



UZBEKISTAN

E-mobility Country Profile

Background

Uzbekistan, a landlocked country in Central Asia, has made significant progress in its socio-economic development in recent years. The country's economy has grown steadily, averaging over 5% annual growth in the past decade.¹

This growth has been driven by a number of factors, including reforms to the business environment, investments in infrastructure, and a growing middle class. The country has a young and growing population, and the government is committed to reforms that will promote economic growth and social development. The GDP per capita is projected to grow at an annual average rate of 4.9% leading to 2050.²

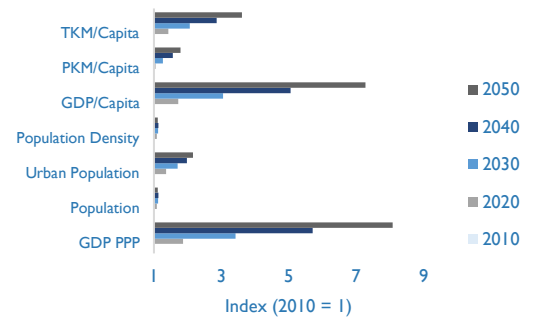
This rapid urbanization and economic expansion are expected to drive growth in transportation activities. Forecasts indicate an average annual increase of 1.9% in passenger transport activity, measured in passenger-kilometres, and a 3.2% average annual growth rate for freight transport activity.³ It is estimated that the car motorization rate currently is 87 cars per 1,000 people.⁴

The transportation sector is one of the major contributors to air pollution and greenhouse gas (GHG) emissions in Uzbekistan. It is estimated that the transportation sector contributes 13% of the fuel combustion GHGs in the country (total of 110 million tons in 2020). Ninety-one percent (91%) of the transport GHG emissions are estimated to be from the road sector.⁵

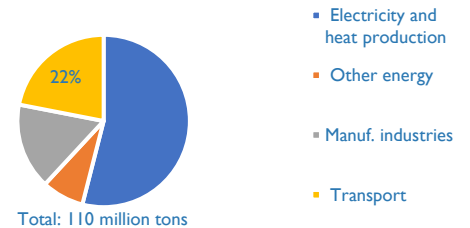
In terms of ambient air pollution, the road transport sector is estimated to contribute 5% of the total burden of disease related to Particulate Matter 2.5 (PM2.5) — in Uzbekistan. Road transport air pollution is also deemed to have significant contributions to the burden of disease related to is-chemic heart disease 61%).⁶

The average concentration of PM2.5 was estimated to be 43 µg/m³. This concentration significantly exceeds the World Health Organization's guideline value of 5 µg/m³. In 2019, an estimated 25 thousand premature deaths can be attributed to PM2.5 pollution in Uzbekistan.^{7,8}

Socio-economic & Transport Indicators



2020 Fuel Combustion CO₂: % By Sector



E-mobility at a Glance

Uzbekistan currently has no local production nor assembly of electric vehicles and relies on imports. It is estimated that more than 5,000 electric cars were sold in 2022, which was 3.5 times higher than the sales in 2021. Sixty-six percent of the electric car sales were new, while the remaining were used vehicles. Tashkent City accounted for 81% of the e-cars sold. To put this into perspective, in 2022, the passenger car production in the country was estimated to be at 327 thousand.⁹

On May 2023, UzAuto Motors, in partnership with BYD Auto has set up a joint venture called BYD Uzbekistan Factory to bring plug-in hybrid EVs in the country.¹⁰ The plant is planned to have a production capacity of 50 thousand vehicles (2 models) per year. Uzbekistan is also in the process of consolidating its strategy to be a CKD production base (e.g. stamping, painting, welding, assembly). ADM Jizzakh is also partnering with Chery International to produce hybrid and electric cars.

Currently, there are also an estimated 20 electric buses in Tashkent. The President has announced that another 200 will be added in Tashkent within the year, and 100 in Samarkand.¹¹

In terms of charging infrastructure, it is said that there are 50 charging stations in Uzbekistan, mostly found in Tashkent and Samarkand.¹²

Electrification of transport may prove to be economical from an operational perspective as the average price of electricity in Uzbekistan (2021) was estimated to be 0.03 USD/kWh, the seventh cheapest rate in the world.¹³

Considering overall access to electricity, Uzbekistan had reached full electrification even before the turn of the century. In terms of the CO₂ emissions impact of the electricity grid, the national average is estimated at 506 kgCO₂ is emitted per MWh, which ranks at 146th place globally.¹⁴ The average grid emission factor has stayed consistent since the turn of the century and is currently practically where it was in the year 2000. The nation's electricity grid is still dominated by coal in terms of power generation, constituting 61% of the generation in 2022. Uzbekistan's electrical generating capacity of 15.9 is dominated by thermal power plants (88%) and hydropower plants (12%).¹⁵

Policy Measures: Highlights

Uzbekistan began the electrification of its auto industry in 2019. In June of that year, the government issued a presidential decree exempting electric vehicles (EVs) from excise tax and customs duty, which could reduce their price by up to half. In 2021, EVs were also exempted from the 3% car registration tax, which is included in the retail price of traditional vehicles.

