



**New Gas Storage Capacity in Galata - To
enhance Regional Energy Security and
facilitate Gas Market Liberalization**

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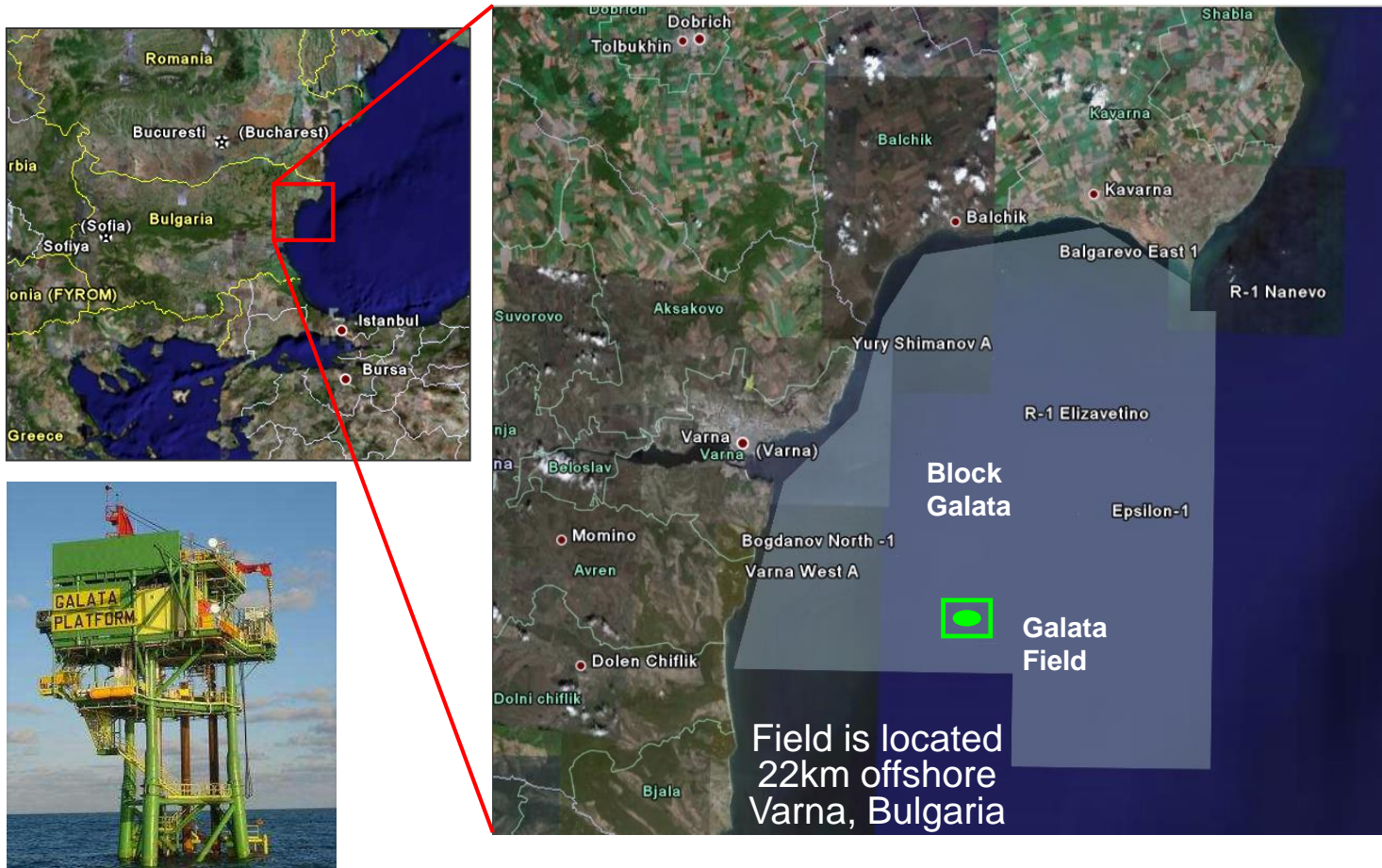
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Introduction to Petroceltic Bulgaria

