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Funded by the European Union

Final Roundtable in THE REPUBLIC OF TAJIKISTAN

Hyatt Regency Dushanbe
4 March 2026

SECCA project activities in the Republic of Tajikistan: Results achieved

Paata Janelidze, Team leader, Key Expert in Energy Engineering
Ilze Purina, Key Expert in Energy Sector Governance
Sustainable Energy Connectivity in Central Asia (SECCA) project

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General information on SECCA

Sustainable Energy Connectivity in Central Asia (SECCA):

EU-funded regional cooperation project between the European Union and its partner countries in Central Asia in the field of sustainable energy

Implementation period:

15 March 2022 - 31 May 2026

Partner countries:

Kazakhstan, Kyrgyzstan, **Tajikistan**, Turkmenistan and Uzbekistan

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Project objective

Overall Objective:

to promote a more sustainable energy mix in the Central Asia region in line with EU best practices

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Sustainable Energy Mix in the Republic of Tajikistan

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Sustainable Energy Mix in the Republic of Tajikistan (1)

A more sustainable energy mix in the Republic of Tajikistan (RT) means:

- **Transitioning toward 100% green energy by 2032** (currently 98%)
  - Maximum use of the vast hydroelectric potential
  - Deployment of solar and wind energy
- **Reduced seasonality of generation**
- **Improving Energy Efficiency** (EE), which reduces overall demand, and reduces the carbon intensity of GDP. EE strengthens energy security and promotes the rational use of water and energy resources

*EE is so important in the world's journey to net zero, to keep global warming at 1.5 degrees Celsius, that it is nicknamed **"the first fuel"** by the International Energy Agency (IEA)*

- **Power grid modernization and reducing losses -** during electric energy transmission
- **Fostering regional energy cooperation**

Sustainable Energy Mix in the Republic of Tajikistan (2)

Benefits of a sustainable energy balance in the Republic of Tajikistan:

- **Enhanced Energy Security and Strengthened Energy Independence** - Reducing dependence on imported fossil fuels, reliable year-round energy supply through the development of the vast potential of renewable energy sources, primarily hydropower
- **Economic growth and Attraction of Investment:**
  - Exporting green energy to neighboring countries contributes to the introduction of new technologies and attracting investment
  - Development of small hydropower and solar energy in remote regions
- **Social development -** Improving the quality of life of the population, electrification of hard-to-reach mountainous areas, reducing rolling blackouts, stimulating local production
- **Efficient use of resources -** Modernization of infrastructure, introduction of energy-saving technologies, transformation of hydropower potential into economic income
- **Environmental benefits -** Reducing greenhouse gas (GHG) emissions, combating climate change and glacier degradation, and promoting a green economy

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SECCA approach to promote a more Sustainable Energy Mix in the Republic of Tajikistan

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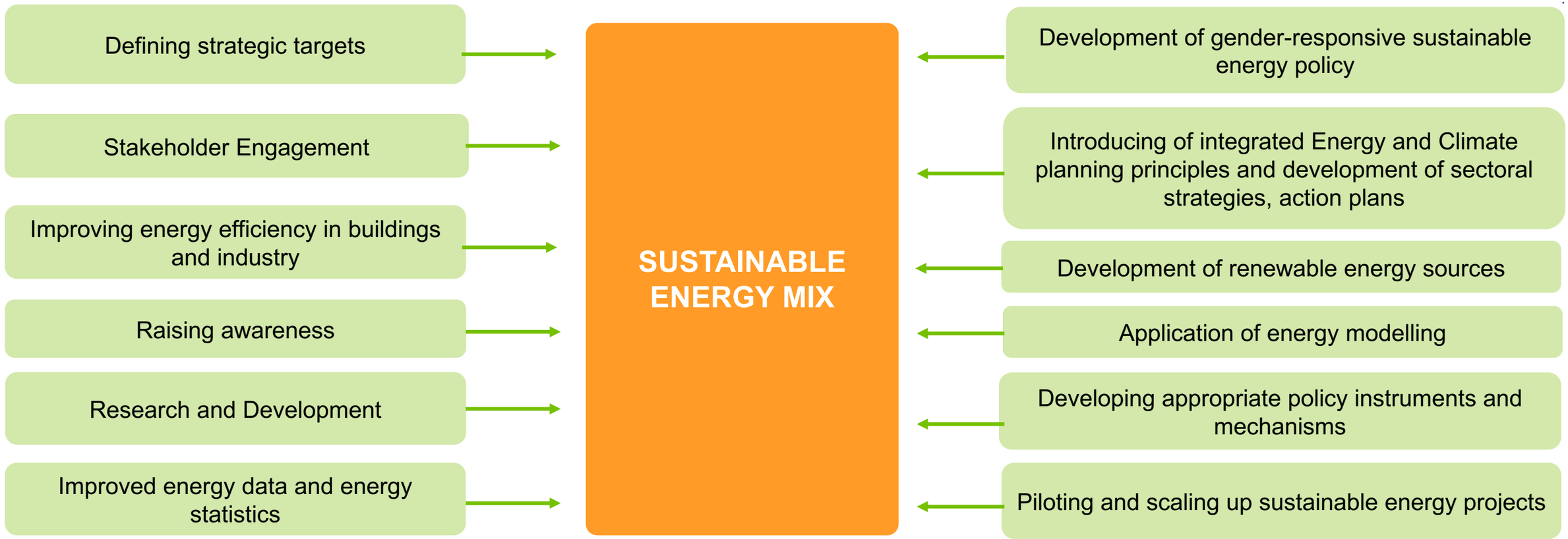
SECCA approach to promote a more Sustainable Energy Mix in the Republic of Tajikistan



