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This action is funded by the European Union

ANNEX

of the Commission Implementing Decision on the financing of the individual measure in favour of Tajikistan for "Sebzor hydropower plant construction project" for 2019

Action Document for "Sebzor hydropower plant construction project"

ANNUAL PROGRAMME

This document constitutes the annual work programme in the sense of Article 110(2) of the Financial Regulation and action programme/measure in the sense of Articles 2 and 3 of Regulation N° 236/2014.

1. Title/basic act/ CRIS number	Sebzor hydropower plant construction project CRIS number: ACA/2019/40841 financed under the Development Cooperation Instrument.	
2. Zone benefiting from the action/location	Central Asia, Tajikistan The action shall be carried out at the following location: Sebzor hydropower plant (HPP) will be located on the Shokhdara river, in the Rashtqala region of Gorno-Badakhshan Autonomous Region (GBAO), Tajikistan, about 20 kilometers south-east from Khorog, the capital of GBAO.	
3. Programming document	Multi-annual Regional Indicative Programme for the period 2014-2020 (RIP) ¹ , which has been amended following the mid-term review ² .	
4. SDGs	- Primary SDGs o SDG 7: Affordable and Clean Energy; o SDG 1: No poverty; - Secondary SDGs o SDG 5: Gender Equality; o SDG 13: Climate Action.	
5. Sector of intervention/ thematic area	Priority Sector 1: Regional Sustainable Development	DEV. Assistance: YES

¹ C(2014) 5653 of 12.08.2014

² C(2018) 4741 of 20.7.2018

6. Amounts concerned	<p>Total estimated cost: EUR 30 000 000</p> <p>Total amount of EU budget contribution: EUR 20 000 000.</p> <p>This action is co-financed in joint co-financing by Kreditanstalt für Wiederaufbau (KfW) for an amount of EUR 10 000 000</p>			
7. Aid modality and implementation modality	<p>Project Modality:</p> <ul style="list-style-type: none"> - Indirect Management with KfW, Germany 			
8 a) DAC code(s)	23220 Hydro-electric power plants – 100%			
b) Main Delivery Channel	Third Country Government (Delegated co-operation) – 13000 - KfW			
9. Markers (from CRIS DAC form)	General policy objective	Not targeted	Significant objective	Principal objective
	Participation development/good governance	<input type="checkbox"/>	X	<input type="checkbox"/>
	Aid to environment	<input type="checkbox"/>	<input type="checkbox"/>	X
	Gender equality and Women's and Girl's Empowerment	<input type="checkbox"/>	X	<input type="checkbox"/>
	Trade Development	X	<input type="checkbox"/>	<input type="checkbox"/>
	Reproductive, Maternal, New born and child health	X	<input type="checkbox"/>	<input type="checkbox"/>
	RIO Convention markers	Not targeted	Significant objective	Principal objective
	Biological diversity	X	<input type="checkbox"/>	<input type="checkbox"/>
	Combat desertification	X	<input type="checkbox"/>	<input type="checkbox"/>
	Climate change mitigation	<input type="checkbox"/>	<input type="checkbox"/>	X
	Climate change adaptation	<input type="checkbox"/>	<input type="checkbox"/>	X
	10. Global Public Goods and Challenges (GPGC) thematic flagships	<p>1: Global Climate Change Alliance; flagship 3: Switch to Green – support private sector-led inclusive green growth; flagship 12: Climate Change Mitigation – supporting low carbon development</p>		

SUMMARY

Hydropower plants (HPP) play a key role in ensuring energy security of Tajikistan, which does not have domestic natural gas and oil resources. Moreover, Tajikistan has limited possibility to import natural gas. With retail electricity tariffs below cost-recovery levels, low and variable collection rates owing to high grid losses and suboptimal financial management at the national utility, the energy sector has been in financial distress while climate change continues to affect the country covered for 93 percent by mountains. At the same time electricity generation by existing HPPs – one of which is located in a high disaster risk area - is limited during the peak demand season, in the winter; thus requiring additional infrastructure for meeting demand and contributing to disaster risk reduction (DRR). Coupled with those challenges is the growing business activity and population growth, whereby there is also demand from Afghanistan's Northern Province bordering Tajikistan.

In line with these challenges, the primary purpose of the Sebzor hydropower plant (HPP) construction is to stimulate economic and social development in Tajikistan's Gorno-Badakhshan Autonomous Region (GBO) bordering Afghanistan. The Sebzor HPP will compensate to some extent the power shortage in winter, contribute to DRR, and thanks to its location allow for extending the electricity grid to Afghanistan in the future.

The EU contribution will be allocated as a grant under Tajikistan's Investment earmarking within the Central Asia Regional Indicative Programme for 2014-2020. There is no blending with non-grant funds because the financial return of the project is not sufficient to attract any loan or equity investors. Although the financial return is low, economic and social returns are high, contributing to poverty reduction. The overall Action will involve the EU, together with KfW managing the construction of the HPP, while coordinating with other donors and the government to work on the roads and connection grids. In line with Tajikistan's growing commitment to support peace and prosperity in Afghanistan, and the EU's strategy to ensure synergies between our support to Central Asia and Afghanistan, the project will pave the way for connecting Tajikistan's electricity grids to northern, remote and mountainous Afghanistan where such structures are underdeveloped. More generally, the Action will enhance the role that the EU can play as a development actor through sustainable energy promotion and will demonstrate the EU's political commitment and engagement in Tajikistan.

