



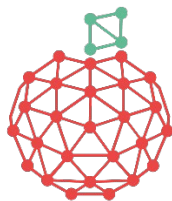
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2nd Almaty Energy Forum

Building resilient energy systems in Central Asia

Date: 14 – 16 November 2022

The Independence Hall, Kazakh-British Technical University

Objectives:

Building on the recommendations from the [1st Almaty Energy Forum](#) and taking into account the latest news from the 27 Conference of the Parties of the UNFCCC (COP 27) in Sharm el-Sheikh in Egypt, United Nations organizations – United Nations Economic Commission for Europe (UNECE), United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), United Nations Development Programme (UNDP) and United Nations Educational, Scientific and Cultural Organization (UNESCO) - are **uniting to build a platform for a continuous inclusive multistakeholder dialogue** to facilitate regional cooperation, provide technical capacity support and help countries in Central Asia innovate and modernize their regional infrastructure and build resilient energy systems that are secure, affordable and deliver on net-zero targets.

This year's Forum will gather policymakers and the representatives from energy industry, finance sector, science and academia, to

- Revisit proposed actions for Central Asia from the [1st Almaty Energy Forum](#) and attract innovation, investment, and financing for regional energy projects
- Strengthen the [United Nations Special Programme for the Economies of Central Asia \(SPECA\)](#)¹ and its Working Group on Water, Energy, and Environment through targeted dialogues
- Build a network of regional and international universities to foster the next generation of energy experts and strengthen science-based policy making

The key themes of the 3-day dialogue include:

- Designing resilient energy systems through low- and zero-carbon technology interplay
- Innovating & modernizing energy systems in Central Asia through private and public financing
- Examining the opportunities and threats associated with energy-water-land nexus approach in Central Asia
- Strengthening regional cooperation & building cross-regional technical and institutional capacity

¹ The United Nations Special Programme for the Economies of Central Asia (SPECA) was launched in 1998 to strengthen subregional cooperation in Central Asia and its integration into the world economy. The countries of SPECA are Afghanistan, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. The United Nations Economic Commission for Europe (UNECE) and the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) jointly provide overall support to the Programme.



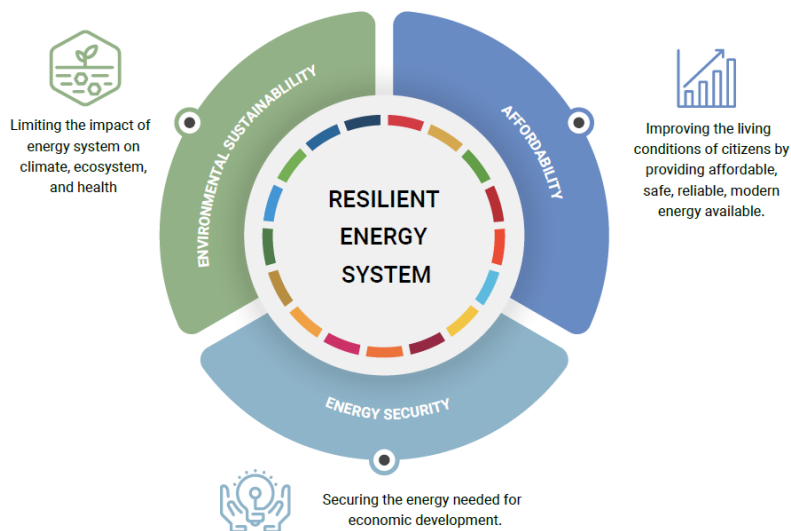
Local context implications:

The countries in Central Asia are facing many challenges to deliver on carbon neutral energy systems that are based on innovative low- and zero-carbon technologies and modernized energy infrastructure:

- **ongoing geopolitical crisis** disrupted global energy systems has strengthened the focus on Central Asia
- **aging infrastructure** with low industrial energy efficiencies does not comply with low-carbon, energy-efficient standards and pledges made under the Paris Agreement
- **lack of science-based policy-making** supported by data, research and holistic energy system approach
- **supply chain disruptions** may slow down or defer the transition to a more sustainable energy system
- **trade barriers** such as Carbon Border Adjustment Mechanisms may impede the competitiveness of regionally manufactured products if the industries do not adapt
- **climate change** and its impact on water resources jeopardizes regional peace and security

Designing resilient energy systems

To address the above challenges, it is required not only to accelerate the energy transition in Central Asian countries but also to **design and implement resilient energy systems** for the region that deliver on i) *energy security* – secures the energy needed for economic development, ii) *quality of life* – provides affordable energy available to all at all times; and iii) *environmental sustainability* – limits the impact of the energy system on climate, ecosystems and human health.



