



International Forum on Innovating and Modernizing Energy and Water in Central Asia

Date: 1-3 November 2021

Venue: Kazakh-British Technical University
59 Tole bi street, Almaty, 050000 Republic of Kazakhstan

- Either in person or online
- Zoom link for three days:
<https://us02web.zoom.us/j/82132076016?pwd=T3VqVUVJcy9sUC9iNEROOST0eHBCdz09>
- Almaty time (GMT +6h, CET +5h) – change of daylight savings time on 31 October for Europe
- Simultaneous translation Russian – English will be provided

Co-organizers: UNECE, UNESCAP, National Academy of Sciences of RK (NAS RK), The International Green Technologies and Investment Centre, International R&D Centre of Energy Integration (IRDCEI), and The Kazakh British Technical University (KBTU), Kazakhstan

Today the economies of Central Asia are looking for more diversification, economic complementarities and increasing intra-regional trade and scaled up regional cooperation. There are many constraints to this aspiration: from transport and trade connectivity and ageing infrastructure to industrial efficiency, energy security, market access and trade barriers. At the same time, Central Asia is highly vulnerable to climate change and in particular due to the short- and long-term implications of melting glaciers are facing an increased risk of natural disasters and depletion of water resource stock. These changes will have direct implications on people and economies. Providing solutions will require a significant effort of adaptation and improvement in the field of water and energy, including in the planning, building, and operations of infrastructure.

Reinforcing regional economic cooperation with a focus on productive sectors and green technologies presents an important factor for stability in the region and for the region's further integration into global value chains. Central Asian countries already agree on the importance of a more integrated approach towards structural economic transformation in order to recover better while staying on track to achieving the Sustainable Development Goals (SDGs) by 2030. Most recently, the Heads of State of Central Asia adopted a Joint Statement on the results of the 3rd Consultative Meeting in the city of Turkmenbashi (August 6, 2021), which, among other priorities emphasizes:¹

- *“the importance of further deepening multilateral cooperation in the transport and transit sector ... trade and tourism, the introduction of innovative, energy-saving and electronic technologies...”*
- *the “intention to join efforts for joint implementation of innovative programs and projects, as well as to promote effective cooperation in the field of science, technology and innovation, joint research ... in order to find new sources of social and economic growth”.*

¹ Excerpts from the Joint Statement are provided in an unofficial translation.

Furthermore, as discussed recently at the "High-level dialogue on the effective development of energy, water and land resources in the Central Asian countries" in Tashkent (15 October 2021) transboundary water cooperation is crucial to tackle climate change and to develop solutions to the problems the countries face collectively, based on common objectives, complementarities, and shared benefits.

This international Forum can provide a much-needed platform for taking these priorities forward, and for strengthening regional cooperation. At this occasion, participants will have the opportunity to share views in the wider areas connected to energy and water as the backbone to societal development, including renewable energy, decarbonising energy intensive industries, circular carbon economy, innovation, and trade and invites participants to set priorities that matter to Central Asia in a series of regional dialogues and workshops. Over three days, experts from governments, private and financial sectors are invited to share their views, raise awareness of opportunities, and examine how closer cooperation can overcome regional imbalances.

The objective of the Forum is to develop solutions for many of the challenges posed by the implementation of the 2030 Agenda on Sustainable Development, and in particular discuss the possibilities for investing in regional and transboundary projects and refining approach, financing mechanisms and partnerships jointly and in an interactive setting. Specifically, the Forum will look at opportunities for projects that bring several Central Asian countries together, that are addressing transboundary or regional needs and opportunities and that may be funded via a combination of national budgets, donor funds and eventually private or IFI financing. Among others, the recommendations reached by the hands-on workshop in Almaty will be reported to the Governing Council meeting of the Special Programme for the Economies of Central Asia (SPECA) later in the month for consideration. The recommendations may also be useful as countries of the region progress with specific forms of collaboration.

