



# INNOVATIVE CARBON RESOURCE APPLICATION FOR ENERGY TRANSITION (iCRAFT) Annual Report 2023

[Abstract](#)

Annual Report for 2023 activities, resulting on a mitigation of 6,3 MtCO<sub>2</sub>e

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**MONITORING REPORT**

<b>Title of the project/program activity</b>	Innovative Carbon Resource Application for Energy Transition (iCRAFT)
<b>Title of methodology applied</b>	Methodology and model for ex-post quantification of CO <sub>2</sub> emissions impact of end-user energy pricing
<b>Version number of this monitoring report</b>	2.1
<b>Completion date of this monitoring report</b>	18.02.2025
<b>Duration of this monitoring period</b>	January 1, 2023 – December 31, 2023
<b>Monitoring report number for this monitoring period</b>	2
<b>Host Party</b>	Uzbekistan
<b>Sectoral scopes</b>	Energy sector (gas and electricity)
<b>Amount of GHG emission reductions achieved by the project activity in this monitoring period</b>	Quantity of emission reductions achieved:
	6,328,464 tCO <sub>2e</sub>
<b>Amount of GHG emission reductions estimated ex ante for this monitoring period</b>	15,881,592 tCO <sub>2e</sub>

## Section 1. Description of project activity

### 1.1 General description of project activity

The project aims to support the implementation of energy reforms in Uzbekistan by mobilizing climate finance payments for results-based emission reductions to address the highest-priority reform needs.

Emission reductions are expected to occur as a result of the change in end-user energy demand stemming from the gradual adjustment in electricity and natural gas tariffs. The methodological and modelling approach used to quantify emission reductions from energy pricing policy reform is designed to analyse the effects of tariff reform on end-user energy demand. The model evaluates the emission reductions that can be achieved through the adoption of energy pricing policies by comparing emissions from the observed scenario (“*Withpolicy*” scenario) with the counterfactual baseline scenario (“*Withoutpolicy*” scenario). The “*Withoutpolicy*” scenario is generated to simulate what would have happened in the absence of energy pricing policies. The emission reductions resulting from changes in electricity and gas tariffs are quantified through the Uzbekistan Energy Policy MRV Model<sup>1</sup>.

### 1.2 Location of project activity

Uzbekistan, countrywide.

### 1.3 Crediting period duration

The crediting period of the project is 2021-2027.

### 1.4 Description of implemented project activity

Since 2017, which marked the beginning of accelerated tariff adjustments, both electricity and natural gas tariffs have been steadily increasing. The tariffs were frozen in 2020 and 2021 to mitigate the impact of COVID-19. The most recent tariff adjustments were implemented in 2022 and 2023. Table 1 below describes the ex-ante projected tariff increase, as well as the actual increase<sup>2</sup>.

Table 1. Projected versus actual tariff increase for 2022-2030 period<sup>3</sup>

		2022	2023	2024	2025	2026	2027	2028	2029	2030
Electricity	Ex-ante estimates	35,3%	26,0%	9,8%	6,9%	5,0%	5,0%	5,0%	5,0%	5,0%
	<b>Actual</b>	<b>25,0%</b>	<b>30,5%</b>							
Gas	Ex-ante estimates	42,2%	29,7%	9,8%	6,9%	5,0%	5,0%	5,0%	5,0%	5,0%
	<b>Actual</b>	<b>11,8%</b>	<b>44,7%</b>							
CPI	Ex-ante estimates	11,4%	11,2%	9,8%	6,9%	5,0%	5,0%	5,0%	5,0%	5,0%
	<b>Actual</b>	<b>12,3%</b>	<b>8,7%</b>							

Tariff reforms were paused in 2020-2021 due to the impacts of COVID-19, and in May 2022 the Government of Uzbekistan adjusted electricity and gas tariffs only for selected non-residential customers, phasing tariff increases to allow adaptation among users. The following year, in October

<sup>1</sup>The Excel based MRV model (also referred to MRV Model) is iCRAFT\_UZB\_MRV. For 2023 verification the model has been updated to version 2, for the second monitoring report of the period.

<sup>2</sup> 2022-2023 Energy Tariff Increases.xlsx

<sup>3</sup> Actual values consider the average increase in the year based on the type of consumer and total consumption.

2023, tariff adjustments applied to both residential and non-residential consumers, resulting in a significant increase compared to 2022.

## **1.5 Post-validation changes**

### **1.5.1 Temporary deviations from the validated monitoring plan, applied methodologies, standardized baselines or other tools and models applied**

There have been no temporary deviations in this Annual Report

For 2021-2022 Annual Report, no ERs claimed for 2021 period (2021 GHG emissions under the “Withpolicy” scenario considered to be the same as under the “Withoutpolicy” scenario).

### **1.5.2 Corrections**

There have been no corrections.

### **1.5.3 Changes to the start date of the crediting period**

There have been no changes to the crediting period.

### **1.5.4 Inclusion of monitoring plan**

The monitoring plan is included in the validated CPDD.

### **1.5.5 Permanent changes to the validated monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other tools and models used**

There have been no permanent changes to the monitoring plan, applied methodology, or the model.

### **1.5.6 Changes to project design**

There have been no changes to the project design.

## Section 2. Description of monitoring system

For information on data collection and procedures for MRV please refer to iCRAFT Project Operations Manual<sup>4</sup>.

### 2.1 Data and parameters fixed ex ante

All historical data prior to 2022 are fixed ex-ante and available under the Uzbekistan Energy Policy MRV Model .(MRV Model) The following table includes a description of all relevant parameters fixed ex-ante.

Parameter	Description [and unit]	Source(s) of data
Gross Domestic Product (GDP)	Gross domestic product in constant 2021 [UZS] [table 6 “Library”. MRV model]	World Development Indicators (World Bank)
Gross Domestic product (GDP) growth	Annual GDP growth as percentage [%] [table 6 “Library”. MRV model]	World Development Indicators (World Bank)
Consumer Price Index mid period	Monthly index with 2021=1 as reference point [units] [table 50 “Library”.MRV model]	World Economic Outlook (WEO) World Development Indicators (World Bank) <a href="https://stat.uz/en/official-statistics/prices-and-indexes">https://stat.uz/en/official-statistics/prices-and-indexes</a>
Inflation rate	Local annual inflation as percentage [%] [table 6 “Library”. MRV model]	World Development Indicators (World Bank)
Exchange Rate	Exchange rates between local and US currency as Nominal UZS / Nominal US dollar on annual basis [units] [table 6 “Library”. MRV model]	<a href="https://www.oanda.com/">https://www.oanda.com/</a>
Carbon Price	UZS/tCO2 [tab “CarbonPrice.1”. MRV model]	Assumed to be zero
Elasticity	Short-run and long-run elasticity for electricity, natural gas and heating oil for residential and non-residential users. [table 33 “Library”. MRV model]	WB Project Appraisal Document (PAD) <sup>5</sup>
Residential Electricity Consumption	Annual final electricity consumption for residential consumers [GWh] [table 48 “Library”. MRV model]	MEF; SA <sup>6</sup>

