

**NG 34/2017 (8.4.2017), Decision on the adoption of the National Policy Framework for the deployment of the infrastructure and the development of the market for alternative fuels in transport**

**GOVERNMENT OF THE REPUBLIC OF CROATIA**

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By virtue of Article 4(8) of the Act on the deployment of alternative fuels infrastructure (“National Gazette”, No 120/16) and Article 31(2) of the Act on the Government of the Republic of Croatia (“National Gazette”, Nos 150/11, 119/14 and 93/16), the Government of the Republic of Croatia, at its session of 6 April 2017, adopted the following

**DECISION**

**ON THE ADOPTION OF THE NATIONAL POLICY FRAMEWORK FOR THE DEPLOYMENT OF THE INFRASTRUCTURE AND THE DEVELOPMENT OF THE MARKET FOR ALTERNATIVE FUELS IN TRANSPORT**

I

The National Policy Framework for the deployment of the infrastructure and the development of the market for alternative fuels in transport (hereinafter referred to as: the NPF) is hereby adopted.

The NPF, with Annexes 1 to 3, shall form an integral part of this Decision.

II

The executive bodies referred to in Chapter 6 of the NPF shall be responsible for implementation of measures falling within their competence and within the foreseen timeframe

III

The Ministry of the Sea, Transport and Infrastructure shall be responsible for coordinating the implementation of measures provided for in Chapter 6 of the NPF.

IV

The Ministry of the Sea, Transport and Infrastructure shall be responsible for notifying the executive bodies referred to in point II of this Decision.

V

This Decision shall enter into force on the date of its adoption and shall be published in the National Gazette.

Class: 022-03/17-04/106  
Reg. No: 50301-25/20-17-2  
Zagreb, 6th April 2017

President

**Andrej Plenković, M. Sc. (signed)**

**THE NATIONAL POLICY FRAMEWORK FOR THE DEPLOYMENT OF THE INFRASTRUCTURE AND THE DEVELOPMENT OF THE MARKET FOR ALTERNATIVE FUELS IN TRANSPORT**

1. PURPOSE AND CONTENT OF THE DOCUMENT

Transport is a prerequisite for the mobility of people and the exchange of goods and therefore it must meet the needs of population and the economy. The growth of transport systems based on the use of non-renewable resources (space and energy) has led to problems of congestion and environmental pollution, as well as to crude oil and petroleum products dependency. In order to allow for further development of transport, on the one hand, and to reduce the negative impact of transport on the environment and crude oil

import dependency on the other, it is necessary to create preconditions for the use of alternative energy products in transport.

In accordance with the currently available technology, and taking into account the European environment and the legal framework of the European Union (hereinafter referred to as: the EU), the Act on the Deployment of Alternative Fuels Infrastructure (NG, No 120/16, hereinafter referred to as: the Act) has been adopted in the Republic of Croatia (hereinafter referred to as: the RoC). By virtue of Article 4 of the Act, the National Policy Framework for the deployment of the infrastructure and the development of the market for alternative fuels in transport (hereinafter referred to as: the NPF) shall be adopted. The purpose of the NPF is to define and develop the objectives and measures for the deployment of the infrastructure and the development of the market for alternative fuels in transport. In this respect, the NPF comprises an overview of alternative fuel types, together with their advantages and constraints, as well as the elements laid down in Article 4(2) of the Act:

- an assessment of the current state of play and the future development of the market of alternative fuels in the transport sector (Chapters 3 and 4 of the NPF)
- national targets and objectives for the deployment of alternative fuels infrastructure, with the definition of settlements, settlement construction areas, i.e. urban/suburban agglomerations, other densely populated areas and networks which, subject to market needs, will be equipped with electricity and compressed gas refuelling points accessible to the public, an assessment of the need to install LNG refuelling points in ports outside the TEN-T core network (hereinafter referred to as: the TEN-T Core Network) and the deployment of electricity supply at airports for stationary airplanes (Chapter 5 of the NPF)
- measures necessary to ensure the national NPF targets and objectives, including measures that can promote the deployment of alternative fuels infrastructure in public transport services (Chapter 6 NPF).

## 2. TYPES OF ALTERNATIVE FUELS – ADVANTAGES AND CONSTRAINTS

**2.1 Electricity:** Benefits of the use of electricity in transport are particularly evident in urban transport, as when using motor vehicles which exclusively use electricity (e-vehicles) there are no emissions of harmful substances into the environment at local level or noise pollution. Also, the advantage is greater efficiency of the electric motor in the conversion of the stored energy to the energy required for driving and the possibility to return unused energy back into the energy system. Limiting factors are currently several times higher price of these vehicles compared to conventional types of motor vehicles and hybrids, due to the battery price which is expected to drop with mass production, longer time required for recharging, limited range of existing electrical vehicles and the lack of public and private recharging infrastructure. EU Member States are currently actively working on the development of technologies for electric vehicles and the related infrastructure, that is to say, the development of e-mobility. As a significant increase of the number of these vehicles and the construction of the related infrastructure is foreseen, the role of e-mobility is particularly taken into account in the development of the concept of „smart cities“ and “smart grids“.

**2.2 Hydrogen:** presents the best solution for replacing hydrocarbon in fuels in long-distance medium/large cars due to the comparability of performances of hydrogen powered cars with conventional cars with internal combustion engines (similar acceleration), autonomy (about 600 kilometres), and the fuel tank filling time (less than 5 minutes). However, the hydrogen charging infrastructure is less developed compared to other alternative forms of fuel, and the prerequisite for further development is the improvement and the reduction of the costs of production and storage of hydrogen intended for motor fuels.

### **2.3 Natural gas:**

**2.3.1 Liquefied natural gas (hereinafter referred to as: LNG):** is an alternative fuel which, due to its more favourable price and significantly lower emissions than traditional petroleum-derived fuels, is most advantageous for use in maritime transport and inland waterway transport, and is additionally the only alternative to diesel fuel for the use in heavy goods vehicles due its range. The constraints are the limited consumption time, lack of availability of the refuelling infrastructure network along the motorways and in EU ports, and in maritime transport the constraint is the amount of investment due to which vessel owners are not interested in the conversion of vessels to LNG.

**2.3.2 Compressed natural gas (hereinafter referred to as: CNG):** it is suitable as an alternative to oil derivatives in the road transport in short and medium distances. The constraint is underdevelopment of the infrastructure and reduced trunk space in a significant number of personal vehicle models.

**2.4 Liquefied Petroleum Gas (hereinafter referred to as: LPG),** the so-called autogas: the availability of the infrastructure for refuelling, relatively low cost of initial investment in the gas

installation, significant difference in price of LPG and petrol, and a relatively short period of return on investment has already resulted in good coverage of the mainland territory of Croatia with LPG refuelling stations, as well as the acceptance of this type of fuel by consumers.

**2.5 Biofuels:** they contribute to the objective of increasing the share of renewable energy in the energy used for transport, due to the raw material used for their production. However, the first generation of food-based biofuels can no longer be regarded as acceptable alternative forms of energy, which include only the advanced generation biofuels (those that do not use food-based raw material, but waste material), in the light of redirecting policy efforts to support such biofuels only at European level.

### 3. ASSESSING THE CURRENT STATE IN THE REPUBLIC OF CROATIA ACCORDING TO TYPES OF ALTERNATIVE FUELS AND TRANSPORT MODES

For the purpose of determining the current state of play, the analysis of legislation, programmes and strategic documents has been carried out, and the data on the existing infrastructure have been collected, both at the level of the RoC, and the level of local and regional self-government units, i.e. in 20 counties and 29 cities. The analysis included the cities with over 20 000 inhabitants in accordance with the census of the Croatian Bureau of Statistics.

#### 3.1 Legal framework

Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels has been transposed into national law of the RoC through the Act which was adopted on 9 December 2016. The Act establishes a common framework of measures for the deployment of alternative fuels infrastructure and the minimum requirements for the construction of infrastructure for alternative fuels, including recharging/refuelling points, sets out common technical specifications for recharging and refuelling points, and user information requirements, as well as the method of the reporting obligation on implementation of measures to establish the infrastructure for alternative fuels.

Pursuant to the Act, the Ministry of the Sea, Transport and Infrastructure (hereinafter referred to as: the Ministry) has been designated as the competent authority to implement the policy of the Government of the RoC in the field of deployment of alternative fuels infrastructure, the reporting to the Government of the RoC and the European Commission (hereinafter referred to as: the EC) on the implementation of measures for the deployment of alternative fuels infrastructure, the establishment of international cooperation of the RoC for the deployment of alternative fuels infrastructure and participation in the work of the EC bodies in the field of deployment of alternative fuels infrastructure.

The Act also designates the national coordinating body (hereinafter referred to as: the NCB) with the task of providing support to the Ministry in the implementation of the alternative fuels policy, developing and implementing the system of monitoring the measures for the improvement of alternative fuels infrastructure, preparing and adjusting the implementation of the framework of measures for the development of alternative transport fuels market contained in the NPF, monitoring their implementation as part of the National Action Plan for Energy Efficiency, preparing the NPF Implementation Report and publishing regular information updates on its website on the measures taken in support of the construction of alternative fuels infrastructure, and of the locations of alternative fuels refuelling and recharging points accessible to the public.

The EU legal framework, which until the adoption of the Directive 2014/94 governed the deployment of alternative fuels infrastructure, has been transposed into Croatian legislation (Annex 1). In addition, strategic documents relating to energy efficiency, as well as documents pertaining to specific areas of concern, at national level (Annex 2), but also at the level of local and regional self-government, where sustainable energy action plans of cities – the so-called SEAPs (Annex 3) are predominantly used. With the Energy Efficiency Act (“National Gazette”, No 127/14) the RoC has built upon the existing European Union plans, and today all big cities and counties are adopting plans for the improvement of energy efficiency on an annual and triennial level in co-operation with the NCP, and report to the NCP on the implementation thereof. On the basis of three-year energy efficiency action plans, individual measures to promote energy efficiency are also implemented in Croatia, some of which relate to co-financing the acquisition of electric vehicles, co-financing the installation of charging/refuelling stations, co-financing the purchase of electricity powered vessels fitted with solar panels and co-financing the modification of existing vehicles of all categories to LNG.

#### 3.2 Assessing the number of registered vehicles

The assessment was made based on the data provided by the Ministry of the Interior, the Centre for Vehicles of Croatia (hereinafter referred to as: the CVC) and by local and regional self-government units, while the assessment of the existing number of charging stations for alternative fuels for road vehicles has been made on the basis of the data provided by local and regional self-government units. The estimate of the existing alternative fuels infrastructure in sea ports and inland waterway ports has been made on the basis of the data provided by port authorities.

### *3.2.1 Electricity:*

In 2016, 856 vehicles using electrical power supply from external sources were registered in Croatia, out of which 299 passenger vehicles, 55 lorries, 250 mopeds, 183 motorcycles, 3 buses, 66 tractors and non-road mobile machinery, and just over 126 publicly accessible charging stations were available.

Electric power supply, i.e. high voltage onshore grid connections exist on inland waterways, in Vukovar and Sisak inland waterway ports and at sea ports in Rijeka, Split and Dubrovnik. The existing electricity supply at sea ports does not have sufficient capacity to supply cruise ships.

There is electrical power supply of stationary airplanes at all international airports in Croatia.

### *3.2.2 Hydrogen:*

In the Republic of Croatia, there is no infrastructure for hydrogen, however 4 hydrogen vehicles were registered, out of which 4 are passenger cars (which use hydrogen as an alternative to conventional fuels).

### *3.2.3 Natural gas:*

#### *3.2.3.1 Liquefied natural gas*

In the Republic of Croatia, there is no infrastructure for LNG. Also, there are no registered vehicles or vessels using this energy product.

#### *3.2.3.2 Compressed natural gas*

In 2016, there were 208 passenger vehicles, 84 lorries, 10 mopeds, 6 motorcycles, 108 buses and 11 CNG powered tractors registered in Croatia.

In Croatia, there are 2 publicly accessible refuelling stations for CNG (Zagreb and Rijeka).

### *3.2.4 Liquefied Petroleum Gas:*

In 2016, there were a total of 57 911 LPG vehicles, out of which 56 914 passenger cars, 875 lorries and 8 mopeds and motorcycles, 16 buses and 98 tractors and non-road mobile machinery were registered in Croatia.

The total number of registered workshops for installation and servicing of gas installations in vehicles in Croatia in 2014 was 153, and the number of LNG filling stations was 334.

### *3.2.5 Biofuels:*

In Croatia, there are 3 bio-fuels production plants, out of which 2 plants use oil produced from oilseeds as raw material, and 1 plant uses edible oil wastes.

Biofuels in Croatia are mainly used blended in motor gasoline or diesel fuel in a share of up to 5 % and 7 %, respectively and such fuel does not have to be displayed at the point of sale (filling stations), therefore the information on the number of public filling stations is not available. Biofuel mixtures from 5 % -10 % into petrol, or above 7 % in diesel fuel must be displayed at points of sale; such mixtures are mainly used by transport companies, in either passenger or freight transport, on the basis of contracts with producers/traders of biofuels.

## **4. ASSESSING FUTURE MARKET DEVELOPMENTS**

Assessment of future market developments by types of alternative fuels and transport modes shall be an integral part of the document with the supporting expertise drawn up for the purposes of the NPF, and the document entitled “Modelling of parameters of electric vehicles charging infrastructure – Overview of incentive measures for the uptake of electric vehicles“, which are used in the preparation of the NPF and published on the Ministry’s website. Neither of the assessment scenarios developed in the scope of the document with the supporting expertise (a scenario without measures, „realistic scenario“, and „optimistic scenario“), foresees the increase of the share of vehicles using alternative energy to over 10 % in the next 10 years (until 2050). On the basis of the analyses set out in the two aforementioned documents, targets have been set out for the minimum infrastructure for electricity and natural gas, that is to say, for settlements, settlement construction areas and urban/suburban agglomerations, other densely populated areas and networks which, subject to market needs, will be equipped with the infrastructure for electricity and natural gas.

