



Building a
BRIDGE
to a Carbon Free
Future

Contributing to Europe's energy security through the exploitation of Greece's potential natural gas resources

Efthimios Tartaras

Hellenic Hydrocarbon Resources Management S.A. (HHRM)

A Key Actor in the Implementation of Greece's National Energy and Climate Plan

Founded in 2011, Hellenic Hydrocarbon Resources Management (HHRM) was initially established with the purpose of managing national interests regarding the exploration, exploitation, and production of hydrocarbons in Greece, in addition to being the competent authority for offshore safety in oil & gas operations. Today, and in response to the growing demands of Greece's ambitious National Energy and Climate Plan, HHRM's scope has widened to include the oversight of new energy technologies that leverage the unique expertise of the oil & gas industry, while the company is also playing a crucial role in cross-border gas infrastructure projects.



Core Mandate

- ✓ Accelerating activities in Greece's upstream sector, with a particular focus on natural gas
- ✓ Ensuring activities are carried out upholding the highest possible standards for environmental protection, health, and safety.
- ✓ Exploring potential synergies between the oil and gas industry and new energy technologies such as Carbon Capture and Storage (CCS), Underground Gas Storage (UGS), offshore wind farms (OWF), and hydrogen.

Regulatory and Licensing Authority for Upstream Hydrocarbon Projects

Offshore Safety Authority

65% Shareholder in DEPA International Works

Regulatory and Licensing Authority for CCS and UGS

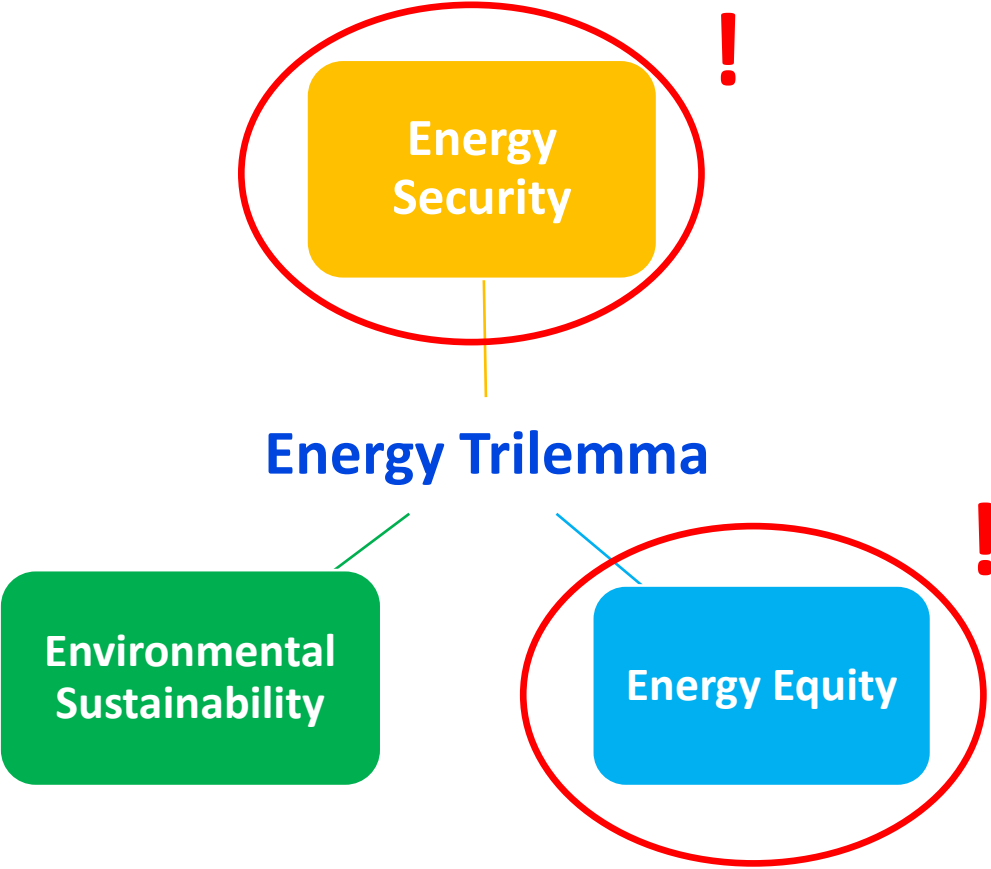
Nominated as Regulatory and Licensing Authority for OWF projects

