

Afrique du Nord: Quel avenir pour le pétrole et le gaz?



Le contexte politique et énergétique en Algérie

by

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**Conférence Cycle IDées
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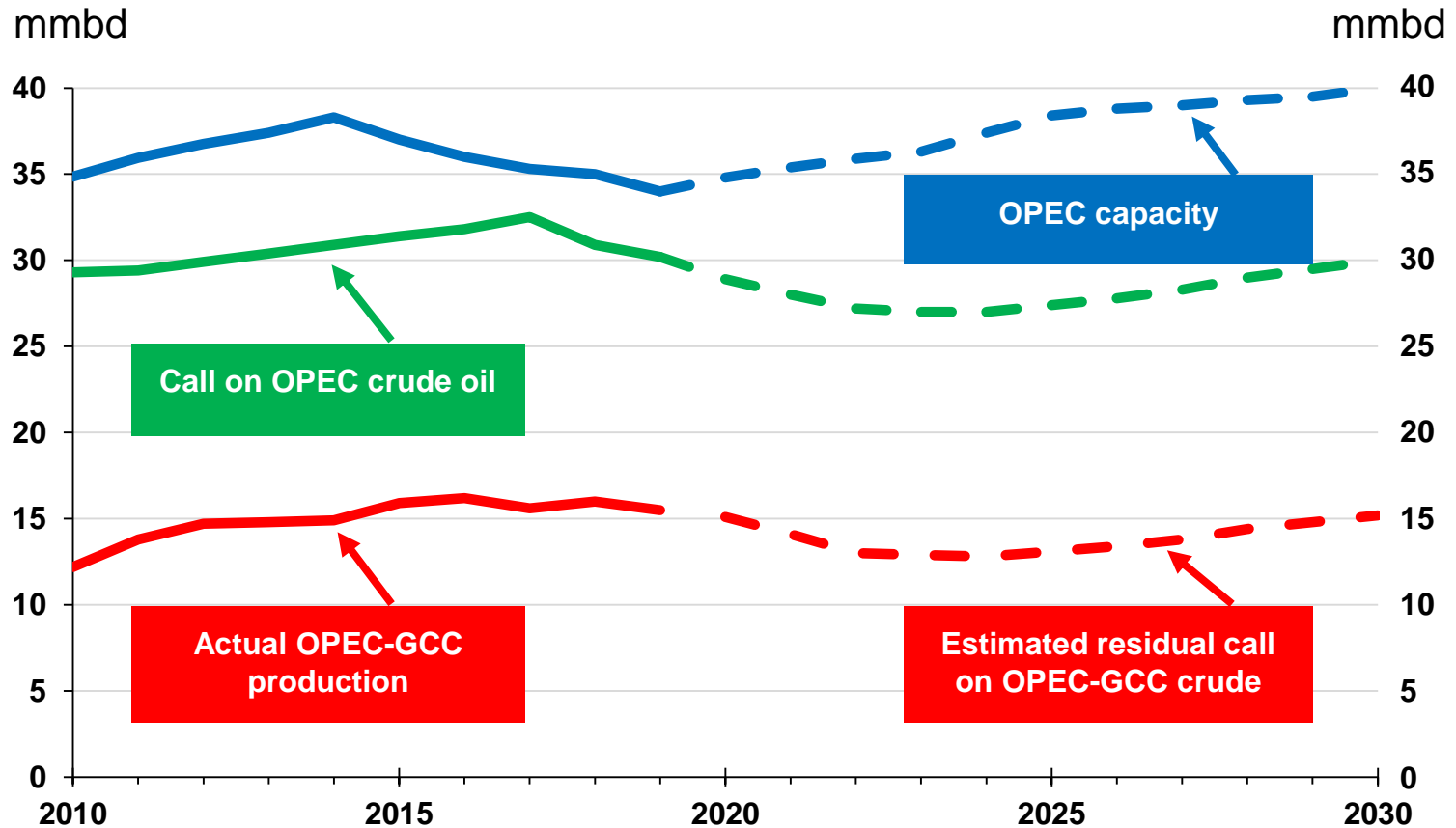
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Presentation outline

