

## **Dual Energy Policy –**

# Natural Gas, Environmental Effects Vs. Renewable Energy



## **Eilat - Eilot Conference 2012**

## Important Aspects in the Agreements System

#### Including Environmental Risk Assessment in the Gas Exploration



## Topics

- ✓ Renewable Energy
- ✓ Expected Fuel Mix
- ✓ Petroleum Rights.
- ✓ Natural Gas Demand.
- ✓ Oil and Gas Explorations Environmental Potential Impacts.
- ✓ Israeli Environmental Regulation.
- ✓ Foreign Environmental Regulation UK as an Example.
- ✓ Joint Operating Agreements.
- ✓ Natural Gas Overall Chain Supply
- ✓ Safety & Environmental Risk Assessment Program approach.



## **Renewable Energy**

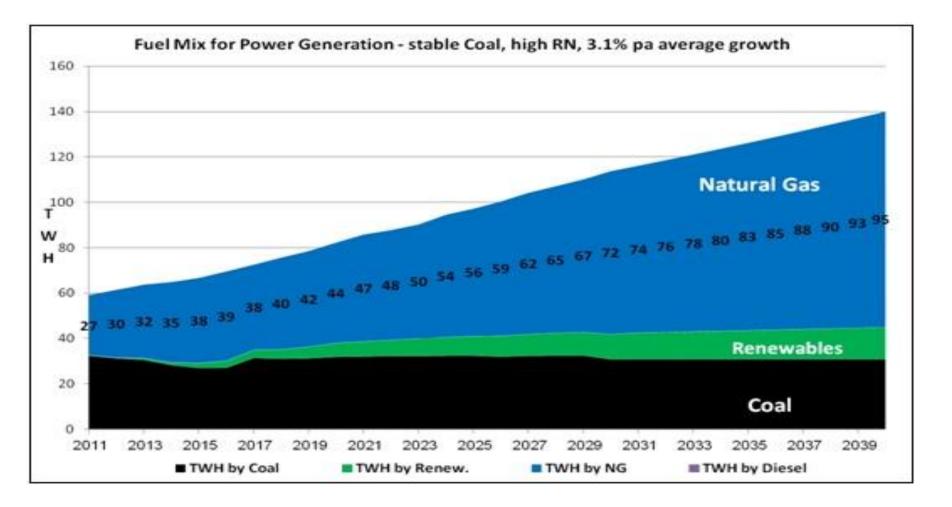
• Advantages and Barriers.

 Current National Policy and Demand Projection.





