

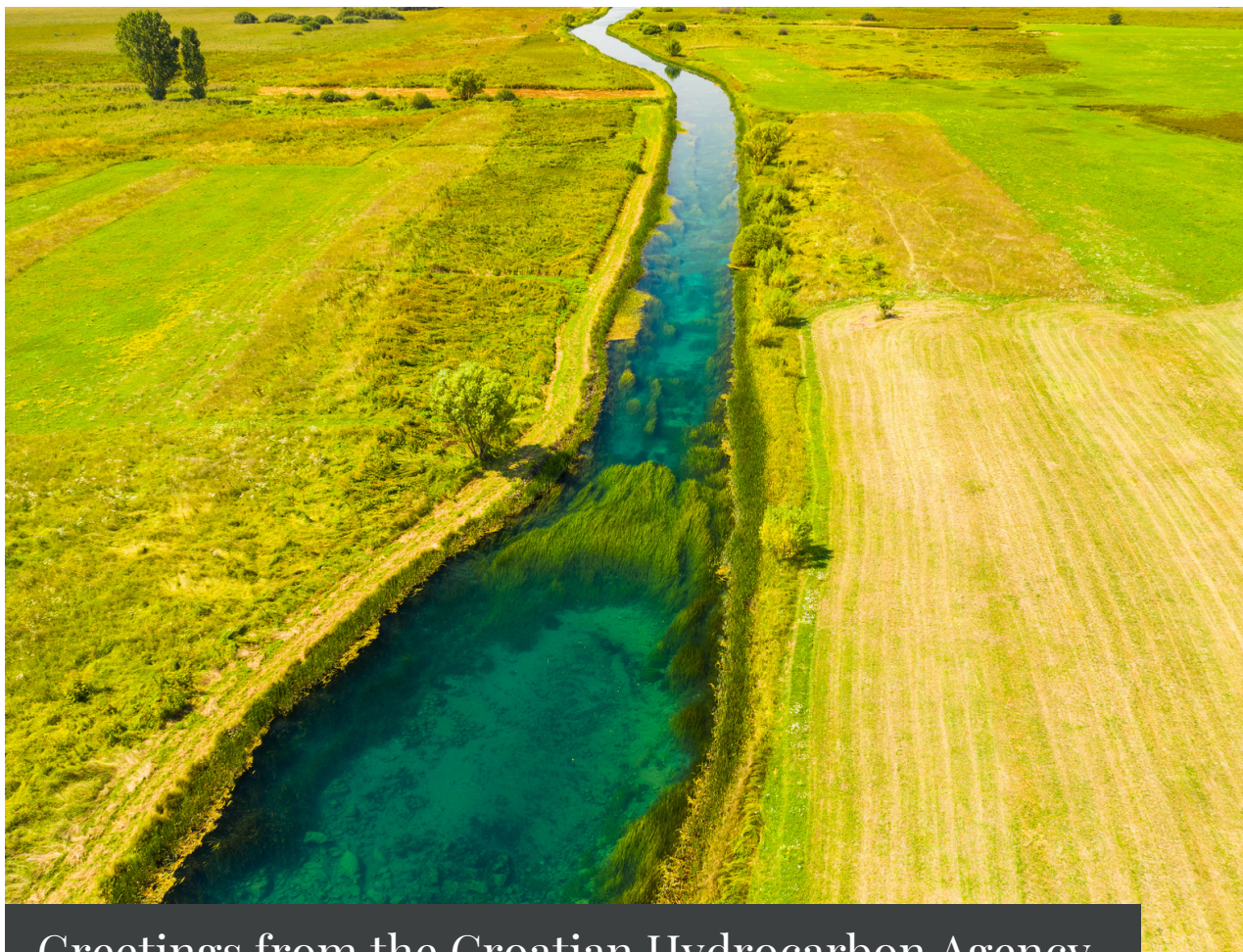
CROATIAN HYDROCARBON AGENCY

Invest in

GEO THERMAL

CROATIA





Greetings from the Croatian Hydrocarbon Agency

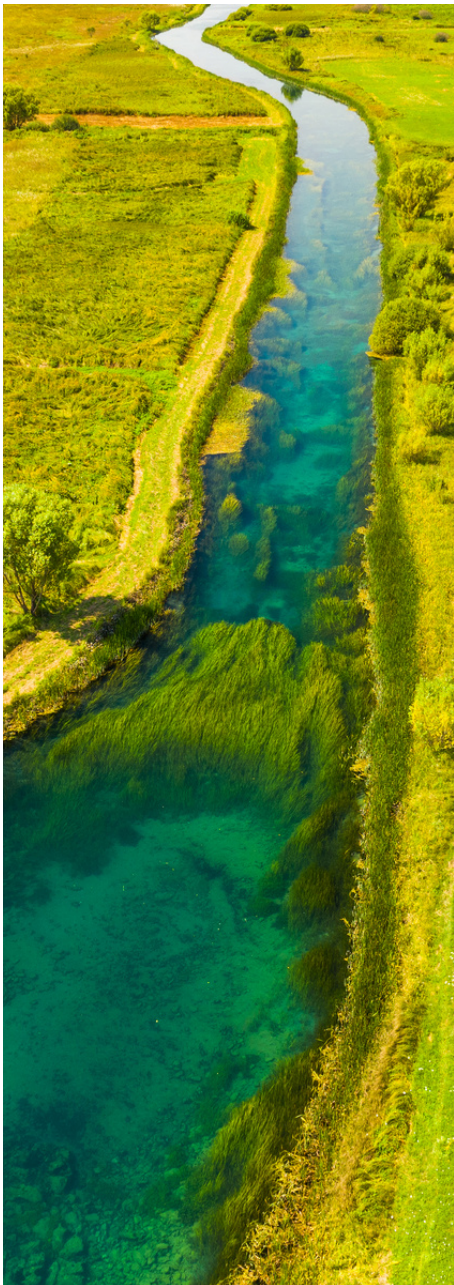
WELCOME ABOARD

We are pleased to have you on board as a potential investor in Croatia's geothermal projects.

Croatia is well on its way to become one of the most successful countries in the EU, having turned its extensive knowledge of the oil and gas industry and its geological potential into a success story of true energy transition.

Welcome aboard!

Why Croatia?



***Rich knowledge, great potential,
real green transition***

Croatia has taken an extraordinary step forward in promoting its geothermal potential, which has been recognised by many organisations and companies worldwide.

Drawing on our extensive knowledge and using data from the oil industry, we have laid the foundations for the development of a new energy concept and further development.

Our geothermal projects are an example of a real transition that takes into account all the components of a sustainable and profitable transition to clean, renewable energy sources. These projects are being developed thanks to the oil industry, as their foundations lie in the data and infrastructure created to meet the needs of hydrocarbon exploration and production.

By using the existing knowledge and data, the Croatian Hydrocarbon Agency channels the fossil industry's data in favour of renewable sources, adding value to these projects and opening the door to new forms of energy.



Unique approach

Proven significant geothermal potential

We have implemented a unique approach aimed at promoting geothermal potential by opening the main repository of the geological database collected for the purposes of oil and gas industry.

Thanks to the data from the oil industry, the Croatian Hydrocarbon Agency can offer concrete and initial data on potentially productive geothermal locations, and even existing wells for which we have information on water temperatures and reservoir permeability.

We have created a database of about 3,500 wells and seismic data over an area of about 20,000 square kilometres, including a large amount of 3D seismic data.

All You

Need To

Know

On **28 December 2022**, the Croatian Hydrocarbon Agency published tenders for the exploration of geothermal waters for energy purposes in six exploration blocks. The geographical area in question is the Drava Basin, where significant geothermal potential has been proven.

Croatia offers exploration areas in four Croatian counties (Međimurje, Koprivnica-Križevci, Podravina, Osijek-Baranja) with a total area of **over 200 km²**.

*The Republic of Croatia has proven geothermal potential – its geothermal gradient is **60% higher than the European average.***

