

CAREC ENERGY SECTOR PROGRESS REPORT AND WORK PLAN

JULY 2023 - JUNE 2024

Reference Document Senior Officials' Meeting Central Asia Regional Economic Cooperation 30-31 May 2024

List of Acronyms

CAREC Central Asia Regional Economic Cooperation

CAREM Central Asia Regional Electricity Market

CASA Central Asia South Asia

CATCA Central Asia Transmission Cooperation Association

CDC Central Dispatch Center

EIF Energy Investment Forum

ESCC Energy Sector Coordinating Committee

SOM Senior Officials Meeting

TA Technical Assistance

TAP Turkmenistan-Afghanistan-Pakistan

TAPI Turkmenistan-Afghanistan-Pakistan-India

TUTAP Turkmenistan-Uzbekistan-Tajikistan-Afghanistan-Pakistan

I. Executive Summary

1. The Central Asia Regional Economic Cooperation (CAREC) Energy Program continues to advance its strategic objectives under the CAREC Energy Strategy 2030, effectively navigating through a dynamic regional landscape. The program's sustained commitment to fostering interconnectivity, scaling up investments, and promoting sustainability has been clearly demonstrated through a series of pivotal events and initiatives during the last year.

2023 Highlights

In November 2023, the 6th Energy Investment Forum (EIF) was held in Tbilisi, attended by over 170 participants from CAREC country governments, development partners, research institutions, and the private sector. The forum served as a critical platform for networking and relationship building, essential for the long-term success of regional energy projects. While the EIF made significant strides in enhancing collaborative ties, it also highlighted the need for greater private sector engagement and a more defined focus on specific projects to optimize impact.

2024 Initiatives and Progress

- 2. The year began with the 34th Energy Sector Coordinating Committee (ESCC) meeting conducted virtually in April 2024. The meeting assessed the progress of the 2023-2025 CAREC Energy Work Plan. It reaffirmed the program's dedication to an action-oriented and meeting-based work plan, leveraging previously delivered knowledge products and aligning with CAREC's strategic goals. The discussions also reinforced the importance of coordination with development partners and member governments.
- 3. Looking ahead, CAREC Energy has organized key initiatives for 2024, which include an Energy Mission for CAREC Government Delegates to Oslo and Copenhagen in June, aimed at enhancing knowledge and practical insights into advanced energy systems. In September, a transmission and interconnectivity workshop is scheduled in Tashkent to address technical and regulatory aspects crucial for regional energy integration. Furthermore, a proposed infrastructure investment forum, integrating efforts from CAREC's transport and water sectors, is planned for the fourth quarter, illustrating a holistic approach to regional infrastructure development.

Conclusion:

- 4. As we move forward, CAREC Energy remains committed to driving the energy agenda in Central Asia, with a clear focus on sustainable and resilient energy systems. The continued engagement of all stakeholders, especially from the private sector, will be vital in achieving the ambitious targets set out in the Energy Strategy 2030. These concerted efforts will ensure that CAREC not only meets but exceeds its energy sector goals, contributing to the overall prosperity and stability of the region.
- II. Key Developments and Results
- A. Sector Implementation

6. As part of the 2030 strategic framework of the CAREC Program, long-term goals for the Energy Sector were identified and integrated in the CAREC 2030 Program Results Framework (see table 1).

The overarching goal in the energy sector is to achieve improved regional energy security and enhanced deployment of green energy until 2030. To this end, several flagship cross-border electricity interconnection projects (TUTAP, TAP and CASA-1000)¹ as well gas interconnection projects (TAPI)² are in place to boost regional energy trade and improve overall energy security in the region.³

Table 1: CAREC 2030 Program Results Framework – Progress in the Energy Sector (2021-2025)

Sector					Progress		
Outcomes & Outputs by 2030	Indicator	2017 Baseline	2020	2021	2022	2023	2024
Output 1: Increased regional energy trade through implementation of the TUTAP, TAP, and CASA- 1000 electricity interconnection projects and the TAPI gas pipeline project	TUTAP, TAP, and CASA- 1000 electricity interconnec tion projects and the TAPI gas pipeline project operational	0 project operational	TUTAP partially operational	TUTAP and other projects' progress impacted by situation In AFG**	TUTAP and other projects' progress impacted by situation in AFG**	TUTAP and other projects' progress impacted by situation in AFG**	TUTAP and other projects' progress impacted By situation In AFG**
Output 2: Financing vehicle for green energy projects developed and consumer awareness for energy efficiency strengthened	# of Donors / DPs providing finance to new CAREC green energy	O Donors / DPs s providing finance to new CAREC green energy alliance	O Donors / DPs ons providing finance to energy alliance	O Donors / DPs providing finance to energy alliance	3 Donors/ DPs expressed support for Green Energy Alliance	Concept note published, under review.	Concept note published, under review.

