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ANNEX VIII

to the Commission Implementing Decision on the Annual action plan in favour of Türkiye for 2024

Action Document for Energy

ANNUAL ACTION PLAN

This document constitutes the annual work programme in the sense of Article 110(2) of the Financial Regulation, and annual and multiannual action plans and measures in the sense of Article 9 of IPA III Regulation and Article 23(2) of NDICI - Global Europe Regulation.

1. SYNOPSIS

2. Action Summary Table

Title	Energy			
	Annual action plan in favour of Türkiye for 2024			
OPSYS	OPSYS business reference: ACT-62857			
ABAC	ABAC Commitment level 1 number: JAD.1655607			
Basic Act	Financed under the Instrument for Pre-accession Assistance (IPA III)			
Economic and Investment Plan (EIP)	No			
EIP Flagship	No			
Team Europe	No			
Beneficiar(y)/(ies) of the action	The action shall be carried out in Republic of Türkiye			
Programming document	IPA III Programming Framework			
	PRIORITY AREAS AND SECTOR INFORMATION			
Window and	Window 3: Green Agenda and Sustainable Connectivity			
thematic priority	Thematic Priority 2: Transport, digital economy and society and energy			
Sustainable	Main SDG (1 only):			
Development Goals	SDG 7: Affordable and Clean Energy			
(SDGS)	Other significant SDGs (up to 9) and where appropriate, targets:			
	SDG 9: Industry, Innovation, and Infrastructure			
	SDG 12: Responsible Consumption and Production			

	SDG 13: Climate Action					
	SDG 15: Life on Land					
DAC code(s)	23181 - Energy education/training (20 %)					
	23182 - Energy research (30 %) 23630 Electric power transmission and distribution (controliged gride) (50 %)					
Main Deliverv	Central Government 12001				us) (30 %)	
Channel	Central Government – 12001					
Targets	⊠ Climate					
	□ Gender					
	□ Biodiversity					
Markers (from DAC form)	General policy objective	Not targeted	SignificantPrincipalobjectiveobjective		Principal objective	
	Participation development/good governance					
	Aid to environment		\boxtimes			
	Gender equality and women's and girl's empowerment					
	Reproductive, maternal, new-born and child health					
	Disaster Risk Reduction	\boxtimes				
	Inclusion of persons with Disabilities					
	Nutrition	\boxtimes				
	RIO Convention markers	Not targeted	SignificantPrincipalobjectiveobjective		Principal objective	
	Biological diversity	\boxtimes				
	Combat desertification	\boxtimes				
	Climate change mitigation				\boxtimes	
	Climate change adaptation	\boxtimes				
Internal markers and Tags	Policy objectives	Not targeted	Significant Princip objective objective		Principal objective	
	EIP	\boxtimes				
	EIP Flagship	YES		NO 🖂		
	Tags:	YES			NO	
	Transport				\boxtimes	
	Energy			\boxtimes		

	Environment and climate			\boxtimes	
	Digital	ıl 🗆			\boxtimes
	Economic development (incl. private sector, trade and macroeconomic support)	(incl.			
	Human Development (incl. human capital and youth)				
	Health resilience			\boxtimes	
	Migration and mobility			\boxtimes	
	Agriculture, food security and rural development				\boxtimes
	Rule of law, governance and Public Administration reform				\boxtimes
	Other				\boxtimes
	Digitalisation		\boxtimes		
	Tags	YES			NO
	digital connectivity	\boxtimes			
	digital governance	\boxtimes			
	digital entrepreneurship				
	digital skills/literacy	\square			
	digital services	\square			
	Connectivity		\boxtimes		
	Tags	YES			NO
	digital connectivity	\boxtimes	\boxtimes		
	energy	\boxtimes			
	transport				
	health				\boxtimes
	education and research				
	Migration				
	Reduction of Inequalities \square				
	COVID-19				
	BUDGET INFOR	MATION			
AmountsBudget line: 15 02 02 01					
concerneu	Total estimated cost: EUR 4 800 00	0.00			
	Total amount of EU budget contribution EUR 4 800 000.00				
	EUR 4 800 000.00 for indirect management with IPA III beneficiary				

	MANAGEMENT AND IMPLEMENTATION					
Implementation modalities (management mode and delivery methods)	Indirect management with the Republic of Türkiye					
Final Date for conclusion of Financing Agreement	At the latest by 31 December 2025					
Final date for concluding contribution / delegation agreements, procurement and grant contracts	3 years following the date of conclusion of the financing agreement, with the exception of cases listed under Article 114(2) of the Financial Regulation					
Indicative implementation period	72 months following the conclusion of the Financing Agreement					
Final date for implementing the Financing Agreement	12 years following the conclusion of the Financing Agreement					

1.2 Summary of the Action

The **overall objective of the Action** is the harmonisation with EU practices by promoting the Green Agenda in Türkiye while fostering transition to green and low-carbon Energy.

The Action will contribute to the **specific objectives** of the **IPA III Thematic Priority 2: Transport, digital economy and society and energy within the Window 3 Green agenda and sustainable connectivity**: to strengthen technical capacity and standardisation in electricity distribution and to improve capacity and policy dialogue on critical raw material recovery for energy technologies.

