

IGB PROJECT

Gas Interconnector Greece-Bulgaria

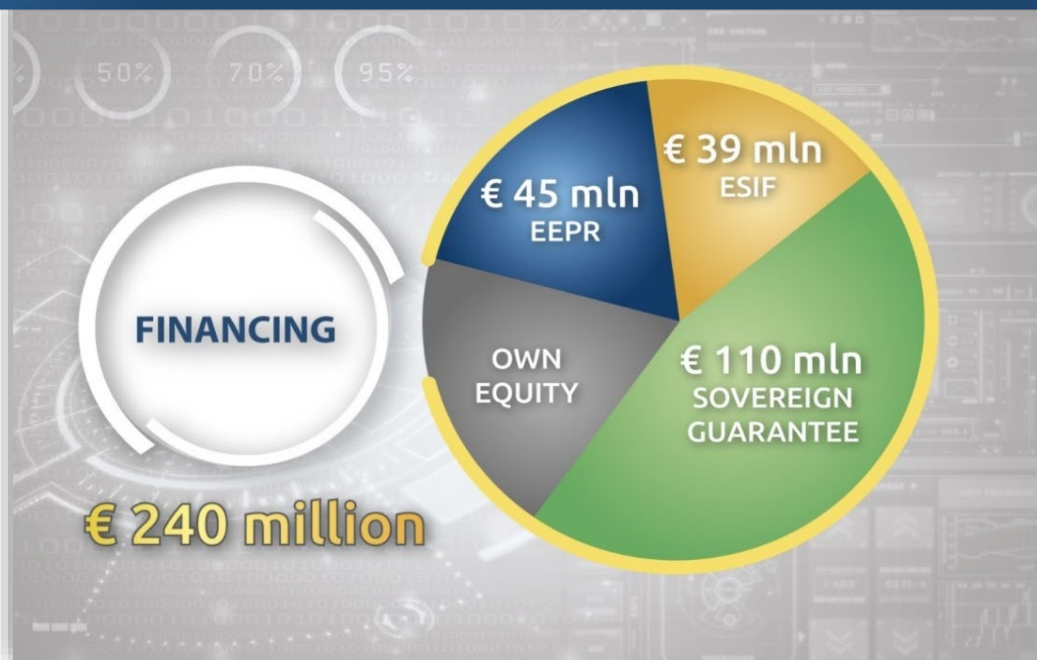


Update on IGB Project
25 February 2021

STRATEGIC ROLE - SOURCES and DIVERSIFICATION



- **EUR 45 mln EEPR** grant financing – eligibility period – 31/12/2021
- **EUR 39 mln** grant financing under the Operational Program “Innovations and competitiveness” (European Structural Inv. Funds allocated to Bulgaria), OPIC, possible extension of eligibility period -2023.
- **EUR 110 mln. EIB long term loan financing** secured by a Sovereign Guarantee by Bulgaria; The loan will be provided to BEH (Bulgarian Shareholder) and transferred to ICGB via on-lending agreement – tenor 25 years, concluded on 10 October 2019
- **Shareholders’ equity**



SHAREHOLDERS' STRUCTURE



The project is managed by the Project Company ICGB AD with shareholders:

- Bulgarian Energy Holding EAD (50%) and
- IGI Poseidon SA (50%).

ICGB will operate the pipeline under an “exempted” framework – Ownership Unbundling, Regulated Tariff and Third Party Access.

On 8th of August 2018 a Final Joint Decision on the Exemption of IGB Pipeline is adopted by the National Regulatory Authorities.

