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***Welcome address and introduction at
the IPHE Round Table Meeting***

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Duration of speech: 15 Minuten
- es gilt das gesprochene Wort! -

1. Begrüßung

Colleagues,

Ms Parker,

- We, who bear responsibility, all need to ask ourselves:
 - What will mobility look like in the future?
 - How will people and goods be transported in 10, 20 or 50 years?
 - How will we light, heat or cool our homes in the future?
 - And which are the energy sources of the future?
- Ladies and gentlemen, all these basic questions, which are also related to hydrogen and fuel cell technology, are the reason you have come to Berlin today from all over the world.

- On behalf of the Federal Government, I would like to thank you and welcome you to Germany's capital city.
- You have come here today, because hydrogen and fuel cell technology will play a key role in answering all these questions.
- However, not everybody shares this conviction.
- The potential of hydrogen and fuel cells, and the opportunities they bring, are either not known or doubted.
- Today's event is aimed at changing this. We want to make suggestions and formulate recommendations on how to convince the doubters and inform the ignorant.
- If we want to succeed with this idea, then we must take hydrogen and fuel cells out of the "experts'

corner” and introduce them to the general public and the consumers. Now is the right time to do so.

- Allow me to explain in a few words why Germany cannot see its way into the future without hydrogen and fuel cells.

2. Transformation of our energy system

- Germany’s transport and building sectors account for about 70% of final energy consumption and approximately 50% of CO₂ emissions.
- And the traffic volume is increasing: By 2050, we expect to have 2.5 billion vehicles on our roads worldwide. This is approximately 2.5 times the amount of 2010.
- Based on this scenario, CO₂ emissions will increase by 50% between 2005 and 2030 and by 80% by 2050.

- This development path is irreconcilable with the objectives of our climate change policy.
- In order to stop global warming, we must drastically reduce greenhouse gas emissions worldwide.
- For EU member states and other countries this means that they will have to reduce their CO₂ emissions by 80-95% by 2050, compared to 1990 levels.
- Our energy policy is committed to expanding renewable energies and increasing energy efficiency.
- The transport sector in particular is required to make a major contribution.
- Optimizing conventional combustion engines alone will not be sufficient to succeed in reducing CO₂ emissions. And biofuels have already reached the limits of their potential.

- Decarbonisation, which will be necessary in the coming decades, will only be successful if vehicles with alternative drives significantly increase their market penetration.
- The power needed for these alternative drives must be generated from carbon-free energy sources.

3. Why fuel cell technology?

- It seems probable that in the future it will be necessary to have a mixture of various types of drivetrains. Battery electric vehicles and fuel cell vehicles, for instance, complement each other very well.
- Fuel cell vehicles have some key advantages: They are very similar to conventional vehicles regarding range and fuelling.
- Fuel cell vehicles can make a significant contribution to reducing CO₂ emissions in the transport sector.

- When combined with the use of surplus wind energy, fuel cells can provide a true zero emission alternative.
- Many industrialized countries are already promoting zero emission vehicles. However, the funding landscape is still dominated by battery electric mobility while hydrogen only plays a minor role.
- Since hydrogen vehicles provide a much broader range of possible uses, we must change the course and, more importantly, adopt a technologically neutral approach.
- Stationary fuel cells, too, offer an enormous ecological potential.
- Around 40% of primary energy is used for power generation, heating, cooling and hot water in the housing sector.

- Here, too, fuel cells will play an important role in the future. We have already seen an enormous improvement in the technical maturity level of our installations.
- With fuel cells, zero energy houses will become a commercially viable option. In this field in particular, I see huge potential that needs to be tapped.
- In special fields like uninterruptible, independent power supply, fuel cells will also play an increasingly important part.
- In Germany, we provide financial assistance to the entire spectrum of research development in the field hydrogen and fuel cell technology.
- With NOW, we have founded a competent and powerful organization which is responsible for preparing this technology for commercialization.
- One thing, however, is important: The advantages of hydrogen and fuel cells must be made visible to the

end users. Only then can we achieve a breakthrough.

4. Sustainable energy policy

- While the technical potential of fuel cells has been recognized, hydrogen is still lagging behind. We always hear that it's not efficient enough and too expensive!
- If you allow, I would like to take this opportunity to make a plea for hydrogen as an important element of a forward-looking energy policy:
- We are convinced that as fuel, hydrogen has the potential to play a major role in energy policy.
- It immediately reduces dependence on fossil fuels, particularly oil.
- But hydrogen has even more advantages. It can be produced from regenerative – and thus local – sources and can so contribute to stable prices.

- In addition, hydrogen offers an opportunity to use large amounts of renewable energies.
- New business models based on wind-hydrogen-strategies are already being developed by some companies. The first wind-hydrogen power plant has been in operation since the end of October.

5. International - IPHE

- We need our innovative products to gain a foothold on international markets at some point.
- And cooperation at international level is a key precondition. Your organization also plays a major role here.
- Today's event is designed to provide an opportunity to discuss approaches on how to provide political support for the commercialization.

- We must explore all possible ways to identify how we can set the right framework for the rollout.
- What we need now are solutions which are suitable for the customers.

6. Looking ahead

- The commercial use of hydrogen and fuel cells promises many advantages. Realization, however, will not happen by chance.
- Now, we need to develop creative business and funding models and calculate the risks.
- A lot of effort is still needed.
- The difficult part, conquering the markets with successful pilot projects, is yet to come.
- I wish us all every success in tackling this challenge and I hope that this event will be another milestone on the long way that lies ahead.