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TA provided by SECCA: General approach

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SECCA approach to provide Technical Assistance aimed at Sustainable Energy Mix in the Republic of Tajikistan

- SECCA has provided Technical Assistance (TA) in promoting a more sustainable energy mix at Regional and National levels
- TA activities at the **Regional level** were implemented **after agreement** with the Beneficiary Countries
- TA activities at the **National level** were implemented **upon request** of the Beneficiary Countries
- Steps taken by SECCA to identify and implement TA activities:
  - **Areas for technical assistance** were **identified** on the basis of consultations with the national government partner (**Ministry of Energy and Water Resources in the Republic of Tajikistan**) and key stakeholders
  - In the absence of information on the most relevant EU developments in the identified area, experts from EU Member States (MS) and/or Contracting Parties to the Energy Community (EC PC) were invited as speakers to SECCA project events (regional and national conferences, technical seminars, round tables, etc.) and **presented EU practices and opportunities for Central Asian countries in these specific areas**
  - After the events, if the beneficiary country expressed interest, **technical terms of reference** were developed and contracts were concluded with non-key experts (NKEs)
  - **Proposed approaches/draft documents and results were presented and discussed** with a wide range of relevant national stakeholders to ensure a high degree of ownership and continuity of the activities initiated

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Regional Activities: Energy Modelling

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Energy modelling (1)

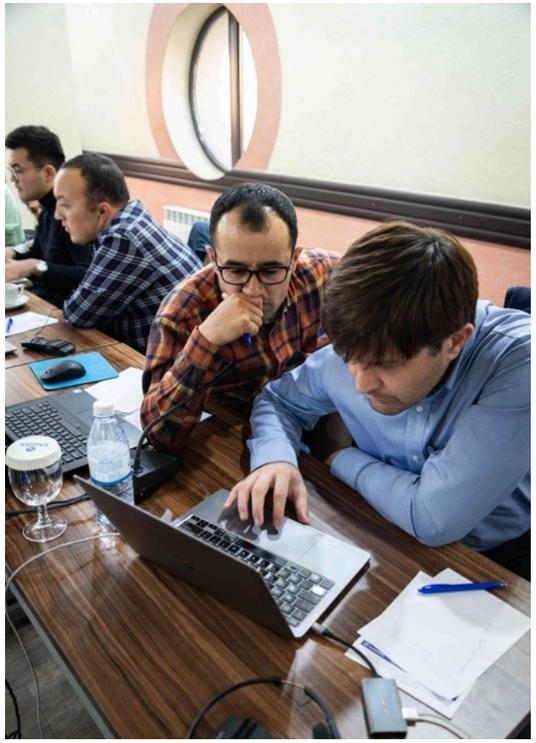
- **Integrated energy and climate planning** is one of the key instruments for promoting a sustainable energy balance
- **The role** of integrated energy and climate planning **has been highlighted** at many regional and national events (conferences, training sessions, etc.) **with the aim of explaining the overall concept to a wide range of stakeholders**
- In the EU, **quantitative analysis of energy and climate systems is based on energy modelling**, which provides a virtual, data-driven 'laboratory' for modelling, analysing and optimising complex energy systems
- Model-based integrated solutions for sustainable energy development and data-driven energy and climate decision-making **are not yet common practice in Central Asia**
- These new approaches for Central Asian countries, best practices, **examples and experiences of EU and EEA member states were discussed in detail** with the SECCA modelling project team and key stakeholders in each beneficiary country

