

RWANDA

SHIFTING TO CLEANER AND MORE FUEL-EFFICIENT VEHICLES



THE GFEI IS SUPPORTED BY:





Table 1: Vehicle Population by Category from 2005-2015

Category	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bus	71	87	133	224	250	397	469	531	597	794	1,020
Car	10,309	11,198	13,003	14,925	16,292	17,220	19,177	22,772	25,471	27,312	29,519
Half trailer	77	89	101	124	162	178	186	189	188	196	203
Jeep	6,121	6,797	7,829	9,156	10,387	11,549	13,567	16,083	18,026	20,156	19,324
Microbus	59	61	74	89	115	130	144	150	155	161	235
Minibus	3,419	3,698	3,910	4,567	4,760	4,853	5,021	5,503	6,223	6,118	5,952
Motorcycle	11,653	15,224	20,598	28,416	33,121	38,521	49,349	60,624	68,779	75,017	83,268
Pick up	7,260	8,119	9,409	10,634	11,448	11,932	12,974	14,225	15,067	16,113	15,766
Special engine	82	96	179	241	327	423	548	645	757	854	1,117
Trailer	389	457	577	626	667	694	733	764	831	874	808
Tricycle	0	0	0	0	0	0	18	61	67	70	70
Truck	1,634	1,805	2,106	2,304	2,490	2,723	3,134	3,435	3,931	4,315	4,502
Unknown	0	0	0		0	1	4	17	17	25	27
Caterpillar	0	0	0	0	0	0	0	2	40	80	107
Forklift	0	0	0	0		0	0	0	0	1	7
Total	41,074	47,631	57,919	71,306	80,019	88,621	105,324	124,999	140,109	152,005	161,925
Change		13.77%	17.76%	18.77%	10.89%	9.71%	15.86%	15.74%	10.78%	7.83%	6.13%

Background

Compared to other countries in the East Africa Sub-region, Rwanda has the least annual vehicle registrations as shown in Table 1 and Figure 1 below. In 2017, the country had a motorization rate of 16.8 motor vehicles for every 1,000 inhabitants. Between 2009-2017 however, annual vehicle growth rate was 12% per annum showing a significant growth to the fleet. Similar to other East African countries, motorcycles recorded the highest growth rate, followed by passenger cars and jeeps.