## 5. OBJECTIVES

The main objective of the deployment of alternative fuels infrastructure is the development of a sustainable transport system, with minimum adverse effects on the environment and society, as well as ensuring interoperability with the neighbouring countries and EU Member States. The achievement of this objective is possible with careful planning and the development of legislative and financial model which would stimulate the development of alternative fuels in transport and the alternative vehicles and vessels market. This would also enable economic development through an increase in economic activity.

### 5.1 Electricity

The objective of establishing a minimum infrastructure for the electricity supply of vehicles in the territory of the RoC is to create more sustainable urban and road traffic and to enable the operation of electric vehicles in larger urban centres and along the main axes of Croatia, as well as to provide shoreside electricity supply for inland waterway vessels and seagoing ships in ports of the TEN-T core network.

In order to meet this objective by 2020 charging stations shall be available every 50 km on motorways, in all agglomerations with more than 20 000 inhabitants, at all seaports, airports and inland waterway ports, as well as at railway stations. Shoreside electricity supply for inland waterway vessels and seagoing ships shall be available in the port of Rijeka and the port of Vukovar/Slavonski Brod until 31 December 2025. The establishment of shoreside electricity supply for inland waterway vessels and seagoing ships in ports is a priority, unless there is no demand and if the costs are disproportionate to the benefits, including environmental benefits.

Also, until 31 December 2025 charging stations shall be available at all international airports in the Republic of Croatia.

The basic objective of establishing the network of charging stations is to create preconditions for the promotion of transport development which will not have a negative impact on the environment. When determining the way to achieve this objective, it is necessary to take a realistic perspective of the future needs. The lack of charging stations would constitute an obstacle to the development of the electric vehicle market, but too many charging stations would equally present an obstacle to the development of the electric vehicle market. Therefore the charging station network needs to be developed gradually, where a single legal framework allowing the smooth functioning of the market is defined at the outset.

A sufficient number of publicly accessible charging stations must be available in agglomerations and in the transport network. The current situation with 126 charging stations and 856 vehicles (1 charging station to 6 vehicles,) exceeds the market needs on the one hand, and on the other hand it does not allow for the use of electric vehicles throughout the territory of the Republic of Croatia.

For the purpose of covering the needs for the operation of electromobility, the proposal on the number of charging stations and the socket outlets is based on a scenario of a low share of energy transmission at public charging stations referred to in the document „Modelling of parameters of electric vehicles charging infrastructure – Overview of incentive measures for the uptake of electric vehicles. By an adequate follow-up of the growth of electric vehicles market, it is necessary to ensure that:

- In 2020 – a minimum of 296 socket outlets (222 AC of minimum power of 22/(11) kW, 74 DC of a minimum power of 50 kW); at 164 charging stations
- In 2025 – a minimum of 602 socket outlets (434 AC of minimum power of 22/(11) kW, 168 DC of a minimum power of 50 kW); at 348 charging stations
- In 2030 – a minimum of 806 socket outlets (554 AC of minimum power of 22/(11) kW, 252 DC of a minimum power of 50 kW); at 479 charging stations
- optimum number of charging station locations in 2030 amounts to slightly less than 300 locations.



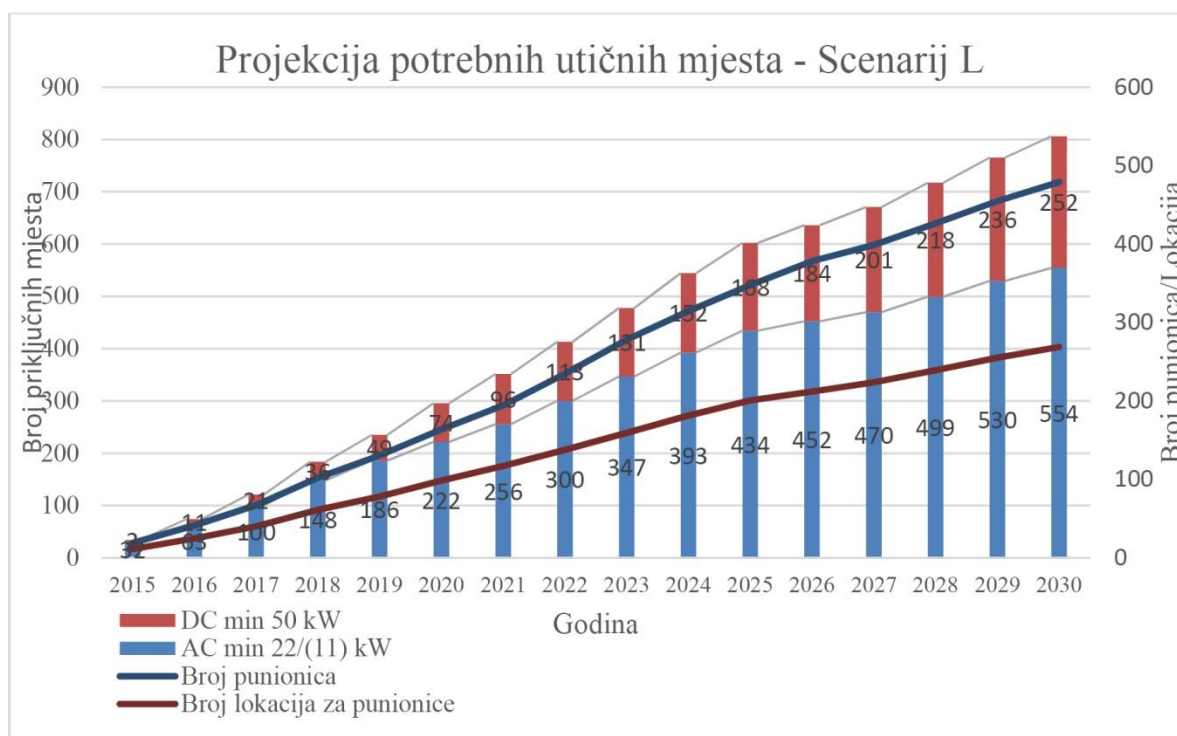


Figure 1 A projection of required socket outlets and charging stations in a scenario of a low share of energy transmission in the public network<sup>11</sup> (scenario L) of the document „Modelling of parameters of electric vehicles charging infrastructure – Overview of incentive measures for the uptake of electric vehicles“, which was drawn up by the consultancy firm, Dyvolve Urbanforesight, Zero Carbon Futures.

Such a scenario is a starting point for planning the establishment of a minimum number of charging stations. It is necessary to provide for a review of the required charging stations in accordance with market developments every 3 years (starting in 2020).

## 5.2 Hydrogen

Pursuant to the assessment drawn up for the purposes of NPF, by 2030 there would be no need for the deployment of the refuelling infrastructure for hydrogen-powered vehicles (0 % of hydrogen consumption in total energy products consumption in transport by 2030 according to the three currently available scenarios) and therefore targets for minimum infrastructure for hydrogen are not provided for.

In the now unlikely scenario of a more rapid development of hydrogen-powered vehicle market, there is a possibility for the implementation of a pilot project for the construction of charging stations (in Zagreb and/or Rijeka), which would, in the light of the range of hydrogen-powered motor vehicles, enable them to operate along the part of the Mediterranean Corridor of the TEN-T Core Network which is located on the territory of the Republic of Croatia.

## 5.3 Natural gas

### 5.3.1 Liquefied natural gas

The objective of designating the minimum infrastructure for the LNG supply of vehicles/vessels in the territory of Croatia is to create a more sustainable maritime transport, inland waterway navigation and road freight traffic and to enable circulation of LNG-powered vessels and heavy duty vehicles along the main waterway and road transport routes in the RoC.

With a view to enabling the operation of inland waterway vessels or seagoing ships throughout the TEN-T core network and the main waterways of the RoC, LNG transshipment and refuelling infrastructure at sea ports shall be available in Rijeka by 31 December 2025, except where by 2020 it appears that there is a complete lack of demand for this type of fuel.

With a view to enabling the operation of inland waterway vessels or seagoing ships throughout the TEN-T Core Network, LNG transshipment and refuelling infrastructure in inland ports shall be made available in Vukovar and Slavonski Brod by 31 December 2030, except where by 2025 it appears that there is a complete lack of demand for this type of fuel.

With a view to enabling the operation of inland waterway vessels or seagoing ships on the main waterways, LNG transshipment and refuelling infrastructure shall be available in Pula, Zadar, Šibenik Split, Ploče and Dubrovnik, except where by 2025 it appears that there is a complete lack of demand for this type of fuel.

The aforementioned ports have been designated on the basis of analyses of potential economically viable locations for the deployment of LNG transshipment infrastructure and made for the purposes of NPF, taking into account transport service to date taking place on predetermined state lines in coastal regular maritime service, traffic loads in ports, navigable areas, availability of LNG supply, and the navigation fleet in the RoC.

With a view to facilitating the operation of heavy goods vehicles on the main road transport routes in the RoC, until 31 December 2025 LNG refuelling infrastructure for heavy goods vehicles shall be available at peripheral parts of the cities of Zagreb and Rijeka, and until 31 December 2030 at peripheral parts of the cities of Zadar, Split, Ploče, Slavonski Brod and Osijek, except where it appears that by 2020 there is a complete lack of demand for Zagreb and Rijeka, and by 2025 for other mentioned cities. In case of sufficient demand, along with refuelling stations at the periphery of cities close to motorways it is possible to provide for the installation of mobile LNG refuelling units for goods vehicles at the motorway rest stops. The required infrastructure has been estimated by taking into account the need to ensure that LNG-powered heavy-duty motor vehicles operate on the major transport routes in the RoC, focusing on parts thereof forming a part of the TEN-T Core Network, and bearing in mind the approximate radius of LNG-powered goods vehicles, as well as the existing infrastructure and roads of the RoC.

It is necessary to review the assessment of the necessary infrastructure in accordance with market developments every 3 years, starting in 2020. Also, in case of sufficient demand, with the refuelling stations at peripheral parts of cities close to motorways, it is possible to provide for the installation of mobile LNG refuelling stations for goods vehicles at the motorways rest stops.

With a view of ensuring a fair distribution of LNG on the territory of the RoC, and in order to supply the refuelling points of ships in maritime and inland ports of the TEN-T Core Network for heavy goods vehicles, a distribution centre shall be available in Rijeka, and the transshipment infrastructure in ports of Rijeka, Vukovar and Slavonski Brod, except where by 2020 it proves that there is a complete lack of demand.

The necessary infrastructure has been assessed by taking into account the need to ensure navigability on the TEN-T Core Network. It is necessary to review the assessment of the required infrastructure in accordance with market developments every 3 years, starting in 2020. Depending on the review of the estimated needs, it is possible to provide for the construction of supply and transshipment infrastructure in other two major Croatian ports on inland waterways, which have a potential for construction: Sisak and Osijek.

### *5.3.2 Compressed natural gas*

The objective of designating the minimum infrastructure for the CNG supply of vehicles in the territory of the RoC is to create a more sustainable (especially public) urban, communal and road transport and ensuring the operation of CNG vehicles in larger urban centres and along the main axes in the RoC.

With a view to facilitating the circulation of CNG-powered road vehicles in larger urban centres of the RoC, refuelling stations shall be available by 2020 in Pula, Rijeka, Zadar, Šibenik, Split, Dubrovnik, Karlovac, Sisak, Osijek, Varaždin, Čakovec and Zagreb. Refuelling stations shall be available at minimum 13 locations, in the form of compressor systems with the possibility of simultaneous refuelling of passenger cars, goods vehicles and buses.

These 12 agglomerations have been designated on the basis of economically viable sites.

With a view to facilitating the circulation of CNG-powered road vehicles along the entire road transport network of the RoC, refuelling stations shall be accessible by 2025 along the main Croatian road routes, with a minimum allowed distance between refuelling stations of 150 km. By 31 December 2025, 19 stations will be available on 11 sites, out of which 8 sites will be located along motorways, and 3 on main roads.

Envisaged locations have been selected on the basis of the analysis made for the purpose of the NPF, whose basic criteria has been the selection of most profitable existing petrol stations, the selection of highly

profitable petrol stations on the connecting transport routes, the preference of locations in the immediate vicinity of the pipeline system and the balanced expansion of refuelling stations network along the roads network in the RoC, with the full compliance with the recommended maximum distance of 150 km between stations.

The most economically advantageous form of deploying CNG refuelling stations would be their extension within the existing refuelling stations. It is necessary to review the assessment of the required infrastructure in accordance with market developments every 3 years, starting in 2020.

#### **5.4 LPG**

The analysis showed that the minimum LPG refuelling stations network has been built for the operation of LPG-powered vehicles on the Croatian roads, therefore targets for the minimum LPG infrastructure have not been provided for.

#### **5.5 Biofuels**

Objectives for transport biofuels have already been set by a number of existing planning acts, including the National action plan for renewable sources of energy until 2020, and therefore they are not defined in the NPF. The analysis drawn up for the purposes of the NPF shows that in order to achieve the annual objectives set out in the said Action plan in the future it would be necessary to build new production capacities or increase imports of biofuels in the RoC.

## **6. MEASURES**

### **6.1 Measures necessary for achieving national targets**

Executing authority: NCB, in collaboration with the Ministry of the Sea, Transport and Infrastructure and other state administrative bodies referred to under targets, the Environmental Protection and Energy Efficiency Fund (hereinafter referred to as: the EPEEF), relevant regulatory authorities, as well as local and regional self-government authorities

Monitoring body: The NCB in coordination with the Ministry of the Sea, Transport and Infrastructure

Timeframe: time limits for drawing up three-year national action plans for energy efficiency

NCB for the energy efficiency has the role of a national energy efficiency agency and is in charge of implementing the energy efficiency policy in the RoC. As the area of implementation of the energy efficiency policy in the context of the transport sector overlaps with the implementation of the policy for the development of alternative fuels infrastructure, by virtue of Article 11(2) of the Act this body becomes NCB of the policy for the development of alternative fuels infrastructure, and further implementing activities are laid down where NCB shall take part in defining, coordinating and monitoring the implementation of national measures for the implementation of the policy for the deployment of alternative fuels infrastructure.