Six exploration blocks tendered in new bidding round in Croatia

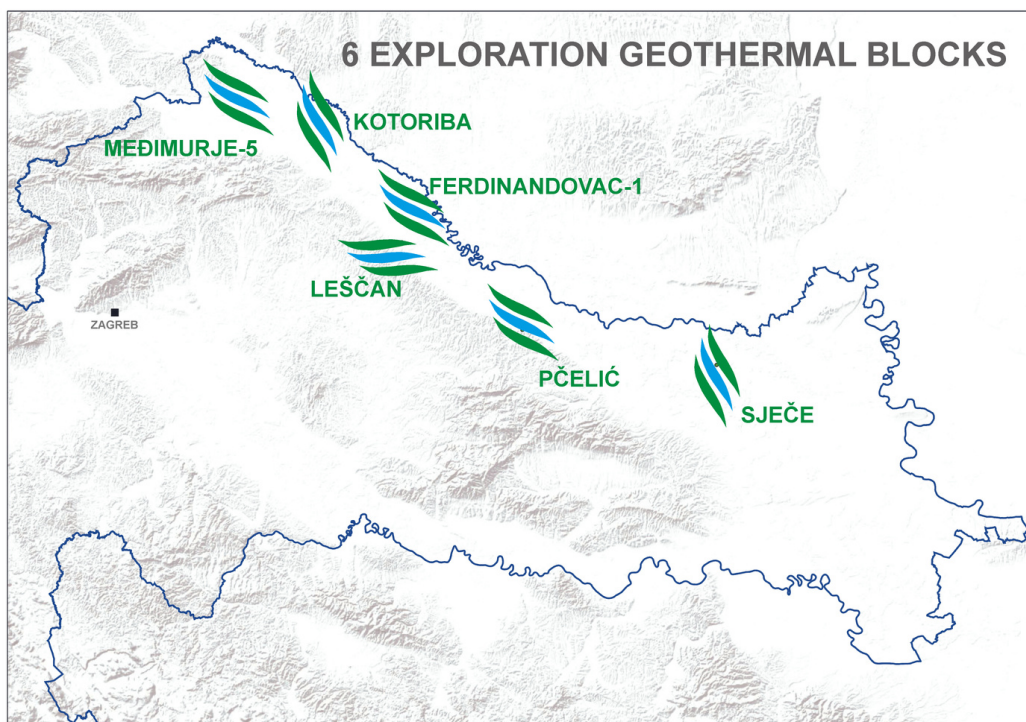
The potential of the exploration blocks was identified in previous wells drilled for the purpose of oil and gas exploration and production, which now significantly reduces the risk and cost for future investors.

The Croatian Hydrocarbon Agency, in collaboration with the Ministry of Economy and Sustainable Development, has carried out the necessary pre-tender preparatory activities and prepared the tender documents for the proposed exploration blocks.

Exploration of geothermal waters for energy purposes is subject to the Act on Exploration and Exploitation of Hydrocarbons.

In a unique process, investors compete for an exploration permit, followed by a production permit if all conditions from the exploration phase, which lasts 5 years, are met.

The deadline for bids is 1 June 2023 at 12:00 p.m.





Međimurje-5

Exploration Block: **Međimurje-5**
Area (sqkm): 17,39

The total depth of the Međimurje-5 well is **3079 m** (MD - measure depth) with a measured temperature at the bottom of **133°C**.



Kotoriba

Exploration Block: **Kotoriba**
Area (sqkm): 27,14

The total depths of wells reach from **3450 to 4000 m** with measured temperatures at the bottom of the wells between the **130°- 170°C**.



Ferdinandovac-1

Exploration Block: **Ferdinandovac-1**
Area (sqkm): 28,62

Total depth of the well is **3011 m** with a measured temperature of **149° C** at the bottom of well.



Leščan

Exploration Block: **Leščan**
Area (sqkm): 55,65

The total depth of the well is **4.830 m** with a measured temperature of **196°C** at the bottom of the well.



Pčelić

Exploration Block: **Pčelić**

Area (sqkm): 32,83

The total depth of the **Pče-1 well** is **4910 m** with a measured temperature of **196° C** at the bottom of the well, while the **Pče-1AL well** reached a total depth of **5215 m** with a measured temperature at the bottom of the well of 207° C.



Sječe

Exploration Block: **Sječe**

Area (sqkm): 32,83

Eight exploration wells: Sječe-1,-2 and -3, Marjanci-1, -2 and -3 and Čamagajevci-1,-1Alfa.

The high-temperature geothermal potential was determined in the **Sječe-1 well** as water saturation with a temperature of **146° C** in Middle Miocene carbonates (syn-rift carbonate geothermal play).

Information on the bidding round

Pursuant to the provisions of Article 54 of the Act, an exploitation license for geothermal waters is granted based on a single bidding round, which begins with the procedure for selecting the most advantageous bidder for the exploration of geothermal waters and ends with the conclusion of a contract for the exploitation of geothermal waters.