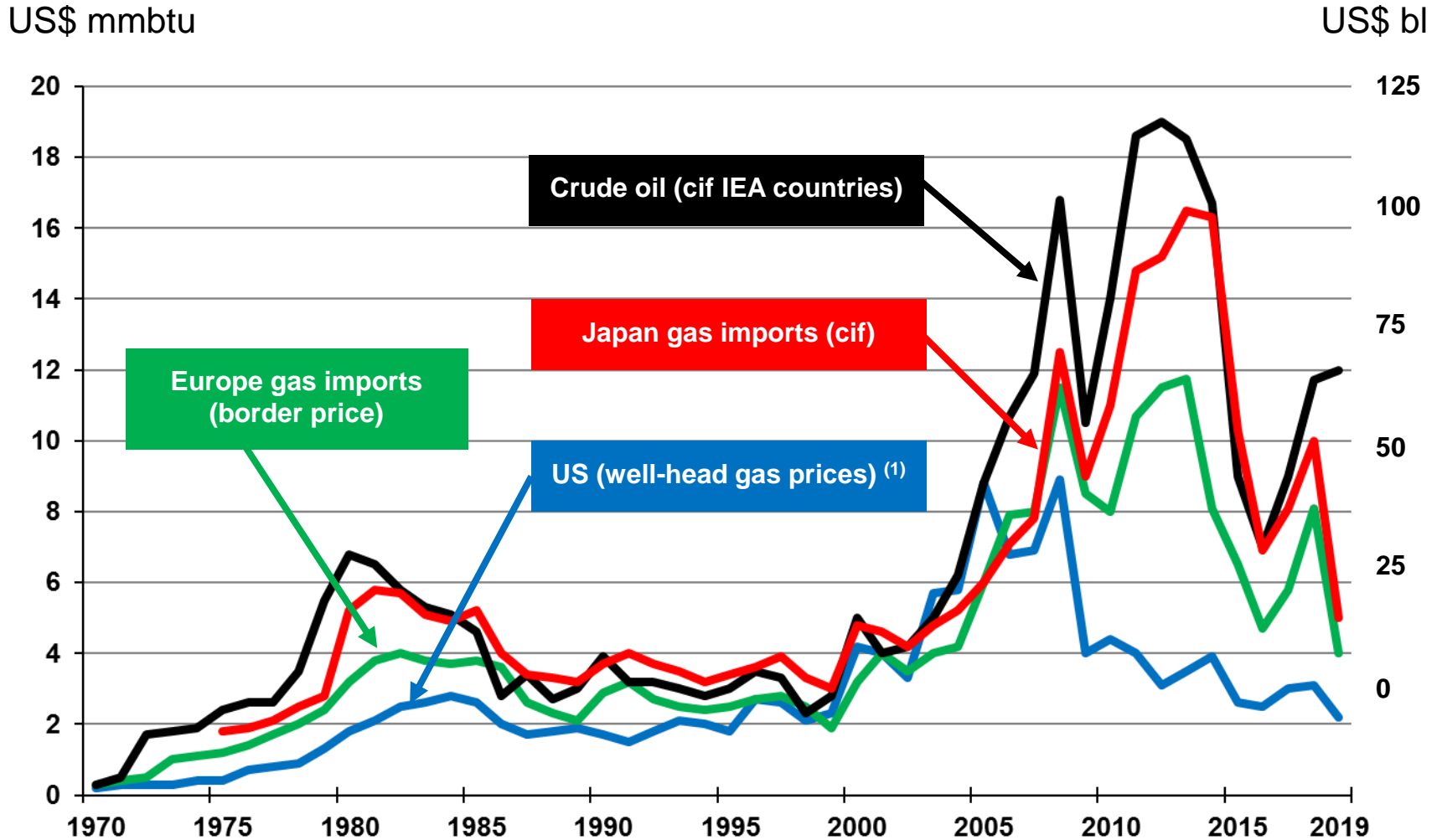
- **Introduction**
- **The global energy environment: a very uncertain outlook**
- **The energy and socio-economic context in North Africa**
- **Revisiting Algeria's political crisis and deteriorating energy scene**
 - Demand-side mitigation measures
 - The supply-side response to declining exports
 - The limits of the political response
- **Conclusions**

