the bottom-left of the yellow box. Inside the bubble, the text 'OCS is here to help!' is written in a bold, red, sans-serif font.

OCS is here to help!



Thank you

www.moital.gov.il/madan.htm



R&D