

## Horizon Europe PROFILE FORM

<b>Organization Name / Department</b>	HUPX Hungarian Power Exchange Company Limited by Shares	<b>Organization Short Name</b>	HUPX Ltd.
<b>Organization Type</b>	<input type="checkbox"/> University <input type="checkbox"/> Public Research Centre <input type="checkbox"/> <b>Large Scale Enterprise</b> <input type="checkbox"/> Small and Medium Scale Enterprise	<input checked="" type="checkbox"/> Public Body <input type="checkbox"/> International NGO <input type="checkbox"/> National NGO	
<b>Research Fields</b>	<p><b><u>In depth experience on the mechanisms of the liberalized national and EU electricity markets. Participation in various European market integration projects for day-ahead and intraday electricity markets. Knowledge of national and EU regulation:</u></b></p> <p>HUPX operates day-ahead and intraday markets on a continuous basis and established a thorough knowledge of the market processes on both markets ranging from bidding, capacity handling, nomination to shipping activities. HUPX develops all their contributions to any potential project aiming to build a smart single electricity grid with its large team of engineers and their expertise:</p> <ol style="list-style-type: none"> <li><b>1. Market coupling projects</b> <ul style="list-style-type: none"> <li>- on day-ahead and intraday timeframes</li> <li>- considering different products of energy and balancing markets</li> <li>- with tailored market services</li> <li>- Relevant core-projects: 4MMC/Interim/Core Market Coupling, XBID, HUDEX project, CEEGEX project</li> </ul> </li> <li><b>2. Design and development of market platforms and business services: hosting and operation and O&amp;M services of market applications</b></li> <li><b>3. Guarantees of Origin Market</b> <ul style="list-style-type: none"> <li>- Monthly auctions with clearing and settlement services and guarantee system. Available technologies: Biogas, Biomass, Geothermal, Hydro, Landfill gas, Solar, Waste, Wind and any other EECS compliant technology</li> </ul> </li> </ol>	<p><b>Motivation:</b> HUPX is interested in the scientific project work, apart from its core activities is truly engaged towards further developments of energy markets, always seeking for more opportunities to extend its market portfolio and have a step ahead in other pan-European projects.</p> <p>According to the 3<sup>rd</sup> Article on the Internal Market for Electricity 2019/943 HUPX aims to support research and innovation actions to ensure sustainable, secure and low-carbon energy sources, technologies or systems which are to be realised and used to the benefit of society.</p> <p>Based on Hungary's National Energy Strategy 2030, an increase in renewable energy generation is foreseen, while according to HUPX assumptions, demand for green energy consumption is expected to show growing tendencies. HUPX encourages any improvement of the current situation aiming to a more sustainable and secure energy supply and wishes to introduce benefits of innovative market solutions to the Hungarian electricity market stakeholders.</p>	
<b>Short Description of the Organization / Department</b>	<p><b>HUPX Ltd.</b> is the operator of the organized Hungarian spot power market with leading position in Central and Eastern Europe. The core activity of HUPX – providing reference price and exchange trading platform - is to effectively contribute to the development of the Hungarian electricity market. HUPX provides high quality exchange services for the power and gas markets in a</p>		

	<p>transparent and non-discriminatory manner, granting members with secure trading platforms and excellent customer services to make trading easy and safe on a constantly moving market. HUPX is responsible for the execution of Single Day-ahead Coupling (SDAC) and Single Intraday Coupling (SIDC) in Hungary.</p>
<p><b>Previous Related Projects / Research Experience</b></p>	<p>HUPX actively participates in research and innovation actions under framework of the Horizon 2020 programme in Farcross and Trinity projects to facilitate market integration and cross-border price harmonization.</p> <p><i>Onepager of current RI projects and the involment of HUPX is available at the following link:</i>  <a href="https://hupx.hu/en/articles/hupx-in-horizon2020-projects/150">https://hupx.hu/en/articles/hupx-in-horizon2020-projects/150</a></p> <p>TRINITY (TRansmission system enhancement of regioNal borders by means of IntellIgenT market technologY) project is part of the Horizon 2020 programme (Grant Agreement No 863874). It is intended to support the creation of a fully unified, single smart electricity grid connecting EU and non-EU countries in the South- and Central-Eastern European regions, whilst new, innovative products developed within the framework of the project will promote higher penetration of renewables.</p> <p>FARCROSS („FACilitating Regional CROSS-Border Electricity Transmission through Innovation”, Grant Agreement No 864274) aims to offer state-of-the-art software solutions that will increase cross-border capacity and so the potential of cross-border trading of energy and balancing capacity</p>
<p><b>Short Description of the Project idea (if foreseeable)</b></p>	<p>Projects aiming to fulfill the actions written in the REPowerEU plan, including but not limited to:</p> <ul style="list-style-type: none"> <li>- <b>design and development of a new market platform and services to trade hydrogen</b></li> <li>- <b>design and development of a new market platform and services for prosumers to offer flexibility</b></li> <li>- <b>any solution accelerating the green transition</b></li> </ul> <p><b>Background:</b>  According to the Article 16 (3) of EU Directive 2019/ 944 (Clean Energy Package) Member States shall ensure that citizen energy communities are able to access all electricity markets, either directly or through aggregation, in a non-discriminatory manner. HUPX wishes to engage this action as the company already has strong market experience in the operation and maintenance of market platforms and wishes to expand its portfolio with new products for new target groups:</p> <p><b>Hydrogen</b> is an important part of the overall EU strategy for energy system integration. A dedicated strategy on hydrogen in the EU was adopted in 2020 describing the need of a new market design and related market rules to the deployment of hydrogen, including removing barriers for efficient hydrogen infrastructure development, and ensure access to liquid markets for hydrogen producers and customers and the integrity of the internal gas market through the upcoming legislative reviews. HUPX as an electricity market operator has obtained strong market experience by facing numerous similar problems by developing its already existing markets. HUPX believes that deploying the existing best practices of the future’s hydrogen market while considering the unique features of the new segment can bring a significant market value for market participants by offering them standardized, user-friendly and transparent trading platforms to step into transactions on the free market.</p> <p><b>Flexibility:</b> While energy markets of EU are easily accessible for a certain segment of market players, HUPX wishes to provide a user-friendly trading framework for those as well who prefer to face with the current challenging situation on their own or decide to join energy communities manage their position to achieve better results. To bring prosumer-pleasing solutions to life requires the ability to gather and understand a wide variety of disparate and complex data sets</p>

