

## EV Energy project



**Action Plan for Lithuania for the development of  
environment-friendly mobility to reduce emissions**

2019.07.01 - 2021.06.30

**Developed by Kaunas University of Technology in cooperation  
with the Ministry of Transport and Communications of the  
Republic of Lithuania**

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## Introduction

This document represents an Action Plan developed by Kaunas University of Technology (KTU) in cooperation with the Ministry of Transport and Communications of the Republic of Lithuania for the EV Energy project „Electric Vehicles for City Renewable Energy Supply“. The project aims to analyze, initiate and implement policies favoring development of environment-friendly mobility to reduce emissions in urban areas.

The Action Plan specifies the nature of the actions to be implemented, their timeframe, the stakeholders involved, the costs and funding sources. An Action Plan is „produced by each region, a document providing details on how the lessons learnt from the cooperation will be implemented in order to improve the policy instrument addressed within the region“.

The Action Plan is a result of a number of activities between the project partners and their stakeholders. In order to develop the Action Plan in EV Energy project, a lot of emphasis was placed on the interregional cooperation and exchange of experience. Exchange of experience was conducted by number of activities: from questionnaires between project partners' stakeholders, study visits and stakeholders meetings, good practice selection, analyses of different regions according the selected SWOT (Strengths, Weaknesses, Opportunities and Threats) and SIAM (Sustainability Impact Assessment Model) and intense discussions during local, regional, national and international events.

The document is split into following parts:

- Part I – General information (contact and background information about Action Plan's developers and project scope);
- Part II – Policy context (details about aimed policy instrument, state of the art and progress);
- Part III – Actions in details (detailed information about actions, their relevance to the project, planned activities, stakeholders involved, timeframe, costs and funding sources, as well as indicators and sources of verification).



## Part I – General information

This part includes general information about developers of this Action Plan and their contacts. Moreover, it presents EV Energy project in details which are important in order to understand why interregional exchange of experience has to be implemented as a form of Action Plans.

*Table 1: details of project partner representative and contact person*

Project: EV Energy	Project organisation(s) concerned: Kaunas University of Technology (KTU)
Country: Lithuania	NUTS2 region: Lithuania
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### Project's background

On 23 October 2014, the European Council agreed on the “2030 climate and energy framework”. This framework addressed new EU-wide targets and policy objectives for the period between 2020 and 2030. For 2030 EU identified following targets:

- To reduce greenhouse gases by 40% relative to 1990 levels;
- 27% improvement in energy efficiency should be improved by 27% and
- at least 27% of EU energy consumption should come from renewable energy.

But transport is the only sector in EU that has not recorded a significant decline in greenhouse gas emissions since 1990. In 2015 the road transport in Europe was responsible for 78% of EU oil consumption, which is 23% higher than in 1990. Thus there is an urgent need to reduce oil consumption by road transport and that is formed as an aim of “EV Energy” project.

“EV Energy” project analyses and develops innovative policies that promote renewable energies, electric mobility and the use of ICT for their integration. Through interregional policy learning, the most appropriate policies are transferred to cities, regions and partner countries and implemented subsequently. Identified best practices and policies are further disseminated for the benefit of the widest possible audience. The policy measures include energy or mobility taxations, parking and charging issues, energy regulations, grid connection costs and tackles many other issues.

EV Energy project emphasizes three thematic areas (pillars):

- Electric Mobility (EM);
- Renewable Energy Sources (RES);
- Infrastructure (smart grids, ICT, etc.).

These pillars are analyzed in details in project partners' countries: Italy, Lithuania, The Netherlands, Spain, and Sweden. Based on their good practices and experiences, the interregional policy learning

and exchange of experience helps to transfer successful policies to partner countries according their policy context.

“EV Energy” started on 2017.01.01 and intends to end on 2021.06.30 taking in total 54 months. Project is split to two phases, first taking a part from 2017.01.01 to 2019.06.30 (30 months by duration) and second starting in 2019.07.01 and ending in 2021.06.30 (24 months by duration). Project “EV Energy” partners are “Green IT Amsterdam Region” (as leading partner) and “Province of Flevoland” from the Netherlands, “Barcelona Official Chamber of Commerce, Industry, Services and Navigation” from Spain, “Stockholm County Council, Growth and regional planning administration” from Sweden, “Kaunas University of Technology” from Lithuania, “Regional Association of Lazio Municipalities - ANCI LAZIO” and “EUR S.p.A” from Italy. Total project budget is 1,049,797.00 EUR, 892,327.45 being Programme “Interreg Europe” (ERDF) funding and 157,469.55 as partner contributions.