<sup>4</sup> Annex-1 iCRAFT POM V3.pdf

<sup>5</sup> <https://documents1.worldbank.org/curated/en/099062723101015596/pdf/P18043202a5c110109330043ce5985bae0>

<sup>6</sup> <https://stat.uz/en/>

Non-residential Electricity Consumption	Annual final consumption for non-residential consumers [GWh] [table 48 "Library".MRV model]	MEF; SA
Residential Natural Gas Consumption	Annual final electricity consumption for residential consumers [GWh] [table 48 "Library". MRV model]	MEF; SA
Non-residential Natural Gas Consumption	Annual final consumption for non-residential consumers, excluding transport and heating sectors [GWh]. [table 48 "Library". MRV model]	MEF; SA
Exogenous Energy Intensity Improvement	Incremental EE improvement resulting from exogenous actions, such as targeted programs [% per year] [tab "FC.EnergyIntensity". MRV model]	Assumed to be zero for all sectors
Endogenous Energy Intensity Improvement	Incremental EE improvement resulting from the subsidy removal policy [% per year] [tab "FC.EE.1". MRV Model]	Assumed to be zero for all sectors
Total Net Energy for Generation	Actual and expected electricity generation [GWh] [table 1 "Library". MRV model]	MEF; SA; Master plan 2020-20307 (for forecast estimates)
Total Energy Sales	Actual and expected electricity sales [GWh] [table 1 "Library". MRV model]	MEF; SA; Master plan 2020-20308 (for forecast estimates)
Average losses	Actual and expected electricity loses [% of sales] [table 1 "Library". MRV model]	Calculated based on actual and projections up to 2033
Off grid Generation	Amounts of off-grid generation assumed to be available in Uzbekistan [table 37 "Library". MRV model]	SA for 2012-2020 plus estimates for 2021-20339
Electricity Imports	Annual volume of electricity imports [GWh] [table 8 "Library". MRV model]	MEF; SA
Electricity Exports	Annual volume of electricity exports [GWh] [table 8 "Library". MRV model]	MEF; SA

<sup>7</sup> <https://minenergy.uz/en/lists/view/77>

<sup>8</sup> <https://minenergy.uz/en/lists/view/77>

<sup>9</sup> Data assumed constant from 2020 onwards.

Capacity of Imports/Exports	Annual capacity for imports/exports with each client/country [GWh] [table 8 “Library”. MRV model]	MEF; Assumed constant (3900 MW)
Planned Reserve Margin	Extra supply available above expected peak demand [%] [table 30 “Library”. MRV model]	Calculation, based on Uzbekistan load demand curve 2019 (20%)
Plant level data: Plant Type / Subtype Technology First year of operation Capacity  Capital Cost Variable op. costs Fixed op. cost Capacity Factor Heat Rate Maximum available capacity  CO <sub>2</sub> emissions rate	Units: [descriptive] [descriptive] [year] [MW] [tab “PS.PlantList”. MRV Model”]  [US\$/kW] [US\$/kW] [US\$/kW] [%] typical [MJ/MWh] [MW] [table 17 “Library”. MRV model]  [tCO <sub>2</sub> /MWh] [table 19 “Library”. MRV model]	Sources: ME, Uzhydropower, and Thermopower JSC.  Lazar’s levelized cost of energy analysis <sup>10</sup>  IPCC 2006 based on fuel
Electricity Tariff for residential and non-residential consumers	Nominal monthly average end-user Tariff [UZS/kWh] [table 49 “Library”. MRV model]	ME, Uzbekenergo
Natural Gas Tariff for residential and non-residential consumers	Nominal monthly average end-user Tariff [UZS/kWh] [table 49 “Library”. MRV model]	ME, Uzbekneftegaz

## 2.2 Data and parameters monitored

The project uses the Uzbekistan Energy Policy MRV Model<sup>11</sup> developed by TCAF specifically for iCRAFT for data collection and estimation of emission reductions.

Changes to main variables, such as tariffs, consumption, and power load curve, are updated in specific sections of the MRV model. For variables not updated, the model uses as default values the data entered originally in the model at the time of validation.

The following table includes a description of relevant parameters monitored during the current period.

<sup>10</sup> <https://www.lazard.com/media/sptifats/lazards-levelized-cost-of-energy-version-150-vf.pdf>

<sup>11</sup> Version 2 of the MRV model for 2023 has been provided to the verifier as part of the verification package, along with requested supporting documentation.

Parameter	Description [and unit]	Source of data	Updated in this report [YES/NO]
Gross Domestic Product	Gross domestic product in constant 2021 [UZS]	World Economic Outlook (IMF) <sup>12</sup> ; World Development Indicators (World Bank)	YES
Gross Domestic product (GDP) growth	Annual GDP growth as percentage [%]	World Economic Outlook (IMF); World Development Indicators (World Bank)	YES
Consumer Price Index mid period	Monthly index with 2021=1 as reference point [units]	World Economic Outlook (IMF); World Development Indicators (World Bank); <a href="https://stat.uz/en/official-statistics/prices-and-indexes">https://stat.uz/en/official-statistics/prices-and-indexes</a> <a href="https://nsdp.stat.uz/">https://nsdp.stat.uz/</a>	YES for 2023
Inflation rate	Local annual inflation as percentage [%]	World Economic Outlook (IMF); World Development Indicators (World Bank)	YES
Exchange Rate	Exchange rates between local and US currency as Nominal UZS / Nominal US dollar on annual basis [units]	<a href="https://www.oanda.com/">https://www.oanda.com/</a>	YES
Carbon Price	UZS/tCO <sub>2</sub>	Assumed to be zero	NO
Elasticity	Short-run and long-run elasticity for electricity, natural gas and heating oil for residential and non-residential users.	WB Project Appraisal Document (PAD) <sup>13</sup>	NO (update expected for 2025 <sup>14</sup> )
Residential Electricity Consumption	Annual final electricity consumption for residential consumers [GWh]	MEF; Statistics Agency <sup>15</sup>	YES for 2023
Non-residential Electricity Consumption	Annual final consumption for non-residential consumers [GWh]	MEF; Statistics Agency	YES for 2023
Residential Natural Gas Consumption	Annual final electricity consumption for residential consumers [GWh]	MEF; Statistics Agency	YES for 2023
Non-residential Natural Gas Consumption	Annual final consumption for non-residential consumers, excluding transport and heating sectors [GWh].	MEF; Statistics Agency	YES for 2023

<sup>12</sup> <https://www.imf.org/en/Publications/WEO/weo-database/2024/October>

<sup>13</sup> <http://documents.worldbank.org/curated/en/099062723101015596/P18043202a5c110109330043ce5985bae0>

<sup>14</sup> The initial analysis was completed in 2022. Subject to data availability, a new analysis is expected by 2025.