1 CONTEXT ANALYSIS

1.1 Context Description

Tajikistan is a country of stark contrasts - physical, economic and social. These include glaciated mountains alongside fertile valleys, vast hydropower resources but electricity shortages, huge remittance inflows but low foreign exchange reserves, and robust GDP growth but still high rates of poverty³. Electricity is almost fully generated by hydropower plants⁴. Current high priorities for the sector are the construction of the Rogun HPP (first turbine put in operation in November 2018) and the construction of CASA-1000 transmission lines. One of the features of the power sector of Tajikistan is that the electricity is being

³<http://documents.worldbank.org/curated/en/294261468339630573/pdf/863720CAS0P146010Box385211B00UO090.pdf>

⁴ The exception is the coal-fired Dushanbe-2 CHP plant, two units of which (50 MW each) were commissioned in 2014 and two others (150 MW each) in 2016.

extensively used for space heating especially in urban areas and forestless rural areas, which is inhabited by over 72% of Tajikistan's 9.2 million (2019⁵) inhabitants.

The GBAO region makes up 45% of Tajikistan's territory, of which 97% are mountains and 3% is arable land. The population of GBAO makes only 3% of total country population, estimated around 230,000 people. Currently, basic needs in the areas of health, education, and water supply are adversely impacted by the shortage in electricity in winter. Water supply, dependent on electric pumps, is also affected. In the case of education, schools are shut down because they are unable to heat classrooms during winter. The current level of school-age enrolment in GBAO is about 70% - below the national average.

Due to its mountainous character and remoteness, the region is difficult for transportation and is prone to constant natural disasters. These challenges are coupled with expected increase of demand from bordering Afghanistan, and GBAO suffering from inadequate investment, poorly developed infrastructure, limited access to electricity and finance (in particular for women), poorly developed service sector for small and medium-sized enterprises. Due to the growth of demand, the fragile existing infrastructure, and increasing economic activities, there will be an expanded gap between the power supply and demand. The Sebzor HPP will partly fill in this gap.

1.2 Policy Framework (Global, EU)

According to the New European Consensus on Development Our World, Our Dignity, Our Future, "the EU and its Member States will pursue three interlinked key objectives: addressing the lack of energy access; increasing energy efficiency (EE) and renewable energy (RE) generation to achieve a sustainable balance between energy production and consumption; and contributing to the global fight against climate change in line with the Paris Agreement and the related nationally determined contributions (NDCs) presented by the Parties"⁶. The ambitious collective European development policy addresses in an integrated manner the key elements of the 2030 Agenda: people, planet, prosperity, peace, and partnership. Tajikistan ratified on 22 March 2017 the Paris Agreement on Climate Change and submitted to the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat in September 2015 its Intended Nationally Determined Contribution (INDC⁷), which includes the promotion of energy efficiency and renewable energy sources. The EU and its Member States' responsibility in the Paris Declaration refers to the need to "address energy poverty by contributing to universal access to energy that is affordable, modern, reliable and sustainable, with a strong focus on renewable energy and energy efficiency"⁸.

Specific to Central Asia and connecting the sub-region with bordering countries and sub-regions, the Action is guided by the current 'European Union and Central Asia: Strategy for a New Partnership', the draft follow-up 'Central Asia Strategy' to be adopted in 2019, and the 'Communication and relative Council Conclusions on Asia-Europe connectivity'. The EU's continuous engagement contributes in addressing regional challenges such as sustainable and transboundary water management, climate change adaptation and mitigation, environmental governance and the transition to a low carbon economy.

⁵ <http://www.worldometers.info/world-population/tajikistan-population/>

⁶ Consensus on Development, p. 23. https://ec.europa.eu/europeaid/sites/devco/files/european-consensus-on-development-final-20170626_en.pdf

⁷ <https://www4.unfccc.int/sites/submissions/INDC/INDC/Published%20Documents/Tajikistan/1/INDC-TJK%20final%20ENG.pdf>

⁸ Consensus on Development, p. 23. https://ec.europa.eu/europeaid/sites/devco/files/european-consensus-on-development-final-20170626_en.pdf

In the EU Gender Action Plan Objective 16 is dedicated to equal access and control over clean water, **energy**, transport infrastructure, and equitable engagement in their management, enjoyed by girls and women.

1.3 Public Policy Analysis of the Partner Country/Region

The Tajik government allocates annually more than USD 300 million or 15% of its state budget for the development of the fuel-energy complex⁹. Development of RE and improvement of the EE are very important aspects of the Government's energy strategy. Related regulation were approved in 2010 (law on "Use of renewable energy sources") and 2013 (law on "Energy saving and energy efficiency"). Secondary legislation (19 by-laws) also has been developed for RE even if private investments have not materialised.

Reliable energy supply is very critical in ensuring the food security and economic development of the country. Limited access to electricity in rural areas causes up to 30% damage to agricultural production and forces to close around 850 small and medium enterprises annually¹⁰.

The sustainable energy targets to be achieved by 2030 include:

1. Access to energy: ensure access to regular and reliable electricity to the rural population;
2. RE: increase energy production from RE sources up to 20% against the baseline.
3. EE: reduce energy losses up to 10% in power grids and up to 20% in thermal grids
4. Increase the efficiency of energy use in all economic sectors, irrigation systems and final users up to 20% against the baseline;

To achieve these targets, among others, the following measures are to be considered:

- Amendment of the tariff policy, ensuring the transparency of the policy-making process and involvement of civil society, vulnerable groups and other users' groups in decision-making;
- Mobilization of private investments, in particular for the deployment of RE, and development of market relations in the energy sector;
- Establishment of the National Trust Fund on RE and EE.

