

## Siping Guo

**Contact:** [gsp.thu.06@gmail.com](mailto:gsp.thu.06@gmail.com)

### **Personal information:**

Siping Guo is a first-generation MIND graduate. She finished her first-year study in Chalmers University of Technology and second-year study in University of Graz. She conducted her master thesis research in Chalmers, analyzing the fostering and hindering factors to the development of offshore wind power in China and reflecting upon the renewable energy policies in China. Siping holds a Bachelor Degree in Material Science and Engineering from Tsinghua University, China.

Siping has passion and commitment to work with renewable energy technologies and sustainability. She is now working as an intern in the World Resources Institute China Office, based in Beijing. She is supporting the Greenhouse Gas Protocol team in China by drafting standards for the City and Community GHG Accounting Program. From 2010-2011, Siping worked as a research assistant in China's State Key Lab of Environmental Protection & Eco-industry in Tsinghua University. She has worked across a wide range of sustainability topics, including eco-industrial park planning, regional circular-economy planning and environmental system analysis.

Siping is a violin player with 4 years of experience performing in symphony orchestra. She is a Taekwondo senior trainer holding Red Belt. Siping loves cooking, especially Chinese food.

### **Title of thesis: Chasing the Wind: An Evolving Chinese Offshore Wind Power Technological Innovation System**

#### **Abstract:**

China, the world biggest energy consumer and greenhouse gas emitter, is facing with the dual challenge from maintaining economic growth at a relatively high rate and reducing its environmental impact. Against such background, offshore wind power has been seen as a new growth engine for the economy as well as a solution to fight against environmental problem. The past few years have seen a significant growth in China's offshore wind power industry. However, the emerging industry is still full of uncertainties and risks.

This study applies Technology Innovation System (TIS) analytical framework to the discussion of Chinese offshore wind power industry, aiming at investigating factors that are hindering or fostering the development of offshore wind power industry in China. In this report, a discussion on both structural components of the TIS and the functions of the TIS is presented, followed by discussions on the inducement and blocking mechanism of the TIS.

The main findings are that the Chinese central government is the most influential actor in the TIS. The government's strong commitment to the adoption of offshore wind power technology serves as a powerful impetus to the industry. Nevertheless, China offshore wind power TIS is still in its very early stage of development. Huge gap exists between Europe and China in terms of the breadth and

depth of offshore wind power knowledge base. China wind power TIS is still highly relying on foreign technologies and know-how. Offshore wind market is underdeveloped. Offshore wind is still far away from significantly supply to the power mix. Four blocking mechanisms are identified in order to explain the system weaknesses: 1) lack of long-term and systemic perspective, 2) knowledge base weakness; 3) lack of market competition atmosphere; and 4) lack of coordination among governmental bodies.