The Forum will be kicked off by a high-level discussion about the role of economic cooperation and green technologies for stability in Central Asia and by an implementation workshop of the UNECE managed project *"Enhancing transboundary energy cooperation through introduction of wind and solar energy into power systems of the CIS countries to support achievement of SDG 7."*

Questions to be addressed

- Innovation, modernisation, and infrastructure: what works, what does not and why in Central Asia? What is missing?
- Which regional and transboundary energy and water projects are turnkey in the context of innovation, environment and *just* transition?
- What are the current regional conditions for infrastructure investments in Central Asia? What are the challenges with regards to financing green infrastructure projects?
- How can we attract and sustain investments in energy and water innovations that are essential for growth and can avert a climate crisis? What measures and financial instruments need to be developed?
- How can such investments be directed to modernizing fossil fuel infrastructure with *just* transition and environmental concerns in mind? Are there alternatives?
- How can such innovation investments be translated into regional results and collaboration?
- What role for research and innovation in *just* transition concepts?
- How can Central Asian countries learn from each other in the space of R&D, innovation, for example through existing or emerging science and technology clusters?
- What role for a SPECA fund? What role for the Technology Centre? For UN platforms?

PROGRAMME OVERVIEW

Monday, 1 November 2021: IMPLEMENTATION WORKSHOP

Enhancing transboundary energy cooperation through introduction of wind and solar energy into power systems of CIS countries to support achievement of SDG 7

This workshop is the final event of the above-mentioned project. Results and recommendations will be presented and discussed. Participants will explore future possible projects and activities.

From 09.00 Registration and coffee

- **Project overview and achievements**

10.30-11.00 Introductory remarks

- Stefanie Held, Chief Sustainable Energy Section, Sustainable Energy Division, UNECE

11.00-12.30 Findings and recommendations

- Iva Brkic, Project Lead, Economic Affairs Officer, Sustainable Energy Division, UNECE
- Georgy Ermolenko, Director of the Department of External Relations of IC EES CIS
- Michail Saparov, Head of the CIS EPS Working Group on ecology, energy efficiency and renewable energy sources

This session will be moderated by Gianluca Sambucini, Economic Affairs Officer, UNECE

12.30-14.00 Lunch break

14:00-14:15 Key findings from the REN21 UNECE Renewable Energy Status Report and from the study on Renewable Energy Financing and Investment in four UNECE member States

- Rana Adib, Executive Director, Renewable Energy Policy Network for the 21st Century (REN21), France (online)
- Maija Vajdic, Consultant, UNECE (online)

14:15-16:00 Views from countries and stakeholders

- Shamsiev Khamidula, Director, Coordination and Dispatch Center "Energiya" UES of Central Asia
- Karen Asatryan Director of the Renewable Energy and Energy Saving Foundation, Armenia
- Rauf Rzayev, Deputy Head of the Energy Department, Ministry of Energy, Azerbaijan
- Andrey Molochko, Supervisor, General Energy Department of RUE "BelTEIClose of the implementation workshop, Belarus
- Ruslan Nurmaganbetov, Head of the management for Development of Renewable Energy Sources, Department for Renewable Energy Sources of the Ministry of Energy, Kazakhstan
- Bekov Kubanych, Director, Strategic Planning and Human Resources Department, JSC "National Energy Holding Company, Kyrgyzstan
- Tatiana Vedeneva, President, Center for Renewable Energy and Energy Efficiency Development (CREED), Kyrgyzstan
- Nurzat Abdyrasulova, CEO, Unison Group, Kyrgyzstan (online)
- Alexandru Chudin, Director, Energy Efficiency Agency, Moldova
- Alexei Zhikharev, Director, Renewable Energy Development Association, Russian Federation
- Sorbon Kholmuhamadzoda, Ministry of Energy and Water Recourses, Chief of Power Engineering Department, Tajikistan
- Nizomiddin Rahmanov, PromStroyBank, Uzbekistan

This session will be moderated by Georgy Ermolenko, Director of the Department of External Relations of IC EES CIS

16.00-16.30 *Coffee break*

16:30-16:45 Renewable energy hard talks: key recommendations and future activities

- Gianluca Sambucini, Economic Affairs Officers, Sustainable Energy Division, UNECE

16:45-17:00 Future collaboration and projects

- Viktor Badaker, Economic Affairs Officers, Sustainable Energy Division, UNECE

17:00-18:00 Discussion and recommendations

18.00 *Close of the implementation workshop.*

Tuesday, 2 November 2021 AM: HIGH-LEVEL DIALOGUE

Defining and prioritising regional needs in energy and water

The Forum will be kicked off by this high-level discussion about the role of economic cooperation and green technologies for stability in Central Asia. The interactive roundtable discussion will set the scene by defining priorities and opportunities on the backbone of energy and water.