Attain resilient energy systems in the region through:

- **Regional cooperation** and scaling up of energy system connectivity to support regional economic growth
- A people-centered **just energy transition** approach that is based on socio-economic priorities
- Development of regional mechanisms that enable cross-sectoral system transformations based on the **energy-water-land nexus**





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PROGRAMME OVERVIEW

Day 1 – Monday, 14 November 2022

Innovating and modernizing energy systems in Central Asia through low- and zero-carbon technology interplay

9.30 – 10.00 Opening statements

Maratbek Gabdullin, Rector of the Kazakh-British Technical University
Viktor Badaker, Economic Affairs Officer, UNECE
Andy Parker, Head of Cavendish Laboratory, University of Cambridge

Session I

10.00-12.00 Low- and zero-carbon technology interplay in Central Asia

Countries in Central Asia are currently revisiting an optimal low- and zero-carbon technology interplay to design and implement more resilient energy systems. The [UNECE Carbon Neutrality Toolkit](#) supports policymakers to make informed decisions towards the implementation of the 2030 Agenda for Sustainable Development and the Paris Agreement. This session will discuss the role of low- and zero-carbon technology interplay and innovation in Central Asia to reach net-zero by 2050.

- What could be an optimal low- and zero-carbon technology interplay for the region to reach net-zero energy systems by 2050?
- How will this be financed?

10.00 – 11.00 Setting the scene:

10.00 – 10.20 Presentation of the carbon neutrality scenarios for Central Asia
Iva Brkic, UNECE & Holger Rogner, Senior Analysts, IIASA

10.20 – 10.35 Macro-economic modelling for climate change adaptation
Dana Yermolyonok, GIZ Kazakhstan

10:35 – 10.45 Energy transition pathways and renewable energy development
Alexey Kobzev, Center for Natural Resources and Sustainability, Kazakh-German University

10.45 – 11.00 *Critical Minerals and Science Collaboration Necessities for Achieving Carbon Neutrality*
Siddharth Saxena, Director Central Asia Forum, Jesus College, University of Cambridge

11.00 – 12.00 Moderated discussion

Moderator: *Iva Brkic, Project Lead, UNECE*

Panellists:

Khamidilla Shamsiev, Director Central Asian Coordination Dispatch Center, Uzbekistan

Victor Kovalenko, Partner, Climate Change and Sustainability Services, EY

Suriya Jayanti, International Energy Transition Counsel, US Department of Commerce

Nizomiddin Rakhmanov, Head of Project Analysis, Uzbek Industrial and Construction Bank

Kenzhekhan Abuov, Project Manager, Asian Development Bank

12.00-12.30 Coffee break & Networking



Session II**12.30-14.00 Role of Natural Gas in Energy Transition in Central Asia**

Natural gas, when managed sustainably, can improve affordability, availability, and accessibility of energy in Central Asia. It is a key component of the increasingly decarbonised energy system in 2050. One of the main directions of decarbonization is the transition from coal and oil to natural gas. The [UNECE project on decarbonizing the transport sector by increasing the use of natural gas as a motor fuel](#) looks at switching to compressed (CNG) or liquefied natural gas (LNG) as an effective way to bridge to more sustainable and decarbonised mobility of the future. This session will discuss more broadly the role of natural gas in energy transition in Central Asia.

- How natural gas can promote sustainable solutions and building resilient energy systems?
- What are the necessary measures to support required synchronization that modernizes gas infrastructure?