“Interreg Europe” programme (successor of INTERREG IVC (2007-2013)) helps regional governments across Europe to develop and deliver better policy. Programme’s aim is to ensure that government investment, innovation and implementation efforts lead to integrated and sustainable impact for people and place. For this aim “Interreg Europe” dedicates EUR 359 million financed by European Regional Development Fund (ERDF) for 2014 - 2020. More information about “Interreg Europe” can be found on their website “<https://www.interregeurope.eu>”.

## Part II – Policy context

The Action Plan aims to impact:

- Investment for Growth and Jobs programme
- European Territorial Cooperation programme
- Other regional development policy instrument

**Name of the policy instrument addressed: Operational Programme (OP) for the European Union Funds Investments in 2014-2020 Republic of Lithuania**

The policy instrument, which project aims to affect, is included in the OP priority 4.5 “Promoting low-carbon strategies for all types of territories, in particular urban areas, including the promotion of sustainable multimodal urban mobility and mitigation relevant adaptation measures” which belongs to the OP priority axis 4, promoting energy efficiency and production and use of renewable energy. The specific objective (4.5.1) of the priority 4.5 is to “Promote sustainable mobility and develop environment-friendly transport to reduce carbon dioxide emissions”.

CO<sub>2</sub> emissions from transport in Lithuania are largely caused by the increasing number of private cars and their use. Between 2007 and 2012, the number of cars for 1,000 inhabitants was growing on an annual basis, increasing from 450 to 541 (20%). Within the same period, the annual number of urban bus passengers fell down from 259.4 to 234.8 million (9.2%), and suburban bus passengers from 38.2 to 26.1 million (31.6%). The growing number of cars and the absence of effective traffic



control systems, in particular in larger cities, cause congestions leading to increasing air pollution and CO<sub>2</sub> emissions.

Due to poor quality and unattractive public transport, Lithuania has one of the highest levels of automobilisation. Physically and morally outdated buses discourage middle-income residents to use public transport. Moreover, bus engines of outworn fleets pollute the environment by CO<sub>2</sub> and other pollutants, which further turns the public against public transport. Public local (urban and suburban) transport is also unattractive due to its operational characteristics, including speed, limited number of effective urban traffic control measures, bus lanes and intelligent transport (traffic control) systems, which are essential for boosting the competitiveness of public transport and could contribute to congestion mitigation.

The sustainable mobility can be promoted by encouraging people to choose sustainable transport, such as electric vehicles, bicycles, car sharing, public transport or walking. All planned sustainable mobility solutions are expected to cut CO<sub>2</sub> emissions and increase a number of public transport passengers by 3,9% in Lithuania. Project “EV Energy” is expected to lower CO<sub>2</sub> emissions by promoting electric vehicles.

Additionally, the OP for the European Union Funds’ investments in 2014-2020 Republic of Lithuania presents an opportunity to use the ERDF to support improvements in the transport sector, as well as energy efficiency and renewable energy sources. However in its current form, measures leave a lot of room for improvements: 1) new measures on changing accepted practices results in sustainable transportation in the region; 2) behavior change type of activities (like specific advice, support, information delivery/awareness raising) that help end-users to be more conscious in more sustainable technology selection.

In the end of the project it is important to assess what was the project’s impact to the aimed policy – how the project succeeded to affect policy. The impact have to be assessed by self-defined indicators. The self-defined indicator of the “EV Energy” project in Lithuania is “Number of charging stations in the Lithuania by 2021”. It means that the more electric vehicles’ charging stations are in Lithuania by the end of the project, the higher is the impact of “EV Energy” project.

Most of the transport CO<sub>2</sub> emissions in Lithuania are caused by increasing number of private cars, old age of the national fleet and high share of diesel engine powered vehicles. In 2007-2012 car ownership has increased by 20%, meanwhile the number of passengers in urban public transport decreased by 9,2% and in suburban public transport by 31,6%. Such growing number of cars and the absence of effective traffic control systems, in particular in larger cities, cause congestion that emit heavy air pollution and CO<sub>2</sub> emissions. Moreover, due to lower purchase power, a second-hand vehicles’ market in Lithuania is very active, therefore an average age of the national vehicle fleet is 15 years. And majority of the vehicles are powered by diesel engines.

