Es gilt das gesprochene Wort.

Ladies and Gentlemen,

I am very happy to welcome you to the 8th Freiberg Conference here in Cologne, in a way also my home district. An essential place of business of RWE is located in Cologne, with the open cast mines and the majority of our power plants more or less on the doorstep.

Cologne is the fourth biggest city in Germany, and offers – besides the Cathedral, of which the cologne inhabitants are very proud in particular – a historic district, multiple cultural highlights as museums and theaters, and especially a lot of gastronomic opportunities.

The typical native citizen of Cologne can be described as a very optimistic, fun-loving and tolerant person, what makes social life in Cologne quite amiable. People like to meet and talk, preferably in a pub enjoying the local beer called “Kölsch”. So it comes as no surprise, that Cologne is one of the epi-centers of the Rhenish Carnival. Carnival, here also called 5th season, determines the rhythm of the city especially at the beginning of the year.

Cologne is the biggest city in the federal state of North Rhine-Westphalia, lying at the southern edge of the Rhine-Ruhr region, which is the biggest area of high population density in Germany. An accumulation of cities such as Dortmund, Essen, Duisburg or Düsseldorf which seamlessly connect to each other.

The prosperity of this region has been based on hard coal and lignite mines for a long time, the essential precondition for Germany's industrialization and especially the cradle of chemical, non-ferrous metal and steel industry.

A lot of coal mining technologies were developed there, but also coal conversion technologies come from that industrial region. A commonly known example is the Fischer-Tropsch process.

If you have some time left, I can recommend the former underground hard coal mine “Zeche Zollverein” in Essen, which now is a museum, displaying mining and life in that area during the last century, and which is now a popular event location, too.

Dear Professor Meyer,

my congratulations for the eighth anniversary of your Freiberg conference.

The issue “coal”, whose value and possibilities by far have not been exhausted, yet, needs a platform for exchange and discussion. The eighth conference, the scope of the programme and, for sure, the amount of participants give evidence of that. It is also clear, this is not only tackling German interests, in view of international participation from all continents of this earth. On all of these continents, coal has its place in industry.

Last year the conference took place in Inner Mongolia, China. The place was chosen, since coal plays an important role in the industrial development in China, as coal played its roles in the development of our country.

Coal, and currently especially lignite, is one of the few natural resources located in Germany, accessible without subsidies, and it offers - next to power production - a bunch of possibilities for use as energy and raw material source. However, I don’t need to tell you that, since we are going to explore especially these possibilities during the next days.
Ladies and gentlemen,

we are here to talk about coal as a fascinating resource whose applications are manifold, reaching far beyond a single use as a fuel for power and heat production.

Taking a look into the conference programme, the variety of topics ranges from specific kinetic analyses, to chemical processes, process chains, poly-generation and market options. Co-processing of coal and biomass, underground and plasma gasification as well as low temperature conversion processes can be found, too.

Having this in mind, we see our domestic lignite as a treasure, capable for multiple options. We already use refined products for de-central energy demand and industrial applications. We invest a lot of improvement efforts and research work on efficient lignite drying and grinding processes to develop a fuel to satisfy the demands of the building materials industry like cement, lime or plaster. More sophisticated products are high performance cokes to be used as active carbon filter material or auxiliary material in steel industry which are demanded world wide. New applications like fertilizers for plants are in discussion.

A lignite gasification process had been locally developed, to open opportunities for IGCC and for alternative use like poly-generation purposes. Within that poly-generation concept there is the potential to produce feedstock for the chemical industry and to use and buffer surplus energy from grid fluctuations. We pursue these options within our research and development activities in the same way, as we develop our established activities from mine to power plant, to further enhance flexibility and environment protection. Within a local initiative, the IRR, which means “Innovation Region Rhenish District” projects for alternative use have been assessed to be promising and valuable.

Innovation and inventiveness are needed and coal conversion processes deserve a higher attention in economy and access to resources. This has already been acknowledged by the “Commission of Research” of the State of North Rhine Westphalia, consisting of members of all political parties. The commission mutually recommends the development of such processes to industrial scale and to secure the scientific knowledge about coal and coal chemistry.

The essential processes for coal conversion into usable hydrocarbons are to be developed, regardless of the currently very low prices and high availability of oil and gas which is tempting for easy use, and which makes it easy to forget the high prices, we have been facing not so long ago.

For a country like Germany – and not only Germany - which is scarce on natural resources, it will be of advantage to have access to technologies providing resource flexibility and price stability as well as to reduce import dependency, for example by using coal as a feedstock for the chemical industry.

We have to state, that coal refining processes have not been applied for a long time, at least in Europe. Experience and expertise, gained in former years, experimentally and theoretically, have lied idle, have been fallen into oblivion or have left companies and universities with the retired persons.