Energy modelling (2)

- As part of the SECCA project, **a Regional Group on Modelling** has been established, comprising two young specialists from each beneficiary country, including **Tajikistan**
- **Cooperation with relevant national stakeholders established**
- A two-phase work plan for the Regional Group on Modelling developed and implemented

  Phase I (September 2024 – February 2025): **Capacity development** of the Regional Group on Modelling through 3 training workshops

  - On “fundamentals” of energy and climate strategic planning and modelling analyses and aimed to provide a common understanding of the energy and climate issues and of some good practices
  - On selection/collection/elaboration/ utilization of energy (and non-energy) statistics and data for quantitative analyses
  - On technical practices for quantitative modelling analysis and their links with the preparation of strategic documents and integrated plans



Energy modelling (3)

- **Phase II** began in July 2025 and was **based on a more targeted, country-specific, applied approach**, while continuing to strengthen the capacity of Central Asian countries to develop national energy sector models, improve systems thinking at the local level, and promote knowledge- and data-driven decision-making in the energy and climate sectors
- Phase II included **one training workshop** and **extensive practical work** on the application of various modelling tools and methods
- **The results were presented at a final workshop** (Almaty, 4-5 February 2026)

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Regional Activities: Energy statistics

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Energy Statistics

In Tajikistan, SECCA worked closely with:

- **Agency on Statistics under the President of the Republic of Tajikistan**

SECCA organised:

- **Regional Workshop on Final Energy Consumption Statistics** (Tashkent, 11-13 July 2023)

SECCA prepared:

- **Recommendations** for improving reporting on SDG7

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Regional Activities: Energy labelling

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Energy labelling

In Tajikistan,SECCA worked closely with:

- **Ministry of Energy and Water Resources of the Republic of Tajikistan**

SECCA organised:

- **Regional Conference on Energy Labelling** (Tashkent, 21-22 October 2025)

In close cooperation with the national stakeholders, SECCA prepared:

- **Country reports** on the current status of energy labelling
- **Recommendations** for the further development of energy labelling in CA countries

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Regional Activities:
Horizon Europe

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Horizon Europe

The largest program of the EU in science and innovation

OBJECTIVES:

Support scientific and technological research, innovation and sustainable development in the EU and beyond

BUDGET AND IMPLEMENTATION PERIODS:
- € 95.5 billion for 2021-2027
- € 175 billion for 2028-2034

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Current status of National Contact Point networks in CA

- Activities under the SECCA Horizon Europe (HE) component began in May 2024 – at that time, **HE National Contact Points (NCPs) coordinators** were established in **Kazakhstan** and **Kyrgyzstan**
- In less than 2 years:
  - **NCP coordinators** nominated in **Tajikistan**, **Turkmenistan,** and **Uzbekistan**
  - **NCP for Cluster 5** nominated in **Kazakhstan**, **Kyrgyzstan**, and **Uzbekistan**, and **is being discussed in Turkmenistan**
- This clearly demonstrates **the will and commitment of the CA countries** to enhance Research and Innovation (R&I) cooperation with the EU under the HE program

Support, tools and instruments for NCPs

- A **database of institutions** interested in participating in the Horizon Europe program has been developed
- The **database** has been uploaded to the **GREENET platform**, the official network of the Horizon Europe Cluster 5 NCLs in the EU, to assist partners in finding participants for Cluster 5 of the Horizon Europe program
- A **communications strategy** has been developed
- **Key performance indicators (KPIs) for monitoring and evaluating progress** have been developed
- Draft **recommendations** for further expanding the participation of Central Asian countries in the Horizon Europe program have been prepared