IGB MARKET TEST

In 2016 ICGB performed Market test for capacity reservation

- Five companies submitted binding offers for a total capacity of 1,57 bcm in direction Greece - Bulgaria on a long term basis
- ICGB concluded Advanced Reservation Capacity Agreements with five shippers – March 2017

ADOPTION OF JOINT EXEMPTION DECISION FOR IGB

In 2018 National Regulatory Authorities of Bulgaria and Greece adopted Joint Exemption Decision for IGB for 25 years:

- Third party access – up to 1,57 bcm
- Regulated tariff – for 3 bcm/y
- Ownership Unbundling

APPROVAL OF IGB NETWORK CODE, TARIFF CODE AND GAS TRANSPORTATION AGREEMENT

In 2019 National Regulatory Authorities of Bulgaria and Greece approved:

- IGB Network Code
- IGB Tariff Code
- Gas Transportation Agreement (GTA)

ITO CERTIFICATION, INGS AND TSO LICENSE

In 2021 ICGB shall obtain:

- Independent Transmission Operator Certificate
- INGS Management License in Greece
- Transmission System Operator License in Bulgaria

and sign Interconnection Agreements with Bulgartransgaz, TAP and DESFA

➤ **ICGB will offer 1.43 bcm/y capacity on capacity booking platforms following capacity allocation mechanisms in Regulation 984/2013**

- Firm Forward Capacity (Greece – Bulgaria)
- Interruptible Forward Capacity (Greece – Bulgaria)
- Interruptible Reverse Capacity (Bulgaria – Greece)

➤ **ICGB will offer the following standard capacity products:**

- Yearly capacity
- Quarterly capacity
- Monthly capacity
- Daily capacity
- Within- day capacity

➤ **Entry/Exit Capacity Tariff Model with separate tariff for Entry and Exit Points**

➤ **Virtual Trading Point**

The Virtual Trading Point shall be used for trading short term standardised products



The following important documents were signed in October 2019:

- Intergovernmental Agreement between the Ministers of Energy of Greece and Bulgaria;
- EIB loan between EIB and Bulgarian Energy Holding;
- Revised Shareholders' Agreement and approval of Final Business Plan and Final construction Budget;
- Facility agreement between BEH and ICGB for on lending of the EIB loan;
- Gas transportation agreements with the exempted shippers;
- Decision of the Shareholders for a Capital Increase;
- Public procurement contracts – EPC and the Line Pipe
- Tie-in Agreements with DESFA, TAP and Bulgartransgaz

Achieved further in October 2019

- Equity injection by the Shareholders;
- Serving of Notice to Proceed;
- Advance payments to the EPC and the Line Pipe Contractor

FACTS & FIGURES:

- **Gas Pipeline Length:** 182.6km (151BG / 31GR)
- **Pipe Diameter:** DN800 (32"/ 813mm)
- **ROW Easement:** 30m / 20m depending on the terrain
- **Labor Force:** 450+ workers (split in several lots)
- **Max. Welding Productivity:** 750-800m/day

MAJOR CONTRACTS:

- **Line Pipe Supplier:** Corinth Pipeworks S.A.
(EUR 58,229,760)
- **EPC Contractor:** AVAX S.A.
(EUR 144,850,000)
- **Owner's Engineer:** Consortium TIBEY (EUR 5,670,000)
- **Construction Supervision:** EcoBulControl

KEY DATES:

- **Commencement:** 28 Oct 2019
- **Duration:** 18 months + possible extension
- **Completion:** EPC Schedule Q4 2021 (not confirmed)
- **Commissioning:** 2+ months
- **Handover:** Q4 2021



Consortium
“TIBEY”

IGB PROJECT - OWNER'S ENGINEER



Line Pipe Delivery

Line Pipe Manufacturer - Corinth Pipeworks S.A.

General Information:

- Total length of line pipes: 185km (5 production milestones)
- Type: 32-inch, 3LPE, epoxy lining, 11; 14; 16; & 20mm thickness
- Length: 12m LSAW and 18m SAWH/LSAW
- Testing: hydraulic, radiographic, ultrasonic and visual inspection

Production & Delivery:

- Milestone 1,2,3, 4 & 5 delivered
- Total pipe quantities delivered to GR and BG: **187 027m**
- HSE Reporting: 450 700 manhours without LTI

Delivery Schedule Level 1 - Milestones

Deliveries	Qty (m)	262 days	24/1/20	30/11/20
Milestone 1	47 034	68 days	24/1/20	31/03/20
Milestone 2	37 645	54 days	7/4/20	30/5/20
Milestone 3	36 192	38 days	29/6/20	5/8/20
Milestone 4	37 529	38 days	7/9/20	20/10/20
Milestone 5	28 627	30 days	11/11/20	15/12/20

STORAGE PIPE YARDS – CORINTH PIPWORKS S.A.