The Action is in line with the goals of the European Green Deal and will enhance Türkiye's alignment with European practices while encouraging innovation, investments, and closer synergies with EU stakeholders. These efforts will strengthen Türkiye's capacity and accelerate its transition to clean and low carbon energy in compliance with its climate commitments, promoting sustainable economic growth.

The Action aims to increase institutional capacity and is composed of two initiatives or Areas of Support (AoS):

- AoS1: Enhancement of the Institutional capacity of Turkish Electricity Distribution Corporation (TEDAŞ) on Live Line Maintenance in line with EU standards and practices.
- AoS2: Enhancement of the Institutional capacity of the Turkish Energy, Nuclear and Mineral Research Agency (TENMAK) and creation of an EU-Türkiye stakeholders' platform to foster the dialogue on the recovery of secondary critical raw materials for energy technologies.

The two AoS are complementary and aim to increase concrete benefits for citizens by reducing power outages and adopting circular economic principles in the manufacture of renewable technologies.

The Action also addresses key Sustainable Development Goals (SGDs):

- AoS1 addresses Türkiye's frequent power outages by encouraging live line maintenance practices in line with EU to ensure an efficient and reliable electricity supply, contributing directly to SDGs 7, 9, and 13.
- AoS2 aims to enhance EU-Türkiye policy dialogue and Türkiye capacity to recycle crucial minerals, supporting sustainable resource management and circular economy principles for the manufacturing of renewable energy technologies, contributing to SDGs 7, 9, 12, 13, and 15.

1.3 Beneficiar(y)/(ies) of the Action

The action shall be carried out in the Republic of Türkiye.

2. RATIONALE

2.1 Context

The European Green Deal aims for a climate-neutral EU by 2050, influencing energy policies and strategies with a focus on digital technologies for sustainability. Türkiye's energy policies align with these international goals through documents such as the 12th National Development Plan (2024-2028), the Türkiye National Energy Plan (2022-2035), and the Türkiye Energy Efficiency 2030 Strategy, emphasising energy security, market stability, and renewable energy.

Türkiye's Sustainable Development Goals (SDGs) include SDG 7 (affordable and clean energy), SDG 8 (sustainable economic growth and employment), and SDG 13 (climate action). Additionally, Türkiye aims at strengthening its alignment with EU policies and enhance digital connectivity.

<u>AoS1:</u>

TEDAŞ's capacity building action focuses on transferring live line maintenance technology from EU member countries to Türkiye, aiming to increase energy efficiency and support Türkiye's 2053 net zero emission targets.

This action aligns with Türkiye's strategic documents, including the Energy Efficiency 2030 Strategy and the II. National Energy Efficiency Action Plan, which emphasises reducing energy distribution losses, increasing efficiency, and prioritising R&D projects. The 12th Development Plan aims for a competitive, efficient, and secure energy supply structure. The Medium-Term Plan focuses on increasing energy efficiency, combating climate change, and leveraging green and digital transformation opportunities. The MENR National Energy Plan supports energy market reforms and alignment with EU policies.

This action contributes to Türkiye's energy efficiency targets, enhances energy supply security, and promotes the development of sustainable energy technologies. It aligns with IPA III framework objectives by ensuring energy security and efficiency.

AoS2:

The Paris Agreement underscores the importance of limiting global warming to 1.5°C by reducing carbon emissions through renewable energy sources.

Rare Earth Elements (REEs) play a critical role in electric motors, batteries, wind turbines, solar panels, and catalytic converters, minimising air pollution and enhancing efficiency. They are essential for the green energy transition.

Türkiye's REE Strategy prioritises the recovery of REEs from waste such as end-of-life electric vehicle batteries and permanent magnets, emphasising R&D for energy-saving and high-recovery technologies. It includes pre-feasibility studies for recycling technologies, strategies to minimise environmental impacts, and awareness-raising activities for different societal segments.

This action aligns with strategic documents such as the 12th National Development Plan, the Medium-Term Programmes (2022-2024, 2024-2026), and the MENR Strategic Plan, which focus on renewable energy, energy efficiency, and environmental sustainability. The IPA III Programming Framework emphasises the sustainable production and utilisation of critical raw materials, energy efficiency, and renewable energy projects.

This action supports SDG 7, SDG 8, SDG 9, SDG 12, SDG 13, and SDG 15, contributing to Türkiye's efforts to develop a sustainable and efficient energy sector, improve environmental quality, and align with EU policies.

2.2. Problem Analysis

AoS1: Enhancement of the Institutional capacity of Turkish Electricity Distribution Corporation (TEDAŞ) on Live Line Maintenance in line with EU standards and practices;

Reliable electricity is critical to the well-being of communities, as power outages disrupt daily life, health services and educational activities. Improving the reliability of electricity supply improves the quality of life, as highlighted in the United Nations article "Transforming our world: the 2030 Agenda for Sustainable Development as Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all".

