Progress Report

"Alternative fuels infrastructure"

BELGIUM

14 November 2019

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Part I

Introduction

1. INTRODUCTION PROGRESS REPORT OF BELGIUM

The Regions of Belgium (i.e. Flemish Region, Walloon Region & Brussels-Capital Region) are competent for most aspects of Directive 2014/94. Accordingly, the progress report of Belgium will be structured as follows:

- **Part 1**: Introduction
- **Part 2**: Progress report Flemish region
- **Part 3**: Progress report Walloon Region
- **Part 4**: Progress report Brussels-Capital Region
- **Part 5**: Progress report federal level

2. DIVISION OF COMPETENCES IN BELGIUM

Table 1 gives an overview of the division of competences regarding alternative fuels in Belgium.

Table 1: Division of competences regarding alternative fuels in Belgium

	Federal	Regional	Local (municipalities)
Fiscal measures	- Tax reduction motorcycles, tri- or quadricycles; - Deductibility of clean company cars; - System of taxable benefits of all kinds (company cars); - Excise duties.	- Purchase premium for electric vehicles (private individuals); - Car registration tax; - Annual circulation tax; - Kilometre based road charge.	/
Mobility & Transport	- Highway code; - Registration of vehicles; - Technical standards of vehicles.	- Public road infrastructure (highways and regional roads); - Availability of alternative fuels on rest areas along highways - Public refuelling and charging infrastructure; - Vehicle inspection; - Homologation vehicles; - CNG/LNG/Shore Power installations in ports and along inland waterways; - Public transport (bus/tram); - H2 installations.	- Public road infrastructure (local roads); - Parking facilities on municipal territory.

Energy	- Access to transmission network - Security of supply	- Regulation of gas and electricity retail markets; Access to distribution networks; - Distribution tariffs; - Renewable energy sources (except offshore wind energy); - Energy R&D (except nuclear).	/
Economy & other	- Standardisation/ normalisation - Price indication of energy products & inspection of price indications	- Integration of refuelling and charging points in petrol stations; - Development of public network of refuelling and charging infrastructure; - Spatial planning.	/

3. POLICY COORDINATION WITHIN BELGIUM

Given the complex institutional context in Belgium (both regional and federal entities are directly involved) and the various involved policy areas such as economy, mobility, energy, environment, finances,..., an interdepartmental transversal government working group (Energy-Transport) was created.

Main mission of this Energy-Transport working group:

- to coordinate the transposition and implementation of the European Directive 2014/94 on the deployment of alternative fuels infrastructure;
- to coordinate and determine the Belgian position with regard to alternative fuel issues;
- to coordinate and cooperate on the development of a national policy framework, as stipulated by Directive 2014/94;
- to make concrete work agreements with all involved entities in order to ensure the development of a coherent national policy framework;
- to analyse and discuss common challenges/questions/problems regarding alternative fuels and identify possible solutions;
- to exchange information/studies and to share best practices among federal and regional entities
- to discuss cross-border issues (Benelux, EU, etc.) on alternative fuels.

The Federal Public Service of Economy and the Federal Public Service of Mobility & Transport (federal government of Belgium) are coordinating the national concertation and development of the Belgian policy framework and progress reports. However, as already mentioned earlier, the regions are competent for most aspects of Directive 2014/94.

The key government departments involved (regional & federal) are represented in this transversal group (see table 2).

Table 2: Overview key government departments and contact persons from Belgian regional and federal authorities

Federal Government		
Federal Public Service Economy (DG Energy)	Lenhard Vanhoorn	lenhard.vanhoorn@economie.fgov.be
Federal Public Service Mobility & Transport	Laurent Demilie	laurent.demilie@mobilit.fgov.be
Flemish Region		
Flemish administration ("Omgeving" - Energy & Environment)	Simon Ruyters	simon.ruyters @mow.vlaanderen.be
Flemish administration (MOW - Mobility)	Olivier Vandersnickt	olivier.vandersnickt@mow.vlaanderen.be
Flemish administration (EWI - Science, Technology & Innovation)	Hilde Vermeulen	hilde.vermeulen@ewi.vlaanderen.be
Walloon Region		
Walloon administration (DGO4 - Energy)	Alain Stéphenne	alain.stephenne@spw.wallonie.be
Walloon administration (DGO2 - Transport)	Muriel Dozier	muriel.dozier@spw.wallonie.be
Brussels-Capital Region		
Brussels administration (Energy & Environment)	Nele Sergeant	nsergeant@environnement.brussels
Brussels administration (Mobility)	Martin Lefrancq	mlefrancq@sprb.brussels

4. BENELUX COOPERATION

Benelux context

Considering the climate challenges and the crucial role of clean mobility in the Benelux countries, which are underpinned by a densely populated area with intensive cross-border traffic and transport.

Considering the Benelux Talanoa Declaration adopted in 2018, aiming to live up to the COP21 targets, which was put forward by the Benelux countries in a joint statement also underlining the importance of clean mobility.

Considering the growing and proportionally high goods flows in the Benelux area over land, water and airways as reported in the Benelux study on freight transport in 2016. Considering the recent developments in national and local policies on clean transport especially in urban areas.

Regional cooperation in EU context

Underlining the importance of regional cooperation, Belgium and its regions emphasize close cooperation with neighbouring countries. Recalling the Benelux recommendation M(2015)10 on cooperation regarding the deployment of infrastructure for alternative fuels and the Benelux political declaration in 2017 on borderless access to e-mobility services within the Benelux which reiterates the need of interoperability and the adoption of common standards.

These initiatives helped facilitate the development of the trans-European project IDACS (ID and Data Collection for Sustainable fuels in Europe) aiming to assure better consumer awareness through better information about the location/availability of alternative fuel infrastructure and create a structured market development for an EU-wide approach for assigning ID codes to e-mobility actors.

Decarbonisation of transport also depends on the full well-to-wheel implications of alternative fuel use. That is why regional energy cooperation also exists between the Benelux region and neighbouring countries on renewable energy which contribute to clean mobility.

5. KEY AFI-FIGURES FOR BELGIUM

Please find in below table 3 some consolidated key figures regarding alternative fuel vehicles and infrastructure (d.d. July/August 2019) for Belgium. Please note that more detailed figures and data can be found in the specific progress reports of the regional entities of Belgium.

Table 3: Key figures alternative fuel passenger vehicles & public infrastructure in Belgium.

July / August 2019	Flemish Region	Walloon Region	Brussels Capital Region	TOTAL
Battery electric vehicles	10832	2398	1738	**14968**
Plug-in Hybrid electric vehicles	28540	4245	3675	**36460**
H2 vehicles	30	4	7	**41**
CNG vehicles	11178	1261	764	**13203**
Charging points	3300	824	233	**4357**
H2-stations	2	0	0	**2**
CNG/LNG stations	107	23	3	**133**

Part II

Flemish Region

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INTRODUCTION

The Flemish Region remains firmly committed to alternative fuels for transport through the implementation of the Flemish Clean Power for Transport Action Plan, which was approved at the end of 2015. The Action Plan aims to bring about a shift from traditional combustion engines to vehicles running on alternative fuels (battery electric, plug-in hybrid, CNG and hydrogen). The objectives and measures under this Action Plan were included in the National Policy Framework, which was submitted in November 2016 in accordance with the Alternative Fuels Infrastructure Directive (AFID). This report presents the current state of affairs regarding the deployment of the Action Plan and the figures for alternative fuel vehicles and the recharging and refuelling infrastructure in Flanders.

By way of introduction, an overview is given below of the current situation regarding the objectives formulated in the Flemish Action Plan and in the National Policy Framework. In general, a positive trend is to be seen regarding the various objectives. The indicative objectives that were set will be difficult to achieve for BEV and CNG vehicles. On the other hand, the sub-objectives for PHEV are amply exceeded.

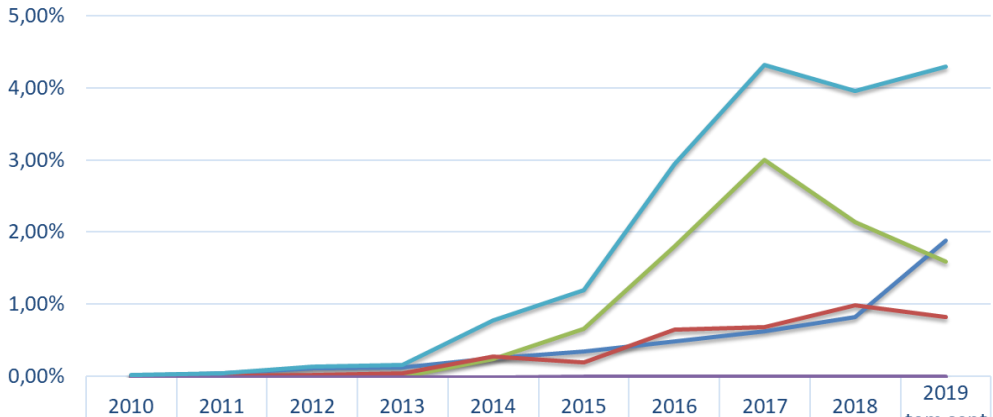
Table 1. Achievement of the objectives of the Flemish CPT Action Plan

	end-2015	end-2018	**Jul-19**	2020
Market share BEV	0.35%	0.82%	**1.83%**	7.50%
BEV fleet	2 229	7 910	**10 832**	60 500
PHEV fleet	2 846	25 726	**28 540**	13 600
Recharging points	?	3 047	**3 047**	7 400
Market share CNG	0.20%	0.99%	**0.82%**	5%
CNG fleet	1 537	9 644	**9 644**	41 000
CNG refuelling stations	50	105		300
H2 refuelling stations	0	2	**2**	20

Figure 1 below shows the market shares for passenger cars for the various alternative fuels over the years (figures up to and including September 2019). In general, there has been a sharp rise in the various fuels. The share of battery electric passenger cars (BEV) has been increasing rapidly since mid-2018, although the share of plug-in hybrid passenger cars (PHEV) is decreasing, resulting in the total number of alternative fuel passenger cars remaining stable between 2017 and 2019.

The policy measures to achieve the objectives are described in the report below. The emphasis here is firstly on financial and tax incentives for the purchase of alternative fuel vehicles and secondly on the deployment of the necessary recharging and refuelling infrastructure.

Figure 1. Market share of alternative fuels passenger cars in Flanders



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 tem sept
Batterij elektrisch	0,01%	0,04%	0,12%	0,12%	0,26%	0,35%	0,49%	0,63%	0,82%	1,88%
Plug-in hybride	0,00%	0,00%	0,00%	0,00%	0,24%	0,66%	1,80%	3,00%	2,14%	1,59%
Aardgas (CNG)	0,01%	0,01%	0,02%	0,04%	0,28%	0,19%	0,65%	0,68%	0,99%	0,82%
Waterstof	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Totaal Groene voertuigen	0,02%	0,05%	0,14%	0,16%	0,78%	1,20%	2,94%	4,32%	3,95%	4,29%

Key
Batterij elektrisch = Battery electric
Plug-in hybride = Plug-in hybrid
Aardgas (CNG) = Compressed natural gas (CNG)
Waterstof = Hydrogen
Totaal Groene voertuigen = Total green vehicles
tem sept = up to and including September

1. LEGAL MEASURES

1.1. FINANCIAL AND TAX INCENTIVES

Road taxes

18 DECEMBER 2015. Decree containing provisions accompanying the budget for 2016 (*Decreet houdende bepalingen tot begeleiding van de begroting 2016*)
Exemption from registration tax and annual road tax for private electric passenger cars and hydrogen passenger cars and (until 2020) for plug-in hybrid and CNG passenger cars.

28 APRIL 2017. Decree amending the Flemish Tax Code of 13 December 2013 with respect to the greening of road tax for light-duty vehicles and vintage cars (*Decreet houdende wijziging van de Vlaamse Codex Fiscaliteit van 13 december 2013, wat betreft de vergroening van de verkeersfiscaliteit voor lichte vracht en oldtimers*)
Exemption from registration tax and annual road tax for private electric delivery vans and hydrogen delivery vans and (until 2020) for plug-in hybrid and CNG delivery vans.

26 OCTOBER 2018. Decree containing provisions accompanying the budget for 2019 (*Decreet houdende bepalingen tot begeleiding van de begroting 2019*)
Exemption from registration tax for private electric motorbikes and hydrogen motorbikes.

Zero-emission premium

8 JANUARY 2016. Flemish Government Decree amending the Energy Decree of 19 November 2010 concerning the introduction of a premium for zero-emission vehicles (*Besluit van de Vlaamse Regering houdende wijziging van het Energiebesluit van 19 november 2010, wat betreft de invoering van een premie voor zero-emissie voertuigen*).
Introduction of a zero-emission premium on the purchase of zero-emission cars by private individuals.

15 JULY 2016. Approval of Mobility Action Plan.
Introduction of a zero-emission premium on the purchase of zero-emission cars by entities of the Flemish authorities.

28 APRIL 2017. Flemish Government Decree amending the Energy Decree of 19 November 2010 concerning the extension of the target group eligible for a zero-emission premium (*Besluit van de Vlaamse Regering houdende wijziging van het Energiebesluit van 19 november 2010, wat betreft de uitbreiding van de doelgroep die in aanmerking komt voor een zero-emissiepremie*)
Extension of the zero-emission premium for private individuals to include leasing.

9 MARCH 2018. Flemish Government Decree amending the Energy Decree of 19 November 2010 concerning the amount of the premium and the extension of the target group eligible for a zero-emission premium (*Besluit van de Vlaamse Regering houdende wijziging van het Energiebesluit van 19 november 2010, wat betreft de hoogte van de premie en de uitbreiding van de doelgroep die in aanmerking komt voor een zero-emissiepremie*)
Extension of the target group of the zero-emission premium for private individuals to include non-profit associations and vehicle-sharing service providers and adjustment of premium amounts.

28 JUNE 2019. Flemish Government Decree amending the Energy Decree of 19 November 2010 concerning the implementation of European Commission Decision SA.46013 concerning the Flemish support mechanism for green electricity and combined heat and power (CHP) and containing various provisions (*Besluit van de Vlaamse Regering tot wijziging van het Energiebesluit van 19 november 2010, wat betreft de implementatie van het besluit SA.46013 van de Europese Commissie inzake het Vlaamse steunmechanisme voor groene stroom en WKK en houdende diverse bepalingen*)
Extension of zero-emission premium for private individuals until end-2020 and extension of target group to include taxi firms.

Ecology premium

16 MAY 2007. Flemish Government Decree granting support to undertakings for ecological investments in the Flemish Region (*Besluit van de Vlaamse Regering tot toekenning van steun aan ondernemingen voor ecologie-investeringen in het Vlaamse Gewest*)
Approval of Framework Decree for the ecology premium call.

26 OCTOBER 2009. Ministerial Decree implementing Article 4 of the Ministerial Decree of 1 October 2007 implementing the Flemish Government Decree of 16 May 2007 granting support to undertakings for ecological investments in the Flemish Region (*Ministerieel besluit tot uitvoering van artikel 4 van het ministerieel besluit van 1 oktober 2007 tot uitvoering van het besluit van de Vlaamse Regering van 16 mei 2007 tot toekenning van steun aan ondernemingen voor ecologie-investeringen in het Vlaamse Gewest*)
Approval of possibilities for support for alternative fuel vehicles and vessels (electric, natural gas, fuel cell), including the necessary recharging and refuelling infrastructure.

24 JANUARY 2019. Ministerial Decree amending the Ministerial Decree of 24 January 2011 implementing the Flemish Government Decree of 17 December 2010 granting support to undertakings for ecological investments in the Flemish Region concerning the change to the limitative list of technologies (*Ministerieel besluit tot wijziging van het ministerieel besluit van 24 januari 2011 tot uitvoering van het besluit van de Vlaamse Regering van 17 december 2010 tot toekenning van steun aan ondernemingen voor ecologie-investeringen in het Vlaamse Gewest, wat betreft de wijziging van de limitatieve technologieënlijst*)
Approval of the latest version of the limitative list of technologies with eligible investments for the ecology premium+.

Project financing

9 SEPTEMBER 2016. Flemish Government Decree on project subsidisation in implementation of the Clean Power for Transport Action Plan (*Besluit van de Vlaamse Regering betreffende het subsidiëren van projecten in uitvoering van het actieplan 'Clean power for transport'*)
Approval of an annual call for projects on specific themes from 2016 to 2020.

16 MARCH 2018. Flemish Government Decision concerning the granting of support for the *Burgertraject* 2018 in the context of the *Stroomversnelling* [Citizen engagement in energy transition] (*Beslissing van de Vlaamse Regering betreffende toekenning steun aan het Burgertraject 2018 in het kader van de Stroomversnelling*).
Approval of the call for local energy projects in the context of the Stroomversnelling, including projects relating to electric mobility.

25 MAY 2018. Approval of the call for local climate projects

Approval of the call for local climate projects, including projects relating to alternative transport fuels.