Development of the NPF measures has been stipulated on a triennial basis through the national energy efficiency action plans. The first National Energy Efficiency Action Plan, which will include a specific section with actions for the implementation of the alternative fuels policy will be the fourth National Energy Efficiency Action Plan for the period from 2017 to 2019.

#### *6.1.1 Legislative measures*

Executing authority: The NCB and the other state administrative bodies, including the Ministry of Finance, the Ministry of the Sea, Transport and Infrastructure, the Ministry of Environmental Protection and Energy, Ministry of the Interior, Ministry of Construction and Spatial Planning, FEPEE, as well as relevant regulatory authorities.

Monitoring body: The NCB in coordination with the Ministry of the Sea, Transport and Infrastructure

Timeframe: 2017 – 2030

At national level, it is necessary to adopt laws and by-laws that shall govern the setting down of conditions for the connection to the electricity system for refuelling stations, conditions for distribution, charging and a unit price of alternative energy products used in transport, setting down of conditions for LNG and CNG refuelling stations. Fulfilment of this obligation is a precondition for further development of alternative fuels infrastructure.

It is necessary to provide for amendments to the acts governing transport infrastructure so as to impose obligations on the deployment of alternative fuels infrastructure for entities managing transport infrastructure, as well as for amendments to the acts governing the conditions for the construction of parking spaces so as to impose an obligation of providing refuelling stations or alternative fuels.



### *6.1.2 Public information, reporting obligations to the Government of the Republic of Croatia and the European Commission*

Holders: NCB in cooperation with state administration bodies and local and regional self-government authorities

Monitoring body: NCB in coordination with the Ministry of the Sea, Transport and Infrastructure

Timeframe: continuous

NCB shall establish a sufficient administrative capacity and in cooperation with other state administration bodies shall carry out continuous processing and quantification of data and public information and shall meet the reporting obligations to the Government of the RoC and the European Commission. Information whose provision is mandatory is set out in the Act.

Training and promotion at the national, local and regional levels have been foreseen in the scope of public information measures. According to the third National Energy Efficiency Action Plan for the period 2014–2016 (3rd National NEEAP) for the purposes of meeting the national objectives (two NEEAP measures), as well as meeting the obligations under the Energy Efficiency Act, the National energy efficiency portal has been developed. Within the portal, it is possible to ensure the space for informing the public on the status of the NPF implementation, as well as for training and promotion of the alternative fuels infrastructure development.

State administration bodies and local and regional self-government authorities shall notify the NCB on the execution of the measures set out in the NPF within its area of competence and at the request of the NCB, or at least once a year.

### *6.1.3 Incentive measures*

#### *Co-financing of the acquisition of alternative fuels vehicles and support to alternative fuels infrastructure for charging vehicles*

Incentive measures shall cover co-financing the acquisition of alternative fuels vehicles principally intended for public and municipal transport, co-financing the construction of alternative fuels infrastructure to operators managing the transport infrastructure and local and regional self-government units from the resources provided by the Environmental Protection and Energy Efficiency Fund, pursuant to the Act on the Environmental Protection and Energy Efficiency Fund („National Gazette“, Nos 107/03 and 144/12 and related implementing regulations).

#### *6.1.3.1 Subsidies for the purchase of vehicles*

Executing authority: Co-financing and tendering (EPEEF)

Monitoring body: NCB in coordination with the Ministry of the Environmental Protection and Energy and the Ministry of the Sea, Transport and Infrastructure

Timeframe: 2014<sup>[2]</sup> (Timeframes are coordinated with timeframes set out in national energy efficiency action plans. The implementation of the subsidy measure for alternative fuels powered vehicles started in 2014 on the basis of the third National Energy Efficiency Action Plan for the period from 2014 to 2016) – 2020.

Incentive measures for co-financing the acquisition of vehicles shall be primarily oriented to alternative fuels for which the assessment of the current situation has shown a marginal representation in the total number of vehicles, and they shall be time-limited until the moment when situation monitoring indicates a minimum representation of vehicles. A minimum degree of the market launching shall be considered as 1 % share of given alternative fuel vehicles in total number of vehicles registered in the country. Following a minimum market development, alternative fuels transport shall be incentivised with other types of measures (fiscal, privileged access measures).

State subsidies shall be provided in order to reduce the initial acquisition prices of new electric vehicles depending on the vehicle category, so that customers are directed towards smaller and more energy efficient vehicles, thereby further boosting the efficiency and reducing traffic congestion.

#### *6.1.3.2 Support for the infrastructure for recharging alternative fuel vehicles*

Executing authority: (EPEEF) (co-financing and tendering)

Monitoring body: NCB in coordination with the Ministry of the Sea, Transport and Infrastructure

Timeframe: 2014<sup>[3]</sup> (Timeframes are coordinated with timeframes set out in national energy efficiency action plans. The implementation of the subsidy measure for alternative fuels infrastructure started in 2014 on the basis of the third National Energy Efficiency Action Plan for the period from 2014 to 2016 ) – 2030.

Incentive measures for the co-financing of infrastructure shall be primarily oriented on alternative fuels for which the assessment of the current situation has shown insufficient infrastructure development, and shall be time-limited until the moment when situation monitoring indicates minimum infrastructure coverage. Minimum infrastructure coverage shall be considered to be that corresponding to the minimum infrastructure targets set out in Chapter 5 of the NPF. Incentive measures provide for the development of pilot projects and the impact examination of the deployment of specific parts of alternative fuels infrastructure on local and/or national level.

#### *6.1.4 Motor vehicle tax reliefs*

Executing authority: Ministry of Finance

Monitoring bodies: The Ministry of the Environmental Protection and Energy, the Ministry of the Sea, Transport and Infrastructure, the Ministry of Finance, the Ministry of the Interior in coordination with the NCB

Timeframe: 2014<sup>[4]</sup> (Timeframes are coordinated with timeframes set out in national energy efficiency action plans). – 2020.

Proportional reduction in vehicle taxation shall be enabled for natural and legal persons who are owners of zero or reduced emission vehicle. It is an existing measure carried out pursuant to the Act on the Special Tax on Motor Vehicles („National Gazette“, Nos 15/13, 108/13 and 115/16). This Act governs the payment of a special tax on motor vehicles intended for use on roads in the Republic of Croatia. Motor vehicles powered by an electric power train only, and motor vehicles whose carbon dioxide (CO<sub>2</sub>) emission is less than 0 grams per kilometre shall not be subject to taxation.

#### *6.1.5 Special environmental charges to power-driven vehicles*

Executing authority: Ministry of Finance

Monitoring: The Ministry of the Environmental Protection and Energy, the Ministry of the Sea, Transport and Infrastructure, the Ministry of Finance, the Ministry of the Interior in coordination with the NCB

Timeframe: 2014 – 2030

This measure is implemented within the already established and functioning system of special environmental charges to power-driven vehicles. The special environmental charge to power-driven vehicles is payable at the time of registration of the vehicle, and is calculated by taking into account CO<sub>2</sub> emissions. The charge is laid down in the Act on the Environmental Protection and Energy Efficiency Fund („National Gazette“ 107/03 and 144/12) and in the Ordinance on unit charges, correction coefficients and specific criteria and benchmarks for determining special environmental charges to power-driven vehicles („National Gazette“, Nos 114/14 and 147/14), and constitutes the revenue of EPEEF.

#### *6.1.6 Financing of research, technological development and innovation*

Executing authority: The Ministry of Science and Education, the Ministry of Economy, Entrepreneurship and Crafts, EPEEF (co-financing and tendering) and the Croatian Agency for SMEs, Innovations and Investments (HAMAG-BICRO)

Monitoring: NCB in coordination with the Ministry of the Sea, Transport and Infrastructure

Timeframe: 2014 – 2020

Provision of financial support for projects supporting the development of clean transport technologies through a tender procedure of the Ministry of the Economy, Enterprise and Crafts entitled “Supporting business investments in research and innovation development“ which allows for the funding of the area entitled “Energy and sustainable environment”, and the tender “CEKOM – supporting the establishment of Centres of competence”, which allows for the funding of technologies and research business infrastructure for the area entitled “Energy and sustainable environment”.

The call of the Ministry of Science and Education enabling the application of research, innovation and innovation projects, in all the thematic priority areas of the Smart Specialisation Strategy, including the areas “Energy and sustainable environment” and “Transport and mobility”, are “Strengthening research, development and innovation capacities” and “Investing in science and innovation”. “Strengthening research, development and innovation capacities” programme provides support for research, development and innovation programmes of research organisations in partnership with the business sector, and shall be financed in the framework of the Operational Programme Competitiveness and Cohesion, 2014 – 2020 in the period from 2018 –2023.

In addition, the financial support to research, development and innovation projects and the commercialisation assisting the development of clean transport technologies are also implemented under

the innovation programmes PoC – Proof of concept, RAZUM – Development of knowledge-based businesses, IRCRO — Collaborative research and development and TTO – Technology transfer offices support programme funded through the Second technology development project (STPII). These programmes are used for funding projects in all science and technology areas, and there are two areas relevant for the NPF area according to HAMAG-BICRO classification: Energy, Environment and Materials, and Transport. The funds under the concerned innovation programmes shall be allocated to small and medium-sized enterprises and public science and research institutions, and shall be carried out by the end of 2017 (until June 2018 for TTO).

## **6.2 Measures at local and regional level**

Executing authority: local and regional self-government units, EPEEF (co-financing and tendering) and the Ministry of Science and Education and the Ministry of Economy, Entrepreneurship and Crafts with the measure 6.2.5 Economic development, scientific research, education and tourism and 6.2.7 Promoting the work of science and research institutions

Monitoring: NCB in coordination with the Ministry of the Sea, Transport and Infrastructure

Timeframe: 2014 – 2030

In addition to measures at national level, a number of measures at local and regional level have been recommended; therefore there are a number of support measures implemented by local and regional self-government units.

### *6.2.1 Parking*

The possibility of a preferential parking for zero emission vehicles or restricting the access to parking places to vehicles with internal combustion engines.

### *6.2.2 Planning and providing infrastructure, access to vehicle recharging infrastructure*

Measures related to the application of the planning policy or legislation related to the construction of new facilities, lease of existing facilities, and the expansion of the vehicle recharging network through the installation of charging stations at public places, while allowing privileged access of vehicles to locations with a possibility for recharging at installed recharging stations.

### *6.2.3 Taxi and rented vehicles*

Promoting the increased use of zero emission vehicles among taxi carriers and rent-a-car companies.

### *6.2.4 Car-sharing user groups*

Promoting the use of zero emission vehicles in car-sharing user groups.

### *6.2.5 Economic development, scientific and research work, education and tourism*

Measures promoting the use of zero or reduced emission vehicles in tourism and/or as a means of promoting opportunities for economic development.

### *6.2.6 Promoting the involvement of SMEs and increasing employment*

Measures promoting the involvement of small and medium-sized enterprises in this market segment, and increasing employment.

### *6.2.7 Promoting the work of scientific and research institutions*

Measures promoting the work of scientific and research institutions, and collaboration with SMEs.

The measures of the Ministry of Science and Education for the promotion of the work of scientific organisations and the collaboration with small and medium-sized enterprises, among others, are described in the Operational Programme Competitiveness and Cohesion, 2014– 2020. The calls enabling the application of research projects of scientific organisations in all the thematic priority areas of the Smart Specialisation Strategy, including the areas of “Energy and sustainable environment” and “Transport and mobility” are “Investing in science and innovation” and “Strengthening research, development and innovation capacities“. These calls provide support to market-oriented research projects which respond to the needs of the economy and the society, and enable higher impact of research outcomes on the economic growth. The call „Investing into science and innovation“ intended for research organisations, shall be implemented from 2017 to 2022.

Through the Second technology development project STPII, HAMAG-BICRO (the loan of the International Bank for Reconstruction and Development) carries out the TTO programme, which promotes the commercialisation of research projects of public scientific organisations in all scientific and technology areas. This programme shall be implemented by June 2018.

### *6.2.8 Educating the population*

Measures promoting the education of population in order to encourage the use of alternative fuel vehicles.

### **6.3 Measures that can promote the deployment of alternative fuels infrastructure in public transport services**

These measures are covered by the NPF measures set out in Chapter 6.1 “The measures necessary for the achievement of national objectives” and 6.2 „The measures at local and regional level”.

Education and promotion of alternative fuels infrastructure at national and local and regional levels is provided for under the NPF measure 6.1.2 “Public information, reporting obligations to the Croatian Government and the EC”.

Infrastructure co-financing incentives to entities managing the transport infrastructure and local and regional self-government units, as well as fostering the development of pilot projects and examining the effects of deployment of certain parts of the infrastructure for alternative fuels at the local and/or state level is provided for in the NPF measure 6.1.3.2 “Support for the infrastructure for recharging of alternative fuel vehicles”. The promotion of the deployment of alternative fuels infrastructure in public transport services is also possible under the NPF measure 6.2.2 “Planning and providing infrastructure, access to infrastructure for recharging vehicles”.