<sup>15</sup> <https://stat.uz/en/>

Plant level data: Plant Type / Subtype Technology First year of operation Capacity	Units: [descriptive] [descriptive] [year] [MW]	Sources: ME, Uzhydropower, and Thermopower JSC <sup>16</sup> .	YES
Capital Cost Variable op. costs Fixed op. cost Capacity Factor Heat Rate Maximum available capacity	[US\$/kW] [US\$/kW] [US\$/kW] [%] typical [MJ/MWh] [MW]	Lazar's levelized cost of energy analysis <sup>17</sup>	NO
CO <sub>2</sub> emissions rate	[tCO <sub>2</sub> /MWh]	IPCC 2006 based on fuel	NO
Power Sector Load Curve	Hourly load for the verified period [MW]	ME	YES for 2023
Electricity Tariff for residential consumers	Nominal monthly average end-user Tariff [UZS/kWh]	ME, Uzbekenergo	YES for 2023
Electricity Tariff for non-residential consumers			YES for 2023
Natural Gas Tariff for residential consumers	Nominal monthly average end-user Tariff [UZS/MJ]	ME, Uzbekneftegaz	YES for 2023
Natural Gas Tariff for non-residential consumers			YES for 2023

Please refer to the Uzbekistan Energy Policy MRV Model for the specific values of these variables.

Four types of data are collected:

1. Data that documents macroeconomic variables and forecasts.
2. Data that documents the end-user demand for electricity and natural gas (Final Energy Consumption) by sector under the coverage of the policy in question.
3. Data that documents the current operation of the electricity supply system under the coverage of the policy in question and for all sectors and client classes.
4. Data that documents the change in policy that occurred (change in the tariff levels)

<sup>16</sup> 2023\_Elektr stansiyalar\_Updated\_2024.10.18.xlsx

<sup>17</sup> <https://www.lazard.com/media/sptfats/lazards-levelized-cost-of-energy-version-150-vf.pdf>

## Electricity system-level data

To capture any changes in electricity demand, data to be collected on the real operation of all the generating units involved, including any constraints historically or currently placed on their operation.

<b>Electricity System-level data (Electricity Imports, Exports and Generation - transformation from other energy sources)</b>			
<b>Annual system level data required</b>	<b>Unit:</b>	<b>historical data for ex-post</b>	<b>forecast data for ex-ante</b>
Total System Generation	<i>MWh</i>	[Annual]	[Annual_Est]
Hourly generation (raw data for load-duration analysis)	<i>MWh</i>	[Hourly]	[Hourly_Est]
System T&D Loss Rate	%	[Annual]	[Annual_Est]
Off-Grid Capacity	<i>MW</i>	[Annual]	[Annual_Est] with specific data from known planned plants and assumption-driven estimate for other plants /years
Off-Grid Generation	<i>MWh</i>	[Annual]	[Annual_Est] with specific data from known planned plants and assumption-driven estimate for other plants /years
<b>Imported Electricity</b>			
Imported Energy	<i>MWh</i>	[Annual]	[Annual_Est]
Imported Capacity	<i>MW</i>	[Annual]	[Annual_Est]
<b>Exported Electricity</b>			
Exported Energy	<i>MWh</i>	[Annual]	[Annual_Est]
Exported Capacity	<i>MW</i>	[Annual]	[Annual_Est]
Electricity price	<i>UZS/MWh</i>	[Annual] with cells to capture tariffs by customer group/sector as appropriate	[Annual_Est] with cells to capture tariffs by customer group/sector as appropriate
Natural Gas Price - Delivered	<i>UZS/MJ</i>	[Annual]	[Annual_Est]
<b>Electricity production, tier 1 or tier 2 inventory data</b>			
Total Electricity generated	<i>MWh</i>	[Annual]	
Natural Gas Consumed	<i>MJ</i>	[Annual]	
Fuel Oil Consumed (by oil grade if appropriate)	<i>MJ</i>	[Annual]	
Coal Consumed	<i>MJ</i>	[Annual]	
Carbon Emissions per period from Natural Gas	<i>tonne CO2</i>	[Annual_Calc]	

### Electricity System-level data (Electricity Imports, Exports and Generation - transformation from other energy sources)

Annual system level data required	Unit:	historical data for ex-post	forecast data for ex-ante
Carbon Emissions per period from Fuel Oil	<i>tonne CO2</i>	[Annual_Calc]	
Carbon Emissions per period from Coal	<i>tonne CO2</i>	[Annual_Calc]	

### Electricity generating units data

Data required for each generating unit	Unit:	historical data for ex-post	forecast data for ex-ante
Unit name	<i>Text</i>	[Descriptive]	[Descriptive] for known planned plants only
Unit ID number	<i>Number</i>	[Descriptive]	[Descriptive] for known planned plants only
Ownership		[Descriptive]	[Descriptive] for known planned plants only
Transmission Zone name or number	<i>Text</i>	[Descriptive]	[Descriptive] for known planned plants only
Unit maximum capacity	<i>MW</i>	[Descriptive]	[Descriptive] for known planned plants or [Descriptive_w/Default] based on studies and projections
Online Date	<i>Year</i>	[Descriptive]	[Descriptive]
Retirement Date	<i>Year</i>	[Descriptive] when known, or [Descriptive_w/Default] based on expected life	[Descriptive_w/Default] based on expected life
Emission Controls	<i>Name of controls (e.g., SCR, FGD, scrubber)</i>	[Descriptive_w/Default]	[Descriptive_w/Default]
Unit fuel type	<i>Fuel (e.g., NG, oil, solar PV, solar thermal, hydro)</i>	[Descriptive]	[Descriptive]
Fuel source	<i>Source (e.g., pipeline, rail shipments)</i>	[Descriptive_w/Default]	[Descriptive_w/Default]
Variable O&M Costs	<i>UZS/MWh</i>	[Annual_w/Default]	[Annual_Est_w/Default]
Fixed O&M Costs	<i>UZS/MW-year</i>	[Annual_w/Default]	[Annual_Est_w/Default]

Data required for each generating unit	Unit:	historical data for ex-post	forecast data for ex-ante
Expected Annual Capacity Factor	%	[Annual_w/Default]	[Annual_Est_w/Default]
Expected Annual Availability or Forced Outage Rate	%	[Annual_w/Default]	[Annual_Est_w/Default]
Annual Capital Requirements (if additional from FOM)	<i>UZS/MW-year</i>	[Annual_w/Default]	[Annual_Est_w/Default]
Ramp Rate	<i>MW/hr</i>	[Annual_w/Default]	[Annual_Est_w/Default]
Minimum Runtime	<i>hrs</i>	[Annual_w/Default]	[Annual_Est_w/Default]
Minimum Off Time	<i>hrs</i>	[Annual_w/Default]	[Annual_Est_w/Default]
Maximum run time or other operating constraints	<i>hrs</i>	[Annual_w/Default]	[Annual_Est_w/Default]
Generation	<i>MWh</i>	[Subannual]	
Capacity Factor	%	[Subannual_Calc]	
Fuel or Heat Input	<i>MJ</i>	[Subannual]	
Heat Rate	<i>MJ/MWh</i>	[Subannual]	
CO <sub>2</sub> Emission Rate from energy	<i>tCO<sub>2</sub>/MWh</i>	[Subannual_Calc]	
CO <sub>2</sub> Emission Rate - non-energy sources	<i>tCO<sub>2</sub>/MWh</i>	[Subannual]	
Carbon Emissions per period from energy	<i>tCO<sub>2</sub></i>	[Subannual_Calc] with degradation factor	
Carbon Emissions per period: non-energy sources	<i>tCO<sub>2</sub></i>	[Subannual_Calc] with degradation factor	