COATED & STACKED 18M PIPES



HASKOVO STORAGE PIPE YARD



Pipeline Construction

EPC Contractor - AVAX S.A

Construction Progress

- Deforestation: completed
- Right of way clearance: 172 000m
- Pipe Stringing: 132 000m
- Welding: 103 098m
- Joint Coating: 81 268m
- Trenching: 62 000m
- Lowering: 53 234m
- Backfilling: 45 000m
- Reinstatement: 5 500m



STRINGING



WELDING



RIGHT OF WAY



LOWERING

Financing :

EIB Loan financing:

Successful fulfillment of all social and environmental preconditions, 1st environmental audit passed ;

1st and 2nd tranche of the loan financing are utilized by the end of Jan. 2021 in the total amount of MEUR 60, fixed int. rate, maturity 25 years and 5 years grace period;

Grant Financing:

EEPR - first interim payment request submitted and approved by EC in the amount of MEUR 6.4 , payment received in the end of Dec.2020.

OPIC – first interim payment request submitted in Nov 2020 in the amount of MEUR 28.5, compliance check and approval expected by the end of Q1 2021.

Shareholders' equity – MEUR 59,3

Intergovernmental Agreement ,IGA (allocation of revenues b/n Greece and Bulgaria and tax regime for IGB , 25 years)

Final step concluded –Ratification by the Greek Parliament, the document has been already ratified in Bulgaria- June 2020.



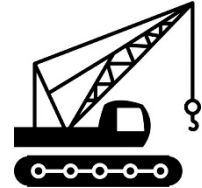
HDD Crossings



GMS 1 & 2 Completion



Construction



Two major crossing using Horizontal Directional Drilling:

- Difficult and risky job profile
- Challenging geology under St. Kladenetz dam
- Addition geotechnical investigation required
- Extra land for temporary work area
- Environmental issues & additional authorization

Completion of Komotini and St. Zagora gas metering stations:

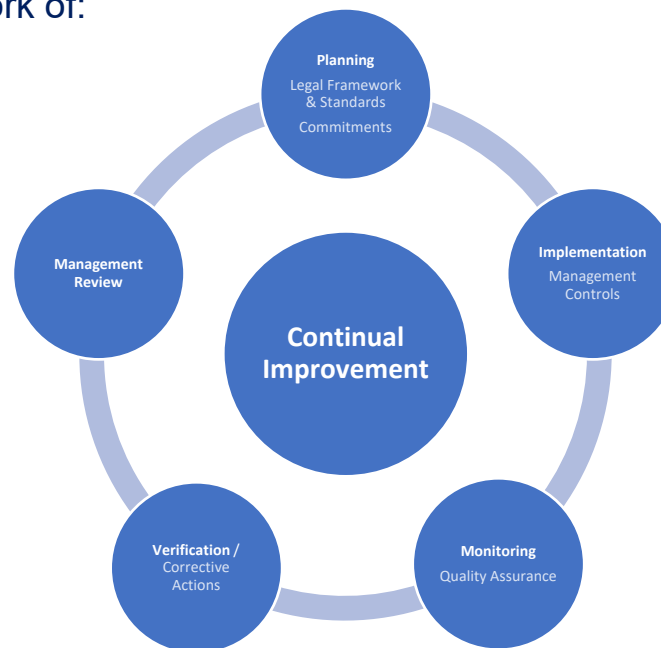
- Detailed design delayed
- Delayed coordination activities
- Delayed procurement of Long-lead items (metering, valves, gas chromatographs, heaters)
- Complex and multicomponent activity
- Simultaneous works
- Determines the critical path of the project