2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

Activities

Climate Change: a global and national challenge

Currently experiencing an unprecedented energy crisis



Lessons Learned



Energy Crisis is not short term

We should prepare for
a series of energy
crises



Little tolerance to supply-demand gaps

Supply and demand gaps
will be difficult to manage
and carry a burden on
economy



Security threat

Short term actions
towards diversification
of energy supply
sources



Energy Independence

Independence can only
be achieved through the
development of
domestic resources

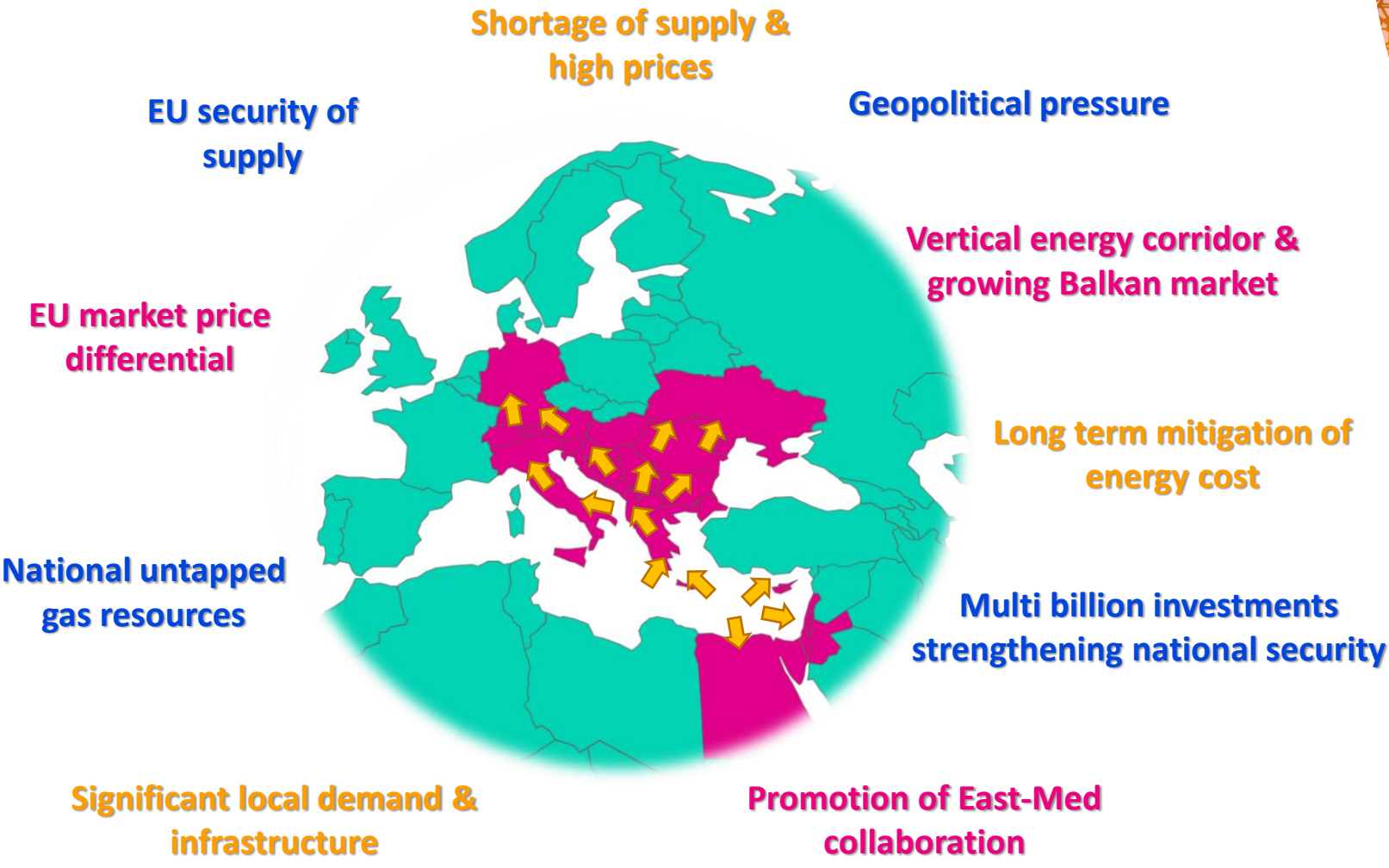
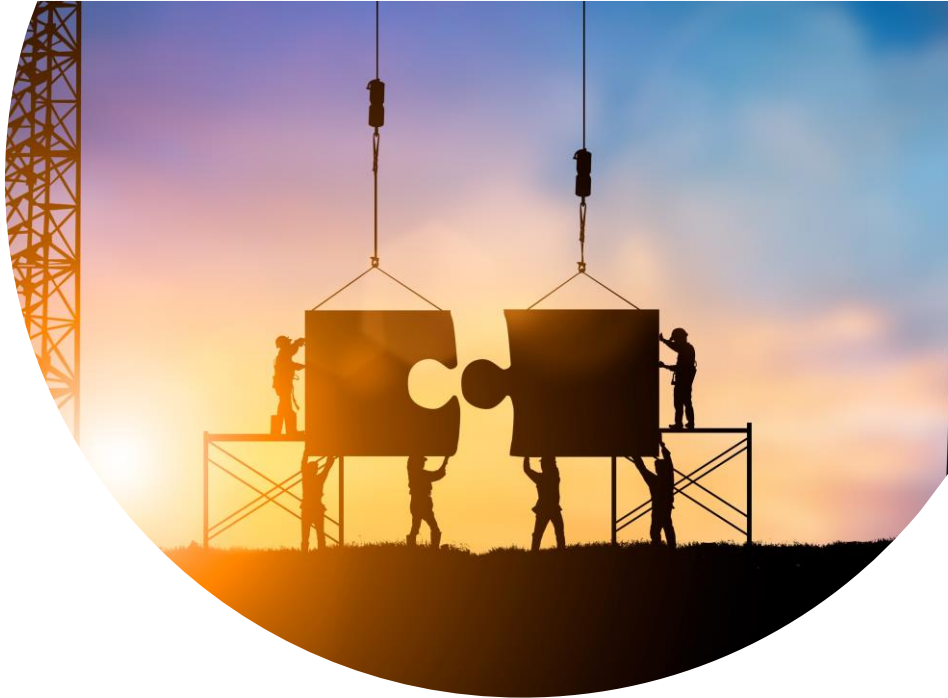