The subject of the bidding round includes the entire one-time procedure for the granting of a licence for the exploration of geothermal waters and a licence for the exploitation of geothermal waters with all its phases.

Information on the Issuer of the Geothermal Waters Exploration and Exploitation License

Name: **Ministry of Economy and Sustainable Development** (Ministarstvo gospodarstva i održivog razvoja)

Headquarters: Radnička cesta 80, 10 000 ZAGREB

Personal Identification Number (OIB): 19370100881

Phone Number: +3851/3717111

Web address: <https://gospodarstvo.gov.hr/>

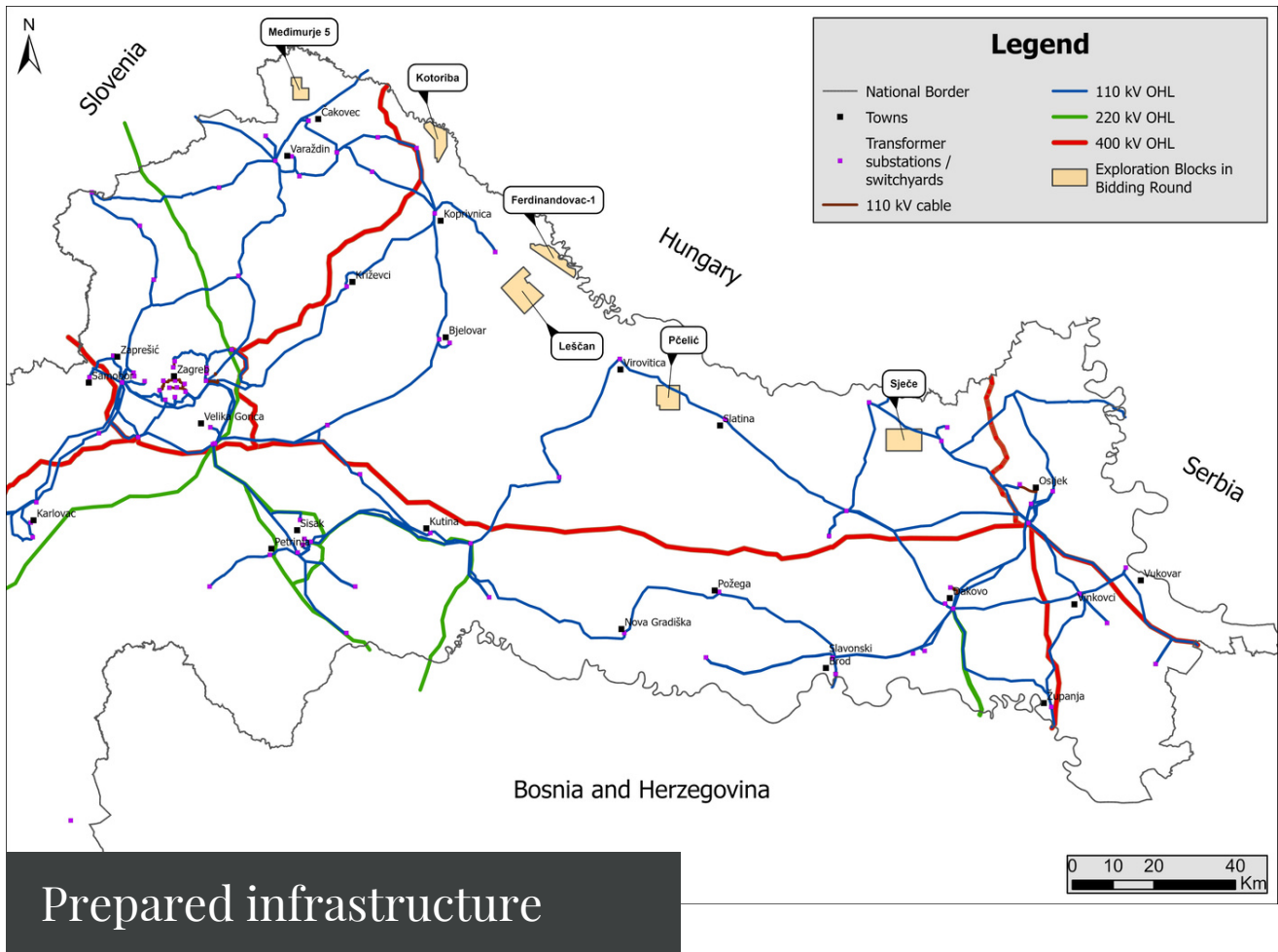
Contact details:

Name: Croatian Hydrocarbon Agency (Agencija za ugljikovodike)

Telephone: +38597/6595252

Web site: www.azu.hr

E-mail address: geoterme@azu.hr



Electric Network in the Republic of Croatia

The transmission network is part of the Croatian electricity grid, which consists of substations, transmission switchgears and overhead lines and cables.