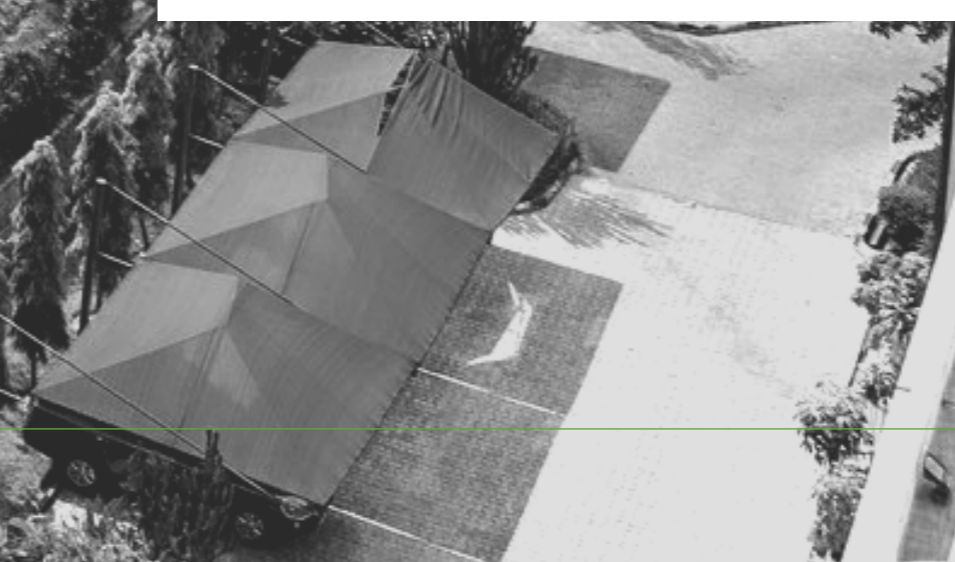
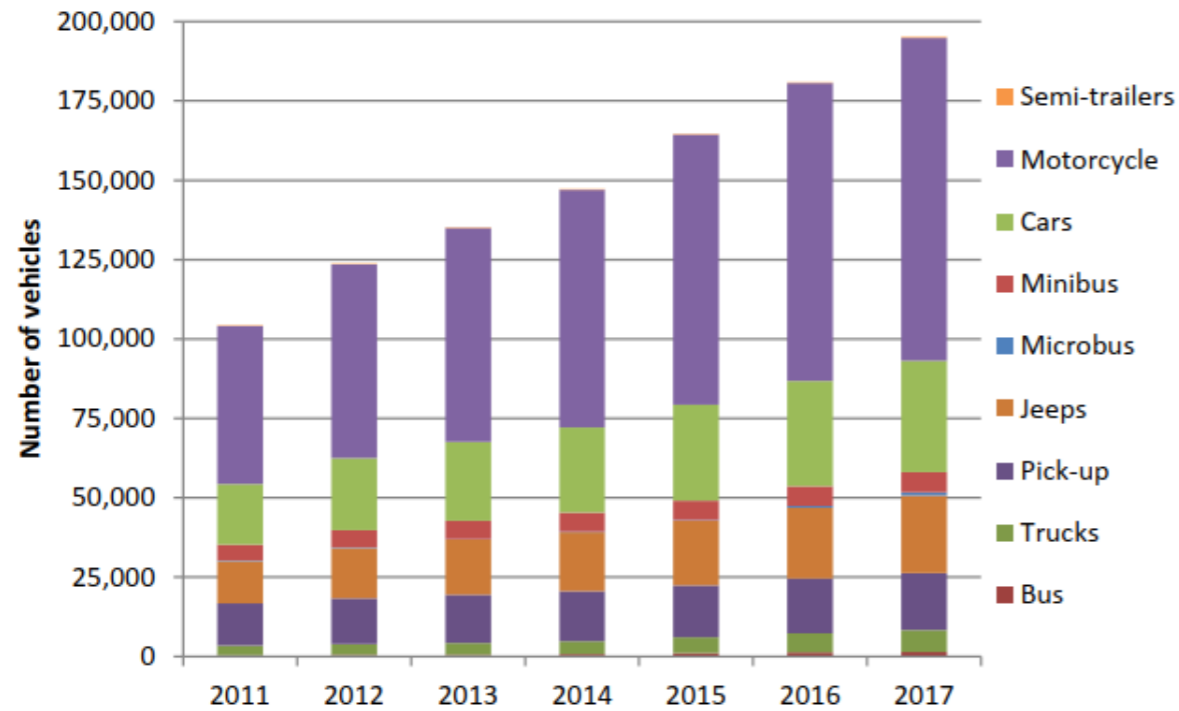
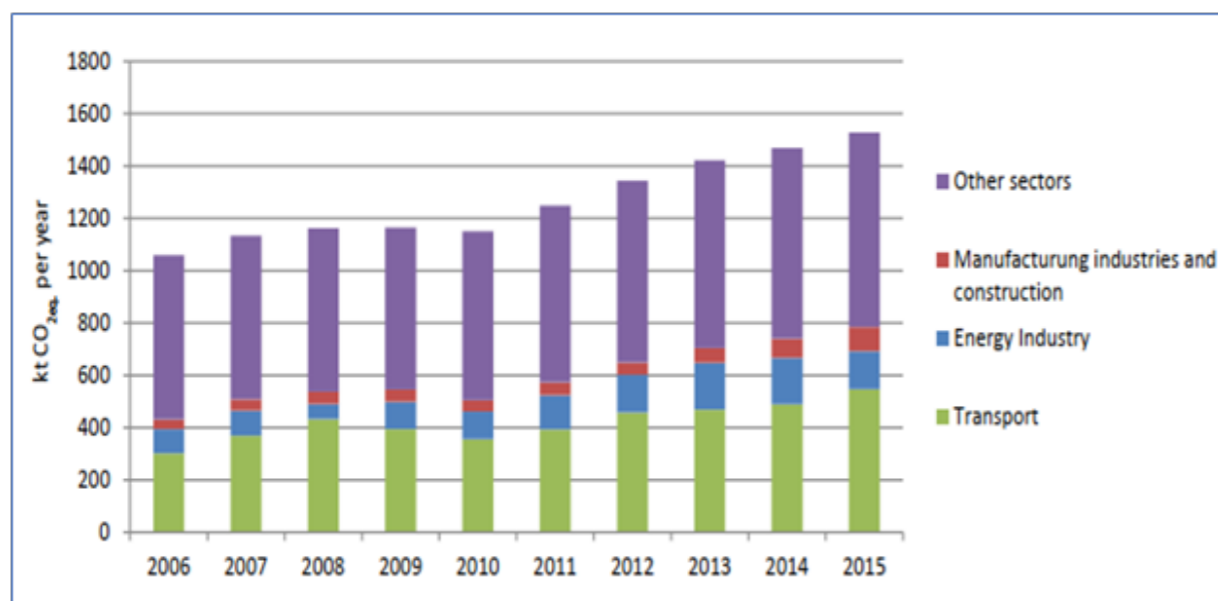