1 MARCH 2019. Granting of support for local energy projects in the context of *Stroomversnelling*
Approval of the call for local energy projects, including projects relating to electric mobility.

1.2. ALTERNATIVE FUELS INFRASTRUCTURE

16 MAY 2014. Flemish Government Decree on the terms and conditions for the award of a project subsidy to permit holders for recharging infrastructure for electric vehicles at carpool car parks or Park&Rides under the management of the Flemish Region in implementation of the Flemish Climate Policy Plan 2013-2020 (*Besluit van de Vlaamse Regering betreffende de modaliteiten voor de toekenning van een projectsubsidie aan vergunninghouders voor laadinfrastructuur voor elektrische voertuigen op carpoolparkings of Park&Rides in beheer van het Vlaamse Gewest in uitvoering van het Vlaams Klimaatbeleidsplan 2013-2020*)
Approval of the call for projects for recharging infrastructure at carpool car parks and Park&Rides.

12 DECEMBER 2014. Flemish Government Decree amending the Flemish Government Decree of 16 May 2014 on the terms and conditions for the award of a project subsidy to permit holders for recharging infrastructure for electric vehicles at carpool car parks or Park&Rides under the management of the Flemish Region, in implementation of the Flemish Climate Policy Plan 2013-2020
Extension of the call for projects for recharging infrastructure at carpool car parks and Park&Rides.

25 MARCH 2016. Flemish Government Decree amending the Energy Decree of 19 November 2010 concerning the activities and public service obligations of the distribution system operators to promote the infrastructure for electric vehicles (*Besluit van de Vlaamse Regering tot wijziging van het Energiebesluit van 19 november 2010, wat betreft de activiteiten en openbaredienstverplichtingen van de distributienetbeheerders ter stimulering van de infrastructuur voor elektrische voertuigen*)
Transposition of definitions of 'electric vehicle', 'battery electric vehicle', 'zero emission vehicle', 'electric vehicle recharging point', 'publicly accessibly electric vehicle recharging point' in Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure.

2 MAY 2019. Flemish Government Decree amending various Decrees relating to the environment and agriculture (*Besluit van de Vlaamse Regering tot wijziging van diverse besluiten inzake leefmilieu en landbouw*)
Transposition of standards for hydrogen provided for in Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure.

17 MAY 2019. Decree of the Flemish Government concerning the technical specifications for shore-side electricity supply for seagoing ships and inland waterway vessels (*Besluit van de Vlaamse Regering betreffende de technische specificaties van walstroomvoorzieningen voor zeeschepen en binnenschepen*)

Transposition of standards for shore-side electricity supply provided for in Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure.

23 SEPTEMBER 2019. Approval of the technical regulations for the distribution of electricity (TRDE) in the Flemish Region
Transposition of Article 4(12) of Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure.

2. POLICY MEASURES SUPPORTING THE IMPLEMENTATION OF THE NATIONAL POLICY FRAMEWORK

2.1. COORDINATION AND COMMUNICATION

Flemish Action Plan and CPT team

On 18 December 2015, the Flemish Government approved the Flemish Clean Power for Transport (CPT) Action Plan. The Action Plan contains objectives and measures to enable the transition to alternative transport fuels and zero-emission mobility to take place. The Action Plan provided the opportunity to develop a coordinated policy, with the launch of concrete initiatives and implementation guaranteed by the competent policy areas and actors concerned. A Coordination working group, together with the main stakeholders, acts as a Flemish CPT team with a view to the hoped-for breakthrough to an environmentally-friendly vehicle fleet. The Action Plan runs until 2020.

The Flemish Region is also represented in the umbrella ENOVER Transport Working Group, which is responsible for coordination of the activities within Belgium. Coordination also takes place at BENELUX level and European level within the 'Sustainable Transport Forum' and the 'Committee on Alternative Fuels Infrastructure'.

Underpinning policy

Potential assessments and forecasts are among the tools used in Flanders to underpin the vision and objectives. On this basis, targets have been formulated for 2025 and 2030, which were also included in a draft vision 2030 CPT, the draft Flemish Climate Policy Plan 2030 and the draft Air Quality Plan. The targets and measures included in these policy plans form the basis for the CPT policy after 2020.

Local authority support

In implementation of the Action Plan, a Local Authority Working Group has been set up, chaired by the Association of Flemish Cities and Municipalities (*Vlaamse Vereniging van Steden en Gemeenten*, VVSG). At the end of 2016, a guide to getting started on electric driving was drawn up for local authorities and supplied to every municipality in Flanders. The local authorities are closely involved in the deployment of the basic network of public recharging infrastructure (see below).

Communication and campaigns

A specific CPT website has been set up since the beginning of 2016 (www.milieuvriendelijkevoertuigen.be). This website contains information on the various technologies, environmental benefits, recharging points, etc. The website also provides a tool which compares the total cost of ownership of conventional and environmentally-friendly vehicles. The website is updated regularly.

Specific campaigns concerning environmentally-friendly or zero-emission vehicles are developed on a regular basis. The campaigns inform the public about the benefits of environmentally-friendly transport, the existing incentives, etc. During the campaigns, specific websites are set up, leaflets are printed and social media are used. The latest campaign 'From Eh? to Aha!', which ran in January 2019, also included a radio spot.

Group purchase of electric cars

To further boost the sale of battery electric cars, a group purchase for battery electric cars and the accompanying recharging systems was planned in 2018. The group purchase attracted a great deal of media attention for electric driving and resulted in the sale of 112 electric cars at the conditions of the group purchase (out of 1 748 validated registrations).

2.2. FINANCIAL AND TAX INCENTIVES

Exemption from road tax

The green annual road tax has been applied since 1 January 2016. Electric vehicles and hydrogen-powered vehicles are fully exempt, as are plug-in hybrid vehicles and natural gas vehicles until 2020. From 2019, there will also no longer be any vehicle registration tax (BIV) to pay for electric motorcycles. They were already exempt from road tax. In the meantime, the same greening of tax has also become reality for delivery vans. This refers to motor vehicles used for carrying goods with a maximum authorised mass of 3 500 kilograms.

Zero-emission premium

Since 1 January 2016, private individuals have been entitled to a premium on the purchase of a new zero-emission car. At the beginning of 2018, the Decree was amended so that in 2018 and 2019 the premium amount was frozen at the level of 2017, the premium for hydrogen cars was increased and the premium can also be applied for by non-profit associations and car-sharing service providers. In addition to cars, electric mopeds class B and electric motorbikes are eligible for a premium. In 2019, the target group was extended to include taxi firms. In total, for 2016, 2017 and 2018 together, 2 018 premiums were granted for a total amount of EUR 6 603 617. In 2019, up to the end of September, 1 709 premiums have already been granted for a total amount of EUR 3 778 789. The new Flemish Government decided to stop the premium from 2020.

Project financing

At the end of 2016, support for CPT projects was launched. The legal basis was established for this purpose and a project structure devised for an annual call for projects. In the meantime, this method has led to some 30 projects in progress on a variety of themes (see overview below). In 2018, an Inspiration Day 'on the way to zero-emission transport' was organised to exchange knowledge and experience between the various project initiators.

Table 2. Number of CPT projects per theme

Sharing schemes (5)	Smart recharging (2)
Zero-emission buses/taxis (3)	Light-duty electric vehicles (3)
Zero-emission delivery vans (9)	Communication and visibility (3)
Zero-emission logistics (3)	Semi-public recharging (2)

In addition, themes relevant for CPT were included in other calls for projects organised by the Flemish authorities:

- Call for sustainability mobility projects by the Department of Mobility and Public Works (2017): call for projects addressed to public and private stakeholders concerning sustainable mobility, under which a project concerning electric taxis was submitted.
- Call for local energy projects in the context of *Stroomversnelling* by the Flemish Energy Agency (*Vlaams Energieagentschap*) (2018): call for projects addressed to local authorities and their inhabitants to commit to a local energy project, including projects concerning electric mobility.
- Call for local climate projects by the Department of the Environment (2018): call for projects addressed to local authorities, under which projects concerning mobility and alternative transport fuels were submitted (e.g. purchase and sharing of electric delivery vans/CNG service vehicles).
- Call for local energy projects by the Flemish Energy Agency (2019): call for projects addressed to local authorities, under which projects concerning electric mobility can be submitted.

Ecology premium+

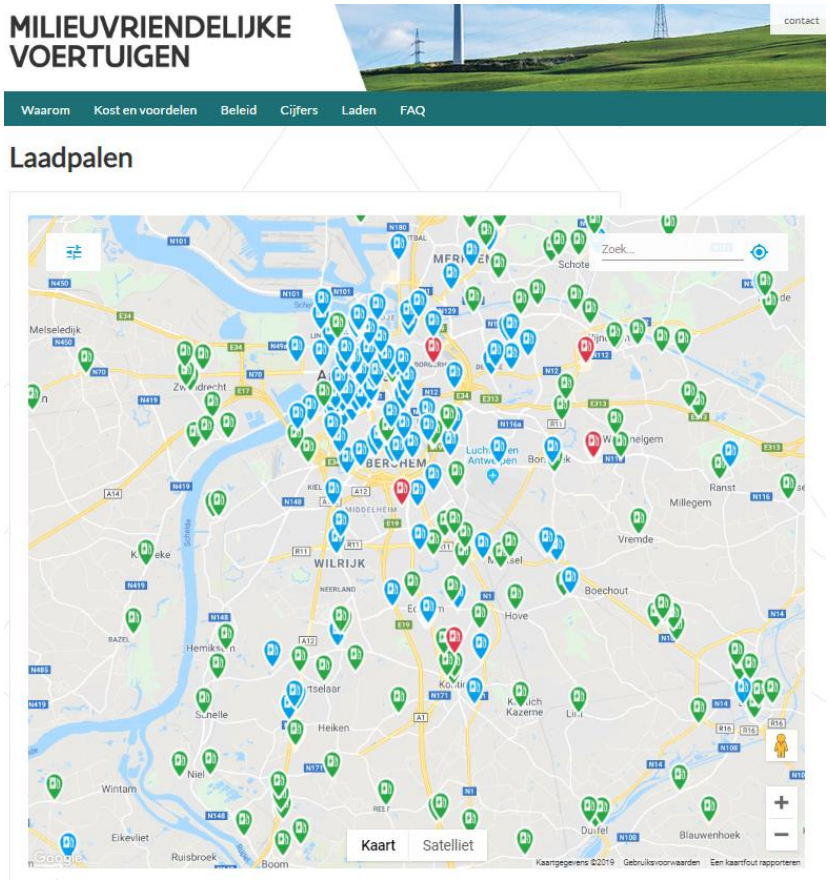
The Flemish Region provides for financial compensation for undertakings which carry out ecological investments. Eligible investments include those in CNG/LNG/H2/dual fuel vehicles and infrastructure and in shore-side electricity supply for seagoing ships. Originally, there was also support for recharging infrastructure, but this was removed from the list of eligible technology at the end of 2014.

2.3. ALTERNATIVE FUELS INFRASTRUCTURE

Deployment of basic network for public recharging infrastructure

The electricity system operators have been assigned the task of organising the installation of 5 000 public recharging points by 2020. A location plan was drawn up for Flanders. Deployment started in 2017, with outsourcing organised each year for a specific number of recharging points. Interoperability of these recharging points is an important focus in this respect, and is always stipulated as a condition in the specifications. On 1 July 2019, this contract resulted in 2 292 recharging points becoming operational.
In addition, the principle of 'recharging station follows car' was introduced for owners of an electric vehicle without the possibility to recharge at a private or publicly accessible recharging point within 500m.

Figure 2. Map of recharging stations in Flanders



Key

MILIEUVRIENDELIJKE VOERTUIGEN = ENVIRONMENTALLY-FRIENDLY VEHICLES; Waarom = Why; Kost en voordelen = Cost and benefits; Beleid = Policy; Laden = Recharging; FAQ = Frequently asked questions; Laadpalen = Recharging stations

Deployment of infrastructure along the motorways and at P&R/carpool car parks

In parallel to the deployment of the basic network, fast charging infrastructure was deployed in service areas along the motorways. This was achieved mainly with the help of European project financing via the Connecting Europe Facility (CEF) programme (FAST-E, ULTRA-E, UNIT-E, BENEFIC, etc.). Thanks to these developments, the presence of an area-wide network is expected on the TEN-T core network in 2020. In addition, ultra-fast chargers will be deployed (MEGA-E, BENEFIC). Future service area concessions will include the obligation to install recharging infrastructure.

Via a call for projects in 2014 by the Flemish Agency for Roads and Traffic (*Vlaams Agentschap Wegen en Verkeer*), recharging infrastructure was also deployed for Park & Rides and Carpool car parks. A second call for projects was planned in 2019. The call for subsidy can be launched as soon as the Flemish Government has approved the subsidy decree.

Recharging at home/at work

The great potential for recharging at home or at work is actively promoted. For instance, specifications were drawn up for recharging at home and the information was added to the website www.milieuvriendelijkevoertuigen.be.
Project financing offered the opportunity in several calls to install recharging infrastructure at businesses.

Code for (semi-)public recharging

In 2015, a cooperation project ran with a number of towns for the deployment of EV recharging infrastructure: EVORA. Under this project, a 'Code for public recharging' was drawn up, with the focus on the interests and needs of the (future) e-drivers.

Benefic

The Flemish Region is an initiator and driver of the European project BENEFIC (www.benefic.eu). Under this project, in partnership with the Brussels Capital Region and the National Government of the Netherlands, a subsidy budget of EUR 7 330 000 has been made available for the deployment of alternative fuels infrastructure (recharging stations, CNG/LNG/H2 infrastructure and shore-side electricity supply). In total, over two calls for projects, 33 infrastructure projects have been approved for deployment in 2020. BENEFIC is financed by the Connecting Europe Facility (CEF) programme of the European Union.

Data infrastructure for alternative fuels

Together with the deployment of the basic network, the Flemish distribution system operators introduced a notification obligation, with a view to making the information obtained on the notified recharging points available as open data to interested market participants. The notification obligation did not yield the desired result, so the Flemish authorities have concluded a contract with a data manager (Eco-Movement) to bring together the Flemish data in close cooperation with the recharging station operators that supply the data. The data are made available via a card on the website www.milieuvriendelijkevoertuigen.be. Data on CNG/LNG refuelling stations are managed and made available by Gas.be. Data on H2 refuelling stations are not actively managed due to the limited number of public stations.

As coordinator for Belgium, the Flemish Region is taking part in the European project 'ID and Data Collection for Sustainable Fuels in Europe (IDACS)', which was launched at the beginning of 2019. Under this project, a methodology and structure will be developed to collect static and dynamic data relating to alternative fuels infrastructure and make them available via a National Access Point (NAP).

2.4. NICHE FLEETS

In the CPT policy area, the focus is placed specifically on niche fleets. The barriers with respect to the recharging/refuelling infrastructure and action radius can be overcome more easily through their plannable routes and often fixed positions. A specific focus on this, together with accompanying support measures, allows a substantial difference to be made in the shorter term and at lower expenditure.

Buses

The Flemish Government approved specific objectives in 2016 for the greening of the buses of the public passenger transport company De Lijn. From 2019, a few new alternative fuels buses will be purchased. From 2025, all bus lines in the town centres

must be operated with zero-emission buses only. In the meantime, De Lijn has embarked on a number of start-up projects with electric buses in Antwerp, Ghent and Leuven. In 2019, a study was carried out by the European Investment Advisory Hub (EIAH) for the further greening of public transport by bus.

Within the CPT project financing, the Zero-Emission Bus Transport Platform (ZEB) was created. Under this project, all stakeholders were brought together to exchange experience and to map thresholds for the transition to zero-emission bus transport.

Taxis

Municipalities and taxi firms received assistance in the transition to electric taxis under the Clean Power for Taxis project. At the same time, environmental criteria and incentives for zero-emission taxis were included in the Flemish legislation for individually remunerated passenger transport. This legislation will enter into force in 2020 and provides for a gradual tightening-up of the environmental criteria for licensed taxis. From 2030, only zero-emission vehicles will be able to obtain new taxi licences. In 2019, the target group for the Flemish zero-emission premium was also extended to include zero-emission taxis.

Shared mobility

In the context of the annual call for projects, several projects relating to electric shared mobility were approved (Cambio, Testrijders, E-deal, etc.). At the same time, the target group for the zero-emission premium was extended in 2017 to cover shared vehicles. The Flemish authorities subscribed to the Green Deal for Shared Mobility, a partnership between various stakeholders with concrete ambitions, including for electric mobility-sharing. Partly thanks to these initiatives, there was significant growth in the number of electric shared vehicles in Flanders.

Commercial fleets

Within the project Electric Corporate Cars Platform (*Platform Elektrische Bedrijfswagens*, PEB), pioneering companies were brought together to exchange experience on the electrification of commercial fleets. In the follow-up project PEB 2.0, companies were actively assisted in the electrification of their fleet. In addition, a study was carried out on tax incentives for the further greening of commercial vehicles.