From 09.00 Registration and coffee

10.00-10.30 Opening remarks

- Maratbek Gabdullin, Acting Director, The Kazakh British Technical University (KBTU)
- Dmitry Mariyasin, Deputy Executive Secretary, UNECE
- Nikolay Pomoshchnikov, Head of Subregional Office, North and Central Asia, UNESCAP (online)
- Marat Kalmenov, Executive Director, KazEnergy
- Bakhytbek Baiseitov, Chairman of the Board of Director and Supervisory Board of Bank CenterCredit JSC, Chairman of the Business Council of the Financial and Business Association of Euro-Asian Cooperation (online)

10.30-12.00 Economic development and green energy technologies as means for regional stability

Interactive moderated high-level roundtable discussion

- What is happening in Central Asia and elsewhere? What is needed?
- Which projects are turnkey in energy, water and innovation to further growth and regional stability and avert a climate crisis?
 - Carbon neutrality: Industry infrastructure, energy intensive industries and technology clusters
 - Oil, gas, and coal as market drivers
 - Just transition, modernisation, and innovation
 - Resource management and circular economy
 - Nexus areas environment, water, trade, innovation
- How can we attract and sustain investments?
- What works and what does not and why?

Panelists

- Farhod Bilolzoda, Deputy Minister of Industry and New Technologies, Tajikistan
- Serdar Saparov, Deputy Minister of Energy, Turkmenistan (online)
- Serik Tyutebaev, Samruk Energy, Managing Director, Member of the Board, Kazakhstan
- Vladimir Shkolnik, Academician, NAS RK, Vice-President of The Kazakhstani National Academy of Natural Sciences, Former Minister of Energy, Kazakhstan

- Oleg Budargin, Vice-Chair of the World Energy Council, 25th World Energy Congress Vice-Chair (online)
 - Keisuke Sadamori, Director, Energy Markets and Security, International Energy Agency, Paris (online)
 - Gürbüz Gönül, Director of Country Engagement Partnership, International Renewable Energy Agency (IRENA), Abu Dhabi (online)
 - Johannes Stenbaek Madsen, Head of Cooperation, Delegation of the European Union to Kazakhstan (tbc)
 - Raymond Pilcher, Chair, UNECE Group of Experts on Coal Mine Methane and Just Transition; President, Raven Ridge Resources Inc., United States (online)
 - Elena Kuanbaeva, Deputy Chairman of the Management Board), The International Green Technologies and Investment Centre, Kazakhstan
 - Nurzat Abdyrasulova, CEO, Unison Group, Kyrgyzstan (online)
 - Hongpeng Liu, Director Energy Division, UNESCAP (online)
 - Aida Sitdikova, Director, Energy Eurasia, Middle East & Africa, Sustainable Infrastructure Group, European Bank for Reconstruction and Development, London (online)
 - Nariman Mannapbekov, Country Director, Asian Development Bank (ADB) Kazakhstan Resident Mission
- This session will be moderated by Dmitry Mariyasin, Deputy Executive Secretary, UNECE*

12.00-12.30 Summary and closing remarks

- Maratbek Gabdullin, Acting Director of The Kazakh British Technical University (KBTU)
- Dmitry Mariyasin, Deputy Executive Secretary, UNECE (in person)

12.30-14.00 Lunch break

Tuesday, 2 November 2021 PM: REGIONAL DIALOGUES

Defining and prioritising regional needs in energy and water

14.00-15.00 Prioritising the needs for a sustainable energy system of tomorrow

This session is dedicated to presenting a roadmap for the region towards sustainable economic development and decarbonisation in the context of the 2030 Agenda for Sustainable Development. Presentations and interventions will be made to define gaps and identify possible turnkey projects. Participants will be able to react to toolkits and solutions and their applicability to the region. How can innovation investments be translated into regional results and collaboration?