Figure 1: Vehicle growth by Category from 2011 -2017



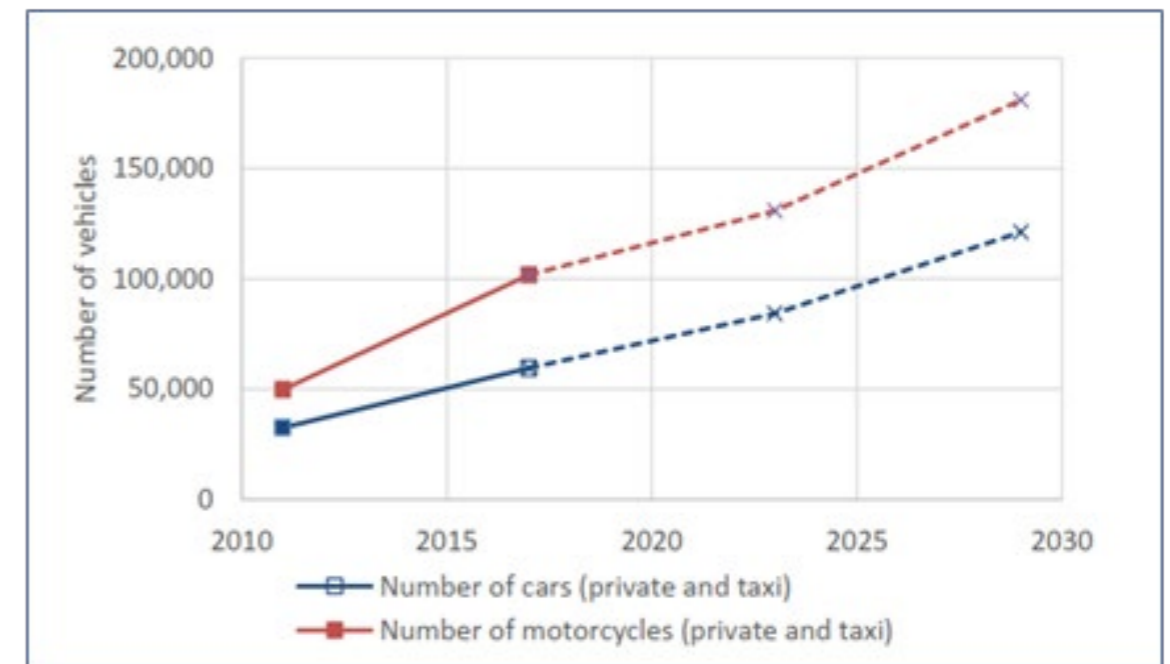
According to the Final Report on Electric Mobility in Rwanda - Background and Feasibility Report (2019), the transport sector remains an important contributor to Rwanda’s energy related greenhouse gas emissions, with the share of transport to total energy-related emissions increasing from 29% to 36% between 2005 and 2016 as shown in the Figure 2 below.

