CHEN HUANG

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RESEARCH INTERESTS

Energy & Climate Policy and Technology Analysis
Energy & Climate Technology Innovation, Finance & Investment Decision
Environmental & Resource Economics

EDUCATION BACKGROUND

Peking University *Sep 2021 - Sep 2023*
Boya Postdoctoral Researcher
(Supervisor: Prof. Hancheng Dai; Prof. Fabian Wagner)

Chinese Academy of Sciences, China *Sep 2018 - July 2021*
Ph.D. of Management Science & Engineering
Dissertation
Policy Research on Collaborative Climate Governance: The Case of China's Power Industry Transition
(Supervisor: Prof. Yi Wang; Prof. Xianchun Tan)

China University of Petroleum (Beijing), China *Sep 2016 - Jun 2018*
Master of Economics in Applied Economics
Dissertation
Research on the Metabolism of Oil& Gas Extraction Industry: From the Perspective of Huge Oilfields
(Supervisor: Prof. Yinghua Xu; Prof. Lianyong Feng)

China University of Petroleum (East China), China *Sep 2012 - Jun 2016*
Bachelor of Engineering in Mechanical Engineering
Dissertation
The Design of Experimental Machine of Shale Shaker (Supervisor: Prof. Rong Shen; Prof. Mingxia Qi)

AWARDS & HONORS

China National Scholarship for Graduate Students, 2020
The highest academic honor for Chinese graduate students, only 0.2% of them can get it.
Awarded by the Chinese Ministry of Education

President Award, Chinese Academy of Sciences, 2020
The most essential award in the postgraduate scholarship of the Chinese Academy of Sciences

Nomination Award of Pollyanna Chu Excellent Doctoral Students, Chinese Academy of Sciences, 2020
Awarded by School of Public Policy and Management, University of Chinese Academy of Sciences

Merit Student, University of Chinese Academy of Sciences, 2020
Outstanding Graduate, China University of Petroleum (Beijing), 2018
Technology Innovation Advanced Award, China University of Petroleum (Beijing), 2017
Excellent Media Manager, China University of Petroleum (East China), 2016

PAPERS

Ren M, Ma T, Fang C, Liu X, Guo C, Zhang S, Zhou Z, Zhu Y, Dai H, **Huang C***. Negative emission technology is key to decarbonizing China's cement industry. Applied Energy, 2023: 120254

Hossain M, Fang Y, Ma T, **Huang C**, Peng W, Urpelainen J, Hebbale C, Dai H. Narrowing fossil fuel consumption in the Indian road transport sector towards reaching carbon neutrality. Energy Policy, 2023.

Huang C, Zhu Y, Ren M, et al. Prospective climate change impacts on China's fossil and renewable power-generation infrastructure: Regional and plant-level analyses. Resources, Conservation and Recycling, 2023: 106704

Huang C, Tan X., Guo J. International comparative research and strategic implications of climate adaptation governance: Case studies from China, the United Kingdom, and Germany. Science Research Management, 2020 (In Chinese).

Huang C*, Gu B, Chen Y, et al. Energy return on energy, carbon, and water investment in oil and gas resource extraction: Methods and applications to the Daqing and Shengli oilfields[J]. Energy Policy, 2019, 134: 110979.

Huang C. Analysis on Development Trend of Patents in China Oil& Gas Industry. Science and Technology Management Research, 2018, 38(20), 164-169 (In Chinese).

Chen Y, Feng L, Tang S, Wang J, **Huang C***, Höök, M. Extended-exergy based energy return on investment method and its application to shale gas extraction in China[J]. Journal of Cleaner Production, 2020: 120933.

Guo J, **Huang C***, Wang J L, et al. Integrated operation for the planning of CO2 capture path in CCS–EOR project[J]. Journal of Petroleum Science and Engineering, 2020, 186: 106720.

Liu X, Guo C, Wu Y, **Huang C**, Lu K, Zhang Y, Duan L, Cheng M, Chai F, Mei F, Dai H. Evaluating cost and benefit of air pollution control policies in China: A systematic review. Journal of Environmental Sciences, 2022

Liu X, Guo C, Ma X, Wu K, Wang P, Huang Z, Zhou Z, **Huang C**, Zhang S, Wang M, Dai H. Environmental Research Letters, 2022

Tax X, Dai H, Gu B, **Huang C**, Zhu K, Ma X, Yan H, Liu X, Zhu Y. Analysis on the key findings related to emission trends and drivers from the IPCC AR6 report. Advances in Climate Change Research, 2022

Zhai H, Gu B, Zhu K, **Huang C**. Feasibility analysis of achieving net-zero emissions in China's power sector before 2050 based on ideal available pathways. Environmental Impact Assessment Review, 2023

Hu Y, Chen Y, Tang S, Feng L, **Huang C**. An Explanation of Energy Return on Investment From an Entropy Perspective. Frontiers in Energy Research, 2021. https://doi.org/10.3389/fenrg.2021.633528

Guo J, **Huang C**. Feasible roadmap for CCS retrofit of coal-based power plants to reduce Chinese carbon emissions by 2050[J]. Applied Energy, 2020, 259: 114112.