Based on SWOT and PESTEL analysis (Kaveckis 2017, Barriers and Drivers for the Integration of Electric Mobility and Renewable Energies in Lithuania, Petrauskiene et al 2018, Situation Analysis of Electric Vehicles, Renewable Energy and Smart Grids for Sustainable Urban Mobility in Five European Regions) EVs and e-mobility is a quite new topic in Lithuania, but government and municipalities are aware and provide their support of national and local initiatives, which gives a fair political strength. The Ministry of Transport and Communications of the Republic of Lithuania allocated a specific budget and developed EV charging infrastructure along main highways and national roads in Lithuania (fig. 1). Local municipalities are eager to have more EVs on their streets



and better EV charging infrastructure as well as actively participate in decision making. Private businesses and IT-related science institutions are willing to take a part in development as well. A number of companies decided to establish the Lithuanian Electric Vehicles Association (LEVA). LEVA encourages Lithuanian electric vehicles services and encourages using electric vehicles. There is a number of other growing initiatives in Lithuania, like increased number of EVs in car sharing platforms, installation of EV charging stations close to the shopping malls. Also people are encouraged to use EVs benefits to use free parking service within central areas of the biggest Lithuanian cities as well as possibility to use bus and taxi lanes. On the household level, more and more people are aware of their health, climate change effects and nature conservation. They are eager to know more about climate friendly technologies, not only regarding EVs, but also renewable energy.

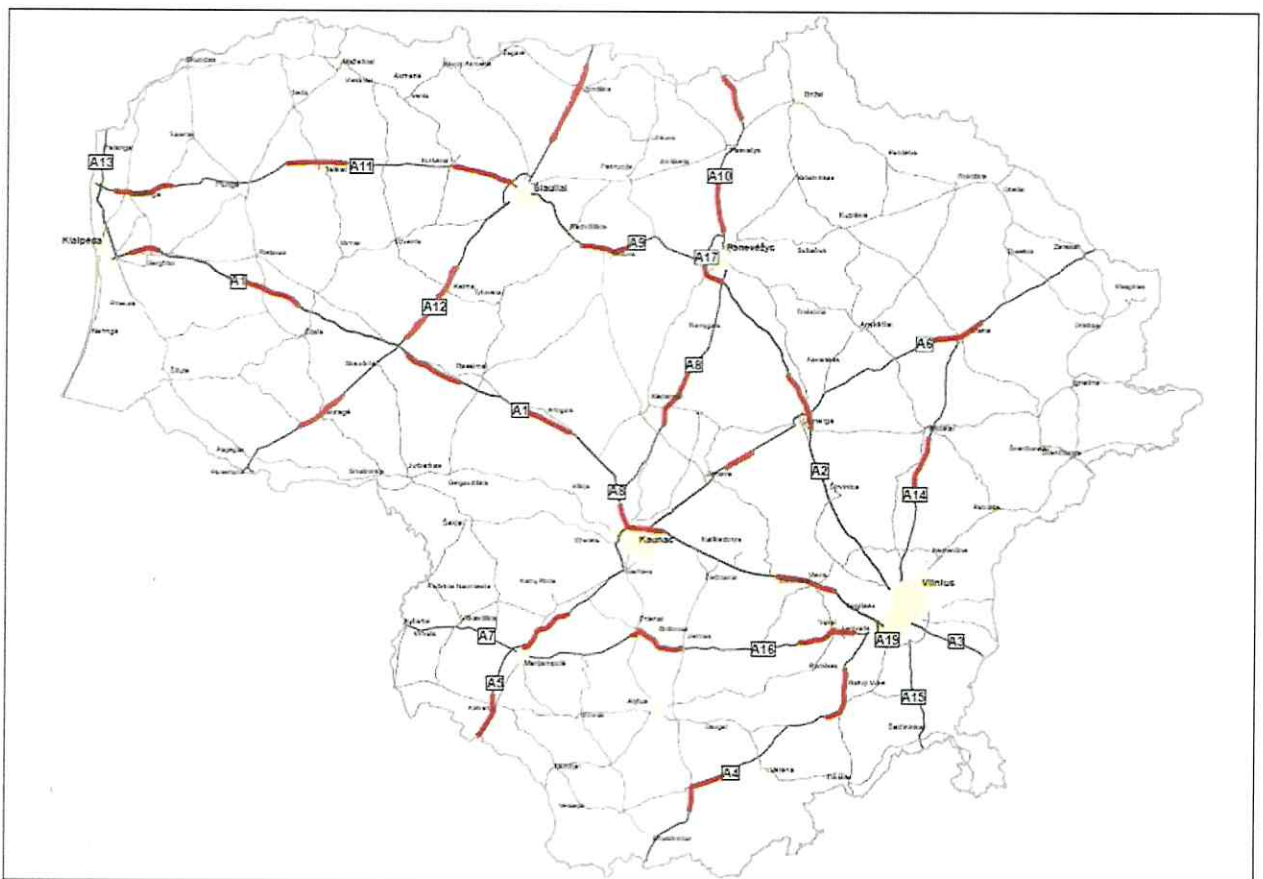


Figure 1: initiative by Ministry of Transport and Communications of the Republic of Lithuania to install public EV charging stations along main highways and national roads in Lithuania

