



CAREC ENERGY SECTOR PROGRESS REPORT AND WORK PLAN

JULY 2022 - JUNE 2023

Reference Document
Senior Officials' Meeting
Central Asia Regional Economic Cooperation
13-14 June 2023

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

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I. **Executive Summary**

The CAREC Energy Program has continued to make progress in executing the CAREC Energy Strategy 2030. Although the COVID-19 Pandemic limited the opportunities for in-person meetings and events during most of 2022, the CAREC Energy Sector Coordinating Committee (ESCC) has maintained a high spirit of collaboration through virtual meetings. Building on the successes of Phase 1 of the CAREC Energy Strategy 2030, CAREC Energy has consolidated its standing as an ambitious, results-focused, and visible program. With the end of COVID- related travelling restrictions, the program will going forward host a series of events focusing on interconnectivity, energy security, energy efficiency and energy investments in the region.

Continued Implementation of Key Initiatives: The initiatives from the 2020-2022 work program include the following:

1. Development of the Central Asia Transmission Cooperation Association (CATCA) concept
2. Establishment of a concept for the CAREC Green Energy Alliance
3. Publication of the CAREC Energy Outlook 2030
4. Launching of the CAREC Energy Reform Atlas
5. Realization of the CAREC Women in Energy Program

These reports and concept studies now form the backbone of CAREC Energy's knowledgebase, enabling the program to harvest existing knowledge and implement meaningful projects and actions.

Publication of CAREC Energy Outlook 2030: Following the endorsement of the CAREC Energy Outlook 2030 by all CAREC members and development partners at the 2022 ESCC meeting, the report was officially published in December 2022. This pivotal document outlines the energy landscape of the region and aims to attract the investments necessary to achieve the ambitious targets of the Energy Strategy 2030.

ESCC Meeting and New Workplan 2023-2025: The Energy Sector Coordinating Committee (ESCC) held a productive meeting on May 16, 2023. At this meeting, the new work plan for the 2023-2025 period was agreed upon, marking the start of the next phase of implementing the CAREC Energy Strategy 2030.

In summary, the CAREC Energy Program has maintained its momentum towards the realization of its strategic objectives. The publication of the CAREC Energy Outlook 2033 and the agreement on a new work plan for 2023-2025 stand as notable achievements during this reporting period, further solidifying the program's role in driving a sustainable and resilient energy future for the region. With the Covid Pandemic finally behind us, the program will in the next year reactivate face-to-face meetings and nourish stronger collaboration in the region through in-person meetings, seminars and workshops.

II. Key Developments and Results

A. Sector Implementation

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 as 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 (2021-2022)

Sector Outcomes & Outputs by 2030	Indicator	2017 Baseline	Progress		2022	2023
			2020	2021		
Enhanced regional energy security and deployment of green energy in the energy sector of CAREC countries	% renewable energy in CAREC countries	<1% renewable energy in CAREC countries	6% renewable energy in CAREC countries	6% renewable energy in CAREC countries*	6% renewable energy in CAREC countries*	Data available at end of 2023
Output 1: Increased regional energy trade through implementation of the TUTAP, TAP, and CASA-1000 electricity interconnection projects	TUTAP, TAP, and CASA-1000 electricity interconnection projects and the TAPI gas pipeline project operational	0 project operational	TUTAP partially operational	TUTAP and other projects' progress impacted by situation in Afghanistan**	TUTAP and other projects' progress impacted by situation in Afghanistan**	TUTAP and other projects' progress impacted by situation in Afghanistan**

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. (ADB Statement on Afghanistan published on November 10, 2021: <https://www.adb.org/news/adb-statement-afghanistan>). This impacted progress of regional interconnection projects during the reporting period covered by this report.

and the TAPI gas pipeline project						
Output 2: Financing vehicle for green energy projects developed and consumer awareness for energy efficiency strengthened	# of donor organizations providing finance to new CAREC green energy	0 donor organizations providing finance to new CAREC green energy alliance	0 donor organizations providing finance to new CAREC green energy alliance	0 donor organizations providing finance to new CAREC green energy alliance	3 organizations expressed support for CAREC Green Energy Alliance***	Concept note published, under review.

* share of variable renewable energy sources (solar PV and wind) – Source: IRENA (2022), Renewable capacity statistics 2022. International Renewable Energy Agency (IRENA), Abu Dhabi

** Progress of regional interconnection projects are impacted as ADB placed on hold its assistance in Afghanistan effective 15 August 2021. ADB Statement on Afghanistan published on November 10, 2021: <https://www.adb.org/news/adb-statement-afghanistan>

*** EBRD, IsDB and UNECE (as expressed at 32nd ESCC meeting, April 2022)

D CAREC launches first region-wide energy efficiency campaign: <https://carecenergy.org/carec-first-region-wide-energy-efficiency-campaign/>

B. Implementation Progress by Priority Area

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 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.