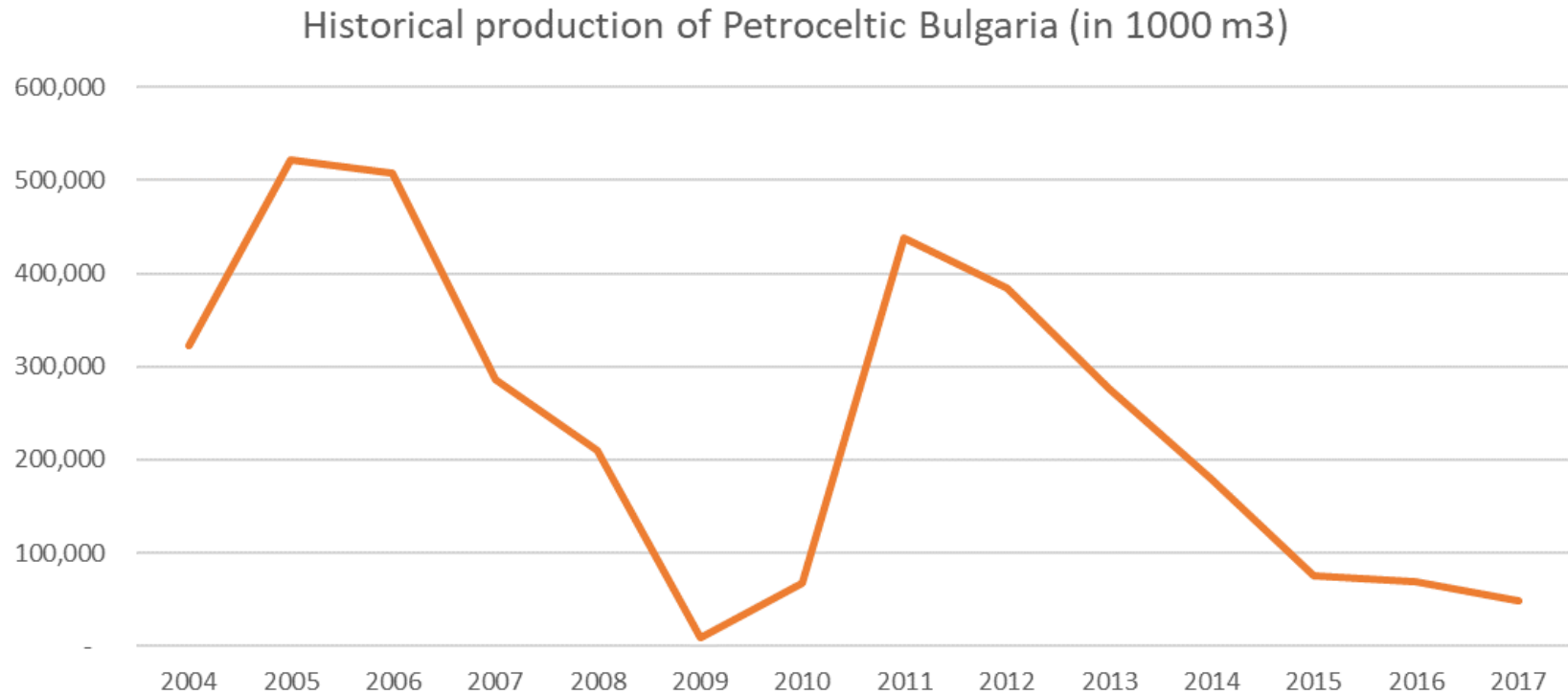
- Petroceltic has a 100% operated interest in three producing gas fields (Galata, Kaliakra and Kavarna) and one field under development (Kavarna East) in the Galata Exploration Block, which is located in the Bulgarian section of the Black Sea
- The current remaining reserves stand at ca. one billion m³
- The producing fields use an unmanned platform located on the main Galata field, to which the other fields have been tied-back using subsea completions
- The Galata license has a high quality reservoir, with permeability of 2,400md, which is ideal to be used as a **Gas Storage Facility**
- Due to the large amount of work and significant investment over the past few years, the Galata field has already effectively been converted into a gas storage facility, save for a few changes to be made (new metering station, etc.)
- The potential storage capacity of the Galata field after conversion is over to 2.0billion m³