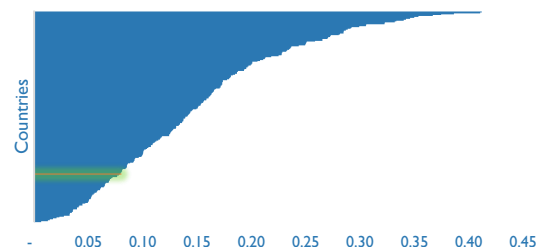
The Development Strategy 2022-2026 defines the goals for the transition to a "green" economy, including the production of electric vehicles.¹⁶ The presidential decree on the strategic transition to the green economy (2019-2030) essentially banned the sales of vehicles below Euro 4 in the country.¹⁷

The government of Uzbekistan recently unveiled its "New Uzbekistan" strategy for 2022-2024. This sweeping strategy lays out 100 objectives to advance the country's socioeconomic development. Specifically, the 24th

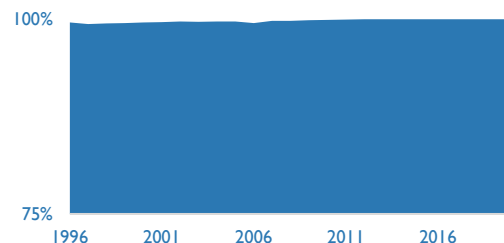
Charging Stations



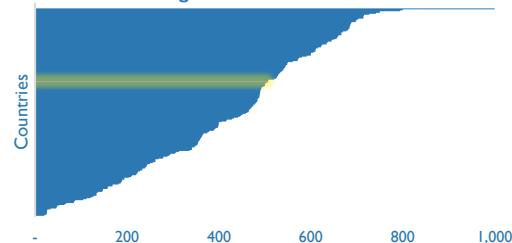
Uzbekistan: 0.03 USD/kWh



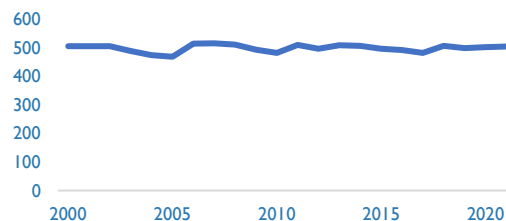
% Population with Access to Electricity



Uzbekistan: 506 kgCO₂/MWh



Uzbekistan Historical Grid kgCO₂/MWh



Policy Measures: Highlights

objective focuses on green initiatives, including boosting renewable energy sources like solar power, cutting greenhouse gas emissions 10% by 2030, and establishing domestic manufacturing capabilities for electric vehicles. The inclusion of electric vehicle production under this national strategy indicates the government's commitment to drive progress on electric mobility as part of its broader sustainability agenda over the next few years.¹⁸

In December 2022, the President signed the "On measures of state support for the organization of the production of electric cars." The decree provides for a number of incentives, including:

- Exemption from disposal fees for electric and hybrid cars produced in Uzbekistan until January 1, 2030
- Exemption from customs duty on components of electric and hybrid cars, raw materials and materials, equipment, and technological equipment, including spare parts for servicing, imported from abroad until January 1, 2030
- Interest rate subsidies on loans for the purchase of electric and hybrid cars produced in Uzbekistan and sold on the domestic market until January 1, 2030
- Exemption from state duty for the issuance of license sheets for passenger transportation services using electric and hybrid cars until January 1, 2030.¹⁹

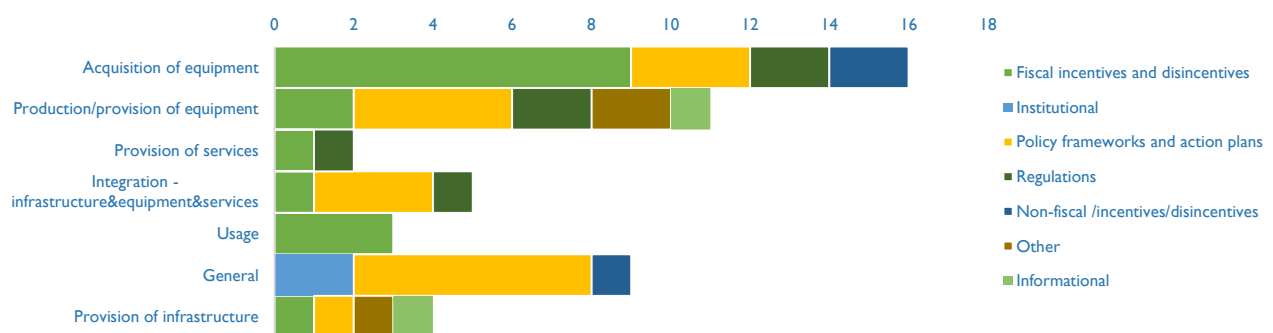
Based on a decree by the President, it is said that the country is targeting to have 2,500 charging stations by 2025. The decree states that by January 1, 2024, all newly built business and shopping centres, entertainment places, gas stations, hotels, and other facilities along national and international highways will be equipped with charging stations. This year, 1,400 plots of lands are planned to be auctioned for the installation of charging stations. The JSC Regional Electrical Power Networks, which is a distribution service operator and electricity company, is also targeting 500 EV charging stations along highways.²⁰ In addition to financial incentives, the Uzbek government is also investing in the development of the EV industry in the country. It is creating copper clusters, which will be used to produce components for EVs and charging stations. The government is also investing in training personnel for the EV industry.