Despite the gradual increase of electricity tariffs in 2016-2018, they still do not reflect the actual production and transmission costs. According to the *Country Economic Update: Tajikistan*, by the World Bank in 2017, "the average tariff is estimated to be at 45 percent of the cost-recovery level"¹¹. The recent tariff increase (by 15% in November 2018) and with an inflation in 2017 of 6.7%¹² would just increase this figure from 45% to 50%.

Electricity tariffs are very sensitive considering the real low incomes of the population and very high unemployment level (despite official statistics at 2.3%¹³). The average wage stood at 1,144 TJS (USD 120) in 2017 (TJS 917- USD 100 in GBAO)¹⁴ with electricity bills at TJS 100 per family (that figure doubles in winter time). In GBAO, the electricity tariff is higher than in other regions of Tajikistan and thus, energy account for a significant part of the total

⁹ Tajikistan – Rapid assessment and gap analysis

(http://www.tj.undp.org/content/tajikistan/en/home/library/environment_energy/sustainable-energy-for-all/)

¹⁰ Tajikistan – Rapid assessment and gap analysis

¹¹ <http://documents.worldbank.org/curated/en/963071514451761441/pdf/122285-WP-Tajikistan-PUBLIC.pdf>

¹² <https://www.azernews.az/region/130146.html>

¹³ <https://www.ceicdata.com/en/indicator/tajikistan/unemployment-rate>

¹⁴ Statistical yearbook. Regions of the Republic of Tajikistan, Agency on Statistics, 2018 (in Tajik and Russian)

expenses, especially in the rural areas (outside Khorog), where the population earn less income.

1.4 Stakeholder Analysis

Stakeholders can be divided in two broad categories: those which will benefit directly from the proposed interventions and those which will benefit from the wider perspective of improved sustainable energy provision.

Stakeholders benefiting directly from deployment of Renewable Energy through the Sebzor HPP in GBAO are various local and international institutions:

At central government in Tajikistan – government bodies working on policy in related sectors and involved in or related to financing agreements, licensing, economic development and transboundary energy delivery (to Afghanistan), not least the *Ministry of Finance* which provides financial support to RE and EE projects. Likewise, the *Presidential Administration*, and *Ministries of Energy and Water Resources* (MEWR) and *Economic Development and Trade* (MEDT) are key stakeholders. The MEWR is the principal energy policy-making institution and has oversight over the public electric utility, *Barki Tojik*, whereas the MEDT develops investment plans for the energy sector in coordination with MEWR and *Barki Tojik*. MEDT represents Tajikistan in the EU-Tajikistan bilateral relations. On a more technical level also key are the *State Committee of Land Resource Management and Geodesy*, as well as the *Committee for Environmental Protection* that regulates the sustainable management of energy resources and monitors the compliance of related regulations.

At regional level: Local executive authorities at GBAO, District (Rayon) and Sub-district (Jamoat) levels; private sector representatives as it directly benefits from improved energy supply and supported by the re-investment of the profits in regional and local economic development.

Pamir Energy, a public-private partnership, established in 2002¹⁵, operates electricity generation, transmission and distribution in GBAO through an exclusive Concession Agreement (until 2027). Pamir Energy is an Open Joint Stock Company owned by the Aga Khan Fund for Economic Development (AKFED) (70%) and International Finance Corporation (IFC) (30%). This innovative PPP (recognised by UN as excellent PPP model) comprised several partners including: the Government of Tajikistan, the World Bank Group (IDA & IFC), the Swiss Government and Aga Khan Development Network (AKDN). Pamir Energy's vision is rooted in the provision of electricity to enable economic and social development, through connectivity of the most marginalised families and meeting the increasing energy demand of the GBAO economy. According to the Concession Agreement, all assets initially handed over to Pamir Energy and donor grants remain as concession assets. Similarly, the Sebzor HPP project will also become a concession asset.

International Donor Community: The international donor community, including the EU and KfW but also the World Bank Group (WB), Swiss State Secretariat for Economic Affairs (SECO), and USAID have been in close consultations with the central as well as local government. The donors have been discussing the coordination of the Sebzor project, including the construction of the Sebzor HPP, the construction of surrounding infrastructure and the extension of the grid to Afghanistan. In this picture, the WB aims to support Tajikistan's transition to a new growth model led by investment and exports. Its current active

¹⁵ Government of Tajikistan and AKDN, through its subsidiary agency, the AKFED, formed the Pamir Energy through a pioneering privatisation – the first Public-Private Partnership (PPP) of its kind in Central Asia.

portfolio in includes 16 projects with a net commitment of USD 560 million, with the largest share in the energy sector (44%). For the period 2019-23, USD 5-7 million grant is envisaged for the Sebzor HPP infrastructure needs. In comparison, SECO has supported the consolidation of Pamir Energy, tariff reform and subsidy system (lifeline subsidy and metering) in GBAO and helped to secure its investments. USAID supports Tajikistan to increase electricity export beyond Central Asia, notably through technical support to the Intergovernmental Council for the CASA-1000 project. SECO and USAID have expressed their interest to finance the transmission line to Tajikistan's Khorog, and to potentially connect to Afghanistan, and lead the associated works to it.

Stakeholders benefiting from the wider perspective of deployment of (renewable) energy in GBAO are all electricity users in GBAO (private households, businesses, public entities). As mentioned above, women will particularly benefit from access to clean and affordable electricity that shall benefit their health, enhance their opportunities to receive education and increasingly empower in economic and social activities.