Overview of Petroceltic Bulgaria Assets

Geographical location of Galata field



Historical production of Petroceltic Bulgaria



Strategic rational for conversion of Galata to gas storage

- This is a **private sector** lead project in a market dominated by state owned companies, it is also the least cost option for new storage capacity in Bulgaria
 - It would bring on line new storage capacity cheaply and quickly because almost all of the infrastructure needed is already in place, This will create a new storage that has not current geological degradation
 - Having two storage's in Bulgaria would bring much more flexibility in managing the gas system of Bulgaria as they can for example be fill and emptied at different times of the year
 - A privately owned and operated Gas Storage will facilitate the liberalization of the Bulgarian gas market and aid transparency in line with EU Third Energy Directive
 - The Galata gas storage is physically located close the Interconnector Greece-Bulgaria and it could be an integral part of the planned Balkan gas Hub.
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Galata is a first class reservoir with little work needed for conversion

Following the Ukraine gas crisis in 2009, Petroceltic undertook a series of significant investments to prepare Galata reservoir for storage conversion:

- **Galata Platform:** Reverse lines to store gas in wells underneath the platform were completed, enabling Petroceltic to inject gas with minor adjustments.
- **Compressor Station:** Reverse lines for redirecting the gas flow from production to injection were completed.
- **Metering Station** (connection to Bulgarian transport network): Reverse lines for redirecting the gas flow from production to storage was completed, enabling the redirection of gas towards the field at present.

The remaining work needed for Galata to be used as a storage is minimal:

- A new metering station at the Onshore Operating Plant
- Cleaning the existing pipeline from slug and water with a cleaning pig and to inspect wall thickness and pipe integrity.

Current Status

- The Galata license expires in May 2026, has a 10-year extension option and the license can be converted to storage any time before expiry
- This is an option, which was envisaged at the time of the signing of the Galata Concession agreement (2001)
- The gas storage license is to be granted by Energy and Water Regulatory Commission following the consent of the Ministry of Energy
- Ministry of Energy and Bulgargas consent was granted in 2008; MoU with Bulgargaz and discussions with BEH over the operations of the facility
- Energy Strategy to 2020 (published in June 2011) lists the project as a strategic one; approved by Government and Parliament

Recent activities and upcoming milestones

- The Energy Act - art. 40 – **was amended** in April 18 to exclude the need for property rights for Gas Storage operations, as it contradicted the Bulgarian constitution.
- Application to the Regulator for a Gas storage License is to be submitted in June 18, we will be submitting the application on the basis of a market based tariff not a regulated tariff
- It will be necessary to amend the Galata Concession agreement to accommodate the new gas storage operations
- It is our intention to give third party access to the gas storage facility in line with the Third Energy Package at unregulated prices

Potential challenges to realizing the project & Conclusions

- So far there has been a reluctance from the Ministry of Energy to engage. We sent an a proposal in November 17 with a view to starting a dialogue
- Potential resistance by some of the incumbent players, who would like to resist market liberalization with enhanced transparency
- **In Conclusion**
 - This is a Private Company initiative, bringing open third part access
 - The first phase of the project can be realised within 6 months allowing gas injection to start in March 19 if there is enough customer demand
 - Further 2 stages of investment can increase the capacity to over 1.5Bn m3 for less than Eur 100m
 - Can be a catalyst for accelerating gas market liberalization and bring greater transparency
 - Enhances regional energy security of supply and can be an important part of the proposed Balkan Gas Hub