Li H, Tan X, Guo J, Zhu K, **Huang C**. Study on an implementation scheme of synergistic emission reduction of CO2 and air pollutants in China's steel industry[J]. Sustainability, 2019, 11(2): 352.

BOOKS

Green Transformation in China: Understanding China's Ecological Progress. Foreign Languages Press. 1st edition (August 1, 2019). Chapter 5. Tan X., Gu B., Zhu K., **Huang C**.

General Discussion on the Construction of Ecological Civilization in the New Era. (April 1, 2021). **Contributing Author**.

Exploration and Demonstration of Ecological Civilization Construction in the New Ear (June 1, 2021). **Contributing Author**.

PEER REVIEWER IN JOURNALS

Structural Change and Economic Dynamics
Business Strategy and the Environment
Energy Policy
Science of The Total Environment
Journal of Cleaner Production
Biophysical Economics and Sustainability

ACADEMIC & PROJECT EXPERIENCE

Research on the potential benefits of achieving green and fair coal retirement in countries along the BRI and the Chinese solution, the Youth Academic Program in Area Studies of Peking University 2022 - 2023
Project Leader *PI: Chen Huang*

- Clarifying the status of China's overseas coal power and new energy investments in key regions and countries;
- Predicting the climate, economic, environmental and health effects of coal retirement along the Belt and Road;
- Propose a Chinese solution to achieve green and fair coal withdrawal based on the national conditions of the countries along the BRI.

Research on the impact of climate change risks on China and China's future strategies for mitigation and adaptation, National Key R&D Program 2018 - 2020
Major Contributor *PI: Prof. Xianchun Tan*

- Investigated the low-carbon transition path of China's power industry under the impact of climate change, as well as the adaptive transformation path using *IEA, BNEF, OECD, Wind* Databases;
- Participated in the national top-level design to realize the coordinated governance of climate mitigation and adaptation in China;
- Familiar with scientific research process and community survey methods.

Research on the relationship between China's total carbon emission control system and the realization of high-quality development, Ministry of Ecology and Environment Consulting Project 2018-2020
Major Contributor *PI: Prof. Xianchun Tan*

- Conducted quantitative analysis of the time and path of China's carbon emissions peak;
- Demonstrated the necessity and feasibility of China's future carbon emission control system (to replace total energy consumption control) and evaluated its contribution to China's high-quality development.

Research on China's policy guarantee system for low-carbon development, Energy Foundation Consulting Project 2018-2020
Major Contributor *PI: Prof. Yi Wang*

- Qualitatively studied the current status, problems and challenges of China's existing low-carbon policies and put forward countermeasures and suggestions to improve the low-carbon policy system;
- Flexible conversation skills gained through conducting policy text analysis, expert interviews and policy department surveys.

Research on Several Important System and Mechanism Issues of China's Ecological Civilization Construction, CAS Consulting Project 2018-2020
Major Contributor *PI: Prof. Xianchun Tian*

· Gained a comprehensive understanding of the current status of China's ecological and environmenttal governance, identified key problems and made relevant policy recommendations.

Analysis on the Economic Value of China National Petroleum Corporation's Patents and Technologies, CNPC Consulting Project 2016-2018
Major Contributor *PI: Prof. Lianyong Feng*

· Used *Clarivate Derwent World Patent Database* and combined expert questionnaire survey to analyze CNPC's key patented technologies' economic value;
· Quantitatively analyze the future development trend of patent technology in China's oil and gas industry.
· Familiar with patent analysis and technology innovation.

SKILLS & INTERESTS

Language: English (Fluent), Mandarin (mother language)
Skills: Python (proficient), C, HTML, Origin
Interests: Photography, Swimming, Cycling, Philosophy

REFERENCES

Prof. Hancheng Dai. Peking University, China.
Email: dai.hancheng@pku.edu.cn
Prof. Fabian Wagner. Internation Institute for Applied Systems Analysis, Laxenburg, Austria.
Email: wagnerf@iiasa.ac.at
Prof. Yi Wang. Institutes of Science and Development, Chinese Academy of Sciences, China.
Email: wangyi@casisd.cn
Prof. Xianchun Tan. Institutes of Science and Development, Chinese Academy of Sciences, China.
Email: txc@casisd.cn

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