## **ANNEX 1 TO THE NPF**

### **THE LEGAL FRAMEWORK FOR THE DEPLOYMENT OF ALTERNATIVE FUELS INFRASTRUCTURE**

#### **ACTS**

1. Act on the Deployment of Alternative Fuels Infrastructure („National Gazette“, No 120/16)
2. Act on the Special Tax on Motor Vehicles („National Gazette“, Nos 15/13, 108/13 and 115/16)
3. Act on the Promotion of Clean and Energy-Efficient Road Transport Vehicles („National Gazette“, No 127/13)
4. The Road Traffic Safety Act („National Gazette“, Nos 67/08, 48/10, 74/11, 80/13, 158/13, 92/14 and 64/15)
5. The Energy Act (National Gazette“, Nos 120/12, 14/14, 95/15 and 102/15)
6. The Energy Efficiency Act („National Gazette“, No 127/14)
7. Electricity Market Act („National Gazette“, Nos 22/13, 95/15 and 102/15)
8. Act on Biofuels for Transport („National Gazette“, Nos 65/09, 145/10, 26/11, 144/12, 14/14)
9. Act on the Environmental Protection („National Gazette“, Nos 80/13 and 78/15)
10. The Gas Market Act („National Gazette“, Nos 28/13 and 14/14)
11. The Excise Duty Act („National Gazette“, Nos 22/13, 32/13, 81/13, 100/15, 120/15 and 115/16)
12. Act on Renewable Energy Sources and High-Efficiency Cogeneration („National Gazette“, No 100/15)
13. The Public Procurement Act („National Gazette“, No 120/16).
14. The Air Protection Act („National Gazette“, Nos 130/11 and 47/14)
15. Act on the Environmental Protection and Energy Efficiency Fund („National Gazette“, Nos 107/03 and 144/12)
16. Act on the Regulation of Energy Activities („National Gazette“, No 120/12)

#### **SUBORDINATE LEGISLATION**

1. Decision on the per-unit amount of financial incentive for biofuel production in 2014 („National Gazette“, No 141/13)
2. Decision on the amount of the share of excise duty revenues allocated to biofuel production in 2014 („National Gazette“, No 147/13)
3. Decision on average prices per man-hour for providers of non-standard services in the gas sector for the second regulatory period 2017– 2021 (HERA, 11/16)
4. Decision on the adoption of the Contingency Plan concerning measures to safeguard security of gas supply the Republic of Croatia („National Gazette“, No 78/14)

5. Decision on the amount of gas transmission tariff lines for the power supply operator Plinacro d.o.o., Savska cesta 88A, Zagreb („National Gazette“, No 65/15)
6. Decision on the charges for the connection to the gas distribution or transmission system and for the increase of the connection capacity for the regulatory period 2017 – 2021 („National Gazette“, No 122/16)
7. Decision on the amount of tariff lines for gas distribution („National Gazette“, No 122/16)
8. Regulation on the quality of biofuels („National Gazette“, No 141/05), the Ordinance amending the Ordinance on the quality of biofuels („National Gazette“, No 33/11)
9. The Regulation on the promotion of production of transport biofuels („National Gazette“, No 1/14)
10. Regulation on the special environmental charges for the non-placement of biofuels on the market („National Gazette“, No 125/10)
11. Regulation establishing the system of guarantee of origin of electricity („National Gazette“, No 84/13)
12. Regulation on unit charges, correction coefficients and specific criteria and benchmarks for determining the special environmental charges to power-driven vehicles („National Gazette“, Nos 114/14 and 147/14)
13. Regulation on the criteria for acquiring the status of a protected customer in the condition of gas supply crisis situations („National Gazette“, No 65/15)
14. Ordinance on liquefied petroleum gas („National Gazette“, No 117/07)
15. Ordinance on the compressed natural gas (CNG) systems for refuelling motor vehicles („National Gazette“, No 134/09)
16. Ordinance on devices equipment for the propulsion of motor vehicles („National Gazette“, No 78/14)
17. Ordinance concerning the procedure of approval of compression ignition (C.I.) engines and gas engines intended for use in vehicles, and vehicles equipped with such engines with regard to the reduction of emission of gaseous and particulate pollutants from the TPV 141 engine („National Gazette“, No 31/13),
18. Ordinance on the refuelling stations for vehicles („National Gazette“, Nos 93/98, 116/07 and 141/08)
19. Ordinance on measures for promoting the use of biofuel in transport („National Gazette“, No 42/10)
20. Ordinance on the method and conditions for the application of sustainability requirements in the production and use of biofuels („National Gazette“, No 83/13)
21. Ordinance on the conditions and the procedure for obtaining incentives for the production of transport biofuels („National Gazette“, No 91/11)
22. Ordinance laying down specific energy values of fuel („National Gazette“, No 36/11)
23. Ordinance on the amount of the annual charge for the use of public roads, payable at the time of registration motor vehicles or a trailers („National gazette“, No 35/11)
24. Ordinance relating to the availability of consumer information on fuel economy and CO<sub>2</sub> emissions of new passenger cars („National Gazette“, No 07/15)
25. Ordinance on the charges for the connection to the electricity network and for the increase of the connecting power („National Gazette“, No 28/06)
26. Ordinance on the use of renewable energy sources and of cogeneration („National Gazette“, No 88/12)
27. Ordinance on rules on acquiring the of status of protected producers of electricity („National Gazette“, Nos 132/13, 81/14, 93/14, 24/15, 99/15 and 110/15)
28. The methodology for determining the amount of tariff lines for distribution of electricity (“National Gazette”, No 104/15)
29. The methodology for determining the amounts of tariff lines for electricity transmission („National Gazette“, Nos 104/15 and 84/16)
30. The methodology for pricing the billing of electricity balancing („National Gazette“, Nos 71/16 and 112/16)
31. The methodology for pricing the provision of balancing services („National Gazette“, No 85/15)
32. The methodology for pricing the provision of ancillary services (HOPS, No 7/16)
33. The methodology for determining the amount of tariff lines for distribution of gas („National Gazette“, No 104/13)
34. The methodology for determining the amount of tariff lines for gas transmission („National Gazette“, Nos 85/13, 158/13 and 118/15)
35. The methodology for price-fixing of non-standard services for gas transmission, gas distribution, gas storage, and the public service of gas supply („National Gazette“, Nos 158/13, 91/16 and 116/16)



36. The methodology for fixing the charges for connection to the gas distribution or transmission system and for the increase of the connection capacity („National Gazette“, No 76/14)
37. The methodology of establishing the origin of electricity („National Gazette“, No 133/14)
38. Rules concerning the use of the register of guarantees of origin of electricity (HROTE 16. 4. 2014, HROTE, 29. 9. 2016)
39. Rules concerning the organisation of the gas market (HROTE, 12/14)
40. Rules concerning switching supplier of electricity („National Gazette“, No 56/15)
41. Rules concerning the organisation of the electricity market („National Gazette“, Nos 121/15 and 48/16)
42. Rules concerning the balancing of the electricity system (HOPS, No 5/16)
43. Power system network codes („National Gazette“, No 36/06)
44. Gas distribution system network codes („National Gazette“, No 155/14)
45. Transmission system network codes (PLINACRO, No 11/16)
46. The price list of non-standard services of distribution system operators (HEP-ODS, No 09/16)
46. Price list of non-standard services of distribution system operators (HEP-ODS, 09/16)
47. General requirements for gas supply („National Gazette“, No 158/13)
48. General requirements for the use of the electricity grid and electricity supply („National Gazette“, No 85/15)

## **ANNEX 2 TO THE NPF**

### **NATIONAL STRATEGY DOCUMENTS**

1. Transport Development Strategy of the Republic of Croatia for the period from 2014 to 2030 („National Gazette“, No 131/2014) was adopted on 30 October 2014 and falls within the competence of the Ministry of the Sea, Transport and Infrastructure.  
[http://narodne-novine.nn.hr/clanci/sluzbeni/2014\\_11\\_131\\_2465.html](http://narodne-novine.nn.hr/clanci/sluzbeni/2014_11_131_2465.html)
2. Energy Sector Development Strategy of the Republic of Croatia („National Gazette“, No 130/09) was adopted on 16 October 2009 and falls within the competence of the Ministry of the Environmental Protection and Energy. The use of renewable energy sources, together with the commitments arising from the objectives of the EU “20-20-20” targets are indicated as one of the objectives of the energy policy.  
[http://narodne-novine.nn.hr/clanci/sluzbeni/2009\\_10\\_130\\_3192.html](http://narodne-novine.nn.hr/clanci/sluzbeni/2009_10_130_3192.html)
3. Strategy for the Sustainable Development of the Republic of Croatia („National Gazette“, No 30/09), was adopted on 20 February 2009 and falls within the competence of the Ministry of the Environmental Protection and Energy. The strategy contains basic principles and benchmarks for setting out the objectives and priorities in designing the long-term transformation towards a sustainable development of the Republic of Croatia.  
[http://narodne-novine.nn.hr/clanci/sluzbeni/2009\\_03\\_30\\_658.html](http://narodne-novine.nn.hr/clanci/sluzbeni/2009_03_30_658.html)
4. Strategic Determinants for the Development of the Green Economy were adopted in September 2011 and falls under the competence of the Ministry of the Environmental Protection and Energy. The strategic determinants for green development have been drawn up with a view to focusing the long-term development of the country towards sustainable development, environmental protection, the use of natural resources and efficient management in all segments of the economy, public and personal needs.  
<https://vlada.gov.hr/UserDocsImages//Sjednice/Arhiva//117153.%20-%201.3.pdf>
5. Third National Action Plan for Energy Efficiency of the RoC for the period from 2014 to 2016 was adopted on 30 July 2014 and falls within the competence of the Ministry of the Environmental Protection and Energy. The plan prescribes the objectives of energy savings and contains measures for the development of energy efficiency in the three year period from 2014 to 2016.  
[http://www.mingo.hr/public/3%20Nacionalni\\_akcijski\\_plan.pdf](http://www.mingo.hr/public/3%20Nacionalni_akcijski_plan.pdf)
6. National Energy Efficiency Programme, 2008 – 2016 was adopted in September 2008 and revised in October 2009, and falls within the competence of the Ministry of the Environmental Protection and Energy. The objective of the document was to provide decision makers with a comprehensive basis for transposing of the acquis of the European Union in the field of energy efficiency into national legislation and for drawing up the National Action Plan for Energy Efficiency.

<http://www.mingo.hr/userdocsimages/energetika/Nacionalni%20program%20energetske%20u%C4%8Dinkovitosti%202008.%20-%202010.pdf>

7. Blueprint to safeguard the air, the ozone layer and to mitigate climate change in the Republic of Croatia for the period from 2013 to 2017 („National Gazette“, No 139/13) was adopted on 14 November 2013 and it falls within the competence of the Ministry of the Environmental Protection and Energy.

[http://narodne-novine.nn.hr/clanci/sluzbeni/2013\\_11\\_139\\_2979.html](http://narodne-novine.nn.hr/clanci/sluzbeni/2013_11_139_2979.html)

8. National Action Plan for Green Public Procurement for the period from 2015 to 2017, with an outlook for 2020 was adopted on 26 August 2015 Ministry of the Environmental Protection and Energy and Environmental Protection and Energy Efficiency Fund are responsible for the implementation of the Plan.

[http://www.mzoip.hr/doc/nacionalni\\_akcijski\\_plan\\_za\\_zelenu\\_javnu\\_nabavu.pdf](http://www.mzoip.hr/doc/nacionalni_akcijski_plan_za_zelenu_javnu_nabavu.pdf)

9. National Action Plan for Renewable Energy Sources until 2020 was adopted on 17 October 2013 and falls within the competence of the Ministry of the Environmental Protection and Energy.

[http://www.mingo.hr/userdocsimages/energetika/NAP\\_OIE.pdf](http://www.mingo.hr/userdocsimages/energetika/NAP_OIE.pdf)

### ANNEX 3 TO THE NPF

#### STRATEGIC DOCUMENTS AND INCENTIVE MEASURES IN LOCAL AND REGIONAL SELF-GOVERNMENT UNITS

In the Republic of Croatia, energy efficiency incentive measures are implemented at national level and at the level of local and regional self-government units. In 2014 and 2015, a project entitled „Let's drive efficiently“ was carried out at national level by the Ministry of the Environmental Protection and Energy, which in collaboration with the Fund implemented an incentive measure for the purchase of more environmentally friendly vehicles. The objective of this measure is to enhance cleaner transport in Croatia and to reduce air pollution that complies with the European goals of increasing energy efficiency and reducing greenhouse gas emissions, and this measure was in line with the national objectives set out in the Third National Energy Efficiency Action Plan of the RoC.

„Let's drive efficiently“ project made it possible to obtain 40 % of the grant for the purchase of electric and hybrid cars, as well as electric scooters, motorcycles and quadricycles, for citizens, companies and craftsmen. Citizens could obtain an incentive for one vehicle owned, with the obligation to maintain the ownership for at least one year, and companies and craftsmen could obtain up to 700000 HRK with the obligation to maintain the ownership for at least 3 years. The purchase of new vehicles was also co-financed, that could have been purchased in any country of the European Union (hereinafter: EU); however, they should be registered in the RoC.

The amount of incentives depends on the type of vehicle:

- up to 70000 HRK(m1 and n1): electric vehicles
- up to 50000 HRK (m1 and (n1): hybrid “plug in“ vehicles and electric vehicles fitted with the range extenders with CO<sub>2</sub> emissions not exceeding 50 g CO<sub>2</sub>/km
- up to 30 000 HRK (m1 and n1): hybrid cars with CO<sub>2</sub> emissions up to 90 g CO<sub>2</sub>/km
- up to 7500 (11): electric motor vehicles with 2 wheels, of engine capacity ≤ 50 cm<sup>3</sup> or with an electric motor of a maximum continuous rated power ≤ 4 kW and speed of ≤ 50 km/h — including scooters, segways
- up to 10 000 HRK (13): electric motorcycles with design speed of over 50 km/h
- up to 15 .000 HRK (16): electric light quadricycles with a power of less than 4 kW
- up to 30 000 (17): electric heavy quadricycles with a power of up to 15 w

In addition to the mentioned measure, the Fund carries out, on an ongoing basis, public calls notices of competition, through which it co-finances projects relating to energy efficiency with 40 % to 80 % of the grants, at all levels, from municipalities, cities and counties to the business sector and citizens.