All resources needed

No luxury for either/or
dilemmas, all resources
needed for the transition

Window of Opportunity

Connecting the pieces

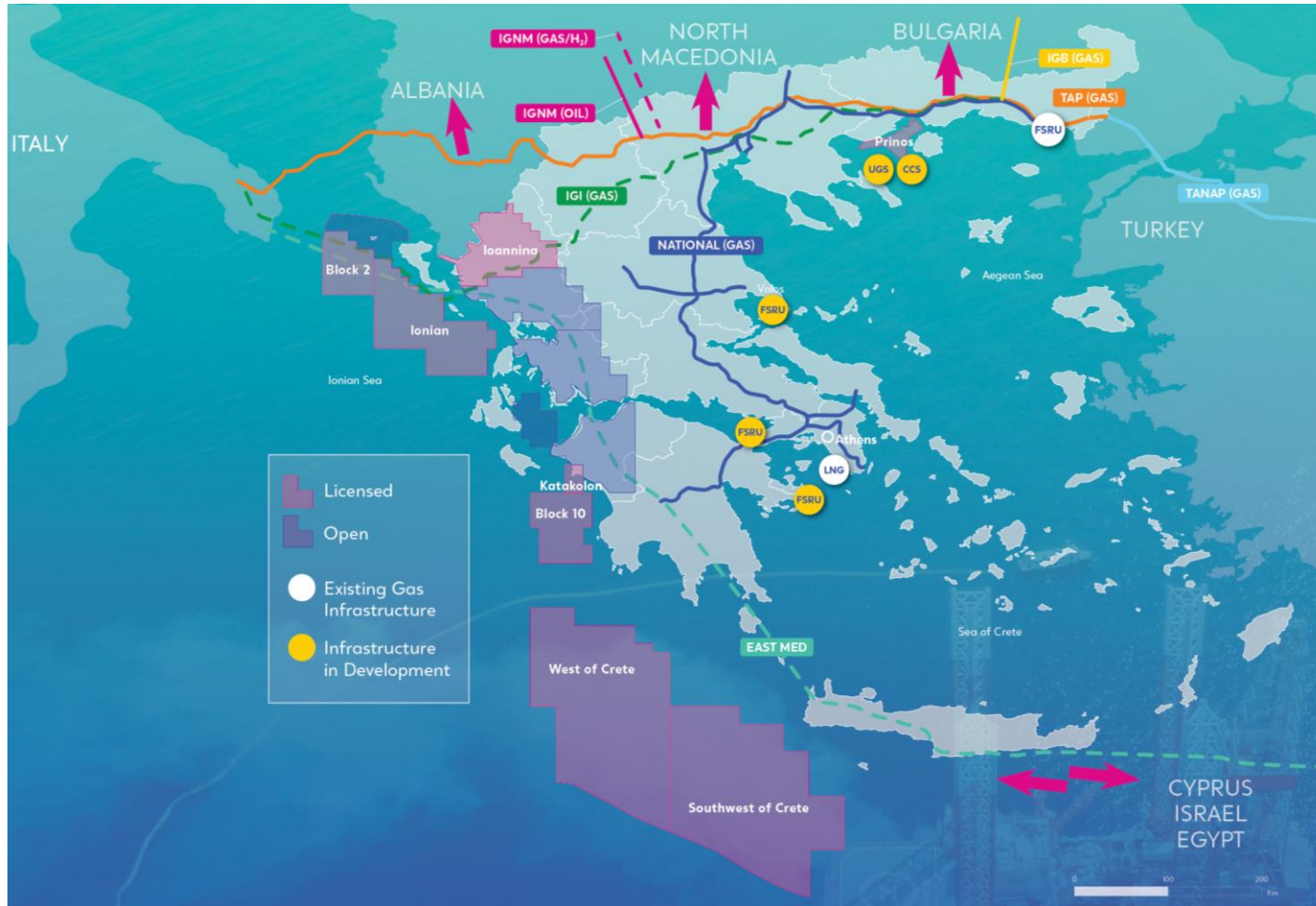


The recently announced MOU between Egypt, Israel and the EU demonstrates the importance of having access to energy resources through friendly partners and further highlights the value of the potential domestic natural gas deposits.

Natural Gas Demand: Greece & Southeastern Europe

The Necessity to Reduce EU Dependency on Russian Gas Creates a Need for New Sources of Supply

At a European level, the invasion of Ukraine has served to expose important vulnerabilities in terms of energy security and a need to rethink sources of supply and dependencies