12: 30 – 13:00 Setting the scene:

12:30 – 12.40 Natural gas in transport sector in the UNECE region

Nadejda Khamrakulova, Project Lead, UNECE

12.40 – 12.50 Perspectives of switching to natural gas in road transport in Kazakhstan

Marius Damachi, Consultant, UNECE

12:50 – 13.00 Role of natural gas in the ESCAP region

Sergey Tulinov, Economic Affairs Officer, ESCAP

13:00 – 13.10 Synergies and cooperation on natural gas in the UNECE and ESCAP regions

Olga Yudina, Advisor to the General Director, Russian Energy Agency

13.10 – 14.00 Moderated discussion

Moderator: *Branko Milicevic, Secretary, Group of Experts on Gas, UNECE*

Panellists:

Valérie Ducrot, Executive Director, Global Gas Centre

Kuanysh Baltabayev, Department of Low Carbon Development, KazMunayGas

Marat Kalmenov, Executive Director, KazEnergy

Talgat Arystanbayev, Chairman of Board, Natural Gas Vehicles Association

Kenyon Weaver, Senior Counsel, Commercial Law Development Program, U.S. Department of Commerce

Norman Storm, General Director, Condor Energies

14.00-15.00 Lunch break & Networking



Session III**15.00-18.30 Towards a Hydrogen Economy in Central Asia – Hype or Hope?**

Hydrogen is an innovative solution to attain carbon neutrality and decarbonize hard-to-abate sectors. The [UNECE project on sustainable hydrogen production pathways in CIS countries](#) mobilizes policymakers and experts from the project beneficiary countries for an inclusive and transparent dialogue to advance sustainable hydrogen on agenda, raise awareness and discuss how to jumpstart a hydrogen economy in Central Asia. Participants will discuss the regional potential for sustainable hydrogen production.

- Hydrogen - hype or hope for Central Asia?
- What does it take to develop a regional hydrogen economy and hydrogen export routes?
- What are the socio-economic implications in a hydrogen driven future?

15.00 – 16.00 Hydrogen value chain: key projects and best practices

Moderator: *Branko Milicevic, Secretary, Group of Experts on Gas, UNECE*

15:00 – 15:20 Linde Gas (tbc)

15.20 – 15.40 Decarbonization of transport through hydrogen in China
Wanyi Wang, UNDP

15:40 – 16:00 Hydeal – Green Hydrogen Hubs
Thierry Lepercq, Hydrogen Europe

16.00 - 16.30 *Coffee Break & Networking*

16.30 – 16.45 Sustainable hydrogen production in Central Asia

16.30 – 16.45 Presentation of the regional analysis
Yuriy Melnikov, Consultant, UNECE

16.45 – 17.45 Moderated discussion

Moderator: *Stefanie Held, Director, UNDP Sustainable Energy Hub*

Panellists:

Saule Zholdayakova, Acting Head of Hydrogen Energy Competence Center, Head of Hydrogen Technologies Research Center, KMG Engineering

Shukhart Isaev, Ministry of Innovative Development, Uzbekistan

John Roberts, Energy Analyst, United Kingdom

Regis Conrad, Synfuels Americas

17:45 – 18:15 Next steps

- How can the UN-system partners help countries in the region accelerate energy transition?

Stefanie Held, Director, UNDP Sustainable Energy Hub

Prof. Chokan Laumulin, Vice-Chair of the UNECE Committee on Sustainable Energy

Sergey Tulinov, Economic Affairs Officer, ESCAP

18:15 – 18:30 Exhibition introduction: UNDP tools for financing clean energy projects

Financial Support Mechanisms for SME's to harness green energy in Kazakhstan

18.30

Close of Day 1





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Day 2 – Tuesday, 15 November 2022

Deploying energy-water-land nexus approach in Central Asia

Session IV

10:00 – 13:00 25th session of the SPECA Working Group on Water, Energy and Environment

Understanding the interactions between water, food, energy, and ecosystems – under conditions of changing climate – is vital in ensuring different and often competing needs for natural resources of Central Asia in a coherent manner. Finding synergies across sectors is a key to accelerate the implementation of the Agenda 2030 for Sustainable Development.

The UN Special Programme for the Economies of Central Asia (SPECA) was established by the Tashkent Declaration on 26 March 1998. The SPECA participating countries are Afghanistan, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. The UN Economic Commission for Europe (UNECE) and the UN Economic and Social Commission for Asia and the Pacific (ESCAP) provide overall support to the Programme. The [Working Group on Water, Energy and Environment](#) (the Working Group) is a subsidiary body of the SPECA Governing Council. The objectives of the WG are formulated in its updated terms of reference (please refer to Annex 1 in https://unece.org/DAM/env/Projects_in_Central_Asia/Report_23rd_Session_SPECA_WG_WEE_2019_Tashkent_final_ENG.pdf). The Working Group members meet annually and agree on the biannual work programme adopted by the SPECA Governing Council.

