

## Energy in the State of Brandenburg: Opening Speech at the Potsdam Conference

By Matthias Platzeck\*

Welcome to Potsdam! I am happy that you have chosen the capital city of Brandenburg as location for your conference. Firstly it underlines the role of the region as an outstanding energy location and secondly you will hopefully have the time, next to your strenuous conference, to discover the one or the other sight of this city.

The Energy question is a matter of our contemporary civilization. It is linked to social, economic, and ecological challenges. The conditions of political independence and individual freedom are at stake. Securing energy means protection against disastrous wars, the stability of states and governments, and the chance for fair development opportunities on all continents.

Therefore, we have to ask: what will be the energy base of our future way of living? Which energy sources will allow wealth, quality of life and peace in the globalized world of the 21st Century? We have to formulate appropriate answers. The challenges are enormous and they are not for tomorrow but they beset us here and today. The extensive programme of your annual conference is an impressive proof. A broad and forward looking policy approach is required. Someone who pursues egoistic interests at the expenses of others, due to lack of understanding or lack of determination, will sooner or later have losses themselves. Energy insecurity cannot be limited any more. Energy supply and climate change risks cross the border between poor and rich, and between nations and continents.

Our present energy decisions have a large political range. The Federal Republic of Germany has taken the right course. Our policy will escape the constraints of the nuclear and oil economy.

The energy chapter of the coalition treaty states:

- that our agreement on the nuclear phase out will not be modified,
- that renewable energy use will be extended,
- that the Renewable Energy Law will be continued,
- that ecological tax reform will not be revised,
- that the share of biofuels will be increased,
- that energy efficiency will be increased in an extensive manner,
- that our innovative efforts will be focused on renewable energy and energy efficient technologies.

The reasons for phasing out nuclear power should not be repeated here. The risks as well as the costs of nuclear power have again and again been discussed. Some weeks ago we had the 20<sup>th</sup> anniversary of the Chernobyl disaster. The question of radioactive nuclear garbage is unsolved. We have also to

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recall the billions of Euro tax subsidies for nuclear energy.

It remains without question that the phase out of nuclear power has averted society from a crucial test. The statement remains valid: the withdrawal from nuclear power is the entrance to energy security.

Let us come to the energy policy of Brandenburg. It is part of an economic policy that is oriented towards growth and employment. The most important energy policy instrument that is binding for the state government is the “energy strategy 2010” that was agreed on in 2002.

We know: energy policy decisions are always long-term strategy decisions that depend on high investments. For this reason continuity and security must apply. For this reason the energy strategy is evaluated now and carried on in the long term. Brandenburg is the most important energy state in eastern Germany. More Energy is produced than is used. 50 percent of the produced energy is exported.

In the past 16 years the entire energy infrastructure of the state was completely renewed with billion Euro costs.

The stable, inexpensive and environmentally sound energy supply has contributed significantly to the development of the state.

The energy and brown coal economy is the most important industry branch in the state with approximately 15000 employees. Approximately 350 small scale businesses are active in the energy sector in Brandenburg.

Also for this reason do the energy economy and technology belong to the growing sectors in the state, which are in the focus of the economic policy. Vattenfall Europe Mining & Generation, energy business with its headquarters in Cottbus is one of the biggest businesses in Eastern Germany both for number of employees and business volume.

The extraction and electricity production from brown coal in the Lausitz, a region in the south of the state, is now as in the past economically important. All the region of the Lausitz and in particular the areas around the industry area of Schwarze Pumpe are traditional energy areas. People here have always lived from and with coal.

Pit brown coal is extracted in three surface mining pits (Cottbus-Nord, Jänschwalde, and Welzow-Süd): in 2005 40.4 million tons altogether. Brandenburg is the second most important extraction state after North Rhine- Westphalia. Brown coal mining does not only ensure employment. Brown coal is and will remain for a long time to come the only competitive inland energy carrier.

And: inland brown coal doesn't need incentives and is mined without subsidies. The coal is available on the market without security risks, without disposal and shortage risks. And on the background of scarcity of oil reserves in the USA, the “oil hunger” of China and the geopolitical developments, these are factors that should not be underestimated.

The power plant in Schwarze Pumpe, which started operations in 1998, is one of the most modern and most efficient brown coal plants in the world.

With 2.3 billion Euro it is till today the biggest private investment in Brandenburg and at the same time the biggest investment in the building of a powerful and environmentally

sound energy supply in the newly formed German states.