But the one of the main factors limiting EVs popularity is its high purchase price. Moreover, no taxation mechanisms of high-polluting vehicles motivate people to choose second-hand vehicles over EVs. In addition, there are not many sustainability promoting procurement options, which would help to reduce high costs of EV-charging infrastructure. Also due to absence of experienced staff and equipment, not many companies are able to provide full services to EVs. Considering the social weaknesses, most of the Lithuanians have a limited income, but prevailing preference for large and unsophisticated vehicles is still valid. There is a risk that EVs popularity can be limited by a lack of public information and popularity of alternative propulsion technologies such as biofuels,

biogas and hydrogen. Therefore, in order to promote EVs, the awareness should be raised among wealthier residents.

The state of the art of the mobility sector in Lithuania showed that although there are some political will and country welcomes new technologies, there is so much to learn from other countries. Part of good practices (GP) can be transfer by specific actions.



## Part III – Actions in details

### Exchange of experience

Kaunas University of Technology (KTU) actively participated in sharing, learning and exchanging experiences between all project partners and their stakeholders. During the first project's phase, KTU organized five Regional Stakeholder Events (RSE) involving a number of stakeholders:

- The Ministry of Transport and Communications of the Republic of Lithuania;
- Lithuanian Road Administration under the Ministry of Transport and Communications,
- Kaunas Municipality;
- Energy Service Company (ESC) – is implementing ESCO model in different business companies, solving various problems: from buildings EE, to the EE in manufacturing processes and electric vehicles (the company was reorganized and changed to “Lithuanian power supplier” belonging to JSC „Lithuania Energy“ Group);
- Lithuanian Electric Vehicles Association (LEVA) - unites electric vehicles enthusiasts, companies operating in the fields of electric vehicles applications, conversion, and manufacturing;
- JSC „Vejo projektai” - Lithuanian and German capital company, developing renewable energy powered electric transport systems for international markets; „Dancerbus” project is being developed;
- JSC “Elinta” - core technologies range from production of automation systems, electronic components and cutting-edge image processing tools to electric mobility. Represents the collaboration between science and industry;
- Environmental protection institute (AAI) –aim is to analyze, evaluate and prepare conclusions in environmental protection fields and communicate it with society, business and public authority;
- Ministry of Energy of the Republic of Lithuania;
- Ministry of Environment of the Republic of Lithuania;
- Ministry of Finance of the Republic of Lithuania;
- Ministry of the Economy and Innovation of the Republic of Lithuania;
- State enterprise Energy Agency;
- Kaunas University of Technology;
- Kaunas Science and Technology Park;
- Lithuanian Energy Institute;
- JSC “Ride share” - the very first fully electric car sharing company provides affordable eco-friendly mobility solutions with self-driving pleasure in Vilnius;
- JSC “GAMA” – automation company, electrical installation;
- JSC “Modus Group Services” - offer innovatory car and bicycle share services (CityBee);

- JSC “Homo Eminens” – company that works on change mentality programmes for citizens in EV themes;
- Program “Create Lithuania” - they are currently working on autonomous vehicles project and would like to explore possible opportunities with KTU and Kaunas municipality

### **1<sup>st</sup> RSE. 21 June, 2017.**

The 1<sup>st</sup> Regional Stakeholder Event was held in Kaunas University of Technology on June 21, 2017, where professionals, experts, academics and interested persons from the sector presented good practices and discussed recent challenges and opportunities related to EVs, renewable energy integration and ICT in Lithuania. The Good Practices from other Europe regions were presented and discussed. After long, in-depth, and lively round of discussions, a presentation of the EV ENERGY partners’ good practices were introduced and briefly discussed with all participants promising to contribute their thoughts and choices for further interest, based on what would be the most appropriate for the Lithuanian region.

### **2<sup>nd</sup> RSE. 12 December, 2017.**

The 2<sup>nd</sup> Regional Stakeholder Event, was held in Ministry of Transport and Communications of the Republic of Lithuania on December 12, where politicians and project partners discussed recent situation in the field of sustainable and electric mobility promotion, renewable energy sources integration in Lithuania. The main questions raised during the event were:

- What is the current situation in the field of sustainable and electric mobility promotion, renewable energy sources integration in Lithuania? What is the legislation, political instruments, projects, inter-institutional cooperation?
- What kind of measure, projects and finance are planned in order to implement the 4 and 6 priorities of the EU Structural Funds Investment Program for 2014-2020?