10.00– 10.15 Setting the scene

- | | |
|---------------|--|
| 10.00 – 10.05 | Opening and introduction to the session – Kazakhstan (Chair)
<i>Akzan Shiranov, Director of the Department for Environmental Policy and Sustainable Development, Ministry of Ecology, Geology and Natural Resources</i> |
| 10.05 – 10.15 | Keynote: Water, energy, food and environmental security in Central Asia: benefits of intersectoral solutions
<i>Dinara Ziganshina, Director, SIC ICWC</i> |

10.15 – 10.45 Promoting regional and intersectoral cooperation in the framework of the SPECA Working Group on Water, Energy and Environment

- | | |
|---------------|--|
| 10.15 – 10.20 | SPECA WEE WG Programme for 2022-2023 and the UNECE activities
<i>Tamara Kutonova, Manager National Policy Dialogue Programme, UNECE</i> |
| 10.20 – 10.30 | Regional mechanisms for the low-carbon, climate-resilient transformation of the energy-water-land Nexus in Central Asia
<i>Matthew Griffiths, Senior Programme Manager, OECD</i>
<i>Tamara Kutonova, Manager National Policy Dialogue Programme, UNECE</i> |
| 10.30 – 10.40 | Presentation of ESCAP activities
<i>Sergey Tulinov, Economic Affairs Officer, ESCAP</i> |
| 10.40 – 10.45 | Urban economic resilience: building and promoting recovery from the COVID-19 pandemic and natural and man-made disasters
<i>Gulnara Roll, Regional Advisor, Forests, Land and Housing Division, UNECE</i> |



10:45 – 11:25 Relevant ongoing and upcoming initiatives

Interventions of 5 minutes

Team Europe Initiative "Water, energy and climate change in Central Asia"

Johannes Baur, Head of Cooperation EU Delegation Kazakhstan

Central Asia Regional Economic Cooperation Water Pillar

Kazuhiro Yoshida, Senior Water Resources Specialist, ADB

Green Central Asia: Enhancing regional dialogue on climate, environment and security

Caroline Milow, Programme Manager, Green Central Asia, GIZ

WEFE nexus related activities

Gulzada Azhetova, USAID/Central Asia Regional Water and Environment Specialist

EC-IFAS reform to promote regional integration of water and energy development

Murat Bekniyazov, Member of the Executive Committee of the International Fund for Saving Aral Sea (EC IFAS) from the Republic of Kazakhstan

Outcome of the Ninth Environment for Europe Ministerial Conference (Nicosia, 5-7 October)

Zaal Lomtadze, Senior Environmental Officer, Environment Division, UNECE

"Towards to low-carbon and socially oriented economy: Effects of alternative "green" projects in energy, agriculture and water sectors"

Janna Fattakhova, UNDP Uzbekistan National Expert

11:25 – 12:15 SPECA countries perspectives on national and regional work on water, energy and environment

Interventions of 5 minutes from SPECA WEE WG members and other experts

- National developments on water, energy and environment
- Needs at national and regional level and potential support provided under the SPECA framework

Panellists:

Farida Alakbarova, Head of sub-division of the Water Resources Management Division, Ministry of Ecology and Natural Resources of Azerbaijan

Daniyar Sagadiev, Head of Tranboundary Rivers Section, Ministry of Natural Resources, Ecology and Geology of the Republic of Kazakhstan

Gulmira Satymkulova, Lead Expert of the Board for Water Resources Management, State Water Service of the Republic of Kyrgyzstan

Shukhrat Khaydarov, Head of the Information, Analytical and Resource Center Ministry of Water Resources of the Republic of Uzbekistan

12:15 – 12:45 Optimizing resources for sustainability through regional cooperation, trade and innovation

Potential to optimize water and energy resources through sustainable trade (study for the SPECA WG on Trade)

Bo Libert, UNECE Consultant





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Enhancing dam safety at the regional and national level

Talaibek Makeev, Economic Affairs Officer, Environment Division, UNECE

12:45 – 13:00 Conclusions and inputs to the SPECA Forum

Messages and draft decisions on water, energy and environment to be submitted to the SPECA Forum

Chair

13.00-15.00 *Lunch break & Networking*

Building resilient energy systems in Central Asia – What is keeping regional policymakers and energy experts awake at night?