(Urban) logistics

The theme of zero-emission (urban) logistics was included a number of times in the annual call for projects. In addition, the Flemish authorities have subscribed to the Green Deal for Sustainable Urban Logistics. The draft Flemish Climate Policy Plan includes the target to use only zero-emission vehicles for urban logistics in 2025.

Flemish authorities' fleet

The Flemish authorities are also drawing the environmentally-friendly card for their own fleet. The target set in this respect was a share of 7.5% CNG and 10% (PH)EV for passenger cars in 2020. The Flemish Government also decided not to purchase any new service vehicles powered solely by fossil fuels from 2021 onwards.

2.5. WATERBORNE MOBILITY

Shore-side electricity

Within the structured dialogue of the inland waterway services platform, the operational cooperation between the port authorities, the commercial shipping sector and the Mobility and Public Works Department was continued and strengthened for the greening of inland navigation, including the reduction of emissions through the use of shore-side electricity. Inland waterway vessels have for some time been able to make use of shore-side electricity facilities in the Flemish port areas. The expansion of a network of shore-side electricity facilities for inland waterway vessels was a priority and is still ongoing (see https://www.binnenvaartservices.be/walstroom/aanvragen.php?lang=nl). In 2018, two shore-side electricity projects were carried out in the Port of Antwerp. Also in 2018, in the context of the LIFE project 'Clean Inland Shipping (CLINSH)', North Sea Port organised the construction of two power cabinets on the plug-in Sifferdok. Flemish Waterways (*Vlaamse Waterweg*) plans to construct two power cabinets at the level of the Sint-Baafs-Vijve lock (operational end-2021) and two power cabinets at the Harelbeke lock (operational October 2019). Within the framework of the BENIFIC EU programme, the Port of Antwerp plans to construct 15 shore-based power cabinets (operational end-2019) and Flemish Waterways the construction of 10 shore-based power cabinets at the level of the waiting quay above the Wijnegem lock on the right-hand bank of the Albert Canal (operational in summer 2020). At present, Flemish inland skippers can already use 503 recharging points (including shore-based power cabinets for private use by the ports).

LNG for vessels

In Flanders, LNG is currently not very widely used, but investments have been made in the necessary facilities. In the maritime sector, demand is rising and various LNG vessels are also under construction. The demand for LNG for seagoing vessels will increase in the coming years in the Flemish seaports, especially in Zeebrugge and Antwerp. LNG bunkering is now already possible in all Flemish seaports (Antwerp, Zeebrugge, Ghent and Ostend) via mobile installations. This technique is used regularly in Antwerp, Zeebrugge and Ghent.

In Zeebrugge, there is in addition the 'small-scale' recharging facility for LNG bunkering vessels among others, including the seagoing LNG bunkering vessel 'ENGIE Zeebrugge'. This vessel operates in the Flemish, French and Dutch North Sea ports.

By the end of 2019, a fixed installation for LNG bunkering of inland waterway vessels and small seagoing vessels is also to be brought into use in the Port of Antwerp.
Trends with regard to the use of LNG for vessels are monitored within the Central Commission for the Navigation of the Rhine, at European level and in the Flemish LNG Experts Group.

3. DEPLOYMENT AND MANUFACTURING SUPPORT

The table below provides an overview of the annual allocation of Flemish financial resources for the construction of alternative fuels infrastructure, broken down by fuel type and mode of transport (road, railway, water and air) and the annual allocation of Flemish financial resources to support production facilities for alternative fuel technologies, broken down according to fuel type and mode of transport.

Table 3. Deployment and manufacturing support investment programme

CATEGORY	No.	DENOMINATION	DESCRIPTION	AF FIELD	ALTERNATIVE FUEL	TRANSPORT MODE	APPLICATION LEVEL	CURRENT AND PAST ANNUAL BUDGET [k€]				FUTURE ESTIMATED BUDGET [k€]			TOTAL ESTIMATED BUDGET [k€]	Start Year	Stop Year
								2016	2017	2018	2019	2020	2021-2025	2026-2030			
AFI deployment	1	Zero-emission premium	Premium on purchase or leasing of a zero-emission vehicle for private individuals, non-profit associations, organisations for vehicle-sharing and taxi firms	AFV	Combination	Road	Regional	€ 5 000	€ 5 000	€ 5 000	€ 5 000	€ 5 000	/	/	€ 25 000	2016	2020
	2	Zero-emission premium Flemish authorities	Premium on purchase of a zero-emission vehicle by entities of the Flemish authorities	AFV	Combination	Road	Regional	/	/	/	/	/	/	/	€ 500	2016	2019
	3	Project subsidies CPT	Annual call for projects concerning specific themes relevant for CPT	Combination	Combination	Road	Regional	€ 700	€ 1 155	€ 1 015	€ 1 000	€ 1 000	/	/	€ 4 871	2016	2020
	4	Project subsidies sustainable mobility	Call for sustainable mobility projects (2017)	Combination	Electricity	Road	Regional	/	€ 50	/	/	/	/	/	€ 50	2017	2019

		Call for local energy projects	Call for local energy projects in the context of the '*Stroomversnelling*' (2018)	Combination	Electricity	Road	Regional	/	/	/	€ 293	/	/	/	€ 293	2019	2019
	5	Project subsidies for local climate projects	Call for local climate projects (2018)	Combination	Combination	Road	Regional	/	/	/	€ 3 364	/	/	/	€ 3 364	2018	2022
	6	Project subsidies for local energy projects	Call for local energy projects	Combination	Electricity	Road	Regional	/	/	/	€ 1 738	/	/	/	€ 1 738	2019	2019
	7	BENEFIC	European CEF project for the support of infrastructure projects via a grant scheme	AFI	Combination	Combination	Regional	/	/	€ 3 341	€ 676				€ 4 017[1]	2017	2020
	8	Project subsidies Car pool and P&R	Call for projects for the realisation of recharging infrastructure at carpool and P&R car parks	AFI	Electricity	Road	Regional	/	/	/	/	/	/	/	€ 475	2014	2020
	9	Ecology premium+	Financial subsidy for undertakings making ecological investments – H2 vehicles	AFV	Hydrogen	Road	Regional	/	€ 16	/	/	/	/	/	€ 16	2017	2019
	10	Ecology premium+	Financial subsidy for undertakings making ecological investments – CNG vehicles	AFV	CNG (incl. Biomethane	Road	Regional	€ 183	€ 326	€ 461	/	/	/	/	€ 970	2016	2019
	11	Ecology premium+	Financial subsidy for undertakings making ecological investments – LNG vehicles	AFV	LNG (incl. Biomethane	Road	Regional	€ 240	€ 4 833	€ 3 493	/	/	/	/	€ 9 639	2016	2019
	12	Ecology premium+	Financial subsidy for undertakings making ecological investments – LNG infrastructure	AFI	LNG (incl. Biomethane)	Road	Regional	€ 305	/	€ 348	/	/	/	/	€ 653	2016	2019
	13	Ecology premium+	Financial subsidy for undertakings making ecological investments – LNG/CNG infrastructure	AFI	Combination	Road	Regional	€ 998	€ 69	/	/	/	/	/	€ 1 067	2016	2019

[1] Total amount of BENEFIC grant awarded to carry out infrastructure projects in Flanders.

4. RESEARCH, TECHNOLOGICAL DEVELOPMENT AND DEMONSTRATION (RTD&D)

The table below provides an overview of the annual allocation of part of the public budget to support RTD and demonstrations in the field of alternative fuels, broken down by fuel type and mode of transport.

The Flemish research and innovation policy does not include any RTD programmes specifically targeting low-emission vehicles and their alternative fuel infrastructure: CPT topics are incorporated in generic research programmes of the Strategic Research Centres VITO, Flanders Make (smart manufacturing industry) and imec. R&D and demonstration projects are submitted through the normal support channels of VLAIO (Flemish Agency for Innovation and Entrepreneurship): R&D business support, spearhead clusters, innovative business networks, ecology premium+, ERDF. In order to enable businesses to benefit from more favourable eligibility conditions in VLAIO aid instruments for batteries, Belgium is participating in the IPCEI batteries project.

The strategic research centre VITO is carrying out research into battery performance and management, smart integration of recharging infrastructure with renewable energy in the electricity grid and energy services based on electric vehicles. VITO is also working in the European context on thermal aspects, safety and fast recharging possibilities in battery design, multidisciplinary development of new generation lithium ion batteries, and climate control systems based on super-hydrophobic membrane contactors for electric vehicles. VITO is active on Flemish and international platforms concerning zero-emission mobility (following the former EV experimentation platform) and on a project basis in Flemish and H2020 cooperation. VITO cooperates in the EnergyVille partnership (www.energyville.be) with the Catholic University of Leuven and imec in the field of sustainable energy and smart energy systems.

The activities of Flanders' Make, The strategic research centre in smart manufacturing industry, include research into electric and hybrid drive systems, design and production of smart materials for lightweight structures, and it is developing clean technologies in the recently renovated testing infrastructure with a view to energy-efficient vehicles.

R&D and demonstration of sustainable hydrogen applications focused on the transition to zero-emission mobility are monitored by Waterstofnet vzw: through participation in the Fuel Cells and Hydrogen Joint Undertaking (FCH JU), they are developing an extensive project portfolio and network, which, in addition to all kinds of vehicle types, also includes heat, chemical and renewable energy applications for H2, based on the findings in the roadmap study 'Power to gas Flanders' carried out by Waterstofnet. This study led to the creation of the 'Power to gas' business cluster, financed under the VLAIO IBN (Innovative Business Network) cluster programme, with some 15 partners operating in green hydrogen production innovation. Under the Flemish cluster policy, the spearhead Flanders Logistics Cluster (Flemish Logistics Institute) is also active in the demonstration of hydrogen-powered heavy-duty goods vehicles.

Table 4. Research, technological development and demonstration investment programme

No.	DENOMINATION	DESCRIPTION	AF FIELD	ALTERNATIVE FUEL	TRANSPORT MODE	APPLICATION LEVEL	CURRENT AND PAST ANNUAL BUDGET [k€]				FUTURE ESTIMATED BUDGET [k€]			TOTAL ESTIMATED BUDGET [k€]	Start Year	Stop Year
							2016	2017	2018	2019	2020	2021-2025	2026-2030			
1	Research study	Study on 'extra incentives for electric vehicles'	Combination	Electricity	Road	Regional	€ 78	/	/	/	/	/	/	€ 78	2016	2017
2	Research study	Study on 'potential of light-duty electric vehicles (LEV) in Flanders'	AFV	Electricity	Road	Regional	€ 67	/	/	/	/	/	/	€ 67	2016	2017
3	Research study	Study on 'provision of information on home recharging of electric vehicles'	AFI	Electricity	Road	Regional	€ 87	/	/	/	/	/	/	€ 87	2016	2017
4	Research study	Study on '(federal) taxation for support of clean power vehicles in preparation for a forthcoming legislative period'	Combination	Combination	Road	Regional	/	/	€ 59	/	/	/	/	€ 59	2018	2019
5	eHUBS	Smart Shared Green Mobility Hubs (Interreg NWE)	Combination	Combination	Road	Regional	/	/	/	/	/	/	/	€ 1 464[2]	2019	2022
6	H2SHIPS	System-Based Solutions for H2-Fuelled Water Transport in North-West Europe (Interreg NWE)	AFV	Hydrogen	Combination	Regional	/	/	/	/	/	/	/	€ 1 093[3]	2019	2022

[2] Of which €878k from ERDF.
[3] Of which €437k from ERDF.

	SUV	Stimulating the Up-take of shared and electric autonomous vehicles by local authorities (Interreg NSR)	AFV	Electricity	Road	Regional	/	/	/	/	/	/	/	€ 253[4]	2019	2022
7	Power to gas	Innovative business network (VLAIO): Business cluster in Waterstofnet	AF	Hydrogen	Combination	Regional	/	/	/	/	/	/	/	€ 298[5]	2017	2025
8	H2-Share (Hydrogen Solutions for Heavy-Duty Transport)	Demonstration project for emission reduction in North-West Europe (Interreg NWE)	Combination	Hydrogen	Road	Regional	/	/	/	/	/	/	/	€ 370[6]	2017	2020
9	Waterstofregio 2.0	Structural operational means Waterstofnet, supported by Interreg programme Flanders-Netherlands	Combination	Combination	Combination	Regional	/	/	/	/	/	/	/	€ 750[7]	2016	2019
10	ISHY (Implementation of Ship Hybridisation)	2-Seas Interreg project	Combination	Hydrogen	Combination	Regional	/	/	/	/	/	/	/	€ 6 784	2019	2022

[4] Of which €126k from ERDF.
[5] Total budget programme amounts to €18 000k.
[6] Total budget project €498k.
[7] Total budget programme amounts to €2 342k.

5. TARGETS AND OBJECTIVES

The table below provides an overview of the alternative fuel vehicles in Flanders regarding both the situation on submission of the NPF and the current figures at 1 July 2019. The last three columns show forecasts of the number of alternative fuel vehicles expected in 2020, 2025 and 2030. These forecasts were compiled on drawing up the Flemish part of the draft National Energy and Climate Plan (NECP) for Belgium. The forecasts were based on the assumption of a market share of zero-emission passenger cars of 7.5% in 2020, 20% in 2025 and 50% in 2030. For PHEV passenger cars, the market shares amount to 5% (2020), 10% (2025) and 20% (2030) respectively. For CNG passenger cars, these figures are 5% (2020), 10% (2025) and 10% (2030). Concrete objectives concerning the number of alternative fuel vehicles in Flanders will be included in the final NECP. Objectives have already been formulated in the Flemish CPT Action Plan and the Flemish part of the NPF for the passenger car fleet numbers in 2020: BEV (60 500), PHEV (13 600) and CNG (41 000).

Table 5. Alternative fuel vehicles in Flanders

TRANSPORT MODE	ALTERNATIVE FUEL VEHICLES (AFV)	CURRENT AND PAST NUMBER OF AFV				NUMBER OF AFV EXPECTED TO BE REGISTERED		
		2016	2017	2018	1 July 2019	2020	2025	2030
	ELECTRICITY							
Road	**Electric Vehicles, EV (total road)**	**/**	**/**	**/**	**68 473**	**/**	**/**	**/**
	Powered Two Wheelers (PTW)	**/**	**/**	**/**	**28 356**	**/**	**/**	**/**
	Electric Vehicles, EV (excl. PTW)	**/**	**/**	**/**	**40 117**	**/**	**/**	**/**
	Electric Passenger Cars (BEV+PHEV)	12 348	23 724	33 287	39 372	71 936	354 402	875 420
	• BEV	3 732	5 506	7 911	10 832	30 928	198 840	581 520
	• PHEV	8 616	18 218	25 376	28 540	41 008	155 562	293 900
	Electric Light Commercial Vehicles	/	/	/	730	/	/	/
	• BEV	/	/	/	730	/	/	/

	• PHEV	/	/	/	0	/	/	/
	Electric Heavy Commercial Vehicles	/	/	/	8	/	/	/
	• BEV	/	/	/	7	/	/	/
	• PHEV	/	/	/	1	/	/	/
	Electric Buses and Coaches	/	/	/	7	/	/	/
	• BEV	/	/	/	7	/	/	/
	• PHEV	/	/	/	0	/	/	/
	CNG (including Biomethane)							
Road	**CNG Vehicles (total road)**	**/**	**/**	**/**	**11 571**	**/**	**/**	**/**
	Powered Two Wheelers	**/**	**/**	**/**	**3**	**/**	**/**	**/**
	CNG Vehicles (excl. PTW)	**/**	**/**	**/**	**11 568**	**/**	**/**	**/**
	CNG Passenger Cars	3 727	6 218	9 644	11 178	41 129	151 504	221 703
	CNG Light Commercial Vehicles	/	/	/	3	/	/	/
	CNG Heavy Commercial Vehicles	/	/	/	381	/	/	/
	CNG Buses and Coaches	/	/	/	6	/	/	/
	LNG							
Road	**LNG Vehicles (total road)**	**/**	**/**	**/**	**/**	**/**	**/**	**/**
	Powered Two Wheelers	**/**	**/**	**/**	**/**	**/**	**/**	**/**

	LNG Passenger Cars	/	/	/	/	/	/	/
	LNG Light Commercial Vehicles	/	/	/	/	/	/	/
	LNG Heavy Commercial Vehicles	/	/	/	13	/	/	/
	LNG Buses and Coaches	/	/	/	/	/	/	/
	HYDROGEN							
Road	**Fuel Cell Vehicles, FCEV (total road)**	**/**	**/**	**/**	**36**	**/**	**/**	**/**
	Powered Two Wheelers	**/**	**/**	**/**	**1**	**/**	**/**	**/**
	Hydrogen Passenger Cars	10	13	23	30	/	/	/
	Hydrogen Light Commercial Vehicles	/	/	/	1	/	/	/
	Hydrogen Heavy Commercial Vehicles	/	/	/	0	/	/	/
	Hydrogen Buses and Coaches	/	/	/	4	/	/	/
	LPG							
Road	**LPG Vehicles (total road)**	**/**	**/**	**/**	**17 568**	**/**	**/**	**/**
	Powered Two Wheelers	**/**	**/**	**/**	**14**	**/**	**/**	**/**
	LPG Passenger Cars	9 973	9 375	10 219	10 035	/	/	/
	LPG Light Commercial Vehicles	/	/	/	7 390	/	/	/
	LPG Heavy Commercial Vehicles	/	/	/	129	/	/	/
	LPG Buses and Coaches	/	/	/	0	/	/	/

The table below provides an overview of the alternative fuels infrastructure in Flanders, with respect to both the situation on submitting the NPF and the current figures at 1 July 2019. The last 3 columns show the numbers of recharging and refuelling points which are forecasted to be necessary in 2020, 2025 and 2030. These figures were calculated on the basis of the vehicles/infrastructure ratio, as provided for in the Alternative Fuels Infrastructure Directive (AFID) (1 recharging point per 10 electric vehicles, 1 CNG refuelling point per 600 CNG vehicles). Objectives have already been formulated for 2020 in the Flemish CPT Action Plan and the Flemish part of the NPF with respect to the number of recharging points (7 400), CNG refuelling stations (300) and H2 refuelling stations (20).