1.5 Problem Analysis/Priority Area for Support

Tajikistan is one of the poorest countries in Central Asia even with a GDP growth of 7.1% in 2017¹⁶. Within Tajikistan, GBAO is the poorest region with the poverty rate at around 40%. Its rural economy suffers from inadequate investment, poor infrastructure, limited access to electricity and finance (in particular for women), poorly developed services for small and medium-sized enterprises (SMEs).

Since the creation of public-private partnership electricity company Pamir Energy in 2002, electricity coverage has been expanded to 96% of households and 2,147 SMEs receiving electricity 24 hours per day in 2017. This has stopped deforestation¹⁷. Nevertheless, the electricity deficit in winter, mostly for heating, would require between 3 to 7 MW of additional capacity. Due to population growth and increasing economic activities, this capacity gap is annually increasing by 5-6%. Also, the two main hydropower plants in GBAO, Pamir 1 (28 MW) and Khorog (9 MW) HPPs, which account for 86% of Pamir Energy generation capacity are located at the Gunt river. The flows of the river are instable, making the two HPPs unreliable. Besides, Pamir 1 HPP is in a high disaster risk area whereby heavy mudflows (last ones in 2015) due to climate change risk destroying the plant.

Alternatives are very limited as Pamir Energy's power grid is disconnected from the national power grid¹⁸. The Sebzor run-of-river HPP is expected to generate 11 MW, significant economic and social impacts in GBAO. Reliable electricity will benefit it in several ways: a boost to the local economy via employment for the HPP construction and operation, and further electricity availability; basic needs (health, education, and water supply) will be met at higher standards; CO₂ emissions and other air pollutants will be reduced; expenditures of households on heating and cooking will be reduced; Women's and Girl's Empowerment will be facilitated (see Sections 4.2 and 4.3 below). The Sebzor HPP will supply electricity during the winter season to the GBAO region and, possibly from 2025, export electricity to Afghanistan once new transmission lines are constructed.

¹⁶ <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=TJ>

¹⁷ The civil war (1992-1997) after independence caused a severe energy crisis resulting in shrinking 70% of the region's forests within a decade.

¹⁸ Only 2 villages in GBAO are connected.

2 RISKS AND ASSUMPTIONS

Risks	Risk Level (H/M/L)	Mitigating Measures
<p>Political: Political support for the project might decline</p>	<p>L</p>	<p>A donor coordination agreement on parallel financing has been signed in February 2019 and sent to the Government to confirm donor commitment in realising the Sebzor HPP and surrounding infrastructure. Such an agreement, although not legally binding, guarantees to some extent the Government's commitment and support.</p>
<p>Political: Insecurity on both sides of the Tajik/Afghan border</p>	<p>M</p>	<p>The EU is implementing the border management programme BOMNAF in Northern Afghanistan. Communities with electricity have lower accounts of terrorism compared to non-electrified regions. Pamir Energy has been operating in the region since 2012, and creates projects through community engagement from inception throughout project implementation.</p>
<p>Environmental/Social: Vulnerability of the beneficiaries of the project and the project asset to climate change and natural disaster</p>	<p>M</p>	<p>Sebzor HPP will be built at Shokhdara river – fed by glacial melt – in an area less prone to natural disasters and will serve as a back-up for the 2 other HPPs at the Gunt river. This will mitigate the risk for the rural population of being cut-off from electricity in case of natural disaster.</p> <p>The area of operation does not have residential houses or other structures, but are used for grazing and recreation. In order to avoid flooding after construction of the weir, dykes will be erected to protect low-lying lands along the dam. Some vegetation clearing will be necessary but it will be coordinated with the Department of Natural Protection in Khorog.</p>
<p>Environmental/Social: Negative Social and environmental impacts during the construction and operation phases</p>	<p>L</p>	<p>Sebzor will be a run-of-river HPP (without dam) meaning it limits the risks to the river. An Environmental and Social Impact Analysis was conducted, an Environmental and Social Action Plan and a Resettlement Action Plan developed, and its implementation will be incorporated as part of the contractors' contractual conditions, as well as adopted by the operator.</p>
<p>Social: Acceptance of the project on the beneficiaries' side</p>	<p>L</p>	<p>The acceptance of the project is high among the beneficiaries of deployment of (renewable) energy in the region. A Stakeholder Engagement Plan has been submitted as part of the Feasibility Study (FS).</p>
<p>Capacity: Lack technical, administrative and financial capacity, as well as lack of experience of Pamir Energy, to implement the project</p>	<p>L</p>	<p>The FS, carried out by the recognised company SWECO, confirms the technical feasibility of the project. Pamir Energy has relevant technical, administrative and financial capacities as well as the experience from other investment projects. Pamir Energy will also be supported by an international consultant. The implementing partner will establish a continuous monitoring of implementation.</p>

Financial: Potentially, fraud, corruption, misused funds may cause the financial problems	L	Reports on funds used against the agreed work plan will be regularly prepared.
Assumptions		
<ol style="list-style-type: none"> 1. Other donors (SDC, USAID, etc.) will be able to finance the construction of the transmission line to Khorog, which is obviously essential for the use of the electrical energy generated by the Sebzor HPP and therefore should be ready at the date of the commissioning of Sebzor HPP. 2. It is assumed that all stakeholders fulfil their commitments (co-financing or other assistance) including the financing the transmission line to Khorog, which is outside the scope of this project. 3. It is also assumed that the GBAO government will re-invest any profit from exporting surplus energy generated by the new plant into local development. 4. The HPP is constructed with high quality, commissioned on time and connected to the Pamir Energy grid. 5. Government, development partners and private sector are willing to prepare and make investments which contribute to energy security at regional level.Sustained interest of developers. 6. Pamir Energy has adequate technical managerial and financial resources and capacities to play the role of the Executive Agency for the construction of the Sebzor HPP. 7. Different river valleys are not hit by natural disaster at the same moment. 8. Other small hydropower plants will follow the business model developed by this project. 		

