

Comparing Energy Transition in the European Union and China

Challenges and Opportunities

Organisers

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This workshop will be held in hybrid form at the Lorentz Center@Snellius location. Researchers who will participate online during the workshop will receive a link from the Lorentz Center – online presentations are indicated underneath the presentation title. Another group of online followers that will listen to the workshop will also receive a link from the Lorentz Center. Key proceedings of the roundtable discussions will be distributed shortly after – anonymisation is possible upon request.

DAY 1

- 9:30 *Welcome with coffee and tea*
- 10:00 *Welcome by Lorentz Center*
- 10:15 *Opening Remarks*
Mehdi P. Amineh
José Luís de Sales Marques
Anoush Ehteshami
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Panel I *A comparative study on the energy transition in the European Union and China: policies, trends, and challenges*

(Chair: José Luís de Sales Marques)

Abstract

Despite that we will remain using scarce fossil fuels in the coming decades, the landscape of energy security is undergoing a transformation towards energy systems based on clean energy sources. To halt global climate change, it is necessary to stop using fossil fuels and transition to renewable energy only. Being each other's most important economic partners, major import-dependent fossil fuels consumers, and global renewable energy technologies leaders, the European Union and China could learn from each other's experiences through comparing (and possibly aligning) their energy transition policies, trends, and challenges. This panel compares the past two decades' energy policy and policy adjustment of the European Union and China as well as a range of legal and geopolitical challenges associated with the transformation underway towards clean and renewable energy. This panel questions what the European Union and China could learn from each other's energy transition policies, trends, and challenges since 2000 until now.

- 10:30 *State and Market Complex and the Energy Transition*
Mehdi P. Amineh
- 10:45 *Evaluation of the EU Energy Law: from beginnings to the REPowerEU Plan*
Paulo Caneles e Castro
- 11:00 *China's Energy Sector Roadmap to Carbon Neutrality: A Perspective of Law and Policy Evolution*
Wang Kunjie
- 11:15 *Experience of energy transition in the EU: process, outcome, and challenges (2000–2022)*
Wina Crijns-Graus
- 11:30 *The comparative energy transition in the European Union and China: policy, practice, and trends*
Liu Hui
- 11:45 – 12:30 *Discussion panel I*

12:30 – 14:00 *Lunch break*

Panel II *China's transitioning toward green energy and its challenges*

(Chair: Wina Crijns-Graus)

Abstract

With its massive economy that's second in size, China is the largest emitter of CO₂ in the world and, accordingly, has taken up on its responsibility to not only transition its own energy system to renewable and clean sources, but also contribute to the energy transition of other countries. The BRI plays an important role in connecting China's capital and renewable energy technologies and products with the rest of the world. However, it concomitantly creates new risks and challenges. This panel discusses the policies and obstacles of introducing new and accelerating existing applications of clean and renewable energy technologies with focus on rare earth metals, nuclear power, and lithium batteries.

14:00 *Geopolitical Competition and China's Supply Chains in Energy Transition Minerals*
Online presentation
Yongzhong Wang

14:15 *Energy Cooperation under the Polar Silk Road*
Online presentation
Wei Wei

14:30 *The Belt and Road initiative and Africa's Green Development-Based on the Perspective of China's Export of Solar and Wind Energy Commodities to Africa*
Online presentation
Shen Lin

14:45 *Sino-EU Green Cooperation and Competition: New Patterns and China's Coping Strategies*
Junyi Hao

15:00 – 15:45 *Discussion panel II*

15:45 – 16:15 *Coffee break*

Roundtable I

Why are fossil fuels so hard to stop?

(Chair: Mehdi P. Amineh)

Abstract

Roundtable I. discuss the policies, trends, risks, and challenges of the energy transition and the experiments that currently have the potential to determine the future of the energy transition. The roundtable strives towards policy recommendations that can help decisionmakers with accelerating the energy transition whilst considering the necessity to secure fossil fuels in the coming decades.

16:15 – 17:00

Participants of panels I and II

17:30

Reception

DAY 2

9:30 *Arrival with coffee and tea*

10:00 *Opening Remarks*

Mehdi P. Amineh

Panel III *Geopolitical and geoeconomic implications of a hydrogen economy: the cases of the EU and Germany, China, Morocco, and Egypt*

(Chair: Yongzhong Wang)

Abstract

New developments in hydrogen technology are expected to determine the future of energy, including hydrogen fuel cells power storages for vehicles. Yet, hydrogen does not occur as a fuel and needs to be manufactured, either using carbon-intensive or low-carbon methods. As a commercial and global hydrogen market still needs to be configured, the European Union and China both aim to be leaders in determining the future of the global hydrogen economy by developing and manufacturing hydrogen technologies and compete to be pioneers. However, healthy competition to become technological pioneers could quickly turn into geopolitical tension over access to resources and markets. Therefore, this panel focuses on the opportunities and challenges of the hydrogen policies and activities of the EU and its Member States and China's BRI in the investment, R&D, and technological cooperation. It does so by analysing four case studies: the EU and Germany, China, Egypt, and Morocco. This panel's question is: "which factors determine why countries cooperate on hydrogen and will these hydrogen partnerships, including trade agreements, improve energy security or will the hydrogen economy mirror the competition over fossil fuels?"