Table 6. Alternative fuels infrastructure in Flanders

TRANSPORT MODE	ALTERNATIVE FUELS INFRASTRUCTURE (AFI)	CURRENT AND PAST NUMBER OF RECHARGING/REFUELLING POINTS				TARGET NUMBER OF RECHARGING/REFUELLING POINTS		
		2016	2017	2018	1 July 2019	2020	2025	2030
	ELECTRICITY							
Road	**Total recharging points (public + private)**	**2 778**	/	/	**12 750**	**/**	**/**	**/**
	Recharging points (publicly accessible)	**430**[8]	**1 726**	**3 047**	**3 300**	**7 100**	**35 000**	**87 000**
	Normal power recharging points, P ≤ 22kW (public)	/	/	/	3 236	/	/	/
	High power recharging points, P > 22kW (public)	/	/	/	64	/	/	/
	• AC fast charging, 22kW < P ≤ 43 kW (public)	/	/	/	31	/	/	/
	• DC fast charging, P < 100 kW (public)	/	/	/	33	/	/	/
	• DC ultrafast charging, P ≥ 100 kW (public)	/	/	/	0	/	/	/
	Recharging points (private)	**2 348**	/	/	**9 450**[9]	**/**	**/**	**/**
	Normal power recharging points, P ≤ 22kW (private)	/	/	/	/	/	/	/
	High power recharging points, P > 22kW (private)	/	/	/	/	/	/	/

[8] Estimate based on enquiry at various public recharging point operators.
[9] Estimate of total number of private recharging points based on figures of AVERE Belgium.

	• AC fast charging, 22kW < P ≤ 43 kW (private)	/	/	/	/	/	/	/
	• DC fast charging, P < 100 kW (private)	/	/	/	/	/	/	/
	• DC ultrafast charging, P ≥ 100 kW (private)	/	/	/	/	/	/	/
Water	Shore-side electricity supply for seagoing ships in maritime ports	9	/	/	11	13	/	/
	Shore-side electricity supply for inland waterway vessels in inland ports	285	/	/	503	513	600	/
Air	Electricity supply for stationary airplanes	/	/	/	96	/	/	/
	NATURAL GAS (including Biomethane)							
Road	**CNG refuelling points (total)**	**/**	**/**	**/**	**/**	**/**	**/**	**/**
	CNG refuelling points (public)	67	84	105	105	70	250	370
	CNG refuelling points (private fleet operators)	/	/	/	/	/	/	/
	LNG refuelling points (total)	**3**	/	/	**13**	**/**	/	/
	LNG refuelling points (public)	2	/	/	6	/	/	/
	LNG refuelling points (private fleet operators)	1	/	/	/	/	/	/
Water	Maritime Ports - LNG refuelling points	0	/	/	**5**	**/**	/	/
	Inland Ports - LNG refuelling points	0	/	/	**2**	**/**	/	/
	HYDROGEN							
Road	**H2 refuelling points (total)**	**3**	/	/	**4**	**/**	/	/
	H2 refuelling points – 350 bar (total)	2	/	/	2	/	/	/
	H2 refuelling points – 350 bar (public)	1	/	/	1	/	/	/

	H2 refuelling points – 350 bar (private fleet operators)	1	/	/	1	/	/	/
	H2 refuelling points – 700 bar (total)	1	/	/	2	/	/	/
	H2 refuelling points – 700 bar (public)	1	/	/	1	/	/	/
	H2 refuelling points – 700 bar (private fleet operators)	/	/	/	1	/	/	/

6. ALTERNATIVE FUELS INFRASTRUCTURE DEVELOPMENTS

The table below provides an overview of changes in supply (infrastructure) and demand (number of vehicles and vessels), resulting in a calculation of the ratio between supply and demand for various vehicle types and alternative fuels for transport.

Table 7. Alternative fuels infrastructure developments

		PAST												FUTURE ESTIMATED								
		2016			2017			2018			1 July 2019			2020			2025			2030		
MODE OF TRANSPORT	ALTERNATIVE FUEL	Supply	Demand	Ratio	Supply	Demand	Ratio	Supply	Demand	Ratio	Supply	Demand	Ratio	Supply	Demand	Ratio	Supply	Demand	Ratio	Supply	Demand	Ratio
Road	Electricity	430	12 348	29	1 726	23 724	14	3 047	33 287	11	3 300	39 372	12	7 100	71 936	10	35 000	354 402	10	87 000	875 420	10
	CNG (incl. Biomethane)	67	3 727	56	84	6 218	74	105	9 644	92	105	11 178	106	70	41 129	588	250	151 504	606	370	221 703	599
	Hydrogen	2	8	4	/	/	/	/	/	/	3	30	10	/	/	/	/	/	/	/	/	/

Part III

Walloon Region

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INTRODUCTION

The main aim in the period covering the adoption of the regional policy framework and this report was to transpose Directive 2014/94/EU into Walloon legislation and to put in place measures enabling the use of alternative infrastructure and fuels in order to achieve the Walloon targets. A variety of measures have also been put in place in this period in order to engage in a broader debate on the decarbonisation of passenger and freight transport.

The reflections in Wallonia have been carried out alongside the major debate initiated in the context of the re-shaping of European and national energy policies. Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action requires Member States to draw up a final version of their national energy and climate plan by 31 December 2019 (for Wallonia the PwEC and PACE). The targets for the number of alternative fuel vehicles and infrastructure by 2030 in the version of the PwEC submitted to the Commission in late 2018 will be re-evaluated. Purely for information, the targets established in the PwEC submitted to the Commission in December 2018 were as follows:

	2019	**2030**
Diesel (incl. mild hybrids)	52.52% (0.06%)	17% (3%)
Petrol (incl. mild hybrids)	46.36% (0.9%)	40% (13%)
CNG (all technologies)	0.07%	18%
BEV	0.13%	19%
PHEV (all technologies)	0.23%	5%
Hydrogen	0%	1%

In terms of infrastructure, this provisional plan envisaged the establishment by 2030 of:

1. LNG stations: 25 stations, primarily along main roads.
2. CNG stations: 220 stations. Some of these stations are planned to be decentralised, in order to distribute gas directly from local biomethane plants where it is produced.
3. Recharging points for electric vehicles: 6,900 points. B2B solutions – 185,000 points.
4. Hydrogen stations: 10 stations in 2025 and 20 in 2030.

The new draft of the plan expected in December 2019 should also include targets for heavier vehicles (LGVs and HGVs). As regards buses, from 2021 Wallonia will be obliged to transpose Directive 2009/33/EC as amended by Directive (EU) 2019/1161.

Furthermore, the new Walloon Government that took up office on 13 September 2019 emphasised various aspects of mobility in its regional policy statement (RPS), primarily reducing the need for mobility and the modal shift, as well as stressing the importance of fuel switching. More broadly, Wallonia will integrate the process which has already begun of phasing out ICE vehicles. In a transitional phase, the Government will support an ambitious plan to establish electric charging points and compressed natural gas (CNG) and liquefied natural gas (LNG) stations, evenly distributed across Wallonia. It will promote vehicles powered by natural gas, electricity and hydrogen and hybrid vehicles. Wallonia will support local authorities through central procurement to help them green their vehicle fleets and machinery.

This need also extends to public transport, in particular buses, as the Government will continue to develop more environmentally friendly public transport, encouraging clean vehicles and optimising their environmental performance per passenger.

1 LEGAL MEASURES

The **Decree** amending the decrees of 12 April 2001 on the organisation of the regional electricity market and of 19 January 2017 on the pricing system applicable to operators of gas and electricity distribution networks with a view to the deployment of smart meters and flexibility, and the **Decree** amending the decrees of 12 April 2001 on the organisation of the regional electricity market … with a view to facilitating the development of renewable energy communities, adopted in plenary by the Walloon Parliament on 30 April 2019. These two decrees introduce both the legal obligations to be met by charging points installed on the network and the option to apply a day/night domestic electricity metering system, and 'ad hoc' electric vehicle charging.

Walloon Government Decree of 16 March 2017 laying down comprehensive conditions for fuelling units intended for fuelling one or more natural gas-powered vehicles with compressed natural gas, at a maximum filling pressure of 30 MPa (300 bar), without the intermediate storage of high-pressure gas. This decree lays down the conditions for the installation of stations supplying CNG.

Walloon Government Decree of 22 November 2018 amending the Walloon Government Decree of 15 May 2014 laying down regulations for the navigation of inland waterways in the Walloon Region and repealing, for the Walloon Region, certain provisions of the Royal Decree of 15 October 1935 laying down general regulations for Belgian inland waterways. This decree establishes the electrical standards for shore-side charging of vessels.

Walloon Government Decree of 13 December 2018 laying down the sectoral conditions applicable to service stations intended for fuelling motor vehicle tanks with alternative gaseous fuels, namely liquefied natural gas, and amending various Walloon Government decrees regarding environmental permits. This decree lays down the conditions for the installation of stations supplying LNG.

Walloon Government Decree of 18 July 2019 laying down the sectoral conditions applicable to service stations for fuelling motor vehicle tanks with gaseous hydrogen fuels. This decree lays down the conditions for the installation of stations supplying hydrogen for road transport.

2 POLICY MEASURES SUPPORTING THE IMPLEMENTATION OF THE NATIONAL POLICY FRAMEWORK

Air, Climate and Energy Plan & Walloon Energy and Climate Plan

The Walloon Energy and Climate Plan (PwEC) and the Air, Climate and Energy Plan (PACE) will provide detailed policy guidance for the decarbonisation of various areas of activity by 2030. As a result of European and regional obligations, these texts are

being reviewed and rewritten. The process is expected to be completed in December 2019 for the PwEC and December 2021 for the PACE.

Besides policy points and binding targets for 2030 (-55% CO_2 emissions compared with 1990 and carbon neutrality by 2050), these documents will lay down the measures to be implemented in accordance with a schedule set by the regional policy statement.

This political statement for the 2019-2024 legislature will enable in-depth work on both mobility and the gradual greening of vehicles in all industries (by working, for example, on taxation or 'soft incentives'), and on the deployment of a network of interoperable charging points across Wallonia.

Registration tax

Decree of 5 March 2008 establishing an environmental penalty for CO_2 emissions from vehicles owned by natural persons in the Code on taxes having equivalent effect to income taxes.

This legal basis enabled the establishment of a preferential rate for the registration of electric vehicles, by amending taxation for such vehicles based not on the tax horsepower of the vehicle but on the rated capacity. The tax on electric vehicles is therefore fixed at EUR 61.50. For vehicles running on CNG, the environmental penalty laid down for vehicles emitting more than 146 g of CO_2/km is repealed.

Greening of public fleets

By means of the Walloon Government Decision of 30 November 2017 on the greening of public fleets, Wallonia has committed to progressively replacing petrol or diesel vehicles in its public fleets with alternative-fuel vehicles within the meaning of the Directive and in the following manner:

- from 1 January 2020, 50% of vehicles replaced will run on alternative fuels;
- from 1 January 2030, 100% of vehicles replaced will run on alternative fuels.

In this context, the local authorities and public interest bodies will be encouraged to aim to replace their fleet with low-emission vehicles at a rate of 20%. With a view to this, since 2016 a subsidy has been available to them on certain conditions.

Investment premiums

Walloon Government Decree of 21 March 2019 on incentives for equipment to reduce vehicle energy consumption and noise pollution for the 2019 financial year, and Ministerial Order of 21 March 2019 implementing Article 2(2) of the Walloon Government Decree of 21 March 2019 on incentives for equipment to reduce vehicle energy consumption and noise pollution for the 2019 financial year provide for HGVs to be fitted out for LNG by contributing either to the additional cost of purchasing new vehicles or to the cost of converting existing vehicles. The maximum investment cost is set at EUR 40,000, with a contribution rate of 30% of these costs.

Low-emission zones

The Decree of 17 January 2019 on combating air pollution from traffic establishes a low-emission zone in Wallonia.

The legislation lays down a timeline for banning class M1 vehicles according to their emission categories as follows:

- from 1 January 2023, the use of a vehicle that does not meet any Euro standard or that meets Euro standard 1;
- from 1 January 2024, the use of a vehicle that meets Euro standard 2;
- from 1 January 2025, the use of a vehicle that meets Euro standard 3;
- from 1 January 2026, the use of a vehicle that meets Euro standard 4;
- from 1 January 2028, the use of a vehicle fitted with a diesel engine that meets Euro standard 5;
- from 1 January 2030, the use of a vehicle fitted with a diesel engine that meets Euro standard 6, with the exception of a vehicle fitted with a diesel engine that meets Euro standard 6d-TEMP or Euro standard 6d or a higher standard.

The Government may, on its own initiative, establish temporary or permanent low-emission zones in Wallonia. The scheme also allows towns and municipalities in Wallonia to take additional measures regarding access to their territory in accordance with the provisions specifically laid down in the Decree.

Even if the Decree has been approved and has entered into force, it will require the adoption of executive orders to implement the practical provisions.

3 DEPLOYMENT AND MANUFACTURING SUPPORT

Deployment and manufacturing support														
CATEGORY	No.	DENOMINATION	DESCRIPTION	AF FIELD	ALTERNATIVE FUEL	TRANSPORT MODE	APPLICATION LEVEL	CURRENT AND PAST ANNUAL BUDGET [k€]				FUTURE ESTIMATED BUDGET [k€]		
								2016	2017	2018	2019	2020	2021-2025	2026-2030
AFI deployment	1	Call for proposals for the deployment of alternative fuels infrastructures	Support through loans at preferential rates. Targeted electricity, CNG and LNG	AFI	Combination	Road	Regional	€ -	€ -	€ 8 550	€ 3 500	€ 5 000	€ -	€ -
	2	Call for local communities for the greening of fleets	Support for municipalities for the greening of fleets, including the installation of public charging points	AFI	Electricity	Road	Regional	€ -	€ -	€ -	€ 3 500			
Support of manufacturing plants for AF technologies	1			Select:	Select:	Select:	Select:							
	2			Select:	Select:	Select:	Select:							
				Select:	Select:	Select:	Select:							
				Select:	Select:	Select:	Select:							

The deployment policies have featured two calls for proposals for the deployment of infrastructure and alternative fuels (covering all fuels), which will enable Wallonia to exceed its provisional 2020 targets. The two calls would enable around 10 LNG stations to be constructed in Wallonia.

The exemplary role of public services has also been supported with a call for proposals to renew vehicle fleets in Walloon towns and municipalities, with the possibility of installing charging points.

The Wallonia Public Service has just launched a public tender for the deployment of some 20 charging points to be constructed at administrative buildings belonging to the Walloon Administration. This measure is part of the strategy to green the Walloon Administration's vehicle fleet.

4 RESEARCH, TECHNOLOGICAL DEVELOPMENT AND DEMONSTRATION (RTD&D)

Research, technological development and demonstration (RTD&D)															
No.	DENOMINATION	DESCRIPTION	AF FIELD	ALTERNATIVE FUEL	TRANSPORT MODE	CURRENT AND PAST ANNUAL BUDGET [k €]				FUTURE ESTIMATED BUDGET [k€]			TOTAL ESTIMATED BUDGET [k€]	Start Year	Stop Year	Observations
						2016	2017	2018	2019	2020	2021-2025	2026-2030				
1	Hydrogen call	A call for proposals for the deployment of Power-to-X projects has been launched in the public transport sector. Call ongoing.	Combination	Hydrogen	Road				15 000 €							En cours. Budget indicatif.

A pilot project is planned involving the deployment of ten hydrogen buses. The call for proposals is awaiting validation.

Several research and development projects are currently underway in Wallonia that are linked to varying degrees with the vehicle market.

In this context, the following projects are of particular note:

- HYSTACK, which aims to develop a testbed for low-power fuel cells (EUR 400,000);
- WALLONHY, which will develop new models of alkaline electrolysers (EUR 1,000,000);
- INTERESTS, which will develop a model for renewable hydrogen production and new materials for storing hydrogen by adsorption on solid compounds (EUR 1,000,000).

