



# **Study Group 1.3 Gas Rent and Mineral Property Rights**

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**3<sup>rd</sup> WOC 1 Meeting  
Kota Kinabalu  
4-7 September 2013**



# Gas rent and mineral property rights

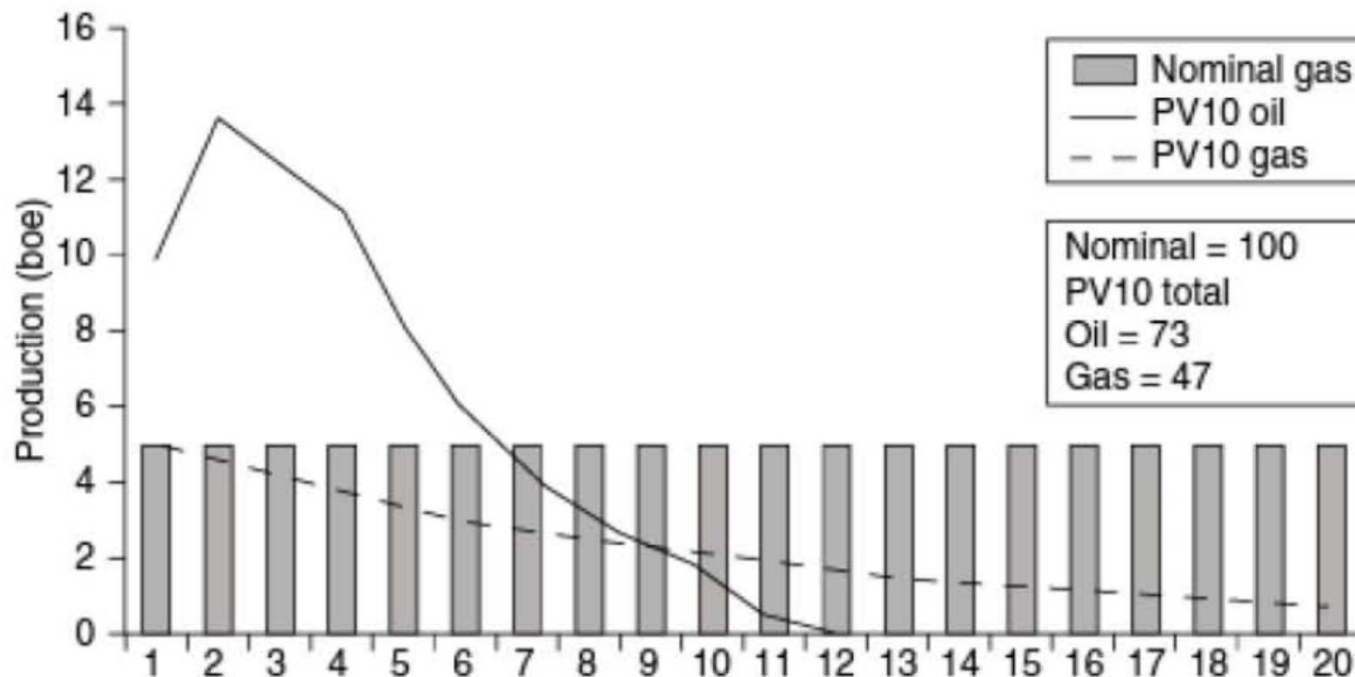
- ↳ **Introduction**
- ↳ **Contractual models**
- ↳ **Fiscal instruments**
- ↳ **Case studies**
- ↳ **Fiscal systems for unconventional gas**
- ↳ **Conclusions**