### Total final consumption data

Annual system level data required	Unit:	historical data for ex-post	forecast data for ex-ante
<b>Residential</b>			
Electricity	<i>MWh</i>	[Annual]	[Annual_Est]
Natural Gas	<i>MJ</i>	[Annual]	[Annual_Est]
<b>Industry</b>			

Electricity	<i>MWh</i>	[Annual]	[Annual_Est]
Natural Gas	<i>MJ</i>	[Annual]	[Annual_Est]
<b>Commercial and Public Services</b>			
Electricity	<i>MWh</i>	[Annual]	[Annual_Est]
Natural Gas	<i>MJ</i>	[Annual]	[Annual_Est]
<b>Other (Agricultural, Forestry, Fishing, Non-specified)</b>			
Electricity	<i>MWh</i>	[Annual]	[Annual_Est]
Natural Gas	<i>MJ</i>	[Annual]	[Annual_Est]

## End-user energy pricing data

Consistent monitoring and collection of data will be done on the end-user demand for energy (Final Energy Consumption) by sector<sup>18</sup> and by fuel type and in different tariff brackets. Data for 30 most recent years is used to develop local elasticities, and then data is required for each historic year in the modelling period, updated yearly.

Annual system level data required	Unit:	historical data for ex-post	forecast data for ex-ante
<b>Residential</b>			
Electricity	<i>UZS/MWh</i>	[Annual]	[Annual_Est]
Natural Gas	<i>UZS/MJ</i>	[Annual]	[Annual_Est]
<b>Industry</b>			
Electricity	<i>UZS/MWh</i>	[Annual]	[Annual_Est]
Natural Gas	<i>UZS/MJ</i>	[Annual]	[Annual_Est]
<b>Commercial and Public Services</b>			
Electricity	<i>UZS/MWh</i>	[Annual]	[Annual_Est]
Natural Gas	<i>UZS/MJ</i>	[Annual]	[Annual_Est]
<b>Other (Agricultural, Forestry, Fishing, Non-specified)</b>			
Electricity	<i>UZS/MWh</i>	[Annual]	[Annual_Est]
Natural Gas	<i>UZS/MJ</i>	[Annual]	[Annual_Est]

## Macroeconomic variables and forecasts

Econometric Data to define country-specific elasticities	Unit:	Historical data for ex-post
Population	million people	30 year's annual data. Cite source
Urbanization	%	30 year's annual data. Cite source
Household electrification of urban and rural households	%	30 year's annual data. Cite source
Ave. Household size (urban and rural)	people/HH	30 year's annual data. Cite source

<sup>18</sup> Residential, Commercial, Public Services, Industry, Agriculture, Forestry, and Fishing.

Econometric Data to define country-specific elasticities	Unit:	Historical data for ex-post
GDP (in UZS)	US\$ million	30 year's annual data. Cite source
Exchange rate	UZS/USD	
Deflator to USD(2010)		
Income per capita (in constant USD)	US\$/yr	30 year's annual data. Cite source
Electricity price (current LCU and constant USD)	US\$/MJ	30 year's annual data. Cite source
Heat price (current LCU and constant USD)	US\$/MJ	30 year's annual data. Cite source
Coal price (current LCU and constant USD)	US\$/MJ	30 year's annual data. Cite source
Natural Gas price (current LCU and constant USD)	US\$/MJ	30 year's annual data. Cite source
Gasoline price (current LCU and constant USD)	US\$/MJ	30 year's annual data. Cite source
Diesel price (current LCU and constant USD)	US\$/MJ	30 year's annual data. Cite source
Other Oil Products (by oil grade if appropriate)	US\$/MJ	30 year's annual data. Cite source
Renewable (by type if appropriate)	US\$/MJ	30 year's annual data. Cite source
Electricity total consumption	MWh	30 year's annual data. Cite source
Heat total consumption	MJ	30 year's annual data. Cite source
Coal total consumption	MJ	30 year's annual data. Cite source
Natural Gas total consumption	MJ	30 year's annual data. Cite source
Gasoline total consumption	MJ	30 year's annual data. Cite source
Gasoline total consumption	MJ	30 year's annual data. Cite source
Diesel total consumption	MJ	30 year's annual data. Cite source
Other Oil Products (by oil grade if appropriate)	MJ	30 year's annual data. Cite source
Heating and cooling degree days		
Heating degree-days	deg-day	30 year's annual data. Cite source
Cooling degree-days	deg-day	30 year's annual data. Cite source

## Roles and Responsibilities

Per Presidential Decree No. 271<sup>19</sup>, a Project Implementation Unit (PIU), has been established under the MEF for the overall coordination and day-to-day implementation of the Project. The PIU is also responsible for monitoring and evaluating results achieved under the Project, to track the implementation progress of the Project activities and key results indicators. To fulfil the coordination role, the following are the roles of the PIU staff members to be filled<sup>20</sup>:

- Head of the PIU  
Responsible for:
  - The overall work done by the PIU;
  - Coordination amongst the various PIU staff/specialists;

<sup>19</sup> <https://lex.uz/docs/6561851>

<sup>20</sup> See “iCRAFT Division Regulation.pdf” and “Job Descriptions iCRAFT.pdf” for more details.

- The overall monitoring and evaluation of the Project progress, results achieved under each project components;
- Reporting to the Director of the CGEP;
- Coordination and cooperation of work with the relevant World Bank's team(s);
- Preparing financial documentation on project financing and other expenses for the Director of the CGEP.
- Financial Management Specialist  
Responsible for:
  - Compiling project proposals, financing iCRAFT payments, from national stakeholders;
  - Preparing a draft of annual reports on the use of the iCRAFT funds for project financing;
  - Bookkeeping all financial transactions under the PIU's activity.
- Reporting coordinating specialist  
Responsible for:
  - Coordinating the Annual Report preparation and consolidating inputs into the final Annual Report;
  - Focal point for the annual verification process;
  - Clearing all the input data, ensuring the accuracy and completeness of collected data, and approving its use in the calculation of results that will be published in the Annual Reports.
- Social and communication specialist  
Responsible for:
  - Fulfilling Annual Reporting requirements per the Environmental and Social Commitment Plan. managing the planned communication campaign, and broader stakeholder engagement including a feedback mechanism as per the Stakeholder Engagement Plan.
- Energy Sector Specialist  
Responsible for:
  - Collecting all data required by the MRV model (ex-post);
  - Assisting in updating data and the MRV model.
- Climate Finance Specialist  
Responsible for:
  - The maintenance and update of the MRV model.
- QA/QC, data archive specialist  
Responsible for:
  - Maintaining all data collected and reported in a database for safekeeping, verifications and audits.

## **Quality Control and Quality Assurance Procedures<sup>21</sup>**

To ensure a successful reporting and verification of emission reductions, all data used for the calculation of ERs will be referenced, stored, and accessed in a way that ensures a high level of reliability. Key aspects include, among others, clear traceability of data sources, appropriate measures for storing and accessing data as well as back-up procedures to avoid any information loss.