This paragraph intentionally omits projects on batteries launched under IPCEI, as they are still at the evaluation stage.

5 TARGETS AND OBJECTIVES

Table 8: Alternative Fuel Vehicles estimates

Alternative Fuels Vehicles (AFV) estimates								
TRANSPORT MODE	**ALTERNATIVE FUELS VEHICLES (AFV)**	**CURRENT AND PAST NUMBER OF AFV**				**NUMBER OF AFV EXPECTED TO BE REGISTERED**		
		2016	2017	2018	July 2019	2020	2025	2030
	ELECTRICITY							
Road	**Electric Vehicles, EV (total road)**	**2 859**	**4 804**	**6 699**	**8 185**	**9 095**	**0**	**563 266**
	Powered Two Wheelers (PTW)	**659**	**909**	**1 205**	**1 433**			
	Electric Vehicles, EV (excl.PTW)	**2 200**	**3 895**	**5 494**	**6 752**	**9 095**	**0**	**563 266**
	Electric Passenger Cars (BEV+PHEV)	2 118	3 794	5 371	6 509	8 746	0	482 626
	• BEV	743	1 090	1 635	2 322	3 679		382 079
	• PHEV	1 375	2 704	3 736	4 187	5 067		100 547
	Electric Light Commercial Vehicles	82	90	112	141	248	0	80 640
	• BEV	81	86	106	134	239		63 840
	• PHEV	1	4	6	7	9		16 800
	Electric Heavy Commercial Vehicles	0	0	0	1	0	0	0
	• BEV	0	0	0	1			
	• PHEV	0	0	0				
	Electric Buses and Coaches	0	11	11	101	101	0	0
	• BEV	0	0	0				
	• PHEV	0	11	11	101	101		
Water	Inland Waterway Vessels							
	Seagoing Ships							
Air	Aircraft							
Rail	Locomotives							
	CNG (including Biomethane)							
Road	**CNG Vehicles (total road)**	**415**	**620**	**1 646**	**2 126**	**4 936**	**0**	**422 450**
	Powered Two Wheelers	**0**	**0**	**407**	**407**			
	CNG Vehicles (excl. PTW)	**415**	**620**	**1 239**	**1 719**	**4 936**	**0**	**422 450**
	CNG Passenger Cars	272	425	943	1 217	3 772		361 970
	CNG Light Commercial Vehicles	143	195	291	477	1 164		60 480
	CNG Heavy Commercial Vehicles	0	0	5	25			
	CNG Buses and Coaches	0	0	0	0			
Water	Inland Waterway Vessels							
	Seagoing Ships							
Air	Aircraft							
Rail	Locomotives							
	LNG (including Biomethane)							
Road	**LNG Vehicles (total road)**	**0**	**0**	**0**	**1**	**0**	**0**	**0**
	Powered Two Wheelers	**0**	**0**	**0**	**0**			
	LNG Passenger Cars	0	0	0	0			
	LNG Light Commercial Vehicles	0	0	0	0			
	LNG Heavy Commercial Vehicles	0	0	0	1			
	LNG Buses and Coaches	0	0	0	0			
Water	LNG Inland Waterway Vessels							
	LNG Seagoing Ships							
Air	Aircraft							
Rail	Locomotives							

	HYDROGEN							
Road	**Fuel Cell Vehicles, FCEV (total road)**	**0**	**0**	**4**	**4**	**32**	**0**	**23 719**
	Powered Two Wheelers	**0**	**0**	**0**	**0**			
	Hydrogen Passenger Cars	0	0	4	4	20		20 109
	Hydrogen Light Commercial Vehicles	0	0	0	0			3 360
	Hydrogen Heavy Commercial Vehicles	0	0	0	0			250
	Hydrogen Buses and Coaches	0	0	0	0	12		
Water	Inland Waterway Vessels							
	Seagoing Ships							
Air	Aircraft							
Rail	Locomotives							
	LPG							
Road	**LPG Vehicles (total road)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Powered Two Wheelers							
	LPG Passenger Cars							
	LPG Light Commercial Vehicles							
	LPG Heavy Commercial Vehicles							
	LPG Buses and Coaches							
Water	Inland Waterway Vessels							
	Seagoing Ships							
Air	Aircraft							
Rail	Locomotives							
	OTHER AF							
Road	**Other AF Vehicles (total road)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Powered Two Wheelers							
	Passenger Cars							
	Light Commercial Vehicles							
	Heavy Commercial Vehicles							
	Buses and Coaches							
Water	Inland Waterway Vessels							
	Seagoing Ships							
Air	Aircraft							
Rail	Locomotives							

Please note that the data in this table is **for information only**, as the Walloon Energy and Climate Plan is being amended in response to the Commission's comments.

Alternative Fuels Infrastructure (AFI) targets								
TRANSPORT MODE	**ALTERNATIVE FUELS INFRASTRUCTURE (AFI)**	**CURRENT AND PAST NUMBER OF RECHARGING/REFUELLING POINTS**				**TARGET NUMBER OF RECHARGING/REFUELLING POINTS**		
		2016	**2017**	**2018**	**July 2019**	**2020**	**2025**	**2030**
	ELECTRICITY							
Road	**Total recharging points (public* + private)**	**235**	**257**	**483**	**824**	**0**	**0**	**191 900**
	Recharging points (publicly accessible)	**235**	**257**	**483**	**824**	**0**	**0**	**6 900**
	Normal power recharging points, P ≤ 22kW (public)	215	233	411	705			
	High power recharging points, P > 22kW (public)	20	24	72	119	0	0	0
	• AC fast charging, 22kW < P ≤ 43 kW (public)	6	8	24				
	• DC fast charging, P < 100 kW (public)	14	16	48				
	• DC ultrafast charging, P ≥ 100 kW (public)							
	Recharging points (private)	**0**	**0**	**0**	**0**	**0**	**0**	**185 000**
	Normal power recharging points, P ≤ 22kW (private)							185 000
	High power recharging points, P > 22kW (private)	0	0	0	0	0	0	0
	• AC fast charging, 22kW < P ≤ 43 kW (private)							
	• DC fast charging, P < 100 kW (private)							
	• DC ultrafast charging, P ≥ 100 kW (private)							
Water	Shore-side electricity supply for seagoing ships in maritime ports							
	Shore-side electricity supply for inland waterway vessels in inland ports	42	42	42	42			
Air	Electricity supply for stationary airplanes							
	NATURAL GAS (including Biomethane)							
Road	**CNG refuelling points (total)**	**5**	**13**	**21**	**25**	**0**	**0**	**220**
	CNG refuelling points (public)	5	13	21	25			220
	CNG refuelling points (private fleet operators)							
	LNG refuelling points (total)	**0**	**0**	**1**	**1**	**0**	**0**	**25**
	LNG refuelling points (public)	0	0	1	1			**25**
	LNG refuelling points (private fleet operators)							
Water	Maritime Ports - LNG refuelling points							
	Inland Ports - LNG refuelling points							
	HYDROGEN							
Road	**H2 refuelling points (total)**	**0**	**0**	**0**	**0**	**4**	**10**	**20**
	H2 refuelling points – 350 bar (total)	0	0	0	0	2	0	0
	H2 refuelling points – 350 bar (public)	0	0	0	0			
	H2 refuelling points – 350 bar (private fleet operators)	0	0	0	0	2		
	H2 refuelling points – 700 bar (total)	0	0	0	0	2	10	20
	H2 refuelling points – 700 bar (public)	0	0	0	0	2	**10**	20
	H2 refuelling points – 700 bar (private fleet operators)	0	0	0	0			
	LPG							
Road	**LPG refuelling points (total)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	LPG refuelling points (public)							
	LPG refuelling points (private fleet operators)							
	OTHER AF							
All	**AF refuelling points (total)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	AF refuelling points (public)							
	AF refuelling points (private fleet operators)							

Here too, the figures are provided for information only.

The amount of road infrastructure has grown significantly in 2019, with 705 standard charging points as at 1 September 2019 and 119 ultrafast charging points.

The alternative fuels infrastructure on the Walloon inland waterways has not has not yet been expanded, owing to:

- low demand (electric charging points are not used by freight barges because they rarely stop, and never at ports);
- a lack of technology that would enable emissions from barge engines to be reduced effectively and significantly in the long term.

6 ALTERNATIVE FUELS INFRASTRUCTURE DEVELOPMENTS

Alternative Fuels Infrastructure (AFI) developments

		PAST												FUTURE ESTIMATED		
		2016			2017			2018			2019			2030		
MODE OF TRANSPORT	ALTERNATIVE FUEL	Supply	Demand	Ratio	Supply	Demand	Ratio	Supply	Demand	Ratio	Supply	Demand	Ratio	Supply	Demand	Ratio
Road	Electricity	235	2200	9	257	3895	15	483	5494	11	824	6752	8	6900	563266	82
	CNG (incl. Biomethane)	5	415	83	13	620	48	21	1239	59	25	1719	69	220	422450	1920

Changes in fuels use

		PAST AND CURRENT STATUS OF FUELS USE IN THE TRANSPORT SECTOR			ASSESSMENT OF FUTURE DEVELOPMENT OF FUELS IN THE TRANSPORT SECTOR		
MODE OF TRANSPORT	FUEL	Percentage of different fuels use for transport [%]			Estimated percentage of different fuels use for transport [%]		
		2016	2017	2018	2020	2025	2030
Road	Gasoline	39.61%	41.55%	45.34%			
	Diesel	59.51%	57.50%	54.41%			
	Electricity	0.11%	0.21%	0.30%			
	CNG	0.02%	0.02%	0.05%			
	LNG	0.00%	0.00%	0%			
	Hydrogen	0.00%	0.00%	0%			
	LPG	0.00%	0.00%	0%			
	Biofuels						
	Synthetic and paraffinic fuels						
	Other AF						
	Total Road	**99%**	**99%**	**100%**	**0%**	**0%**	**0%**

Part IV

Brussels Capital Region

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INTRODUCTION

The Brussels Capital Region (BCR) is facing major challenges with respect to both global warming and the improvement of local air quality. Especially with regard to nitrogen oxides and fine particulate matter, the Region intends to carry out structural regularisation of its situation in the light of the European standards. Motorised transport, and especially the large numbers of diesel vehicles circulating in the Region, make a significant contribution to this pollution.

There is strong economic activity in the Brussels Region so each day it has to process a large number of commuters from the other Regions. Moreover, Brussels is regularly at the top of the list of cities with the most congestion. This congestion not only causes considerable environmental pollution, but also creates very large economic losses, as a result of which a growing number of businesses are considering leaving the Region. It is therefore clear that transport constitutes a decisive problem in the context of the regional objectives in the field of air quality and greenhouse gas emissions.

The new 'Good Move' regional mobility plan proposal was built on an analytical and collaborative process with the stakeholders concerned. The mobility vision was based on a major improvement to the living environment and safety of the inhabitants and users of the town (including car-free areas, boosting public transport, expanding a quality network for cyclists and pedestrians, hierarchy of traffic flows). The mobility system must be geared more to the needs of users by enabling users to avail themselves of the most suitable means of transport for their journeys and discouraging car use, reducing car ownership and bringing about a significant reduction in the length and number of individual motorised journeys.

The Region is striving to develop the conditions enabling replacement of the use of the passenger car by active modes, public transport and car-sharing, depending on the potential of each mode for the various categories of distances and socio-democratic characteristics of the population. For the remaining car journeys, preference is given to small vehicles without internal combustion engine.

The policy statement of the new Brussels Government (2019-2024) included phasing-out diesel vehicles by 2030 at the latest and petrol and LPG vehicles by 2035, a measure which has also been included in Good Move. This phasing-out will be structured as a continuation of the Low-Emission Zone (LEZ), which has been in force since 1 January 2018 for the entire territory of the Brussels Capital Region and which has currently established access criteria up to and including 2025. The Government's aim here is to promote the development of light, low-carbon and shared vehicles. An impact study of the phasing-out of ICE vehicles will be launched at the end of 2019, which will provide elements for refinement of the regional strategy on alternative vehicles (electric, hybrid, CNG and hydrogen), taking into account the impact and development of each technology.

To encourage the transition to electric transport, the BCR has already taken a number of measures, especially with regard to the exemplary role of the Brussels public authorities with regard to transport, licences for electric taxis, financial support for businesses for replacement of delivery vans, etc.

A major obstacle to the uptake of electric mobility is the presence of recharging infrastructure. Because few Brussels residents have their own garage or parking space to be able to recharge their vehicles, there is considerable demand for public

recharging points for electric vehicles. A concession was launched at the end of 2018 for the deployment and exploitation of public recharging infrastructure (normal recharging), with achievement of the basic network in the course of 2019. In a subsequent phase, residents, taxi and car-sharing firms will be able to apply for a recharging station under this concession.

These recharging stations, as well as three additional public CNG stations, 2 fast chargers and 1 ultra-fast charger are also receiving support under the BENEFIC project, with co-financiering from the European Commission Connecting Europe Facility (CEF) programme.

At the moment (1 July 2019), there are 233 public and semi-public recharging points available for EV drivers in the Brussels Capital Region, which means that the target for 2020 of 200 recharging points has already been exceeded. The further deployment of the concession will increase this number still further in the coming year. In addition, three public CNG stations are operational and a fourth station will be added before the end of 2019. Furthermore, two shore-side electricity installations have been located at the cruise terminal in the Port of Brussels.

1. LEGAL MEASURES

Electric vehicle quotas for the Brussels public authorities via the mobility plan

The Brussels Government Decree of 15 May 2014[10] provides that the Brussels local and regional authorities that are required to draw up a mobility plan (i.e. they employ more than 100 people at the same site) must integrate in their plan an analysis of the composition and use of their vehicle fleet, as well as targets to improve the environmental performance of the vehicle fleet and measures to achieve this. This includes the obligation, from 1 January 2015, to reduce their passenger car fleet or to switch it in part to electric vehicles. The regional authorities must ensure that they integrate at least 25% electric vehicles in their fleet per 3-year period; for local authorities (municipalities, CPAS[11] and intermunicipal associations), this figure is 15%. Since 1 January 2018, this measure is also applicable to the multi-purpose vehicle (MPV) category. From 2020, these quotas will be increased to 40% and 25% respectively. Each passenger car fewer in the fleet (after 1 January 2013) can also be counted as one electric car. In the case of reduction of the fleet of MPVs, each MPV fewer in the fleet may also be counted as one electric MPV. Furthermore, these electric vehicles must use 100% green electricity.

In support of this measure, Brussels Environment (*Leefmilieu Brussel*) has offered the Brussels public authorities a public procurement centre for operational leasing which includes battery electric vehicles (passenger cars and MPVs).

[10] Brussels Capital Region Government Decree on the exemplary conduct of the authorities concerning transport and amending the Brussels Capital Region Government Decree of 7 April 2011 concerning mobility plans (*Besluit van de Regering van het Brussels Hoofdstedelijk Gewest betreffende het voorbeeldgedrag van de overheden inzake vervoer en ter wijziging van het besluit van de Regering van het Brussels Hoofdstedelijk Gewest van 7 april 2011 betreffende de bedrijfsvervoerplannen*) – 15 May 2014.

[11] Public social assistance centres (CPAS).

100% 'Zero-emission' vehicles at the Brussels public authorities from 2025

The Inter-Federal Energy Pact approved on 14 December 2017 by the Brussels Government includes objectives for the decarbonisation of transport. Under this Pact, 20% of new registrations must be 'zero-emission' vehicles in 2025, 50% in 2030 and 100% in 2050. The Pact goes further for the public authorities and provision is made that all new purchases of passenger cars and buses for public transport must be 'zero-emission' by 2025.
On second reading on 16 May 2019, the Brussels Government approved a draft Decree amending the Brussels Capital Region Government Decree of 15 May 2014 on the exemplary conduct of the authorities concerning transport. The objectives of this amending Decree include the implementation of the provisions of the Inter-Federal Energy Pact concerning the inclusion of 'zero-emission' vehicles at the Brussels public authorities. In concrete terms, this means that increasing the quotas of 'zero-emission' vehicles will be accelerated and, more specifically, that, from 1 January 2021, 65% of new cars for the regional authorities and 50% for the local authorities must be 'zero-emission'. From 2025, 100% of new purchases or leasing must be 'zero-emission' vehicles, for both the local and the regional Brussels authorities. This also applies to buses used for public transport purchased by STIB-MIVB.