The call on OPEC oil will continue to decline until the mid 2020s



Sources: Nalcosa, IEA, OPEC

Regional gas prices are converging toward the low end of the historical range



Sources: Platts, EIA, Argus, Oxford Energy Institute, Own Analysis
 (1) Henry Hub from 2005 onwards

North African countries share common critical challenges

The energy landscape

- Soaring oil and natural gas demand
- Highly subsidized local energy prices
- Declining or stable hydrocarbon supply
- Marginal contribution of renewable energies
- Limited regional energy trade and cooperation

The socio-economic context

- Rapid population growth
- Low/stagnant per capita income
- Low level of economic diversification
- Insufficient employment opportunities
- Exodus of talented younger generation

Algeria has the largest hydrocarbon reserves

	Proved Conventional Reserves		Unconventional Potential	
	Oil (billion bl)	Gas (Bcm)	Shale Oil (billion bl)	Shale Gas (Bcm)
Algeria	15.2 ⁽¹⁾	2'400	5.7	20'000
Egypt	1.6	2'100	4.6	2'800
Libya	48.4	1'400	26.1	3'500
Morocco	< 0.1	100	< 0.1	600
Tunisia	0.4	100	1.5	500
Total	65.7	6'100	38.0	27'400

Sources: EIA (2015), BP statistical Review (2019) and Nalcosa's estimates
 (1) Including NGL's

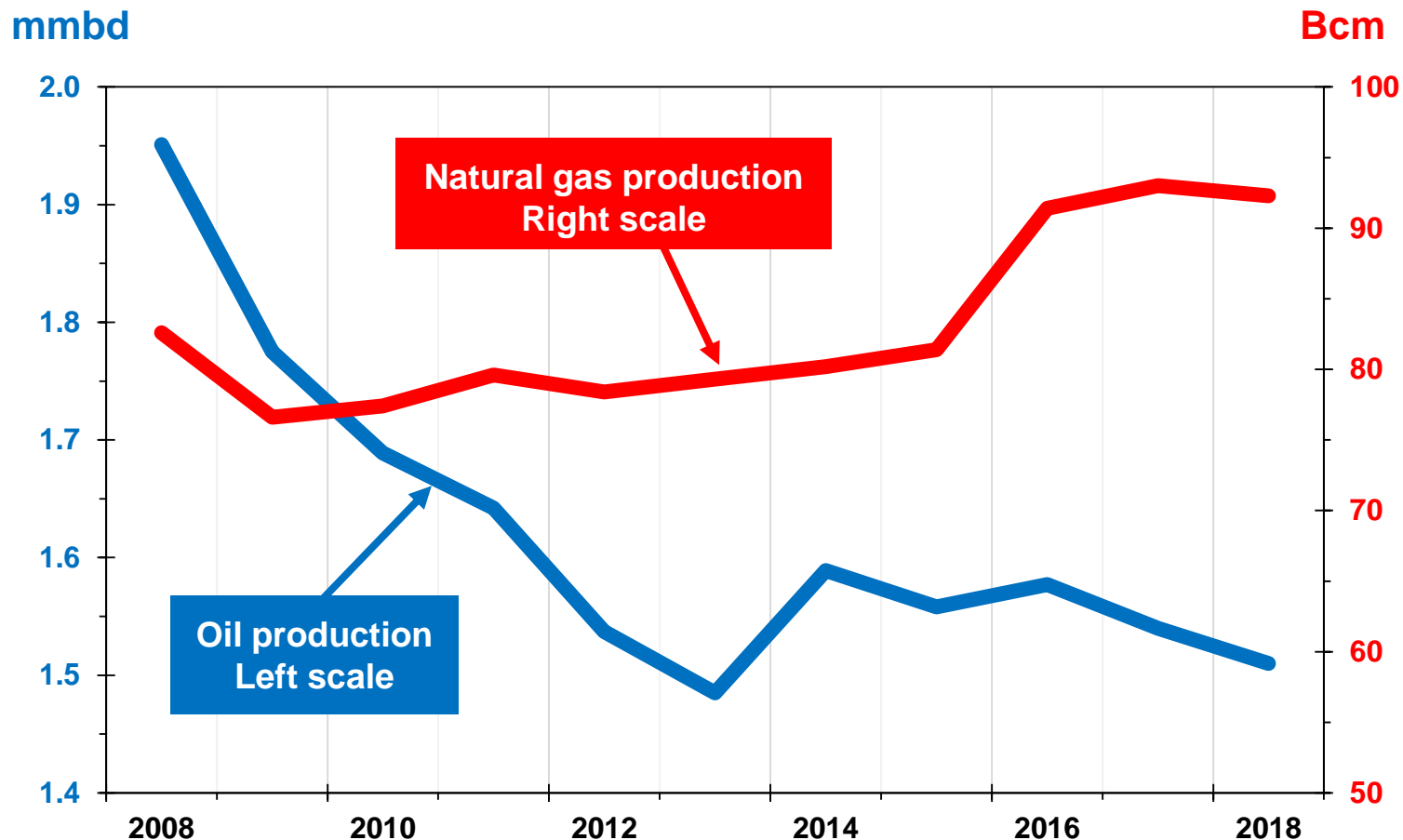
Algeria's Energy Consumption growth is the highest in the region