The main objectives of quality control and quality assurance procedures are to:

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<sup>21</sup> Annex-2 iCRAFT\_QA\_QC\_Procedure\_V2.pdf

- Ensure the implementation of monitoring and reporting systems that support the process of issuing emission reductions;
- Ensure the integrity of stored data and calculations;
- Facilitate all monitoring, reporting and verification processes;
- Promptly report any deviations that may affect expected outcomes.

Procedures for QA/QC activities include the use of several tools, such as:

1. Summary of Monitoring records (SMR)
2. QA/QC checklist
3. Training
4. Backup procedures
5. Spot checks and internal pre-audits.

### ***Summary of Monitoring Records (SMR)***<sup>22</sup>

All monitoring records and related evidence for the calculation of ERs and all other variables to be included in the Annual Report should be stored. Events impacting any of the reported variables and/or calculations shall also be recorded and stored.

A unique document, often called “summary of monitoring records” (SMR)– in a spreadsheet format – shall present a synthetic view of information which is relevant for the reporting, calculations and verification. The document should include:

Variables and Reporting Indicators

- Variables used in MRV model: records used to calculate emissions reductions, including
- Transformative Change Indicators
- Sustainable Development Co-benefits Indicators
- Environmental and Social Reporting Indicators

Together with the variables and indicators, the SMR shall include information on:

- i. If value of the variable/indicator is reported or calculated;
- ii. The source of information (list of documents evidence for reported info, intermediary calculation files for calculated info);
- iii. Responsible entity for the accuracy of the information (evidence owner/source).

### ***QA/QC Checklist***

The QA/QC checklist is a control document managed by the Reporting Coordinator and QA/QC and Data Archive Specialist to ensure that:

- All information required for the Annual Reports is reported in the SMR.
- Supporting documents and evidence are available in the monitoring records data base for all variables and reporting indicators
- Training/Accreditation information is collected.
- Relevant data issues are reported, and evidence are collected.

The frequency of data check is set-up in line with the frequency of data availability.

### ***Backup procedures***<sup>23</sup>

<sup>22</sup> Annex-4 Summary of Monitoring Records (SMR).pdf; iCRAFT\_SMR\_2023\_V.01.xlsx

<sup>23</sup> Annex-3 iCRAFT Backup Procedure

Loss of all monitored parameters or inconsistent reporting/calculations may result in a lack of ability to report and verify emission reductions. The following backup measures are established to mitigate these risks:

- Establishing a regular backup schedule based on data sensitivity and criticality;
- Determining the scope of backups, including data, software, and configuration files;
- Choosing a secure and reliable storage location for backups (e.g., off-site storage, cloud-based storage);
- Regularly testing backup procedures to ensure their effectiveness and reliability.

To maintain data integrity, a regular backup schedule is established tailored to the sensitivity and criticality of the data involved. This approach ensures that the most important data is backed up more frequently. For the management of sensitive data, primarily taken from internal databases of government bodies and not publicly available (for instance, Customs Committee statistics on detailed utility imports to assess the amount of energy-efficient utility imports), backups are conducted as soon as the data is compiled and validated. Other data compiled as a result of regular monitoring is backed up on a monthly basis.

The scope of backups encompasses all relevant databases, files, and documents, alongside the MRV Model, its configurations, and settings. The QA/QC and Data Archive Specialist is responsible for backing up the database. Compiling and calculating integral data are conducted using cloud-based storage, specifically the Virtual Drive Account of the Center of Green Economy Projects. The off-site storage location for saving and backing up data is located on the server of the Information Technology Center under the Ministry of Economy and Finance. To protect sensitive information from unauthorized access, encryption protocols are implemented for all backups.

### ***Process for updating QA/QC procedures***

The QA/QC procedures will be updated regularly, and suggestions and feedback will be used to update the QA/QC procedures to reflect the unique features and to introduce improved QA/QC methods. All changes to be introduced into the QA/QC procedures require no objection from the World Bank Task Team Leader and approval by the Director of the Center of Green Economy Projects

## Section 3. Calculation of emission reductions

### Determining the CO<sub>2</sub>e emissions reduction caused by implementing the tariff reform:

The scenario calculations are performed by the model on the following basis:

First, the “*Withpolicy*” scenario is established based on ex-post data on energy consumption and prices for electricity and natural gas. Then the model analyzes the change in end-user demand for each type of energy based on differences in end-user energy prices caused by the policy package that is being evaluated in this analysis. For this, the counterfactual “*Withoutpolicy*” scenario pricing is established and agreed upon, and the demand adjustment is determined by analyzing the price effect by employing the most rigorous possible of the methodologies laid-out in the section “Measuring price effect for demand adjustment”.

### Establishing CO<sub>2</sub>e emissions from “*Withpolicy*” operation

Based on the end-user, final demand data collected, CO<sub>2</sub>e emission levels under the “*Withpolicy*” operation<sup>24</sup> are determined using Equation 7-8<sup>25</sup> and applying country-specific emissions factors per fuel and sector or technology when these are available or from the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2, tables 2.2 to 2.10 for stationary sources.

### Establishing CO<sub>2</sub>e emissions from counterfactual “*Withoutpolicy*” operation

The CO<sub>2</sub>e emissions levels under the counterfactual “*Withoutpolicy*” operation are determined with the end-user energy prices that could be expected. Using the results of these analyses, the inventory method is then used in all cases to evaluate the CO<sub>2</sub>e emissions under this counterfactual “*Withoutpolicy*” operation applying equations 9-10.<sup>26</sup>

### 3.1 Calculation of baseline emissions or baseline

A baseline is set by considering business-as-usual, historical trends and the expected trajectory of emissions in the scenario where the policies would have not been implemented and selecting the one that represents the country’s own effort to achieve the NDC. The difference between the “*Withpolicy*” and baseline scenario (“*Withoutpolicy*”) determines the impact of the policy on emission reductions. The summary of GHG emissions “*Withoutpolicy*” is provided in Table 2 below. For the details of the estimations please refer to the ER calculation spreadsheet.

**Table 2. GHG emissions “*Withoutpolicy*”**

	Unit	2023
Electricity	MtCO <sub>2</sub>	36.5
Natural Gas	MtCO <sub>2</sub>	35.1
Total	MtCO <sub>2</sub>	71.6

<sup>24</sup> Note that the “*Withpolicy*” scenario represents the actual and observable conditions.

<sup>25</sup> Please refer to CPDD V5-Annex 3 MRV Methodology.

<sup>26</sup> Please refer to CPDD V5-Annex 3 MRV Methodology.

### 3.2 Calculation of project emissions

Project emissions are calculated as a result of “*Withpolicy*” scenario and provided in the below table, please refer to the ER calculation spreadsheet for the details of calculations.

**Table 3. GHG emissions “*Withpolicy*”**

	Unit	2023
Electricity	MtCO <sub>2</sub>	30.5
Natural Gas	MtCO <sub>2</sub>	34.8
Total	MtCO <sub>2</sub>	65.3

### 3.3 Calculation of leakage emissions

Leakage emissions are not applicable as per methodology.