Decree on 'exemplary conduct concerning transport' for the Brussels authorities

The Brussels Government Decree of 15 May 2014[10] concerning the 'exemplary conduct' of the Brussels authorities has the aim of encouraging Brussels regional and local government institutions (municipalities, CPAS, intermunicipal associations and regional institutions) to set a good example in matters of transport. This Decree states that all government institutions concerned, when purchasing or leasing new vehicles, must meet certain requirements with regard to environmental performance. This refers more specifically to:

- respecting minimum Ecoscores[12] for the purchase or leasing of passenger cars and MPVs, with the Ecoscore increasing by 1 point each year;
- a ban on the purchase of diesel vehicles (for passenger cars and MPVs);
- inclusion of environmental performance requirements in the award criteria of the specifications for the purchasing or leasing of new vehicles with a proportion of at least 30%;
- the requirement to include the Ecoscore (min. 70%) among the environmental performance requirements for the purchasing/leasing of passenger cars, MPVs and minibuses, as well as the unladen mass of the vehicle and the fitting of the vehicle with a regenerative braking system (in the case of hybrid and battery electric vehicles – BEV);
- the requirement among the environmental performance requirements for the purchase of trucks and delivery vans to respect at least the present Euro standard, as well as to give preference to vehicles that are lighter and fitted with a regenerative braking system (hybrid and BEV).

Since the application of the 'Exemplary conduct concerning transport' Decree – in mid-2014 – the number of electric vehicles at the Brussels government institutions has increased sharply in the space of 4 years. In the case of passenger cars, 17% are BEVs (2% in 2014), and in the case of new purchases, as many as 30%. However, the absolute figures for BEVs are still limited (232 vehicles).

[12] Further information on the 'Ecoscore' environmental score for vehicles can be found at www.ecoscore.be.

In this context, mention can be made of the fact that Agence Bruxelles-Propreté/ Agentschap Net Brussel (ANB), which is responsible for refuse collection in the Brussels Capital Region, has purchased five electric lorries for the collection of containers. They also carried out an analysis of the possibility of converting to electric refuse collection vehicles, but for the time being it appears that the market supply cannot meet the ANB requirements. For light-duty vehicles, they wish to replace all ICE vehicles with electric vehicles (<3.5 tonnes) by 2025.

Legal framework for the gas and electricity market

Legal and regulatory framework

The Order of 19 July 2001 on the organisation of the electricity market (*Ordonnantie van 19 juli 2001 met betrekking tot de organisatie van de elektriciteitsmarkt*) and the Order of 1 April 2004 on the organisation of the gas market (*Ordonnantie van 1 april 2004 met betrekking tot de organisatie van de gasmarkt*) were amended in 2018,[13] more specifically to transpose the requirements deriving from Directive 2014/94/EU on the deployment of alternative fuels infrastructure. The Order of 19 July 2001 on the organisation of the electricity market now also specifies that every user of an electric vehicle so requesting receives a smart meter. Also in 2018, the Technical Regulations on Electricity (*technisch reglement elektriciteit*)[14] – which provide for all the conditions for access to the distribution grid – were amended to facilitate connection to the 400V grid of recharging stations on the public roads (see below).
To clarify the role of the operator of a publicly accessible recharging station, a Decree[15] was adopted in 2019 to supplement the Order of 19 July 2001 on the organisation of the electricity market. These three texts, supplemented by tariff decisions of the regulator, are intended to form a transparent framework for the development of the recharging infrastructure.

Regulatory and tariff framework

The regulator identifies electric mobility as an important change in the electricity market for the tariff period 2020-2024, for which a high level of monitoring is required to keep a close eye on the costs and price effects of this change. The regulator will ensure that the tariffs applied by the distribution system operator are proportionate, transparent and non-discriminatory.

Investments in the distribution grid

The distribution system operator maintains and develops its grid – both 400V and 230V – in order to meet the present and future needs for recharging electric vehicles.

[13] Order amending the Order of 19 July 2001 on the organisation of the electricity market in the Brussels Capital Region, the Order of 1 April 2004 on the organisation of the gas market in the Brussels Capital Region, concerning road charges relating to gas and electricity and amending the Order of 19 July 2001 concerning the organisation of the electricity market in the Brussels Capital Region and the order of 12 December 1991 establishing budgetary funds (*Ordonnantie tot wijziging van de ordonnantie van 19 juli 2001 betreffende de organisatie van de elektriciteitsmarkt in het Brussels Hoofdstedelijk Gewest, de ordonnantie van 1 april 2004 betreffende de organisatie van de gasmarkt in het Brussels Hoofdstedelijk Gewest, betreffende wegenisretributies inzake gas en elektriciteit en houdende wijziging van de ordonnantie van 19 juli 2001 betreffende de organisatie van de elektriciteitsmarkt in het Brussels Hoofdstedelijk Gewest en de ordonnantie van 12 december 1991 houdende oprichting van begrotingsfondsen*) – 23 JULY 2018.
[14] Decision 80 of 5 December 2018 of BRUGEL concerning the approval of proposals for technical regulations for electricity and gas, proposed by the distribution system operator for electricity and gas SIBELGA.
[15] Decree of the Brussels Capital Region Government laying down implementing measures concerning the deployment of alternative fuels infrastructure (*Besluit van de Brusselse Hoofdstedelijke Regering houdende uitvoerende maatregelen betreffende de uitrol van infrastructuur voor alternatieve brandstoffen*) – 28 MARCH 2019.

The Brussels electricity distribution grid is characterised by low availability of 400V, accounting for only 11% of the grid, while the remainder of the grid is 230V, which limits the recharging capacity. The gradual and partial conversion of the grid to 400V is carried out where necessary or possible and financially reasonable, notably taking into account the needs relating to the recharging infrastructure for electric vehicles. The regulator pays particular attention to the adequacy and reasonableness of the investments approved by the distribution system operator.

Environmental criteria for car-sharing

The Brussels Capital Region Government Decree of 28 April 2016 amending the Brussels Capital Region Government Decree of 21 March 2013 laying down the conditions for the use of reserved parking spaces for operators of shared motor vehicles (*Besluit van de Brusselse Hoofdstedelijke Regering van 28 april 2016 tot wijziging van het besluit van de Brusselse Hoofdstedelijke Regering van 21 maart 2013 houdende de voorwaarden voor het gebruik van voorbehouden parkeerplaatsen aan operatoren van gedeelde motorvoertuigen*) substantially increased and therefore tightened up the Ecoscore threshold values required for bringing shared vehicles into service. Consequently, for city cars and the type of family cars of category M1, type AA, AB, AC, AD and AE, it is no longer possible to bring diesel cars into service, as a result of which the car-share operators are encouraged indirectly to opt for alternative fuels. The minimum Ecoscore for these vehicles was set at 72 and is rising to 75 in 2020.

Tax exemption for parking spaces for businesses

Businesses and liberal professions located in the City of Brussels are exempted from the municipal tax on parking spaces, on condition that they equip these parking spaces with a recharging point for electric vehicles.

This exemption has been granted since 1 January 2014 on the annual tax on parking spaces (5 euro/m^2) for visitors or staff of businesses and liberal professions, on condition that they equip these parking spaces with a recharging point for electric vehicles.

Obligation for recharging infrastructure in car parks (public & private)

In accordance with the revised European Directive (EU) 2018/844 on the energy performance of buildings, minimum facilities for electric recharging stations in the car parks of residential and non-residential buildings are defined. A proposal for a Decree laying down the general operational conditions for car parks and implementing these provisions concerning recharging infrastructure was presented in first reading to the Brussels Government in November 2018, but has been temporarily halted due to the change of government.

This proposal follows the provisions of the Directive, whereby for residential buildings with more than 10 parking spaces, provision must be made for the necessary ducts for electric cabling so that a recharging point can be provided on each parking space. For non-residential buildings with more than 10 parking spaces, the car park must be equipped with at least 1 recharging point for electric vehicles and the ducts for cabling for at least one in five parking spaces. These provisions were also included in the Regional Urban Development Regulations (*Gewestelijke Stedenbouwkundige Verordening*, GSV).

Since the Brussels fire service is raising questions about the safety of parked electric vehicles in underground car parks, a working group has been set up on the subject. In order to study these aspects in a city where a significant deployment of electric vehicles has already taken place, as well as other aspects surrounding electro-mobility, a study trip was organised to Oslo in September 2019 with a delegation of Brussels administrations (Brussels Environment, Brussels Mobility, fire service and distribution system operator Sibelga).

2. POLICY MEASURES SUPPORTING THE IMPLEMENTATION OF THE NATIONAL POLICY FRAMEWORK

Air-Climate-Energy Plan

On 2 June 2016, the Brussels Government adopted the Air-Climate-Energy (ACE) plan, which aims to reduce harmful emissions significantly and improve air quality and quality of life for the population of Brussels. In this plan, it is proposed to reduce greenhouse gases by 30% by 2025. The plan sets out the following approach for the transport sector: (1) optimise the demand for mobility (fewer kilometres), (2) achieve a modal shift, (3) limit the impact of the vehicles to a minimum.

In order to achieve this last objective, various measures are proposed, including improvement of the environmental performance of vehicles. This aim can be achieved either by improving the vehicle technology used or by using alternative fuels and technologies (natural gas or electricity).

The ACE plan proposes various actions concerning alternative vehicle technologies, and more specifically:

- Studying the potential of electric vehicles and defining a strategy;
- Operating electric bus lines at the STIB-MIVB;
- Setting up pilot projects and incentives to promote the use of electric vehicles;
- Promoting the use of natural gas as fuel;
- Raising awareness of the environmental performance of vehicles;
- Improving environmental performance of vehicles for paid transport.

In order to improve the environmental performance of vehicles, the plan also proposes to introduce a low-emission zone (LEZ) and to reform vehicle taxation on the basis of environmental criteria. The LEZ has been in force since 1 January 2018 throughout the territory of Brussels (see below in a separate section).

Phasing-out of internal combustion engine vehicles

To improve air quality in the Brussels Capital Region and to meet the climate goals of the Paris Agreement, the Government of the Brussels Capital Region decided on 31 May 2018 to launch a consultation with the stakeholders and the sectors concerned, with the aim of banning diesel vehicles in 2030 at the latest, at a later stage of banning petrol vehicles and of developing alternative technologies in the short and medium term (in particular the already available technologies, such as electric, hybrid and CNG vehicles).

The consultation started on 19 September 2018 with a launch symposium attended by more than 100 people from different sectors. This was carried out in two phases: a written phase with a questionnaire comprising about fifty questions (in October 2018) and an exchange and discussion phase in the form of nine round tables and three focus groups (between March and April 2019). After the consultation, a final symposium was organised to present the results to the stakeholders.

The following elements emerged from the consultation. The vast majority of stakeholders are in favour of the idea of phasing out ICE vehicles to improve air quality and to reduce greenhouse gas emissions. Some advocate technological neutrality (not imposing specific technology but setting standards and leaving 'the market' to achieve them), but others believe that the industry has demonstrated insufficient ethics and goodwill and that more restrictive measures must be taken. As far as alternative technologies are concerned, natural gas and hydrogen may be of interest, but probably only for heavy-duty vehicles. Concerning the environmental impact of electric vehicles, the focus must lie mainly on batteries: their manufacture is very intensive in energy and raw materials, but they have a reasonably long lifespan (second life in stationary storage applications) and they can be recycled. The vehicle costs and the development of recharging infrastructure are the two major concerns for most stakeholders, especially as the Brussels distribution grid is only compatible with fast recharging in a limited part of the region. The economic and social impact are hard to estimate, some occupations and activities may benefit from the transition, but others may suffer. With regard to mobility, a large number of respondents consider that phasing out ICE vehicles can be conceived of only in a global vision of mobility in the Brussels Capital Region, which must give priority to active means of transport, public transport and shared mobility. All participants are of the opinion that it is absolutely necessary to ensure that the purpose of the ban and its implementation are communicated effectively and to draw inspiration from the initiatives taken elsewhere, in order to ensure greater support on the part of all target groups concerned.

Now that the consultation phase has been completed, studies will be launched to clarify the impact of phasing out internal combustion engines in the Brussels Capital Region:

- An impact study on air quality and climate;
- An impact study on the budget of the public authority fleets;
- A health impact study;
- An impact study on mobility, economic and social aspects and energy.

On the basis of the consultation as a whole (written phase and round tables) and the impact studies, a roadmap will be drawn up with the most desirable implementation for the Brussels Capital Region in order in this way to support the Brussels Government in the operationalisation of the phasing-out of diesel and petrol.

In its policy statement, the new Brussels Government confirmed the phasing-out of ICE vehicles. It was decided to phase out diesel in 2030 at the latest and petrol and LPG in 2035 at the latest. This phasing-out is conceived of as an extension of the low-emission zone which gradually tightens up the access conditions for the period 2018-2025 for cars and light utility diesel and petrol vehicles

Low-emission zone (LEZ) since 2018

The Brussels Government decided on 2 June 2016 to proceed to introduce a low emission zone (LEZ), which is applicable permanently throughout the territory of the Region for vehicles of all nationalities. This measure has been in force since 1 January 2018, with progressive tightening-up of the access criteria for the zone up to and

including 2025. The Euro standard of a vehicle, depending on fuel type, determines whether or not it is allowed in the LEZ. The access conditions are stricter for diesel vehicles, since they emit more pollutants. LPG and CNG vehicles follow the same schedule as petrol vehicles. The vehicle categories concerned are passenger cars, delivery vans up to 3.5 tonnes (category N1), buses and coaches. In 2018, only diesel vehicles of Euro 1 standard or without Euro standard were no longer allowed to circulate. Since 1 January 2019, Euro 2 diesel vehicles and petrol vehicles without Euro standard or of Euro 1 standard are also prohibited.

For the control, an ANPR camera-based recognition system has been set up, distributed throughout the Brussels Capital Region. For vehicles not allowed to circulate, it is possible to purchase a day-pass for a maximum of 8 calendar days per year (€35) Furthermore, under certain conditions, derogations are also granted, including for vintage cars, priority vehicles, vehicles adapted for disabled people or equipped with a wheelchair lift, etc. Electric vehicles and hydrogen vehicles are automatically exempted from the LEZ and can therefore circulate at all times.

After one year in operation, the LEZ has had a clear effect. In only six months, the number of very old diesel vehicles on the road has fallen, as shown by the figures on the composition of the vehicle fleet circulating in the LEZ. This decline has been very pronounced since 1 October, which corresponds to the beginning of the actual application of the penalties.

The change in composition of the car fleet circulating in Brussels goes hand in hand with a reduction in the emission of nitrogen oxides (NO_x) and fine particulate matter ($PM_{2.5}$). Between June and December 2018, emissions from Belgian passenger cars in circulation fell by 4.7% for NO_x and 6.4% for $PM_{2.5}$. These reductions are greater compared to the natural evolution of the vehicle fleet. We can therefore assume that the LEZ has played a role in these reductions.

In the medium term, it is expected that air quality will improve throughout the territory thanks to the LEZ. Brussels Environment forecasts that the air quality standards for NO_2 will be complied with between 2020 and 2025 in all measuring stations in the Region, as outlined in the study on the forecasted effects of the LEZ. This improvement will be beneficial to the quality of life and health of the entire Brussels population.

Detailed information on the impact of the LEZ can be found in the *2018 LEZ Evaluation Report* and in the *study on the forecasted effects of the LEZ*.

Concession for public recharging infrastructure

On 19 October 2018, the Brussels authorities signed a concession agreement with PitPoint for the installation of public recharging infrastructure throughout the territory of the Brussels Capital Region. The installation of the recharging stations – with a maximum recharging speed of 22 kW per station – was launched at the beginning of 2019, using 100% green electricity. This concession has a duration of 10 years. In the first phase, a basic network is installed of approximately 100 charging stations at strategic locations distributed among the 19 municipalities of the Brussels Capital Region. In a subsequent phase, which is to start at the beginning of 2020, this basic network is to be extended to include stations at the request of inhabitants and car-sharing firms. An overview of the existing network is available at www.charge.brussels. Applications for additional recharging stations will be made via this platform.

The public recharging points are considered as places to recharge and not as preferential parking spaces for electric vehicles. To achieve this, in a subsequent phase, in addition to a recharging tariff, a rotation tariff will also be imposed. This rotation tariff is applicable in the daytime when the electric vehicle is no longer recharging, so that the vehicle can be moved as quickly as possible and in this way the recharging station becomes available again as a recharging point for other vehicles.

As at 1 July 2019, 34 recharging points of the concession were operational, with the expectation that this number will rise to about 200 (100 recharging stations) by the beginning of 2020. Due to the complex political and administrative structure of the Brussels Capital Region, in combination with limited availability of the necessary 400V grid to be able to install 22kW recharging stations (12% of the territory), delays have arisen in the deployment. However, it is expected that the deployment will take place at a faster rate by the end of 2019.

PitPoint has received a subsidy of €159 040 for the concession project from the Brussels Capital Region, via the European BENEFIC project, in which the Brussels Capital Region is a partner together with Flanders and the Netherlands. This subsidy has been granted for the installation of 350 public recharging points. BENEFIC is financed by the Connecting Europe Facility (CEF) programme of the European Union. Further information on BENEFIC is available at www.benefic.eu.

