


# Market strategy for PODRAVJE, SLOVENIJA

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<b>Are there existing filling stations and natural gas and biogas driven cars already in the region?</b>	No

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## Summary

In Slovenia there is no existing filling station for CNG and there are only four productions of biogas but they produce the biogas in cogeneration system for heat and electricity production.

There are only 10 filling stations in Slovenia with LPG.

There is no legislation about the biogas production and there are no special programmes or documents about using the gas as a vehicles fuel. We have only one ordinance about the use of biofuels. There the use of biogas is described as a biofuel.

In Slovenia we have National energy plan where the sustainable transport is described only as using alternative fuels (the biogas is not mentioned) and promotion of public transport. There is no activity on the national level about gas driven cars. They have started only with electric car promotion.

Since there is no infrastructure for such vehicles there is also not the possibility to buy gas vehicles. There are very few persons that can unofficial (without the attest) convert the vehicle from petrol to natural gas.

The use of natural gas in Slovenia does not have a long tradition. It has come to Slovenia in late 70s. People are quite afraid of using it at homes. The market for natural gas as a heating source has expanded in last 15 years.

In last two years we have built only two or three biogas production plants in Slovenia.

Regarding the background situation in Slovenia in the first stage we have to develop the market for gas driven cars. At the same time we can promote the production and usage of biogas. In the second step it will be possible to promote the use of biogas in cars.

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## Introduction/Background

### **Strategic framework of Slovenia in the field of energy – operational programme for sustainable energy –proposed by Slovene government**

In Slovenia, energy supply and consumption are characterized by a relatively high-energy intensity which is still about 90 % above the European (EU-15) and 2,6 times higher than in Denmark. This is partly due to the structure of Slovenian processing industry, which still includes a considerable number of energy-intensive sectors, such as the production of aluminum, steel, stone, pulp and paper, with a relatively low value added; energy efficiency is also not sufficient in all the sectors of final energy use.

Analysis of strengths, weaknesses, opportunities and threats for the field of sustainable use of energy pointed out the following weaknesses: growing dependence on energy import, high growth of electrical energy use, growth of primary energy consumption, uneconomical energy management, especially in the public sector, institutional framework which gives preference to traditional energy sources, insufficient state budget funds and from other sources for implementation of promotion programmes and too few demonstration projects, non-inclusion of EFEU and RES into public tenders, lack of qualified investors, lack of existing infrastructure for certain technologies, narrow scope of research and technological development of energy equipment and services related to EFEU and RES, big energy companies do not see EFEU and RES as development opportunities but rather as a competitive option, high costs of project preparation, especially in times of development of these markets and higher transaction costs due to smaller scope of projects.

**With regard to sustainable use of energy Slovenia set its goals with adoption of the Resolution on National Energy programme; in this programme goals are defined referring to efficient use of energy and renewable energy sources – the goals are to increase energy efficiency by the year 2010, to increase the scope of co-generation of heat and electrical energy and to increase generation of heat and electrical energy from renewable sources and to increase the share of bio-fuel in transport.**

National programmes promoting efficient use of energy are carried out directly by the Ministry of Environment or through the Ecology Fund. In addition to financial incentives for investments into efficient use of energy (households, public and services sector, industry) and into environment-friendly production of energy (renewable energy sources, co-generation systems) the national programmes also include energy counseling, awareness-raising, informing and training of energy users and other target groups.

Within the Sustainable Energy Use Development Programme support will be given for promotion and support towards energy efficiency and more extensive use of renewable energy sources. The main areas of promotion will be the following:

- Energy restoration and sustainable use of buildings: energy efficient restoration of existing buildings in the public sector, construction of low energy and passive buildings, use of modern heating technologies, air conditioning and environment friendly decentralized energy supply systems with emphasis on renewable sources and cogeneration;
- Efficient use of electrical energy: implementation of measures in industry, public and service sectors;
- Innovative local energy supply systems: more extensive individual systems and remote and joint systems for production of heat and electrical energy, with emphasis on renewable energy sources and cogeneration;

- Demonstrational and pilot projects and energy consulting programmes, informing programmes and training of energy users, potential investors, energy services providers and other target groups.

In the frame of innovative local energy supply the following technological areas represent priorities:

- district heating systems using biomass, including the systems of heat and electricity co-generation;
- modern boilers and systems for co-generation of heat and electrical energy using biomass and natural gas;
- heat generation systems using biogas;
- generation of heat and electrical energy from geothermal energy.

### **Awareness of people about the sustainable use and production of the energy**

Slovenia is a young state. We gain our independency in 1991. Till 1991 the Slovenia was socialistic state and energy prices were low and not market regulated. Incomes were low and people were modest: not every family got a car, TV, there were not so many domestic appliances and equipments. In late 80s there were also restrictions in electricity and petrol use. People used energy very rationally and efficient. After our independency 1991 the development has began: the production of energy has risen and also the use. The incomes and GDP has grown and people were able to buy more cars, equipment and appliances. Before a lot of people use wood biomass for heating but they changed their system to oil because it was more comfortable for the use. The prices were not so important at that time. We just wanted to catch the “western world” and their way of life which was that was prohibited for so many years.