### 3.4 Calculation of emission reductions

	Baseline GHG emissions (t CO <sub>2</sub> e)	Project GHG emissions (t CO <sub>2</sub> e)	Leakage GHG emissions (t CO <sub>2</sub> e)	Emission reduction (tCO <sub>2</sub> e)
<b>Total</b>	71,628,807	65,300,343	0	6,328,464

### 3.5 Comparison of emission reductions achieved with estimates in the validated CPDD

Amount achieved during this monitoring period (t CO <sub>2</sub> e)	Amount estimated ex ante for this monitoring period in the CPDD (t CO <sub>2</sub> e)
6,328,464	15,881,592

### 3.6 Explanation of calculation of “amount estimated ex ante for this monitoring period in the CPDD”

Ex-ante estimates of emission reductions are calculated using the version of the Uzbekistan Energy Policy MRV Model presented at the time of validation of the project (“UZB\_NewEnergyPolicyMRV v23”).

### 3.7. Remarks on increase in achieved emission reductions

The amount of emission reductions achieved during this monitoring period is significantly lower than the ex-ante estimates in the PDD. This difference is linked to a different generation mix in 2023 in the current version of the MRV model, with additional renewable energy sources for both “with-policy” and “without-policy” scenarios, as well as a different implementation of the subsidy removal in the ex-ante and ex-post scenarios, with a more phased approach for its implementation.

The data in the MRV Model was updated to include the latest official numbers. The following three updates were made to the model:

### ***Load Duration data***

In this version, 2023 hourly generation data was made available.

The hourly generation data for 2023 is used in the calculations in the form of generation by hour as a percentage of the total yearly generation in each of six seasonal bins, which normalizes the year-to-year differences.

### ***Average energy tariff data by month in 2023***

The tariff data for electricity and natural gas by month for 2023 was updated to the final official numbers. This change was made to ensure that the model reflects the most accurate and up-to-date information.

### ***Energy consumption data for 2023***

The electricity and natural gas end-user consumption data for 2023 was updated to the final official numbers. This is a crucial aspect of the model as it provides accurate information on energy consumption and usage patterns.

For additional details on the calculation of emission reductions, please refer to the "iCRAFT\_UZB\_MRV" spreadsheet.

## Section 4. Parameters monitored to evaluate transformative change

Indicator	Description	Reported unit	Responsible entity	2023	References/Source
Size of emission reductions	Amount of emission reductions achieved in the monitoring period	MtCO <sub>2e</sub>	MEF	6.3	"iCRAFT_UZB_MRV" spreadsheet <sup>27</sup>
<b>Sustainability</b>					
<b>Policy</b>					
New investments in renewable energy	Increase of installed capacity of renewable energy that year	MW installed capacity	ME	<b>Increase of 1576.9 MW in 2023</b> [1317 MW - solar; 100 MW – wind; 159.9 MW - hydro]	Ministry of Energy <sup>28</sup>
Improved social protection	Increased number of beneficiaries covered by the social protection project	Number of beneficiaries	MEF, MPRE	2022: 3,783,253 2023: 4,030,611 <b>Increase of 247,358</b>	"Citizens' Budget: 2024 Draft", p.27 Total number <sup>29</sup>
Reduced fossil fuel subsidy	Reduction of government subsidy spending on the industrial and commercial segment (and households) of electricity and natural gas	Million USD/ Percentage	MEF	2022: 19,796.8 <sup>30</sup> 2023: 10,400.2 <b>Decrease: 9,396.6 / 47.47%</b>	IEA Fossil Fuel Subsidies Database <sup>31</sup>

<sup>27</sup> iCRAFT\_UZB\_MRV\_V2.01.xlsm

<sup>28</sup> Яшил иқтисодиёт update 13.01.2025.docx

<sup>29</sup> [https://api.mf.uz/media/document\\_files/Citizens\\_Budjet\\_for\\_2024.pdf](https://api.mf.uz/media/document_files/Citizens_Budjet_for_2024.pdf)

<sup>30</sup> Reported originally as 21,038 under Subsidies 2010-2022 series published by IEA (1<sup>st</sup> Annual Report), revised by IEA to 19,796.8 in the 2010-2023 series (Subsidies 2010-2023.xlsx)

<sup>31</sup> Subsidies 2010-2023.xlsx extracted from <https://www.iea.org/data-and-statistics/data-product/fossil-fuel-subsidies-database> (electricity + gas)

Indicator	Description	Reported unit	Responsible entity	2023	References/Source
<b>Technology</b>	Increased import of more energy efficiency appliances	Percentage / Thousand USD	MEF	<b>Increase of 125%</b> 2022: 277,257.80 2023: 623,849.22	Internal Database of Customs Committee <sup>32</sup>
	Increased percentage of people in favour of tariff reforms and reducing consumption and paying higher tariffs in exchange of improved services (as part of Listening to Citizens of Uzbekistan (L2CU) survey).	Percentage	PIU	<b>Electricity Increase of 2%</b> 2022: 16.5% 2023: 18.5%  <b>Natural Gas Increase of 7.8%</b> 2022: 8.8% 2023: 16.6%	Listening to the Citizens of Uzbekistan Survey <sup>33</sup>
<b>Financing</b>	Reduced spending on fossil fuel subsidy	Million USD/ percentage	MEF	<b>9,396.6 / 46.46%</b> 2022: 19,796.8 2023: 10,400.2	IEA Fossil Fuel Subsidies Database <sup>34</sup>
<b>Leverage</b>					
Increased participation	PPP Private sector financing leveraged in renewable energy technologies	Million USD	MEF	<b>Decrease of 75%<sup>35</sup></b> 2022: 2,401 2023: 0,591	National database of legislation of the Republic of Uzbekistan <sup>36</sup>
MRV system	Robust MRV system is being designed	Yes/No	PIU	YES (Work in progress)	MEF / iCRAFT <sup>37</sup>

<sup>32</sup> Increased Import of More Energy Efficiency Appliances Data.xlsx

<sup>33</sup> L2CU Data.xls

<sup>34</sup> Subsidies 2010-2023.xlsx

<sup>35</sup> Overall investments significantly increased from 2 to 7 billion (see section 5 “New investments in renewable energy technologies”)

<sup>36</sup> <https://lex.uz> as collected in “Increased PPP Participation Data” excel file following guideline “Increased PPP Participation Data Instruction.docx”

<sup>37</sup> 2024.11.25 MRV TEAM INFO.pdf. As reported by the Leading Economist of the MRV Unit of the Center for Green Economy Projects (CGEP), the Center is currently working on the design of the MRV system, in line with Presidential Decree 2013 of June 2024 (<https://lex.uz/pdfs/6956101>)

Indicator	Description	Reported unit	Responsible entity	2023	References/Source
Article 6 National Authority	National Authority designated for Article of Paris Agreement	Yes/No	MEF	<b>Yes</b> MEF designated as the National Authority	Presidential Decree No. 436 dated December 2, 2022 <sup>38</sup> ; UNFCCC Designated National Authorities <sup>39</sup>
<b>Carbon pricing</b>					
Results-Based Climate Finance Emission Reduction Payment Agreement (RBCF-ERPA)	First ERPA for RBCF signed	Tonnes of VERs contracted	MEF	500,000	Emission Reduction Payment Agreement between Uzbekistan and IBRD, signed on October 4, 2023 <sup>40</sup>
Mitigation Options Purchase Agreement for Internationally Transferred Mitigation Options (MOPA-ITMO)	First MOPA for ITMOs signed	Tonnes of ITMOs contracted	MEF	0	Mitigation Outcome Purchase Agreement between Uzbekistan and IBRD, signed on October 4, 2023 <sup>41</sup>

<sup>38</sup> <https://lex.uz/ru/docs/-6303230>

<sup>39</sup> [https://unfccc.int/process-and-meetings/the-paris-agreement/article-64-mechanism/national-authorities#country\\_RtoZ](https://unfccc.int/process-and-meetings/the-paris-agreement/article-64-mechanism/national-authorities#country_RtoZ)

<sup>40</sup> According to the Schedule 2 of the ERPA, the annual amount of contract VERs for the period of January 1, 2023 to December 31, 2023.