Figure 2: GHG Emissions by Sector: 2006 - 2015



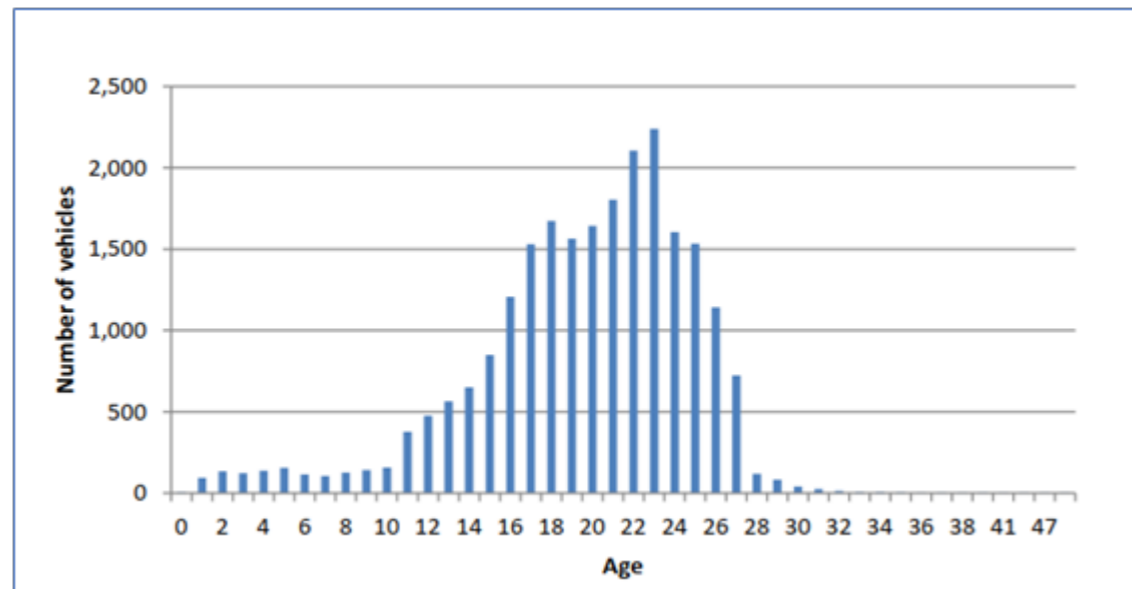
The country is projected to see a doubling in the number of vehicles and motorcycles by 2030 as estimated in Figure 3 below.

Figure 3: Projected Growth in the Number of Cars and Motorcycles



Rwanda predominantly imports vehicles and an analysis of the vehicles imported between 2016 and 2019 show an average import age of 20 years, peaking at 23 years as shown in Figure 4 below. Vehicles below 5 years represented only 3 % of the entire fleet.

Figure 4: Age of Imported Cars from 2016 – June 2019



Rwanda’s fuel economy study was undertaken from 2018 by the Rwanda Environment Management Authority in partnership with the Ministry of Infrastructure, as part of the government’s feasibility study for introduction and implementation of electric mobility in Rwanda.