3 LESSONS LEARNT AND COMPLEMENTARITY

3.1 Lessons Learnt

The development of hydropower, including small scale is a high priority of Tajikistan’s energy strategy. The State Programme of Development of Renewable Energy Sources and Construction of Small Hydropower Plants (2016-2020), adopted in 2015, lists 22 small HPPs totalling 30.75 MW capacity. The largest project, the 1.5 MW plant in Murghab (GBAO), received a KfW grant of EUR 7.4 million. These projects are expected to bring a sharp improvement to the standards of living of local residents as well as significant environmental benefits, including a drastic reduction in the amount of wood and dung used for heating and related indoor air pollution¹⁹.

Lesson learnt: Governmental resources are limited while energy sector investment needs are significant and therefore, donor community role is crucial in achieving sustainable energy and environmental targets as most of these projects require financial support.

Pamir Energy has a relevant and extensive experience in project implementation of both, hydropower plant construction/commissioning and related infrastructure (transmission lines, sub-stations, etc.). Pamir Energy has successfully reduced grid losses, increased collection rates to almost 100% through provision of reliable electricity supply and customer services as well as a targeted customer support scheme. Pamir Energy has successfully commissioned a hydropower plant in the Murghab area with severe climatic conditions. Pamir Energy has won

¹⁹ https://www.kfw.de/KfW-Group/Newsroom/Latest-News/Pressemitteilungen-Details_488448.html

the "2017 International Ashden Award" for its work bringing clean, reliable and affordable electricity to 220,000 people in East Tajikistan and 35,000 people in North Afghanistan²⁰.

Lesson learnt: Pamir Energy is a well-organized and reputable company capable to implement complex hydropower and electricity infrastructure projects.

Feasibility study for Sebzor HPP was performed by SWECO in 2016 in which a clear attention was paid to power demand forecast, and economic and financial analysis..

Lesson learnt: Since the Sebzor project is viable economically, but not financially, grant financing has to be considered, which, based on the assumptions made, would generate an economic benefit exceeding the related costs.

Environmental Impact Assessment for Sebzor HPP was performed by SWECO also in 2016.

Lessons learned: It is expected that the positive environmental impacts will be far greater than the negative impacts, which will further be reduced by implementation of the Environmental Management Plan

3.2 Complementarity, Synergy and Donor Coordination

Sustainable energy deployment in Tajikistan is one the priorities of the EU and Member States, which are implementing (or have implemented) related actions at regional and national levels:

- Donor activities coordination in Tajikistan is ensured by the Development Coordination Council (DCC).
- Coordination between donors, which will be jointly responsible for the Sebzor HPP construction, and SDC, USAID, and others, which will eventually finance the construction of the transmission line to Khorog, is essential for the achievement of the overall objective of the action as defined in 4.1 below.
- Sughd Energy Loss Reduction Project co-financed by EBRD and EIB loans, and IFCA grant (through blending);
- EU4Energy Initiative (EU funding and implemented by the International Energy Agency (IEA): aims to improve energy supply, security and connectivity, EE and further use of RE;
- Central Asia Sustainable Energy Programme (CASEP) (2012-2015), focused on policy design and formulation²¹ towards the deployment of EE and RE sources at national and regional levels, professional development of local partners policies and instruments, and awareness-raising on EE/RE.

4 DESCRIPTION OF THE ACTION

4.1 Overall Objective, Specific Objective(s), Expected Outputs and Indicative Activities

The overall objective of this project is to promote sustainable economic development in GBAO.

²⁰ <https://news.tj/en/news/tajikistan/economic/20170613/pamir-energy-wins-ashden-award-for-bringing-power-to-southeastern-tajikistan-and-northern-afghanistan>

²¹ Action Plans were supported in Kyrgyzstan (approved by Government) and in Tajikistan (which were not approved).

The following two Specific Objectives (SO) are envisaged to be achieved, and the following outputs and activities are planned for their achievement:

Specific Objective 1: Improved access of the rural population (both women and men) in GBAO and importing countries to sustainable, green, reliable and affordable electricity.

Specific Objective 2: Reduced Disaster Risk in GBAO through a more balanced energy generation.

Output 1: Sebzor HPP with a capacity of 11 MW constructed

- *Activity 1.1. Hiring of implementation consultant – for technical and construction supervision*
- *Activity 1.2. Obtaining of necessary permits*
- *Activity 1.3. Review of Tender Documents, prepared by Pamir Energy*
- *Activity 1.4. Implementation of civil works*
- *Activity 1.5. Installation of equipment*
- *Activity 1.6. Implementation of electrical works*
- *Activity 1.7 Commissioning, connection to the grid, starting operation*

Output 2: Business model for small hydropower developed

- *Activity 2.1. Development of the business model (Sebzor HPP to be used as a reference)*
- *Activity 2.2. Meetings on: (i) tariff reform (affordable for the population and sustainable long-term investment); and (ii) clean energy and rural economic development*

Output 3: Awareness raised on good practices in small hydropower development, business model and risk mitigation

- *Activity 3.1. Development of an outreach plan*
- *Activity 3.2 Preparation of progress reports and final report including Lessons Learnt*
- *Activity 3.3 Production and online publication of short videos and short reports on good practices*
- *Activity 3.4. Maintenance of information sharing.*

4.2 Intervention Logic

Sebzor HPP will be strategically placed on the Shokhdara River, a sub-basin less vulnerable to the extreme flow, less susceptible to natural disasters and less vulnerable to climate change impact. The Sebzor HPP will reduce the pressure on generators of Pamir 1 and Khorog HPPs, which are currently working on maximum capacity in winter, thus making them prone to breakage. In case of shutdown of the existing Pamir 1 and Khorog HPPs, due to natural disasters, Sebzor HPP will be able to provide the emergency energy supply. In this way, Sebzor HPP will improve access to sustainable, reliable and affordable electricity (SO1). If there is any surplus production, it can be sold to neighbouring countries, where the demand is even further from being met, such as bordering areas of Afghanistan.