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Regional Activities: Gender in Energy

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Gender in Energy

- **Gender equality and social inclusion (GESI)** represent one of the focuses of the SECCA activities
- SECCA conducted five **national GESI assessments** for CA countries, focussing on:
  - The policy dimension of the gender and energy nexus
  - Access to electricity and clean cooking fuels
  - Girls in science, technology, engineering and mathematics (STEM) education
  - Women's employment in the energy sector
- The analysis showed that GESI is a challenge in CA, especially in the energy sector, in which fewer women are involved
- **The results** of the national **GESI assessments** have been presented at the **Regional Conference** "Gender and Energy in Central Asia" (Almaty, 17-18 October 2024)
- In Central Asian countries, including **Tajikistan**, **STEM4Her** events were held as part of the Sustainable Energy Days 2025 campaign, reaching approximately 900 schoolgirls and university students in all five Central Asian countries

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Podcast promoting sustainable energy “Energiya Joly”

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Podcast promoting sustainable energy “Energiya Joly”

- **“Energiya Joly” Podcast,** launched by SECCA in October 2024, explores the path to sustainable energy in Central Asia
- To date **21 video podcast episodes** were produced on various EE and RE related topics
- As of February 2026, a dedicated podcast channel on YouTube https://www.youtube.com/@EnergiyaJoly has
  - 7500**+** subscribes
  - Around **400 000** views
- Episode 11, **"Tajikistan and Regional Energy: From Hydroelectric Power Plants to Cross-Border Trade“,** features an in-depth discussion with Furugzod Usmonov, CASA-1000 Project Coordinator in Tajikistan and an expert on regional energy integration. The episode discusses how Tajikistan is building a sustainable energy system and its place on the regional energy map

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Regional contests

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Regional contest #Reels4SustainableEnergy

- **In 2023,** SECCA organised a **Regional contest *#Reels4SustainableEnergy*** among **university students, young researchers and young professionals** in the field of sustainable energy
- A total of **67 reels from across the region** were posted on Instagram, and **six winners** of reels contest were awarded prizes (Astana, 2 June 2023)

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Regional Media Contest
Energy transition for a better tomorrow

- **Competition start** date**:** 14 April 2025
- **Participants:** journalists from print and online media, television and radio in Central Asia
- **Publication/broadcast period:** 15 April 2024 to 14 May 2025, on sustainable energy issues
- A total of **128 journalists from all** Central Asian **countries** took part in the competition and submitted **206 entries**
- The award ceremony took place on 1 June 2025 during EuroFest2025 in Astana, Kazakhstan

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Regional Photo Exhibition

The EU – CA: Faces of Sustainable Energy Development Cooperation

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Regional Photo Exhibition *The EU – CA: Faces of Sustainable Energy Development Cooperation*

- **Opening:** 1 June 2025 at the EuroFest festival, Astana
- **Featuring:** 38 inspiring portraits of scientists, engineers, entrepreneurs, politicians and educators from Central Asia who are promoting sustainable energy
- **Objective:** To raise public awareness of EU-Central Asia cooperation in the field of energy sector development, motivating people to contribute to the transition to a greener, cleaner and more sustainable energy sector for a better future for all
- **Regional coverage:** As part of the 3rd EU-Central Asia: Sustainable Energy Days (SED) campaign, the exhibition visited Kazakhstan, Kyrgyzstan, **Tajikistan,** Turkmenistan and Uzbekistan
- **Tajikistan edition:** presented at the SEDs in Dushanbe on 13 November 2025

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Regional Activities: Study Tours

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Study tours (1)

Georgia: ‘Sustainable energy in practice: Georgia’s success and EU best practices’

- **When:** November 2023
- **Participants:** 16 high-level government officials and energy experts **from all five Central Asian countries**
- **Objective:** To study Georgia's successful energy sector reforms, which are in line with EU policy and Energy Community standards
- **Exchange of knowledge and information on the following topics**:
  - Legal and regulatory framework for sustainable energy
  - Integrated energy and climate planning
  - Energy efficiency in buildings and industry
  - Project development and implementation
  - Green investments and renewable energy auctions
  - Regional energy networks