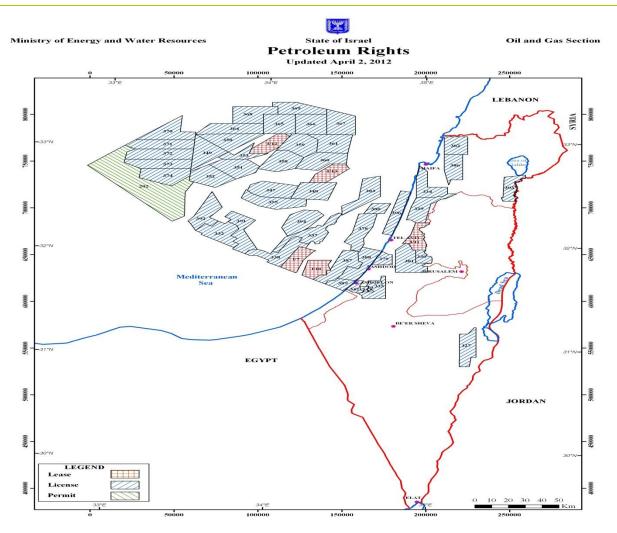
## **Expected Fuel Mix**



from MEWR website



## **Petroleum Rights**

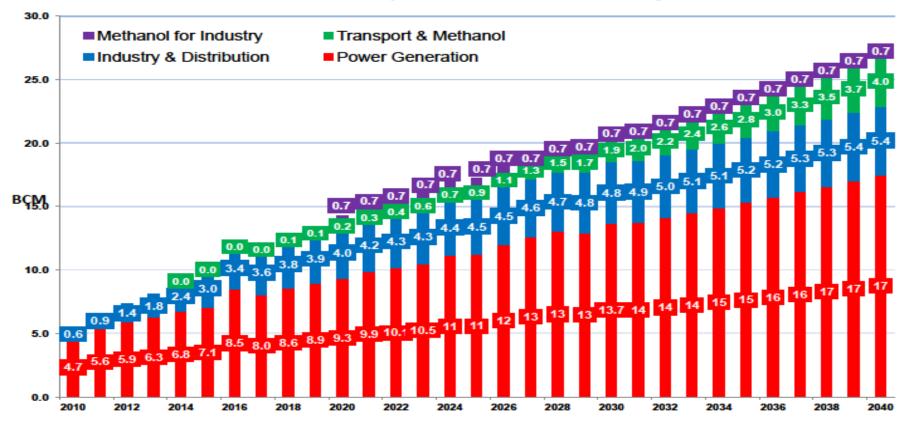


from MEWR website



## **Natural Gas Demand**

#### Israel NG Demand Forecast, Orot Rabin Converted, 10% Renewables by 2030



from MEWR website



## **Environmental Potential Impacts**

- Although Natural gas considered as a clean energy source, it has to be handled carefully, to avoid environmental effects as:
- Effects on the Marine Biology
- Marine and Shoreline Pollution
- Hazardous Material Incidents
- Hazardous Wastes and Wastewater produced
- Air Emission, Flaring
- Noise Nuisance





## **Israeli Environmental Regulation**

- Ministry of Energy and Water Resources :
  - Petroleum Law,1952 and it's derived Regulation including The latest Petroleum Regulations (Authorization to Deviate from the Provisions of the Planning and Building Law), 2012.

#### Ministry of Environmental Protection?

Prevention of Sea Pollution legislation, Hazardous Material Legislation, Clean Air Act and Other.



## UK – Oil & Gas Env. Offshore Reg.

DEPARTMENT OF

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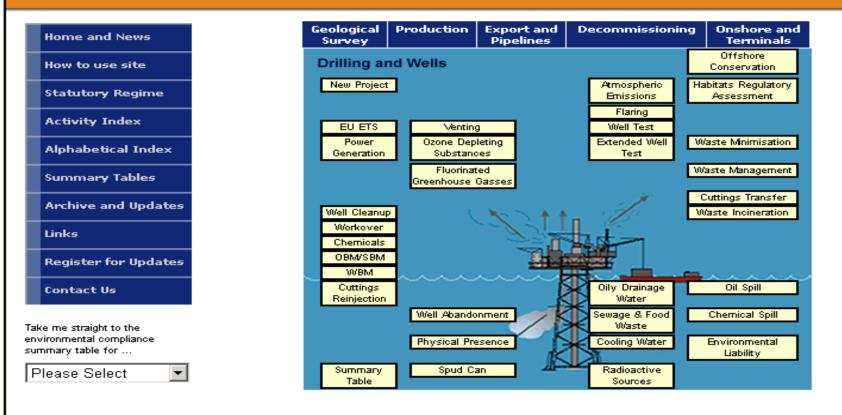


## UK – Oil & Gas Env. Offshore Reg.



#### **Environmental Legislation Website**

#### This Page Last Updated 6 April, 2012





## **Joint Operating Agreements**

- Good International Petroleum Industry Practice.
- SHE programs implemented by the Operator and reviewed periodically.
- Annual audits by the parties.
- Emergency Act All reasonable measures for remedy the failure and effects of pollution.



## Natural Gas Overall Chain Supply

- Environmental Issues and Liabilities in the Overall Agreements system in the Supply Chain:
  - ➤Gas Drilling
  - ≻LNG Facilities.
  - ≻Gas Piping and Supply.
  - ≻Gas Endorsement in the Industry.



### **Natural Gas Overall Chain Supply**

- Issues as Emergency incidents Liability.
- Insurance Cover for all Scenarios.
- Use of All Reasonable Measures for Minimizing the Environmental incident Potential.
- Minimizing Officer's Liability.