In addition to the important role of the Sebzor HPP project in disaster risk reduction (SO2), the project is economically and socially attractive thanks to the full grant element of the present Action. In the long term, the project will promote sustainable economic development in the region (OO) thanks to foreseen re-investment of surplus profit into the rural economy, the creation of employment and local contracts for the local rural population, which could be

as high as 60-70% of the total contract value of EUR 30 million²², affordable electricity tariffs that reduce the burden on the rural consumers²³, development of small businesses on the basis of improved electrical supply²⁴, .

The Sebzor HPP would replace diesel generators and reduce the biomass currently used for heating and cooking that leads to further deforestation²⁵. Therefore, in the long term, greenhouse gases (GHG) emissions will be avoided. Thereby, the Sebzor project will contribute to the implementation of Tajikistan's Intended Nationally Determined Contribution (INDC) under the United Nations Framework Convention on Climate Change (UNFCCC).

4.3 Mainstreaming

Gender: While energy poverty impacts the whole population, differences in access to resources ensures the impact on women and men is not the same. Household expenditures on liquefied petroleum gas (LPG) for cooking and coal and wood for heating are high. As a result, “the population relies heavily on supplementary fuels, which men are responsible for purchasing and women and children are responsible for collecting. Insufficient heating and the use of unclean solid fuels for cooking contribute to health problems in women, children, and the elderly, who spend more time at home. Energy shortages also have a negative impact on businesses, especially small-sized and home-based enterprises. The types of businesses that women typically engage in, such as tailoring and sewing, and baking and food production, are associated with high electricity consumption”²⁶. The Sebzor construction will allow for a transition towards renewable energy thus improving the population and more specifically women's business opportunities and living conditions.

Conflict Sensitivity and Human Rights: The energy from this project will serve the people the GBAO region which has seen political unrest in the recent past. On the extension, GBAO is bordering Afghanistan's northern province, making it situated in an even more sensitive region. Meeting parts of the currently unmet demands in GBAO, and in the future those in Afghanistan's Badakhshan province will help reduce impacts of the conflicts and unrest.

Resilience: This project will act as a catalyst in developing economic resilience in the region with small and medium businesses getting access to cheaper and reliable electricity. At the same time, the project will enhance GBAO's resilience to climate change impacts, such as mud floods due to excessive use of existing HPPs.

Environment and climate change: This project will provide green energy and will abate approximately 2.1 Mt of GHG (CO₂equiv.) emissions over a 20 years period. In terms of reduction of deforestation in GBAO, the request for firewood will decrease, as the use of electricity increases. Moreover, as Sebzor HPP will be a piped HPP not involving damming of the river , and the impacts on the ecology of the river will be minimal .

²² According to the feasibility study, employment shall be in the range of 1,000-2,000 temporary jobs and about new 100 permanent jobs to operate and maintain the HPP and related infrastructure

²³ If Pamir Energy manages to reach the projected 11,000 households by 2025 and 37,000 households by 2032, the corresponding households income would increase by an estimated USD 13 million by 2025 and USD 44 million by 2032

²⁴ According to EBRD's Business Environment and Enterprise Performance Survey in 2018, the top two business obstacles faced by Tajik enterprises are electricity issues and access to finance. 60% of businesses still experienced power outages, which caused total losses at 14% of annual revenues

²⁵ According to Pamir Energy, in border villages, households currently spend on average USD 157 per month on diesel and other fuels. With the Sebzor project, this could fall to USD 30

²⁶ Tajikistan: Green Energy Small and Medium Enterprises (SMEs) Development Project
([https://www.thegef.org/sites/default/files/project_documents/1-11-18 - Rev CEO Endorsement DOC.pdf](https://www.thegef.org/sites/default/files/project_documents/1-11-18_-_Rev_CEO_Endorsement_DOC.pdf))

4.4 Contribution to SDGs

This intervention is relevant for the 2030 Agenda. It contributes primarily to the progressive achievement SDGs 7 and 1, while also contributing to SDGs 5 and 13. Electricity from the renewable energy source will be supplied to the consumers at the affordable tariff which would cover O&M costs but not investment costs of the proposed Sebzor HPP (SDG 7). The implementation of this project will contribute to income generation during the construction and operation (job creation) of Sebzor HPP. In addition, availability of affordable electricity will promote small businesses (SMEs) and entrepreneurship, especially for women-operated businesses (SDG 1). Women will spend less or even no time collecting firewood, pressing dry dung, and preparing briquettes from coal dust. Electricity available for heating and cooking will allow avoiding health problems including those due to the use of unclean solid fuels for cooking (indoor air pollution). There would be better opportunities for small-sized and home-based enterprises, such as tailoring and sewing, and baking, food production, ran typically by women, and which are associated with high electricity consumption (SDG 5). Lastly, resilience and adaptive capacity to climate-related hazards and natural disasters will be strengthened (SDG 13).

5 IMPLEMENTATION

5.1 Financing Agreement

In order to implement this action, it is not foreseen²⁷ to conclude a financing agreement with the partner country.