About 80 percent of electricity production in Brandenburg comes from brown coal power plants in the Lausitz. Around half of the clients outside the state are supplied with this electricity.

The week before last Federal Chancellor Merkel and I put the foundation stone for a CO<sub>2</sub> free pilot power plant in Schwarze Pumpe. We are very proud to be able to present such a project here in Brandenburg. It is the first plant of this type. The state Brandenburg documents that even in the future brown coal will remain an important economic factor. Especially, when it is possible to include the tradition and prepare the way for highly modern technologies of the future. The CO<sub>2</sub> free pilot power plant is an example for this.

Vattenfall is the first business to experiment this technology outside laboratories. About 50 million Euro will be invested in this pilot plant. It should start operating in 2008.

The decision for the location at Schwarze Pumpe was taken because of the good general framework, e.g., the process steam can be used in the surrounding industries. In addition the synergies both for the supply and disposal and for the technical staff will be optimally used.

Another advantage is the cooperation with the closeby Technical University in Cottbus. There are many research projects to increase the efficiency of the Oxyfuel technology (CO<sub>2</sub> capturing in the exhaust), which is used by Vattenfall.

We are convinced that only the use of the most modern technology will achieve the long-term acceptance of inland brown.

To maintain and expand the headstart in the field of brown coal power plant technology is a big challenge. It is a big benefit for the state that the Vattenfall company together with the Technical University of Cottbus and other research establishments have accepted this challenge.

Not only the deposits of brown coal, but also the strong position of Brandenburg in the production and utilisation of renewable energies allow us to speak of the energy state Brandenburg. The use of these resources was promoted with the becoming effective of the law on renewable energies on 1<sup>st</sup> August 2004.

Brandenburg is one of the leading states in the production of energy from wind. At the end of 2005 there were 2,033 wind power plants with an installed capacity of 2,62 Megawatt connected to the grid. The utilisation of solid fuel biomass in the production of electricity has noticeably increased. Many job opportunities were created due to the positive development of renewable energies in particular in the economically underdeveloped regions.

Examples are the production of rotor blades in Lauchhammer or the production of solar modules in Prenzlau. The investments that were undertaken deserve appropriate conditions. Brandenburg offers them. **Brandenburg's aim** with its energy policy is to increase the utilisation of renewable energies. Till the year 2010 the primary energy consumption should be boosted from 3 percent to 5 percent. The share of electricity from renewable energies has increased to around 10 percent.

After the quick development of wind energy utilisation in the past few years, in the future, the focus will lie on the utilisation of inland biomass to produce electricity, heat and transport fuels. Biomass contributes the most among renewable energies to the added value in the state and secures new jobs and revenues in particular in rural areas.

The promotion of renewable energies should, according to our belief, be applied so that integration is further developed on various levels: we need not only a lot of energy from renewable sources, but also energy with high availability and tradability to achieve a stable energy supply.

In 2005 a new record of production was achieved at the PCK Refinery GmbH in Schwedt, in the North East of the state on the Oder River, where 11.5 tons of crude oil are processed. About one tenth of each ton of crude oil used in Germany is processed in Schwedt: PCK is one of the most efficient and profitable refineries in all Europe. The refinery was one of the first to produce fuel without sulphur and was the first to produce fuels with biogenous components in Germany. Brandenburg is, in Europe, one of the most important regions in the production of fuels from renewable primary products.

Biodiesel is produced in seven plants with a capacity of approx. 380,000 tons. In Brandenburg it is possible to refuel biodiesel at over 50 fuelling stations.

In Brandenburg, in Schwedt, a bio-ethanol plant with a capacity of 180,000 tons per year operates. There are plants for other bio-ethanol production in Brandenburg. Two plants are going to be constructed in Wittenberge and in Premnitz, with capacities of 150,000 and 100,000 tons per year respectively.

The development of processes and plants to produce synthetical fuels from biomass is being greatly considered. On the one hand new possibilities are being given to agriculture and forestry business to produce biomass. On the other hand there are many middle sized businesses in the state that could contribute to the development of processes and plant components with their know how.

Recapitulating it is possible to take note of the following main focuses of the state's energy economic policy in the next years: securing electricity production from brown coal, the further development of renewable energies (in particular biomass), incentives for energy research, securing of energy infrastructure, development and utilisation of new energy technologies.