Tax reform

Under the present vehicle taxation, the annual road tax (VB) and the vehicle registration tax (BIV) are based mainly on engine power, which means that no direct environmental factors are taken into consideration. However, the Government statement of the new Brussels Government (2019-2024) includes an important reform of vehicle taxation. The BIV will be structured according to the environmental performance of the vehicles (weight, real power and fuel type used) with the intention of discouraging the purchase of vehicles which are not suitable for journeys in an urban environment. The annual road tax will be revised linked to the LEZ objectives. This new regime will be structured as a zonal levy targeting all vehicles circulating in the Brussels Capital Region and will be modulated in accordance with the use, so that car traffic can be reduced, especially during peak hours. The network of ANPR cameras will be developed further for this purpose. Attempts will also be made to achieve a cooperation agreement with the other regions, with a view to the introduction of a smart kilometre levy on light-duty vehicles in the metropolitan area (Brussels Capital Region and peripheral area) or the entire national territory – to replace the current taxation.

Pollution peak exemption for electric vehicles

The Brussels Capital Region Government Decree of 31 May 2018[16] on pollution peaks provides, in the case of intervention threshold 2 (the highest pollution threshold), that every motor vehicle must be banned from circulation in the Brussels Capital Region, with the exception of the Brussels Ring. However, certain vehicles including electric

[16] Brussels Capital Region Government Decree amending the Brussels Capital Region Government Decree of 27 November 2018 determining emergency measures to avoid peak periods of air pollution caused by fine particulate matter and nitrogen dioxides (*Besluit van de Brusselse Hoofdstedelijke Regering houdende wijziging van het Besluit van de Brusselse Hoofdstedelijke Regering van 27 november 2008 tot bepaling van de dringende Maatregelen om piekperiodes van luchtvervuiling door fijn stof en door stikstofdioxiden te voorkomen*) - 31 MAY 2018.

vehicles (with a battery or hydrogen-powered) have been exempted from this measure. The occurrence of intervention threshold 2 is unlikely.

Licences for electric taxis

The Brussels Capital Region Government Decree of 21 June 2012 on electric taxis (*Besluit van de Brusselse Hoofdstedelijke Regering van 21 juni 2012 betreffende de elektrische taxi's*) provides for special conditions for operators of an electric taxi service, more specifically with regard to replacement or reserve vehicles.

On 25 June 2013, a call for operators of a taxi service or candidate operators of a taxi service was published in the Moniteur Belge/Belgisch Staatsblad for the delivery of 50 licences for the operation of an electric taxi service.

The Government Decree of 12 December 2013[17] led to the issue of 50 permits to operate a taxi service with electric vehicles. These permits were distributed between 19 operators with a maximum of 7 vehicles per operator. Since one of the operators selected relinquished its permit, 49 of the 50 vehicles have been brought into service since September 2014. This means that about 4% of Brussels taxis are emission-free.

Premiums for investments in mobile equipment

The Brussels Capital Region Government Decree of 11 October 2018 on aid for general investments (*Besluit van de Brusselse Hoofdstedelijke Regering van 11 oktober 2018 betreffende de steun voor algemene investeringen*) provides that micro, small and medium-sized enterprises in the Brussels Capital Region can obtain aid for investments in mobile equipment (Article 10). The following vehicles are eligible for this:

- Vehicle categories N (delivery vans and lorries) and O (trailers and semi-trailers);
- Special vehicles and machinery adapted according to the activities of the undertaking;
- Cycles and electrically powered cycles designed to transport bulky loads by means of a container or platform, as well as cycle trailers.

The vehicles are registered in the Brussels Capital Region (apart from in the case of financial leasing) and comply with the European emission standards applicable at that time to new vehicles. The aid does not apply specifically for the purchase of vehicles with alternative engines, but can be used for this purpose.

The aid consists of a basic premium of 5% of the amount of the investment for micro and small enterprises and 2.5% for medium-sized enterprises, with possibilities to increase the aid intensity further. The ceiling for the aid amounts to 30% of the investment in the development area and 15% outside the development area for micro and small enterprises. For medium-sized enterprises, these figures are 20% and 10% respectively.

Premium for the replacement of a polluting commercial vehicle

[17] Brussels Capital Region Government Decree awarding permits for the operation of a taxi service with electric vehicles or extending permits previously granted for the operation of a taxi service with a number of electric vehicles (*Besluit van de Brusselse Hoofdstedelijke Regering tot toekenning van de vergunningen voor het exploiteren van een taxidienst met elektrische voertuigen of tot uitbreiding van de vroeger toegekende vergunningen voor het exploiteren van een taxidienst met een aantal elektrische voertuigen*) – 12 DECEMBER 2013.

Micro and small enterprises in specific economic sectors having to replace light-duty commercial vehicles (category N1) which may no longer circulate in the Brussels Capital Region due to the LEZ, can receive a premium for this if certain conditions are met. The new vehicle must comply with the European emission standards applicable at that time for new vehicles, must belong to category N1 and must not be equipped with a diesel engine (also not diesel-hybrid). This aid does not apply specifically for the purchase of vehicles with alternative engines, but can be used for this purpose.
The premium amounts to 20% of the accepted expenditure, with a maximum of €3 000 per vehicle replaced. A premium can be received for a maximum of 3 vehicles per period.

These conditions are laid down in the Brussels Capital Region Government Decree on aid to comply with the standards in the context of the implementation of the low-emission zone (*Besluit van de Brusselse Hoofdstedelijke Regering betreffende de steun om te voldoen aan de normen in het kader van de uitvoering van de lage-emissiezone*) of 11 October 2018.

The premium for the purchase of electric, hybrid or fuel cell electric vehicles at small and medium-sized enterprises, provided for in the Brussels Capital Region Government Decree of 2 April 2009 on aid for the production of eco-products (*Besluit van de Brusselse Hoofdstedelijke Regering van 2 april 2009 betreffende de steun voor de productie van eco-producten*), was repealed by Decree of 11 October 2018.

Premium for (electric) bicycle, electric scooter or delivery cycle

Various municipalities in the Brussels Capital Region offer a premium for the purchase of an electric bicycle or delivery cycle.

Every inhabitant of the municipalities of Jette and Ganshoren who purchases a new e-bike – a bicycle with an electric motor for support up to 25 km per hour – is entitled to a municipal premium. This premium amounts to 15% of the purchase price, with a maximum of €150 for e-bikes and €300 for delivery cycles (not necessarily electric). A family is entitled to a maximum of 2 premiums for a period of 3 years. The municipality of Woluwe-St-Pierre has granted a very similar premium since 1 July 2018: 15% of the purchase price with a maximum of €200 for an e-bike or €300 for a delivery cycle.

In the municipality of Uccle, one premium per family can be granted, which is set at €250 for the purchase of an electric bicycle, electric adaptor kit for bicycles, electric delivery cycle or an ordinary delivery cycle.

Berchem-Sainte-Agathe offers a premium for the purchase of a traditional bicycle (€50), e-bike (€200), electric scooter (€100) or delivery cycle (€200). The premium amounts to a maximum of 15% of the purchase price. This premium applies for all bicycles and electric scooters purchased in the period between 1 July 2018 and 30 June 2021.

Shared electric bicycles, scooters and motor scooters (with seat)

Various electric bicycle and motor scooter-sharing businesses operate within the territory of the Brussels Capital Region. At the moment, in the case of shared electric motor scooters (with seat), there are about 250 Poppy, 300 Scooty and 230 Felyx vehicles. In addition, an electric bicycle-sharing service is offered by Jump (1 200 bikes) and Billy (600 bikes) in the Brussels Capital Region.

The electric scooter-sharing market is very volatile. At present, four e-scooter service providers operate in Brussels: Poppy, Bird, Lime and Circ.

Electric car-sharing

In addition to the 'station-based' car-sharing of electric vehicles offered by ZenCar (80 EVs), various businesses also operate in the Brussels Capital Region which offer 'free-floating' car-sharing with electric and natural gas vehicles, more specifically DriveNow (no numbers known) and Poppy (50 EVs and 50 CNG vehicles).

Electric buses at STIB-MIVB

The Brussels public transport company (MIVB-STIB) placed an order in 2018 for 37 battery electric buses, more specifically: 7 'city buses', 5 standard buses and 25 articulated electric buses.

The electric 'city buses' have been in operation since June 2018 on a new bus line (line 33) which is fully electric. This bus line has 13 stops and links the upper and lower town, with a capacity of 42 seats. These city buses are recharged by means of 'overnight charging' technology in the depot. Seven recharging stations have been installed for this purpose at the Jacques Brel depot.

Five electric standard buses were ordered from Bluebus and are partially deployed on bus lines 13 and 37. These buses have a capacity of 68 seats and are also recharged by means of 'overnight charging' technology.

In addition, in April 2019, 25 articulated electric buses (Solaris) were delivered, which run on line 64 and make use of 'opportunity charging'. Fast rechargers have been installed for this purpose at the 'Porte de Namur' stop.

In total, in the period 2018-2019, STIB-MIVB has added a total of 288 new buses to its fleet, consisting of diesel-hybrid and battery electric buses. This increases the capacity on the STIB-MIVB bus network by approximately 32% by the end of 2019.

STIB-MIVB has also committed to purchasing further exclusively fully electric buses from 2025.

Autonomous electric shuttle buses

In the summer of 2019, two autonomous electric shuttle buses were tested (in Woluwe park). These buses each have capacity for 6 seated and 6 standing persons, are accessible for people with limited mobility and are recharged at night. The purpose of this is to test this new technology and to obtain as much experience as possible with these vehicles in order subsequently to supplement the existing supply. This could then be applied in areas which currently have little or no service, such as a university campus, hospital or park.

A second test with the autonomous shuttle buses is planned on the Solvay business site (Neder-over-Heembeek) between November 2019 and February 2020. Buses can be tested in a controlled environment on this site, in which there are pedestrians and cyclists, but also cars, parking areas and intersections, so that a miniature city can be simulated.

Open data platform for recharging infrastructure Brussels Capital Region

Since the beginning of 2016, the Brussels Region has been making the data relating to the current publicly and semi-publicly accessible recharging points within the region available via the open data platform of Brussels Mobility (http://data-mobility.irisnet.be/catalogus/dataset/elektrische-oplaadpunten).

These data can be shown on a map, on which the services offered can also be indicated. This platform allows private individuals and organisations to have their own recharging infrastructure included in the database and as such to share it with the public.

The public recharging points installed under the concession with PitPoint are available at www.charge.brussels. There are plans to create a website integrating all data concerning the recharging infrastructure and alternative vehicles in the context of the Brussels Capital Region.

Awareness-raising

With a view to raising the awareness of Brussels companies and government institutions concerning the acceptance of alternative vehicle technologies and more sustainable mobility and fleet management, the Brussels public authorities regularly organise training, workshops and information sessions on the subject.

For instance, Brussels Environment, among others, has regularly organised an 'EV Roadshow' (since 2015), in which various types of electric vehicles (bicycles, tricycles and quadricycles, utility vehicles, passenger cars, etc.) are demonstrated and tested, as well as the recharging infrastructure for these vehicles.

3. DEPLOYMENT AND MANUFACTURING SUPPORT => **Table 1**: Deployment and manufacturing support investment programme

Deployment and manufacturing support

CATEGORY	No.	DENOMINATION	DESCRIPTION	AF FIELD	ALTERNATIVE FUEL	TRANSPORT MODE	CURRENT AND PAST ANNUAL BUDGET				FUTURE ESTIMATED BUDGET [€]			TOTAL ESTIMATED BUDGET [€]	Start Year	Stop Year
							2016	2017	2018	2019	2020	2021-2025	2026-2030			
AFI deployment	1	BENEFIC (CEF funding)	Public charging infrastructure concession in the BCR - 350 normal	AFI	Electricity	Road	/	/	/	/	159.040 €	/	/	159.040 €	2018	2020
	2	BENEFIC (CEF funding)	3 CNG stations in the BCR (Pitpoint)	AFI	CNG (incl. Biomethane)	Road	/	/	/	/	180.000 €	/	/	180.000 €	2018	2020
	3	BENEFIC (CEF funding)	2 Fastchargers (Fastned)	AFI	Electricity	Road	/	/	/	/	18.000 €	/	/	18.000 €	2018	2020
	4	BENEFIC (CEF funding)	1 Ultra-fastcharger (Fastned)	AFI	Electricity	Road	/	/	/	/	36.000 €	/	/	36.000 €	2018	2020
	5	BENEFIC (CEF funding)	1 Fastcharger for public transport buses (STIB-MIVB)	AFI	Electricity	Road	/	/	/	/	91.717 €	/	/	91.717 €	2018	2020
Support of manufacturing plants for AF technologies	1	MIVB-STIB	ELIPTIC European Project: analysis of electrical bus lines and energy tram	AF&AFI&AFV	Electricity	Road	/	415.000 €	/	/	/	/	/	€ 415.000 funded by Horizon 2020	2015	2017
	2	MIVB-STIB	Electric buses for public transport: 5 standard buses with overnight charging, 25 articulated buses with opportunity charging and 7 minibuses with overnight charging.	AFV	Electricity	Road	/	/	29,7M€	/	/	/	/	€ 29.390.547 funded by the STIB-MIVB PPI: including a BENEFIC funding (CEF) of 91.717 €	2018	2018
	3	MIVB-STIB	Autonomous electric buses	AFV	Electricity	Road	/	/	/	0,36 M€	0,36 M€	/	/	Total estimated budget still under analysis	2019	2020
	4	MIVB-STIB	ZeEUS European project: exchange on electrical bus tests and pilots	AFV	Electricity	Road	/	/	/	/	/	/	/	Travel costs to European meetings: funded by Horizon 2020	2013	2018
	5	MIVB-STIB	Apollo European project: excange on clean buses	AFV	Electricity	Road	/	/	/	/	/	/	/	Travel costs to European meetings: funded by European Commission	2019	2022
	6	MIVB-STIB	ASSURED European project: exchange on the charging infrastructure standardisation and operation maximisation	AF&AFI&AFV	Electricity	Road	/	/	/	/	/	/	/	Travel costs to European meetings: funded by Horizon 2020	2017	2021

4. RESEARCH, TECHNOLOGICAL DEVELOPMENT AND DEMONSTRATION (RTD&D) => TABLE 2

Research, technological development and demonstration (RTD&D)																
No.	DENOMINATION	DESCRIPTION	AF FIELD	ALTERNATIVE FUEL	TRANSPORT MODE	CURRENT AND PAST ANNUAL BUDGET [€]				FUTURE ESTIMATED BUDGET [€]			TOTAL ESTIMATED BUDGET [€]	Start Year	Stop year
						2016	2017	2018	2019	2020	2021-2025	2026-2030			
1	CARBATT	Advanced solutions for the European electric CAR BATTery towards decarbonization of transport (VUB)	AFV	Electricity	Road	/	12451	12451	/	/	/	/	24902	2017	2018
2	ASSURED	fAst and Smart charging solutions for full size Urban hEavy Duty applications (VUB)	AFI	Electricity	Road	12435	11434,5	/	/	/	/	/	24871	2016	2017
3	ASSUZB	Automated Shuttle Service for Universitair Ziekenhuis Brussel (VUB, ULB)	AFV	Electricity	Road	/	/	354250	131780	37400	/	/	523430	2018	2020
4	BC-klet	Tester une solution innovante de livraison de marchandises légères à vélo par conteneurisation intelligente en RBC (VUB, USLB, Urbike, SmartCoop, FEBECOOP)	AFV	Electricity	Road	/	/	305510	210383	140255	70128	/	726276	2018	2021
5	ELEVATE	Electrified L-category Vehicles in urbAn Transport	AFV	Electricity	Road	4813	3311	/	/	/	/	/	9625	2016	2017
6	e-VOLVE	Integrated, brand-independent architecture, components and systems for next generation electrified vehicles optimized for the infrastructure (VUB)	AF&AFI&AFV	Electricity	Road	/	/	24927	/	/	/	/	24927	2018	2018
7	Green approaches towards Full Solid-State Batteries for Electric Vehicles	Green approaches towards Full Solid-State Batteries for Electric Vehicles (UCL, ULB, VUB)	AFV	Electricity	Road	/	/	/	399209	279100	123370	/	801679	2019	2022
8	RESERVE	Renewable Energy StoragE in Robust and Versatile systEms (VUB)	AF&AFI&AFV	Electricity	Road	24139,5	/	/	/	/	/	/	24139,5	2016	2016
9		Synthèse et évaluation d'électrolytes solides hybrides polymères/inorganiques pour des batteries lithium métal (UCL)	AFV	Electricity	Road	/	/	/	85635	42817	42817	/	171270	2019	2021
10		Synthèse et évaluation de matériaux cathodiques hybrides inorganiques/organiques pour des batteries Li-ion à (dé)charge ultra-rapide (UCL)	AFV	Electricity	Road	/	/	86570	43285	43285	/	/	173140	2018	2020
11	HECTOR - Hydrogen Waste Collection Vehicles in North West Europe	Deployment and test of a fuel cell garbage truck in 7 cities, among which Brussels.	AFV	Hydrogen	Road	/	/	/	2411	371165	69864	/	443440	2019	2022
12	Hydropack	Système de stockage d'Hydrogène embarqué pour mobilité à faible impact environnemental (Plastic Omnium)	AF	Hydrogen	Road	/	/	407938	305953,5	305953,5	/	/	1019845	2018	2021

5. TARGETS AND OBJECTIVES

Table 3 below provides an overview of the number of alternative fuel vehicles registered in the Brussels Capital Region on 31 December of the relevant year. A final status of these registrations was established on 1 July 2019. Data concerning vessels or aircraft registered in the Brussels Capital Region are not available; information concerning railway transport can be found in the chapter of the Brussels federal authority. This table therefore covers only the road vehicles for the various fuel categories.