5.2 Indicative Implementation Period

The indicative operational implementation period of this action, during which the activities described in Section 4 will be carried out and the corresponding contracts and agreements implemented, is 60 months from the date of adoption by the Commission of this Financing Decision.

Extensions of the implementation period may be agreed by the Commission's responsible authorising officer by amending this Decision and the relevant contracts and agreements.

5.3 Implementation Modalities

The Commission will ensure that the EU appropriate rules and procedures for providing financing to third parties are respected, including review procedures, where appropriate, and compliance of the action with EU restrictive measures²⁸.

5.3.1 Indirect management with a Member State Organisation

This action may be implemented in indirect management with KfW, a German Member State Organisation. This implementation entails the full construction of the Sebzor HPP, and thus the fulfilment of all objectives and activities. The Regulations for German Financial Cooperation ("KfW regulations") will be used during the implementation of the action.

²⁷ It is expected that the German government will co-finance the project with a grant contribution to the Tajik government. The German government will sign an intergovernmental agreement with the Tajik government, in which the EU contribution co-financing together with the German contribution could be mentioned.

²⁸ https://eeas.europa.eu/sites/eeas/files/restrictive_measures-2017-04-26-clean.pdf

The envisaged entity has been selected using the following criteria: the Tajik government has requested the German Government to co-finance the project with a grant contribution through KfW thus ensuring a certain level of government ownership and support; KfW's operational capacity and experience, having implemented investment projects in various sectors in Tajikistan, not least the rehabilitation of the Nurek HPP, and rehabilitation of the Murgab HPP carried out with Pamir Energy; preliminary non-committal negotiations have been ongoing between the EU, KfW, the Tajik Government and Pamir Energy thus ensuring a certain level of commitment from all parties.

5.4 Scope of Geographical Eligibility for Procurement and Grants

The geographical eligibility shall apply in terms of place of establishment for participating in procurement and grant award procedures and in terms of origin of supplies purchased as established in the basic act and set out in the relevant contractual documents.

The Commission's authorising officer responsible may extend the geographical eligibility on the basis of urgency or of unavailability of products and services in the markets of the countries concerned, or in other duly substantiated cases where the eligibility rules would make the realisation of this action impossible or exceedingly difficult.

5.5 Indicative Budget

Area	EU contribution (amount in EUR)	Indicative third party contribution
Indirect management with KfW (Germany) - cf. section 5.3.1	20 000 000	10 000 000
Evaluation, (cf. section 5.8), 5.9 – Audit (cf. section 5.9)/Expenditure verification	will be covered by another decision	N.A.
Communication and visibility (cf. section 5.11)	N.A.(included in the KfW management fee)	N.A.
Totals	20 000 000	10 000 000

The full grant is justified because the project would otherwise not be financially feasible. Some reasons are that the business environment is still not conducive for private sector investment on energy; the rural consumers, both on the Tajik and the Afghan side of the Badakhshan provinces would not be able to afford tariffs high enough to maintain return in case loans would be applied for construction; the electricity output (and thus return) will be less than 50% in the 1st project operation period as it will only be required in the winter months; the Tajik government does not have sufficient financial capacity to fund the

construction²⁹. For this reasons, it is not only the EU and KfW, but also other key donors that are in close consultations with the Government to mobilize grants for the full construction of the HPP and the surrounding infrastructure.

5.6 Organisational Set-up and Responsibilities

It is expected that the German government will co-finance the project with a grant contribution to the Tajik government. EU shall sign Delegation Agreement with KfW and KfW will conclude the Financing Agreement for the total financing with the Ministry of Economic Development and Trade on behalf of the Tajik Government, and Pamir Energy as project-executing agency for KfW.

KfW will take responsibility for the implementation of the action. The modalities will be laid down in a separate Agreement between KfW and Pamir Energy, in addition to the intergovernmental agreement. MEDT and Pamir Energy will conclude a Channelling Agreement for the channelling of the grant financial contribution to Pamir Energy.

KfW shall exercise investment control and the follow up of re-investment of the surplus profit (if any, as the result of the grants for the Sebzor HPP).

5.7 Performance and Results Monitoring and Reporting

The day-to-day technical and financial monitoring of the implementation of this action will be a continuous process, and part of the implementing partner's responsibilities. To this aim, the implementing partner shall establish a permanent internal, technical and financial monitoring system for the action and elaborate regular progress reports (not less than annual) and final reports. The monitoring system will also ensure adequate monitoring of the implementation of the Environmental and Social Management Plan, such that remedial actions can be decided in cases of deviations and unexpected adverse impacts. Every report shall provide an accurate account of the action implementation, difficulties encountered, changes introduced, as well as the degree of achievement of its results (outputs and direct outcomes) as measured by corresponding indicators, using as reference the Logframe matrix.

SDGs indicators and, if applicable, any jointly agreed indicators as for instance per Joint Programming document should be taken into account.

The report shall be laid out in such a way as to allow monitoring of the means envisaged and employed and of budget details for the action. The final report, narrative and financial report, will cover the entire period of the action implementation.

The Commission may undertake additional project monitoring visits both through its own staff and through independent consultants recruited directly by the Commission for independent monitoring reviews (or recruited by the responsible agent contracted by the Commission for implementing such reviews).

5.8 Evaluation

Having regard to the importance of the action, a final evaluation will be carried out for this action via an implementing partner.

²⁹ The Debt Sustainability Analysis (DSA) suggests that Tajikistan's debt distress level rose to high. As a result of the IMF art. 4 consultations, the World Bank eventually may decide to move back from loans to grant-only-financing.

