

## TRAINING ON RENEWABLE ENERGY, ENERGY TRANSITION AND ENERGY EFFICIENCY

*within the framework of the OSCE-DKU project*

*"Empowering Young Central Asian Women in the Energy Sector"*

Training dates: April 17 - 21, 2023.

Venue: Kazakh-German University (DKU), Almaty, 173, Nazarbayev Ave., DKU Hall, 1st floor.

Language: Russian and English (simultaneous translation).

*This training course for young female specialists and female students is developed to equip young specialists with the necessary skills for the energy jobs of the future and encourage them to pursue careers and promote this change among their colleagues and network.*

*Participants: young women specialists and female students in the field of renewable energy, energy, ecology, environment and sustainable development from the Central Asian countries (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan), Afghanistan and Mongolia.*

### TRAINING PROGRAM

Day 1 - April 17 (Monday)	
09:30-10:00	Registration of participants
Moderator – Mr. Alexey Kobzev, Head of Green Energy and Climate Change Lab., DKU	
10.00-10.15	Welcoming remarks <ul style="list-style-type: none"> <li>• <i>Dr. Wolrad Rommel</i>, President, DKU</li> <li>• <i>Ms. Giulia Manconi</i>, Project Manager, Acting Senior Programme Officer, Energy Security, OSCE</li> </ul>
10.15-10.20	<i>Group photo</i>
10.20-10.35	General information about the training: an overview of the course's goal, objectives, program, who the course is for, introducing lecturers and speakers, etc. <ul style="list-style-type: none"> <li>• <i>Mr. Alexey Kobzev</i>, Head of Green Energy and Climate Change Lab., DKU</li> </ul>
10.35-10.40	Introduction of participants, adoption of the rules of work during the training (interactive activity) <ul style="list-style-type: none"> <li>• <i>Dr. Alexandr Belyy</i>, assoc. prof., DKU</li> </ul>
<b>Session</b>	<b>Renewable energy (RE) and energy efficiency (EE) policy / International and regional context</b>
10.40-11.00	Renewable energy transition in Central Asia <ul style="list-style-type: none"> <li>• <i>Ms. Bayan Abylkairova</i>, Deputy Chief of Party, USAID Power Central Asia Activity</li> </ul>
11.00-11.20	Support for renewable energy development in Kazakhstan: progress and current challenges <ul style="list-style-type: none"> <li>• <i>Ms. Ainur Sospanova</i>, Chairwoman of the Board, RES Association "Qazaq Green", Kazakhstan</li> </ul>
11.20-11.30	Q&A
11.30-11.50	<i>Coffee break</i>
11.50-12.00	Interactive activity with participants: exercise "In the active work stage" <ul style="list-style-type: none"> <li>• <i>Dr. Alexandr Belyy</i>, assoc. prof., DKU</li> </ul>
12.00-12.30	Climate change in Kazakhstan and Central Asia. <ul style="list-style-type: none"> <li>• <i>Dr. Larissa Kogutenko</i>, Head of Water Resources and Climate Lab., DKU</li> </ul>

12.30-13.00	Energy transition in the world and in Kazakhstan <ul style="list-style-type: none"> <li>• <i>Prof. Dr. German Trofimov</i>, Vice President for Energy of the Israeli Independent Academy for Development of Sciences</li> </ul>
13.00-13.15	Q&A
13.15-14.15	<i>Lunch</i>
14.15-14.35	6th IPCC Report: Energy and Climate Change linkages <ul style="list-style-type: none"> <li>• <i>Dr. Vladimir Grebnev</i>, International climate change expert, Kyrgyzstan</li> </ul>
14.35-15.00	Presentation of the UNECE/REN-21 report on the development of renewable energy sources in the EECCA countries, including Kazakhstan <ul style="list-style-type: none"> <li>• <i>Dr. Alexandr Belyy</i>, assoc. prof., DKU</li> </ul>
15.00-15.25	Energy/fuel poverty in Kazakhstan. Research and case studies (video) <ul style="list-style-type: none"> <li>• <i>Dr. Ayimgul Kerimray</i>, independent ecologist, scholar</li> </ul>
15.25-15.40	How energy management helps in energy efficiency and energy transition <ul style="list-style-type: none"> <li>• <i>Ms. Maria Stepanova</i>, energy efficiency expert</li> </ul>
15.40-15.50	A brief summary of the lecture part of the first day of the training. Passing "Quiz of the Day". Summing up.
15.50-16.20	<i>Coffee break and networking</i>

