

27th WORLD GAS CONFERENCE WASHINGTON DC JUNE 2018

Triennial Work Program The USA IGU Triennium June 2015 – June 2018

Proposed Triennial Work Program Working Committee -1 & Program Committee - A

Novy Urengoy 3-6 February 2015

Fueling the Future

The Areas of Strategic Importance for the USA Triennium

All work activities must support one of the three areas of Strategic Importance for the USA Triennium:

- ACCESS development of supply, removal of barriers towards infrastructure development
- MARKETS- increasing opportunities to grow demand, integration of gas with other forms of energy, removal of market barriers
- **SOCIAL LICENSE** –improvement to safety and reliability, reduction of the environmental impact, driving higher energy efficiency, improving community engagement



IGU Committees for the USA Triennium

 Exploration and Production Committee (WOC-1)
 Mr. M Redhani B A Rahman PETRONAS
 Malaysia



Gas Storage Committee

(WOC-2) Mr. Nikita Barsuk JSC GAZPROM Russia



Gas Transmission Committee (WOC-3) Mr. Martin Slaby NET4GAS Czech Republic



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Distribution Committee (WOC-4) José M. Almacelllas Gónzalez GAS NATURAL FENOSA Spain



Utilisation Committee (WOC-5) Mohammad Reza Ghodsizabeh National Iranian Gas Co.

(NIGC) Iran





IGU Committees for the USA Triennium



Sustainability Committee (PGC-A) Ms. Gabriela Roselló TOTAL AUSTRAL S.A. Argentina



LNG Committee (PGC-D) Mr. Masanori Oki OSAKA GAS CO., LTD. Japan



Strategy Committee (PGC-B) Mr. Ulco Vermeulen GASUNIF Netherlands



Marketing and Communications **Committee** (PGC-E) Ms. Barbara Jinks **AUSTRALIAN GAS INDUSTRY TRUST** Australia



Gas Markets Committee (PGC-C) Mr. Sid-Ahmed Hamdani SONATRACH Algeria



R&D and Innovation **Committee** (PGC-F) Dr. Gerald Linke E.ON NEW BUILD & **TECHNOLOGY GMBH** Germany 27th WORLD GAS | JUNE 25-29

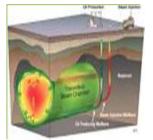


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Recap on Current Working Committee -1

WOC 1 : EXPLORATION AND PRODUCTION OF NATURAL GAS

WOC 1 focused on the assessment of conventional and unconventional resources, on key technologies for the exploration and production of natural gas and on new policies and fiscal regulations for upstream business



Technological Advances in E&P of Natural Gas

SG 1.1

Natural Gas Available Everywhere: Assessment of Global Gas Resources and Reserves SG 1.2





Fiscal Regimes for the Production of Conventional and Unconventional Gas SG 1.3



CONFERENCE WASHINGTON DC

Proposed Scope for WOC-1 in USA Triennium

WOC-1 Exploration & Production of Natural Gas

WOC-1 will focus on the exploration & production of conventional and unconventional gas resources, leveraging on the latest technological advances and challenges in accessing the resources. The committee will also investigate on the next big thing in exploration & exploitation of natural gas.

Conventional Resources of Natural Gas

SG Leader:

Gazprom

Unconventional Resources of Natural Gas

Ekaterina Litvinova

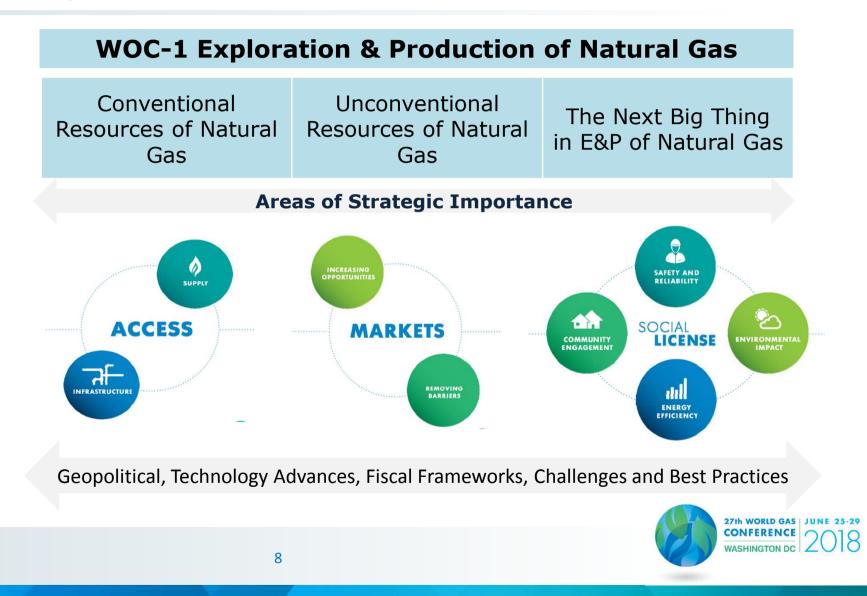
SG Leader: Andres Weissfeld The Next Big Thing in F&P of Natural Gas