	<p>and offer different features to make insightful recommendations, and help inform fast, smart decisions in real time.</p> <p>While aiming to develop new services for new clients, HUPX would like to offer a wider range of services for new purposes including a potential co-operation with TSOs and DSOs and their service providers to make a common effort to build an organized platform for flexibility.</p> <p><u>HUPX would like to contribute to design, develop and maintain such platforms and believes being continuously involved in the regulation processes as a NEMO, the company could serve a solution in line with the expectations of EU</u></p> <p><b>Data monitoring services</b>  Building a new platform for inverter data monitoring to improve grid controllability and forecasting tools to support market participants to improve their market position by projecting a more realistic picture about the actual available resources. Bringing prosumer-pleasing solutions to life requires the ability to gather and understand a variety of complex data sets and offer different features to make insightful recommendations and help smart decisions in real time. HUPX already handles big data with a huge routine.</p>
<p>Related Call/Topic</p>	<p><b><u>HORIZON EUROPE</u></b></p> <p><b>Sustainable, secure and competitive energy supply (2023)</b></p> <p><b>Supporting the development of a digital twin to improve management, operations and resilience of the EU Electricity System in support to REPowerEU</b>  <b>TOPIC ID: HORIZON-CL5-2023-D3-01-10:</b></p> <p><b>Digital tools for enhancing the uptake of digital services in the energy market</b>  <b>TOPIC ID: HORIZON-CL5-2023-D3-03-04</b></p> <p><b>Efficient, sustainable and inclusive energy use</b></p> <p><b>Interoperable solutions for positive energy districts (PEDs), including a better integration of local renewables and local excess heat sources</b>  <b>TOPIC ID: HORIZON-CL5-2023-D4-01-03</b></p> <p><b>Innovative uses of lifecycle data for the management of buildings and buildings portfolios (Built4People Partnership)</b>  <b>TOPIC ID: HORIZON-CL5-2023-D4-02-01</b></p> <p><b>Sustainable, secure and competitive energy supply (2024)</b></p> <p><b>Energy Management Systems for flexibility services</b>  <b>TOPIC ID: HORIZON-CL5-2024-D3-01-12</b></p> <p><b><u>CLEAN ENERGY TRANSITION PARTNERSHIP</u></b></p> <p><b>TR1 INTEGRATED NET-ZERO-EMISSIONS ENERGY SYSTEM CALL MODULES</b>  Call Module 1.2: RESDemoPowerflex</p> <p><b>TRI 3 ENABLING CLIMATE NEUTRALITY WITH STORAGE TECHNOLOGIES, RENEWABLE FUELS AND CCU/CCS</b>  Call Module 3.2: Hydrogen and renewable fuels</p>

	<p><b>TRI 5 INTEGRATED REGIONAL ENERGY SYSTEMS CALL MODULE</b>  Call Module 5: Integrated Regional Energy Systems for a Resilient, Secure, and Renewable Energy Supply</p> <p><b>DRIVING URBAN TRANSITION</b>  CALL TOPIC: <b>POSITIVE ENERGY DISTRICTS PATHWAY (PED)</b></p> <p>PED topic 1: <b>Energy communities – energy transition driven by civil society</b>  PED topic 2: <b>Energy flexibility strategies – technological, legal, societal challenges</b>  PED topic 3: <b>Energy efficiency in existing urban structure</b></p> <p><b><u>CLEAN HYDROGEN PARTNERSHIP</u></b></p>
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