<b>Day 2 - April 18 (Tuesday)</b>	
09:30-10:00	Registration of participants
<b>Session</b>	<b>Technical aspects of renewable energy sources (RES) and energy efficiency</b>
Moderator – Mr. Abylaikhan Soltanayev, Head of Education Programs of RE and Hydropower, Almaty University of Power Engineering and Telecommunications (AUPET)	
10.00-10.30	Technical and organizational aspects of the development of solar and wind energy <ul style="list-style-type: none"> <li>• <i>Prof. Dr. Nurzhan Beisenkhanov</i>, Dean of the School of Materials Science and Green Technologies, Kazakh British Technical University (KBTU)</li> </ul>
10.30-11.10	Technical aspects of the use of renewable energy sources in Kazakhstan. Technical and organizational aspects of hydropower development. <ul style="list-style-type: none"> <li>• <i>Mr. Abylaikhan Soltanayev</i>, Head of Educational Programs of RES and Hydropower, Almaty University of Power Engineering and Telecommunications (AUPET)</li> </ul>
11.10-11.40	Alternative energy sources: methane from the agroindustrial complex, biogas from landfills, methane from coal beds. <ul style="list-style-type: none"> <li>• <i>Dr. Gulmira Kezembayeva</i>, Senior Lecturer, Mining and Metallurgical Institute named after O.A. Baikonurov, "Chemical Processes and Industrial Ecology" Department, Satbayev University</li> </ul>
11.40-11.45	Q&A
11.45-12.00	<i>Coffee break</i>
12.00-12.05	Interactive activity with participants: exercise "In the active work stage" <ul style="list-style-type: none"> <li>• <i>Dr. Alexandr Belyy</i>, assoc. prof., DKU</li> </ul>
12.05-12.25	A comprehensive project on renewable energy and energy efficiency: how to improve business with the help of green technologies. Case study. <ul style="list-style-type: none"> <li>• <i>Mr. Kairat Sultanov</i>, Director of the recreation area "Parus", Akmola region</li> </ul>

12.25-12.50	Prospects of Tajikistan's hydropower industry for regional development <ul style="list-style-type: none"> <li>• <i>Ms. Rafika Musoeva</i>, Chairman of the Association of Power Engineers of Tajikistan</li> </ul>
12.50-13.15	Hydrogen Energy <ul style="list-style-type: none"> <li>• <i>Mr. Yury Melnikov</i>, Expert of UNECE's Hydrogen Task Force</li> </ul>
13.15-13.20	Q&A
13.20-14.20	<i>Lunch</i>
14.20-14.40	Global energy transition in the world and in Kazakhstan. The relevance of the transition to clean energy in Kazakhstan. Energy transition - the basis for decarbonization of Kazakhstan <ul style="list-style-type: none"> <li>• <i>Ms. Elena Metzger</i>, Deutsche Energie-Agentur GmbH (dena) (TBC)</li> </ul>
14.40-15.00	Legislative development and technological solutions for RES in Kyrgyzstan <ul style="list-style-type: none"> <li>• <i>Ms. Tatyana Vedeneva</i>, President, Center for Renewable Energy and Energy Efficiency Development, Kyrgyzstan</li> </ul>
15.00-15.30	<i>Group work</i>
15.30-15.40	Wrapping up the second day of the training. Passing "Quiz of the Day".
15.40-17.00	Kazakh British Technical University's (KBTU) experience in research & development. <ul style="list-style-type: none"> <li>• <i>Site visit to KBTU</i></li> </ul>

