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4 . Energy Issues

1.Current World Status

- **Fossil energy (oil, coal natural gas)**

- Developed country's economy and life depend on fossil energy.
- Fossil fuels are limited resources which have been created over hundreds of millions of years but will be exhausted within the next several decades.
- Consumption of fossil fuels increases year by year. The pace of depletion may be accelerated by developing countries working to expand their economies.
- Oil producing nations with small reserves will face shortages within twenty years.
  - ⇨ At that stage, oil producers(OPEC) will drastically reduce exports
  - ⇨ The world economy will collapse.

＊ Massive consumption of fossil fuel brings drastic increase of CO2.
=>Global warming is progressing.
(Serious problems such as abnormal weather, sea level rise, flood, famine and increase of environmental refugee occur.)

Resource	Years until fully consumed
Oil	~40 years
Natural Gas	~60 years
Coal	~230 years
Uranium	~70years

- **Nuclear Power**

Due to the major risk of nuclear plants, many industrialized nations have altered their policies since the Chernobyl incident.
Italy abolished completely, Austria and Denmark stop development.
Holland (2004), Sweden and Germany(2020) plan to close completely.
Developed counties such as France, USA, and England don't plan for new plants.
=>In the future nuclear power plants which will be closed by its life will increase.

- **Hydroelectricity**

- Hydroelectricity has a serious impact on the natural environment while its economic viability is questionable as well.
- European country and Chine promote small scale (local) hydeoelctricity which can utilize flowing current of natural rivers to create a usable resource.

- **Soft energy**

- Wind Power

Unlimited energy resource, however, such plans are so dependent on the suitability of sites that can only work in very limited areas.
The number of wind power plants is increasing in Germany, Denmark, California, USA.

- Biomass energy

This form of energy results from methane gas and alcohol made from wood, field and food waste and livestock droppings as resources for power plants. The plant produces heat from electricity and heat is used for heating and hot water supply (Co-Generation).
Biomass energy is popular in Sweden and Germany.

- Solar power

Efficiency is not good and difficult in big scale generation, however, available for supportive small scale use.
California,USA promotes solar heat generation and Germany promotes sunlight generation.

- Geothermal energy

Generation of electricity from the vapor of volcanoes. Such power production is seen in volacanic countries including the Philippines and New Zealand.
=>However, all of these resources cannot provide energy supplies to the scale that fossil fuels do. They can provide energy only on a small local scale.

2. The policies and practices of soft energy in EU

Reconsidered energy massive consumption as it was and change to use of soft energy from fossil fuel and nuclear power. Promote to reduce energy consumption.

- **Sweden**

Consumption of fossil fuel decrease by almost half by bringing in such as carbon tax, 40% of all energy consumption is from soft energy.
Planning to halve total current energy consumption by 2050 and to phase in a regular supply of soft energy resources.

- **Denmark**

Expand the use of soft energy. (Wind power plants have increased 100fold in the last 15 years.)
In 30 years reduce 20% of energy consumption, provide soft energy for 1/3 of whole energy.

- **Germany**

Plans are in effect to stop or restrict any increase in energy consumption. And dependency on nuclear power and fossil fuel is diminishing. Wind power already generates the largest amount in the world.

- **France**

Control amount of energy consumption by raising up the electricity cost during peak time to 11 times.

3. Current Status in Japan

- Energy consumption increased up to 10 times in last 40 years.

=>Worst energy sufficiency country in the world. In the future energy consumption will increase.

- 10% of world's nuclear power plant (50 plants) are working. In 2000 nuclear power promotion law was voted, 13 plants are under planning to construction by 2010.
- Dams which is under construction and planned are about 380.
- Promote RDF => Plastics are allowed to be burnt, dioxin will occur.
- Less than 1% of soft energy sufficiency. There are no policy to promote it.
  => A cut-back in the supply of oil would cause a major panic in Japan.
  It would be a huge blow to electricity generation, automobile manufacturing, transportation of materials and food production as well as to all other parts of the economy and life in general.
  A reduction in oil supply is fatal to Japan because Japanese agriculture is dependent on chemical fertilizers, agricultural chemicals and machines.

＊ Reduction of energy consumption and change to soft energy is urgent matters.

⇨ We need to rethink thoroughly our life and economy of massive consumption and waste.

Country	Energy Self-sufficiency Percentage
Australia	174%
Russia	156%
Canada	148%
UK	112%
China	105%
India	86%
USA	82%
Japan	5%

4. What we can do?

- Use cars less frequently. Stop letting the engine idle.
- Save electricity. Save gas. Save energy (keep a book of household environmental account).
- Adhere to the 4R's: Refuse, Reduce, Reuse and Recycle
- Become a green consumer. Don't just think about it. Start with what you are able to do. Show that you care and take action.
- Increase family time. Energy consumption can be reduced to a fraction of the current level by doing things together and sharing resources.
- Cut down on extravagances. Extravagance equals excessive use of energy.
- Express our opinions to promote soft energy to government.
  => A self-sufficient system is required for energy as well.