# Schedule of activities

- ❖ **1<sup>st</sup> Meeting (Sapporo, September 2012)**
  - ❖ New study group proposed in WOC 1
  - ❖ Endorsed by the coordination committee in October 2012
  - ❖ Preliminary membership and distribution of tasks
- ❖ **2<sup>nd</sup> Meeting (Rio de Janeiro, February 2013)**
  - ❖ New members
  - ❖ Initial contributions assessed
  - ❖ Gas rent survey organised to direct future actions
- ❖ **3<sup>rd</sup> Meeting (Kota Kinabalu, September 2013)**
  - ❖ Survey results
  - ❖ New tasks
  - ❖ Committee sessions at WGC
    - ❖ Theme, format and contents for call for papers
    - ❖ Suggested speakers and chairs
- ❖ **4<sup>th</sup> Meeting (Seoul, February 2014)**
  - ❖ 1<sup>st</sup> complete draft of triennial report
  - ❖ Define complementary topics, if necessary
- ❖ **5<sup>th</sup> Meeting (Barcelona, September 2014)**
  - ❖ Selection of best contributions from call for papers
  - ❖ Invited chairs and speakers status
  - ❖ Triennial report conclusion and approval
- ❖ **6<sup>th</sup> Meeting (location tbc, February 2014)**
  - ❖ Replacement of unconfirmed speakers and other pending issues
  - ❖ WOC 1 in 2015–2018

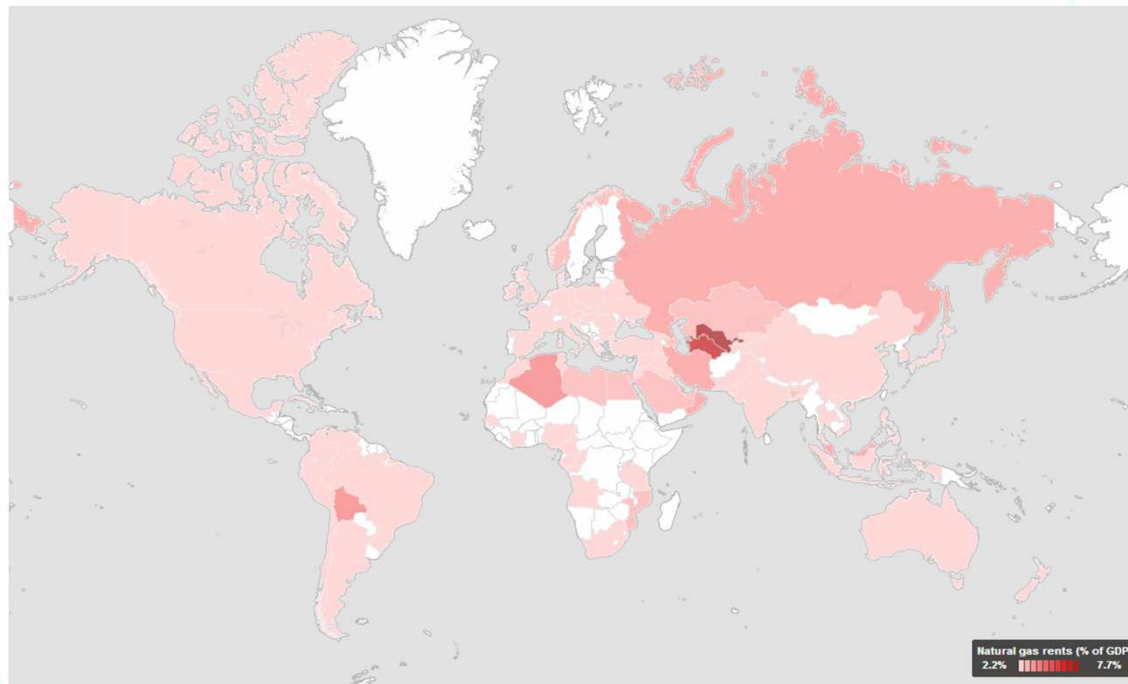
# Purposes

- Gas is not oil (Kellas, 2010)
  - Lower prices
  - Expensive pipeline and processing facilities require larger investments
  - Production of gas cannot be anticipated as its oil counterpart→ **Present value 36% smaller, even if investment and cost were the same**



