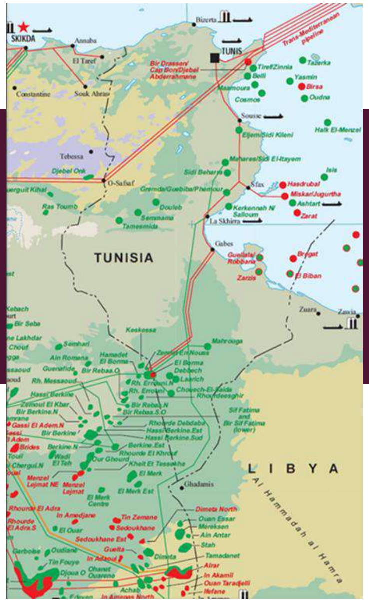
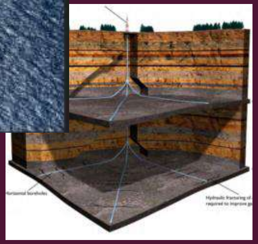
INVESTISSEMENT DANS LE SECTEUR DE L'ÉNERGIE, LES ÉLÉMENTS D'UNE **STRATÉGIE**

HICHEM MANSOUR, ETUDES STRATÉGIQUES - SOLIDAR TUNISIE

ATPG CONFERENCE, TUNIS 6 OCT 2016





SOLIDAR TUNISIE

- ONG Active depuis 2015. valeurs de la constitution (Justice sociale, solidarité et équité)
- Force de proposition et d'analyse des projets de lois soumis a l'ARP
- Structure transversale d'accompagnement
- Etudes, policy papers, formation d'élus par un réseau de compétences
  - ***Examples:***
    - Les incitations fiscales
    - Code des investissements
    - Lecture critique du projet du plan de développement 2016-2020
    - les négociations entre l'Union Européenne et la Tunisie autour de la question de l'ALECA
    - **Articles, PP: Investissement dans le secteur de l'énergie, les éléments d'une stratégie (Leaders, Décembre 2015)**

Solidar Tunisie تونس الاجتماعية

PLAN DE LA PRÉSENTATION

1. Contexte Global et local
2. Perception de la Tunisie
3. Reformes en cours
4. Éléments a considérer:
   - coût des services
   - Structure, organisation et outils de gouvernance
   - Accès aux données
   - Potentiel du non conventionnel et EnR
5. Conclusion