Average Growth Rate per annum over the last 10 years

	Oil and Products	Natural gas	Primary Energy	
			Total	Per capita
Algeria	3.6	5.2	4.5	2.5
Egypt	2.3	4.2	3.2	1.2
Libya	Na	Na	Na	Na
Morocco	3.2	6.7	3.7	2.3
Tunisia	3.0	3.5	3.0	2.1

Sources: BP statistical reviews, IEA, OPEC & Nalcosa's estimates

Algeria's oil production⁽¹⁾ is on a declining trend while net gas production⁽²⁾ is stabilizing

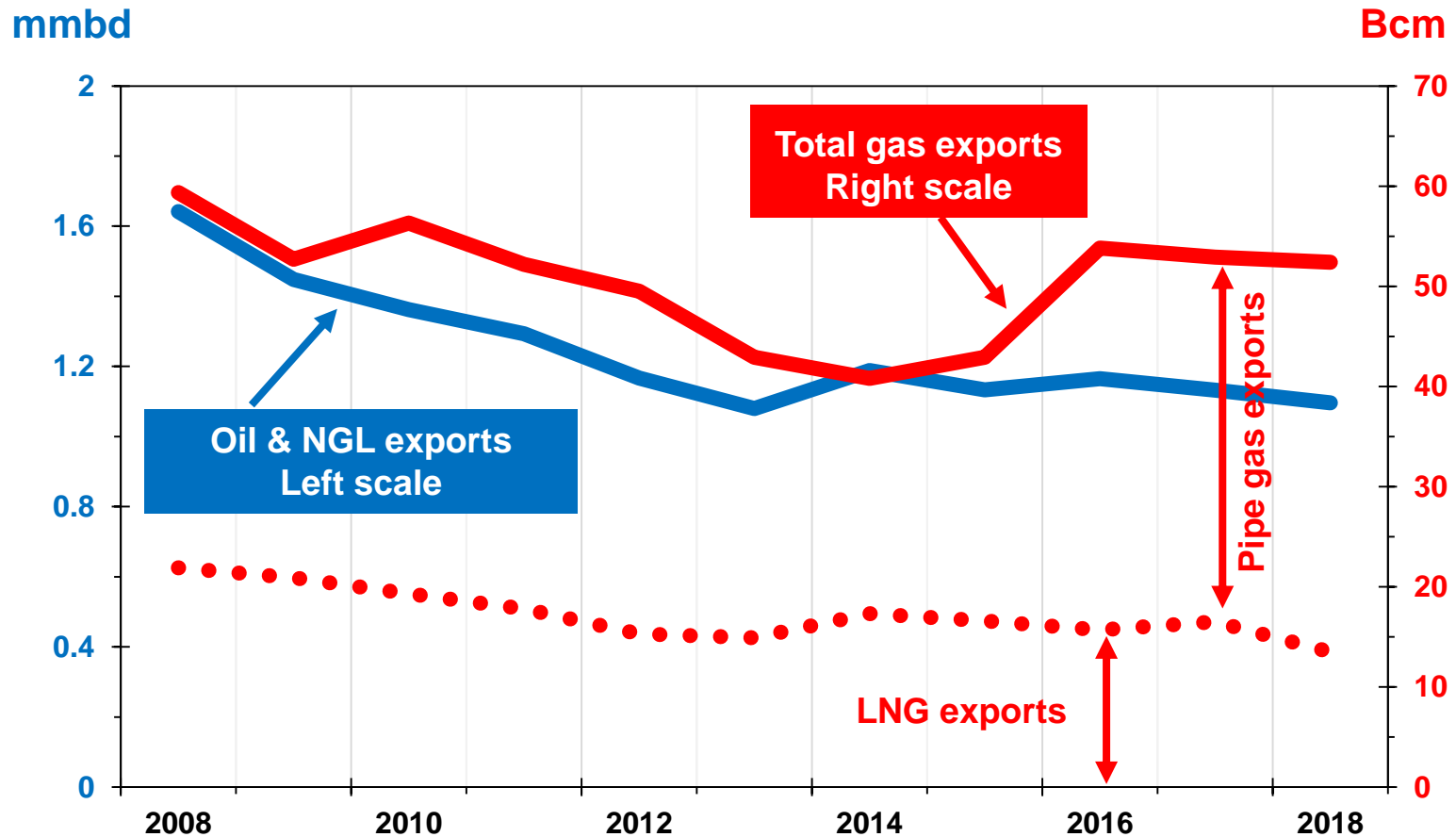


Sources: BP statistical reviews, IEA, OPEC & Nalcosa's estimates

(1) Including NGL's

(2) Marketed production (excluding reinjection, shrinkage and flaring)

Total hydrocarbon exports are on a declining trend



Sources: BP statistical reviews, IEA, OPEC & Nalcosa's estimates

Regional domestic natural gas prices (\$/mmbtu)

	Domestic sales	Industrial Sales
Algeria	0.55	0.85
Egypt	1.25 - 3.00	5.00 - 5.75
Libya	0.25	0.25
Morocco	5.00 - 6.00	N.A.
Tunisia	3.80 - 4.50	5.25 - 5.70

Sources: IGU, Apicorp and author's own estimates

Renewable energies play a marginal role in Algeria

	Electricity Generation by Fuels ⁽¹⁾ (%)				Renewable Energy Capacity (GW) ⁽²⁾		% Share of Renewables ⁽²⁾ in Power Generation
	2018				Current Capacity 2018	Planned (2024)	Government Target