According to the Energy Market Regulatory Authority's (EMRA) 2023 Electricity Market Sector Report¹, the System Average Interruption Duration Index (SAIDI) is calculated as 771 minutes, which is significantly higher than the Council of European Energy Regulators (CEER)'s cut-off limits (100 minutes). This excessive duration of outage has a significant impact on the social and economic well-being, including on the health of the population. One of the main reasons for the long outage is inadequate maintenance. In the current situation, the electricity line needs to be de-energised for maintenance and the concern of not leaving users without electricity leads to inadequate maintenance. Inadequate maintenance increases the risk of line failure which leads to dramatic service failures. For example, in February 2022, the power grid collapsed in Isparta due to much heavier than expected snowfall. The risks that emerged in the line over time due to the lack of adequate maintenance became a reality with the snowfall and caused a two-day power outage. It was assessed that the excessive currents resulting from the failure had a cascading effect on many elements of the line. Live line maintenance is an effective solution for lack of maintenance by eliminating the underlying concern of not deenergising the line.

The inability to supply energy in a reliable manner also affects the operational efficiency of the distribution electricity network. "With proper maintenance and service, the equipment lifetime can be significantly extended" is highlighted in IEA Electricity Grids and Secure Energy Transitions Report². Hence, by using live

¹ <u>https://epdk.gov.tr/Detay/Icerik/3-0-24/elektrikyillik-sektor-raporu</u>

² <u>https://www.iea.org/reports/electricity-grids-and-secure-energy-transitions</u>

line maintenance approach to extend the lifespan of the components, another target is to lower the emission rate from the waste material.

Therefore, the action focuses on the adoption of a live line maintenance system in the electricity distribution network of Türkiye in line with the EU. By minimising the outage duration, live line maintenance will provide reliable energy supply and ensure operational efficiency of the network. In the transition to live line maintenance in Türkiye, legislative and technical capacity building is required. In this context, this action encompasses training of trainers for live line maintenance, preparatory work for a live line maintenance training centre, feasibility analyses on the network and recommendations for legislative arrangements.

Identification of main stakeholders and corresponding institutional and/or organisational issues (mandates, potential roles, and capacities) to be covered by the action

The implementation of live line maintenance in Türkiye's electricity distribution network involves several key stakeholders. The Ministry of Energy and Natural Resources (MENR) leads the energy sector, focusing on policy development, legislative enforcement, and strategic oversight of energy and natural resources. MENR's role includes ensuring sustainable energy consumption and supporting economic growth. The Turkish Electricity Distribution Corporation (TEDAŞ), under MENR, plays a pivotal role in building the capacity of 21 private electricity distribution companies by providing live line maintenance training, overseeing certification, and setting procedural guidelines. These companies are expected to adopt live line maintenance practices, aligning with EU standards to improve network reliability and reduce outages. Local communities, especially in underserved areas, will benefit from increased electricity reliability, despite potential temporary disruptions. Training providers and consultants, working with TEDAŞ and EU experts, will ensure that training programs are tailored to Türkiye's unique infrastructure needs, facilitating a smooth transition to live line maintenance techniques.

AoS2: Enhancement of the Institutional capacity of Turkish Energy, Nuclear and Mineral Research Agency (TENMAK) and creation of an EU-Türkiye stakeholders' platform to foster the dialogue on the recovery of secondary critical raw materials for energy technologies.

Both Türkiye and EU's demand for base metals, battery materials, rare earths and more are set to increase exponentially as the EU divests from fossil fuels and turns to clean energy systems which necessitate more minerals. At the same time, the EU green transition will require the build-up of local production of batteries, solar panels, permanent magnets, and other clean tech. Abundant access to a range of raw materials will be needed to address the growing demand. However, specific focus should also be put on ensuring a circular approach, therefore making renewable energy technologies truly renewable. In this respect, it is necessary to improve the use of secondary raw materials from waste. Extraction and production of critical material from waste will not only cause lower emission and polluting impact compared to primary sources but also will limit depletion of natural resources. Hence, use of secondary raw materials from waste has the clear benefit to couple circular economic approach to the clean energy transition and achieving the net zero emission target.

The strategic importance and interest for such topic goes well beyond research and innovation activities and it is strictly intertwined with stakeholder's engagements, and it can perfectly fit with the EU-Türkiye policy dialogue given the converging and synergistic objectives.

To develop a system for the recovery of critical minerals from secondary resources, national and international regulations should be analysed and the relevant regulatory framework established and at the same time knowledge transfer from EU Member States (EU MS) should be facilitated to allow for an increased production from secondary sources.

In this context, joining EU and Türkiye forces and bringing together relevant stakeholders would require the creation of a dedicated platform to underpin and foster dialogue beyond the usual research and innovation

boundaries. With the possible ambition of creating both a policy mechanism for setting common priorities on critical raw material for energy manufacturing (e.g. boron and lithium) and a mechanism for attracting additional funding from private and institutional investors.

It is important to gather all stakeholders together, both Public and private, so to facilitate dialogue and identify concrete pathways to scale up production of critical raw materials from alternative (secondary) sources to develop a circular economy and to achieve 2053 net zero emission target.Currently, critical minerals are widely obtained from primary sources by traditional mining. Awareness should be raised to increase knowledge on the recovery of critical minerals from secondary sources.