It was decided to send special questions to EV Energy project partners. In summary, the political authorities of Lithuania are motivated to advance sustainable mobility in Lithuania, willing for cooperation in EV Energy projects in order to improve legislation base and implementation of projects.

### **3<sup>rd</sup> RSE. 10 April, 2018.**

The 3<sup>rd</sup> Regional Stakeholder Event was held in Ministry of Transport and Communications of the Republic of Lithuania, where politicians and project partners summarized information received from project partners and discussed how the good practice and experience from could be adopted for the sustainable and electric mobility integration in Lithuania. Agenda was:

- Review and summarize information (answers to the about 20 questions) received from project partners and stakeholders;
- Discussion how the good practice and experience from other countries could be adopted for the sustainable and electric mobility integration in



- Presentation of Sustainability Impact Assessment Model (SIAM) to Lithuanian policy makers

Lithuanian stakeholders expressed opinion that all answers are very useful and there are different measures which could be chosen from each partner. Despite that, it was concluded that Stockholm and Barcelona regions' policy are closest to Lithuania. At the end of the meeting the emphasis was put on highlighting the good practice, which is most suitable to transfer to Lithuania. Everybody agreed to transfer good practice from Stockholm - "Supporting EV Websites".

#### **4<sup>th</sup> RSE. 21 November, 2018.**

The 4<sup>th</sup> Regional Stakeholder Event was held in Ministry of Transport and Communications of the Republic of Lithuania on 21 November, where politicians presented the recent situation in the field of sustainable and electric mobility promotion in Lithuania and how this promotion is influenced by the exchange of experience of the EV ENERGY project. The main questions raised during the the 4<sup>th</sup> RSE meeting were:

- What is the current situation in the field of sustainable and electric mobility promotion, renewable energy sources integration in Lithuania? What is new in the legislation, political instruments, projects, inter-institutional cooperation?
- Does the Lithuanian Ministry of Transport are planning any activities in Lithuania, which are attributed to the EV Energy project partners good practices and experience (eg. Supporting Website's Sweden; PRIVEC Plan Barcelona or other good practices, which were presented during the meetings in Kaunas, Stockholm and Barcelona)?

The good news from the policy makers was that in order to stimulate the growth of EVs in Lithuania the new EV strategy for 2030 is going to be prepared. The new EVs strategy is based not only on the infrastructure development but also includes people awareness rising, information, financial and other measures, which are stimulating the use of EVs and sustainable transport in general. Good Practices such as supporting Website's from Sweden, transport fleet electrification in Barcelona, subsidies mechanism and different tax reduction in order to stimulate the growth of EV was suggested for the Strategy measures.

#### **5<sup>th</sup> RSE. 10 April, 2019.**

The 5<sup>th</sup> Regional Stakeholder Event was held also in Ministry of Transport and Communications of the Republic of Lithuania on 21 November. Agenda was related with the main questions raised during the event:

- What is new in the legislation, political instruments, projects, inter-institutional cooperation?
- What is the current situation in the field of electric mobility development in Lithuania and future activities?
- Discussions regarding the Action plan developed under the EV Energy project: key points, activities and etc.

The Action plan was presented during the meeting. Both actions were presented to the audience and discussed how exchange has been transferred and how the actions will be implemented.



The Ministry of Transport and Communications of the Republic of Lithuania is the main stakeholder responsible for improvement of mobility policies at the national level. It is a public body responsible for Specific Objective 4.5.1 'Promote sustainable mobility and develop environment-friendly transport to reduce carbon dioxide emissions' within OP for the European Union Funds Investments in 2014-2020 Republic of Lithuania. KTU has signed a cooperation agreement between ministry and university since 2012. Due to its collaboration with national authority, it is in a good position to influence national and local policies, providing its knowledge and knowhow to policymaking bodies. Thus, the involvement of the representatives of ministry into process of exchange of experience from the very beginning of the project implementation was very important. Representatives participated in number of international workshops and study visits in Stockholm and Barcelona. During these visits, representatives learned a lot from case studies, field visits and presentations (more details in each of the Actions). They actively discussed with local stakeholders not only about challenges they experience in Lithuania, but also possible solutions and other good practices (GP) in project partners' countries, their applicability and the ways how they can be transferred to our region. Moreover, stakeholders from the Ministry of Transport and Communications of the Republic of Lithuania actively participated in exchange of experience activities by addressing number of mobility-related questions which as questionnaires were distributed by KTU and project partners and answered by their stakeholders. These questionnaires and their answers were a great support tool not only to Lithuanian but also to the stakeholders of other project countries'. Questions and answers covered four main topics related to EVs: 1) Financial means and problems of installing EV charging stations, 2) Operators, management and maintenance of EV charging stations, 3) E-charging network in residential areas, 4) Public motivation, 5) Public transport, 6) Technical and spatial questions. Such experience helped stakeholders to identify most plausible transfer of good practices, formulate approaches for policy change and advice authorities that are capable to affect and implement policy changes.