The government is also taking steps to reform transportation systems, especially in major cities like Tashkent. Under Presidential Decree No. 111 issued February 2022, and its accompanying roadmap, the Ministry of Transport is tasked with creating incentives for private taxi companies to acquire electric vehicles in 2022. Additionally, the decree mandates the development of charging infrastructure for public electric buses by mid-2023. Through directives like this, the government is pushing for the adoption of electric vehicles in public and private transportation fleets. By setting clear targets and duties for agencies, Uzbekistan aims to accelerate the transition to electric mobility in urban transit. This decree also enables the Ministry of Transport to purchase electric buses for Tashkent City with VAT (15%) exemption.²¹

In October 2023, the Asian Development Bank (ADB) has allocated 170 million dollars to support an electric transport development program in the country and will be dedicated in removing barriers and popularizing commercial electric vehicles (e.g. electric bus fleets and charging infrastructure).²²

Snapshot of E-mobility Policy Measures

Distribution of Policy Measures



Pillar	Stage	Category	Type of Policy Measure
Charging equipment and components	Acquisition of equipment	Fiscal incentives and disincentives	Custom tariff waiver/ reduction for chargers and components
	Production/provision of equipment	Informational	Guidelines (general) - charging equipment
	Integration - infrastructure&equipment&services	Policy frameworks and action plans	Integration of charging stations in gasoline stations
EVs and EV components	Acquisition of equipment	Fiscal incentives and disincentives	Exemption motor vehicle tax
			EV procurement targets
			Value-added tax waiver or reduction for EV and components
		Policy frameworks and action plans	Custom tariff waiver/ reduction for EV and components
			Low cost credit lines for ev purchase and infrastructure
			EV procurement - rail
			Excise tax waiver for EV and components
	Regulations	Public fleet electrification target	
		Mandated EV % target in fleet	
	Production/provision of equipment	Fiscal incentives and disincentives	Ban on sales of ICE based on emission standards
			Priority lanes/processing for importation of EVs and components
			Favouring EV in public tenders
		Policy frameworks and action plans	Import tax exemption/ reduction - raw materials, supplies, components
			EV production government funding
			EV production targets
Materials exploration for components			
Regulations		General pronouncement of support for Evs production / assembly / import	
	EV standards - multidimension		
Other	Standards - charge port		
	Total EV fleet target		
Usage	Fiscal incentives and disincentives	Research and development - EV and components	
		Removing Fossil Fuel subsidies or Increased tax on fossil fuels	
	Registration tax waiver or reduction for EV and components		
End-of-life	Policy frameworks and action plans	Exemption from congestion charges and road pricing	
General	Integration - infrastructure&equipment&services	Fiscal incentives and disincentives	EV end-of-life management policy
	General	Institutional	Incentives for EV charging infrastructure
		Policy frameworks and action plans	Defined institutional setup
			Renewable energy targets
			EV included in NDC
Non-fiscal /incentives/disincentives	General pronouncement of support - RE		
Infrastructure	Acquisition of equipment	Fiscal incentives and disincentives	Property tax or land tax reduction/waiver for incorporating chargers
	Integration - infrastructure&equipment&services	Policy frameworks and action plans	Identification of buildings for charging station construction/installation
		Regulations	Standards for Charging Stations
	Provision of infrastructure	Fiscal incentives and disincentives	Tax Incentives for firms engaging in charging stations
		Policy frameworks and action plans	Investments for new supportive transport infrastructure
		Other	Charging stations targets - total
	Informational	Guidelines (general) - charging infrastructure	
Services	Provision of services	Fiscal incentives and disincentives	Charging rate ceiling
		Regulations	Enabling participation of energy storage systems (e.g. Evehicles) in electricity market

Note: The graph and the tables above are mainly representative of the policy measures that had been collected, collated and categorized by the authors. The authors make no claims about the completeness of the list, nor the accuracy of the categorization.