DP = development partners

B. Implementation Progress by Priority Area

7. The CAREC Energy Strategy 2030⁴, adopted on 14 November 2019 at the CAREC Ministerial Conference in Tashkent, remains the key guiding document for all CAREC energy activities. It rests

^{**} Progress of regional interconnection projects are impacted as ADB placed on hold its assistance in Afghanistan effective 15 August 2021.

¹ CASA = Central Asia–South Asia, TAP = Turkmenistan–Afghanistan–Pakistan, TAPI = Turkmenistan–Afghanistan– Pakistan–India, TUTAP = Turkmenistan–Uzbekistan–Tajikistan–Afghanistan–Pakistan.

² TAPI = Turkmenistan–Afghanistan–Pakistan–India

³ ADB placed on hold its assistance in Afghanistan effective 15 August 2021. This impacted progress of regional interconnection projects during the reporting period covered by this report.

⁴ Asian Development Bank (ADB). CAREC Energy Strategy 2030. Manila.

on the overarching principle of "Common Borders. Common Solutions. Common Energy Future", and aims at achieving a reliable, resilient, sustainable, and reformed energy market in the CAREC Region by 2030.

- 8. To achieve the goals of the CAREC Energy Strategy 2030, the following three strategic pillars were identified:
 - Strategy Pillar 1: Better Energy Security through Regional Interconnections
 - Strategy Pillar 2: Scaled-Up Investments through Market-Oriented Reforms
 - Strategy Pillar 3: Enhancing Sustainability by Greening the Regional Energy System
- 9. To support the above priority areas, the following three cross-cutting themes also form integral part of the CAREC Energy Strategy 2030's focus:
 - Cross Cutting Theme 1: Building Knowledge and Forming Partnerships
 - Cross Cutting Theme 2: Attracting Private Sector Investments across the Energy Value Chain
 - Cross Cutting Theme 3: Empowering Women in Energy

Under all strategy pillars and cross-cutting themes, a list of deliverables was agreed as part of the CAREC Energy 2030 work plan. The following table shows all actions to be implemented between 2020 and 2030 and the progress made to date.

Table 2: Energy Sector Progress by Priority Area (2023//2024)

Strategy Pillar 1: Better Energy 40%			
Action	Description	Performance Indicators	Progress
Realize TUTAP, TAP, and CASA- 1000 electricity interconnection projects	The CAREC region's flagship power transmission line projects connecting Central and South Asia are at various stages of implementation and shall go into operation within the strategy period.	TUTAP, TAP, and CASA-1000 projects in operation	In progress, but delayed due to issues in Afghanistan
Advance TAPI gas pipeline project	Ongoing negotiations for possible modalities to realize the TAPI gas pipeline shall be accelerated.	Dialogue on the implementation of TAPI project intensified	In progress, but delayed due to issues in Afghanistan

Facilitate cooperation among regional transmission system operators (TSOs)	Growing electricity and gas interconnections require increased cooperation among TSOs. The establishment of a corresponding platform for regional network development planning, identification of projects of common interest, and information sharing shall be facilitated by this activity.	Central Asia Transmission Cooperation Association (CATCA) concept developed	Completed (April 2022) https://carecenergy.org/foundation-laid-fornew-regional-transmission-body-catca/
Identify new cross- border infrastructure projects	New cross-border gas and electricity links shall be identified to increase energy security in the region.	New regional gas and/or power interconnections identified	In progress



