

Global Awareness of Energy Usage

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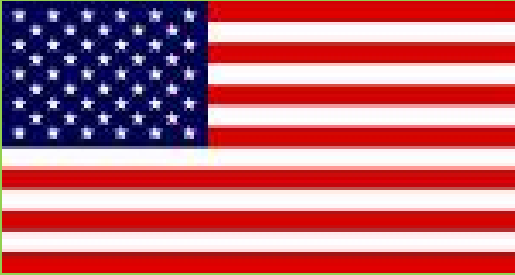
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Energy Choices Around the World





United States

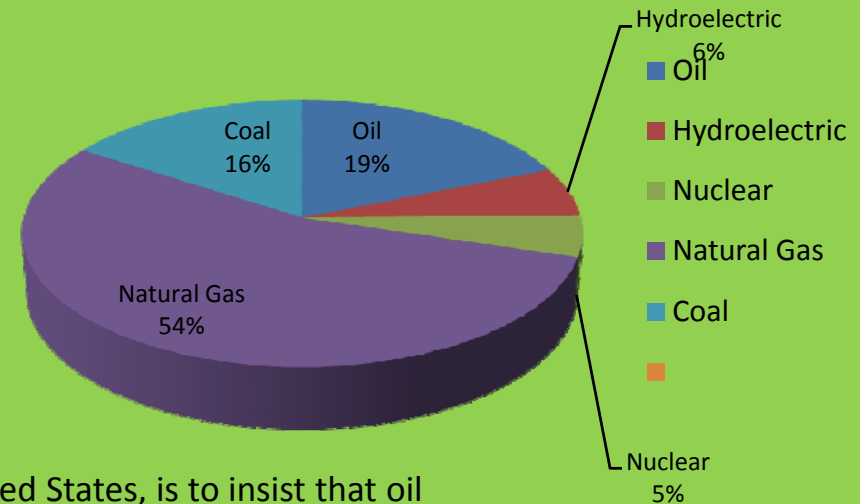
The United States and Saudi Arabia

As of 2005, Saudi Arabia has 25% of the world's proven oil reserves (the world's largest oil reserves) and has the world's fourth largest natural gas reserves. Saudi Oil accounts for about 13% of U.S. oil imports.

Former U.S. ambassador to [Saudi Arabia](#), [Chas Freeman](#), said of Saudi Arabia, "One of the major things the Saudis have historically done, in part out of friendship with the United States, is to insist that oil continues to be priced in dollars. Therefore, the US Treasury can print money and buy oil, which is an advantage no other country has. With the emergence of other currencies and with strains in the relationship, I wonder whether there will not again be, as there have been in the past, people in Saudi Arabia who raise the question of why they should be so kind to the United States."

American dependence on oil imports has grown from 35% in 1973 (the first year reliable data were collected) to 60% by the end of 2006

U.S. Electric Power Generation





Saudi Arabia

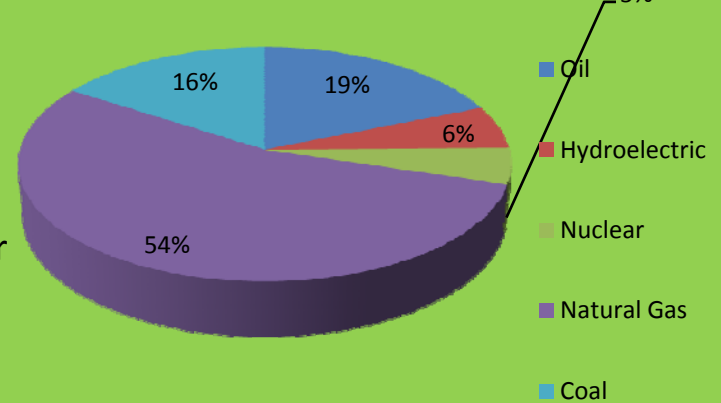
Petroleum: Total Oil: 10,246.93 Barrels
Crude Oil: 8,721.51 Barrels
Natural Gas: 2,594 Metric Tons
Electricity: 165.55 Thousand Metric Tons per Year

CURRENT AND FUTURE ENERGY CONCERNS

- The biggest oil producer in Petroleum Exporting Countries
- \$70 billion energy investment plan
- \$18 billion directed toward increasing upstream petroleum capacity
- Largest natural gas producer
- Exploring on an offshore for additional reserves
- Natural gas demand is expected to nearly triple to 14.5 cubic feet per day by 2030
- Next 2 decades electric generation capacity is set to double to 60 gig watts

The United States government recently declared Alberta's oil sands to be 'proven oil reserves.' Consequently, the U.S. upgraded its global oil estimates for Canada from five billions to 175 billion barrels. Only Saudi Arabia has more oil. The U.S. ambassador to Canada has said the United States needs this energy supply and has called for a more streamlined regulatory process to encourage investment and facilitate development.