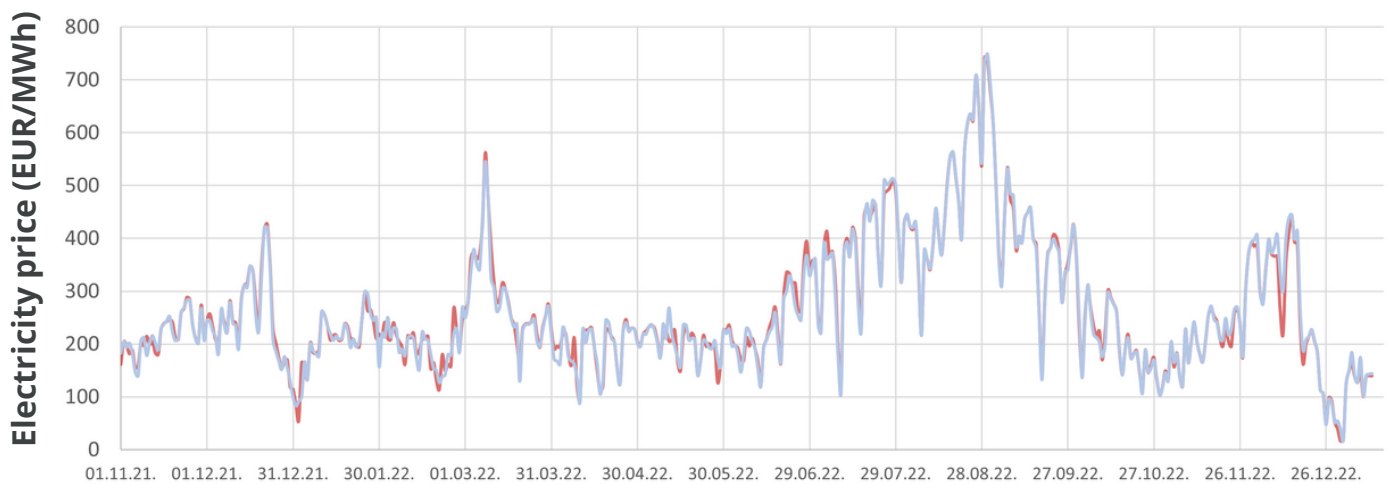
Electricity is transmitted through a network of voltage levels **400, 220 and 110 kV.**

Electricity markets in Croatia

In the initial phase of market operation, a bilateral market model was chosen, in which electricity is traded on the basis of bilateral contracts concluded between the participants in the electricity market.

With the amendments to the rules for the organisation of the electricity market, the concept of balancing groups was introduced, enabling joint optimisation of the market participants' portfolios in the same balancing group. The second electricity market is the organised electricity market, which is operated by CROATIAN POWER EXCHANGE Ltd (CROPEX).