Recently, the European Union released its Critical Raw Materials, however although some organisations, institutions, and groups in Türkiye have created Türkiye's critical mineral lists, an official list has not been published yet. To ensure supply chain security, environmental sustainability, sustainable production, and economic development, determining Türkiye's critical minerals should be a part of strategic planning. To that end, in addition to publishing the critical mineral list, there is an urgent need to make social, commercial, and legal regulations for the recovery of critical minerals from secondary sources and to create strategy documents in this context.

Identification of main stakeholders and corresponding institutional and/or organisational issues (mandates, potential roles, and capacities) to be covered by the action

The Energy Sector in Türkiye is governed by multiple institutions, with the Ministry of Energy and Natural Resources (MENR) playing a leading role under the Instrument for Pre-Accession Assistance (IPA). **MENR** is responsible for policy development, legislation, and oversight of energy security, efficiency, and international cooperation. It collaborates with the **Ministry of Trade**, which focuses on economic competitiveness, and the **Ministry of Environment**, **Urbanisation**, **and Climate Change**, which aims to protect environmental sustainability. The **Turkish Energy**, **Nuclear**, **and Mineral Research Agency** (**TENMAK**), established in 2020, oversees scientific research and innovation in energy, mining, and nuclear technology. TENMAK's **Rare Earth Elements Research Institute** (**NATEN**) focuses on research and development related to rare earth elements, fostering cooperation with public and private entities to advance technological products and ensure sustainable resource use. Together, these institutions work to enhance Türkiye's competitiveness and support its transition to a secure, sustainable energy future.

2.3. Lessons Learned

The most important lessons learned from the last two decades covering IPA I and IPA II periods are continuous improvement and systematic performance monitoring of the institutional capacity building activities with a holistic view of the ecosystem and focusing on full compliance with EU energy legislation, market, and network:

- Improved compliance with EU legislation;
- Need for rapid adaptation to the European Green Deal regulations;
- Need for an institutional capacity dedicated to the transformation of the energy ecosystem;
- Need for improved human resource capacity in public institutions in the energy sector;
- Raised awareness and learning by doing with pilot renewable energy projects;
- Improved dialogue and strengthened cooperation with the European Commission and various energy sector stakeholders.

Additionally, the MENR has accelerated the implementation of projects and programmes in the sector towards the transition to a green and low-carbon economy in close cooperation with sector stakeholders. Therefore, the capacities of the MENR and critical institutions have been improved, and their coordination and relationships have been strengthened.

To sum up:

- Good communication was key to our success, stressing the importance of clear discussions among team members.
- Careful planning helped handle unexpected problems, showing how crucial preparation is.
- Using flexible methods allowed us to quickly adapt to changes in the project's needs, highlighting the importance of being responsive.

Additionally, it was understood that improving compliance with EU regulations and enhancing teamwork, which emphasise the need for continuous improvement and real structural reforms, were crucial.

3. DESCRIPTION OF THE ACTION

3.1. Intervention Logic

The Overall Objective/Impact of this action is to facilitate the harmonisation with EU standards and practices by promoting the Green Agenda in Türkiye's while fostering transition to a greener and low-carbon Energy.

The Specific Objectives (Outcomes) of this action are to:

- 1. enhance efficiency and reliability of the Turkish electricity distribution system through strengthened technical capacity and standardisation in line with EU practices,
- 2. improve Türkiye's capabilities in recovering critical raw materials, particularly for renewable energy technologies in collaboration and dialogue with the EU.

The Outputs to be delivered by this action contributing to the corresponding Specific Objectives (Outcomes) are:

1.1 <u>contributing to Outcome 1</u> (or Specific Objective 1) Improved TEDAS capacity for Live Line Maintenance through training of trainers in cooperation with the relevant EU partners and alignment with practices and procedures of relevant EU Member States.

1.2 <u>contributing to Outcome 1</u> (or Specific Objective 1) Feasibility Assessment and preparatory steps for Live Line Maintenance centre or facility in Türkiye is in line with the EU standards, norms and legislation.

2.1 <u>contributing to Outcome 2</u> (or Specific Objective 2) Enhanced strategic management, sectoral assistance and technical capacity of TENMAK/NATEN in recovery of critical raw materials (CRM) from secondary resources (mining residues and EoL products), with specific focus on renewable energy technologies (e.g. REEs, boron and lithium).

2.2 <u>contributing to Outcome 2</u> (or Specific Objective 2): Established EU-Türkiye stakeholders' platform to foster the EU-Türkiye policy dialogue on the recovery of secondary critical raw materials for energy technologies.

The underlying intervention logic for this action is that the outputs will contribute to achieve the outcome and thus the above-mentioned impact under the assumptions mentioned under chapter 3.4 "Risks and Assumptions".

3.2. Indicative Activities

Activities related to Output 1.1

- Activity 1.1.1: Training of trainers in cooperation with relevant EU facilities which may include specific on-site training in EU MS to acquire the necessary theoretical and practical training on live line maintenance technology.
- Activity 1.1.2: Preliminary analysis on Turkish electricity distribution system, study of EU best practices of live line maintenance via desk research and preparation of knowledge transfer plan
- Activity 1.1.3: On-site analysis of EU best practices for live line maintenance applications via site visits to EU countries (indicatively to 3 countries) in line with knowledge transfer plan. A targeted TAIEX study visit can precede those trainings to increase their practical implications on improving the current live line maintenance applications in Türkiye.
- Activity 1.1.4: Network analysis and preparation of feasibility for application of live line maintenance in the Turkish electricity distribution network including definition of technical standards and technical specifications, transition needs, preparation of Technician's Manuals for live line maintenance.
- Activity 1.1.5: Strategy and Roadmap for Application of Live Line Maintenance in Türkiye including recommendations for necessary legislation and regulations.