From the program of your conference I saw that it embraces many of the addressed topics. Your debates are, of course, very interesting for the further development of our energy strategy.

I would like to ask you, Prof. Dr. Erdmann, to make the results of your conference available to the Brandenburg State Government.

I wish all participants a stirring experience exchange and enough time to deepen already existing and to initiate new contacts.

I wish the yearly conference good progress and all of you a good stay in the capital city of Brandenburg. Come back!

## In Review - 29<sup>th</sup> IAEE International Conference, Potsdam, Germany

“I thought the Potsdam Conference was a huge success from a professional point of view.” “Congratulations for the great success of the Conference. Contents, management and venue were all excellent.” “One of the highspots was the number of young people attending. It is good to see the IAEE renewing itself.”

These are some of the comments from the delegates attending the 29<sup>th</sup> IAEE International Conference on “Securing Energy in Insecure Times” this June 2006 in Potsdam, Germany. The conference theme addresses some of the big issues in contemporary energy economics. The conference organizers should have proposed *Vladimir Putin* as the conference patron because his interruption of natural gas flows from Russia via the Ukraine to Western Europe this January put a particular spotlight to the energy security issue, especially in Europe. This move from Russia waked up energy economists to look at security and accordingly it was not surprising that as many as 270 papers had been presented around the manifold facets of the conference theme.

It is difficult to present a comprehensive overview about the conference. But some highlights should be mentioned here.

Each day stood under a particular headline that guided the discussion in the plenary sessions and some concurrent sessions. The key message of the **Day on Global Issues** was that, according to the instrumental role of markets towards efficiency gains, markets should lead energy policy. *Lord David Howell*, former UK energy minister, stated that there is no such thing as full energy security. Energy supply may always be disrupted by events. The best degree of security is achieved through diversity and the ability to switch between sources of primary and secondary energy. On the other hand, *Klaus, Töpfer*, Germany’s first federal minister for the environment and until recently the UNEP executive director, pointed to the role of efficiency gains on the energy demand side. This is by far the best strategy towards energy security. However, progress is always slow and lazy. Therefore a long term strategy is required. Actions must be taken today even if their beneficial role becomes obvious only in some distant future. As example, urban settlement structures are determined by the relative price of gasoline. In order to achieve more efficient vehicle energy demand, the appropriate method is to remove all energy subsidies. If subsidies persist, then there are no appropriate economic signals towards an efficient settlement structure.

Currently fossil fuels are subsidized because the costs of climate change are not included. The knowledge on carbon dioxide is still incomplete but this cannot be an excuse for postponing actions because all types of economic decisions are taken with incomplete knowledge.

In the mean time the world is becoming increasingly dependent on oil and other fossil fuels. According to *Majid Al-Moneef*, Saudi Arabian Governor to OPEC, further demand growth, combined with increasing concentration of world oil

reserves in areas such as the Middle East, Russia and Africa, meant that fossil fuel markets would become increasingly interdependent and that energy security was linked to recognizing this interdependence. Producers could contribute to increasing energy security by expanding their crude production capacity and investing in the downstream in order to ensure supply continuity.

Another view of producing companies was presented by *Ruslan Nickolov*, Director of TNK-BP. He argued in favour of reciprocity as a critical element of energy security. Reciprocal transparency enables to plan demand, supply, investments and deliveries. Reciprocal market access and openness to investment foster greater energy security. Most important are cross-border capital flows, openness to investments and absence of protectionism.

According to *Olivier Appert*, President of the Institut Français du Pétrole, present oil prices exercise a strong incentive on oil producers to increase production, but they do not want to invest for nothing. US President George Bush’s recent statement on reducing US dependence on Middle East oil was naturally a cause for concern and is not helpful for energy investments. On the other hand, producers that originally were opposed to climate change mitigation have realized that the introduction of greenhouse gas measures had no impact on price.

The second day of the conference dealt with **Securing Energy under Competition and Regulation**. The key message was that securing energy requires energy markets to be open to newcomers and new investments. There are obvious deficits in this concern. In recent months and years there had been a tremendous activity of incumbents and national governments to avoid and restrict market access to newcomers. Key words are re-nationalization of fossil energy resources and the growing attention of governments in consuming countries to establish so called national champions. Both contribute to the recent increase in energy prices.