It will be carried out for accountability and learning purposes at various levels (including for policy revision), taking into account in particular the fact that: (i) actual investment costs of Sebzor HPP might be different from the planned ones; (ii) actual energy output might be different from the expected one; (iii) absence of investment plans for the expansion of power grid might not allow immediate start of export of electricity after the commissioning.

The evaluation reports shall be shared with the partner country and other key stakeholders. The implementing partner and the Commission shall analyse the conclusions and recommendations of the evaluations and, where appropriate, in agreement with the partner country, jointly decide on the follow-up actions to be taken and any adjustments necessary, including, if indicated, the reorientation of the project.

The financing of the evaluation shall be covered by another measure constituting a financing decision

5.9 Audit

Without prejudice to the obligations applicable to contracts concluded for the implementation of this action, the Commission may, on the basis of a risk assessment, contract independent audits or expenditure verification assignments for one or several contracts or agreements.

The financing of the audit shall be covered by another measure constituting a financing decision.

5.10 Communication and Visibility

Communication and visibility of the EU is a legal obligation for all external actions funded by the EU. For that purpose it shall be specified in the Contribution agreement with KfW that:

- KfW shall ensure that the communication and visibility measures required by the European Union are fully implemented.

- The communication and visibility measures shall be based on a specific Communication and Visibility Plan of the Action, to be elaborated at the start of implementation.

- The Communication and Visibility Requirements for European Union External Action (or any succeeding document) shall be used to establish the Communication and Visibility Plan of the Action and the appropriate contractual obligations.

The costs related to the Communication and Visibility shall be included in the KfW management fee.

APPENDIX - INDICATIVE LOGFRAME MATRIX (FOR PROJECT MODALITY) ³⁰

	Results Chain	Indicators	Sources of Data	Assumptions
Impact	To promote sustainable economic development in GBAO	<ul style="list-style-type: none"> - GDP per capita in GBAO - Poverty rate in GBAO - Number of new SMEs registered per year (disaggregated by sex of business owner) - Direct GHG emissions (Mt CO2 eq.) avoided over 20 years. - CO2 emissions - Amount of profit from export of surplus energy generated by Sebzor HPP that is re-invested in GBAO development (in EUR) 	<ul style="list-style-type: none"> - GBAO Statistics Office Reports - GBAO Statistics Office Reports - GBAO Statistics Office Reports - UNFCCC Reports - UNFCCC Reports 	Other donors (SDC, USAID, etc.) will be able to finance the construction of the transmission line to Khorog, which is obviously essential for the use of the electrical energy generated by the Sebzor HPP and therefore should be ready at the date of the commissioning of Sebzor HPP.
Outcomes	1. Improved access of the rural population (both women and men) in GBAO and importing countries to sustainable, reliable and affordable electricity	<ul style="list-style-type: none"> - Share of energy cost in low income household revenue; - Number of people provided with access to electricity generated by sustainable energy for the first time; - MW produced by the Sebzor HPP; - %MW required by the population that Sebzor HPP provides; - %MW produced by the Sebzor HPP that is exported each year; 	<ul style="list-style-type: none"> - Baseline and endline analysis to be conducted by the project - GBAO provincial reports - Sebzor HPP operating reports - Sebzor HPP operating reports - Sebzor HPP operating reports 	<p>It is assumed that all stakeholders fulfil their commitments (co-financing or other assistance) including the financing the transmission line to Khorog, which is outside the scope of this project.</p> <p>It is also assumed that the GBAO government will re-invest any profit from exporting surplus energy generated by the new plant into local development.</p>

³⁰ Mark indicators aligned with the relevant programming document mark with '*' and indicators aligned to the EU Results Framework with '**'.2.1

	2. Reduced disaster risk in GBAO	<ul style="list-style-type: none"> - Number of interruptions of electricity supply per month - Number of people displaced, injured or killed by disasters caused by HPP operation 	<ul style="list-style-type: none"> - Pamir Energy Documents - Information from the local authorities 	The HPP is constructed with high quality, commissioned on time and connected to the Pamir Energy grid.
Outputs	1. Sebzor HPP with a capacity of 11 MW constructed	<ul style="list-style-type: none"> - Status of pre-investment documentation - Status of Tender on construction of Sebzor HPP - Extent of construction of Sebzor HPP - Number of GBAO residents employed in the construction of Sebzor HPP (disaggregated by sex) 	<ul style="list-style-type: none"> - Tender Dossier, tender evaluation report. - Supervision reports. - Official documents. - Information from media 	<p>Sustained interest of developers.</p> <p>Pamir Energy has adequate technical managerial and financial resources and capacities to play the role of the Executive Agency for the construction of the HPP.</p> <p>Different valleys are not hit by natural disaster at the same moment.</p>
	2. Business model for small hydropower developed	<ul style="list-style-type: none"> - Number of feasibility studies and investment proposals, using experience of Sebzor HPP - Status of Model business plan 	<ul style="list-style-type: none"> - Feasibility study reports. - Model business plan document. 	Other small hydropower plants will follow the business model developed by this project.
	3. Awareness raised on good practices in small hydropower development, business model and risk mitigation	<ul style="list-style-type: none"> - Status of the Outreach programme document; - Level of interest in replication of this action in different regions of Tajikistan (number of municipalities/communities contacting the project team for information about the small hydropower plants/business model) - Number of people viewing the Project best practices compiled, published and available on website - Number of people viewing the Short video developed by the project 	<ul style="list-style-type: none"> - Project documentation and web site. - Video posted on website. - Online analytics report. 	