Main construction challenges:

- Tough mountainous terrain (appx. 30km.) - steep slopes, ravines, rocky areas
- Above ground installations – GMS1&2, BVSs, Dispatching Centre
- Automation and SCADA integration
- Testing & Commissioning
- Covid19 & Adverse Weather

- WE AIM to provide affordable, secure and lower-carbon energy supplies to Bulgaria and Greece, while minimizing our impact on local communities and the environment.
- WE COMMIT to observe good industrial practices, comply with legal requirements, abide by appropriate national and international standards.
- WE ARE GUIDED by key sustainability principles, including a precautionary approach, risk management, impact minimization, stakeholder inclusion and transparency.
- WE HAVE COLLECTED EXTENSIVE DATA to understand environmental and social sensitivities along the pipeline route to help develop our operations and mitigate risks.
- WE MANAGE environmental, social and cultural heritage (ESCH) risks and opportunities effectively.
- ESCH performance management is based on a dynamic process of assessment, activity planning, management, mitigation and monitoring, using the Implemented Environmental and Social Management System framework of:

- Planning
- Implementation
- Monitoring
- Verification
- Management review



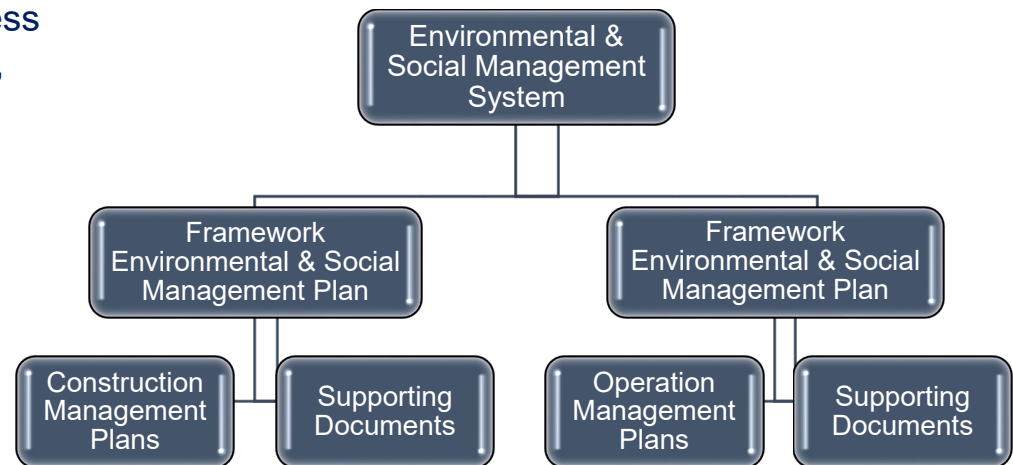
- The Environmental and Social Management System covers construction, commissioning and operation of IGB Project.
- Interconnector Greece Bulgaria Pipeline is committed to restoring and improving land and livelihoods affected by our activities.
- We have been engaging openly, proactively and respectfully with all the communities along the pipeline route and will continue to do so.
- ICGB's environmental and social management system (ESMS) is focused on a dynamic process of assessment, activity planning, management,