Another way of learning from each other was an exchange of information related to GP. Learning process was done by active communications between project partners and their stakeholders during emails, conference calls and project meetings. Semester meetings took part in project partners' countries (The Netherlands, Italy, Spain and Sweden), where project partners and their stakeholders presented unique GP. Moreover, special events in Bulgaria and Great Britain gave a better understanding the exchange of experience process and learn from other INTERREG EUROPE projects.

Such ways of communication, active cooperation and process of exchange of experience shows already a great impact of policy learning, which in this Action Plan can be formulated as specific objectives and actions to achieve these objectives.

## Objectives and actions

The Operational Programme for the European Union Funds' investments in 2014-2020 Republic of Lithuania includes a strategic objective, which promotes low-carbon strategies for all types of



territories. This strategic objective can be specified to a number of specific objectives. One of them promotes a sustainable mobility and develops environment-friendly transport to reduce carbon dioxide emissions. Such specific objectives can be achieved by actions which are presented in this Action Plan. Actions together with strategic and specific objectives can be overviewed in table 2. Additionally, information regarding all the details about the Action Plan are presented below for each actions separately.

Table 2: strategic, specific objectives and related actions

Strategic objective	Specific objective	Action
A. Promoting low-carbon strategies for all types of territories, in particular urban areas, including the promotion of sustainable multimodal urban mobility and mitigation relevant adaptation measures	A.1 Promote sustainable mobility and develop environment-friendly transport to reduce carbon dioxide emissions	A.1.1 Development of EV charging network
		A.1.2 Development of EV supporting website

## Action 1 - Development of EV charging network (A.1.1)

### 1. Background:

- **Motivation:** A high share of EV vehicles would definitely reduce CO<sub>2</sub> emissions. However, in order to increase EV popularity, it is important to have a well-developed EV charging infrastructure. Well-developed infrastructure should cover not only main highways and national roads, but also cities and their surroundings. However, authorities alone cannot achieve this objective, therefore a high support from private sector is required.
- **Challenges:** From all EV project partners, Lithuania has a lowest number of EVs and limited EV charging network. National government started an initiative, but due to high costs of EV charging infrastructure, there is a need to motivate private bodies to invest much more into EV charging infrastructure.
- **Good practices:** All partner countries have operational EV charging networks, however Spain and its metropolitan area of Barcelona experienced similar problem as Lithuania faces today. A solution was a PIRVEC Plan (Clean energy for all Catalans: 2017 – 2025) for the deployment of charging infrastructure for EVs in Catalonia. This plan achieved two objectives: 1) it gathered all stakeholders to sit down together and establish a number of working groups/task forces; 2) large public financial injection helped to improve infrastructure, increased a take up of EVs and advancement in deployment of charging infrastructure. In total PIRVEC Plan with a budget of €5.8M was initiated to set up 81 quick charging points accessible from the public road network, also a network of 360 new stations for semi-fast charging, 21 000 new charging points (subsidies for up to 50% costs of installation costs in difficult settings), unified identification and payment system, accessible through smartphones. “EV Energy” project partner from Spain (Barcelona Chamber of Commerce) presented this PIRVEC Plan as a good practice, which had a great interest by Lithuanian stakeholders.
- **Exchange of experience:** In 2017 during the first Regional Stakeholder Event (RSE) it was emphasized that there is a need for developed EV charging infrastructure, but funding is limited. This challenge motivated to search for information how other countries deal with this problem, which among other problems, were formulated into a questionnaire and send to other project partners who distributed it to their stakeholders. The answers showed, how other countries face lack of private initiatives and attract funding to develop EV charging infrastructure. All project partner countries had more or less examples how to attract private funding, however a PIRVEC Plan from Barcelona was one of the most comprehensive ways and was selected as a good practice for EV charging infrastructure in Lithuania. Further communication and a meeting between the representatives of the Ministry of Transport and Communications of the Republic of Lithuania and PIRVEC plan coordinators in Barcelona enabled wider dialog between both sides and helped to identify means of PIRVEC Plan which could be applicable and potentially transferred to Lithuania.