Activities related to Output 1.2:

- Activity 1.2.1 Preparatory activities, including feasibility, guidance and manuals for the creation of a live line maintenance training centre for electricity distribution in Türkiye in line with relevant EU Member States practices. This will also include:
 - Creation of a training module including training strategies, curriculum, content, trainer manual, trainee documents, list of materials and equipment to be used in the training
 - Requirement and feasibility analysis for training centre (training centre includes theoretical and practical area)
 - Design and definition of technical specifications (including bill of quantities) of the training centre

Activities related to Output 2.1:

- Activity 2.1.1 Technical Assistance and support for NATEN/TENMAK, including:
 - Project Opening and Stakeholder Engagement Event
 - Current situation analysis on CRM market in Türkiye from circular economy perspective covering legislation and practices as well as industrial security with a special focus on energy sector via determination of the percentage of recovered CRMs and reused EoL products (e.g. magnet-to-magnet production) used in energy systems
 - Study on literature via desk research and good practices via study visits (indicatively to 3 countries) for CRM recovery from EoL products covering technology, economics, administrative and regulatory aspects
 - Requirement Analysis for transition to circular economy in CRM market of Türkiye (with a special focus on CRMs used in energy sector (permanent magnets in wind turbines, Li-ion batteries of EV motors, etc.) in Türkiye) for recovery of EoL products covering legislation, ecosystem mapping (including public and private sector) and industrial restructuring

- Mid-Term Strategy and Roadmap for EoL Products Recovery Sector in Türkiye
- Strategy and Road-Map Workshop for discussions on the Requirement Analysis Report and Mid-Term Strategy and Roadmap for EoL Products Recovery Sector by the public and private sector stakeholders
- Business Analysis for Development of Institutional Capacity of TENMAK/NATEN
- Technical Analysis and know-how development on recovery technologies for the recovery of CRMs from Secondary Sources and End-of-Life (EoL) Products including required technological infrastructure, procedures (workflow charts), environmental compliance, cost analysis etc.
- Design of a pilot-scale EoL products recovery facility with state-of-art technologies for TENMAK including technological, regulatory and economic feasibility, etc. and creation of operational manual of the facility
- Design of a Model EoL Products Recovery Facility for industry including technological, regulatory and economic feasibility, etc. and creation of operation manual of the facility
- > Introductory Meeting for Model EoL Products Recovery Facility to the sector stakeholders
- Symposium on EoL products recovery
- Activity 2.1.2 Capacity building for NATEN/TENMAK, including:
 - > Trainings for development of institutional capacity in TENMAK/NATEN on CRM recovery
 - Fellowship in EoL products recovery facility, laboratories, research institutes, etc. for metallurgical methods, permanent magnet recycling, etc. in the EU countries
 - Participation in international workshops/symposiums/sectoral events on the recovery of CRMs from EoL products, permanent magnet recycling, etc.

Activities related to Output 2.2:

- Activity 2.2.1: creation of a platform to deepen and underpin the EU-Türkiye policy dialogue on critical raw material from secondary sources for the clean energy transition (making renewables truly renewable). This will also include:
 - o necessary scientific support in cooperation with TENMAK and other relevant Institutions
 - specific support for engagement of EU MS and Turkish stakeholders with clear focus on attraction of investments
 - o visibility, communication and outreach

3.3. Mainstreaming

Environmental Protection, Climate Change and Biodiversity

The Action addresses environmental protection, climate change, and biodiversity through various initiatives. In fact, the action tackles energy losses in Türkiye's electricity and increases the energy efficiency of the distribution network by adopting EU-standard live line maintenance technologies, reducing greenhouse gas emissions, and extending the lifespan of network components. Continuous monitoring and maintenance of these materials contribute to environmental protection.

Moreover, the action aims to achieve sustainable development by enhancing institutional capacity for sustainable resource management, particularly in recovering critical minerals from secondary sources. It includes raising awareness, developing technical expertise, and fostering cooperation through networks and partnerships. These initiatives align with the EU Green Deal, focusing on international cooperation, innovation in clean technologies, and transitioning to a circular economy.

Gender equality and empowerment of women and girls

As per OECD Gender DAC codes identified in section 1.1, this action is labelled as G0. Although this implies that the action is not relevant for gender equality, it will contribute to the objectives and the policies of 12th Development Plan (2024-2028) (NDP), putting equal opportunities between men and women as an integral part of its design, implementation, monitoring and evaluation.

In the 12th Development Plan (2024-2028) (NDP) "Action will be carried out for a gradual transition to increase the representation and participation of women, who constitute half of the population, in all decision-making mechanisms, including the public, private sector, politics, and at all levels of management." The improved equality of women's rights with those of men is explicitly emphasized in this phrase.

