

MAIN PROBLEMS OF FOSSIL FUELS

- fossil fuels account for about 80% of the total energy supply
- imported petroleum and products account for about 40% of total supply
- Thailand spends more than 10% of GDP on imported petroleum and products
- emissions of CO₂, NO_x, SO_x, PM

POLICIES AND TARGETS

Energy conservation :

Policy : reduction of rate of energy growth

Target : rate of energy growth / rate of economic growth to be reduced from 1.4 : 1 to 1 : 1 by the year 2001, and later on

Rate of energy growth < rate of economic growth

Renewable Sources of Energy :

Policy : increase of share of renewable energy supply

Target : share of renewable energy to be increased to 8% of the commercial supply by the year 2011 or, \cong 25% of the total supply

TRANSPORT SECTOR

Problems :

- highest energy demand, \cong 37%
- highest demand \cong 70% of total petroleum products
- excessive use of diesel oil, \cong 50% of fuels used in transport
- largest emitter of carbon dioxide, PM 2.5

Energy Conservation Recommendations :

- car taxes based on engine fuel performance, km/litre, instead of engine capacity, c.c.
- promotion of hybrid cars
- expansion and improvement of rail transports
- expansion of improvement of water transport

Alternative Fuels

NGV :

- incentives on modification of existing diesel engines in buses, vans, etc.
- tax incentive on dedicated NG engines,
- incentives for new buses, trucks, etc.

Gasohol :

- guarantee on a fair alcohol price which should be adjusted to the price of oil
- mandate on car engines run by gasohol, E10,
- availability of either benzin 91 or 95,
- reduction of alcohol production costs by solar distillation, etc.

Plant Oil & Biodiesel :

- supplies of plant oils,
- expansion of oil-plants plantations
- engine emission
- bio-diesel from used cooking oils etc.

POWER GENERATION

Conservation Recommendations :

- standards on electricity intensity for electrical appliances, buildings & industries
- direct sales of electricity to PEA, consumers, etc.

Renewable Energy Sources

Biomass :

- wastes from agro-industries
- municipal wastes
- fast-growing trees
- animal wastes
- agricultural wastes etc.

Small Hydropower Plants :

- technical, economic and social feasibility studies,
- case studies of Japan, Europe
- by product of existing irrigation dams etc.

Wind Power :

- wind power potential at 40m and higher,
- technical and economics feasibility studies of large wing turbines,
- pilot plants for large wind turbines
- mixed power generation by wind, solar and IC engines.

PV, Fuel Cells, Nuclear Power :

- Technology Assessment
- R & D Priorities

Comparative Studies on Cost / Benefit of Ren. Energy :

- short term, 2011
- long term, within 20 years.
- avoided costs of externalities, e.g. CO₂, SO_x