Endnotes

Photo: Mysportedit, CC BY-SA 4.0 <<https://creativecommons.org/licenses/by-sa/4.0/>>, via Wikimedia Commons

1 World Bank. (n.d.). The World Bank in Uzbekistan [Text/HTML]. World Bank. <https://www.worldbank.org/en/country/uzbekistan/overview>

2 Nkiriki, J., Jaramillo, P., Williams, N., Davis, A., & Armanios, D. (2021). Global Transportation Demand Dataset using the Shared Socioeconomic Pathways (SSPs) Scenario Framework. <https://zenodo.org/record/4557615#.ZGLJ8nZBxrp>

3 Ibid.

4 Statistics Agency Uzbekistan. (2022). In Uzbekistan, there are an average of 87 cars per 1,000 people. <https://stat.uz/en/press-center/news-of-committee/32626-ozbekistonda-har-1000-kishiga-o-rtacha-87-ta-yengil-avtomobil-to-g-ri-kelmoqda-3>

5 IEA. (2023) Greenhouse Gas Emissions from Energy Highlights - Data product – IEA. <https://www.iea.org/data-and-statistics/data-product/greenhouse-gas-emissions-from-energy-highlights>

6 McDuffie, E., Martin, R., Spadaro, J., Burnett, R., Smith, S., & O'Rourke, P. et al. (2021). Source sector and fuel contributions to ambient PM2.5 and attributable mortality across multiple spatial scales. *Nature Communications*, 12(1). Doi: 10.1038/s41467-021-23853-y. <https://www.nature.com/articles/s41467-021-23853-y>

7 Ibid.

8 WHO. (2022). Air quality database. <https://www.who.int/data/gho/data/themes/air-pollution/who-air-quality-database>

9 Center for Economic Research and Reforms. (2023). Uzbekistan Passenger Cars Market Overview.

10 Ibid.

11 uzdaily.uz. (n.d.). Project to develop the electric vehicle industry presented to Uzbek President. <https://www.uzdaily.uz/en/post/76207>

12 Ibid.

13 Cable.co.uk. (n.d.). Worldwide Electricity Pricing. <https://www.cable.co.uk/energy/worldwide-pricing/>

14 Ember. (n.d.). Electricity Data Explorer. <https://ember-climate.org/data/data-tools/data-explorer/>

15 IEA. (n.d.). Energy security – Uzbekistan energy profile – Analysis—IEA. <https://www.iea.org/reports/uzbekistan-energy-profile/energy-security>

16 uzdaily.uz. (n.d.). Project to develop the electric vehicle industry presented to Uzbek President. from <https://www.uzdaily.uz/en/post/76207>

17 Ministry of Transport of Uzbekistan. (2022). С 2022 запрещается ввоз автомобилей, не соответствующих классу Евро-4. [online] Available at: <https://mintrans.uz/ru/news/2022-yildan-ba-zi-toifadagi-transport-vositalarini-olib-kirish-sotish-va-ular-dan-foydalanish-man-etiladi>

18 Salikhov, S., & Tulaganov, K. (2022). The Market and Policy Development of EV Industry on a Global Level and In Uzbekistan Review. *Academic Research in Educational Sciences*, 3(4), Article 4.

19 daryo.uz. (n.d.). Uzbekistan exempts electric and hybrid cars from customs duty until 2030—Daryo News. <https://daryo.uz/en/2022/12/19/uzbekistan-exempts-electric-and-hybrid-cars-from-customs-duty-until-2030>

20 Asia-plus. (n.d.). Uzbekistan plans to increase the number of electric vehicle charging stations to 2500 by 2025 | Tajikistan News ASIA-Plus. <https://asiaplus.tj.info/en/news/centralasia/20221221/uzbekistan-plans-to-increase-the-number-of-electric-vehicle-charging-stations-to-2500-by-2025>

21 See note 18.

22 CentralasianLIGHT.org. (n.d.). Uzbekistan to receive financial support for development of electric transport. <https://centralasianlight.org/news/uzbekistan-to-receive-financial-support-for-development-of-electric-transport/>



These e-mobility country profiles are a product of the collaboration between the Urban Electric Mobility Initiative (UEMI) and the Asian Transport Outlook (ATO). UEMI is the mobility hub of the Urban Living Lab Centre, a UN-Habitat collaborating platform. This effort is supported through the UEMI-coordinated SOLUTIONSplus project which has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 875041. The sole responsibility for the content of the profiles lie with the authors. It does not necessarily reflect the opinion of the European Union. Neither the INEA nor the European Commission are responsible for any use that may be made of the information contained therein. The ATO Project is co-funded by the Asian Development Bank (ADB) and the Asian Infrastructure Investment Bank (AIIB).