Table 4 provides an overview of the planned alternative fuels infrastructure in the Brussels Capital Region, in which an inventory has been drawn up of the situation at 1 July 2019. Aircraft infrastructure was not included here either, since there is no airport within the territory of the Brussels Capital Region.
The future figures for 2020, 2025 and 2030 were taken for both tables from the figures in the National Policy Framework for the Brussels Capital Region in 2016 and are consequently unchanged.

In 2018, two shore-side electricity installations were placed at the cruise terminal in the outport of the Port of Brussels. No alternative fuel infrastructure is available (yet) in the Port. In addition, no vessels running on alternative fuel have yet been received. The Port is in talks with various suppliers of LNG, hydrogen, etc., but this has not yet resulted in concrete plans. However, these developments are being monitored closely.

Table 3: Alternative fuel vehicles in the Brussels Capital Region

Alternative Fuels Vehicles (AFV) estimates								
TRANSPORT MODE	ALTERNATIVE FUELS VEHICLES (AFV)	CURRENT AND PAST NUMBER OF AFV				ESTIMATED NUMBER OF AFV		
		2016	2017	2018	1jul2019	2020	2025	2030
	ELECTRICITY							
Road	**Electric Vehicles, EV (total road)**	**1.735**	**3.237**	**5.025**	**6.012**	**2.638**	**5.000**	**7.600**
	Powered Two Wheelers	/	172	207	231	/	/	/
	Electric Passenger Cars (BEV+PHEV)	1.594	2.899	4.523	5.413	2.000	4.000	6.000
	• BEV	709	901	1.312	1.738	/	/	/
	• PHEV	885	1.998	3.211	3.675	/	/	/
	Electric Light Commercial Vehicles	137	162	274	331	600	1.000	1.600
	• BEV	137	162	274	331	/	/	/
	• PHEV	/	/	/	/	/	/	/
	Electric Heavy Commercial Vehicles	3	3	8	8	/	/	/
	• BEV	3	3	8	8	/	/	/
	• PHEV	/	/	/	/	/	/	/
	Electric Buses and Coaches	1	1	13	29	38	/	/
	• BEV	1	1	13	29	38	/	/
	• PHEV	/	/	/	/	/	/	/
	CNG (including Biomethane)							
Road	**CNG Vehicles (total road)**	**247**	**493**	**838**	**1.055**	**240**	**240**	**240**
	Powered Two Wheelers	0	0	0	0	/	/	/
	CNG Passenger Cars	176	363	597	764	200	200	200
	CNG Light Commercial Vehicles	62	117	222	268	40	40	40
	CNG Heavy Commercial Vehicles	6	10	15	19	/	/	/
	CNG Buses and Coaches	3	3	4	4	0	0	0
	LNG (including Biomethane)							
Road	**LNG Vehicles (total road)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	HYDROGEN							
Road	**Fuel Cell Vehicles, FCEV (total road)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

N.B.: For motorised two-wheelers, only categories L3 to L7 have been included in the inventory. Since the breakdown was not made in the L category for the situation at end-2016, no figure could be included in the table for this.

Table 4: Alternative fuels infrastructure in the Brussels Capital Region

Alternative Fuels Infrastructure (AFI) targets							
TRANSPORT MODE	**ALTERNATIVE FUELS INFRASTRUCTURE (AFI)**	**CURRENT AND PAST NUMBER OF RECHARGING/REFUELLING POINTS**			**TARGET NUMBER OF RECHARGING/REFUELLING POINTS**		
		2016	**2017**	**1 Jul 2019**	**2020**	**2025**	**2030**
	ELECTRICITY						
Road	**Total recharging points (public* + private)**	**/**	**/**	**395**	**200**	**400**	**600**
	Recharging points (publicly accessible)	**/**	**/**	**233**	**200**	**400**	**600**
	Normal power recharging points, P ≤ 22kW (public)	/	/	199	200	400	600
	High power recharging points, P > 22kW (public)	/	/	34	0	0	0
	• AC fast charging, 22kW < P ≤ 43 kW (public)	/	/	/	/	/	/
	• DC fast charging, P < 100 kW (public)	/	/	/	/	/	/
	• DC ultrafast charging, P ≥ 100 kW (public)	/	/	/	/	/	/
	Recharging points (private)	**/**	**/**	**162**	**0**	**0**	**0**
	Normal power recharging points, P ≤ 22kW (private)	/	/	/	/	/	/
	High power recharging points, P > 22kW (private)	/	/	0	0	0	0
	• AC fast charging, 22kW < P ≤ 43 kW (private)	/	/	/	/	/	/
	• DC fast charging, P < 100 kW (private)	/	/	/	/	/	/
	• DC ultrafast charging, P ≥ 100 kW (private)	/	/	/	/	/	/
Water	Shore-side electricity supply for seagoing ships in maritime ports	/	/	/	/	/	/
	Shore-side electricity supply for inland waterway vessels in inland ports	/	/	2	3	6	6
	NATURAL GAS (including Biomethane)						
Road	**CNG refuelling points (total)**	**1**	**1**	**3**	**3**	**3**	**3**
	CNG refuelling points (public)	1	1	3	3	3	3
	CNG refuelling points (private fleet operators)	/	/	/	/	/	/
	LNG refuelling points (total)	**0**	**0**	**0**	**0**	**0**	**0**
	LNG refuelling points (public)	/	/	/	/	/	/
	LNG refuelling points (private fleet operators)	/	/	/	/	/	/
Water	Maritime Ports - LNG refuelling points	/	/	/	/	/	/
	Inland Ports - LNG refuelling points	/	/	/	0	0/1	1
	HYDROGEN						
Road	**H2 refuelling points (total)**	**0**	**0**	**0**	**0**	**0**	**0**

6. ALTERNATIVE FUELS INFRASTRUCTURE DEVELOPMENTS

The table below provides an overview of the ratio between demand (number of vehicles) and supply (public and semi-public infrastructure) for electric and CNG road vehicles in the Brussels Capital Region.

The future estimates take the figures included in the National Policy Framework of 2016. In the case of CNG, this estimate of the future ratios is not relevant, since demand in reality is already far higher than was estimated for the plan in 2016 (shown in italic).

Table 5: Alternative fuels infrastructure developments

		PAST			FUTURE ESTIMATED								
		1 July 2019			2020			2025			2030		
MODE OF TRANSPORT	ALTERNATIVE FUEL	Supply	Demand	Ratio	Supply	Demand	Ratio	Supply	Demand	Ratio	Supply	Demand	Ratio
Road	Electricity	233	5781	25	200	2600	13	400	5000	13	600	7600	13
	CNG (incl. Biomethane)	3	1055	352	3	*240*	*80*	3	*240*	*80*	3	*240*	*80*

Part V

Federal level

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INTRODUCTION

The implementation of alternative fuels infrastructure is a regional competence. This means that the 'legal measures' and 'support for deployment and production' are not a federal responsibility. The measures set out here therefore concern only the 'measures supporting the implementation of the national policy framework' and the aspects relating to railways.

1. LEGAL MEASURES

As for the transposition of Directive 2014/94 regarding the deployment of alternative fuel infrastructure, the federal government transposed the following aspects (in line with the limited federal competences with regard to this Directive – i.e. normalization aspects fuels in this respect).

1. Belgian standard NBN EN 17124 on the basis of the European standard EN 17124 *Hydrogen fuel - Product specification and quality assurance - Proton exchange membrane (PEM) fuel cell applications for road vehicles.*

European standard EN 17124 has been published on 10 October 2018 by the CEN. The corresponding Belgian standard NBN EN 17124 has been published by the Belgian Bureau for Standardization on 28 November 2018. => https://shop.nbn.be/Search/SearchResults.aspx?a=17124#details. The publication in the Belgian Official Journal took place on 1 February 2019.

2. Belgian standard NBN EN 17186 on the basis of the European standard EN 17186 *with regard to the identification of vehicles and infrastructures compatibility - graphical expression for consumer information on EV power supply.*

The European standard EN 17186 has been published by the CEN on 20 March 2019. Subsequently, the adoption of the Belgian standard NBN EN 17186 took place 1 month after adoption of the European standard, i.e. on 17 April 2019 (https://shop.nbn.be/Search/SearchResults.aspx?a=NBN%20EN%2017186&UIc=en#details).

3. Royal Decree *on the names and characteristics of alternative fuels:* The royal decree (d.d. 13 April 2019) has been published in the Belgian Official Journal on 19 April 2019.
(http://www.ejustice.just.fgov.be/cgi/article_body.pl?language=fr&caller=summary&pub_date=19-04-19&numac=2019011951).

2. POLICY MEASURES SUPPORTING THE IMPLEMENTATION OF THE NATIONAL POLICY FRAMEWORK

Federal fiscal measures supporting the implementation of the national policy framework

Effective tax/financial incentives, which can ensure promotion of the use of the various types of sustainable vehicles (such as electric and CNG vehicles) by businesses and individuals, are of prime importance for market creation.

The Regions have been competent for tax incentives for individuals since 1 January 2013 (also see the regional policy frameworks). The annual road tax and the vehicle registration tax (BIV) are determined by the regional authorities.

However, Federal tax measures can be used, for example, to promote the purchase of sustainable commercial vehicles. This is not without importance as the expansion of sustainable commercial vehicle fleets can speed up general introduction significantly.

Important Federal tax measures:
- Tax reduction for electric vehicles
- Tax deductibility of clean commercial vehicles
- 'Benefit in kind' system
- Excise duties

A few specific tax measures are described below. Further information is obtainable via the Federal Public Service Finance.

a. Electric motorcycles, tricycles and quadricycles

A 15% tax reduction applies to the purchase of electric motorcycles, tricycles and quadricycles.

This applies to **motorcycles**, **tricycles** and **quadricycles**:
- that are exclusively powered by an electric motor (not hybrid electric vehicles);
- that can carry at least two people;
- that require a valid Belgian driving licence (category A or B) or an equivalent European or international driving licence.

However, it does not apply to power-assisted and high-speed electric bicycles.

For more information:
https://finances.belgium.be/fr/particuliers/transport/vehicules_electriques

b. Power-assisted and high-speed electric bicycles

The mileage allowance granted for travel between home and work by bicycle is exempt from tax and social security contributions at a rate of EUR 0.24 per km. This exemption has been extended to cover high-speed electric bicycles[18].

The 120% deductability[19] for provision of a bicycle or a power-assisted electric bicycle has been extended to high-speed electric bicycles.

The fiscal rules for bicycles, electric bicycles and high-speed electric bicycles contribute to the strong growth in the number of these vehicles in Belgium.

c. Company cars

Deductability rates for company cars depend on the type of fuel used, the list value of the vehicle and the CO_2 emissions. These deductability rates have been revised downwards. For company cars purchased before 1 January 2018, the rate depends on the following formula:

120% – (0.5% x fuel co-efficient x CO2/km)[20]

The calculation of the benefit in kind of a company car also depends on its CO_2 emissions.

For more information:
https://finances.belgium.be/fr/particuliers/transport/voitures_de_societe#q2

This taxation of company cars at all levels depending on their CO_2 emissions has led to strong growth in the number of alternative-fuel company cars, in particular BEVs and PHEVs.

Federal measures concerning the purchase of 'green' passenger vehicles for the services of the federal state and certain public interest bodies

The Federal Government has revised the circular regarding the purchase of passenger vehicles for the services of the state and certain public interest bodies (**Circular 307e** of **21 April 2017**).
(https://www.publicprocurement.be/sites/default/files/documents/bs_mb_p25156199-omzendbrief_307sexies-20170421.pdf)

According to the 2014 coalition agreement, '*ensuring sustainable mobility is a considerable challenge and one that is important for our economy, the environment and air quality*. *For this reason, the Federal Government will aim to purchase electric, hybrid or CNG-powered vehicles for all federal public services and federal institutions.'*

Services with a fleet of fewer than 20 vehicles will encourage the purchase of electric, hybrid or CNG vehicles wherever possible. They will ensure that particular attention is paid to environmental criteria when awarding contracts.

Services that purchase at least 20 vehicles a year will structure their budget for the purchase of new vehicles as follows:

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[18] Act of 22 October 2017 laying down various provisions on taxation I, which established the tax regime for high-speed electric bicycles, and the explanatory memorandum to that Act.
[19] From 1 January 2020 (2021 tax year), the 120% deductability of costs paid or borne specifically with a view to encouraging the use of bicycles by members of staff for travelling between their home and their workplace will be revoked (in corporation tax).
[20] From 2020 the maximum deductability rate for a company car will be reduced to 100%.

- At least 5% of all vehicles purchased or leased will be electric, hybrid or CNG; **AND**
- at least 10% of all vehicles purchased or leased will have an ecoscore[21] higher than 75 (including electric, hybrid or CNG vehicles).

These percentages should be increased by 5% each year following the entry into force of this circular (i.e. year 0 = 5%, year +1 = 10%, year +2 = 15% and so on).

This purchasing policy must be maintained until:

- at least 25% of the service fleet concerned is composed of vehicles with an ecoscore higher than 75; **AND**
- at least 25% of the service fleet concerned is composed of electric, hybrid or CNG vehicles.

Federal measure 'mobility budget'

The Federal Government adopted the mobility budget in **February 2019**. The mobility budget enables businesses to offer staff who benefit (or who fulfil the conditions to benefit) from a company car a 'personalised' mobility budget to 'spend', by providing more environmentally friendly choices.

The principle of this mobility budget rests on three pillars:

- **Pillar 1**: With the mobility budget, workers can finance the provision of a more environmentally friendly company car (a car that emits less CO_2, an electric car, a natural gas-powered car, etc.)

- **Pillar 2**: Workers can use the balance to finance more sustainable modes of transport:
  - soft mobility (kick scooter, self-balancing scooter, bicycle, etc.);
  - public transport;
  - organised collective transport;
  - car-sharing;
  - transport services that combine the sustainable modes of transport listed above.

- **Pillar 3**: The part not used by the worker is paid out to him or her once a year.

For more information: https://lebudgetmobilite.be/fr

Federal measure 'fuel labelling'

In order to help consumers choose the right fuel for their vehicle, Belgium has implemented new labelling requirements for **new vehicles** and **filling stations** (i.e. federal competence). From October 2018, a new single, standardised set of fuel labels will appear across Europe.

These labels will be placed:

- on new vehicles, next to the door/cap of the fuel tank;

[21] www.ecoscore.be: The ecoscore is an environmental score for vehicles. It provides an indication of a vehicle's overall environmental performance. It takes into account a number of aspects: greenhouse gases, air quality (the impact on health and on ecosystems) and noise pollution.

- in the vehicle's instruction manual. For some new vehicles, this information may also appear in the electronic manual available through the in-car infotainment console;
- at all public filling stations on the fuel distribution unit and on top of the fuel dispensing nozzle;
- at motor vehicle dealerships.

More information can be found via the following link: https://economie.fgov.be/en/themes/energy/fuel-labelling.

3. RESEARCH, TECHNOLOGICAL DEVELOPMENT AND DEMONSTRATION (RTD&D)

The (federal) energy transition fund aims to encourage and support research, development and innovation in the field of energy.

In the context of the energy transition fund, the Directorate-General for Energy at the SPF Economie organises a call for proposals each year in accordance with Article 3(1) of the Royal Decree of 9 May 2017 laying down how the energy transition fund is to be used.

The budget of the energy transition fund is EUR 25 million a year, which could be granted as subsidies to projects that fulfil all the criteria and that relate to research, development, investments in research infrastructure, or innovation by SMEs.

The calls for proposals aim to support innovative projects in the context of the following federal energy competences:

- renewable energy in the Belgian exclusive economic zone in the North Sea;
- biofuels;
- nuclear power;
- security of supply;
- **the balance of the transport network.**

In the focus area '*security of supply and the balance of the transport network*', research/demonstration projects are considered that concern electric vehicles, their batteries and the impact on the transmission network.

4. AFI DEVELOPMENTS (RAILWAY)

The past and future development in the number of locomotives is presented in the table below.

Alternative Fuel Vehicles (AFV) estimates

TRANSPORT MODE	ALTERNATIVE FUEL VEHICLES (AFV)	CURRENT AND PAST NUMBER OF AFV			NUMBER OF AFV EXPECTED TO BE REGISTERED		
		2016	2017	2018	2020	2025	2030
	ELECTRICITY						
Rail	Locomotives	1.090	1.044	1.036	982	937	950

At present there are no plans to purchase any hydrogen locomotives.