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



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

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

Under all strategy pillars and cross-cutting themes, a list of deliverables was agreed as 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 (2022/2023)

 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-for-new-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	Completed (April 2022) https://atlas.carecene.org/

		database with study materials) established	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.carecene.rgy.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



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.	CAREC Green Energy Alliance established	In progress <i>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.</i>
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	CAREC Energy Efficiency Week held Regional Energy Efficiency Scorecard	Upcoming workshop on energy efficiency planned in the 2023-25 work program.

	progress and rewarding high performers.	developed Capacity building workshops held	
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 Energy efficiency radio or TV commercial developed Handbook for organizing consumer awareness campaigns published	Completed (June 2021) https://carecenergy.org/carec-first-region-wide-energy-efficiency-campaign/ Completed (June 2021) https://carecenergy.org/carec-first-region-wide-energy-efficiency-campaign/ Cancelled, will focus with key stakeholders and decision makers instead of general public.
Support in the development of renewable energy and the diversification of the energy mix	This activity is aimed at supporting CAREC members in adding renewable energy to their energy mix by providing practical guidance on the necessary pre-requisites.	Workshop on pros and cons of different renewable incentive schemes held Coping mechanisms for renewable energy intermittency developed Manual on legislative requirements for the integration of renewable energy prepared Role of gas as a transition fuel discussed	Under review Completed (August 2020) https://carecenergy.org/carec-finds-cooperation-on-renewable-energy-to-save-millions-of-dollars/ Completed (August 2020) https://carecenergy.org/carec-finds-cooperation-on-renewable-energy-to-save-millions-of-dollars/

			Under review
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Strategy Pillar 3: Enhancing Sustainability by Greening the Regional Energy System
(progress from 5% in 2021 to 50% 2022)

50%

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 Charter, ERRA and EFSD are some of the new organizations that joined ESCC activities between 2020-2022 https://carecenergy.org/partners/
	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	Put on hold



Cross Cutting Theme 2: Attracting Private Sector Investments across the Energy Value Chain
(progress from 0% in 2021 to 50% 2022)

50%

Action	Description	Performance Indicators	Progress
Prepare a regional investment strategy	A regional investment strategy containing recommendations for improved enabling conditions for	CAREC Energy Investment Strategy developed	Upcoming

	private investments in the CAREC region shall be developed.		
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 (Dec 2021) https://carec-eif.org/ <i>next EIF is tentatively envisaged in Q4 2022</i>
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 career, build a regional network, and become more visible in the region's energy sector.	Women in Energy Summit organized	Completed (March 2022) https://women-energy-summit.org/
		Secondment program for women in energy established	Upcoming
		Educational scholarship program for women in energy facilitated	Upcoming

C. Conferences and Meetings conducted.

No conferences or workshops were organized during the reporting period. On May 16, 2023, the Energy Sector Coordinating Committee meeting was successfully held virtually. All member countries participated, except Afghanistan.

III. Challenges and Key Issues

The main challenge for the current reporting period, has been the global COVID-19 pandemic which continued making- and planning personal meetings more challenging. Despite these circumstances, meetings have been successfully held (in virtual format). While it is unfortunate that personal meetings were more difficult to arrange, the virtual format also brought a number of positive effects:

- No restriction in the number of participants allowed a lot more CAREC members to join our meetings compared to the face-to-face format and led to more active participation
- A much bigger number of development partners joined our meetings compared to the past with some new partners joining the energy activities for the first time

During the reporting period and following the events of August 2015, ADB placed on hold its assistance in Afghanistan effective 15 August 2021 (ADB Statement on Afghanistan published on November 10, 2021: <https://www.adb.org/news/adb-statement-afghanistan>).

IV. Work Program for Coming Period

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 May 16 2023. Activities to be taken up for the period 2023-2025 is 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:

1. Energy Investment Forum during Q4-2023
2. Workshop on regional transmission and grid infrastructure.
3. Workshop on energy efficiency in the CAREC Region.
4. Study Tour to the Nordic Region

V. Deliverables for the Ministerial Conference

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 MC 2023:

Table 3: List of Deliverables for the 2023 Ministerial Conference

Deliverables	Completion	NFP/MC action
Publication of 1st CAREC Energy Outlook	Q4 - 2022	for information
Organization of a CAREC Energy Investment Forum	Q4 2023	for information

VI. Key Issues for Guidance by the Senior Officials' Meeting

Alongside the adoption of the CAREC Energy Strategy 2030, the CAREC Energy Ministers signed a declaration in September 2019 in Tashkent in the framework of the 1st CAREC Energy Ministers Dialogue which contains specific commitments for the CAREC Energy Sector including the following:

- Double regional power flows until 2023
- Double solar and wind power capacity by 2023
- Double the level of energy efficiency until 2030
- Attract private investors through suitable financing vehicles
- Affordable and clean energy for all including in hard to reach areas before 2030
- Implement energy sector reform including phase out of fiscal and fossil fuel subsidies
- Gender Equality in the CAREC Energy Sector by 2030

In view of the commitments, it is suggested to hold a 2nd Energy Ministers Dialogue in 2023/2024 to report on the progress made of these commitments and agree on new commitments as deemed necessary. The CAREC Senior Officials are kindly invited to transmit this suggestion to their governments and report back whether the idea of holding a 2nd Energy Ministers Dialogue is supported.