Strategy Pillar 2: Scaled-Up Investments through Market-Oriented Reforms

80%			
Action	Description	Performance Indicators	Progress
Build capacity for unbundling models and liberalization of energy markets	This activity shall support policy makers in making informed decisions when embarking on unbundling and market liberalization reforms.	CAREC Energy Reform Atlas (containing access to practical handbooks and database with study materials) established	Completed (April 2022) https://atlas.carecene rgy.org/ https://atlas.carecene rgy.org/home-utk/
Advise on tariff- setting principles and methods of introducing tariff reform	Financial health of network companies is critical to ensuring high quality of service. This activity shall shed light on tariff design options and ways of implementing gradual tariff reform.	Handbook on Tariff Principles and Reform Options published Capacity building workshops held	Completed (April 2022) https://atlas.carecene rgy.org/home-trf/
Develop options for social protection measures for vulnerable energy consumers	This activity shall assist in elaborating options for social protection measures to accompany tariff reform and shall include the development of a definition for "vulnerable consumers" to assist policy makers in identifying the appropriate target group.	CAREC Guide to Social Protection and Energy Sector Reform published	Completed (April 2022) https://atlas.carecenergy.org/home-vct/
Share international best practices in legal enforcement of sector reform	Sector reform requires adapting existing energy laws and creating new laws. This activity is aimed at discussing successful examples of relevant sector laws and methods of law enforcement.	Capacity building workshops held	Upcoming Energy Mission to Oslo and Copenhagen in June 2024 will address sector reform and lessons learned



Strategy Pillar 3: Enhancing Sustainability by Greening the Regional Energy System

70%

Action	Description	Performance Indicators	Progress
Establish a joint platform for mobilizing sources of funding for emission reduction projects	For emission reduction projects to be realized, a dedicated platform shall be established for identifying and securing funding for priority projects.	Energy Alliance established	In progress A concept defining the role, structure and functioning of the CAREC Green Energy Alliance was endorsed by ESCC in April 2022 and published in November 2022. Currently under review.
Identify suitable energy efficiency measures and track progress	Energy efficiency is a powerful tool for reducing emissions. The aim of this activity is to disseminate practical skills in implementing efficiency measures and establish a regional benchmarking tool for comparing progress and rewarding high performers.	CAREC Energy Efficiency Week held Regional Energy Efficiency Scorecard developed Capacity building workshops held	Upcoming workshop on energy efficiency planned in the 2023- 25 work program.
Create public awareness of energy efficiency	This activity shall enhance public awareness of energy efficiency and empower consumers to engage in more conscious use of energy.	CAREC Consumer Leaflet on Energy Saving prepared	Completed (June 2021) https://carecenergy.org/carec-first-region-wide-energy-efficiency-campaign/ Completed (June
		Energy efficiency radio or TV commercial developed	2021) https://carecenergy.org/ carec-first-region- wide- energy- efficiency- campaign/
		Handbook for organizing consumer awareness campaigns published	Cancelled, will focus with key stakeholders and decision makers instead of the general public.
Support in the	This activity is aimed at supporting	Workshop on pros	Under review

development of renewable energy and the diversification of the energy mix	CAREC members in adding renewable energy to their energy mix by providing practical guidance on the necessary pre- requisites.	and cons of different renewable incentive schemes held Coping mechanisms for renewable energy intermittency developed	Completed (August 2020) https://carecenergy.org/carec-finds-cooperation-on-renewable-energy-to-save-millions-of-dollars/
		Manual on legislative requirements for the integration of renewable energy prepared	Completed (August 2020) https://carecenergy.org/carec-finds-cooperation-on-renewable-energy-to-save-millions-of-dollars/
		Role of gas as a transition fuel discussed	Under review



Strategy Pillar 3: Enhancing Sustainability by Greening the Regional Energy System (progress from 50% in 2023 to 55% 2024)

55%

Action	Description	Performance Indicators	Progress
Develop CAREC Energy Outlook and Investment Report	This activity is aimed at providing investors and other relevant stakeholders with reliable regional data to make investment and policy decisions.	CAREC Energy Outlook and Investment Report published	Completed (May 2022) ESCC approved the Outlook in April 2022. Published in Dec, 2022
Establish relevant partnerships to support the implementation of the three strategy pillars	All three strategy pillars include capacity building, institution-building, and training initiatives, which shall be implemented in collaboration with experienced partner organizations.	Partnerships with global centers of excellence in the fields covered by the strategy established	In progress UNECE, UNDP, Energy Chater, ERRA and EFSD are some of the new organizations that joined ESCC activities between 2020-2022

The CAREC program shall facilitate cross-regional networking and skills development of next-generation energy professionals to allow a natural sense for regional cooperation to emerge among the target group.	CAREC Young Energy Leaders initiative established	On hold
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Cross Cutting Theme 2: Attracting Private Sector Investments across the Energy Value Chain (progress from 50% in 2022 to 70% 2024)