40%: percentage of Europe's gas imports from Russia

16 billion Nm3: Forecast demand of gas imports in Greece by 2040

77%: percentage of South Eastern Europe's gas imports from Russia

11 billion Nm3: Forecast demand of gas imports in Southeastern Europe by 2040

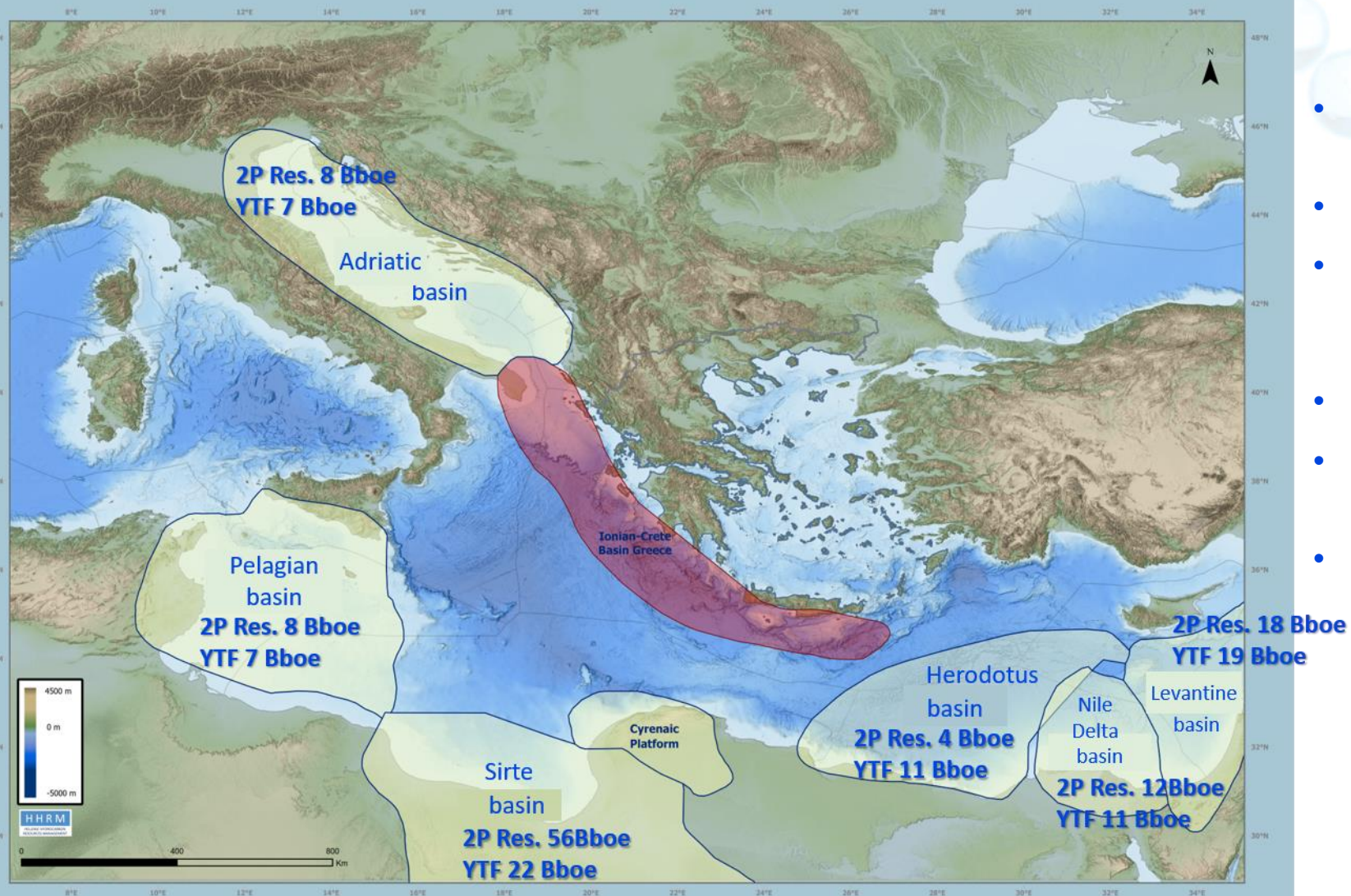
A potential natural gas supply gap would have a huge impact on Southeastern European countries

Greece
Can assist European partners bringing new gas supply into markets

- Extensive gas import/export and transmission infrastructure: cross-border pipelines, 1+3 FSRUs, an LNG terminal under expansion, and significant port infrastructure
- Proven hydrocarbon systems with large structures similar to natural gas discoveries made in neighboring countries: Albania, Cyprus, Egypt, Israel, and Italy.