## 2. Action:

- **Intention/aim:** Based on PIRVEC Plan (GP from Barcelona) experience this action aims to develop EV charging infrastructure in municipalities (districts and cities) to increase a number of private EV users and show private investors a potential to develop EV charging infrastructure even further.
- **Direct and indirect beneficiaries:** Main direct beneficiaries of this action are EV users, who benefit due to higher EV charging coverage, shorter charging times and shorter distances to charging stations. Other direct beneficiaries are municipalities. A higher number of EVs means lower pollution on the streets, less noise, more sustainable transport and great image as eco-friendly municipalities. Additional beneficiaries are developers of EV charging stations, electricity suppliers. Indirect beneficiaries are EV producers, city inhabitants, businesses around EV charging stations and national government.
- **Process (steps):** Development of EV charging infrastructure is a continuous process, which requires a careful planning, cooperation between national/local government and private subjects, a great financial support. Municipalities and institutions have to follow number of steps in order to develop EV charging infrastructure. Successful development of EV charging stations in local cities and districts municipalities would motivate local private businesses to invest and develop EV charging coverage even more.

## 3. Players involved:

The following players are involved in the development of the action plan: the Ministry of Transport and Communications of the Republic of Lithuania, Lithuanian National Road Administration under the Ministry of Transport and Communications.

The following players are involved in the implementation of the action plan: Lithuanian city and district municipalities, Ministry of Finance of the Republic of Lithuania, Ministry of the Economy and Innovation of the Republic of Lithuania, The Lithuanian Electric Vehicles Association (LEVA), some companies as JSC "Lithuanian power supplier" – installing charging stations, JSC "GAMA" – automation and electrical installation company, JSC "Elinta" - production of automation systems, electronic components and cutting-edge image processing tools to electric mobility.

## 4. Timeframe

Development of EV charging infrastructure in local municipalities aims a timeframe from 01-07-2019 to 30-06-2020.

## 5. Costs and funding sources

Action's total planned costs are 1039 234,59 EUR, 903 682,26 EUR of them are ERDF funds and 135 552,34 EUR are municipalities' funds.

### Action 2 - Development of EV supporting website (A.1.2)

#### 1. Background:

- **Motivation:** A detailed and accurate information regarding EV types, charging stations' infrastructure, its operability, pricing, laws and regulations are very important to EV owners and people who still think to obtain an expensive EV. For this reason a comprehensive EV supporting portal/websites are required.
- **Challenges:** Many European countries have EV-related basic information provided through private or public initiatives – from websites of ministries, to private blogs about experiences using EVs. Unfortunately, many of such practices lack structured centralized approach. Often their provided information is vague and repetitive, they are owned and maintained by different bodies which often lack communication and compete against each other. Such and similar challenges motivates to search for good practices in other countries.
- **Good practices:** Although there are number of the EV websites-related good practices among Spain, The Netherlands and Italy, "Stockholm County Council" from a Sweden offered a list of EV supporting websites (i.e: [www.uppladdning.nu](http://www.uppladdning.nu), <http://emobility.se/>, [www.laddinfra.se](http://www.laddinfra.se), [www.elbilsstatistik.se](http://www.elbilsstatistik.se), and [www.powercircle.se](http://www.powercircle.se)) and identified it as one of their good practices (GP). The GP "EV supporting websites" address a series of EV websites to support EV consumer choice regarding information on the advantages and disadvantages of buying and using an electric vehicle, charging infrastructure Sweden wide, technical and non-technical information. Their websites also helps EV drivers to find charging stations, provides information of development of the EV fleet in Sweden and serves as a knowledge portal for e-mobility, EVs and charging infrastructure. Main target groups of these websites and containing information are private persons but also companies with interest in EVs. The good practice function of the web sites is the simplicity and the crowd-oriented function of their services. Swedish examples of well-structured data and knowledge portals are a great guidance for other countries which want to increase their national EV fleets
- **Exchange of experience:** The need of EV supporting websites was identified during first regional stakeholder events in the Ministry of Transport and Communications of the Republic of Lithuania. Stakeholders emphasized a lack of structured and centralized EV-related information, which would be very valuable for existing and new EV users. Meanwhile KTU informed Lithuanian stakeholders that project partner countries have a number of examples of EV supporting websites and Sweden has a great example of GP, which they are willing to share. Further dialog was brought to higher level during a workshop in Sweden,



where project staff and Lithuanian stakeholders had opportunity to meet with representatives of Swedish EV supporting websites and discuss challenges, possibilities and ways how to improve information, keep it neutral and centralized. A later communication took place between Lithuanian stakeholders and EV implementators in Lithuania and finally a direct communication between EV supporting websites representatives from Sweden and Lithuania.