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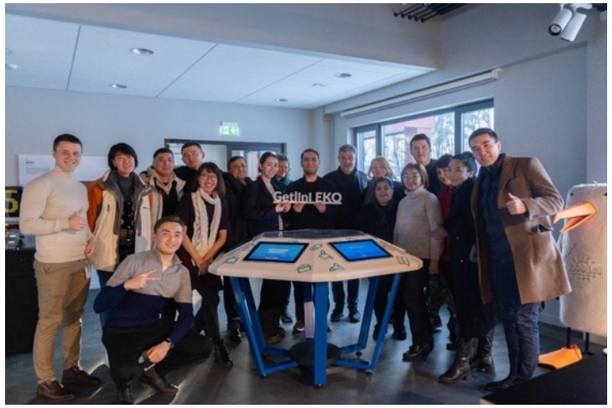
Study tours (2)

Latvia: "Promotion of Energy Efficiency – Latvian experience"

- **When:** 27 November to 1 December 2023
- **Participants:**
  - Winners of the #Reels4SustainableEnergy and best sustainable energy mural design competitions
  - Representatives of energy-efficient schools from Kazakhstan, Kyrgyzstan, **Tajikistan**, Turkmenistan and Uzbekistan
- **Main topics for discussion:**
  - Successful practices for improving energy efficiency in the public and private sectors in Latvia
  - Development of renewable energy sources



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TA provided by SECCA:

National-level Activities in Tajikistan:

Policy, regulatory and institutional framework for the transition to a sustainable energy system

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Development of by-laws

- SECCA supported **the Ministry of Energy and Water Resources of the Republic of Tajikistan** in **developing a number of proposals to optimize and regulate the e-mobility sector**

- **In April 2025, the Government** of the Republic of Tajikistan adopted a resolution providing for **duty-free import of new (less than one year old) electric vehicles** and excluding exemptions for used electric vehicles

Capacity building

Training Workshop: Key Aspects of Sustainable Energy Policy Planning and Implementation
(Dushanbe, June 8-9, 2023)

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EU - Tajikistan: Sustainable Energy Days

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Sustainable Energy Days 2023

Events within the framework of SEDs 2023:

- In close collaboration with the Ministry of Energy and Water Resources of the Republic of Tajikistan**, the International Conference "**Energy Efficiency in Tajikistan: Prospects and Challenges" was held. Over 90 people attended the conference
- Award ceremony for the International Presidential School **as the most energy-efficient school in Dushanbe**
- Electric scooter **flash mob** under the slogan "Reduce Carbon Emissions, Save the Earth!"

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SEDs 2024

Events within the framework of SEDs 2024:

- **Khatlon Region:** Two educational institutions were involved: the Tajikistan Institute of Energy in Bokhtarion and the Energy College in Rumi.
- Bike ride
- Lectures
- Student debates
- Drawing competitions
- Quiz
- Award ceremony
- Vaksh Riverbank cleanup campaign

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SEDs 2025

Events within the framework of SEDs 2025:

- Opening of the **photo exhibition** "The European Union – Tajikistan: Faces of Sustainable Energy DevelopmentCooperation"

- Greening campaign at the “Novaya” substation

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TA provided by SECCA:

National-level activities in Tajikistan:

Promotion and facilitation of investment, capacity and awareness in Sustainable Energy