Presentations and discussion

- Tracking the progress of the sustainable energy agenda in Central Asia
 - Sergey Tulinov, Energy Division, UNESCAP (online)
- Development of an SDG 7 roadmap for Tajikistan and Kyrgyzstan as an example for the region
 - Anis Zaman, Economic Affairs Officer, UNESCAP (online)
- Global energy sector: Kazakhstan and cutting-edge fundamental research
 - Siddhardt Saxena, Director, Cambridge Central Asia Forum, Jesus College, University of Cambridge, United Kingdom
- Kazakhstan energy transition to low-carbon development by 2030 and carbon neutrality by 2050
 - Marat Koshumbaev, Research Coordinator, International Scientific Center for Energy Integration (online)

This session will be moderated by Professor Chokan Laumulin, The Kazakh-British Technical University, Research Affiliate, Cambridge Central Asia Forum, Jesus College, University of Cambridge, United Kingdom

15.00-16.00 Energy security, decarbonisation and the power sector

Presentations and discussion

- Carbon neutrality and energy intensive industries: The UNECE toolkit for decarbonisation
 - Iva Brkic, Economic Affairs Officer, Sustainable Energy Division, UNECE
- Coal phase out as an important step towards decarbonisation of the power sector
 - Michael Williamson, Energy Division, UNESCAP (online)
- Electricity connectivity roadmap in Asia Pacific and its relevance to Central Asia and the neighbouring subregions
 - Matthew Wittenstein, Energy Division, UNESCAP (online)
- Central Asia – as - a - Digital Platform Strategy
 - Askar Tazhiyev, consultant, UNESCAP

This session will be moderated by Stefanie Held, Sustainable Energy Division, UNECE

16.00-16.30 Coffee break

16.30-17.30 Energy and water nexus: Toolkits and regional cooperative mechanisms

- Toolkit to sustainably deploy renewable energy considering water and the environment
- Regional mechanisms for the low-carbon, climate-resilient transformation of the energy-water-land nexus in Central Asia
- Opening remarks:
 - Lucia de Strasser, Environment Division, UNECE (online)

Panellists and presenters:

- Takayoshi Kato, Policy Analyst, Organisation for Economic Co-operation and Development (OECD) (online)
- Andrey Zhironkin, Principal Banker, Agribusiness CEE South, European Bank for Reconstruction and Development, London (online)
- Alberto Troccoli, World Energy and Meteorology Council (online)

Reactions and discussion

This session will be moderated by Lucia de Strasser, Environment Division, UNECE

17.30-18.00 Discussion and recommendations

This session seeks to summarize the lessons and recommendations made during the day, considering:

- Economic development and innovation: Priority setting: what works, what does not, gaps, project areas and investments
- How can these tool and projects be better adapted to the region?
- Which projects are turnkey and how can innovation investments be translated into regional results and collaboration?
- Successful financial models and partnerships
- Lessons learnt and recommendations
- Conclusions

This session will be moderated by Stefanie Held, Sustainable Energy Division, UNECE

Wednesday, 3 November 2021: WORKSHOP

Innovating and financing energy and water in Central Asia

09.00-18.00 Developing a pipeline of fundable regional projects

This day is dedicated to exploring with participants ideas for fundable projects and undertakings that would make a difference in the region. The objective is a set of recommendations and a list of fundable regional projects to be presented to the Governing Council of the United Nations Special Programme for the Economies of Central Asia (SPECA) later in the month in Tashkent.

09.00-10.00 Investments in clean energy technologies and innovation in Central Asia

This session will kick off the day with a view on innovative thinking in energy and reactions from the financial community and participants about what is possible in the region.

- Energy of the future and climate
 - Vladimir Shkolnik, Academician, NAS RK, Vice-President of The Kazakhstani National Academy of Natural Sciences, Former Minister of Energy, Kazakhstan
- Innovation and finance in Central Asia
 - Nizomiddin Rahmanov, PromStroyBank, Uzbekistan
- Management of regional ecological risks – an innovative model
 - Zhaksylyk Tokayev, International Green Technologies and Investment Centre

Reactions and discussion with financial sector participants

This session is moderated by Stefanie Held, UNECE

10.00-11.00 Renewable energy projects: Solar, wind, bioenergy, and hydropower

In this session, concrete ideas for scalable renewable energy projects in the region will be presented. Participants will be invited to refine the proposals with scale up in mind.

- Wind and hydropower for water management in Central Asia
 - Viktor Badaker, Economic Affairs Officer, UNECE
- Biogas project experience in Kyrgyzstan and opportunities for wide-spread application
- Renewable Energy Model Center for Central Asia
 - Alaibek Obozov, Kyrgyzstan
- Creation and development of silicon solar cells, wind turbines and thin films
 - Dina Bakranova, KBTU

Reactions and discussion with financial sector participants

This session is moderated by Stefanie Held, UNECE

11.00-11.30 Coffee break

11.30-12.30 Cross-border electricity networks and trade

This session will present the results of an ongoing study of electricity connectivity and invite reactions from participants.

- Cross-border connectivity: Tajik perspective
 - Furugzod Usmonov and Parviz Atoev, Tajikistan
 - Luis Lopez, Analyst, International Energy Agency (IEA), Paris (online)
- Clean Household Energy Consumption in Kazakhstan
 - Aiyngul Kerimray, EU4Energy Programme
- Creation of a unified energy system of the Eurasian continent: with the participation of the energy sector of Kazakhstan
 - A. Trofimov, Advisor to General Director «AlatauEnergoproekt»

Reactions and discussion with financial sector participants
This session is moderated by Stefanie Held, UNECE

12.30-13.30 *Lunch break*

13.30-15.00 **Decarbonising energy intensive industries**

This session will provide an overview of inherent challenges and opportunities resulting from the modernisation of aging infrastructure with decarbonisation in mind. Panellists will discuss regional restructuring, just transition, solutions for energy-intensive industries, clean technologies, hydrogen and innovation clusters.

- Opening remarks: Economic and social aspects of decarbonisation, cleaning up coal infrastructure and regional restructuring
 - Raymond Pilcher, Chair, UNECE Group of Experts on Coal Mine Methane and Just Transition (online)

Panellists:

- Birlesbek Aliyarov, Academician of the National Academy of Sciences of the Republic of Kazakhstan
- Michal Drabik, Economic Affairs Officer, Sustainable Energy Division, UNECE
- Iva Brkic, Economic Affairs Officer, Sustainable Energy Division, UNECE
- Judd Swift, Synfuels, United States (online)
- Saidzhon Saidrahmonzoda, Chief, Department of Coal Industry, Ministry of Industry and New Technologies, Tajikistan

Reactions and discussion with financial sector participants

This session will be moderated by Raymond Pilcher, UNECE Group of Experts on Coal Mine Methane and Just Transition

15.00-16.00 **Circular carbon economy and sustainable resource management**

- Critical raw materials and resource management in the region
 - Arkady Rogalsky, Executive Director, Kyrgyz Society of Subsoil Experts, Kyrgyzstan
 - Georgiy Freiman, Chairman of the Executive Committee, Public Association of Independent Subsoil Experts of Kazakhstan and General Manager, GeoMineProject LLP, Kazakhstan
- Industrial and Urban Waste Management
 - Dzhamilya Aitmatova, Vice-Chair of the UNECE Group of Experts on Cleaner Electricity Production, Kyrgyzstan

Reactions and discussion with financial sector participants

This session will be moderated by Stefanie Held, UNECE

Discussion questions for all segments:

- Which projects make sense at a regional scale or can be scaled up?
- What are the current regional conditions for infrastructure investments? Challenges?
- Financing larger energy infrastructure, incl. cross-border. How can such innovation investments be translated into regional results?
- Could a regional fund play a role?
- Successful partnering for implementation

16.00-16.30 *Coffee break*

16.30-18.00 **Summary of project pipeline continued**

- Summary of toolkits

- Linkages with a Fund for the SPECA region/financing options
- Recommendations for further work and partnerships
- Next steps.
 - Stefanie Held, Viktor Badaker, Gianluca Sambucini, and Iva Brkic, Sustainable Energy Division, UNECE

18.00 International Forum closes.

Side meetings for implementation work possible.

Drafting of documents continues on 4 November in a smaller voluntary group.