Key Fuel Economy Findings

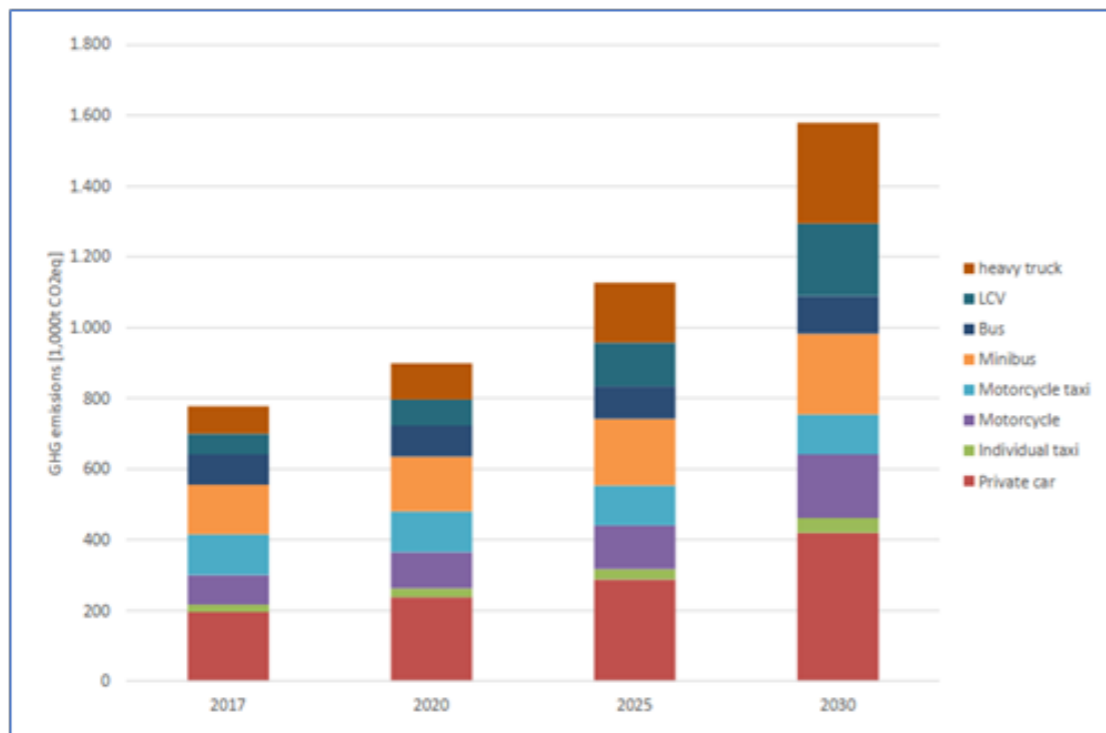
As a result, GFEI study showed that country was importing vehicles that were not fuel efficient as shown in Table 2 below. Even though the fuel economy improved marginally from 9.8 L/100km in 2005 to 9.1 L/100Km in 2015, this was still above global and other countries analyzed through the GFEI. This can be largely attributed to the high number of jeeps in the fleet.

Table 2: Rwanda’s Vehicle fuel economy 2006-2015

Year of Registration	Average Fuel Economy(L/100Km)
2006	9.8
2007	9.1
2008	9.1
2009	9.2
2010	9.1
2011	9.1
2012	9.2
2013	9.1
2014	9.2
2015	9.1

In a business as usual scenario, it is estimated that by 2030, private cars will contribute the highest share of total transport GHG emissions (WTW) in Rwanda at 43% followed by buses and minibuses at 34% and motorcycles at 18% as shown in Figure 5.

