

ICTAF Obligations

3 case studies:

1. Solar heated water by industrial collector system at a camp site
2. 500MW Solar Thermal Power Station
3. biomass in municipal garbage dumps

Database update

Information for Newsletter

National Energy Policy

Israel – Basic Data

Population (2003): 6.5 million

Area: 21,946 km² (430 km long and 60-100 km wide)

Capital: Jerusalem

Official languages: Hebrew, Arabic

Religions: Jewish, Moslem, Christian, Druze and other minorities

Economy

Market economy

GDP - \$30.3 Billion

Employment - 2,324,000

Substantial government participation

Leading exports: high technology equipment, diamonds, and agricultural products.

Increasing privatization and liberalization.

Energy Economy

Based on imported fossil fuels
Annual supply of primary energy \pm **22.5 million TOE** (tons of oil equivalent).

Fossil fuels comprised 97% of the total (66% oil and 44% coal).

Domestic solar water heaters provide \pm 3% of the primary energy supply.

Energy Economy (cont.)

Since 1990 the average annual growth rates have been:

Energy consumption - 6.3%

GDP - 4.8%

Energy intensity - 1.5%

Reserve electric capacity - $\pm 10\%$ above the expected peak demand

Electricity demand projections: annual increase of 1.2% till 2010 and 0.7% after 2010.

National Energy Policy Strategy and Priorities **Ministry of National Infrastructures**

The main objective : To ensure the quantity and the availability of energy supply in the short and in the long term.

Supply should be implemented:

- With care for reasonable costs,**
- Optimal environmental and social impacts,**
- Complying with international commitments .**

National Energy Policy (cont.)

The main priorities are:

- **Diversification** of the energy supply sources
- **Variation** of the fuels used for generation
- Introduction of **natural gas**
- Increasing **privatization**
- Consideration for the **environment**
- Managing the **demands** for energy
- Increasing the **effectiveness and efficiency** of the energy market
- Providing energy supply for **water desalination**

National Energy Policy (cont.)

Use of natural gas - starting in 2004, would increase to 50% of fuels for electricity production in the long-term.

National Energy Policy (cont.)

Monopoly of the Israel Electric Company (IEC).

The development plan for electricity-generation from 1999 to 2005 includes 1,133 MW from Independent power producers (IPP) At present, IPPs, with an total capacity of 280 MW have already signed Power Purchase Agreements with the IEC.

There are as yet, no IPPs in operation. The first one is to be established in 2005.

Installed Capacity, MW, end of the period

Year	MW	Peak Demand
1999	8,579	7,150
2000	9,179	7,650
2001	9,744	8,061
2002	10,484	8,367
2003	10,484	8,741
2004	11,340	9,142
2005	11,710	9,497

Renewable Energy

Type	Capacity MW	Future
Hydro	5	No increase
Wind	6	Growth
Solar		100 - 500

Oil & Fuels Sector

The Fuel Authority, a division of the Ministry of National Infrastructures is in charge of the country's fuel market and oil sector.

- Till now, **total dependence on imports**
- In 2002, 9.5 million tons of crude oil were imported
- Offshore **natural gas** was recently discovered reserves estimated at 12 billion cubic feet, consumption planned to be equal to 700 million cubic feet per year

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- Proven **oil reserves** are estimated at just over 4 million barrels with production of ~1000 bpd.
- The Ministry of **National Infrastructures encourages** private sector exploration, mostly by small and medium sized independent operators.
- The **Eilat-Ashkelon pipeline** system, jointly owned by Government and Private sector, has a throughput capacity of 55 million tons of crude oil per year.
- **Oil Refineries** Ltd, jointly owned by the Government (74%) and private investors (26%) operates two refineries and is the only company, which refines oil, and supplies oil products to the market.

Two **refineries** exist - Haifa and Ashdod with total refining capacity of 13 million tons of crude oil per year.

The **Natural Gas Authority** in the Ministry National Infrastructure was established to further facilitate the introduction of natural gas into the energy sector.

The potential consumers of natural gas include existing and future power plants, industrial energy users, and petrochemical industries, industrial cogeneration plants and the commercial sector.

The **share of natural gas** will be ~ **8%** of the total energy basket in 2005 and **25%** of the total energy basket in 2025.
(Ashdod st. is operating on NG since February 2004)

Coal is at present the main source for electricity generation in Israel.

In 2002, Israel imported ~13 million tons which is equivalent to 35% of the primary energy consumption in Israel.

The main sources for coal import are South Africa , Columbia and South – East Asia

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Renewable Energy Sources (RES)

Israel is very advanced in development and utilization of **solar energy**, which accounts for **3%** of the country's gross energy consumption (GEC).

(According to law contractors are obliged to install solar energy for water heating in new buildings under 9 floors since 1990.)

Two **wind energy** farms produce another **~1%** of GEC.

Government, the IEC and the public sector, finance energy production plants exploiting RES.

Energy conservation

Promotion of RUE and conservation is a basic objective of Israel policy. This includes special legislation.

Energy Efficiency

The Energy Resource Management Division of the Ministry of National Infrastructures is the main authority responsible for energy conservation measures: information , training, consulting, energy audits, legislation and regulations and demonstration projects.