Energy Consumption by Sector





Russia

Main sources of energy:

Russia mainly relies on fossil fuels for energy including oil, coal, and natural gas. Other resources include nuclear and hydro electric.

Production vs. Consumption (in thousand metric tons of oil equivalent)

Production	966,512
Consumption	550,724

Per person energy usage in percent

Residential	33%
Industry	34%
Transportation	20%
Agriculture and Public Service	13%

Summary

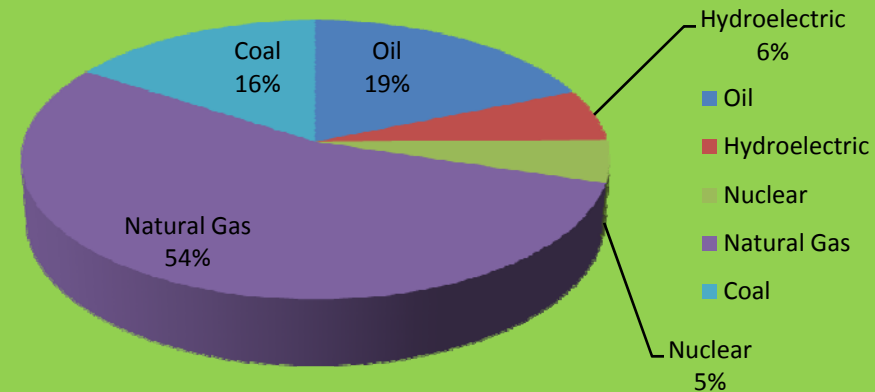
- Positives - World's leading energy producer and exporter (oil, coal, natural gas)
Largest natural gas producer and exporter
Second largest exporter of oil (sometimes more than Saudi Arabia)
- Negatives - World's third largest energy consumer
Natural resources eventually will run out.

Policy and Plans - Increase energy efficiency while decreasing impact on environment

Develop new ways to produce energy without compromising future energy development

On July 2008 the Russian president passed a law allowing the government to extract oil from the continental shelf

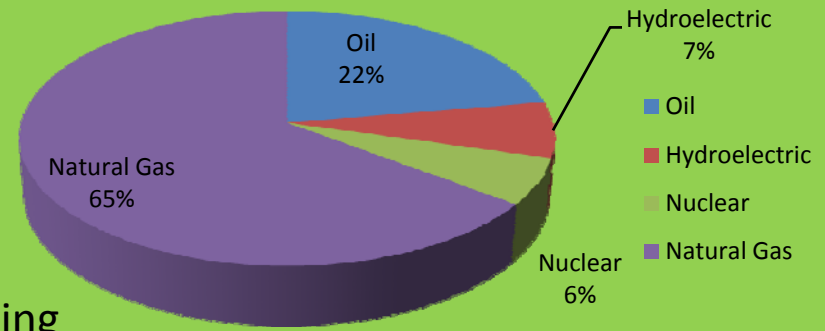
Total Energy Consumption in Russia





Uzbekistan

Primary Energy Supply



Uzbekistan is a country that is closely connected to Russia. Independent since 1991, the country seeks to gradually lessen its dependence on agriculture while developing its mineral and petroleum reserves. Russian businesses have shown increased interest in Uzbekistan, especially in mining, telecom, oil, and gas. Uzbek authorities have accused US and other foreign companies operating in Uzbekistan of violating Uzbek tax laws and have frozen their assets.