<sup>41</sup> According to the Schedule 2 of the MOPA, first reporting period starts from January 2024.

## Section 5. Parameters monitored to evaluate sustainable development co-benefits

Indicator	Description	Reported unit	Responsible entity	2023	References/Source
<b>Social</b>					
New green jobs	New green jobs (directions/sectors listed in the green taxonomy) created	Number of jobs	MEF	<b>Increase of 256,790</b> 2022: 2,784,140 2023: 3,040,930	Green Economy Platform <sup>42</sup>
Expanded access and equity of access to social safety nets	Social safety net expanded to reach more poor households	Number of households	MEF, MPRE	<b>Increase of 87,202</b> 2022: 2,135,913 <sup>43</sup> 2023: 2,223,115	"Citizens' Budget: 2024 Draft", p.27 lines 1 and 2 <sup>44</sup>
Social acceptance of tariff reforms	Social acceptance of tariff reforms has changed compared to previous years	Percentage of people in favour or against as per Listening to citizens of Uzbekistan (L2CU) survey	PIU	<b>Electricity: Increase of 2%</b> 2022: 16.5% / 2023: 18.5% <b>Natural Gas: Increase of 7.8%</b> 2022: 8.8% / 2023: 16.6%	Listening to the Citizens of Uzbekistan Survey <sup>45</sup>
Reliability of energy services	Improved reliability of energy services due to more rationale use of electricity and gas and improved maintenance and infrastructure investment	Frequency and duration of power shortages and or customer complains/feedback	ME	<b>Frequency: increase of 29%</b> from 671 in 2022 to 868 in 2023 Duration: tot.: 3526 h; avg.: 4.1 h <b>Complaints: decrease of 35%</b> from 645 in 2022 to 419 in 2023	Letter from ME dated October-17, 2024 <sup>46</sup>
<b>Environmental</b>					

<sup>42</sup> green.imv.uz; Green statistics\_30.10.2024.pdf

<sup>43</sup> As reported based on execution data under 2024 report (see below), compared to 2,083,948 based on "preliminary execution" data on 2023 budget informed in the 1<sup>st</sup> Annual Report.

<sup>44</sup> 2023 data reported as "anticipated" (preliminary execution). [https://api.mf.uz/media/document\\_files/Citizens\\_Budjet\\_for\\_2024.pdf](https://api.mf.uz/media/document_files/Citizens_Budjet_for_2024.pdf)

<sup>45</sup> "Listening to the Citizens of Uzbekistan Survey Data\_rev.xlsx", using information from "L2CU Data.xls" as described under "Listening to the Citizens of Uzbekistan Survey Data Instruction.docx"

<sup>46</sup> "Reliability of Energy Services\_1/2/3" excel files includes aggregated data (file #1) and data reported by ME on complaints (file#2) and power shortages (file#3)

Indicator	Description	Reported unit	Responsible entity	2023	References/Source
Improved air quality	Change in air pollutant due to reduced use of fossil fuels country wide	Levels of SO <sub>2</sub> , NO <sub>x</sub> , fly ash emissions, Suspended Particulate Matter (SPM), s in the air	MEEPCC, SA	<p><b>SO<sub>2</sub>: decrease of 12.6%</b> from 1,730,029 tonnes in 2022 to 1,521,414 tonnes in 2023</p> <p><b>NO<sub>x</sub>: decrease of 4.67%</b> from 2,688,397 tonnes in 2022 to 2,562,860 tonnes in 2023</p> <p><b>NMVOC: increase of 153.69%</b><sup>47</sup> from 1,288,359 tonnes in 2022 to 3,268,464 tonnes in 2023</p>	Green Economy Platform <sup>48</sup>
<b>Economic</b>					
New investments in renewable energy technologies	New investment channelled to deployment of renewable energy sources	Million USD	ME, MEF	<b>Increase of 178.6%</b> from 2,641 in 2022 to 7,358 in 2023	National database of legislation of the Republic of Uzbekistan <sup>49</sup>
Fiscal savings	Reduced spending on fossil fuel subsidy	Million USD/ Percentage	ME	<b>9,396.6 / 46.46%</b> 2022: 19,796.8 2023: 10,400.2	IEA Fossil Fuel Subsidies Database <sup>50</sup>
<b>Institutional</b>					

<sup>47</sup> Email from GED\_MEF on NMOVCs.pdf. Significant increase due to: i) Industrial Growth; ii) Expansion of Small Businesses and Enterprise; iii) Surge in Construction; iv) Increase in transportation activity (exhaust from vehicles); v) rapid urbanization.

<sup>48</sup> green.imv.uz; Green statistics\_30.10.2024.pdf

<sup>49</sup> <https://lex.uz> as collected in "New Investments in Renewable Energy Technologies Data" excel file

<sup>50</sup> -The amount of 2022 subsidy Reported under the 1st Annual Report was \$21,038 Million, in line with the Subsidies 2010-2022 series published by IEA in 2023. However, the IEA revised the 2022 value to \$19,796.8 Million in the Subsidies 2010-2023 series published in 2024.

Indicator	Description	Reported unit	Responsible entity	2023	References/Source
Improved energy pricing policy	More ambitious tariff reforms adopted	Tariff increase in percentage	PIU	<b>Electricity Tariffs:</b> residential: 2.6% increase; 2022: 294.5 UZS/kWh 2023: 302.2 UZS/kWh non-residential: 32.6 % increase 2022: 539.5 UZS/kWh 2023: 715.4 UZS/kWh  <b>Natural Gas Tariffs:</b> residential: 0% increase <sup>51</sup> non-residential: 20.8% increase 2022: 871.6 UZS/kWh 2023: 1,053 UZS/kWh	Ministry of Energy <sup>52</sup>
Enhanced international cooperation	International cooperation agreements signed on low carbon economy growth	Number of agreements	MEF	5	Uzbekistan - Korea <sup>53</sup> ; Uzbekistan - GIZ <sup>54</sup> ; Uzbekistan - EU & AFD <sup>55</sup> ; Uzbekistan - SCE <sup>56</sup> ; Uzbekistan - I-REC <sup>57</sup> .