Category	Risks	Likelihood (High/ Medium/ Low)	Impact (High/ Medium / Low)	Mitigating measures
3-Risks related to people and the organisation	Loss of or inadequate support from critical personnel	Medium	High	Backup personnel are being prepared and recruited.
3-Risks related to people and the organisation	Participants who receive training are not familiar with the electrical distribution materials in the relevant EU country for AoS1	Medium	Low	Introduction to electrical materials to participants before and during the training.
1-Risks related to the external environment	Coordination deficiencies or delays with the organizations intended to provide know-how and technology transfer	Medium	Medium	Keeping bilateral relations up-to- date and dynamic

3.4. Risks and Assumptions

External Assumptions

- The effects of regional climate changes on live line maintenance operations will be taken into account when preparing the feasibility report;
- The Electricity Distribution Companies in the regions where the analysis for the Feasibility Report will be conducted shall provide the necessary data for the analysis to the consultant;
- The Electricity Distribution Companies will be willing to provide overall good quality services which includes, but not limited to, investments and planning of the distribution systems, maintain the necessary communication infrastructure for real-time monitoring of the energy flow, receiving and finalising the notifications regarding the system, and planning and implementation of preventive maintenance and repair services at all stages from the entry of the electricity into the distribution system to the consumption points in the distribution area covered by its license.
- Stakeholders will be willing to participate and cooperate throughout the actions;
- The EU parties will be willing to transfer know-how to the Turkish side

3.5. Indicative Logical Framework Matrix

Results	Results chain: Main expected results	Indicators	Baselines (2023)	Targets (2030)	Sources of data	Assumptions
Impact	To facilitate the harmonisation with EU standards and practices by promoting the Green Agenda in Türkiye's while fostering transition to a greener and low-carbon Energy.	1 Share of renewable energy sources in electricity generation 2 Completion rate of 27 actions under MENR's responsibility in Energy Efficiency 2030 Strategy and 2nd National Energy Efficiency Action Plan	1 %43.4 (2025) 2 %0 (2024)	1 %47.3 (2030) 2 %100 (2030)	1 MENR's reports (DG Energy Affairs) 2 MENR's reports (Directorate of Energy Efficiency and Environment- DEEE)	Not applicable
Outcome 1	Enhanced efficiency and reliability of the Turkish electricity distribution system through strengthened technical capacity and standardisation in line with EU practices	1.1 Reduced Average Interruption Duration Index of Turkish Electricity Distribution System	1.1 771 minutes	1.1 600 Minutes	1.1 EMRA's Annual Electric Market Sector Report	DSOs willing to engage with the project
Outcome 2	Improved capabilities in critical raw material recovery in Türkiye, particularly for renewable energy technologies achieved through collaboration and dialogue with the EU	2.1.1 Number of ongoing projects on recovery and recycle in TENMAK	2.1.1 3	2.1.1 5	2.1.1 Annual Reports (TENMAK)	Commitment from EU and TR stakeholders is in place
Output 1 related to Outcome 1	1.1 Improved TEDAS capacity for Live Line Maintenance through training of trainers in cooperation with relevant EU partners and alignment with practices and procedures of relevant EU Member States.	1.1.1 Number of trainers on LiveLine Maintenance1.1.2 Strategy and Roadmap forApplication of Live LineMaintenance in Türkiye	1.1.1 0 1.1.2 0	1.1.1 20 1.1.2 1	1.1.1 Project Reports 1.1.2 Project Reports	TEDAS commitment to retain the knowledge acquired
Output 2 related to Outcome 1	1.2 Conducted feasibility assessment and preparatory steps for Live Line Maintenance Center or facility in Türkiye in line with EU standards, norms and legislation	1.2.1 Presence of Design Projects of the Training Center for Live Line Maintenance	1.2.1 0	1.2.1 1	1.2.1 Project Reports	TEDAS commitment to consider a LL facility in Türkiye
Output 1 related to Outcome 2	2.1 Enhanced strategic management, sectoral assistance and technical capacity of TENMAK/NATEN in recovery of critical raw materials (CRM) from secondary resources (mining residues and EoL products), with	2.1.1 Availability of midterm strategy and roadmap for transition to circular economy in CRM market of Türkiye	2.1.1 No 2.1.2 No	2.1.1 Yes 2.1.2 Yes	2.1.1 Project Reports 2.1.2 Project Reports	TENMAK to make available the necessary staff and resources

	specific focus on renewable energy technologies (e.g. REEs, boron and lithium).	2.1.2 Presence of a design for a Model EoL Products Recovery				
		Facility for industry				
Output 2 related to Outcome 2	Established EU-Türkiye stakeholders' platform to foster the EU-Türkiye policy dialogue on the recovery of secondary critical raw materials for energy technologies.	2.2.1 Presence of a Platform for EU-Türkiye policy dialogue on secondary critical raw materials for energy technologies created and operational	2.2.1 No Platform is present	2.2.1 EU-Türkiye stakeholders' platform is created	2.2.1 Project Reports	Continuous political engagement from EU and Türkiye

4. IMPLEMENTATION ARRANGEMENTS

4.1. Financing Agreement

To implement this action, it is envisaged to conclude a financing agreement with the Republic of Türkiye.