> SG Leader: Lenny Marlina Omar Petronas

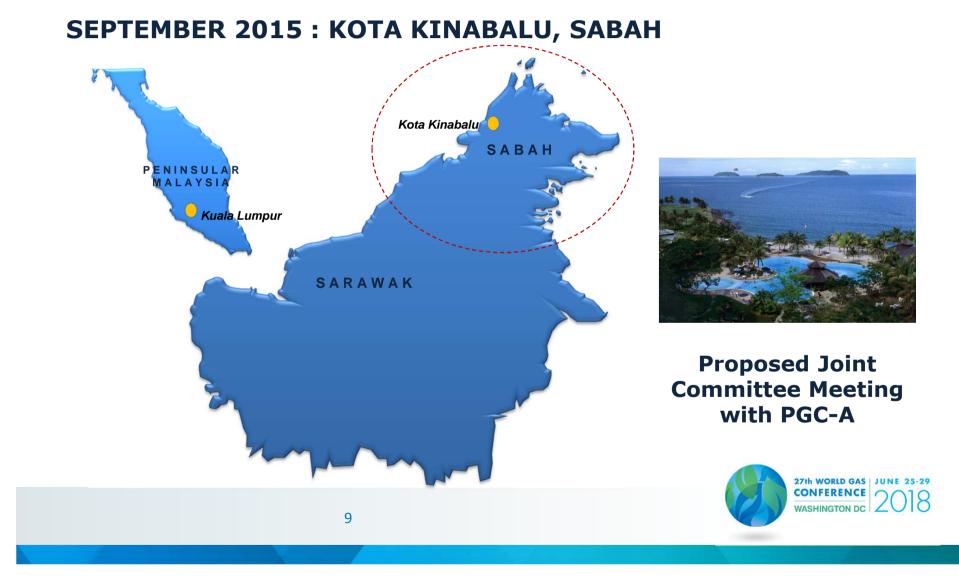


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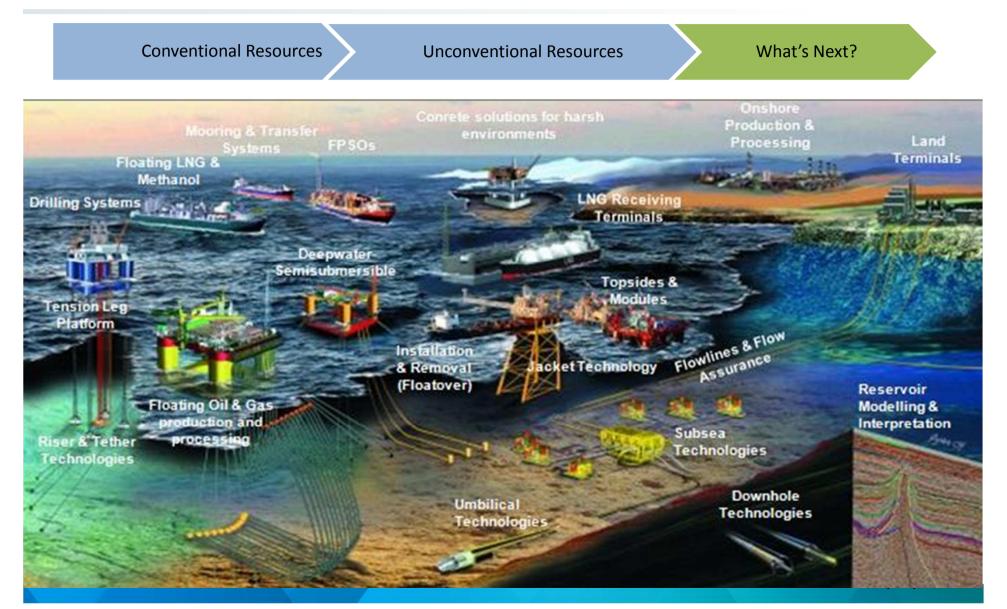
Areas of Strategic Importance cut across the scope for WOC-1



Proposed 1st Meeting of WOC-1 (USA Triennium)



Exploration & Production of Natural Gas



Next Triennium: Timeline Deliverables for Working Committee-1

Details	2015		2016				2017				2018	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
WOC-1 Meetings		Sep'15		Feb'16		Sep'16		Feb'17	<u> </u>	Sept'17	Feb'	18 🗰
 WOC-1 Study Report 1. Appointment of SG Leaders & Identify members 2. Develop study TOR 3. Identify areas that will be studied 4. Select final list of coverage for final report 5. Identify transversalities with other SG and WOC/PGC 6. Conduct literature research 7. Write first draft of report for WOC- 1 discussion 8. Compilation, consolidation and review of report 9. Submission of WOC-1 report to CC 10. Review and edit based on CC comments 11. Final submission 				-								WGC
 Preparation for presentation of papers at WGC2018 1. Select the themes for call for papers 2. Call for papers 3. Submission of abstracts by authors 4. Review and selection of the abstracts 5. Submission of full paper by authors 									•			

Contacts for WOC-1

- WOC-1 Chairman:
 - Redhani Rahman
 - mdredha@petronas.com.my
- WOC-1 Secretary:
 - Xaxa Zulkifli
 - im_xaxanuhani@petronas.com.my
- A mailing list will be created once members have been confirmed and discussions can take place through emails as necessary



Next Triennium: Proposal on Scope & Deliverables for Working Committee-1

Scope	Study Group 1.1 Conventional Resources of Natural Gas	Study Group 1.2 Unconventional Resources of Natural Gas	Study Group 1.3 The Next Big Thing in E&P of Natural Gas				
Above- ground: Access/ Geopolitical/ Fiscal Framework	 Harsh environment - Arctic New Play types - Tight Reservoir, Ultra Deep Exploration Fiscal/ Non-fiscal framework 	 Potential development of shale oil and gas outside North America Fiscal/ Non-fiscal framework 	 Brand New Opportunities Eg: US Atlantic Coast, Unconventional Offshore – Methane Hydrates 				
Technological Advances	 Elaborating on recent advances of technologies in the value chain (E-D-P- M), across play types and geography Recent technologies on Seismis, Drilling, Monetization Technologies – GTL, FLNG, CNG etc 	 Technological advances in unconventional technology dispels environmental activism 	 More automation, less manpower intensive operations on Natural Gas E&P: Eg: Super Material Digital field Concept (integrated information stream) Smart Platforms (optimizing energy consumption via alternative sources e.g. wind, tidal or solar) Methane hydrates becomes the new unconventional resource 				
Challenges & Lesson Learnt	Case Studies & Best Practices (CSR, Publicity)						