Therefore, this conference again is of high value, to keep this knowledge alive and to share it.
If you talk about coal nowadays, you will inevitably end up with a discussion on climate protection.

This seriously touches us RWE as operator of many hard coal and lignite fired power plants and of the largest open-cast lignite mines in Europe.

In June of the recent year, the G7 states took a decision during the Elmau conference, to reduce climate gases until 2050 by 70% and to fully give up CO2 emissions until the end of the century. Nearly at the same time, the Pope published his encyclical “Laudato si” in which he is also requesting a long-term exit from fossil fuels. However, this has only been the prelude for COP 21 in Paris in December where 195 countries reached the first binding international climate protection agreement. The conclusion of the Paris agreement is a strong signal, since only a wide, international consensus about a common goal can support climate protection globally. Like any other change, ecological reorientation takes time and particularly needs many supporters.

RWE is one of those. We developed our mission statement, to become a high-performing partner for the sustainable transition of the European energy system. This intention is serious and not just symbolic, for RWE it is a matter of adapting our business model and therefore our strategy to survive.

This will be a painful process and let me say it frankly: Conventional power production business in Germany is seriously suffering.

The power plants hardly earn the money they need facing low wholesale prices. A price recovery seems far away, since the old market system based on conventional power generation does not fit anymore to a system, that is significantly shaped by fluctuating renewable power generation.

Our energy system and the grids are already working at their limits every day. Renewable energies have a “must run” status, so continuous interventions to the grid and costly re-dispatching are necessary, with rising tendency. In 2015 the required costs for such interventions summed up to more than one billion Euro, without creating any value.

An industrialized society needs security of supply and it needs it at affordable prices.

We must establish new and renewable technology, long-term, affordable, and always available. This requires a constructive co-operation of the existing and of innovative technology, to do the pragmatically reasonable things on this path of transition. Ideological make-or-break actions as performed the recent years created uncertainty and reluctance for investments.

Surveys show, that Germany will reach its defined climate objectives by executing the already decided measures. The energy sector is contributing to that in a disproportionately high manner. Coal utilization can and will be part of the solution for energy transition, when it is done properly.

Consequently, we appeal to politics: Create - and stick to - boundary conditions that are reliable, long-lasting, affordable for the overall economic system and technically feasible. This avoids structural interruptions especially in the coal mining regions with their considerable employment. With the instruments already in place and the upcoming ETS reform, we are already on track.
Ladies and gentlemen,

the word „decarbonisation“ is the word of the moment, although – to be honest – I do not like it and therefore don’t use it, because we all together cannot give an answer to the question, how will our society look like if it is decarbonised. I prefer to talk about carbon neutrality.

Carbon is not only the chemical element making life possible, the majority of all products contains carbon as the essential component.

A complete “decarbonisation“ thus cannot be seriously wanted or stipulated.

Nevertheless, a sensual treatment of carbon means: efficient utilization, and, as far as possible, keeping it out of the atmosphere or making use of it in a sustainable circuit, which means to create a carbon cycle economy. Coal can support this development and be the facilitator for renewables as wind and solar which are gaining more and more importance and whose fluctuations need a counterpart which levels out.

Coal can also support sustainably generated hydrogen to become a reasonable energy storage for power overproduction. Pure hydrogen production costs are still tremendous, handling and storage come with some risk potential, due to the necessary high pressure, and pure hydrogen is lacking an established infrastructure.

Taking a step forward, the connection of both worlds is obvious, in particular the production of hydrocarbons from coal with addition of sustainably produced hydrogen. This would support the energy transition in Germany also on the raw material market and leads to products of high energy density, with restricted risk potential, which can be handled in an existing infrastructure. Coal will have a bridging function as a carbon supplier, until expansion and availability of sustainable power make the use of biomass and CO2 as a carbon source possible and economical. This means a “real carbon cycle”, but for sure no “decarbonisation”.

Furthermore, hydrocarbons represent an ideal energy storage to buffer the increasing fluctuations in the grid. Power production from lignite and use as a feedstock can be combined in a complementary way.

Next to climate protection, „resources“ is the major subject. It is our task to use the global, as well as the domestic resources, as gentle, as efficient and as responsible as possible, as long as they have not been completely substituted by regenerative or cyclic used materials. It is also responsible to keep this option open for future generations. Coal does still play an important role in this matter. A world wide energy transition will not come instantly.

That’s why we are here, to discuss and to deepen our understanding about the potential of coal for energy and raw material supply but also its cutting edge ability to develop processes for biomass and carbon cycle economy.

I wish a successful conference with inspiring lectures and good discussions. Please feel welcome to participate in the excursions to our mines, power plants and the sites of some partners from chemical industry which are offered in the coming days.

Enjoy your time in Cologne, have success and good luck, or as we miners say in Germany: “Glückauf”.