4.2. Indicative Implementation Period

The indicative operational implementation period of this action, during which the activities described in section 3 will be carried out and the corresponding contracts and agreements implemented, is 72 months from the date of conclusion of the financing agreement.

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

4.3. 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 measures³.

4.3.1. Indirect Management with an IPA III beneficiary

This action will be implemented under indirect management by the Republic of Türkiye.

The managing authority responsible for the execution of the action is the National IPA Coordinator (NIPAC). The managing authority shall be responsible for legality and regularity of expenditure, sound financial management, programming, implementation, monitoring, evaluation, information, visibility and reporting of IPA III activities.

The managing authority shall rely on sectoral expertise and technical competence of the following intermediate bodies for policy management: Turkish Electricity Distribution Corporation (TEDAŞ); Turkish Energy, Nuclear and Mineral Research Agency (TENMAK). They shall ensure sound financial management of the action.

Budget implementation tasks such as calls for tenders, calls for proposals, contracting, contract management, payments and revenue operations, shall be entrusted to the following intermediate body for financial management: CFCU. It shall ensure legality and regularity of expenditure.

4.3.2. Changes from indirect to direct management (and vice versa) mode due to exceptional circumstances

In case part of the AoS2 cannot be implemented under Indirect Management with the Beneficiary Country,

 $^{^{3}}$ <u>EU Sanctions Map</u>. Please note that the sanctions map is an IT tool for identifying the sanctions regimes. The source of the sanctions stems from legal acts published in the Official Journal (OJ). In case of discrepancy between the published legal acts and the updates on the website it is the OJ version that prevails.

the creation of a platform to deepen and underpin the EU-Türkiye policy dialogue on critical raw material from secondary sources for the clean energy transition (making renewables truly renewable) may be implemented in direct management (procurement).

4.4. Scope of geographical eligibility for procurement and grants

The geographical eligibility 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 shall apply, subject to the following provisions.

The Commission's authorising officer responsible may extend the geographical eligibility based on urgency or of unavailability of services in the markets of the countries or territories concerned, or in other duly substantiated cases where application of the eligibility rules would make the realisation of this action impossible or exceedingly difficult (Article 28(10) NDICI-Global Europe Regulation).

4.5. Indicative Budget

Indicative Budget components	EU contribution (amount in EUR)
Methods of implementation – cf. section 4.3	
Outcome 1: Enhanced efficiency and reliability of the Turkish electricity distribution system through strengthened technical capacity and standardisation in line with EU practices, composed of	2 100 000
Indirect management with the Republic of Türkiye – cf. section 4.3.1, and	2 100 000
Outcome 2: Improved Türkiye's capabilities in recovering critical raw materials, particularly for renewable energy technologies in collaboration and dialogue with the EU, composed of	2 700 000
Indirect management with the Republic of Türkiye – cf. section 4.3.1	2 700 000
Indirect management with the Republic of Türkiye – cf. section 4.3.1	4 800 000
Evaluation – cf. section 5.2 Audit – cf. section 5.3	may be covered by another Decision
Strategic Communication and Public Diplomacy – cf. section 6	will be covered by another Decision
Totals	4 800 000

4.6. Organisational Set-up and Responsibilities

The Managing Authority (MA) in the field of Energy is the National IPA Coordinator (NIPAC). The IBPMs of the activities are TEDAŞ and TENMAK.

Budget implementation tasks such as calls for tenders, calls for proposals, contracting, contract management, payments and revenue operations, shall be entrusted to the following intermediate body for financial management (IBFM): CFCU.

Each AoS defined in this action document will establish its management units for a smooth implementation of the activities. Day-to-day management and coordination of the activities will be carried out by the Action Coordination Units (ACU).

A Steering Committee (SC) will be established for each activity and will be mainly composed of the representatives of the MA, IBPMs, IBFM, Ministry of Energy and Natural Resources, the stakeholders of the activities, National IPA Coordinator (NIPAC), Presidency of Strategy and Budget as well as the Delegation of the European Union to Türkiye (EUD). The SC will act as the advisory body that will provide high-level strategic guidance and oversight on activity implementation. SC will be gathered at regular intervals and additionally whenever deemed necessary.

Furthermore, a Sectoral Monitoring Committee (SMC) which is one of the highest decision taking platforms in terms of effective management of the funds provided by the EU, will meet regularly to solve the problems encountered during the programming, implementation and monitoring and give recommendations for effective utilisation of funds. SMC will be mainly composed of the representatives of the Commission/EU Delegation to Türkiye, MA, IBPMs, IBFM, the stakeholders of the activities, the Presidency of Strategy and Budget, NIPAC and if necessary relevant line ministries especially.

The functions of Sectoral Monitoring Committee are as follows:

- Review at each meeting the progress made towards achieving the specific targets of the Programme based on the basic documents.
- Examine at each meeting the results of implementation, particularly the achievement of the targets set for each priority axis and measures and interim evaluations.
- Examine the sectorial annual and final reports on implementation.

SMC will meet at least twice a year at the initiative of NIPAC. The issues to be followed up will cover the period between two Committee meetings and the Committee Members will be informed about the current situation with regards to those issues.