	Gas	Oil	Other Fossil Fuels	Renewables ⁽²⁾			
Algeria	97	2	1	<1	0.45	2.50	30% by 2040
Egypt	81	10	1	8	3.35	6.50	20% by 2020
Libya	62	38	0	<1	0.05	0.10	30% by 2040
Morocco	18	24	41	17	4.50	9.20	40% by 2030
Tunisia	95	2	<1	2	0.35	1.20	30% by 2040
Average	80	10	4	6	8.70	19.50	

Sources: BP Statistics (2019), IEA Renewables (2019), OME, Apicorp and Nalcosa's estimates, IEA Renewables 2019

(1) Excluding regional electricity trade

(2) Including hydro-power

Déterminer le meilleur usage des ressources encore disponibles pour un nouveau départ

- **Stabiliser le niveau de la production d'hydrocarbures et reconstituer les réserves**
- **Intensifier l'effort d'exploration, dans le conventionnel en priorité. Se préparer à maîtriser les conditions d'une exploitation optimale du non-conventionnel**
- **Maîtriser le taux de croissance de la consommation nationale. Restructurer le mode de subvention des prix intérieurs**
- **Accélérer le développement des énergies renouvelables**
- **Diversifier l'économie nationale en développant les activités en aval (raffinage et pétrochimie)**
- **Adapter l'organisation de Sonatrach aux nouvelles réalités de l'industrie pétrolière**