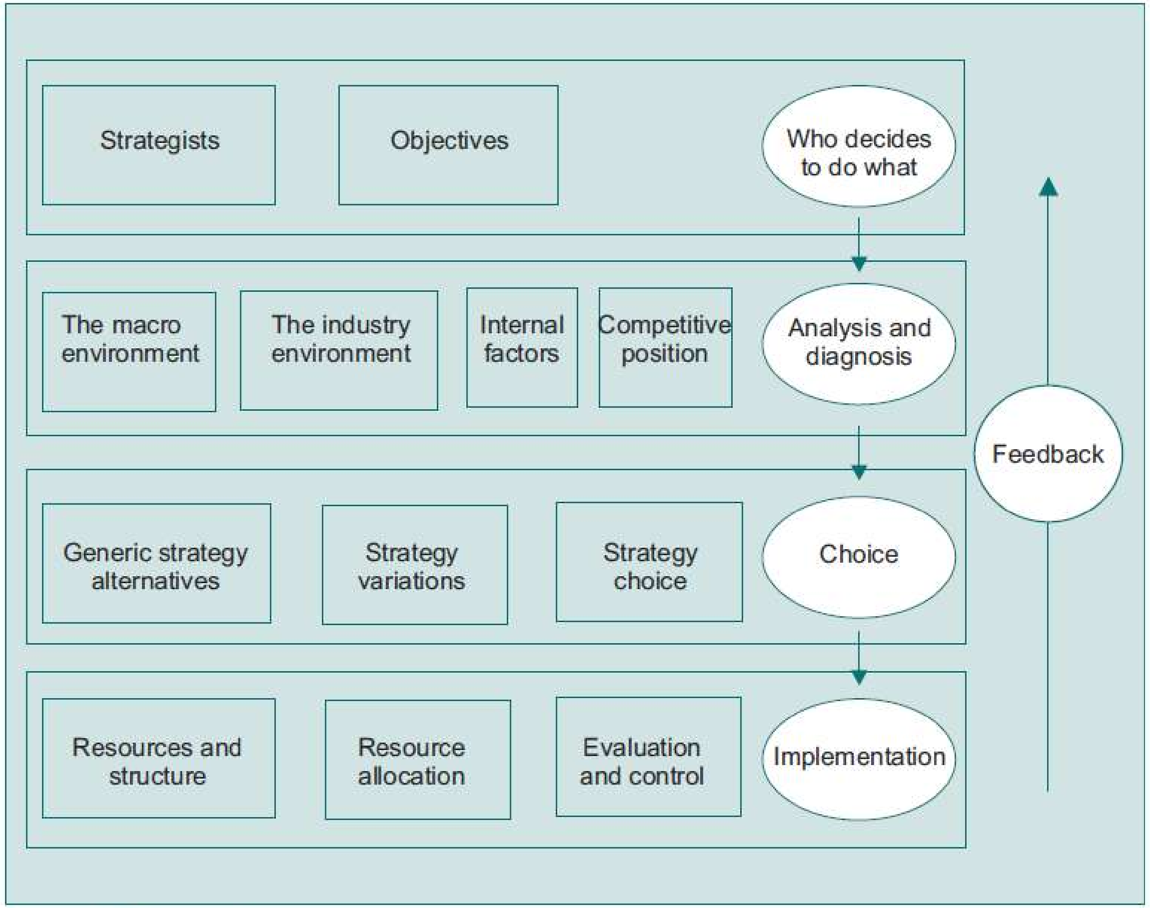


Figure 2.1 **The strategic process model**

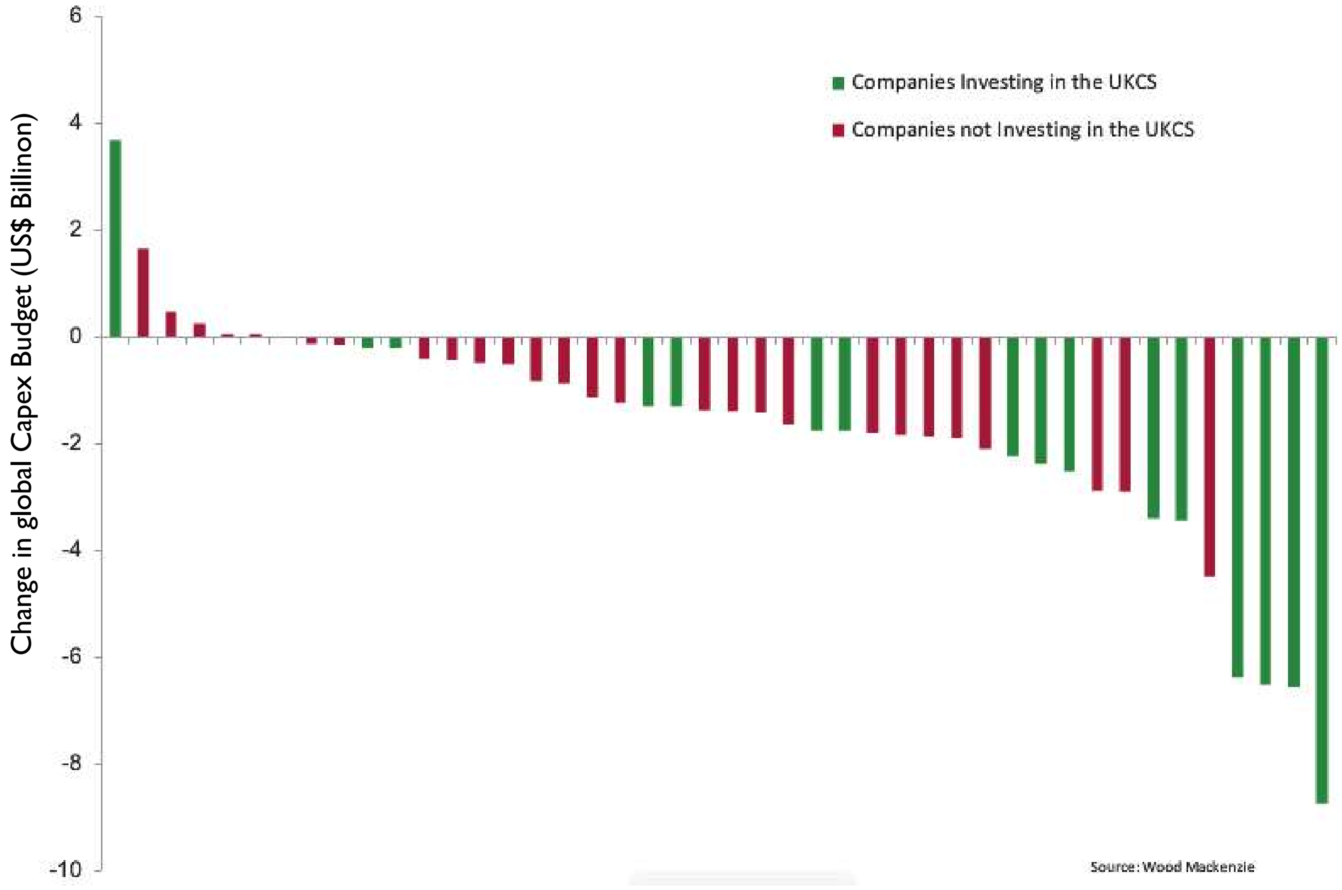
ETAT DES LIEUX: NAM, UK, GULF

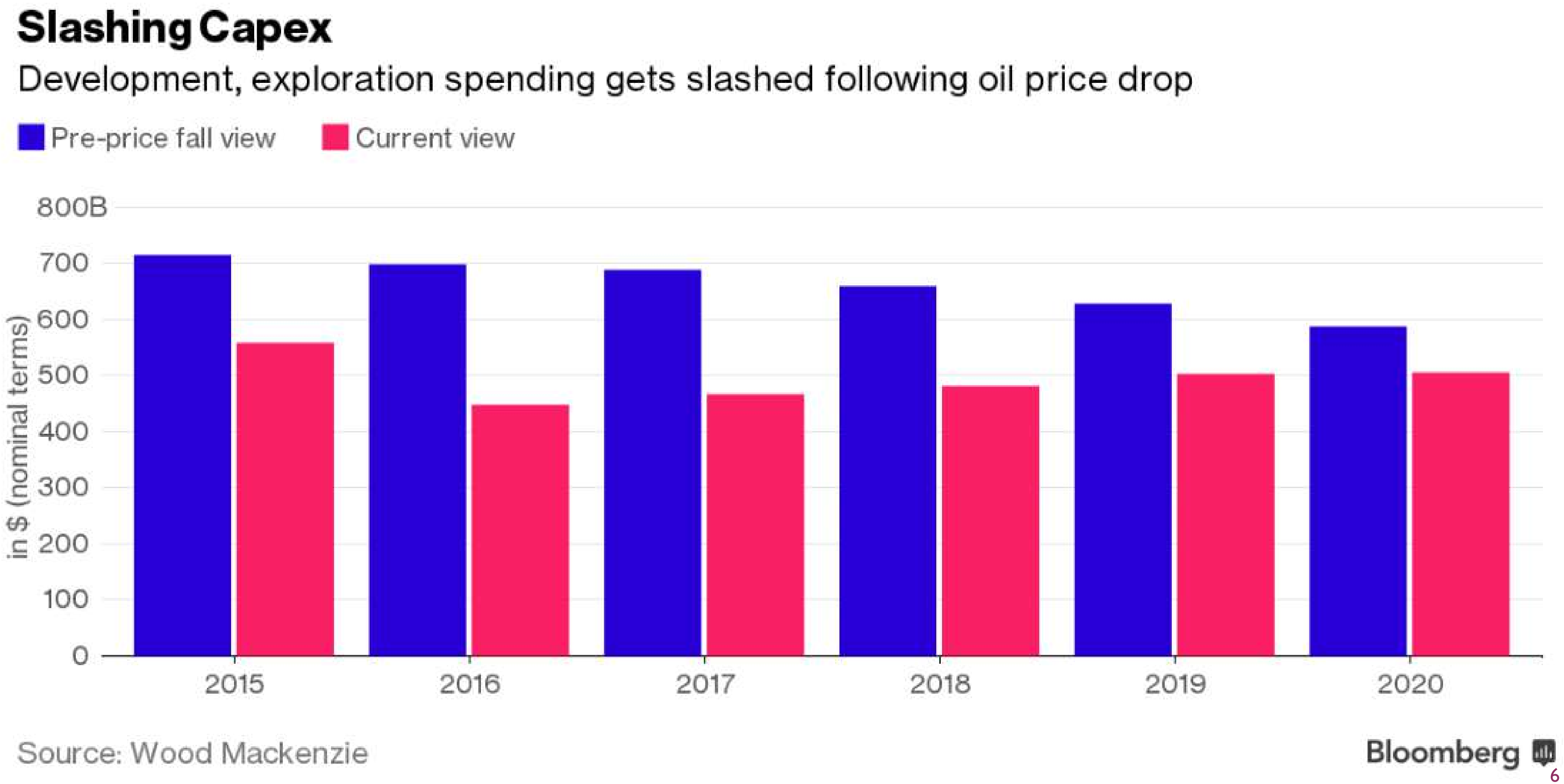
Rig Count Overview & Summary Count