Main Source of Energy

- Oil and Natural Gas
- Thermoelectric

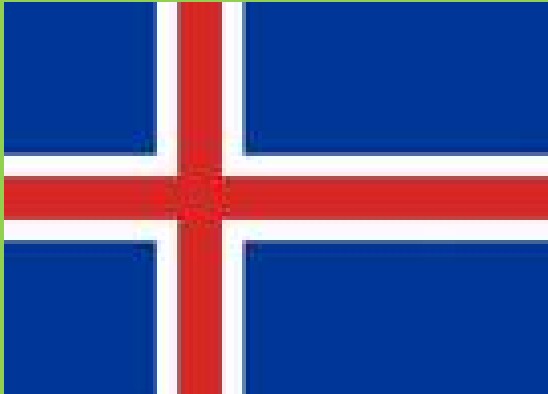
Production vs. consumption

- Production 55,066 metric tons
- Consumption
- 49,383 metric tons

Types of Renewable Energy

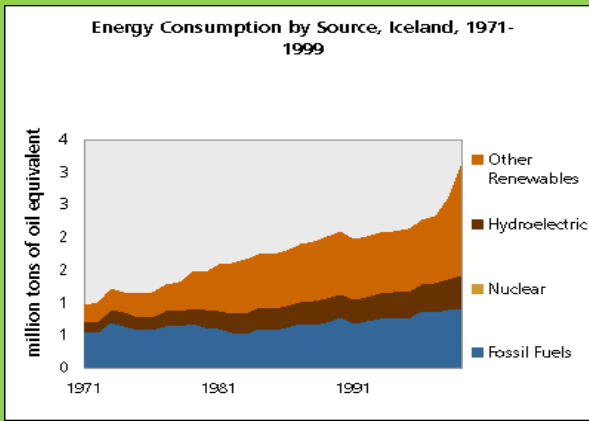
- Solar Power is used in public places
- Hydroelectric has a future Potential





Iceland

- Iceland is currently asking the other nations of the world to become partners in manufacturing. The Geothermal energy under the land is more than they can use and since it can't be packaged and shipped they want to increase manufacturing.



ENERGY SOURCES

- Geothermal
- Coal & Gas

Production vs. Consumption

- Product 2490 metric tons
- Consumption 3173 metric tons

Renewable Resources

- Geothermal energy allows Iceland to be free of dependency on fossil fuels.
- Natural gas is available as a nonrenewable resource as well.

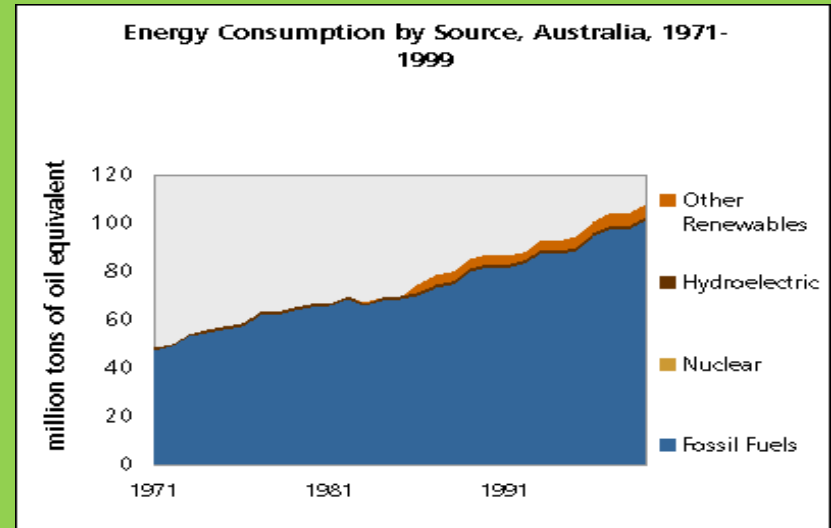




Australia

- i. Main energy sources used are:
- ii. Coal, crude oil, natural gas liquids.
- iii. Energy production is 232,552 metric tons
- iv. Consumption – 107,930 metric tons.
- v. Per-person energy usage of gasoline is 940 liters per year.

Australia is similar to the United States in the increased dependence on nonrenewable fossil fuels. They are considering development of renewable energy sources as well as natural gas which is more abundant.





Five Policies

RECOMMENDATIONS FOR THE US

1. Increases in fuel economy standards
2. Development and deployment of advanced coal technologies
3. Adoption of renewable national energy standard (Windmills)
4. Ocean energy sources, wave power and tidal power
5. Tax breaks for energy conservation