Session V

15:00 – 18:00 High-level segment with regional stakeholder community

The objective of the high-level dialogues is to discuss how the region is affected by the current global crisis and to identify the cross-regional economic complementarities, leverage on these synergies and unlock region's full potential to design and implement resilient energy systems. This dialogue is also aimed at strengthening a regional UN partnership for Central Asia to shape and accelerate the energy transition across the region.

15.00-15.30 Opening remarks

Olzhas Suleimenov, Poet, State and Public Figure, President of the Nevada-Semipalatinsk International Anti-Nuclear Movement

Haoliang Xu, UN Assistant Secretary-General, UNDP

Dmitry Mariyasin, Deputy Executive Secretary, UNECE

Maratbek Gabdullin, Rector of the Kazakh-British Technical University

15:30 – 16:30 High Level Panel I – Building resilient energy systems in Central Asia

- How can the region strengthen its energy systems and connectivity?
- What are the cross-regional economic complementarities and how can they be leveraged?
- What is the role for sound financial mechanisms and governance systems?

Moderator:

Haoliang Xu, UN Assistant Secretary-General, UNDP Assistant Administrator and Director of Bureau for Policy and Programme Support

Panellists:

Zhandos Nurmaganbetov, Deputy Minister of Energy, Kazakhstan

Taalaibek Tolubaev, Deputy Minister of Energy, Kyrgyzstan

Valérie Ducrot, Executive Director, Global Gas Centre

Jürgen Keinhorst, Chair of the UNECE Committee on Sustainable Energy

Bakhytzhhan Makazhanov, Deputy Chairperson of the Managing Board, "Damu" Entrepreneurship Development Fund", Kazakhstan



16:30 – 17:30 High Level Panel II – Building resilient energy systems in Central Asia (cont'd)

- What are the identified policy barriers that impede financing of technology innovation and energy infrastructure modernization in Central Asia?
- How can UN Agencies help IFIs to derisk investments into green energy infrastructure projects and unlock region's full potential?

Moderator:

Dmitry Mariyasin, Deputy Executive Secretary, UNECE

Setting the scene:***Economy of Central Asia: Energy Systems and Regional Cooperation***

Alexander Gareev, Managing Director, Directorate of Energy, Eurasia Development Bank

Panellists:

Serik Tutebayev, Chairman of the Management Board, Samruk Energy, Kazakhstan

Ravshanbek Kasymov, First Deputy Chairman of the Board, National Energy Holding, Kyrgyzstan

Farhod Bilolzoda, Chair of the Board of Directors, Innovation and Industrial Development Fund, Tajikistan

Ibrahim Shoukry, Regional Head, Regional Hub Almaty, Islamic Development Bank

Mirzo Iskandar Gulamov, Deputy Head of Country Office Kazakhstan, Asian Development Bank

17.30-18.00**Next steps**

- Recommendations from the discussions for joints activities
- Key messages for the SPECA Annual Meeting
- Solidifying the role of Almaty Energy Forum as a platform for a continuous inclusive regional multistakeholder dialogue

Haoliang Xu, UN Assistant Secretary-General, UNDP

Dmitry Mariyasin, Deputy Executive Secretary, UNECE

Prof. Chokan Laumulin, Vice-Chair of the UNECE Committee on Sustainable Energy

Prof. Andy Parker, Head of Cavendish Laboratory, University of Cambridge

Azamat Amirtaev Head of the Republican Public Association "BAYTAK BOLASHAK", Kazakhstan

19.00-22.00

Reception

Day 3 – Wednesday, 16 November 2022

Strengthening regional cooperation & building cross-regional technical and institutional capacity





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Session VI

10:00 – 13:00 Strengthening regional cooperation in Central Asia through energy connectivity

Now more than ever there is a need for coordinated efforts and more ambitious and bolder actions. UNECE and ESCAP are providing a neutral and inclusive multilateral platform for regional cooperation to promote the technology transfer, sharing of best practices and lessons learned, and unlocking financing into clean energy projects of mutual interest. The objective of this session is to discuss how the region can increase intra-regional trade and energy connectiveness and identify what would be the key green infrastructure projects of common interest.

