This is the common paper of the group north/central. The region includes people from the Czech Republic, Finland, Germany, Slovakia, Denmark, Switzerland and Wales.

Interestingly, there are quite different policies on nuclear power in these countries. While the Czech Republic, Finland, Germany, Slovakia, Switzerland and Wales operate nuclear power plants, Denmark never got far past the idea of maybe building a plant before the plans were buried due to protests. However, all of these countries, including Denmark, identify nuclear power as an important source of their energy consumption. Denmark therefore imports nuclear energy from Germany and Sweden. Germany, the Czech republic are rather exporters of electricity, while other countries, including Denmark, import more electricity than they themselves produce. Denmark's total energy balance is positive because they export more oil than they import electricity. Therefore, it is hard to determine the actual amount of electricity produced by nuclear power plants in other countries in Danish statistics on the subject.

This is how the different countries generate and use energy:

Use of primary energy

	Germany (2008)	Czech Rebublic	Denmark	Switzerland	UK(Wales)	Finland	Slovakia
Mineral oil	34,1%	21,71%	40%	55%		26%	18%
Natural gases	21,4%	15,48%	20%	12%		11%	31%
Graphite	12,6%	N/A	N/A				-
Nuclear power	11,4%	14,6%	N/A	9,5%		17%	25%
Brown coal	10,9 %	46,24%	N/A	1%		10%	22%
Renewables	8,7%	4,71%	18%	19%		25%	4%
others			2%	3,5%		11%	

electricity production

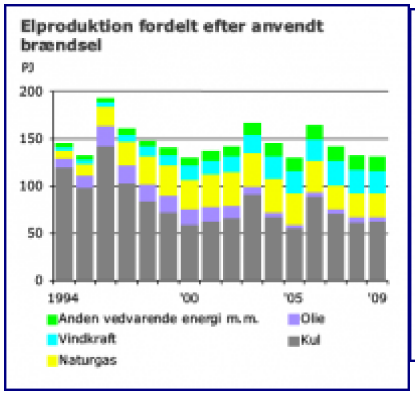
	Germany	Czech Republic	Denmark	Switzerland	UK(Wales)	Finland	Slovakia		
brown coal	25,25%	61%	50%	small		13,1%	24,87%		
nuclear energy	24,92%	29,7%	0%	40,0%	19.26%	27,9%	53,39%		
graphite	20,86%	N/A	0%				0%		
natural gas	14,40%	4,8%	19%	small		11,4%	9,18%		
wind	4,47%	0,15%	19%	very small		0,3%	0,83%		
water		2,34%	0%	55,3%		15,6%	11,73%		
solid biomass		1,34%	9%			10%	0%		
mineral oil	1,65%	0,1%	2%	small		0,6%	0%		
others	8,42%	negligible	1%			21,1%	0%		

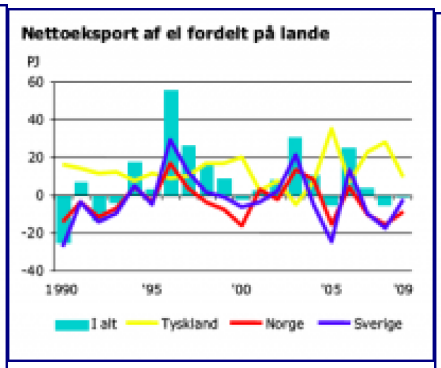
Electricity production in Germany 2009

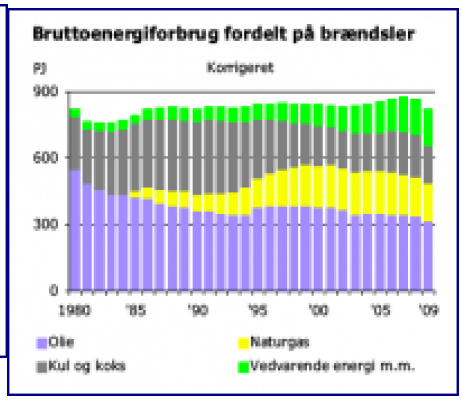
Nuclear energy	22,6%
Brown coal	24,6%
Mineral coal	18,3%
Natural gas	12,9%
Mineral oil	2,1%
Wind power	6,3%
Water power	3,2 %
Biomass	4,3%
Photovoltaic	1%
Waste	0,8%
Other	3,9%
total production	696,8 billion kW
Import	40,5 billion kW
Export	54,8 billion kW

There are some statistics on 1) energy production in our country and 2) energy consumption in our country.

Denmark:





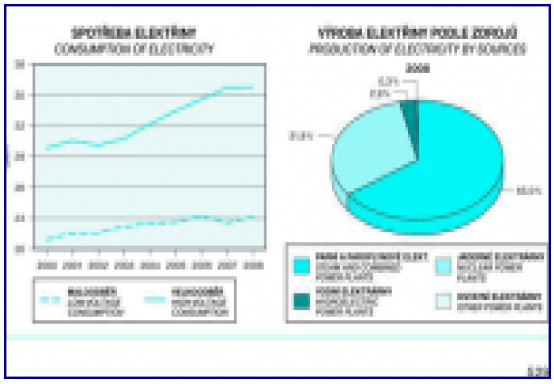


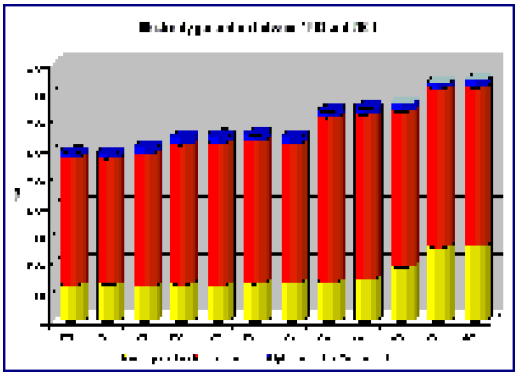
NOTE: Since nuclear power is categorized as a renewable energy source by the EU, the use of nuclear energy in Denmark may be included in the green part of the graph in Screen-capture-3.png.

Swiss graphic about primary energy sources not available. Just about final energy use:

available here

The statistical figures for the Czech Republic:





And what's remarkable about the energy production in our region?
The comparatively high amount of brown coal used to produce energy in the Czech Republic and Slovakia can be explained by the attitude of the pre-1989 communist governments, which neglected the ecological aspects of the industrial production. The relatively low cost of brown coal, which is provided by local coal mines may have also influenced the current situation.
The nuclear power plants (at least the parts of them, which were built before 1989) are based on Soviet designs and using Soviet technology, for the same historical reasons.
The Czech Republic is nowadays supporting the construction of wind and solar power plants, the share of those modern ecological methods of energy production is however very low yet.

Scandinavia is a region with a considerable amount of green energy research and use of renewable

energy sources. Sweden and Norway use quite a lot of water energy (due to the fact that they have a lot of rivers well suited for this type of energy production), whereas Denmark is mostly a poineer country in terms of wind power. All three countries use a relatively low amount of coal, even though it still adds up to over about half of the electricity production in Denmark. In Sweden, about half of all electricity comes from nuclear power. Sweden and Finland are the only countries in Scandinavia with nuclear power. Some of the nuclear power produced in Sweden is being sold to Denmark and Norway, and at other times, Denmark and Norway sell energy back to sweden. Because of wind and water being inconsistent energy production forms, it is unstable, and sometimes - when the wind does not blow - Denmark needs to import electricity, mostly from Sweden and Germany. The situation is similar in Norway with Sweden being their primary import / export country in terms of electricity.Therefore, Denmark and Norway, even though they do not have nuclear power, still recieve electricity from Sweden, and it is safe to say that some of that power is produced by nuclear power plants. The exchange of electricity and the prices of that electricity is managed by Nord Pool, a trading agency with offices in Denmark, Norway, Sweden and Finland.

In Germany both east and west have always been large producers of brown coal used for electricity production. Western Germany started to use nuclear energy commercially in the 1960s and ever since energy production depended on nuclear energy in large parts. Ever since the reactor catastrophe in Chernobyl no new reactors have been built. Today, there are still 17 reactors in use. A few years a ago the federal government decided to abolish nuclear energy production Germany until 2020, but this ban was just lifted by the new government a few weeks ago. Since the reunion in 1990 Germany has done much to improve its CO2 Balance by modernizing brown coal power stations especially in the east and by subsidizing Windmills and Solar cells. Today, the amount of nuclear energy used is decreasing, but Germany is not yet at a point where it does not need it anymore.

In Germany, the nuclear power plants are operated by private companies, like Vattenfall, RWE, E.ON and EnBW. Also in Finland nuclear power plants are opetated by private companies, but state owns parts of these companies. Both Czech NPP are operated by the company CEZ, of which the state is the largest shareholder.

Concerning the countries operating the nuclear power, we do expect the future developement in this domain (i. e. building/ extending the power plants) in Finland, Switzerland, Slovakia and the Czech Republic. Wales constantly opposes building of the new power plant in its territory (although UK as a country operates the nuclear power stations). Surprising might be the fact, that in Germany (in the country now operating the most atomic power stations in this group!) we discuss the phase out and the prohibition of building the new power plants.

Second part: How our region tries to protect itself in case of accidents.

How countries protect themselves in case of accidents does not vary too much. People are informed over the internet or radio and there are measures like evacuations, iodine pills....
There is an additional protection measure in Switzerland compared to other countries: It is mandatory to have a shelter in every house. That is actually a relic from the thirties (fear from Germany) and the early Cold War, a law which is still in force.

In the context of protection in case of emergency, these countries have signed the EURATOM treaty: Denmark, Finland, Czech Republic, Slovakia, Germany, Wales.

However, what does vary between the countries is, who is responsible and how help is organized. Germany for example is a federal republic and thus the power over police forces and the original

emergency plans lies in the states' hands. They are primarily responsible for reactors' and peoples' safety. However, they are helped by federal agencies, such as the Ministry of environment or an office for radiation protection. In Finland, however, the power is in the central government's hands. Here, the Ministry of employment and environment is responsible. In Denmark, it is a state controlled agency with responsibility for emergency actions in all kinds of disaster situations who control the emergency plans for a nuclear accident.