

The case for Romanian Black Sea Gas supply

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Black Sea: Status of blocks and discoveries





Ukraine Attempting offshore licensing round Crimea area under dispute

Bulgaria Limited deep water exploration drilling No new discoveries made

Turkey, Russia, Georgia No activity

Only Romania is active with discoveries for development

Midia Gas Development Project - under construction



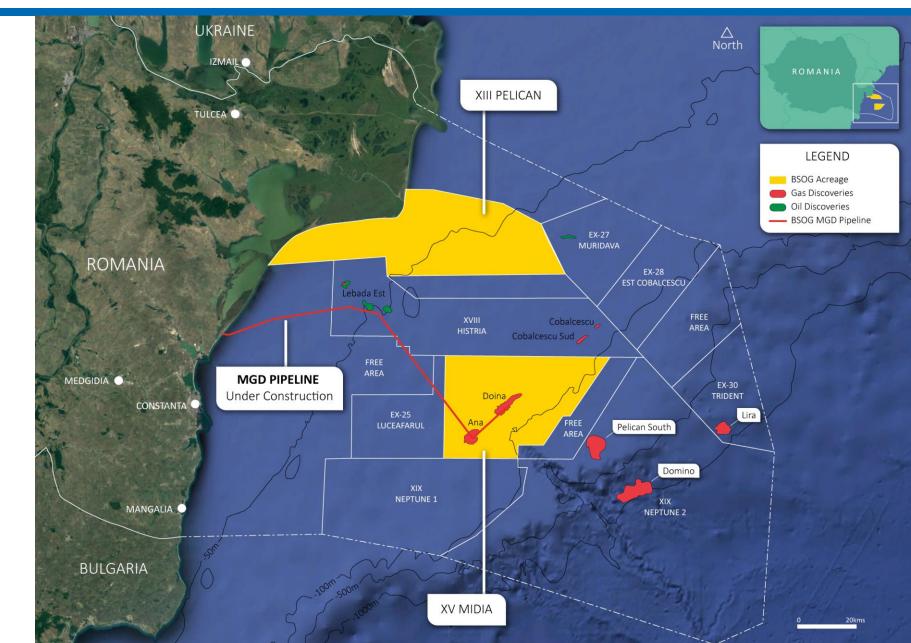
MGD Project

- Brand new infrastructure located 120 km offshore
- 16" Diameter Pipeline
- Tied into Transit 1 pipeline operated by Transgaz

2021 On production

300 Bcf Reserves for Production

10% Of Romania's gas needs





- Roughly 5Tcf of undeveloped offshore discoveries
- Transgaz (National Transmission Operator) manages over 13,000kms of transmission lines in country
- Over 20 Bcm pa connecting Romania to Ukraine and Bulgaria through high pressure Transit Lines
- New BRUA line with over 4 Bcm pa potential underway to connect Romania to Austria
- Strong support from EU and US to develop this alternative source to Russian Gas

Substantial infrastructure already in place to facilitate providing Romanian Black Sea Gas into Europe



Deloitte.



Deloitte study for offshore* found the following contributions to the Romanian economy to 2040:

	Offshore Industry	New Consumption Industries
GDP Output	\$71.3 Billion	\$98.9 Billion
Jobs	30,605	41,945
State Revenues	\$26 Billion	\$18.3 Billion

• In addition Romania moves from being dependant on Russian gas to being self sufficient and a net exporter

*<u>Report published in May 2018 by Deloitte Romania</u>

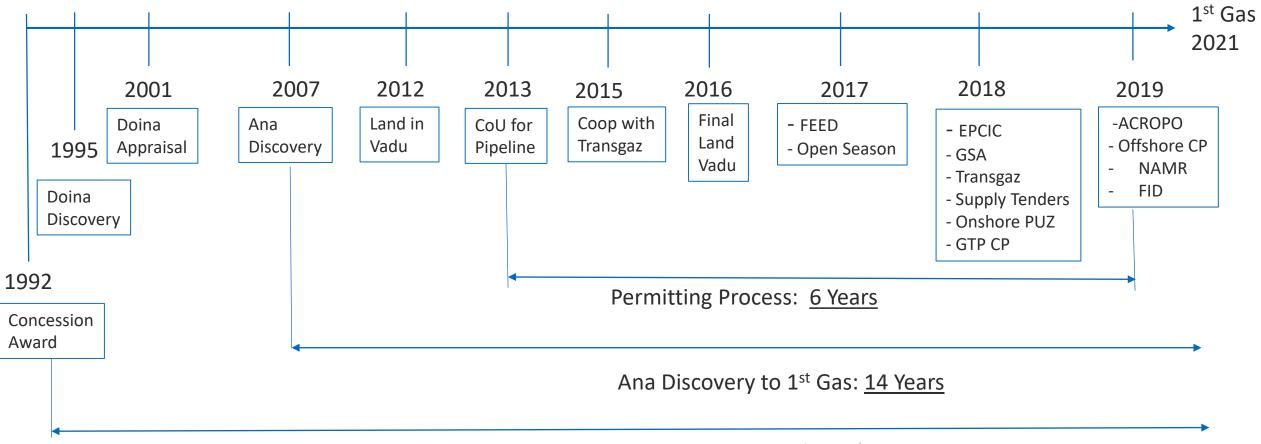
The contribution of Black Sea oil & gas projects to the development of the Romanian economy

