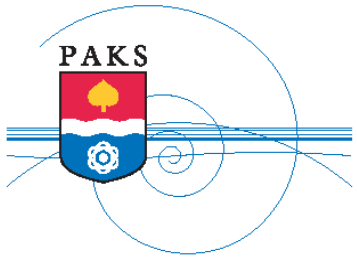
Smart City Paks
A livable, sustainable atomic city



Smart solutions in the city

- SEAP
- Protheus project
- Electric buses
- E-bicycle acquisition
- E-charging stations
- Smart meters
- Photovoltaic cells

Financing

- Protheus – supported by ELENA (European Local ENergy Assistance), the European Commission's regional support programme for the promotion of environmentally friendly technologies
- Acquisition of electric buses – IKOP (Hungarian Integrated Transport-development Operational Programme)
- Acquisition of electric bicycles – eGuts (Danube Transnational Programme)
- Installing e-charging stations – Jedlik Ányos Plan
- Installing smart metres – Interreg Central Europe – Together Programme
- Installing photovoltaic cells – KEOP (Hungarian Environment and Energy Operational Programme)

SEAP

- In 2016 the Covenant of Mayors accepted Paks' Sustainable Energy Action Plan (SEAP). This document does not only represent the city's ambitious endevour (to decrease the city's CO2 emission by 20% by 2020), but is also the basis of all Hungarian energy proposals in the 2014-2020 period. Furthermore, the SEAP is a document that collects all projects/summarises development actions and contains the guidelines that the city would like to follow in the future regarding renewable energy resources with the help of domestic and EU tenders and grants.

The Protheus project

- According to the forecasts of the International Energy Agency, by 2050 70% of newly purchased cars will be hybrid or plug-in hybrid, which presents a major challenge.
- Paks would like to take action in time, and aims at pioneering in innovation. It has thus started an ambitious regional undertaking. The Protheus project's goal is to implement electromobility in Paks and municipalities within a 60 km radius. Further objectives are the generation, storage and distribution of electricity and smart grid integration of the subregion network. This supports the promotion of a new conditionality that insures a more livable and healthy environment, as well as the development of a sustainable, recoverable model for effective operation of resources. We shall exchange the carbon dioxide emitting local and regional public transport buses and other service vehicles that transport workers to and from the current and future nuclear power plant for 100% electric vehicles.
- The project aims to develop a fleet of domestically manufactured buses and utility vehicles, the infrastructure of alternative fueling (electric charging stations) and the expansion of the project's economic and logistic catchment area.
- **Financing:** ELENA – (European Local ENergy Assistance), the European Commission's regional support programme for the promotion of environmentally friendly technologies. 90% in the preparatory phase, favourable financing in the implementation phase.

Electric bus acquisition

- **IKOP** (Hungarian Integrated Transport-development Operational Programme): Apart from the subregional Protheus project, the City of Paks also plans to acquire 10 new electric buses for city transport and install two e-bus charging stations with EU funding. In this way we could trade the whole of our local petrol-based public transportation to electric public transportation. The project's objective is the development of the city's public transport system, the elevation of service quality, the preference of public transportation over private means of transport. Further objectives are the reduction of environmental impact and laying the foundations of sustainable development. The realisation of the project would enable the operator to work economically and cost-effectively.
- **Financing:** (100%) IKOP (Hungarian Integrated Transport-development Operational Programme) - EU funding through national grant scheme

E-bicycle acquisition, charging station

- **eGUTS** (Danube Transnational Programme): **E**lectric, Electronic and **G**reen **U**rban **T**ransport **S**ystems – Electric and Sustainable Urban Transportation Systems

- Paks is participating in the transnational programme as a project partner, and has the opportunity to acquire 2 electric bicycles and install a charging station. The use of the bicycles can be monitored in real time via transmitters controlled by a central computer. The municipality wishes to increase the number of electric bicycles freely available to the public in the future, to further popularise green transport, the everyday use of renewable energy resources and to deepen citizens' environmental awareness.

E-charging stations

- The project is funded through a national grant scheme, the **Jedlik Ányos Plan**. The manufacturing of electric cars has only just begun in Europe, we can hardly see e-cars on the roads. However, it is palpable that manufacturers are at the ready and significant changes are to come. It is the Hungarian State's objective for electric charging stations to become available in as many municipalities as possible, thus they are providing e-charging stations nationwide based on population ratio. We are planning the installment of 2 charging stations in Paks. We are submitting the project at the end of this year.
- **Financing:** (100%) national grant, through national grant schemes

Smart meters – Together Programme

- **Interreg-Central Europe – Together:** EU-funded development project in which the municipality shall implement the installation of smart metres in 11 institutions to monitor their heat, gas and energy consumption. Thus, we will be able to control and regulate them. The metres have multiple counters so they are able to monitor multiple tariffs simultaneously. They are also able to measure consumption hourly or even down to the minute. In this way institutions' actual consumption will not have to be determined based on flat-rate fees or periodical metre reading, but we will be able to reduce the given institutions' utility expenses by being aware of consumption patterns (peak- and off-peak periods).

Financing: (100%) Interreg-Central Europe Together Programme: direct EU-funding

Photovoltaic cells

The use of renewable energy resources, environmental awareness and the implementation of Paks as a green city are not empty words. The municipality of Paks has begun the installation of solar collectors, starting with its own institutions. The solar collectors will produce electricity for the 9 buildings of 4 institutions (Mayor's office, schools, kindergartens, community center). The generated electricity will be regenerated, thus reducing the institutions' consumption, maintenance costs and CO2 emission.

Financing: (100%) KEOP (Hungarian Environment and Energy Operational Programme) EU funding, through national grant scheme

THANK YOU FOR YOUR ATTENTION!

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