**STRATEGIC DOCUMENTS AND INCENTIVE MEASURES OF LOCAL AND REGIONAL SELF-GOVERNMENT UNITS  
PERTAINING TO THE DEPLOYMENT OF ALTERNATIVE FUELS INFRASTRUCTURE**

<b>STRATEGIC DOCUMENTS</b>	<b>INCENTIVE MEASURES</b>
<p><b>CITY OF ZAGREB</b> <b>EXISTING STRATEGIC DOCUMENTS</b></p> <ul style="list-style-type: none"> <li>– Strategy for the development of energy infrastructure for powering of electric vehicles in the City of Zagreb – harmonisation with the Energy Strategy of the Republic of Croatia – 10 % of renewable energy sources in transport by 2020</li> <li>– Sustainable Energy Action Plan (SEAP) of the City of Zagreb,</li> <li>– „Energy Efficiency Programme in Urban Transport” has been developed</li> <li>– Feasibility study or the deployment of electric scooters sharing system has been developed, with a purpose of, reducing CO<sub>2</sub> emissions from the transport sector in the City of Zagreb</li> </ul>	<p><b>CITY OF ZAGREB</b> <b>INFRASTRUCTURE</b></p> <ul style="list-style-type: none"> <li>– five major projects were prepared for electric vehicles charging stations at five locations in the City of Zagreb – (1. Trg Stjepana Radića 1; 2. Avenija Dubrovnik 15; 3. Park stara Trešnjevka; 4. Zapoljska 1 and 5. Trg Francuske Republike 15).</li> <li>– Zagrebparking – car fleet was renewed with two electric vans</li> <li>– five charging stations for electric vehicles in five Zagrebparking managed public garages, (Tuškanac, Petrinjska Langov trg, Kvaternikov trg and Velika Gorica); each charging station will be able to charge two vehicles in the nearby parking places; in the second stage as an incentive to the expansion of the charging stations network, installation of charging stations in public car parks that would utilise the energy from renewable energy sources, and therefore such charging stations would be entirely “green”</li> <li>– three fast all-purpose charging stations for electric vehicles at locations: 1. Trg Stjepan Radić 1; 2. Avenija Dubrovnik 15; 3. Park stara Trešnjevka 2</li> <li>– the Urban Mobility d.o.o. company provides a car-sharing service in the City of Zagreb for enhancing the vehicle occupancy rate with 30 small urban vehicles „VW up“ model’, out of which 10 are 100 % „VW e-up“ electricity driven vehicles</li> <li>– the plan is to procure 15 100 % -electric vehicles and externally chargeable (OVC HEV) hybrid electric vehicles for the Zagrebački holding company</li> </ul>
<p><b>ZAGREB COUNTY</b> <b>THE CITY OF VELIKA GORICA</b></p> <ul style="list-style-type: none"> <li>– Sustainable Energy Action Plan (SEAP) of the City of Velika Gorica</li> </ul>	<p><b>ZAGREB COUNTY</b></p> <ul style="list-style-type: none"> <li>– as part of SEAP some of the planned measures include the reduction of CO<sub>2</sub> emissions in the transport sector for the cities of Velika Gorica</li> </ul>

<p><b>CITY OF SAMOBOR</b> – Sustainable Energy Action Plan (SEAP) of the City of Samobor</p> <p><b>CITY OF ZAPREŠIĆ</b> – Sustainable Energy Action Plan (SEAP) of the City of Zaprešić</p>	<p>Samobor and Zaprešić are defined by a 10 % share of biofuels in total fuel consumption in the transport sector by 2020, the use of CO<sub>2</sub> neutral vehicles owned by towns and cities, the introduction of charges for traffic pollution in the city centre</p>
<p><b>SPLIT-DALMATIA COUNTY</b> <b>PLANNED STRATEGIC DOCUMENTS</b> – the development of SEAP is underway at county level</p>	<p><b>SPLIT-DALMATIA COUNTY</b> <b>PLANNED FUTURE INFRASTRUCTURE</b> – under the “Intermodal“ project implemented by the Split-Dalmatia County, 5 electricity charging stations were opened until 15 August 2015 (Split airport, Makarska, and the three in the City of Split). During 2016, additional 8 electricity charging stations were installed. Further development the electric vehicles infrastructure is planned. Applications for EU programmes are underway.</p> <p><b>THE CITY OF SPLIT</b> <b>PLANNED FUTURE INFRASTRUCTURE</b> – the planning of the medium-pressure gas network in the City of Split was initiated in 2016 an 2017, which will form a basis for the development of alternative fuels infrastructure</p>
<p><b>PRIMORJE-GORSKI KOTAR COUNTY</b> <b>THE EXISTING STRATEGIC DOCUMENTS</b> – Development Strategy of the Primorje – Gorski Kotar County 2016 – 2020</p> <p><b>CITY OF RIJEKA</b> <b>EXISTING STRATEGIC DOCUMENTS</b> – Sustainable Energy Action Plan (SEAP) of the City of Rijeka – Development Strategy of the City of Rijeka for the period 2014.– 2020 – the annual energy efficiency plan in direct consumption of the City of Rijeka for 2015 and 2016 – procurement plans of the utility companies in the City of Rijeka – Revision of the Sustainable Energy Action Plan of the City of Rijeka, May 2016</p> <p><b>PLANNED STRATEGIC DOCUMENTS</b> –COSTA II EAST POSEIDON MED project – the Port of Rijeka</p>	<p><b>PRIMORJE-GORSKI KOTAR COUNTY</b> – the current Development strategy of Primorje-Gorski Kotar county contains the measure “Support to the advancement towards the economy based on low CO<sub>2</sub> and greenhouse gas emissions in all sectors“ – aims at boosting the use of vehicles with low CO<sub>2</sub> emission and vehicles fuelled by natural gas and electricity, and encourages the deployment (construction and operation) of charging stations networks for gas-powered vehicles and electric vehicles</p> <p><b>CITY OF RIJEKA</b> <b>PLANNED FUTURE INFRASTRUCTURE</b> – by the end of 2016, 2 additional electricity charging stations were constructed in Rijeka – planned construction of 2 additional CNG refuelling stations in the City of Rijeka and another 2 on the periphery of the city</p>

<p>Authority, together with other members of the North Adriatic Ports Association (NAPA) are partners in the project which will examine the potential for LNG as ship motor fuel</p> <ul style="list-style-type: none"> <li>– in eastern Mediterranean ports.</li> </ul>	<ul style="list-style-type: none"> <li>– by 2020, 10 additional CNG buses</li> </ul>
<p><b>OSIJEK-BARANJA COUNTY</b>  <b>EXISTING STRATEGIC DOCUMENTS</b></p> <ul style="list-style-type: none"> <li>– County development strategy of Osijek-Baranja County 2011– 2013</li> <li>– Programme on the efficient use of electric power in direct consumption in the County for the period 2013 – 2015</li> </ul> <p><b>CITY OF OSIJEK</b>  <b>EXISTING STRATEGIC DOCUMENTS</b>  Sustainable Energy Action Plan of the City of Osijek</p>	<p><b>OSIJEK-BARANJA COUNTY</b></p> <ul style="list-style-type: none"> <li>– measures and activities relating to the use of alternative fuels defined;</li> <li>– systematic energy management in public institution vehicles, green public procurement of public institution vehicles and green public procurement of public transport vehicles</li> </ul> <p><b>CITY OF OSIJEK</b>  <b>PLANNED FUTURE INFRASTRUCTURE</b></p> <ul style="list-style-type: none"> <li>– The City of Osijek has signed a contract with HEP on the construction of two in electric vehicle charging stations in the City of Osijek and the construction of three additional electric vehicles charging stations has been negotiated</li> </ul>
<p><b>VARAŽDIN COUNTY</b>  <b>CITY OF VARAŽDIN</b>  <b>EXISTING STRATEGIC DOCUMENTS</b></p> <ul style="list-style-type: none"> <li>– Sustainable Energy Action Plan (SEAP) of the City of Varaždin</li> </ul>	<p><b>VARAŽDIN COUNTY</b>  <b>CITY OF VARAŽDIN</b></p> <ul style="list-style-type: none"> <li>– several measures involving the acquisition of new vehicles of the city administration and companies, in accordance with green public procurement criteria, education and promotion of energy efficiency in transport have been defined under SEAP</li> </ul>
<p><b>KOPRIVNICA-KRIŽEVCI COUNTY</b>  <b>CITY OF KOPRIVNICA</b>  <b>EXISTING STRATEGIC DOCUMENTS</b></p> <ul style="list-style-type: none"> <li>– Sustainable Energy Action Plan (SEAP) of the City of Koprivnica</li> <li>– CIVITAS DYN@MO Programme ( DYN@MO project brings together four European cities, with a view to strengthening the sustainable mobility: , Aachen in Germany, Gdynia in Poland, Palma de Mallorca in Spain and Koprivnica –it is aimed at developing the most effective</li> </ul>	<p><b>KOPRIVNICA-KRIŽEVCI COUNTY</b>  <b>CITY OF KOPRIVNICA</b>  <b>PLANNED FUTURE INFRASTRUCTURE</b></p> <ul style="list-style-type: none"> <li>– Podravka d.d. and GKP Komunalac – acquisition of several electric vehicles is underway</li> </ul>



<p>measures of transport sustainability on the basis of electric mobility and sustainable urban transport planning)</p>	
<p><b>CITY OF KRIZEVCI</b>  <b>EXISTING STRATEGIC DOCUMENTS</b>  – Sustainable Energy Action Plan (SEAP) o the Town of Križevci</p>	<p><b>CITY OF KRIZEVCI</b>  – a 10 % share of biofuels in the total fuel consumption in the transport sector of the City of Križevci by 2020, promoting e-mobility, acquisition of new vehicles owned by the city in accordance with the GPP criteria</p>
<p><b>BJELOVAR-BILOGORA COUNTY</b>  <b>THE CITY OF BJELOVAR</b>  <b>THE EXISTING STRATEGIC DOCUMENTS</b>  – Sustainable Energy Action Plan (SEAP) of the City of Bjelovar</p>	<p><b>BJELOVAR-BILOGORA COUNTY</b>  <b>CITY OF BJELOVAR</b>  – the measure for the increase of the share of biofuels in the total fuel consumption in the transport sector, and the measure for promoting e-mobility through the promotion of the use of electric vehicles and charging stations infrastructure development have been planned  – a letter of intent have been addressed to HEP d.d concerning cooperation, equipping and operation of electric vehicle charging station at the public car park of the City of Bjelovar with a proposed location  – acquisition of electric vehicles is planned to meet the needs of traffic and community wardens, in parallel with the planned construction of a charging station for electric vehicles  – design documentation for a rest area and e-bicycle charging station on the cycling route in Gornje Plavnice is under preparation</p>
<p><b>SISAK-MOSLAVINA COUNTY</b>  <b>CITY OF SISAK</b>  <b>EXISTING STRATEGIC DOCUMENTS</b>  – Sustainable Energy Action Plan (SEAP) of d the City of Sisak  <b>PLANNED STRATEGIC DOCUMENTS</b>  – the Sustainable Urban Mobility Plan is under preparation, with a view to creating a sustainable transport system by improving traffic safety and protection of the system users reducing the pollution, greenhouse gas emissions and energy consumption, increasing efficiency and cost-effectiveness of transportation of persons and goods, as well as enhancing the attractiveness and quality of mobility in the city.  <b>CITY OF POPOVAČA</b></p>	<p><b>SISAK-MOSLAVINA COUNTY</b>  <b>CITY OF SISAK</b>  – the measures involving the promotion of the use of biofuels, support to purchase of energy efficient vehicles, deployment of electric vehicles, bio-fuels in the car fleet of the city have been defined under SEAP  –In 2016, the City of Sisak has with the co-financing of the Environmental Protection and Energy Efficiency Fund purchased one electric vehicle and built the first electric vehicle charging station located at the car parking of the Kontrola market.  – in the near future, the City plans to replace official vehicles with electric ones and to build 2 additional charging stations for electric vehicles.</p>

<p>– Strategy on Energy Efficiency in transport in the City Popovača is underway</p>	<p>– the process of public procurement of public bicycles is underway, whereby the City plans to acquire 2 electric bicycles.</p> <p><b>CITY OF PETRINJA</b>  <b>PLANNED FUTURE INFRASTRUCTURE</b>  – activities and measures for charging station for electric cars are planned, in particular one such charging station is planned at Trg Petra Preradovića, as part of the reconstruction of the square</p> <p><b>CITY OF KUTINA</b>  <b>PLANNED FUTURE INFRASTRUCTURE</b>  –one charging station for electric vehicles was installed in 2016, and the acquisition of one electric vehicle is planned for 2017</p> <p><b>CITY OF POPOVAČA</b>  – currently three charging stations for electric vehicles are operational in the City of Popovača</p> <p><b>MUNICIPALITY OF TOPUSKO</b>  <b>PLANNED FUTURE INFRASTRUCTURE</b>  – the construction of one charging station for electric vehicles in cooperation and with the co-financing of the Environmental Protection and Energy Efficiency Fund is planned</p>
<p><b>VUKOVAR-SRIJEM COUNTY</b>  <b>THE CITY OF VINKOVCI</b>  <b>EXISTING STRATEGIC DOCUMENTS</b>  – Sustainable Energy Action Plan (SEAP) of the City of Vinkovci</p>	<p><b>VUKOVAR-SRIJEM COUNTY</b>  <b>THE CITY OF VINKOVCI</b>  – a 10 % share of biofuels in the total fuel consumption in the transport sectoring the City of Vinkovci by 2020; promoting e-mobility, acquisition of new vehicles owned by the city in accordance with the GPP criteria</p>
<p><b>KARLOVAC COUNTY</b>  <b>CITY OF KARLOVAC</b>  <b>EXISTING STRATEGIC DOCUMENTS</b>  – Energy Efficiency Action Plan (SEAP) of the City of Karlovac developed  – Revision of the Energy Action Plan of the City of Karlovac (SEAP revision) developed</p>	<p><b>KARLOVAC COUNTY</b>  <b>CITY OF KARLOVAC</b>  – Measures to reduce CO emissions in the transport sector are defined through a 10 % share of biofuels in the total fuel consumption in the transport sector in the City of Karlovac by 2020, promoting the use of alternative fuels, organising information and demonstration workshops for citizens on the use of alternative fuel vehicles with the possibility of renting alternative fuel vehicles and the acquisition of new vehicles owned by the</p>