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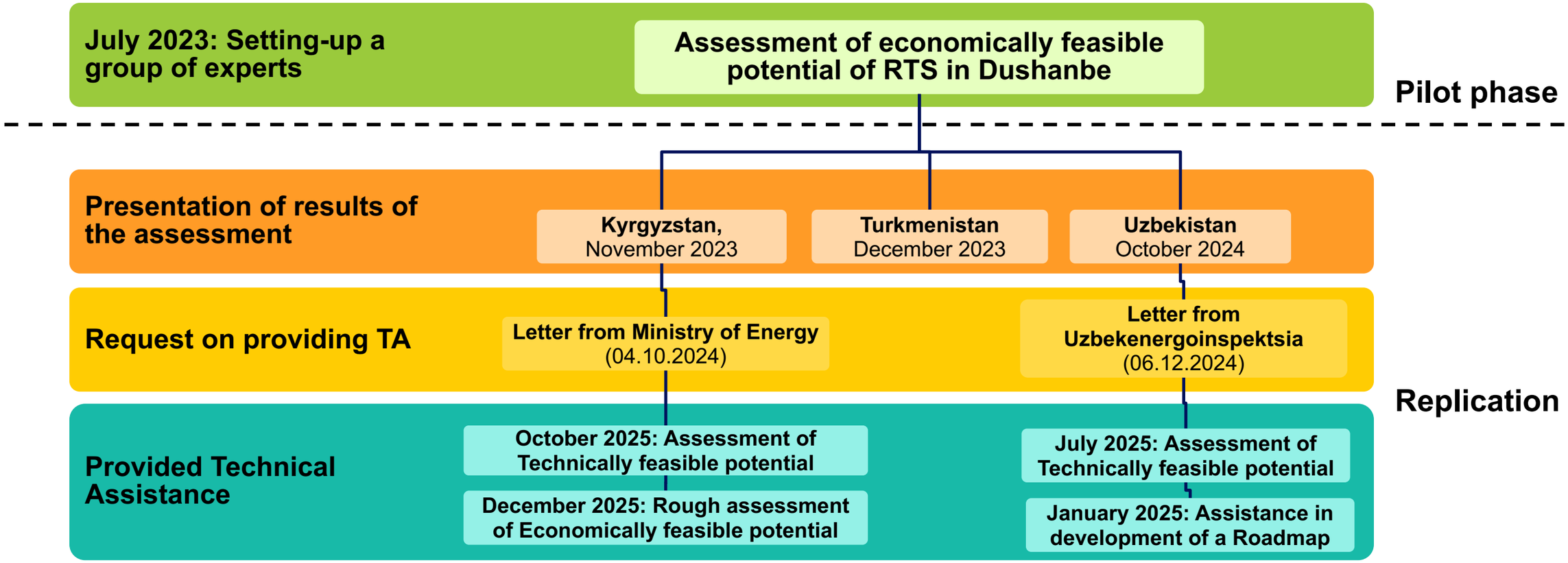
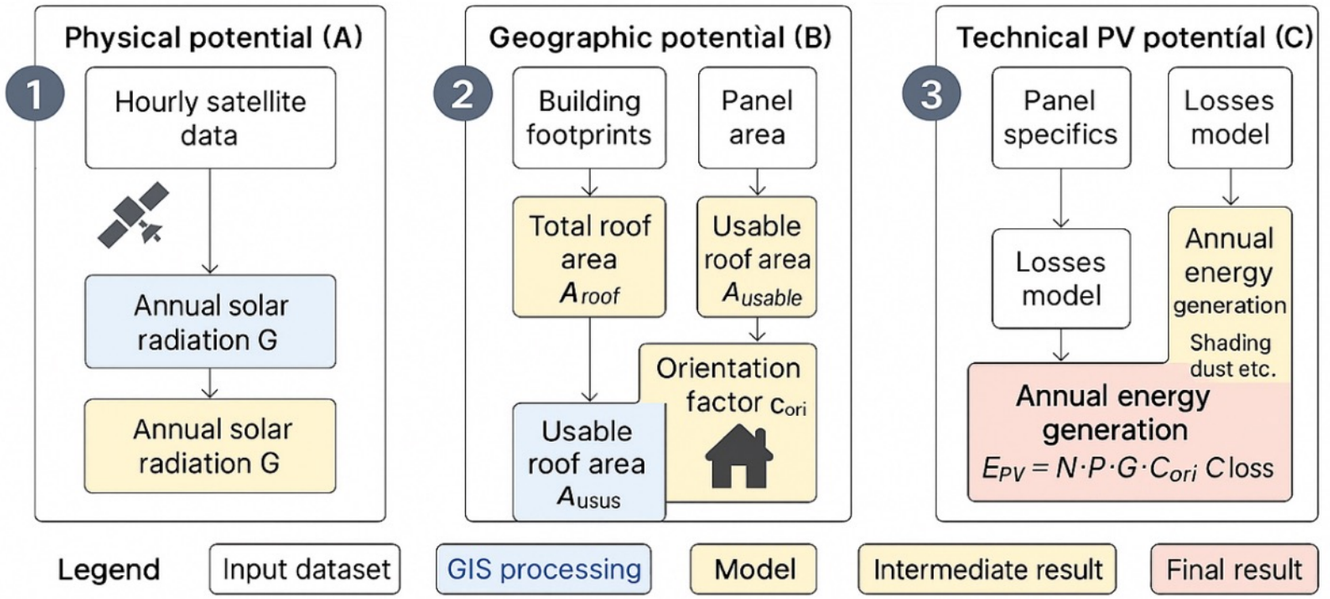
SECCA: Promoting of Rooftop Solar (RTS) Development in CA