# Triennial report progress

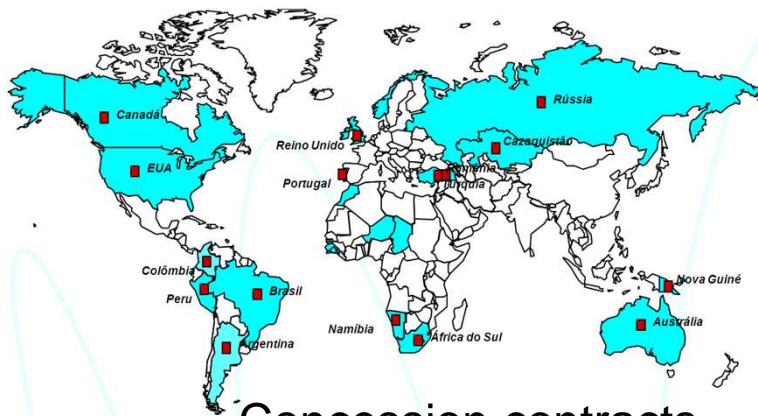
Largest gas rents in the world as % of GDP (World Bank, 2011)



Country name	2008	2009	2010	2011
Trinidad and Tobago	47,6	28,9	25,5	24,5
Turkmenistan		23,0	22,3	22,6
Uzbekistan	73,6	22,8	16,6	15,1
Qatar	24,2	14,6	14,0	14,2
Brunei Darussalam	31,8	18,0	14,3	12,5

# Triennial report progress

## Contractual models (Pereira, 2010)



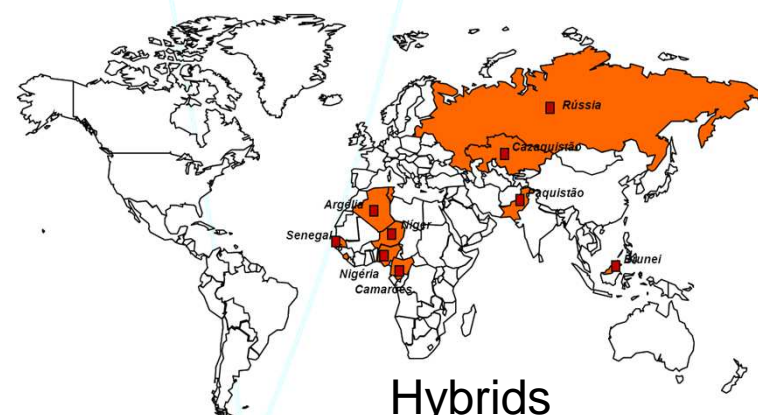
Concession contracts



Production sharing contracts



Service contracts

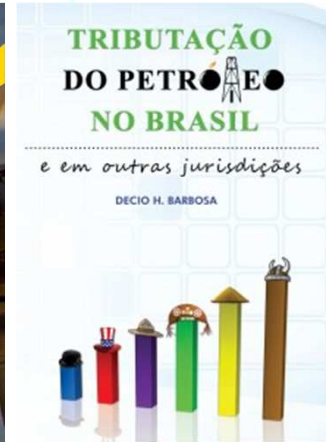
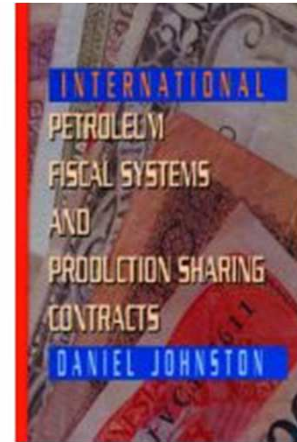


Hybrids

How will they evolve? Are PSCs a tendency?

# Triennial report progress

## Fiscal instruments



### ❖ **Regressive**

- *Payment is proportional to the income revenue or an equivalent of that (e.g. production rate)*
- *This anticipates government rent but severely hits investors when they are most eager to recover costs*
- *Example: signature bonuses, royalties, etc.*

### ❖ **Progressive**

- *Payment is proportional to profits (in lieu of revenues), or is postponed by means of uplifts, accelerated depreciation or other such mechanisms*
- *Example: inland revenue, progressive royalty rates, etc.*

# Triennial report progress

## ***Fiscal instruments:***

- ↳ Signature bonuses***
- ↳ Area retention fees***
- ↳ Exploratory programme***
- ↳ Local content***
- ↳ Royalties***
  - Progressive royalty rates***
  - Marginal fields***
- ↳ Inland revenue***
  - Depreciation uplift***
  - Ring fencing of deductions***
  - Compensation of fiscal losses***
  - Abandonment costs***
  - Research and development incentives***
  - Gold plating***