10:15 *Africa's role in the European supply chain of hydrogen: the case of Morocco*
Jeroen van Wijk

10:30 *Africa's role in the European supply chain of hydrogen: the case of Egypt*
Antonella Maes-Anastasi

10:45 *International experience of fiscal and tax policies supporting hydrogen energy development*
Online presentation
Huifang Tian

11:00 – 11:45 *Discussion panel III*

11:45 – 13:15 *Lunch break*

Panel IV

China-Brazil energy relations: China's involvement in biofuel industry in Brazil and its challenges

(Chair: Paulo Caneles e Castro)

Abstract

Brazil is a global leader in terms of renewable energy, including policies and implementation of incentive programmes for biofuels. One key sector in which biofuels help reduce Brazil's carbon footprint is transportation, where biofuels make up an impressive 40% of the energy used. China, on the other hand, aims at reducing the carbon footprint of the transportation sector through increasing the share of electric vehicles. Accordingly, Chinese car manufacturers have introduced a range of new EV models. By being Brazil's largest partner in inflowing foreign investment, China's interests are posing a direct threat to Brazil's home-grown biofuel economy. BRI projects invest in renewable electricity production and Chinese car manufacturers offer their EV models. This panel therefore explores China's challenge to and impacts on Brazil's biofuel economy. It questions in how far China's investments in Brazil's renewable energy sectors contribute to the energy transition and what the domestic and geopolitical economic opportunities and challenges of China's involvement in Brazil are.

13:15

The dynamic of the biofuel industry in Brazil's energy transition and the role of China

Online presentation

Rafael Almeida Ferreira Abrão

13:30

Chinese BRI policy and interests towards Brazil

Online presentation

Jiang Shixue

13:45 – 14:30

Discussion panel IV

14:30 – 15:00

Coffee break

Roundtable II

Comparing the overall Energy Security and Energy Transitions in China and the EU

(Chair: Anoush Ehteshami)

Abstract

This roundtable discusses the investments in the renewable energy sectors by the EU and China. It focuses on the potential of the hydrogen economy of Morocco and Egypt for the EU to manufacture green hydrogen and of Brazil for China to invest in the biofuel sector. It explores the implications and challenges of these investment strategies and how they compare with each other and strives towards policy recommendation for these. The main question is “should recipient countries welcome renewable energy investments from abroad?”

15:00 – 16:00 Participant of panels III and IV

16:00 – 18:00 *Coffee and walk in Leiden historical centre*

18:00 *Dinner hosted by EPA-ILAS*

DAY 3

9:30 *Arrival with coffee and tea*

10:00 *Opening Remarks*

Anoush Ehteshami

Panel V *China-led BRI involvement in Central and Eastern Europe: the Russia-Ukraine War and its impacts in the EU-China energy relations*

(Chair: Jeroen van Wijk)

Abstract

Central and Eastern Europe (CEE) are the main geographical locations for China's BRI activities in Europe and an important region for the European Union. This panel explores and critically reflects on China's BRI activities in the energy and infrastructure sectors of CEE countries and argues that China is gradually increasing its weight over their economies and politics by contributing to economic prosperity. The unfolding war between Russia and Ukraine, however, seems to have disrupted this trend and raised suspicions from CEE countries on China's BRI activities and intentions. The question of the panel is: "what are the national and (geo-,)political economic impacts of the China-led BRI activities (i.e., trade, investment, and finance) in two key economic sectors (energy and infrastructure) of selected countries in Central and Eastern Europe (CEE), and what challenges do they raise for the European Union's economic and security interests in this region and their respective countries?"

10:15 *The logic behind China's External Relations towards Central and Eastern Europe*
Online presentation

Richard Turcsanyi

10:30 *The geopolitical and geo-economic impact and consequences of the Russian-Ukrainian War for the EU's energy security*

László Marác

10:45 *A survey of BRI investment in the energy sector and infrastructure of Central and Eastern Europe from 2012 to 2022*

Mehdi P. Amineh, Kevin Spinner*

11:00 – 11:45 *Discussion panel V*

11:45 – 13:15 *Lunch break*

Panel VI

Belt and Road Initiative in West Asia: Strategic Partnership and its security challenges for the EU

(Chair: Mehdi P. Amineh)