Sustainable Energy Connectivity in Central Asia

Assessment of RTS potential in Tajikistan



Stages and elements of assessing the technical potential of RTS

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Assessment of RTS potential in Dushanbe

Technical potential

311 MW

Estimated generation

447 GWh

Useful roof area

3.105 km2

Number of buildings

3880

Conclusion: Although the average electricity tariff level in Tajikistan is below cost recovery level, there are **already certain segments (e.g. commercial buildings) where the implementation of RTS systems is financially feasible**

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Assessing the Potential of Solar Water Heating (SWH) Systems in Tajikistan

Water Heating Energy Demand Forecast

- The energy demand forecast was developed using the IAEA MAED-D model
- Analysis period: 2020-2040 with a five-year time step
- Household groups: urban and rural - reflecting different energy access conditions, fuel mix, and consumption levels

Four scenarios were developed:

1. Business-As-Usual (BAU)
2. Basic Support Level (BSL)
3. Moderate Support Level (MSL) - included a SWH support program
4. Comprehensive Support Level (CSL) - included a full SWH support program

Assessing the Potential of Solar Water Heating (SWH) Systems in Tajikistan (2)

Brief overview of investment needs (up to 2040) by scenario

	BAU	BSL	MSL	CSL
Total investment volume (USD million)	$0	$170	$267	$408
of which: government subsidy	$0	$0	$80	$204
private/from households	$0	$170	$187	$204
Annual solar energy consumption (GWh)	0	649	1,306	2,363
Job creation	0	4,860	9,340	13,600
Annual CO_2 emission avoidance (kt/year)	0	111	255	424
Cost per ton of CO_2 ($/t, lifetime)	$0	$35	$52	$48

Financial analysis of SWH in Tajikistan

Financial Analysis Results:

- Investing in solar water heaters is economically feasible given current and projected energy prices in Tajikistan.

- For urban households, a two-collector SWH system with a 30% government subsidy, replacing electric water heaters at the 2026 tariff of $0.045/kWh (41.37 dirams):
  - ✓ Net Present Value (NPV) - over $800 over 20 years
  - ✓ Internal Rate of Return (IRR) - over 25%
  - ✓ Simple Payback Period - approximately 4 years

- For rural households, a subsidized single-collector SWH system replacing traditional fuels (coal with an effective cost of $0.127/kWh of useful heat) pays for itself within 5-7 years

- **Considering that electricity tariffs have quadrupled over the past 15 years and are expected to increase further, the financial analysis the rationale for SWH will be gradually strengthened**

