Berlin Rally (13 November 2021)

- 1. As a visitor to Germany, I first want to thank the German people for the sacrifices they have made to be a pioneer in developing renewable energies at large scale. It's costly to be at the forefront in development of improving technologies, so you deserve thanks from all nations.
- 2. Renewable energies will be a large part of the solution for how we can stabilize climate. However, we are still a long way from having a full solution. In fact, we are just getting to the most difficult part of the story.
- 3. Now we are beginning to catch glimpses of what is euphemistically called the existential threat of climate change. Low latitudes are beginning to be uncomfortable, including the subtropics in the summer.
- 4. In addition, research by my group implies that continued business-as-usual global GHG emissions could cause shutdown of overturning ocean circulations in the Southern Ocean and North Atlantic by mid-century. Feedbacks associated with these shutdowns will speed melting of Antarctic ice, leading to sea level rise of several meters, and the loss of coastal cities in the lifetimes of some children being born today.
- 5. Increasing climate extremes and emigration pressures caused by overheating of low latitudes and loss of coastal cities could make the planet almost ungovernable. That's the existential threat.
- 6. That's the bad news. Now the good news!
- 7. The good news is that young people are beginning to understand the hand that they are being dealt. They don't like it. And they do not plan to settle for it. We older people must do our best to support young people.
- 8. I note that the United States, the United Kingdom and Germany, on a per capita basis, are the three major nations most responsible for global warming. So they have a special responsibility to do what they can to assure a bright future for young people.
- 9. One thing that Germany could do as it works toward its goal of 100 percent renewable energy is consider young people in choosing how they phase out older energies. The first to go should be the dirtiest, most carbon-intensive energy, coal. The next should be gas. Gas is not clean.

Air pollution from the mining and burning of gas kills thousands of Europeans per year, and its total greenhouse effect including leaked methane is almost as bad as that of coal. Only then should the nuclear power plants be closed.

- 10. But the German government has taken actions that are more consequential for young people and future generations. Germany is attempting to have gas treated as a clean energy in financial rules of the European Union and the United Nations. If Germany achieves this preposterous goal for gas, young people worldwide justifiably will hold your nation in contempt.
- 11. Yet this is not the first time that Germany has stood against the future of young people. In 2001 at COP6 in Bonn, Germany used its position as the host nation to see that nuclear power was excluded as a clean development mechanism. This exclusion and demonization of nuclear power contributed to the delay in development of modern nuclear power. Thus nations with emerging economies, such as China and India, were forced down the path of coal.
- 12. The German public is not to blame for this. Even the texts in schools demonized nuclear power and failed to point out that other energy sources were more dangerous for both human life and human health. Modern nuclear power is safer by orders of magnitude.
- 13. If Germany persists and succeeds in treating gas as clean and discouraging use of nuclear power by other nations, the eyes of history will be unforgiving.
- 14. The eyes of innocent young people will be even more damning. Germany will make a mockery of the goal to keep global warming to 1.5°C and could cause global temperature to blow past 2°C if it succeeds in elevating gas and restricting use of modern nuclear power.
- 15. Finally, I note that the United States and China are the largest historic and present sources of greenhouse gases. The eyes of history will frown on all of us, if we do not do all that we can to encourage the U.S. and China to give priority to cooperation for the sake of young people and future generations.