## 2. Action:

- **Intention/aim:** action's intention is to develop a website/platform/portal similar to Swedish EV supporting websites. This website should provide all necessary information to existing and potential EV users about EV models in the market, operational EV charging infrastructure in Lithuania, charging prices, types of EV charging stations, EV car sharing services and similar information which importance can vary over the time.
- **Direct and indirect beneficiaries:** Main direct beneficiaries of this action are EV users as well. Detailed and neutral information would help potential and existing EV users to make best decision in matter of purchasing and EV, planning their trip based on information of EV charging stations' locations etc. Success of this action would help them to save money and time. Other group of direct beneficiaries are EVs vendors. Higher popularity of EVs would increase their sales. The last, but not least direct beneficiaries are municipalities which would suffer lower pollution because of more EVs on the streets. Indirect beneficiaries are city inhabitants, EV-related businesses, science institutions.
- **Starting initiative:** It was decided do not wait and initiate an early version of the internet website which could be filled with information later on. The basic version of EV supporting website "www.evl.lt" was presented by a public company, called "Aplinkos Apsaugos Institutas" (in English: Environmental Protection Institute), to Lithuanian stakeholders, LEVA, private companies, researchers and EV community in January 2019. In February, a portal was launched and accessible. Although there are not much data in this portal yet, basic information helps potential EV users to find where they could get essential EV-related services.
- **Process:** Development of such information portal/website is not a discrete, but a continuous process - due to a large data volume, it would be a great challenge to publish all information at once and after few years it can be outdated. Thus not only information's sufficiency is important, but also recency.

## 3. Players involved:

The following players were involved in the development of the action plan: the Ministry of Transport and Communications of the Republic of Lithuania, Lithuanian National Road Administration under the Ministry of Transport and Communications, and Environmental Engineering Institute (AAI).

The following players are involved in the implementation of the action plan: Environmental Engineering Institute (AAI), state enterprise „Regitra“, Lithuanian Electric Vehicles Association (LEVA) and JSC „SPARK“.

#### **4. Timeframe**

Starting year is 2019 and is plan to continue after end of “EV Energy” project phase II (2021.07).

#### **5. Costs and funding sources**

This action is financed by internal AAI funds. Costs are unknown.



## Indicators and sources of verification

In order to achieve dedicated aim, Action Plan has to be monitored, controlled and evaluated. Therefore measures or indicators have to be addressed. For this action, we address self-defined, compulsory, indicators. Self-defined indicators are mandatory, are defined in the application form. They are dedicated to increase the quality of the monitoring and general assessment.

Table 3: compulsory (self-defined) indicators for the monitoring of the Action Plan in the project's phase II

Action	Indicator	Reference source of information for monitoring
<b>Compulsory (self-defined) indicators</b>		
A.1.1 Development of EV charging network	Number of EV charging stations installed (aimed value by 30-06-2021 (300)	Quarter information by communicating with the Ministry of Transport and Communications of the Republic of Lithuania
		Quarter monitoring through EU investments in Lithuania websites ( <a href="http://www.esinvesticijos.lt">http://www.esinvesticijos.lt</a> )
		Quarter communication with corresponding municipalities
A.1.2 Development of EV supporting website	Number of website visits (during phase II) by 30-06-2021	Quarter information by communicating with AAI

The self-defined indicator of the “EV Energy” project in Lithuania is “Number of charging stations in the Lithuania by 2021” which is the indicator measuring A.1.1 action. It means that the more electric vehicles’ charging stations are in Lithuania by the end of the project, the higher is the impact of “EV Energy” project. Aimed minimum value of self-defined indicator for this Action Plan is 300. The initial value is 79. The A.1.2 action’s indicator is number of website (<http://www.elv.lt>) visitors. The more content should increase a number of website visits. Desired value is 6000.





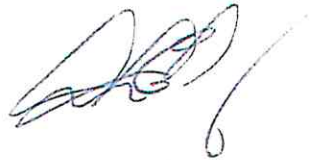
DATE: 2019-08-28

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International Relations, Ministry of Transport and  
Communications of Lithuania

ORGANISATION:

SIGNATURE:



STAMP OF THE ORGANIZATION:



