Karsten Kreutz
November 2010

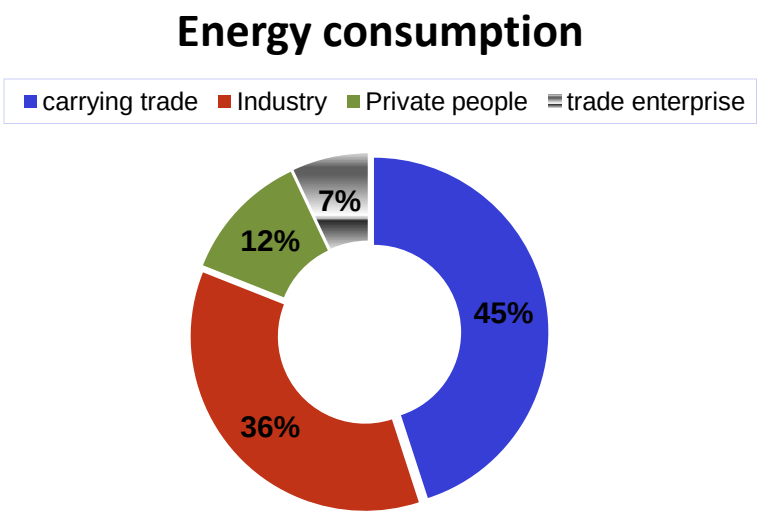
Energy

The most important energy source of the United States of America is oil. Oil provides forty percent of the whole energy America uses. The USA needs twenty million barrel oil a day, that´s more than Europe and Russia together. More than 60% of this oil is imported. The further energy is prepared by other fossil fuels like gas and coal. The contingent of gas amounts nearly 24%, the part of coal is also 24%.

Atomic power is not widely used in America, because they haven´t build a further nuclear power station since the meltdown at the atomic power plant on “Three Mile Island” in Pennsylvania in the year 1979. So in the USA nuclear power produces just 20% of the electric power, this is only 8% of the whole energy which is needed in the United States of America.

The part of the renewable energy amounts 6, 4 % of the electric energy. Above 90% of this energy is produced by hydro-electric power plants and by biomass energy. These 90% are spread to 45% by hydro-electric- and 47% by biomass power plants. Geothermal energy delivers five percent of the renewable energy in the USA. The remaining three percent are shared between solar- and wind power.

The below shown graphic demonstrates how much energy different users need. The carrying trade is using 45% of the whole energy, which is needed by the USA. Especially this is a sector, where much energy and also huge greenhouse gas emissions could be saved. The industry just uses 36% and private people need only 12% of the whole energy consumption. These 12% are mostly covered by gas. The lowest part of the energy (7%) is used by trading enterprises.



The CO_2 emissions of the USA have rised from 5300 Mt in the year 1990 to 6800 Mt today. By comparison: The CO_2 emissions of Germany got smaller about nearly 20% since 1990. If the forecasts are correct, this development in the USA will go on.

The greenhouse gas emissions of America are the second highest of the world, just one place behind the Republic of China. In real numbers this means nearly 6.800 Mt CO_2 emissions a year. By comparison: The $C0_2$ emission of Germany is only about 12% of this. So it's not surprising that America, which has not so much citizen like China, emits per person more CO_2 than any other bigger country of the world.

Just some little countries, for example Katar, emit more CO_2 per citizen than the USA, but these countries have just a few people (1 million), so this weights not so heavy. (USA=310 Mio. people)

The consequence of this fact is that the USA doesn't join the Kyoto protocol to avoid economical disadvantages in opposite to India and China. These both countries defeat this protocol too. But hope for our climate comes by the federal states like California. In the year 2020 California wants to reach the level of 1990 and 2050 they want to terminate the CO_2 emissions down to 20% of the level of 1990. Despite of all these efforts, the CO_2 emissions of the world will rise about 55% till 2030.

To satisfy the energy hunger of the USA they must import nearly $^1/_3$ of the whole energy they need.

To stay independent from energy imports as much as possible, the US government has four ideas, which should prepare the energy which the USA will need in the future.

1. Open up the offshore oil sources in front of the US coast. But these project isn´t popular because the terrible accident on the offshore platform "Deep Water Horizon". Another problem of this plan is, that it doesn´t lower the emissions of CO_2.

2. President Obama wants to support the nuclear power industry by giving them credit guarantees in a range of 54 milliard US $. So, only in Georgia, two new nuclear power stations will be built.

3. Modern coal power stations: Coal will be very important for America´s future, because between 25% and 36% of the whole world coal reserves are in the USA.

4. Renewable energy: The US government decided to spend 4, 5 milliard US $ to the biggest solar power station in the world, called "Blythe-Project", which will be build in California by a German company. It´s power should be 1000 MW, so that 300.000 to 750.000 households can be covered.
Together with this project they plan further solar power stations which should have a power of 2.800 MW. With this electric energy nearly two million households could be covered. That´s more than the German nuclear power station "Biblis" (2.407 MW) can deliver.

5. Obama also builds on wind power.

He wants to double the percentage of these before mentioned energies (point 2 -5) and create so the basic for seven hundred thousand new jobs.

Quellen:

Brockhaus: Das große Weltlexikon
http://www.stern.de/politik/ausland/energieversorgung-in-den-usa-obama-will-atomkraft-staerken-1539707.html
http://www.focus.de/politik/ausland/usa-obama-baut-wieder-atomkraftwerke_aid_480868.html
http://www.kas.de/db_files/dokumente/laenderberichte/7_dokument_dok_pdf_8385_1.pdf
http://www.weltalmanach.de/stichwort/stichwort_atomstrom.html
http://www.co2-handel.de/article187_13682.html
http://www.spiegel.de/wissenschaft/natur/0,1518,447223,00.html
http://www.spiegel.de/wirtschaft/unternehmen/0,1518,725284,00.html
Quelle: Bundesministerium für Wirtschaft und Technik, BP
Quelle: Globus-Infografik Nr. 3123 vom 15.10.2009
http://www.oekosystem-erde.de/html/klimapolitik.html