<p><b>PLANNED STRATEGIC DOCUMENTS</b></p> <ul style="list-style-type: none"> <li>– Study on the transport development of the Karlovac County (deadline 30. 9. 2016)</li> </ul>	<p>city in accordance with the GPP criteria</p> <p><b>EXISTING CHARGING STATIONS:</b></p> <ul style="list-style-type: none"> <li>– City of Karlovac has 1 charging station installed at the car park at Josip Juraj Strossmayer Square which can be used by citizens on working days from 7: 00 a.m. to 4: 00 p.m., free of charge and by using a special card</li> <li>– Čistoća d.o.o. (the company owned by the City of Karlovac) has an internal charging station with two connection points, used by 4 electric vehicles owned by the company.</li> </ul> <p><b>PLANNED FUTURE INFRASTRUCTURE</b></p> <ul style="list-style-type: none"> <li>– City of Karlovac intends, in cooperation with interested companies, to open at least 2 charging stations for electric vehicles intended for citizens and tourists (a large number of vehicles in transit).</li> </ul>
<p><b>ISTRIA COUNTY</b> <b>CITY OF PULA</b></p> <p><b>EXISTING STRATEGIC DOCUMENTS</b></p> <ul style="list-style-type: none"> <li>– Sustainable Energy Action Plan (SEAP) of the City of Pula</li> <li>– Feasibility study on the use of natural gas for propulsion of motor vehicles in urban public transport in the City of Pula was developed in June 2014</li> <li>– a proposal for the Annual Energy Efficiency Plan for 2017 for the City of Pula is under preparation</li> <li>– Energy Efficiency Action Plan for the period 2017– 2019 for the City of Pula is under preparation. – 2019</li> </ul>	<p><b>ISTRIA COUNTY</b> <b>CITY OF PULA</b></p> <ul style="list-style-type: none"> <li>– administrative measures in haves defined the adoption of the decision on a the higher share of biofuels in publicly owned vehicles (notably public transport)</li> </ul> <p><b>PLANNED FUTURE INFRASTRUCTURE</b></p> <ul style="list-style-type: none"> <li>– expansion of the bike sharing schemes of the City of Pula through the purchase of 10 electric bicycles with racks installed at new locations</li> <li>– construction of the „Pula CNG charging station“</li> <li>– purchase of 10 CNG-powered buses</li> </ul>
<p><b>ZADAR COUNTY</b> <b>CITY OF ZADAR</b></p> <p><b>EXISTING STRATEGIC DOCUMENTS</b></p> <ul style="list-style-type: none"> <li>– Development Strategy of the City of Zadar 2013 – 2020</li> <li>– Sustainable Energy Action Plan (SEAP) of the City of Zadar</li> <li>– Action Plan for Energy Efficiency of the City of Zadar for the period 2017– 2019</li> <li>– Action plan for the promotion of electric bicycles and scooters for</li> </ul>	<p><b>ZADAR COUNTY</b> <b>CITY OF ZADAR</b></p> <ul style="list-style-type: none"> <li>– as part of SEAP, the acquisition of new vehicles for the city administration and public companies was defined as a measure for the reduction in CO<sub>2</sub> emissions in the transport sector, in accordance with the criteria of the green public procurement, and the maximum quantity of CO<sub>2</sub> emissions for new passenger cars ( 130 gCO<sub>2</sub>/km with a view to reducing this limit to 90 gCO<sub>2</sub>/km in 2020).</li> </ul>

<p>delivery of goods and transport of passenger for the City of Zadar (developed under the EU project PRO-E-BIKE )</p>	<ul style="list-style-type: none"> <li>– as part of the Action Plan for Energy Efficiency of the City of Zadar for the period 2017– 2019, the development of the study on the deployment of urban logistics on the Zadar peninsula, intelligent transport system (ITS) and the reconstruction of roads in the City of Zadar, as well as the deployment of the smart parking management system and the deployment of car sharing system in the public sector were defined as energy efficiency measures in the transport sector</li> <li>– as part of the Action Plan for the promotion of electric bicycles and scooters for delivery of goods and transport of passenger service for the City of Zadar, one of the measures is the installation of the charging station for electric vehicles</li> </ul>
<p><b>PLANNED STRATEGIC DOCUMENTS</b></p> <ul style="list-style-type: none"> <li>– Feasibility study for the introduction of the public network of electric vehicle re-charging stations in the City of Zadar</li> <li>– Master Plan for Sustainable Mobility of the Zadar region (in preparation)</li> <li>– Strategy for Intelligent Transport System (ITS) of the City of Zadar , with an amendment of the Transport Study (in preparation)</li> <li>– Programme for energy efficiency in urban transport in the City of Zadar (draft Programme developed)</li> </ul>	<ul style="list-style-type: none"> <li>– as part of the system of public city bikes introduced in the City of Zadar, stations for the public bicycle system were installed at 4 locations in the City of Zadar, with a total of 25 bicycles being at disposal</li> </ul> <p><b>PLANNED FUTURE INFRASTRUCTURE</b></p> <ul style="list-style-type: none"> <li>– City of Zadar signed a Cooperation Agreement with HEP d.d., Zagreb on HEP development project for the construction of the recharging infrastructure for electric vehicles, under which 1 charging station for electric vehicles has been built in the city of Zadar (execution in February 2017)</li> <li>– Installation of charging stations for electric vehicles is planned as part of the project „Transport System of the City of Zadar: Intelligent Transport System (ITS), and the upgrading of roads in the City of Zadar”</li> </ul>
<p><b>POŽEGA-SLAVONIA COUNTY</b></p> <p><b>EXISTING STRATEGIC DOCUMENTS</b></p> <ul style="list-style-type: none"> <li>– County Development Strategy 2011– 2013. (extended until 2016), a strategy for the period from 2017 is underway</li> <li>– a final draft of the County Development Strategy of Požega-Slavonia County for the period 2016– 2020</li> <li>– Action Plan for Energy Efficiency for the period 2016 – 2018</li> </ul> <p><b>PLANNED STRATEGIC DOCUMENTS</b></p> <ul style="list-style-type: none"> <li>– the adoption of a new County development strategy is underway, whereby one of the priorities is the support to the advancement towards</li> </ul>	<p><b>POŽEGA-SLAVONIA COUNTY</b></p> <ul style="list-style-type: none"> <li>– One of the objectives of the County development is to improve the physical, social and economic infrastructure and to reduce negative impacts on the environment. In the priority entitled „Quality management of natural resources“, the following measures were set: to ensure preservation of the environment through raising the level of rational use of raw materials and energy sources in business activities, to reduce emissions of harmful substances into the environment and the amounts of waste deriving as a result of business processes, and to encourage the production and the use of energy from alternative sources</li> </ul>

<p>the economy based on low CO<sub>2</sub> in all sectors, environmental protection and the promotion of resource efficiency</p>	<ul style="list-style-type: none"> <li>– under the Energy Efficiency Action Plan the following measures are planned: conducting the green public procurement for by public transport vehicles, and training and the promotion of eco-driving</li> </ul>
<p><b>KRAPINA — ZAGORJE COUNTY</b>  <b>THE CITY OF KLANJEC</b>  <b>EXISTING STRATEGIC DOCUMENTS</b>  – Sustainable Energy Action Plan (SEAP) of the City of Klanjec</p>	<p><b>KRAPINA — ZAGORJE COUNTY</b>  <b>THE CITY OF KLANJEC</b>  The following incentive measures are carried out in the context of SEAP:</p> <ul style="list-style-type: none"> <li>– promotion, information and training measures and activities</li> <li>– The Campaign: electric mopeds</li> <li>– green public procurement</li> <li>– introduction of the green public procurement criteria for vehicles owned by the city</li> <li>– measures for vehicles owned by the city</li> <li>– set of measures to encourage bicycle transport in the city</li> <li>– measures for personal and commercial vehicles</li> </ul>
<p><b>THE CITY OF PREGRADA</b>  <b>EXISTING STRATEGIC DOCUMENTS</b>  – Sustainable Energy Action Plan (SEAP) of the City of Pregrada</p>	<p><b>THE CITY OF PREGRADA</b>  – the following incentive measures are carried out in the context of SEAP:</p> <ul style="list-style-type: none"> <li>–Legislative and planned measures</li> <li>–a 10 % share of biofuels in total fuel consumption in the transport sector of the City of Pregrada by 2020</li> <li>– green public procurement</li> <li>– introduction of the green public procurement criteria for vehicles owned by the city</li> <li>–measures for vehicles owned by the city</li> <li>– set of measures to encourage bicycle transport within the territory of a city</li> <li>– the measures for personal and commercial vehicles</li> </ul>
<p><b>MEĐIMURJE COUNTY</b>  <b>EXISTING STRATEGIC DOCUMENTS</b>  – Development Strategy of Međimurje County 2011 – 2013. Decisions of the Assembly of Međimurje County (pursuant to the instruction of the Ministry of Regional Development and EU Funds) of 10 October 2013, 9</p>	<p><b>MEĐIMURJE COUNTY</b>  – Master plan for the integrated passenger transport and the intermodal freight transport has been developed within the scope of the Project for the development of an integrated public passenger transport system. The project is implemented for the area comprising 3 counties in the north Croatian</p>



October 2014, 7 October 2015 and 21 December 2016 extended the validity of the strategy by the end of 2017.

– Annual Energy Efficiency Plan of Međimurje County for 2016

#### **PLANNED STRATEGIC DOCUMENTS**

– Development Strategy for Međimurje County until 2020.

– Annual Energy Efficiency Plan of Međimurje County

– Action plan for energy efficiency of Međimurje County for the period from 2017 to 2019

#### **THE CITY OF ČAKOVEC**

##### **THE EXISTING STRATEGIC DOCUMENTS**

– Development Strategy of the City of Čakovec for a period until 2020

– Strategy of development of the urban area

– Sustainable Energy Action Plan (SEAP) of the City of Čakovec

region: Koprivnica-Križevci, Varaždin and Međimurje County, i.e. northern Croatian region. The implementation of a pilot project is planned of integrated public transport systems– promoting sustainable mobility through the creation of preconditions for the use of electric vehicles, the use of more efficient vehicles, which are less polluting for the air and contain less emissions of carbon dioxide, promoting the use of bicycles for shorter distances and daily use, carrying out awareness campaigns on the benefits of the use of bicycles, e-bicycles and e-vehicles.

– planning and construction of charging stations network for e-vehicles

– further development of an integrated public passenger transport system and IPT, promotion and provision of eco-driving training, co-financing of the acquisition of plug-in hybrid vehicles in Međimurje County, introducing the green public procurement for public transport vehicles are planned

– further development of an integrated public passenger transport system and IPT, promotion and provision of eco driving training, co-financing of the acquisition of plug-in hybrid vehicle in Međimurje County, the introduction of the green public procurement for public transport vehicles, development of the infrastructure of electricity charging stations CNG fuelling stations and solar charging stations for electric vehicles are planned

##### **THE CITY OF ČAKOVEC**

– “sharing” system of electric bicycles has been introduced, with an aim of reducing CO<sub>2</sub> emissions from the transport sector in the City of Čakovec

– electric vehicle charging station in Ulica Bana Josipa Jelačića 22A in Čakovec, in immediate proximity of the Međimurje polytechnics is in service

– as part of SEAP several measures involving the acquisition of new vehicles for the city administration, institutions and companies owned by the City of Čakovec were defined, in accordance with the criteria of the green public procurement, education and the promotion of energy efficiency in transport. Adoption of a number of regulations and by-laws will define and regulate in more detail the implementation of measures leading to a target of 10 % of biofuels in the transport sector by 2020,, promoting e-mobility through the acquisition of hybrid and electric vehicles, the use of existing electric bicycles in urban areas, promoting a car-sharing model, promoting the deployment of an integrated public transport within the administrative

	area of the city of Čakovec, promoting the use of bicycles and enhancing bicycle transport.
<b>CITY PRELOG</b> <b>EXISTING STRATEGIC DOCUMENTS</b> – Sustainable Energy Action Plan (SEAP) of the City of Prelog	<b>CITY OF PRELOG</b> – as part of SEAP, several measures involving the acquisition of new vehicles of the city administration, institutions and companies owned by the City of Prelog, in accordance with the green public procurement criteria, education and promotion of energy efficiency in transport. Promoting the use of biofuels with a focus on public transport and companies providing public transport services leading to a target of 10 % of biofuels in the transport sector by 2020, encouraging a car-sharing model, promoting the deployment of an integrated public transport within the administrative area of the City of Prelog, promoting the use of bicycles and enhancing bicycle transport, planning the construction of the bypass of the city of Prelog.
<b>LIKA-SENJ COUNTY</b> <b>CITY OF OTOČAC</b> <b>EXISTING STRATEGIC DOCUMENTS</b> – Sustainable Energy Action Plan (SEAP) of the City of Otočac <b>PLANNED STRATEGIC DOCUMENTS</b> – Programme for energy efficiency in urban transport	<b>LIKA-SENJ COUNTY</b> <b>CITY OF OTOČAC</b> – “Public Bicycles in the City of Otočac“ project implemented on the basis of the Public Call of EPEEF (ENU-15) with the purpose of reducing CO <sub>2</sub> emissions from the transport sector in the City of Otočac

# LIST OF SUSTAINABLE ENERGY ACTION PLANS (SEAPs)

## INTRODUCTION

By signing the Covenant of Mayors of European cities at the initiative of the European Commission launched in January 2008, the mayors shall undertake to draw up an action plan for sustainable energy development of cities, which on the basis of collected data on the pre-existing condition identifies and provides clear benchmarks for the implementation of projects and measures of energy efficiency and the use of renewable energy sources at the urban level, with the aim of reducing CO<sub>2</sub> emissions by more than 20 % by 2020.