The new Slovene energy law was adopted in 1999. It has determined the energy policy, roles for energy market, energy supply and reliability and efficient use. It assured competition on energy market. The efficient use of energy and the use of renewable energy sources were a part of an energy policy. Efficient use and saving the energy were set in the first row. The state has set the obligation to educate and inform the people about rational use of energy (RUE) and use of renewable energy sources (RES), to introduce energy advices, audits, local energy concepts, to set funds for investments in RUE and RES. People have not taken much care about new law. Since 1991 each year there were more products per inhabitants that use energy. The rational use of energy seems to people like to hold back their development and living standards. The prices for energy are not so high that energy saving could be seen in much money savings. The family payments for electricity are much lower than for telephones, the petrol prices are low and one person in car is cheaper than using public transport. They do not see a lot of reasons for savings and RES. People are aware a bit about the climate changes but their point of view is that it will happen somewhere else not in Slovenia, we are so small that cannot do anything.

## **Analysis of the different aspects of the gas market**

### **Situation in transport(car) sector**

- 800.000 registered cars
- Ca 39.000 km of different roads
- 100% fossil fuel import dependence
- 2% of biodiesel added into diesel or bencin
- 500 filling stations with fossil fuels
- 3000 registered LPG cars up to now (only few registered hybrid cars- electricity)
- 5 LPG filling stations in 2006
- 24 LPG filling stations in 2007
- 29 LPG filling stations in 2008 because of the big marketing campaign of the biggest oil supply company Petrol in Slovenia

There is no word about natural gas or biogas used in transport sector. It is not possible to buy a CNG car in Slovenia. They have to be specially ordered from abroad. There are some problems with the documentation for import of such cars.

### **Situation in natural gas supply sector**

There are 16 natural gas supply companies in Slovenia and they are associated in the National associations for natural gas.

According to their strategic documents there is no idea proposed about using the natural gas in transport sector. They do not want to take a risk to build a gas filling station (investment ca 100.000 EUR) if there is no customers. The network for natural gas supply is not very spread in Slovenia and therefore their main goal for the future is building the net.

### **Situation in biogas production sector**

There are 4 biogas production plants in Slovenia. They all use biowaste from agriculture. It is very difficult to build a biogas plant in Slovenia. It takes a long time to get all the permission because environmental conditions are unacceptable by local population. All biogas plants are using biogas for cogeneration: electricity and heat production. The incentives on the national level are in a favor of electricity production. The producers get from 350 to 370 EUR per MWh of electricity produced. The contracting period for such premiums is 15 years. The economic evaluation of the production is therefore very positive. We were in a contact with the company that has made an economic research for upgrading the biogas for the use in cars and the results were very negative and such use is not acceptable.

## Market Strategy

### Activity of EnergaP on regional level

- Meetings with regional gas supply company Plinarna Maribor, they have no idea about using CNG in transport, they are interested in some promotional activity. They would give the gas from bus for free
- Meetings with public transport company Veolia about the possibility of hiring one CNG bus from Sweden. Due to high maintenance cost they were not really interested in such project. In 2008 some problems between local authority Municipality of Maribor and Veolia company raised up and the cooperation with them has stopped.
- Study and questioner for car dealers about the possibility of buying CNG car and their knowledge of CNG. The results were that is not possible to buy such car in Slovenia and seller usually do not know about the possibility to use CNG in cars. They also mixed the LPG and CNG. The customers do not ask about CNG cars.
- Municipality of Maribor – second the biggest municipality in Slovenia (115000 citizens) they are interested in the project but just to inform people about new potentials of natural gas. The role of public procurement for buying a car is the lowest price, there is no LCA needed (according to the national law)
- We have organized one study visit to Austria biogas production plant and gas filling station for professionals in the field of communal energetic. They were very interested in the subject but they have not seen the financial resources. We have also organized a visit for students of Faculty for civil engineering – transport department and for City administration – environmental department to Austria biogas and biodiesel production plant.
- The project Madegascar were presented at national conference about biogas. There were more than 50 participants. Their reactions were very negative from the economic point of view.
- We have presented the sustainable transport and Madegascar project also to the pupils from Secondary school for transport in Maribor (100 participants)
- We have organized a workshop about the gas driven car in Maribor. There were more than 100 people invited from gas supply companies, local authorities, taxis, bus companies, public companies with big car fleet, car dealer, filling station owners. Only 5 were interested to participate. Therefore we have canceled the workshop
- We have prepared a website in Slovene language, we have published a brochure and produced 2 e-newsletters about natural gas and biogas as a vehicle fuel and we have sent them to more then 300 addresses (gas supply companies, car dealer, municipalities, big car fleet owners, ..) The Madegascar project was also presented in national thematic bimonthly newspaper about energy matters (30.000 copies).
- There were a lot of meetings with the head of the Department for traffic at the Municipality of Maribor. They are willing to do some activity with the aims to reduce the air pollution problems in city centre. We visited together the City of Bremen in Germany where CNG bus and city administration CNG car fleet were presented. Their experiences are not very good with these cars. The buses are expensive and they need more maintenances, personal cars have to run for certain distances that they could cover the investment cost.

## **Activities on national level**

- Meetings with national Slovene association of gas supply companies (16 members). They are not informed about the using CNG in transport. On the 7<sup>th</sup> of April EnergaP will present Madagascar project to them.
- We are organizing a big national conference in the capital city Ljubljana together with national Chamber of commerce and with the associations of car dealers, taxis, public transport, trade and handcrafts, biogas producers, Slovene Ministry for environment and spatial planning, Ministry for economy and Ministry for transport. There will be more than 300 different stakeholders invited. At the conference project Madagascar and best practices from partners will be presented. We will also prepare promotional materials for participants.

## **Message**

Regarding the background situation in Slovenia in the first stage we have to develop the market for gas driven cars. At the same time we can promote the production and usage of biogas. In the second step it will be possible to promote the use of biogas in cars.