<b>Day 3 - April 19 (Wednesday)</b>	
09:30-10:00	Registration of participants
<b>Session</b>	<b>Economic, financial and organizational aspects of RES and EE</b>
Moderator - <i>Dr. Alexandr Belyy</i> , assoc. prof., DKU	
10.00-10.30	Economic, social and gender aspects of the introduction of renewable energy and energy efficiency projects <ul style="list-style-type: none"> <li>• <i>Dr. Alexandr Belyy</i>, assoc. prof., DKU</li> </ul>
10.30-11.00	Solar energy systems: Economic and organizational aspects. How to do business in the Sun? <ul style="list-style-type: none"> <li>• <i>Mr. Abdulla Ushurov</i>, Founder of Solarway Co.</li> </ul>
11.00-11.30	Energy storage systems for renewable energy sources <ul style="list-style-type: none"> <li>• <i>Prof. Dr. German Trofimov</i>, Vice President for Energy of the Israeli Independent Academy for Development of Sciences</li> </ul>
11.30-11.50	<i>Coffee break</i>
11.50-11.55	Interactive activity with participants <ul style="list-style-type: none"> <li>• <i>Dr. Alexandr Belyy</i>, assoc. prof., DKU</li> </ul>
12.20-13.00	Financial measures to support the transition to clean energy in Kazakhstan: experience and future perspectives (video) <ul style="list-style-type: none"> <li>• <i>Mr. Oleg Khmelev</i>, International Technical Advisor for Joint Projects of the United Nations Development Program, Global Environment Facility and the Government of the Republic of Kazakhstan</li> </ul>
13.00-13.05	Q&A
13.05-14.05	<i>Lunch</i>

14.05-14.30	Monetization of emissions reductions in the energy sector <ul style="list-style-type: none"> <li>• <i>Dr. Liliya Zavyalova</i>, International consultant on climate change, low-carbon development, renewable energy and MRV, Uzbekistan</li> </ul>
14.30-15.10	<i>Group work</i>
15.10-15.30	Energy sector in the updated nationally determined contributions (NDC) of the Kyrgyz Republic <ul style="list-style-type: none"> <li>• <i>Dr. Vladimir Grebnev</i>, International climate change expert, Kyrgyzstan</li> </ul>
15.30-15.50	<i>Coffee break</i>
15.50-16.10	Gender diversity in the energy transition; EBRD/GCF Programme to support the renewable energy sector and promote gender equality in Kazakhstan <ul style="list-style-type: none"> <li>• <i>Ms. Anar Nurbaeva</i>, Gender Advisor, European Bank for Reconstruction and Development (EBRD)</li> <li>• <i>Ms. Dilara Shurshenova</i>, Manager, Ernst &amp; Young Kazakhstan LLP</li> </ul>
16.10-16.20	Wrapping up the third day of the training. Passing “Quiz of the Day”.
16.20-17.00	<ul style="list-style-type: none"> <li>• <i>Site visit to DKU laboratory at Pushkin building</i></li> </ul>