# Triennial report progress

## *Case studies (previous WOC 1 meetings)*

- ❖ **United Kingdom**
  - *Presented in Sapporo (September 2012)*
- ❖ **Norway**
  - *Presented in Sapporo (September 2012)*
- ❖ **Tanzania**
  - *Presented in Rio (February 2013)*
- ❖ **Mozambique**
  - *Presented in Rio (February 2013)*
- ❖ **Angola**
  - *Presented in Rio (February 2013)*
- ❖ **Other countries**

# Triennial report progress

## Unconventional gas rent

### Fiscal incentives

- *United Kingdom*

New fiscal regime proposed for unconventional

	Tax	Development consent previous to 16 March 1993	Development consent from 16 March 1993
Conventionals	RFCT	30%	30%
	SC	32%	32%
	PRT (100%-RFCT-SC)*50%	19%	-
	Total	81%	<b>62%</b>
Unconventionals	RFCT	30%	30%
	SC	0%	0%
	PRT (100%-RFCT-SC)*50%	35%	-
	Total	65%	<b>30%</b>

# Triennial report progress

## *Unconventional gas rent*

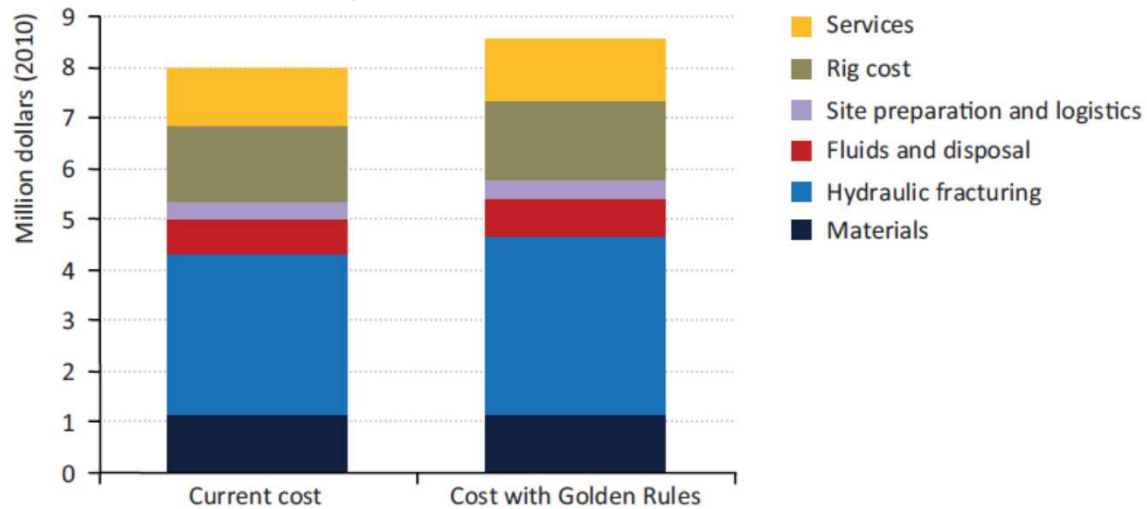
- ❖ *Golden rules for a golden age of gas*
- ❖ *Unconventional gas “secrets”*
  - *A “dirty little secret”*
  - *Drilling carries*
  - *Associated gas*
  - *“Pretty little secrets”*