Abstract

The PRC's relations with West Asian states has developed to become among the most economically, politically, and strategically significant of China's relations in the wider MENA region. China has five 'comprehensive strategic partnerships' with the regional states, three of which are with Gulf states (Iran, Saudi Arabia, and the UAE). Furthermore, of the so-called seven 'strategic partnerships' that China has signed, four are with the Gulf Arab states of Oman, Qatar, Iraq, and Kuwait. Through these 'partnerships' Beijing signals the high value it attaches to relations with the said countries and the range of partnerships in place now speaks volumes about China's serious interest and growing presence in West Asia. The three baskets of 'energy relations', 'trade interactions', and 'investments' have come to define the contours of China's relations with the region today. If one adds the geopolitical dimension, the importance of the Persian Gulf (PG) subregion to the BRI, and the military and security dynamics of China's interactions, then it would be no exaggeration to claim that the PG is central to China's regional strategic calculations. At the same time, regional states view China as a crucial and credible partner. As the leading trading partner of several regional states, the world's largest energy importer, and a state with clear aspirations to lead Asia, China is now a vital power for all these governments to court, which has broad implications for the EU which has its own deep interests in West Asia and the Persian Gulf.

- 13:15 *Geopolitical economy of BRI in West Asia*
Anoush Ehteshami
- 13:30 *The PRC-UAE Comprehensive Strategic Partnership*
Online presentation
Ben Houghton
- 13:45 *China's Comprehensive Strategic Partnership with Iraq*
Online presentation
Amjed Rasheed
- 14:00 *China's Comprehensive Strategic Partnership with Iran*
Jia Liu

14:15 – 15:00 *Coffee break*

15:00 – 15:45

Discussion panel VI

18:00

Dinner organised by the Lorentz Center

DAY 4

9:30 *Arrival with coffee and tea*

10:00 *Opening Remarks*

José Luís de Sales Marques

Panel VII *China-led BRI activities in the energy sectors of Central and West Asia: the cases of Kazakhstan, Turkmenistan, Iran, Iraq, Turkey*

(Chair: Anoush Ehteshami)

Abstract

Central and West Asia are key regions for the BRI and the activities of China's state and state-led companies and firms. As both regions bridge Europe and China together, host important hydrocarbon resources and other mineral deposits, and have great potential for renewable energy, they are central to China's BRI. Therefore, this panel explores and critically reflects on China's BRI activities in the energy and infrastructure sectors of four BRI countries located in these two regions (Kazakhstan, Iran, Iraq, and Turkey). It argues that these activities gradually transform the economic and security systems towards China with serious geopolitical and geo-economic consequences for the European Union and its Member States. The question of the panel is: "what are the national and (geo-)political economic impacts of the China-led BRI activities (i.e., trade, investment, and finance) in two key economic sectors (energy and infrastructure) of selected countries in Central and West Asia, and what challenges do they raise for the European Union's economic and security interests in this region and their respective countries?"

10:15 *The Geopolitical Economy of BRI activities in Central and West Asia and its impacts on the EU*

Mehdi P. Amineh

10:30 *The Political Economy of BRI activities in Iraq's energy sector and infrastructure*
Online presentation

Amjed Rasheed

10:45 *The Political Economy of BRI activities in Iran's energy sector and infrastructure*

Jia Liu

11:00 *The Political Economy of BRI activities in Kazakhstan's and Turkmenistan's energy sector and infrastructure*

Laura Linck

11:15 *The Political Economy of BRI activities in Turkey's energy sector and infrastructure*

Emre Demirkiran

11:30 *Unraveling the Geopolitical Economy of the China-Pakistan Economic Corridor: Risk Assessment of Selected Chinese Companies involved in Pakistan's Renewable Energy Sector under China's BRI*
Site Li

11:30 – 12:15 *Discussion panel VII*

12:15 – 13:45 *Lunch break*

Roundtable III *Opportunities and challenges of the China-led Belt and Road Initiative in Central and Eastern Europe and Central and West Asia: transforming the geopolitical economy of energy and its consequences for the EU*

(Chair: José Luís de Sales Marques)

Abstract

This roundtable discusses the China-led BRI activities in Central and Eastern Europe and Central and West Asia and the selected case countries by focusing on their energy and infrastructure sectors. It will critically reflect on these activities, explore their opportunities, and discuss the geopolitical and geo-economic challenges and security issues. It also discusses the (possibility for a) gradual transformation of the states and society of the selected case countries of these regions towards China and what it means for the EU. In this context, it strives towards not only policy recommendations for China and the case countries, but also for the EU on how it should deal with the BRI's activities and its impacts on the EU's energy security and energy transition.

13:45 – 14:45 Participants of panels V, VI, and VII

14:45 – 15:30 *Coffee break*

15:30 – 16:30 *Closing remarks*

José Luís de Sales Marques
Anoush Ehteshami
Mehdi P. Amineh