70%

Action	Description	Performance Indicators	Progress
Prepare a regional investment strategy	A regional investment strategy containing recommendations for improved enabling conditions for private investments in the CAREC region shall be developed.	CAREC Energy Investment Strategy developed	Upcoming
Hold annual CAREC Energy Investment Forum	The annual Energy Investment Forum shall continue to attract investors to the region and foresee a dedicated space for B2B meetings.	CAREC Energy Investment Forum held yearly	Completed. 6 th CAREC Energy Investment Forum held in Tbilisi in November 2023
Provide practical support to investors to enhance their business operations in the region	This activity shall create improved enabling conditions for private investors operating in the region.	CAREC Business Advisory Council created to identify needs of private investors	Upcoming



Cross Cutting Theme 3: Empowering Women in Energy (progress from 10% in 2021 to 60% 2022)

60%

Action	Description	Performance Indicators	Progress
Establish CAREC Women in Energy Program	This activity shall provide women in the CAREC region with the necessary tools to boost their	Women in Energy Summit organized	Completed (March 2022) https://women-
	career, build a regional network, and become more visible in the region's energy sector.	Secondment program for women in energy	energy-summit.org/
		Educational scholarship program for women in energy facilitated	On hold Gender related initiatives are now facilitated through the CAREC Gender pillar.

C. Conferences and Meetings conducted.

10. The 6th CAREC Energy Investment Forum was held in Tbilisi, Georgia, on 28-29 November 2023. The event attracted around 200 participants, including 170 participants attending in-person. The event had more than 27 individual sessions, including country presentations. On 4 April 2024, the Energy Sector Coordinating Committee meeting was successfully held virtually. All CAREC member countries participated (except Afghanistan).

III. Challenges and Key Issues

- 11. With the complete lifting of all COVID-19 restrictions, the challenges and key issues associated with meeting and planning have substantially diminished, though some hurdles still persist. While the ease of arranging in-person meetings has significantly improved, transitioning from a predominantly virtual engagement back to face-to-face interactions has introduced new dynamics that require careful management:
 - Logistical complexities: As in-person meetings resume, logistical arrangements have become more intricate, involving considerations for larger groups now accustomed to virtual participation.
 - **Hybrid engagement needs**: Balancing the benefits of physical meetings with the inclusivity of virtual access is essential, as members and partners now expect the flexibility to join sessions remotely if they cannot attend in person.
 - **Resource allocation:** Allocating resources effectively between maintaining high-quality virtual platforms and managing the increased costs of in-person events is a growing concern.
- 12. Despite these challenges, the shift back to traditional meeting formats has also continued to provide significant advantages:
 - **Increased personal interaction:** Face-to-face meetings enhance relationship-building and foster more dynamic exchanges, crucial for effective collaboration and negotiation.
 - **Enhanced engagement:** In-person gatherings typically see more focused discussions and decisions, with fewer distractions compared to virtual settings.
 - **Diverse participation:** The return to physical meetings has not reduced the number of participants; instead, it has enriched the quality of interaction among CAREC members and development partners, many of whom join for the first time in a physical setting.
- 13. These changes mark a new phase of adaptation as the CAREC Energy Program continues to evolve in response to the changing global landscape, maintaining its commitment to a robust and participatory approach to regional energy challenges.

IV. Work Program for Coming Period

14. The CAREC Energy Strategy 2030 is implemented in sequences of 2-year work programs. Thus, until 2030, there will be a total of five work programs to achieve the goals of the strategy. The deliverables of the first work program (covering the period 2020-2022) were completed at the end of 2022. A new work program for the period 2023-2025 was agreed at the ESCC meeting on 16 May

2023. Activities to be taken up for the period 2023-2025 are aligned with the CAREC Energy Strategy 2030 work plan and focus primarily on in-person meetings and events. These include the following initiatives for the next 12-18 months:

- A. Energy Investment Forum during Q4-2023 COMPLETED
- B. Workshop on regional transmission and grid infrastructure scheduled for 25-26 Sep 2024
- C. Workshop on energy efficiency in the CAREC Region potentially in Q1 2025
- D. Study Tour to the Nordic Region scheduled for 17-21 June 2024

V. Deliverables for the 23rd CAREC Ministerial Conference

15. The following list gives an outlook of deliverables (i) completed during the reporting period covered by this report and (ii) expected to be completed until the Ministerial Conference in 2024:

Table 3: List of Deliverables for the 2024 Ministerial Conference

Deliverables	Completion	NFP/MC action
6 th CAREC Energy Forum	Q4 - 2023	for information