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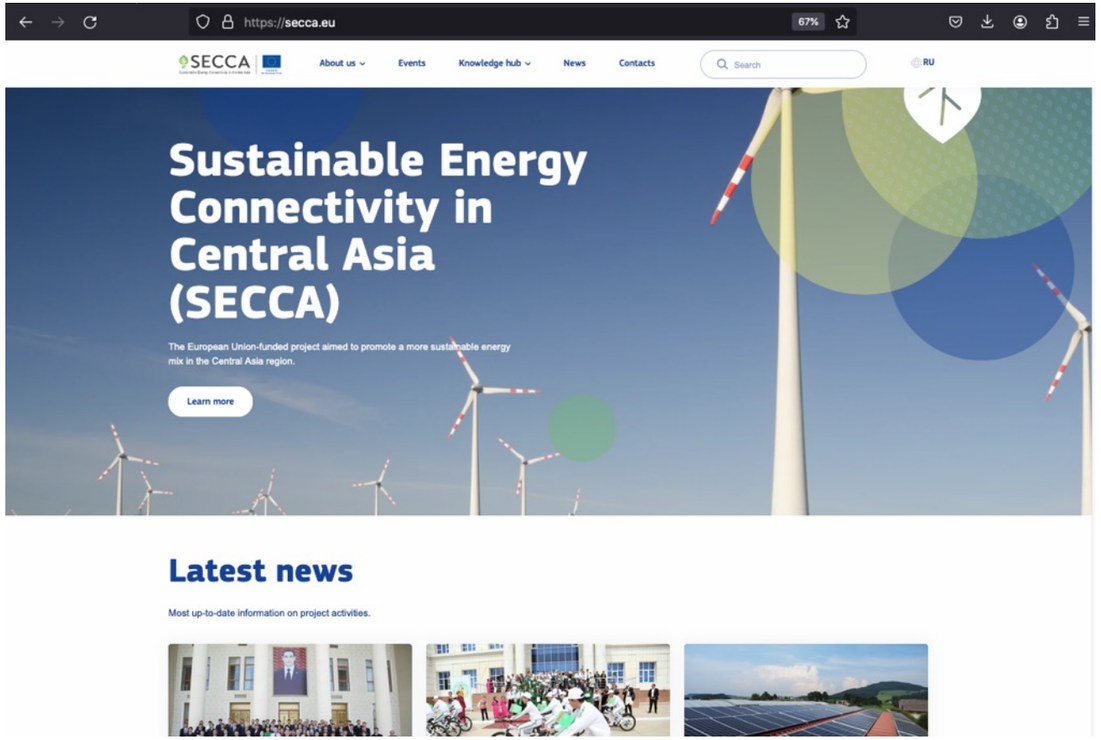
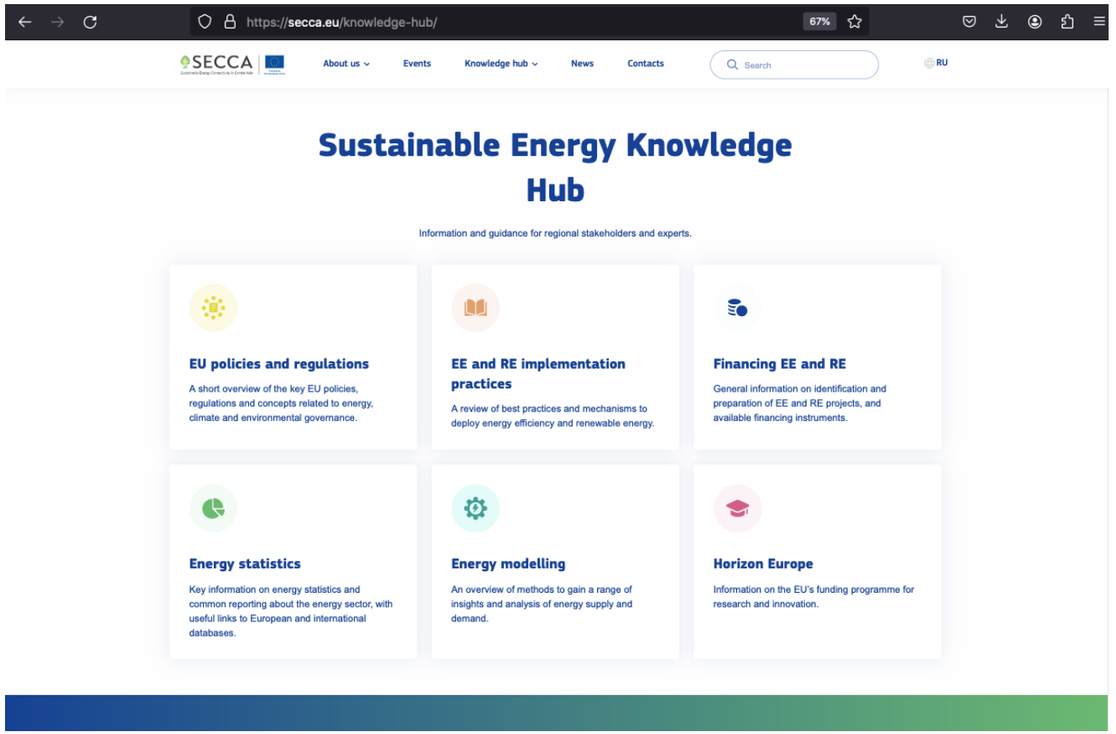
Latest news and events

www.secca.eu





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