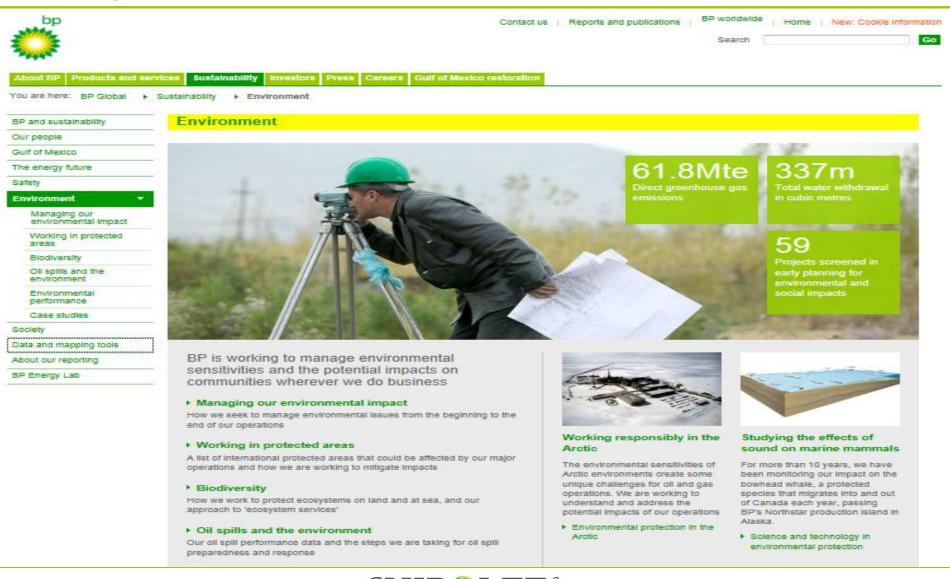


### Safety & Environmental Risk Assessment

- Clear and Comprehensive methods and Practices
- Based on Scientific Marine Monitoring Procedures
- In the Israeli Case Study Creates the Norms
- Minimize Officers Liability

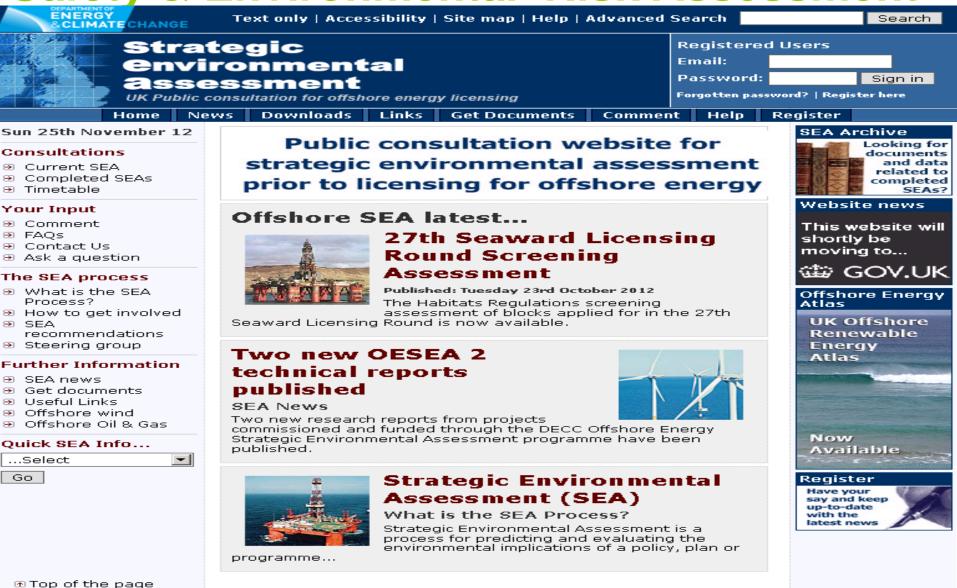


#### Safety & Environmental Risk Assessment





#### Safety & Environmental Risk Assessment







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Thank you

SHIBOLETS & NOTARIES