*Ulf Boege*, president of Germany’s Federal Cartel Office, argued in his key note speech that the protection of companies by politicians has been seen to fail time and time again. If competition is to work, it is necessary to have free movement of capital, but, referring to E.ON’s attempted takeover of Spain’s Endesa, there remains far too much political resistance.

As a result, energy prices and the margins of incumbents are extremely high in these days. *Boege* proposed to remove the automatic link between oil and gas prices in continental Europe. Under the present price link, gas prices rise in response to events in Iraq, oil market speculation, etc. This sends the wrong signals to the consumers. Without the price link, rising oil prices would make gas more competitive and stimulate appropriate consumer reaction. If gas and oil prices move together, then the oil price can raise more than it would otherwise do.

*David Nissen* from the Columbia University put up the question to what degree energy policy should determine the market design. While regulators in the US are aggressive towards market design, European regulators respond until

recently to “anti-trust” practice. Retail competition is supposed to control wholesale market power. Unfortunately, the European regulators’ recent change to a more active market design did not result in a more competitive market structure which is, according to *David Nissen*, a result of the bargaining power of energy companies.

The last day of the conference was on **Long-term Technology and Policy Choices**. The plenary speakers didn’t promote a single technology that energy market should rely on in order to increase supply security. The discussion rather recognized that a diverse range of energy sources including enhanced energy efficiency is needed to meet the challenges presented by climate change, security of supply concerns and energy poverty.

In spite of their technical advancements, renewable energy technologies are still missing the cost targets necessary for becoming competitive. An example discussed by *Hermann-Josef Wagner*, professor at the University of Bochum, is offshore wind power generation. In addition to the still to high specific investment costs, the investment volume of a typical offshore wind farm represents a handicap as it seems unlikely that project volumes of 100 Mio. EURO or more can be financed prior to the proven maturity and reliability of this technology. According to *Shirley Neff* from the Columbia University the renewable energies in the US are in an early stage because of the insufficient and instable investment environment.

On the other side of the spectrum is nuclear power which had been discussed rather intensively in Potsdam. While *Matthias Platzeck*, Prime Minister of the Federal State of Brandenburg and until recently party president of the German Social Democratic Party, underlined in his opening speech the position that energy supply should not rely on nuclear power due to the many risks associated with this technology and the missing acceptance in the population, other speakers had been more optimistic. There is little doubt that a turning point has been made in the fortunes of the nuclear industry, even though the problem of waste management persists with no better solution than to stick it in the ground. However, the industry’s expansion faces other constraints, the most serious of which is its limited capacity of the construction industry. Another concern is the long term uranium resource availability. According to *Hadi Hallouche* from Shell, the combined call on the industry for decommissioning, plant replacement and new-build suggests that capacity restraints will limit the expansion of the nuclear industry to a peak in 2030.

Regarding the important role that coal may have as a feedstock of future energy systems, *Claude Mandil*, Executive Director of the International Energy Agency (IEA), mentioned efforts towards coal capture and storage technologies (CCS). He claimed that CCS is a key for a sustainable energy future and that demonstration projects have to begin now.

My report on the conference should stop here. A good overview about the statements given at the concurrent sessions of the conference offers the “Book of Executive Summaries” containing two page summaries of each paper presented in the concurrent sessions. This publication is particularly designed

for all those energy experts and practitioners that would like to follow the present trends in energy economics research without having to read all the technical details of the papers. With the book comes a CD-ROM that contains the extended abstracts and all available full length papers. This package (book of 512 pages plus proceedings CD-ROM; ISSN 1559-792X) can be ordered at the IAEE website <https://www.iaee.org/en/publications/proceedings.aspx>

The 29<sup>th</sup> IAEE International Conference offered not only stimulating presentations and discussions but also a well received social program. The highlight was a 4-hour sunset boat trip from the conference hotel along the lakes of Potsdam. As rumours say, IAEE delegates consumed 800 glasses of beer and 200 bottles of wine during the boat ride which is a true sign of the relaxed atmosphere on this pleasant summer evening. It is most astonishing that delegates didn’t show any signs of tiredness or exhaustion on the next conference day. Among the findings of the conference is that energy economists are not only rather strong with respect to analyzing energy security issues but also with respect to their physical form. So I have some hope that I will meet all the Potsdam delegates at future IAEE conferences.

*Georg Erdmann*  
Conference Chair



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# Scenes from the 29th IAEE International Conference

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