List of Sustainable Energy Action Plans of cities collected from the units of local (regional) self-government:

1. The City of Zagreb (Zagreb SEAP)
2. The City of Rijeka (Rijeka SEAP)
3. The City of Osijek (Osijek SEAP)
4. The City of Zadar (Zadar SEAP)
5. The City of Velika Gorica (Velika Gorica SEAP)
6. The City of Pula (Pula SEAP)
7. The City of Karlovac (Karlovac SEAP)
8. The City of Sisak (Sisak SEAP)
9. The City of Varaždin (Varaždin SEAP)
10. The City of Bjelovar (Bjelovar SEAP)
11. The City of Samobor (Samobor SEAP)
12. The City of Vinkovci (Vinkovci SEAP)
13. The City of Koprivnica (Koprivnica SEAP)
14. The City of Zaprešić (Zaprešić SEAP)
15. The City of Križevci (Križevci SEAP)

A summary of the action plans for sustainable development of the said cities in the transport sectors provided below.

### 1. SUSTAINABLE ENERGY ACTION PLAN OF THE CITY OF ZAGREB

Measures for reducing CO<sub>2</sub> emissions from transport sector of the City of Zagreb:

Priority measures and activities of the transport sector are divided in the following categories:

I Planning measures to reduce CO<sub>2</sub> emissions from the transport sector

II Promotion, information and educational measures and activities

III Green public procurement

IV Measures for vehicles owned by the City

V Public transport measures

VI Measures for personal and commercial vehicles

I Planning measures to reduce CO<sub>2</sub> emissions from the transport sector

1. Introducing charges for traffic pollution in the downtown of the City of Zagreb

2. Deployment of the traffic monitoring and information system

3. Measures to increase the traffic flow rate in the City of Zagreb

Right of passage of public transport through dedicated lanes

Installation of the system ensuring the right of passage of public transport vehicles at junctions

Savska cesta free of passenger and goods vehicles.

II Promotion, information and educational measures and activities

1. „Say YES to public transport!“ campaign

2. Promoting a car-sharing model for the increase of vehicle occupancy

3. Providing information and training on of environmentally friendly driving style (driving schools)
4. Promoting the use of alternative fuels
5. Establishment of the Citizens Information and Demonstration Centre on the use of vehicles using alternative fuels with the possibility to rent vehicles using alternative fuels
6. Continuation of the work of the CIVITAS ELAN – organisation of town hall debates, workshops and round tables, conducting surveys and opinion polling, distribution of information and promotional material, etc.
7. Continuation of training courses for drivers modern low-floor trams – a training for operating a new braking system for the more efficient electricity generation
8. „A car-free day“ campaign
9. Encouraging the use of one vehicle for employees living in the same/neighbouring part of the city
10. Bioethanol biennial promotional action

### III Green public procurement

1. Introducing green public procurement criteria for vehicles owned by the City of Zagreb and subsidiaries of the Zagreb Holding company.
2. Introducing GPP criteria for public transport vehicles

### IV Measures for vehicles owned by the City

1. Deploying the Systematic energy management in vehicles owned by the City and by subsidiaries of the Zagreb Holding company

Identification of the state of play (routes, vehicle types, fuels used and consumption, etc.)

Proposal for measures to increase the efficiency (e.g. optimisation of routes and schedules, etc.)

Implementation monitoring

### V Public transport measures

1. Deploying the systematic energy management in public transport vehicles:

Identification of the state of play (routes, vehicle types, fuels, consumption, etc.)

Proposal for measures to increase the efficiency (e.g. optimisation of routes and schedules, etc.).

Implementation monitoring

2. Set of measures for the increase of quality of public transport (new trams, LED monitors displaying arrival/departure information, etc.)

3. Set of measures for the increase of the share and efficiency of public transport in overall transport throughout the City, which includes a range of measures and capital investments:

Deployment of a new type of rail transport, of a metro type

Deployment and improvement of the conventional rail, the so called suburban railway in urban and suburban transport

Renewal of the railway line and upgrading of vehicles

Expanding the public transport system network, new lines, new tracks, new train stations

Upgrading of equipment and infrastructure, stations, platform shelters

Integrating transport systems

Park&ride system

Replacing the existing worn out Zagreb Electric Tram (ZET) buses with buses powered by alternative fuels

Deployment of hybrid buses in public transport in the City of Zagreb

Deployment of electric vehicles for transport in parks and in recreational areas of the City of Zagreb

Replacing standard buses with minibuses on routes with expected fewer number of passengers in evening hours

4. Producing biodiesel from edible oil wastes for the purposes of public transport

5. Establishing the network of rental bicycles equipped with IT protection against theft, with secured bicycle storage and service, as well as measurement of the distance travelled in km.

### VI Measures for personal and commercial vehicles

1. Charging the entry into highly congested parts of the city (Ilica, Gornji grad, etc.)

2. Exemption from charging the entry into highly congested parts of the city for vehicles powered by alternative fuels,
3. Authorisation to use a „yellow lane“ (dedicated traffic lane) for vehicles with 3 or more passengers.

## 2. SUSTAINABLE ENERGY ACTION PLAN OF THE CITY OF RIJEKA

Measures for reducing CO<sub>2</sub> emissions in the transport sector of, the City of Rijeka:

Priority measures and activities for the transport sector are divided into the following subcategories:

I Planning measures to reduce CO<sub>2</sub> emissions from the transport sector

II Promotion, information and educational measures and activities

III Green public procurement

IV Measures for vehicles owned by the City

V Public transport measures

VI Measures for personal and commercial vehicles

I Planning measures to reduce CO<sub>2</sub> emissions from the transport sector

1. Deployment of the traffic monitoring and information system
2. Measures to increase the traffic flow rate in the City of Rijeka right of passage of public transport buses through dedicated lanes, installation of the system ensuring the right of passage of public transport vehicles at junctions
3. Introducing charges for traffic pollution
4. Measures to improve transport safety in the City of Rijeka

Gradual installation of LED technology road signs at all dangerous spots in the City

The use of traffic lights with LED technology

II Promotion, information and educational measures and activities

1. Promoting a car-sharing model for enhancing vehicle occupancy rate
2. Providing information and training on of environmentally friendly driving style (driving schools)
3. Promoting the use of alternative fuels
4. Establishment of the Citizens Information and Demonstration Centre on the use of vehicles using alternative fuels (electricity, natural gas, biofuels, etc.) with the possibility of renting of vehicles using alternative fuels
5. “A car-free day“ campaign
6. „Electric mopeds“ campaign

III Green public procurement

1. Introducing green public procurement criteria for vehicles owned by the City
2. Introducing GPP criteria for public transport vehicles

IV Measures for vehicles owned by the City

1. Deploying the systematic energy management in vehicles owned by the City:  
Identification of the state of play (routes, types of vehicles, fuels used, consumption, etc.)  
Proposal for measures to increase the efficiency (e.g. optimisation of routes and schedules etc.)

2. Implementation monitoring

Acquisition of new vehicles with reduced greenhouse gas emissions (alternative fuels) in accordance with the GPP criteria<sup>3</sup> Acquisition of 10 official CNG-powered vehicles

4. Joint use of vehicles (a car sharing model) for the employees of the City administration

V Public transport measures

1. Measures to improve the quality of bus and coach transport in urban public transport

Upgrading of the existing systematic energy management in public transport vehicles

Adoption of the Decision of the City Council making the award of a concession for bus and coach transport conditional on a gradual replacement of old buses with CNG-powered buses

Installing LED monitors at all bus stops in the city providing information on arrival of buses Acquisition of CNG buses for public transportation of citizens and construction of a CNG refuelling station



Replacing standard buses with minibuses on routes with expected fewer number of passengers in evening hours

## 2. Measures to improve motorcycle transport in the City

Establishing the network of rental mopeds equipped with IT protection against theft, with secured bicycle storage and service, as well as measurement of the distance travelled in km

Continued construction of new motorcycle paths

Continued maintenance of motorcycle paths throughout the city

## VI Measures for personal and commercial vehicles

1. Establishment of "Drive together" internet portal

2. Charging the entry into highly congested parts of the city

3. Exemption from charging the entry into highly congested parts of the city for vehicles powered by alternative fuels

4. Authorisation to use a „yellow lane“ (dedicated traffic lane) for vehicles with three or more passengers.

### 3. SUSTAINABLE ENERGY ACTION PLAN OF THE CITY OF OSIJEK

Measures for reducing CO<sub>2</sub> emissions in the transport sector

The measures are divided into five categories:

I Legislative and planned measures

II Promotion, information and educational measures and activities

III Personal and commercial vehicles

IV Vehicles owned by the City

V Public transport

I Legislative and planned measures

1. 10 % share of biofuel in total fuel consumption in the transport sector in the City of Osijek by 2020

2. Fostering e-mobility

3. Correction of traffic signals with a view to increasing traffic flows

Introducing charges for traffic pollution of the city centre (charges collected for traffic pollution may be used for financing the improvement of urban public transport, diversion of traffic from the city centre

II Promotion, information and educational measures and activities

1. Promoting a car-sharing model for enhancing vehicle occupancy rate

2. Providing information and training on of environmentally friendly driving style (driving schools)

3. Promoting the use of alternative fuels

4. Establishment of the Citizens Information and Demonstration Centre on the use of vehicles using alternative fuels (electricity, natural gas, biofuels, etc.) with the possibility of renting of vehicles using alternative fuels

5. Organisation of the Mobility Week in the city

6. „A car-free day“ campaign

7. „Cycling is healthier!“ campaign

III Personal and commercial vehicles

1. Car-sharing model for the increase of vehicle occupancy

IV Vehicles owned by the City

1. Acquisition of new vehicles owned by the City in accordance with the GPP criteria

V Public transport

1. Set of measures to improve cycling transport in the City

Establish a network of rental bicycles equipped with IT protection against theft

Ensure additional spaces for accommodating privately-owned bicycles in the city of (garages, parking spaces, etc.)

Promote and encourage the use of bicycles as means of transport in particular over short distances; continuously maintain the cycling paths throughout the city; carry out programmes and training on the

benefits of cycling in kindergartens, schools, citizens forums on an ongoing basis; develop and implement a campaign “Cycling is healthier!”

#### 2. Advanced traffic regulation at intersections equipped with intelligent traffic lights

Deploying intelligent traffic lights at intersections (equipped with an autonomous power supply system from renewable sources (sun, wind), installation of visual display of the duration of red light phases – raising awareness of drivers of a possibility to opt for engine shutdown while waiting in queues at intersections

#### 3. Set of measures to improve public bus and coach transport in the City

Optimise public bus transport services by setting up 300 – 600 m distances between bus stops Divide the urban area to three degrees according to the accessibility of public transport lines: 1st degree area – 3-minute walk to the bus stop; 2nd-degree area – 5-minute walk to the bus stop; 3rd-degree area – 10-minute walk to the bus stop

Improving bus stops and canopies

Deploying buses powered by eco-friendly fuels.

### 4. SUSTAINABLE ENERGY ACTION PLAN OF THE CITY OF ZADAR

Measures for reducing CO<sub>2</sub> emissions in the transport sector

1. Education and promotion of energy efficiency in transport
2. Deploying a car-sharing model
3. System for monitoring bus driving modes
4. Acquisition of new vehicles of the City administration and institutions/companies in accordance with the GPP criteria
5. Implementation of the European standards relating to the automotive industry

Maximum quantity of CO<sub>2</sub> emissions for new passenger cars of 130 gCO<sub>2</sub>/km has been defined, with a view to reducing the limit of 90 gCO<sub>2</sub>/km in 2020.

### 5. SUSTAINABLE ENERGY ACTION PLAN OF THE CITY OF VELIKA GORICA

Measures for reducing CO<sub>2</sub> emissions in the transport sector of Velika Gorica

The measures are divided into 5 categories:

I Legislative and planned measures

II Promotion, information and educational measures and activities

III Personal and commercial vehicles

IV Vehicles owned by the City

V Public transport

I Legislative and planned measures

1. 10 % share of biofuels in total fuel consumption in the transport sector in Velika Gorica by 2020
2. Introducing charges for traffic pollution in the city centre of Velika Gorica

II Promotion, information and educational measures and activities

1. Promoting a car sharing model to enhance vehicle occupancy
2. Providing information and training on environmentally friendly driving style (driving schools)
3. Promoting the use of alternative fuels
4. Organising information and demonstration workshops for citizens on the use of alternative fuel vehicles with the possibility of renting vehicles powered by alternative 5 Organising the mobility week in the city
6. Organising public debates, workshops and round tables, conducting surveys and opinion polling, distribution of information and promotional material, etc.

7. „A car-free day“ campaign

8. „Cycling is healthier!“ campaign

III Personal and commercial vehicles

1. Traffic closure (excluding delivery services in the morning) of the city centre of Velika Gorica, from Veterinarska ulica to Kolodvorska ulica
2. Deploying of a car-sharing model for enhancing vehicle occupancy
3. Expanding the system for automatic parking fare collection in Velika Gorica

#### IV Vehicles owned by the City

1. Acquisition of new vehicles owned by the City in accordance with green public procurement criteria

#### V Public transport

1. Construction of car parks for private vehicles in the vicinity of the railway station and secured garages for bicycles (with lockers)
- 2 Set of measures to improve public transport by bus or coach in the area of Velika Gorica

Deploying an improved bus and coach service within settlements towards the railway station (subsidised circular bus and coach line running through a wider city centre area)

Installing LED monitors displaying bus arrivals at all bus and coach stations

Replacing standard buses with minibuses in the evening hours on routes with expected fewer number of passengers

Improving bus stations and canopies

Introducing buses powered by eco-friendly fuels

3. Deploying an improved bus and coach service within settlements towards to the railway station (subsidised circular bus and coach line running through a wider city centre area)

4. Stimulating the production of biodiesel from edible oil wastes for the purposes of public bus and coach transport.

## 6. SUSTAINABLE ENERGY ACTION PLAN OF THE CITY OF PULA

#### Administrative measures in transport

1. Expanding the pedestrian zone
2. Expanding paid parking zones
3. Higher parking fares
4. Adoption of a decision on a higher share of biofuels in publicly owned vehicles (notably in public transport)
5. Charging the entry of vehicles in the city centre
6. Introducing charges for vehicles according to the level of pollutants in exhaust gases
7. Fostering a car-sharing system

#### Technical measures in the transport sector:

1. The use of biofuels in vehicles owned by the City and city companies to a degree higher than prescribed by law
2. Acquisition of new efficient vehicles owned by the City

#### Priority measures in transport — public sector

1. Biodiesel in publicly-owned vehicles
2. Acquisition of new vehicles in accordance with GPP criteria

#### Priority measures in transport – private sector

1. 10 % of biofuels in transport by 2020
2. Education of drivers (based on the experience of progressive cities through continued citizens' education it is possible to save 5 % of transport fuels)
3. Car sharing
4. Fostering bicycle transport
5. Fostering public transport.