Game changing impact on economy should be highly motivating for supporting developments

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- No developments offshore in over 30 years
- Only BSOG's 300Bcf Midia Gas Development (MGD) underway
- Xom/Petrom Neptun Deep Block on hold
- Lukoil's Trident Block still under exploration and appraisal review
- New 11th licensing round still pending (since 2013)



Concession Award to 1st Gas: <u>29 Years</u>

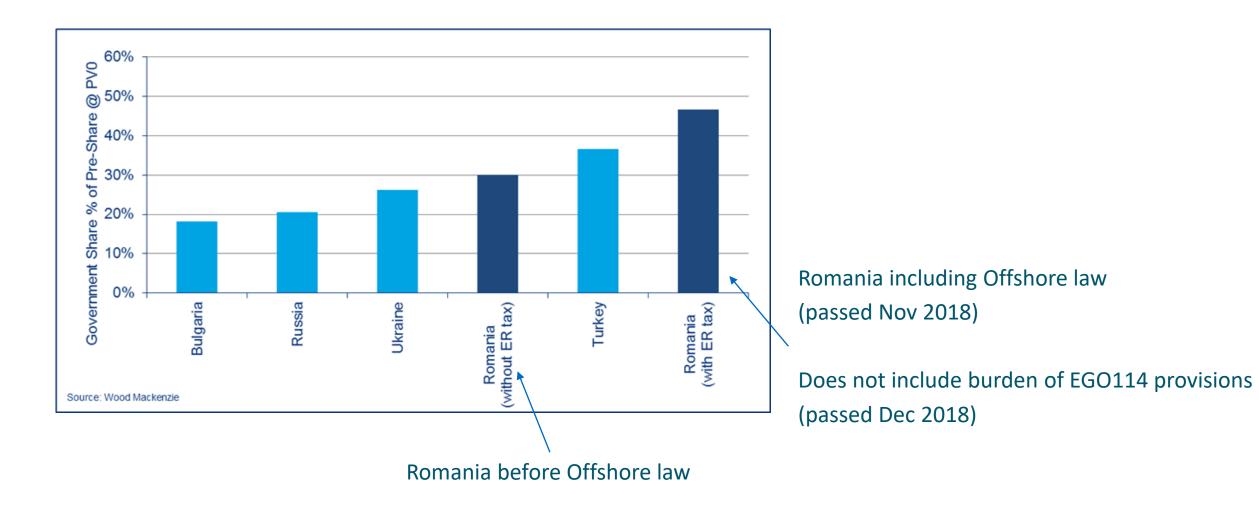
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Efforts urgently needed to find ways to shorten time line to first gas

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The Reality: Black Sea fiscal benchmarking for MGD Project



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Revocation of 2018 measures plus assurances of fiscal stability required to ensure viability of developments

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The Reality: Foreign Direct Investment by country



Rank ¢	Country +	Stock of FDI at home (millions of USD)	Date of information ◆
1	The Netherlands	4,888,000	31 December 2017 est.
2	United States	4,084,000	31 December 2017 est.
3	See United Kingdom	2,027,000	31 December 2017 est.
_	🖌 Hong Kong	1,901,000	31 December 2017 est.
4	China China	1,514,000	31 December 2017 est.
5	Ireland	1,477,000	31 December 2017 est.
6	Germany	1,455,000	31 December 2017 est.
7	Singapore	1,285,000	31 December 2017 est.
8	+ Switzerland	1,230,000	31 December 2017 est.
9	Belgium	1,093,000	31 December 2017 est.
10	eanada	1,045,000	31 December 2017 est.

45	Peru	97,290	31 December 2017 est.
46	Taiwan	85,580	31 December 2017 est.
47	Argentina	84,140	31 December 2017 est.
48	Romania	81,530	31 December 2017 est.
49	Azerbaijan	80,630	31 December 2017 est.
50	Philippines	78,790	30 September 2017 est.
51	Kew Zealand	78,250	31 December 2017 est.
52	Ukraine	71,150	31 December 2017 est.
53	Lebanon	61,020	2016 est.
54	Morocco	57,810	31 December 2017 est.
55	slovakia	57,230	31 December 2017 est.

Romania can do more to encourage Foreign Investment

*Source: CIA World Factbook

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Assuming a decarbonised world for 2050

- Gas has a limited time line but essential role to play to reach that goal
- Romania could provide an important bridge as a transition fuel supplier and at the same time:
 - be part of the global environmental solution
 - deliver major benefits to the Romanian economy
 - provide security of supply to Europe

In order to get the optimum benefit of these Romanian offshore resources in the limited time frame:

- Need proactive Romanian political support for the development of the Black Sea
- New discoveries should fully utilise existing infrastructure thereby avoiding
 - Long lead regulatory processes
 - Costly and time consuming single purpose construction activities
 - Community resistance and delays to new infrastructure development



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