<b>Day 4 - April 20 (Thursday)</b>	
09:30-10:00	Registration of participants
<b>Session</b>	<b>Pilots and practitioners in the field of RES and EE</b>
Moderator – Ms. Dana Zhunissova, Project Coordinator, DKU	
10.00-10.20	Capacity building programs on the clean energy transition in Central Asia <ul style="list-style-type: none"> <li>• <i>Mr. Alexey Kobzev</i>, Head of Green Energy and Climate Change Lab., DKU</li> </ul>
10.20-10.40	Pilot case from Kostanay region: introduction of renewable energy sources on the territory of the Ecopark <ul style="list-style-type: none"> <li>• <i>Ms. Galina Shnaider</i>, Director of the Ecopark, Kostanay region, Kazakhstan</li> </ul>
10.40-11.00	Women's leadership in ecology and energy <ul style="list-style-type: none"> <li>• <i>Dr. Aigul Solovyeva</i>, Chairman of the Management Board of Association of Ecological Organizations of Kazakhstan</li> </ul>
11.00-11.20	<i>Coffee break</i>
11.20-11.40	Heat pumps as an efficient technology to replace traditional heating and cooling of buildings. Case study. <ul style="list-style-type: none"> <li>• <i>Ms. Dariya Miroshnichenko</i>, Public Foundation "PRO ECO", Karagandy, Kazakhstan</li> </ul>
11.40-12.00	Results of the EU-UNDP pilot project on introduction of small renewable energy sources <ul style="list-style-type: none"> <li>• <i>Dr. Gulzhamal Issayeva</i>, DKU Fellow</li> </ul>
12.00-12.20	Passing “Quiz of the Day”.
12.20-13.15	<i>Lunch</i>
13.15-18.00	<ul style="list-style-type: none"> <li>• <b>Site visit to RE facility – Qapshagai solar power plant (Konaev city)</b></li> </ul>

Day 5 - April 21 (Friday)	
09:30-10:00	Registration of participants
<b>Session</b>	<b>Women's initiatives on RES and EE</b>
Moderator – Mr. Alexey Kobzev, Head of Green Energy and Climate Change Lab., DKU	
10.00-10.30	Activities of the Financial Settlement Center of RES and the creation of a unified electricity market. <ul style="list-style-type: none"> <li>• Ms. Gulzhan Nalibayeva, General Director of the Financial Settlement Center of Renewable Energy LLP</li> </ul>
10.30-11.00	Gender aspects in energy <ul style="list-style-type: none"> <li>• Ms. Lyazzat Akmurzina, Executive Director of the KAZENERGY Association</li> </ul>
11.00-11.30	Promoting the role of women in Tajikistan's energy sector <ul style="list-style-type: none"> <li>• Ms. Rafika Musoeva, Chairman of the Association of Power Engineers of Tajikistan</li> </ul>
11.30-11.45	Coffee break
11.45-12.05	Power Central Asia activities on development women in energy sector <ul style="list-style-type: none"> <li>• Ms. Akmaral Sman, gender specialist, USAID Power Central Asia Activity</li> </ul>
12.05-12.25	Gender equality and initiatives to support women in the energy sector <ul style="list-style-type: none"> <li>• Ms. Khorlan Ayazbekova, Head of Strategy Management Division, JSC NC "KazMunayGas"</li> </ul>
12.25-12.40	Opportunities for introduction of hydrogen energy in Kazakhstan <ul style="list-style-type: none"> <li>• Dr. Saule Zholdayakova, Acting Director of Alternative Energy Department, Head of Hydrogen Technology Research Laboratories, KMG Engineering</li> </ul>
12.40-12.45	Interactive activity with participants <ul style="list-style-type: none"> <li>• Dr. Alexandr Belyy, assoc. prof., DKU</li> </ul>
12.45-13.05	Development of Sustainable Energy and Climate Action Plan <ul style="list-style-type: none"> <li>• Mr. Yernar Bilyalov, consultant, UNECE</li> </ul>
13.05-13.15	Q&A
13.15-14.15	Lunch
14.15 -14.30	Presentation of Master's programs of DKU <ul style="list-style-type: none"> <li>• Dr. Larissa Kogutenko, Head of Water Resources and Climate Lab., DKU</li> <li>• Ms. Inna Matveyenko, Head of Green Business and Society Lab., DKU</li> </ul>
14.35-14.40	Closing remarks
14.40-15.00	Summing up the results of the training. Filling out the post-training survey. Passing "Quiz of the Day". Awarding certificates to the participants of the training.
15.00-16.30	Visit to the Central State Museum of the Republic of Kazakhstan

*\*some participants will departure in the evening*