

Triennial Work Program 2012-2015

**IGU Joint Committee Meeting
4-7 September 2013
Kota Kinabalu, Sabah**



**Working Committee 1 - Plenary
Study Group 1.1**

Technological Advances in the Exploration & Production of Natural Gas

Technological Advances in the Exploration & Production of Natural Gas

KEY SCOPE:

- To **investigate and compile** the most **recent technological advances** in the exploration and production of natural gas, and share with the International Gas Community, the availability and applicability of the technological advances
- The technological advances will be sourced from published papers and technology providers, without being specific to certain proprietary technologies to avoid the IGU being used as a commercial platform.
- Research from academia and commercial research centers towards the advancement of new technology for exploration and production of natural gas could also be highlighted

As at 3rd WOC1 Meeting (6 September 2013):

1. Agreed scope and content of the study report
2. Confirmed team members for SG 1.1
3. Confirmed study report contributors
4. Confirmed work plan and timeline/ deadlines for report submission
5. Suggestion for WGC 2015:
 - Topics for Expert Panel Forum
 - Topics for Technical Sessions

Way Forward:

1. Detail of Sub-sections of the Study Report
2. 1st Draft Submission – End Oct'13
3. Consolidated Draft – End Nov'13
4. Submission of Consolidated 1st Draft to WOC1 Secretary – End Dec'13

Study Group Leader

Adif Zulkifli (Petronas, Malaysia)