# Triennial report progress

## Unconventional gas rent

### Golden rules for a golden age of gas

IEA, 2012



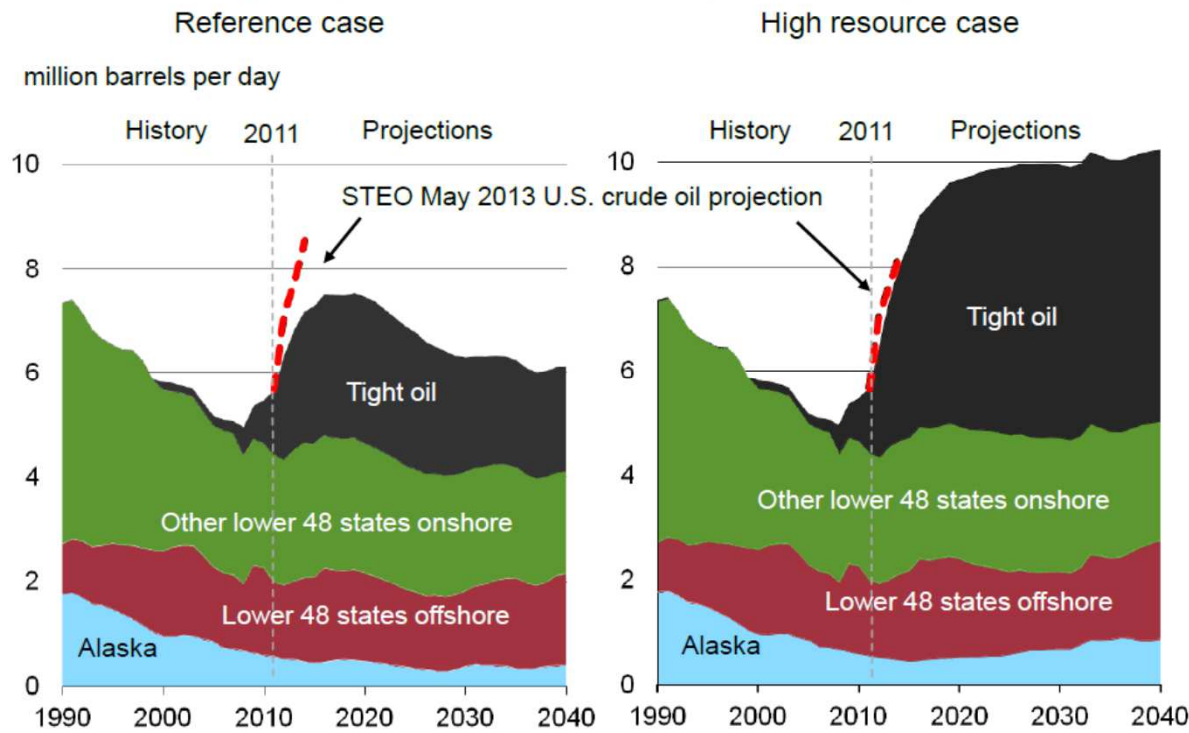
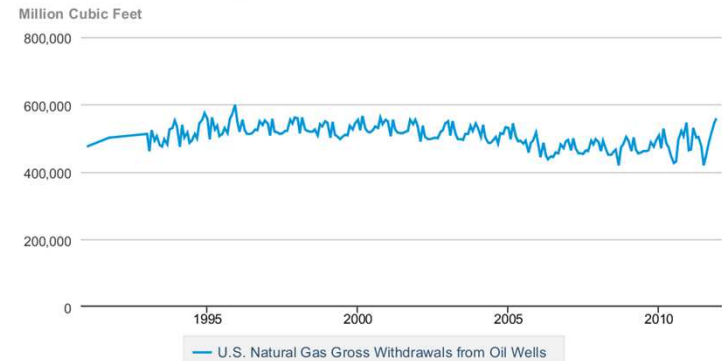
70.000 m<sup>3</sup>/d min.  
avg. 1<sup>st</sup> year throughput

Gas price	3.5 US\$/MBtu
Decay rate	60% p.y.
Interest rate	8%
Heating value	10,500 kcal/m <sup>3</sup>