<sup>51</sup> Focus on large consumers to liberalize market gradually. <https://daryo.uz/en/2023/09/09/hike-in-their-electricity-and-gas-tariffs>

<sup>52</sup> 2022 data as reported in previous Annual Report. 2023 data calculate in "1\_2023\_Final\_DataEntryForm\_TariffConsumption.xlsx", in line with information from the Ministry of Energy (ME\_Official\_Letter\_XO61066424\_02-06-8441-son.pdf )

<sup>53</sup> Agreement dated June 1, 2023. <https://lex.uz/docs/6658260>

<sup>54</sup> Agreement dated December 3, 2023. <https://www.imv.uz/en/news/category/yangiiliklar/post-1800>

<sup>55</sup> Agreement dated May 17, 2023. [https://www.eeas.europa.eu/delegations/uzbekistan/eu-and-afd-support-green-transition-uzbekistan\\_en](https://www.eeas.europa.eu/delegations/uzbekistan/eu-and-afd-support-green-transition-uzbekistan_en)

<sup>56</sup> Agreement dated May 2023.

[https://uza.uz/en/posts/uzbekistan-and-singapore-will-jointly-develop-the-business-sector-and-the-green-economy\\_487312](https://uza.uz/en/posts/uzbekistan-and-singapore-will-jointly-develop-the-business-sector-and-the-green-economy_487312);

<https://sce.org.sg/press-releases.aspx>

<sup>57</sup> A resolution of appointment

<https://www.trackingstandard.org/ministry-of-economy-and-finance-of-the-republic-of-uzbekistan-becomes-the-i-rece-local-issuer-following-the-resolution-from-the-president-of-the-republic-of-uzbekistan/>

## Section 6. Environmental and social reporting indicators

Indicators	Description	Reported unit	Responsible entity	2023
Social Specialist in place	Appoint and maintain a social specialist in the PIU for managing the planned communication campaign, and broader stakeholder engagement including a feedback mechanism	Yes/No	PIU	No (Social Specialist hired in 2024)
Communication Strategy developed and implemented	Financing a communication campaign to inform the public and address stakeholders' views on proposed reforms	Financed: Yes/No	PIU	No (Social Specialist hired in 2024)
		Developed: Yes/No		No (Social Specialist hired in 2024)
		Types of materials developed and campaigns undertaken, results of satisfaction and perceptions surveys		No materials or other related information to provide (Social Specialist hired in 2024)
Operationalisation of feedback and redress grievance mechanism (FGRM)	Establish, publicize, maintain, and operate an accessible feedback and grievance mechanism, to receive and facilitate resolution of concerns and grievances in relation to the Project	When established, how publicised	PIU	Has not been established nor publicised as 2023 <sup>58</sup> (2024 only)
		Cumulative and for reporting period: Records of feedback and grievances, types, how many resolved, how many outstanding		No records or other related information to provide (2024 only)
Worker Grievance Mechanism	Ensure worker grievance is available for workers in to allow them to quickly inform	Mechanism in place: Yes/No	PIU	No <sup>59</sup> (2024 only)

<sup>58</sup> No FGRM in place for the reporting period due to the fact that the PIU started to work from March 2024. It was published in April, 2024. New FGRM approved and publicly disclosed by the World Bank in May 2024

<sup>59</sup> No Worker Grievance Mechanism in place for the reporting period due to the fact that the PIU started to work from March 2024. New FGRM approved and publicly disclosed by the World Bank in May 2024

Indicators	Description	Reported unit	Responsible entity	2023
	management of labour-related issues and raise workplace concerns and labour-related matters without fear of retaliation or favour	Cumulative and reporting period: Communicated to workers		Has not been communicated to workers (2024 only)
		Cumulative and for reporting period: Records of grievances, types, how many resolved, how many outstanding		No records or other related information to provide (2024 only)
Stakeholder Engagement Plan Revised	SEP will be regularly revised to include updated information on FGRM and details of the communications strategy including campaigns as well as messaging on social safety nets and who would be legible for any benefits	Yes/No	PIU	No (revised 2024)
		When revised and why		Has not been revised (revised 2024)
		Disclosed: Yes/No		No (disclosed 2024)
Incidents and accidents	Incident or accident related to the Project which has, or is likely to have, a significant adverse effect on environment or people; including any sea/sh complaints and protests for against tariff reforms	Scope, severity, and possible causes of the incident or accident, indicating immediate measures taken	PIU	No occurred incidents or accidents
Training of PIU staff	Stakeholder mapping; engagement including on FGRM; community health; safety	Cumulative and for reporting period: Training completed	PIU	Yes <sup>60</sup>

<sup>60</sup> Training was provided to MEF in October, 2023 prior to the creation of the PIU. Additional training was provided to the PIU in June, October and November 2024, "Training November 26.pdf"; "Trainings October 21-24.pdf"; "Mission Announcement 21-24 Oct 2024.pdf"; "Mission Announcement Jun24-Jul04\_2024 .pdf"

## Section 7. Financial reporting

Not applicable since no payments have been made during this monitoring period. The first tranche was received in June 2024.<sup>61</sup>

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<sup>61</sup> <https://www.worldbank.org/en/news/press-release/2024/06/21/uzbekistan-receives-7-5-million-in-carbon-credits-for-enabling-half-a-million-tons-of-emissions-reduction>

## Section 8. Other Relevant Information

### Abbreviations

AFD	French Development Agency
CGEP	Center for Green Economy Projects
COVID-19	Coronavirus disease 2019
CPDD	Crediting Program Design Document
ERPA	Emission Reduction Purchase Agreement
EU	European Union
GDP	Gross Domestic Product
GIZ	German Agency for International Cooperation
IBRD	International Bank for Reconstruction and Development (also known as World Bank)
iCRAFT	Innovative Carbon Resource Application for Energy Transition
IEA	International Energy Agency
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
I-REC	The International REC Standard Foundation
ITMOs	Internationally Transferred Mitigation Outcomes
JSC	Joint Stock Company
L2CU	Listening to Citizens of Uzbekistan
ME	Ministry of Energy of Uzbekistan
MEEPCC	Ministry of Ecology, Environmental Protection and Climate Change of Uzbekistan
MEF	Ministry of Economy and Finance of Uzbekistan
MOPA	Mitigation Outcome Purchase Agreement
MPRE	Ministry of Poverty Reduction and employment of Uzbekistan
MRV model	Excel based Uzbekistan Energy Policy MRV model
PAD	Project Appraisal Document
PIU	Project Implementation Unit
QA/QC	Quality Control and Quality Assurance
RBCF	Result Based Climate Finance
SA	Statistics Agency of Uzbekistan
SCE	Singapore Cooperation Enterprise
SMR	Summary of Monitoring Records
TCAF	Transformative Carbon Asset Facility
tCO <sub>2</sub>	Ton of CO <sub>2</sub>
US	United States
UZS	Uzbekistani Sum (currency)
WB	World Bank
WEO	World Economic Outlook

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### Document Information

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Version	Date	Description
1.1	2024_02_28	Format Corrections Updates to Section 4 parameters table Updates to Section 5 parameters table Updated description for Section 8 Updates to section 2 description of monitoring system
1.0	2023_11_09	Initial Adoption

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