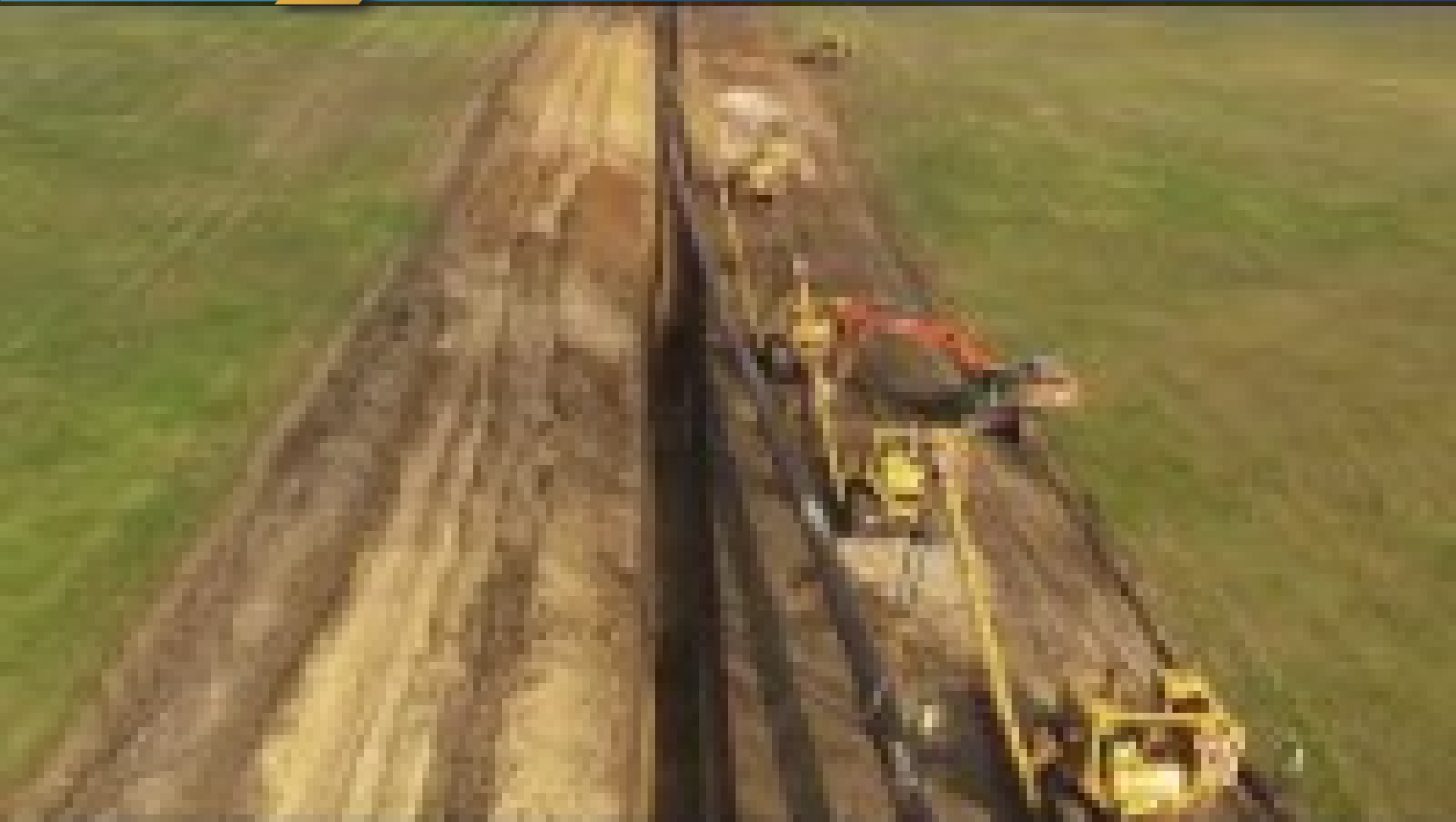
mitigation and monitoring in relation to local livelihoods along the pipeline route.

- Key elements - Environmental & Social Management Plans (ESMPs) - principal mechanisms by which the Project Company manages the significant environmental and social aspects and impacts and ensures compliance with the Project commitments and requirements applicable to the Project.

A central part of the IGB governance and ESMS are the principles of avoiding and minimizing ESCH impacts and the implementation of mitigation, management and rehabilitation processes.

These principles integrate sustainability into our business and are the foundation to our operations and the ESCH management processes.







IGB PROJECT

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Natural Gas Interconnector Greece-Bulgaria

www.icgb.eu



Co-financed by the European Union
European Energy Programme for Recovery