# Triennial report progress

## Unconventional gas rent

### Associated gas

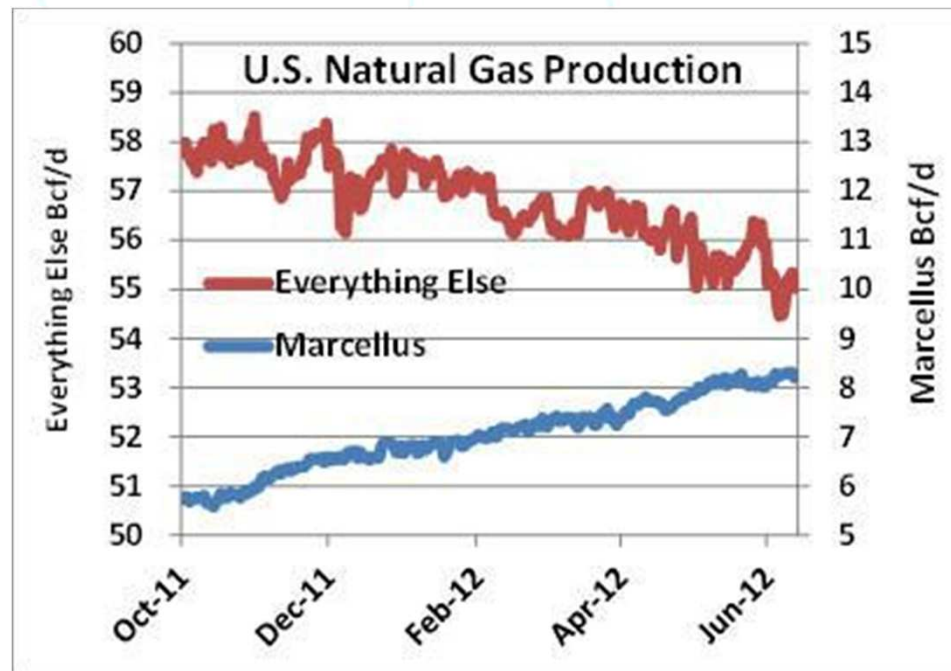


Sieminski, 2013

# Triennial report progress

## Unconventional gas rent

### Associated gas

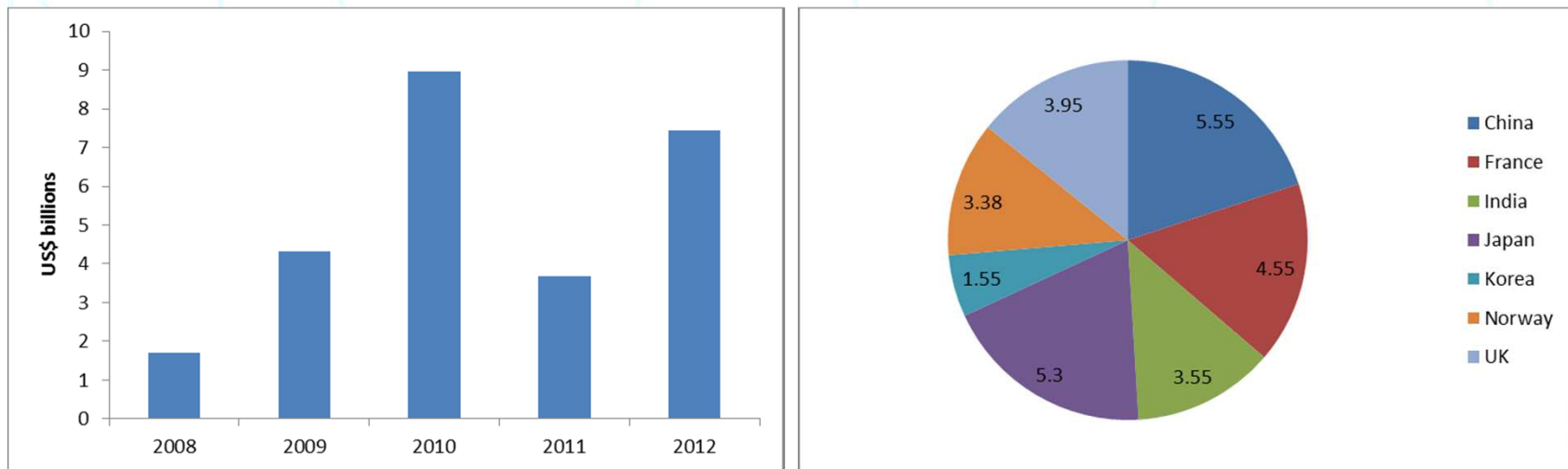


Anthony, 2012

# Triennial report progress

## Unconventional gas rent

### Drilling carries from foreign investment



Data from Fawzi, 2013

# Triennial report progress

## Unconventional gas rent

### Fiscal incentives

- **USA**

- ✓ *Tight gas granted with the highest ceiling prices by the NGP Act of 1978*
- ✓ *Section 29 income tax credits (US\$ 3/bbl ~ US\$ 0,50/MBtu)*
- ✓ *Subsidies for research, demonstration and production projects*