Electricity price – Day-ahead market



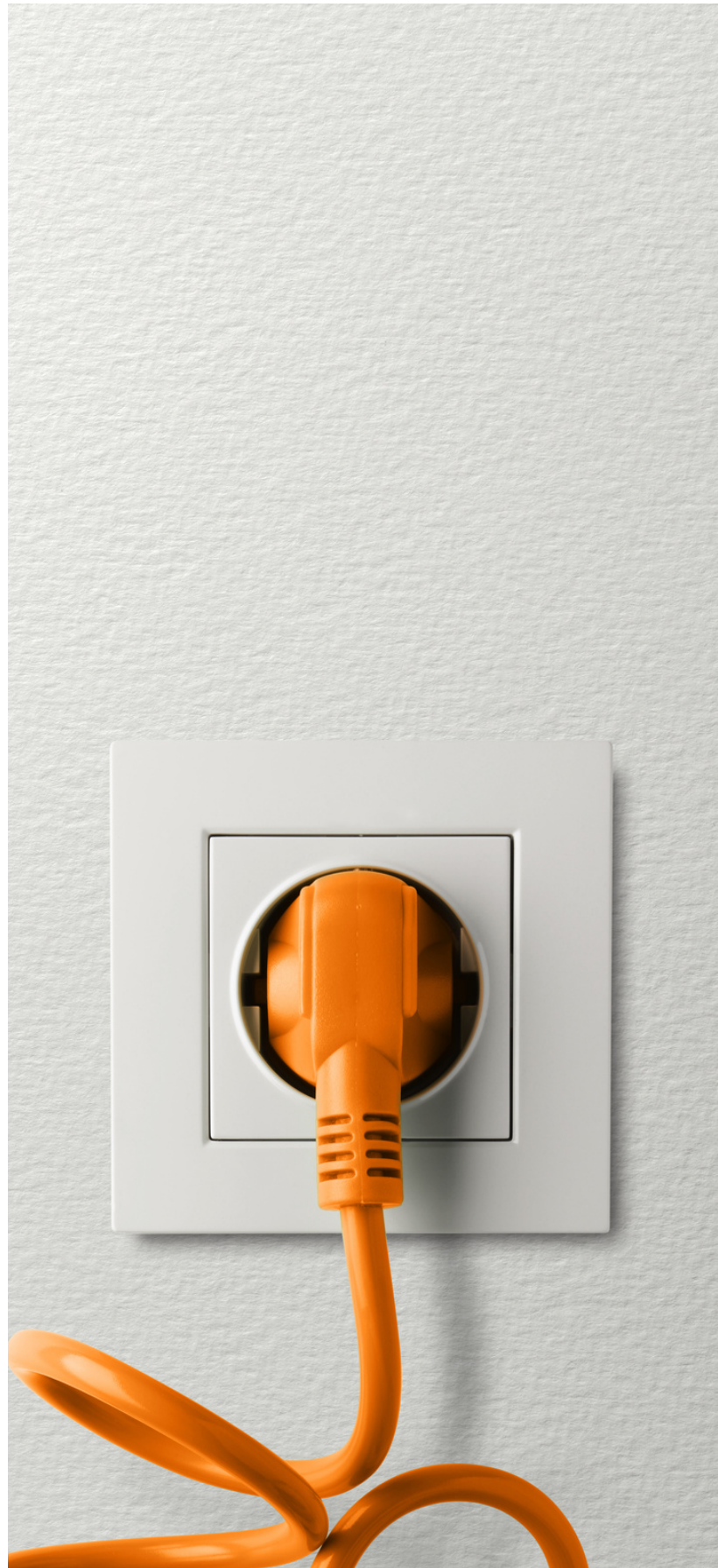
— Baseload price CROPEX

— Baseload price HUPX

Baseload price - calculated using a weighted average of the traded volume based on forward data.

Croatian
Hydrocarbon
Agency is looking
for a strong
partner, and
potential investors
will receive
licensing terms
that are
advantageous,
transparent and
simple, based on
worldwide best
practice.

The investment-friendly legislation, existing infrastructure, geopolitical stability, proven geothermal potential and long-standing tradition in the industry undoubtedly make Croatia a desirable business partner.





About Us

2014

Established by the Government of the Republic of Croatia as an operational and systematic support to the Ministry of Economy and Sustainable Development.



2018 - ONGOING
ENERGY TRANSITION

CROATIAN HYDROCARBON AGENCY

REAL TRANSITION

Our geothermal projects are an example of a real transition that takes into account all the components of a sustainable and profitable transition to clean, renewable energy sources.

FULL CIRCLE

Drawing on our extensive knowledge and using data from the oil industry, we have laid the foundations for the development of a new approach to energy.

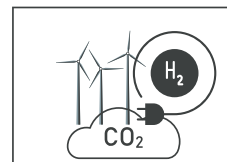
HYDROCARBONS



GEOHERMAL



NEW ENERGY



BENEFITS

1

WE CREATE

foundations for a sustainable (energy) future with viable and sustainable models that are recognized by the EU.

2

WE FACILITATE

investments by adapting legal regulations.

3

WE PARTICIPATE

in innovative projects that create opportunities for the development of a new approach to the overall development of the economy.



If you are interested in participating
in geothermal projects in Croatia,
please contact us:

**CROATIAN
HYDROCARBON
AGENCY**

+385 1 6431 920
geoterme@azu.hr
www.azu.hr