Updated on 6 Sept 2013

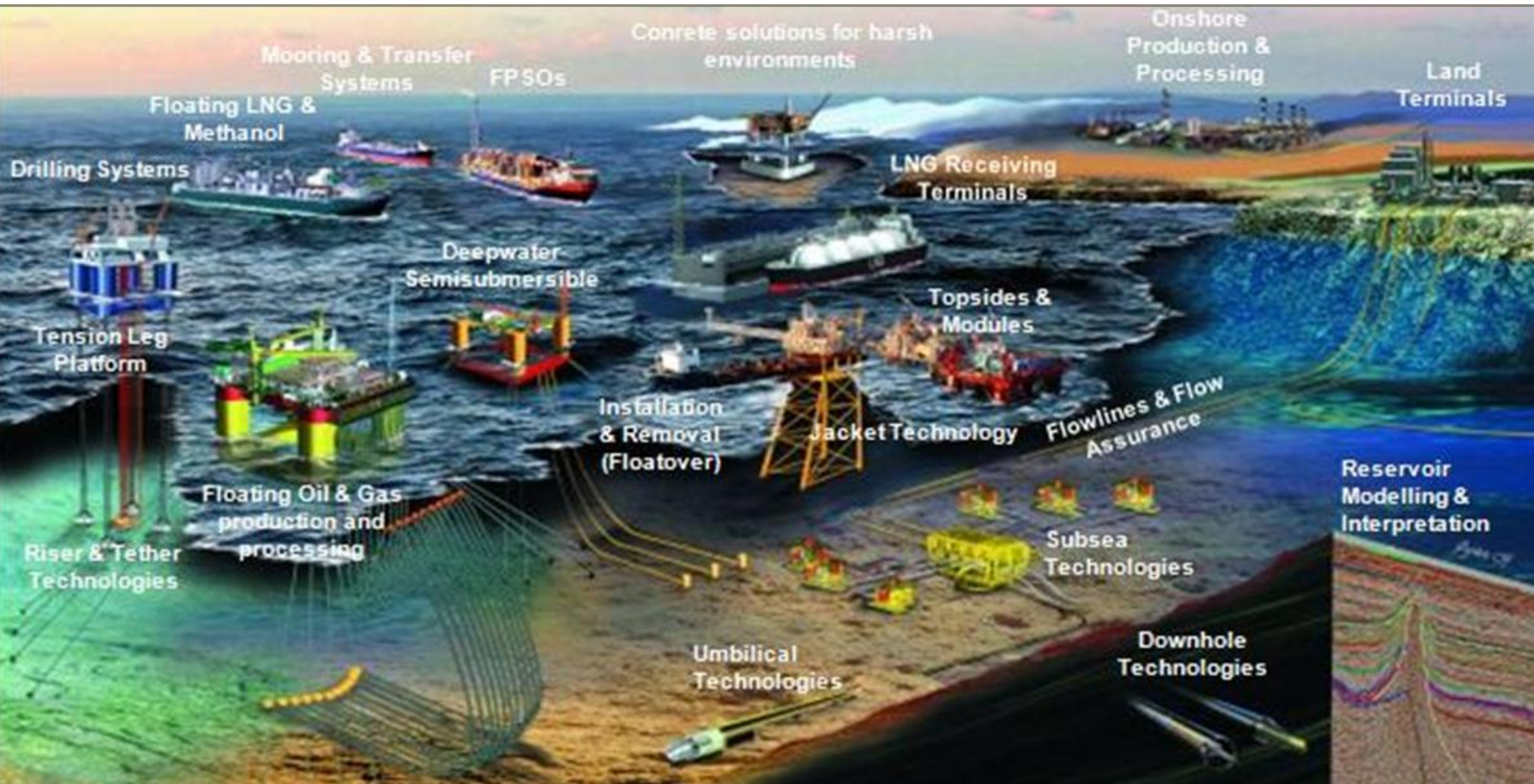
Study Group Members

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2. Yanan Bian (Petrochina, China)
3. Li Yang (Petrochina, China)
4. Joel Hervochon (TOTAL, France)
5. Seungho Lee (Kogas, Korea)
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10. Ilya Shireen A Harith (PETRONAS, Malaysia)
11. Andrey Kniazev (Gazprom, Russian Federation)
12. Boris Sharipov (Gazprom, Russian Federation)
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17. Yassine Mestiri (ATPG ETAP, Tunisia)
18. Reza Mesgarian (NIGC, Iran)

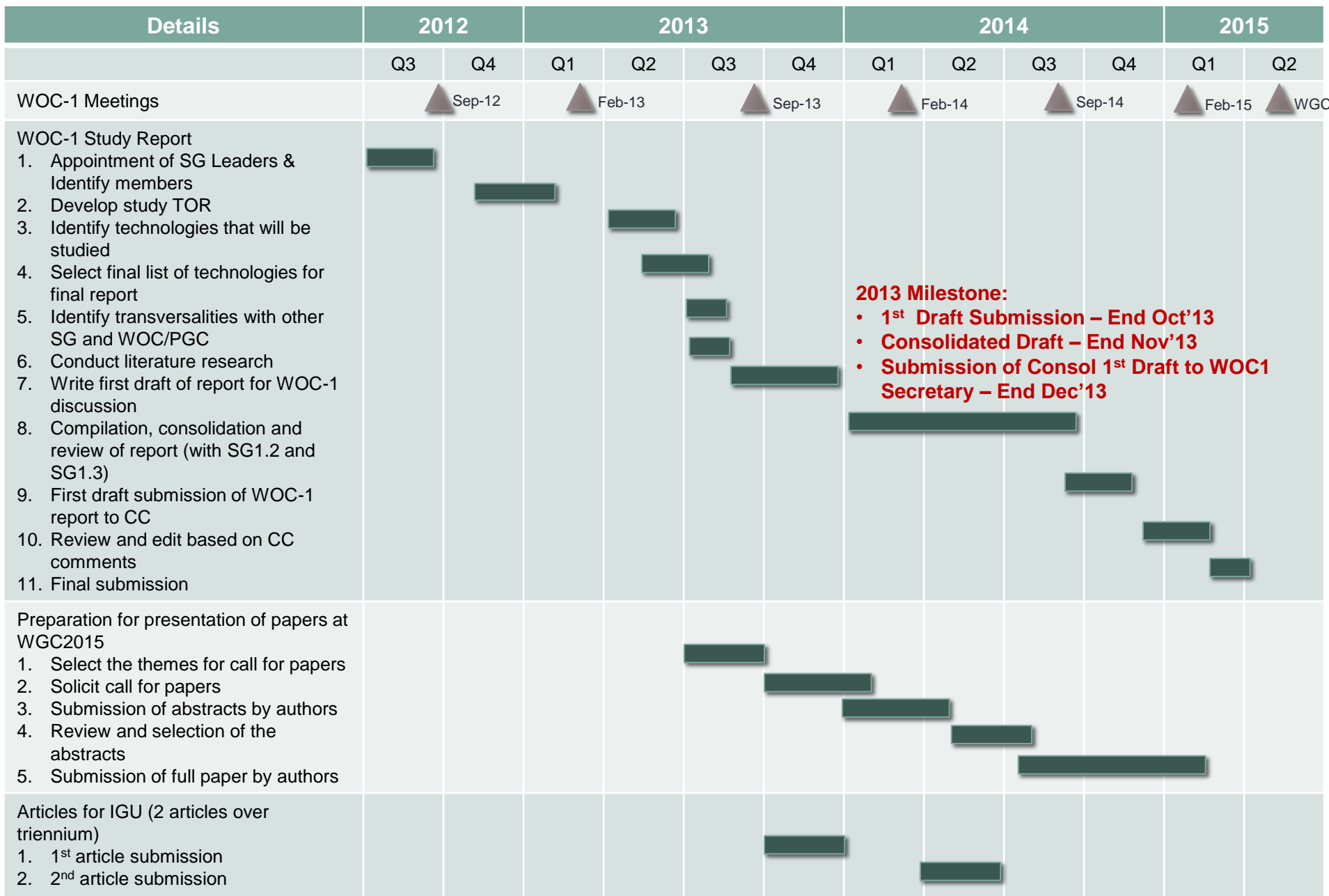
Proposed Framework:

Build on list of gas technologies in Exploration, Development & Production LF

Elaborating on recent advances of technologies in the value chain



WOC-1 SG 1.1: Milestone



SG 1.1 Committee Session Suggestion:

1. Can Technology Innovation Be Sustained?

- Role of Governments in Infrastructure and Structures for Technology
- Companies Balancing Technology Investment with Decreasing Cost Margins and Oil Price Volatility

2. Technology Transfer

- How can we balance knowledge and technology transfer with intellectual property rights against the backdrop of intense competition

3. Stranded Gas Monetization

- Is FLNG the only best answer moving forward?
- Role of the Gas Price

4. Gas vs Renewables

- Can they complement each other?

5. How Technologies Facilitates Utilisation of Gas in Other Sectors

SG 1.1 Committee Session Suggestion

1. Can Technology Innovation Be Sustained?

Chaired by

Objectives:

- To discuss role of governments in infrastructure and structures for technology (fiscal improvement and allocation)
- Companies balancing technology investment with decreasing cost margins and oil price volatility

Topics of interest include:

- Regulatory and fiscal framework to incentivize the technology advancement
- Company strategies for technology innovation to meet the challenges
- Cheap gas requires cheaper and higher performance

Session form:

- Ministerial panel discussion from the perspective of a developed and emerging nations
- In the same panel, with participation from companies

Keywords: technology innovation for unlocking gas reserves, R&D expenditures, regulatory framework, policies and incentives, research infrastructure and structures

SG 1.1 Committee Session Suggestion

2. Technology Transfer

Chaired by

Objectives:

- To discuss on how we can balance knowledge and technology transfer with intellectual property rights against the backdrop of intense competition

Topics of interest include:

- Intellectual property vs common good of the industry (over the last few years, the depth of content sharing has decreased)
- Common sharing platforms
- Strategic Trades Act
- Technology transfer by partnership – is it for real?. Cost implications, ownership rights and learning
- Risks
- Innovative approaches

Session form:

- Presentation by expert panels
- In the same panel, with participation from companies – E&P and Service Companies

Keywords: technology transfer, intellectual property, partnership, competition, knowledge transfer, innovative approaches

SG 1.1 Committee Session Suggestion

3. Stranded Gas Monetization

Chaired by

Objectives:

- To discuss monetization options for small and/or remote gas resources - is FLNG the only best answer moving forward?

Topics of interest include:

- Role of levels and stability of gas prices to ensure commercialization of selected technologies
- Capital cost of floaters and technologies
- Risks associated with FLNG
- New development concepts– beyond FLNG

Session form:

- Discussion by expert panels with participation from companies – E&P and Service Companies

Keywords: FLNG, monetization, remote gas resources, small fields, beyond FLNG, deeper water

Thank you