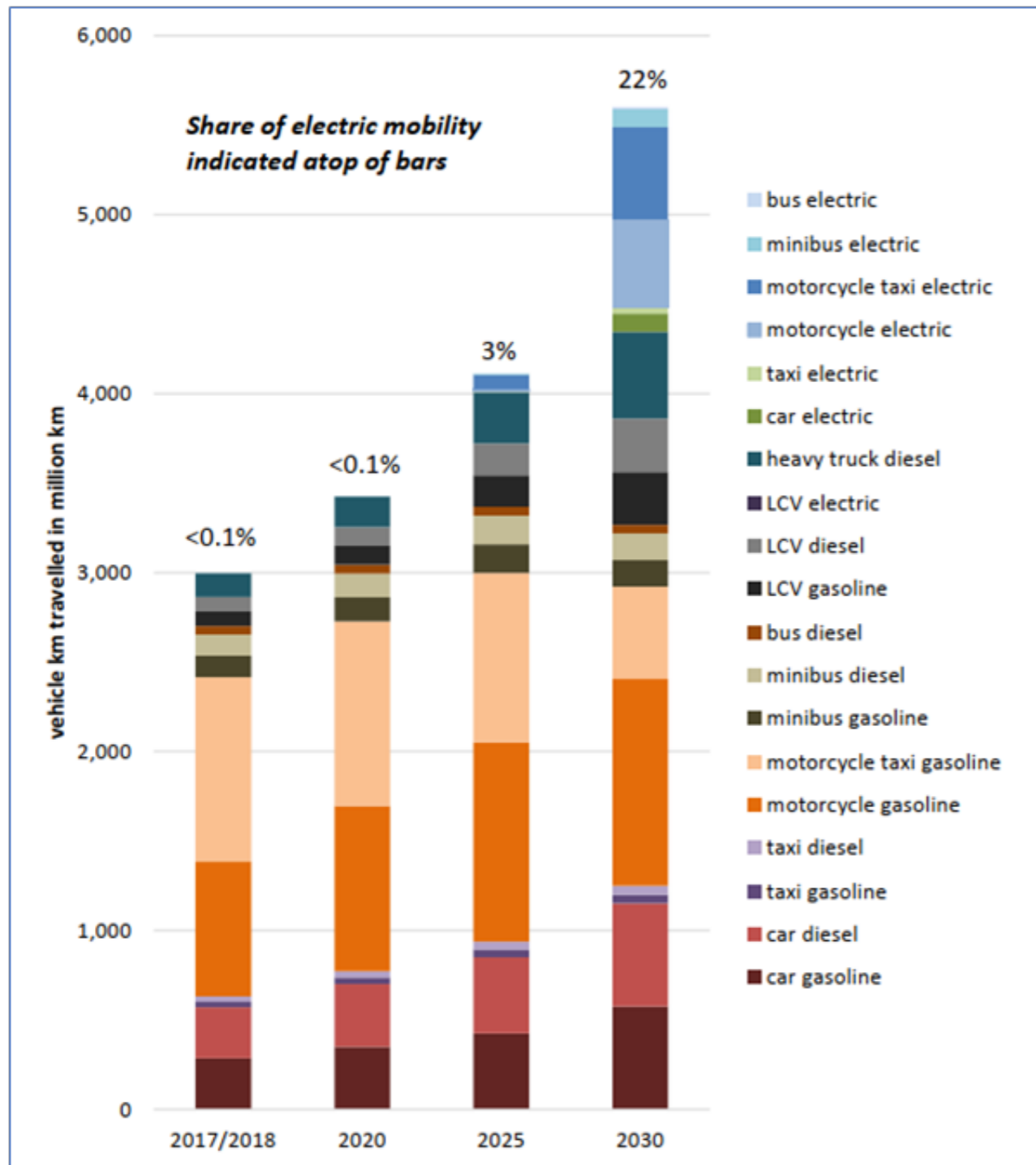
Figure 5: Projected Transport Emission in a BAU scenario from 2017-2030



Proposed policies to improve fuel economy/ electric mobility

The Government of Rwanda's ambition in the transport sector is to ensure the provision of safe and environmentally sound transport, green growth and innovation to reduce dependency on fossil fuels in the transport sector, In line with this ambition, Rwanda has aggressively pursued electrification of transport as a way of improving fuel economy. Among the proposals that were recommended in the fuel economy study in Rwanda are

- Reduce import duties and/or provide value added tax (VAT) exemptions on specific items in electric mobility such as battery cells.
- Introduction of special electric tariff for electric mobility charging stations.



Prior to 2019, the country did not have any vehicle import restrictions. In 2019, Euro 4/IV equivalent vehicle emissions standards were adopted. There were no policies put in place specifically to address import of cleaner, more fuel-efficient vehicles until only recently where Rwanda has become Rwanda the leading country in the East African sub-region in promoting electric mobility. As shown in Figure 6, Rwanda is projected to have 22% of its vehicle fleet electrified by 2030.





Current interventions in promoting electric mobility in Rwanda

In 2021, Rwanda introduced fiscal measures to incentivize the adoption of electric vehicles in the country. Electric vehicles, spare parts, batteries and charging station equipment were exempted from import and excise duties, the Value Added Tax was zero rated and the withholding tax reduced to 5% at customs.

At the same time, companies manufacturing and assembling electric vehicles in Rwanda have been given incentives under the investment code such as 15% Corporate Income Tax (CIT) and tax holiday (irrespective of the investment value).

Additional measures are under consideration but not yet implemented such as capping electricity tariff for charging stations at the industrial tariff level; electric vehicles to benefit from a reduced tariff during the off-peak time; provision of rent-free government owned land for setting up charging stations; provisions of electric vehicle charging stations in the building code; provision of free licenses and authorization for commercial EVs; preference to electric vehicles for Government hired vehicles; establishing restricted zones for green transport; provision of special license plate for EVs allow preferential parking and entry into low emission zones; EV access to High Occupancy Vehicle lanes; enforcement of existing emission standards to discourage the purchase of polluting vehicles; regulating importation of used vehicles by imposing an age limit and introducing a carbon tax to discourage polluting vehicles.