As part of its prerogative of budget implementation and to safeguard the financial interests of the Union, the Commission may participate in the above governance structures set up for governing the implementation of the action.

The Managing Authority and IBPMs/Co-Beneficiaries/Stakeholders of the activities are given below;

Outcomes	Managing Authority	IBPM / Co-Beneficiaries / Stakeholders
Outcome 1	NIPAC	IBPM: Turkish Electricity Distribution Corporation (TEDAS)
Outcome 2	NIPAC	IBPM: Turkish Energy, Nuclear and Mineral Research Agency (TENMAK)

5. PERFORMANCE MEASUREMENT

5.1. 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. Every report shall provide an accurate account of implementation of the action, 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 log frame matrix (for project modality) and the partner's strategy, policy or reform action plan list (for budget support). 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).

Roles and responsibilities for data collection, analysis and monitoring:

is identified in the most recent EC guidelines.

- Monitoring tasks undertaken by the implementing partners/ beneficiary country, under the coordination of NIPAC Office, and NAO Office for financial monitoring, will consist of collecting and analysing data aiming at informing on the use of resources and progress towards planned results, feeding the management of the action's decision-making processes.
- Monitoring tasks undertaken by the EU Delegation shall complement the implementing partners'/ beneficiary country's monitoring system, especially in key moments of the action cycle. It will also support follow-up of recommendations stemming out of external monitoring and will be used for informing EU management. This monitoring could take different forms and methodologies (meetings with implementing partners, action steering committees, on the spot checks ...), to be decided based on specific needs and resources at hand. Reporting will be done according to methodologies and tools included in DG NEAR guidelines on linking planning/programming, monitoring and evaluation, including the use of standard checklists.

Both types of internal monitoring are meant to inform and provide support to external monitoring:

• External monitoring / Results Oriented Monitoring (ROM) The Commission and/or NIPAC may undertake additional project monitoring in line with the European Commission rules and procedures set in the Financing Agreement through independent consultants recruited directly by the Commission/NIPAC for independent monitoring reviews (or recruited by the responsible agent contracted by the Commission/NIPAC for implementing such reviews). These reviews might be composed of monitoring of the action, results data collection or any other task that

The Steering Committees will be established at activity level in order to steer the implementation of activities, achievement of results against indicators in the action document, to discuss monitoring findings (including ROM findings) and agree on corrective actions as appropriate. The Steering Committees will be composed of the representatives of end beneficiaries, Lead Institution, NIPAC Office, Contracting Authority and the EU Delegation.

5.2. Evaluation

Having regard to the nature of the action, evaluation(s) may be carried out for this action or its components by the beneficiary via independent consultants. The evaluations will be carried out as prescribed by the DG NEAR guidelines on linking planning/programming, monitoring and evaluation.

The evaluation reports shall be shared with the partner country and other key stakeholders following the best practice of evaluation dissemination⁴. 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.

5.3. Audit and Verifications

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 audit or verification assignments for one or several contracts or agreements.

6. STRATEGIC COMMUNICATION AND PUBLIC DIPLOMACY

All entities implementing EU-funded external actions have the contractual obligation to inform the relevant audiences of the Union's support for their work by displaying the EU emblem and a short funding statement as appropriate on all communication materials related to the actions concerned. To that end they must comply with the instructions given in the 2022 guidance document <u>Communicating and raising EU visibility</u>: <u>Guidance for external actions</u> (or any successor document).

This obligation will apply equally, regardless of whether the actions concerned are implemented by the Commission, the partner country, service providers, grant beneficiaries or entrusted or delegated entities such as UN agencies, international financial institutions and agencies of EU Member States. In each case, a reference to the relevant contractual obligations must be included in the respective financing agreement, procurement and grant contracts, and contribution agreements.

7. SUSTAINABILITY

TEDAŞ, focusing on enhancing electricity distribution networks with shorter outage durations, integrates economic, environmental, and social impacts into sustainable business practices. Following completion of the action, TEDAŞ plans to conduct live line maintenance training and certification at its upcoming training centre. These efforts align with Türkiye-specific adaptations of EU-mandated procedures facilitated by the Ministry of Energy and Natural Resources (MENR). The institutional capacity will be bolstered through training, alongside the promotion of live line maintenance guidelines and procedures. TEDAŞ will manage certificate renewals and certify staff periodically, with audits ensuring sustained live line maintenance in the electricity distribution sector.

The supply chain complexity of Rare Earth Elements (REEs) and critical raw minerals underscores the importance of recycling and reusing End of Life (EoL) materials to develop Türkiye's REEs and critical raw minerals economy. This holistic approach significantly enhances Türkiye's sustainability in clean energy and recycling sectors, contributing to global efforts for a greener and more sustainable future.

The sustainability of gained knowledge and skills from these actions will be safeguarded for the long term. Post-action policies and guidelines by the Ministry of Energy and Natural Resources will ensure the continuity of action results. European Union support and guidance will be pivotal in maintaining sustainability standards. Feasibility reports and legislative recommendations resulting from these actions will guide Türkiye's energy strategy towards reliability and security.

⁴ See best practice of evaluation dissemination