# Best practices (proposal)

- a) ***Reduce the relative importance of signature bonuses and area retention fees in the bidding processes;***
- b) ***Increase the relative importance of exploratory programmes and other instruments of economic and social development;***
- c) ***Consider realistic mechanisms to account for the individual items that compose the exploratory programme (e.g. allow companies to demonstrate higher than expected costs in order to receive higher exemptions);***
- d) ***Replace royalties and other instruments based on production rates or income revenues by progressive instruments based on profits, or use progressive royalty rates to exempt or reduce the relative incidence of royalties at the initial production stage;***

# Best practices (proposal)

- e) For marginal fields, consider mechanisms that will allow efficient investors to maintain production, employment and tax collection (e.g. reduction of royalties);***
- f) Carefully select the relative importance of local content in the bidding processes, taking into account the actual capabilities of the local suppliers of equipment and services (some statistics are required to gauge this);***
- g) Allow the depreciation of assets before production starts, and consider the use of generous uplift allowances;***
- h) Although unattractive at a first view for investors, ring fencing is important to create equal opportunities and protect the government share;***

# Best practices (proposal)

- i) The recovery of abandonment costs in previous excises appears to be as a good practice, as it increases the guarantees surrounding a proper decommissioning of production facilities;***
- j) Too highly progressive taxation schemes must be avoided as they can cause gold plating of investment portfolios.***

# Committee Session 1.3 (proposal)

## Will the North American gas revolution ever be reproducible in other parts of the world?

Chaired by ....

**Objectives:** A significant number of years have already passed ever since the unconventional gas revolution completely changed the world gas industry. Many countries are now trying to reproduce this phenomenon, as its economic benefits are significant, but progress has been limited so far. Experience in the US has demonstrated that it is vital to get the overall fiscal and regulatory framework right, and this session will explore that, aiming at the fiscal incentives, regulations, business models and technologies that could be adopted elsewhere to achieve similar results.

### Topics of interest include

- Reasons and causes of the unconventional gas revolution;
- Regulatory and fiscal frameworks to incentivise the production of gas;
- Gas production methods, cost and efficiency;
- Gas production taxation and allowances;

**Session form:** Presentation and discussion of case studies taken from the triennial report, performed by the members of SG 1.2, complemented by invited guests and authors selected from the call for papers.

**Keywords:** Unconventional gas, upstream regulations, upstream fiscal systems, North America, gas production costs, gas taxation, gas rent, mineral property rights, gas producing countries, gas production costs

# Committee Session 1.3 (proposal)

## Fiscal regimes for the production of gas

Chaired by ....

**Objectives:** Gas projects have different characteristics when compared with their oil counterparts, requiring different development conditions

### Topics of interest include

- Additional incentives for gas production
- Marginal fields;
- FLNG as a means to monetize stranded gas and marginal fields;
- Fiscal regimes to sustain gas production in mature/tail end gas fields

**Session form:** Presentation and discussion of case studies taken from the triennial report, performed by the members of SG 1.2, complemented by invited guests and authors selected from the call for papers.

**Keywords:** tail gas, marginal fields, mature fields

# Committee Session 1.3 (proposal)

## Gas on gas competition and upstream investment

Chaired by ....

**Objectives:** Over the last years we have experienced a growth in the use of hub pricing mechanisms in lieu of the traditional long term contracts indexed in oil, and this is transferring market risks to the gas producers. Will this significantly affect new upstream investment? Hub pricing is not a synonym of cheaper prices, and in the long term consumers could meet another scenario.

### Topics of interest include

- Gas pricing mechanism background;
- Tendencies in gas pricing;
- Effects in high cost projects;

**Session form:** Presentation and discussion of case studies taken from the triennial report, performed by the members of SG 1.2, complemented by invited guests and authors selected from the call for papers.

**Keywords:** Spot market, long term contracts, upstream investment, bankability

# Terima kasih!