## 7. SUSTAINABLE ENERGY ACTION PLAN OF THE CITY OF KARLOVAC

#### Measures for reducing CO<sub>2</sub> emissions in the transport sector

The measures are divided into five categories:

I Legislative and planned measures

II Promotion, information and educational measures and activities

III Personal and commercial vehicles

IV Vehicles owned by the City

V Public transport

I Legislative and planned measures

1. 10 % share of biofuel in total fuel consumption in the transport sector of the City of Karlovac by 2020 pursuant to the Energy Development Strategy of the RoC („National Gazette“, No 130/09) and the Act on Biofuels („National Gazette“, No 65/09, 145/10 and 26/11).

2. Expanding the system for automatic parking fare collection in the City of Karlovac

I Promotion, information and educational measures and activities

1. Promoting a car-sharing model for enhancing vehicle occupancy rate

2. Providing information and training on environmentally friendly driving style (driving schools)

3. Promoting the use of alternative fuels

4. Organising information and demonstration workshops for citizens on the use of vehicles using alternative fuels (electricity, natural gas, biofuels, etc.) with the possibility of renting of vehicles using alternative fuels

5. Organising the Mobility Week in the city

6. „A car-free day“ campaign

7. „Cycling is healthier“ campaign

III Personal and commercial vehicles

1. Introducing a car-sharing model for enhancing vehicle occupancy rate

IV Vehicles owned by the City

1. Acquisition of new vehicles owned by the City in accordance with GPP criteria

V. Public transport

1. Subsidised purchase of tickets and monthly passes for particular groups of citizens (pupils, students, retired persons, etc.) for improving the quality of rail transport in the city of Karlovac

2. Improvement of bicycle transport in the city

3. Deploying mobile telemetry FM stations in the Autotransport Karlovac d.d. fleet in which will bring about a significant reduction of fuel consumption and the related reduction of harmful emissions.

## 8. SUSTAINABLE ENERGY ACTION PLAN OF THE CITY OF SISAK

Measures for reducing CO<sub>2</sub> emissions in the transport sector

The measures can be divided into the following categories:

I Protection of the city centre

II Urban connectivity

III City of Sisak fleet

IV Public transport

V Personal vehicles

VI Information/awareness.

I Protection of the city centre

1. Marking pedestrian zones in the city centre

2. Application of the public bicycle system

II Urban connectivity

1. A new bridge over the river Kupa

2. Construction of bicycle paths.

III City of Sisak fleet

1 Modernisation of the fleet, fleet energy management, deployment of biofuels/electric vehicles

2. Car sharing scheme for employees of the City of Sisak

#### IV Public transport

1. Upgrading of the car fleet: hybrid vehicles or vehicles with low fuel consumption
2. Improving the logistics of the bus network
3. Energy management of the bus fleet.

#### V Private vehicles

1. Programme for the promotion of a personal car sharing
2. Supporting the purchase of energy efficient vehicles

#### VI Information/awareness

1. Promoting the use of biofuels
2. Eco-driving courses
3. "A car-free day" programme.

### 9. SUSTAINABLE ENERGY ACTION PLAN OF THE CITY OF VARAŽDIN

Measures for reducing CO<sub>2</sub> emissions in the transport sector

1. Education and promotion of energy efficiency in transport
2. Car-sharing
3. Enhancing bicycle transport
4. Introducing the European standards relating to the automotive industry (in accordance with Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 laying down the maximum quantity of CO<sub>2</sub> emissions for new passenger cars to 120 g/km with a view to reducing the abovementioned ceiling to 90 gCO<sub>2</sub>/km in 2020)
5. Acquisition of new vehicles for the City administration and companies in accordance with the GPP criteria.

### 10. SUSTAINABLE ENERGY ACTION PLAN OF THE CITY OF BJELOVAR

Measures to reduce CO<sub>2</sub> emissions from the transport sector

#### I Legislative and planned measures

#### II Promotion, information and educational measures and activities

#### III Personal and commercial vehicles

#### IV Vehicles owned by the City

#### V Public transport.

#### I Legislative and planned measures

1. 10 % share of biofuels in the total fuel consumption in the transport sector in the city of Bjelovar by 2020
2. Fostering e-mobility
3. Correction of traffic signals with a view to increasing traffic flows

#### II Promotion, information and educational measures and activities

1. Promoting a car-sharing model for enhancing vehicle occupancy rate
2. Providing information and training on environmentally friendly driving style (driving schools)
3. Promoting the use of alternative fuels
4. Establishment of information and demonstration centre for citizens on the use of vehicles using alternative fuels (electricity, natural gas, biofuels, etc.) with the possibility of renting of vehicles using alternative fuels
5. Organising the Mobility Week in the city
6. „A car-free day“ campaign
7. „Cycling is healthier!“ campaign

#### III Personal and commercial vehicles



1. Car sharing model for increasing vehicle occupancy rate

IV Vehicles owned by the City

1 Acquisition of new vehicles owned by the City in accordance with the GPP criteria

V Public transport

1. Enhancing bicycle transport in the City

2. Set of measures for improving public transport bus services in the city

Optimise public bus transport services by setting up 300 – 600 metres distances between bus stops

Divide the urban area to three degrees, according to the accessibility of public transport lines: 1st degree-area – 3-minute walk to the bus stop; 2nd-degree area – 5-minute walk to the bus stop; 3rd-degree area –10-minute walk to the bus stop

Improvement of stations and canopies

Deployment of buses powered by eco-friendly fuels.

## 11. SUSTAINABLE ENERGY ACTION PLAN OF THE CITY OF SAMOBOR

Measures for reducing CO<sub>2</sub> emissions in the transport sector

1. The use of pure biodiesel in public urban and suburban transport

2. 10 % share of biofuels in the total fuel consumption in the sector of personal and commercial vehicles

3. Using CO<sub>2</sub> neutral vehicles owned by the City of Samobor

4. Introducing charges for traffic pollution in the city centre

5. Providing information and training on environmentally friendly driving style (driving schools)

6. „A a car-free day” campaign.

## 12. SUSTAINABLE ENERGY ACTION PLAN OF THE CITY OF VINKOVCI

Measures for reducing CO<sub>2</sub> emissions from the transport sector

I Legislative and planned measures

II Promotion, information and educational measures and activities

III Personal and commercial vehicles

IV Vehicles owned by the City

V Public transport

I Legislative and planned measures

1. 10 % share of biofuel in total fuel consumption in the transport sector in the city of Vinkovci by 2020

2. Eco-driving campaign for drivers of road vehicles

3. Fostering e-mobility.

II Promotion, information and educational measures and activities

1. Promoting a car-sharing model for enhancing vehicle occupancy rate

2. Providing information and training on environmentally friendly driving style (driving schools)

3. Promoting the use of alternative fuels

4. Organisation of information and demonstration workshops for citizens on the use of vehicles using alternative fuels (electricity, natural gas, biofuels, etc.) with the possibility of renting of vehicles using alternative fuels

5. Organisation of the Mobility Week in the city

6. Organisation of town hall debates, workshops and round tables, conducting surveys and opinion polling, distribution of information and promotional material, etc.

7. „A car-free day“ campaign

8. „Cycling is healthier!“ campaign

III Personal and commercial vehicles

1. Car sharing model for enhancing vehicle occupancy rate

IV Vehicles owned by the City

1. Acquisition of new vehicles owned by the City in accordance with the GPP criteria

V Public transport:

1. Set of measures for improving public bus transport services in the city of Vinkovci

Optimise public bus transport services by setting up 300 – 600 metre distances between bus stops

Divide the urban area to three degrees according to the accessibility of public transport lines:

1st degree-area – 3-minute walk to the bus stop -degree area – 5-minute walk to the bus stop 3rd-degree area –10-minute walk to the bus stop

Deployment of buses powered by environmentally friendly fuels

2. Improving bicycle transport in the city area.

### 13. SUSTAINABLE ENERGY ACTION PLAN OF THE CITY OF KOPRIVNICA

Measures for reducing CO<sub>2</sub> emissions from the transport sector

1. Developing the public transport network

Acquisition of electric minibuses

Developing the optimum number of bus and train stations

Developing an integrated passenger ticketing system

Construction of an intermodal terminal.

2. Establishing the system of public bike sharing

3. Establishing the car sharing system in local administration and city companies

4. Replacing the vehicles of the City owned fleet with vehicles that emit less harmful gases in accordance with the EU strictest standards regarding emissions 5 Construction of charging points for electric vehicles

6. Introducing the European standards relating to the automotive industry (in accordance with Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 laying down the maximum amount of CO<sub>2</sub> emissions for new passenger cars to 130 g/km with a view to reducing the abovementioned ceiling to 90 gCO<sub>2</sub>/km in 2020

7. Encouraging the purchase of electric and hybrid vehicles

8. Fostering the use of biofuels.

### 14. SUSTAINABLE ENERGY ACTION PLAN OF THE CITY OF ZAPREŠIĆ

Measures for reducing CO<sub>2</sub> emissions from the transport sector

I Legislative and planned measures

II Promotion, information and educational measures and activities

III Personal and commercial vehicles

IV Vehicles owned by the City

V Public transport

I Legislative and planned measures

1. A10 % share of biofuels in total fuel consumption in the transport sector in the city of Zaprešić by 2020

2. Introducing charges for traffic pollution in the city centre

II Promotion, information and educational measures and activities

1. Promoting a car-sharing model for enhancing vehicle occupancy rate

2. Providing information and training on environmentally friendly driving style (driving schools)

3. Promoting the use of alternative fuels;

4 Organisation of information and demonstration workshops for citizens on the use of vehicles using alternative fuels (electricity, natural gas, biofuels, etc.) with the possibility of renting of vehicles using alternative fuels

5. Organisation of town hall debates, workshops and round tables, conducting surveys and opinion polling distribution of information and promotional material, etc.

6. „A car-free day“ campaign

7. „Cycling is healthier!“ campaign

### III Personal and commercial vehicles

1. Deploying a car sharing model for enhancing vehicle occupancy rate
2. Introducing the system for automatic parking fare collection in the city

### IV Vehicles owned by the City

1. Acquisition of new vehicles owned by the City in accordance with GPP criteria.

### V Public transport

1. Adoption of the Decision of the City Council making the award of a concession for bus and coach transport conditional on a gradual replacement of old buses with biodiesel-powered buses
2. Stimulating the production of biodiesel from edible oil wastes for the purposes of public transport bus services
3. Ensuring priorities of public urban transport on the routes it operates along with other vehicles
4. Improving the bicycle transport in the city
5. Stimulating the production of biofuels from edible oil wastes for the purposes of public transport bus services
6. Modernisation of the Zaprešić – Zabok railway section

The measure includes the extension of the urban – suburban transport system of the City of Zagreb to Zabok railway station, so as to fully eliminate diesel traction of trains for the transportation of passengers through the city of Zaprešić and in Zagreb railway node

7. Deploying new multiple units for urban-suburban transport (more energy-efficient propulsion engines equipped with electric regenerative braking system)

8. Set of measures for enhancing public bus transportation services in the city of Zaprešić

Installation of LED monitors displaying bus arrivals at all bus stops in the city

Construction of public car park for buses

Replacing standard buses with minibuses in the evening hours on routes with expected fewer number of passengers

Improving bus stations and canopies

Construction of a new bus terminal in the southern part of the city, to the south-west of the state road D225 in the immediate vicinity of the railway station.

## 15. SUSTAINABLE ENERGY DEVELOPMENT ACTION PLAN OF THE CITY OF KRIŽEVCI

Measures for reducing reduce CO<sub>2</sub> emissions from the transport sector

### I Legislative and planned measures

### II Promotion, information and educational measures and activities

### III Personal and commercial vehicles

### IV Vehicles owned by the City

### V Public transport

#### I Legislative and planned measures

1. 10 % share of biofuels in total fuel consumption in the transport sector in the city of Križevci by 2020, pursuant to the Energy Development Strategy for Energy Development of the RoC („National Gazette“, No 130/09) and the Act on biofuels („National Gazette“, No 65/09, NG 145/10, NG 26/11)
2. Relocation of transit traffic outside of the city centre
3. Establishing a special traffic regime in the area around the railway station – a bicycle path

#### II Promotional and educational activities, national legislation

1. Promoting a car-sharing model for enhancing vehicle occupancy rate
2. Providing information and training on environmentally friendly driving style (driving schools)
3. Promoting the use of alternative fuels;
4. Organisation of information and demonstration workshops for citizens on the use of vehicles using alternative fuels (electricity, natural gas, biofuels, etc.) with the possibility of renting of vehicles using alternative fuels

5. Organisation of town hall debates, workshops and round tables, conducting surveys and opinion polling, distribution of information and promotional material, etc.

6. „A car-free day“ campaign

7. „Cycling is healthier!“ campaign

III Personal and commercial vehicles

1. Deploying a car-sharing model for enhancing vehicle occupancy rate.

IV Vehicles owned by the City

1. Acquisition of new vehicles owned by the City in accordance with GPP criteria

V Public transport

1. Improvement of bicycle transport in the city

2. Reconstruction of the main arterial railway route and the railway station

3. Construction of the car parking for personal vehicles in the vicinity of the railway station and a secured garage for bicycles (with a locker).