The Ionian and Crete Basin

Significant potential but largely under-explored



- Thick sedimentary infill (up to 10km or more)
- Shallow/deep/ultra-deep water
- Underexplored areas (near shore) & practically unexplored areas (further offshore)
- Sparse 2D seismic coverage
- 3 wildcats with oil & gas shows (+ 5 more further near-shore)
- One gas (and oil) discovery nearby (Katakolo field)

First offshore seismic surveys since 2016 completed successfully in 2022 with the highest environmental and safety standards

2D seismic surveys completed by HELPE in early 2022 in Blocks 10 & Ionian



New environmental standards set for SEE region

- **“Soft start” protocol** to ensure that marine mammals can be temporarily removed from the geophysical survey area prior to commencement.
- **Doubling of marine mammal observers** aboard seismic surveillance to ensure protection of cetaceans and other marine life within the safety zone.
- **Doubling the radius of the safety zone up to 1.5 km** around the ship that carried out the seismic surveys in case of detection of large marine animals.
- **Waiting period 30 minutes** before the start and stop of each research activity.
- **Passive acoustic monitoring** of underwater sounds for the measurement of sea noise levels and the detection of marine mammals.
- **Application of a 1 km exclusion zone** around the "Natura" areas as well as fish farms.
- **Land and air monitoring of cetaceans** during and after surveys.
- **Environmental monitoring of wildlife sanctuaries**, including telemetry monitoring of loggerhead turtles with GPS tracking devices.
- **Full compliance with all applicable regulations and guidelines** (MARPOL VI and ACCOBAMS conventions and JNCC guidelines).

Accelerating Greece's Upstream Gas Sector is a National Priority

Greece aiming to become a natural gas producer within the decade



Clear and Full Political Support by the Prime Minister
Kyriakos Mitsotakis



Greece Currently Has **8 Active Concessions**

- 2 blocks in exploitation phase: Prinos and Katakolon
- 6 blocks in exploration stage:
 - 3 offshore blocks located in the Ionian sea: Block 2, Block 10, and the Ionian Block.
 - 2 blocks offshore Crete: West of Crete and Southwest of Crete
 - 1 onshore block: Ioannina, which is the most mature



Friendly investment environment for Hydrocarbon Exploration Projects Deemed **Projects of National Interest**. Special **Task Force** set up by YPEN to ensure swift progress.

- Fast track permitting process
- Favourable tax regime
- Easier access to financing



Estimations point towards natural gas deposits worth upwards of €250 bn

Roadmap for the monetization of potential domestic natural gas deposits



Completion of seismic surveys **1-2 years**



Completion of exploratory drilling **3-4 years**



Domestic Production & revenue generation **6-7 years**

Milestones for the development of potential natural gas deposits in Greece

HHRM – Building a Bridge towards a Carbon-Free Future

Based on 4 main pillars: Natural Gas, CCS, Offshore Wind and H₂



NG



Accelerated exploration and monetization of domestic natural gas resources is a national priority.

HHRM is the regulatory authority for all related E&P activities.



CCS



HHRM appointed as the regulatory and licensing authority for CCS.

Prinos will be the 1st field in Greece to be developed for CCS use. The project has been approved for €150M worth of EU and state funding.



OWF



Greece is the 8th country worldwide in share of electricity generation from RES.

HHRM is nominated as the regulatory and licensing authority for OWF projects in the soon-to-be submitted new OWF law.



H₂



Hydrogen economy extends the life span of HC upstream assets and midstream infrastructure.

HHRM appointed as the regulatory and licensing authority for UGS (incl. H₂).

18, D .Margari Str. , 11525, Athens, Greece | T. (+30) 210 6717591

www.greekhydrocarbons.gr
contact@greekhydrocarbons.gr
offshoresafety@greekhydrocarbons.gr



THANK YOU

2021 All rights reserved, Hellenic Hydrocarbon Resources Management S.A. ("HHRM S.A.")

Copyright Notice

This brochure has been designed by HHRM S.A. and it is protected by any applicable copyright and other intellectual property laws. This document is the exclusive property of HHRM S.A.. No portion of this document may be reproduced or duplicated, in whole or in part, without the express written consent of HHRM S.A. and any review, use, distribution or disclosure of the information contained herein by unauthorized persons is strictly prohibited.