10:00 – 10:30 Connecting the dots (wrap up first 2 days):

Iva Brkic & Branko Milicevic, UNECE

Kumar Kylychev & Anne Lorenzen, UNDP

Randi Kristiansten & Sergey Tulinov, ESCAP

10:30 – 11:30 Energy Connectivity in Central Asia

10.30 – 10.50 Framework on Energy connectivity and regional cooperation

Randi Kristiansten, ESCAP

10.50 – 11.10 Energy Connectivity in Central Asia, USAID

Sergey Yelkin, USAID/Central Asia Regional Energy Specialist

11:30 – 12:30 Moderated discussion

Moderator: *Randi Kristiansten, ESCAP*

Panellists:

Furugzod Usmonov, Chair of the Board of Directors, Innovation and Industrial Development Fund, Tajikistan

Shamil Dikambaev, Research Institute on Energy and Economics, Ministry of Energy, Kyrgyzstan

Bakhtzhan Jaxaliyev, Advisor, Samruk Energy

Oleg Budargin, GEIDCO Vice-Chair, GEIDCO Regional Committee for Central Asia and Eastern Europe Head

12:30 – 13:00 Next steps

- What can we do next?
- How can UNECE, UNDP, ESCAP & KBTU help countries enhance regional energy connectivity?
- What are the identified projects of common interest?
- Next event on energy connectivity in preparation for the 3rd Almaty Energy Forum?

13.00-15.00 Lunch break & Networking

Session VII

15:00 – 18:00 Building cross-regional technical and institutional capacity

The energy transition creates an opportunity for sustainable green job creation, but it also requires new skills that are different to those of traditional energy engineers. The countries in Central Asia require skilled energy professionals and scientists with specific professional knowledge and a broad understanding of the energy system to make energy transition across the region a reality. The





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objective of this session is to discuss how science can strengthen decision making and identify what needs to be done to strengthen research in clean energy technologies across the region.

- How can science and technological research strengthen policy- and decision-making?
- What needs to be done to strengthen research in clean energy technologies?

15:00 – 15:30 Setting the scene:

15.00 – 15.15 Providing affordable, clean energy: how universities can drive progress in energy efficiency (SDG 7)

Lachyn Italmazova, Regional Director – Knowledge Partnership, Times Higher Education

15.15 – 15.30 Role of governance in shaping research and future talent

Piyush Verma, Senior Governance Expert, UNDP

15:30 – 16:30 Moderated discussion:

- How is academia shaping energy transition in Central Asia?
- What is the role of research in driving energy system innovation?
- How can we create a social and education eco-system in Central Asia to nurture scientific human capital?

Moderator: *Prof. Chokan Laumulin, Vice-Chair of the Committee on Sustainable Energy, UNECE & KBTU*

Panellists:

Barbara Janusz-Pawletta, Deutsch Kazachische Universität

Alaibek Obozov, University from Kyrgyzstan

Nemat Badalov, Institute of Energy, Tajikistan

Rakhimzhan Babakhodzaev, University from Uzbekistan

Churiev Maksat - Department chair and coordinator of international projects of Yagshygeldi Kakayev International of Oil and Gas

16:30 – 17:30 Moderated discussion:

- How can we unlock full potential and foster next generation of experts to deliver on energy transition in Central Asia with development organizations and private sector representatives?

Moderator: *Anne Marx Lorenzen, UNDP*

Panellists:

Ismail Bedelbay, Public Environmental Fund "Nature First", Kazakhstan

Magnus Magnusson, Director, UNESCO Almaty Cluster Office for Central Asia

Askar Tazhiyev, Deputy Chairman, KazAID

Maratbek Gabdullin, Rector of the Kazakh-British Technical University

Shamil Dikambaev, Research Institute on Energy and Economics, Ministry of Energy, Kyrgyzstan

Session VIII

17:30 – 18:00 Wrap up and next steps





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- What can we do next?
- How can UNECE, UNDP, ESCAP & KBTU help countries strengthen regional cooperation & build cross-regional technical and institutional capacity?
- What concrete steps are required to nurture human capital to deliver on energy transition?
- Launch of a *university network* to accelerate energy transition in Central Asia?

Viktor Badaker, Economic Affairs Office, UNECE

Randi Kristiansten, Economic Affairs Officer, ESCAP

Anne Marx Lorenzen, UNDP

Prof. Chokan Laumulin, Vice-Chair of the Committee on Sustainable Energy, UNECE & KBTU

Yerlik Karazhan, CEO, ESGQ Rating Agency, LLP

18.00

End of the Forum