Area	Last Count	Count	Change from Prior Count	Date of Prior Count	Change from Last Year	Date of Last Year's Count
U.S.	16 September 2016	506	-2	9 September 2016	-336	18 September 2015
Canada	16 September 2016	132	-2	9 September 2016	-50	18 September 2015
International	August 2016	937	-1	July 2016	-200	August 2015

Source: BHI Head count Sep 2016

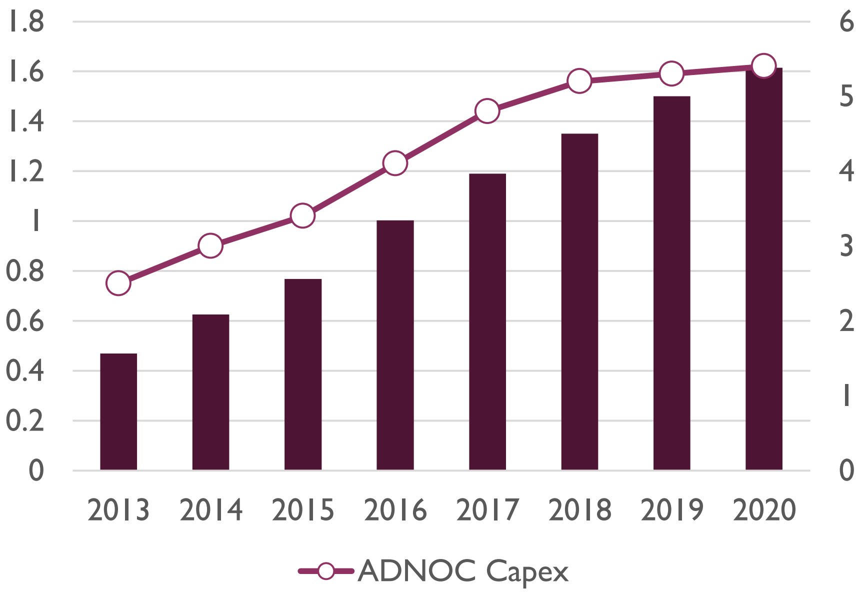
ETAT DES LIEUX: NAM, UK, GULF



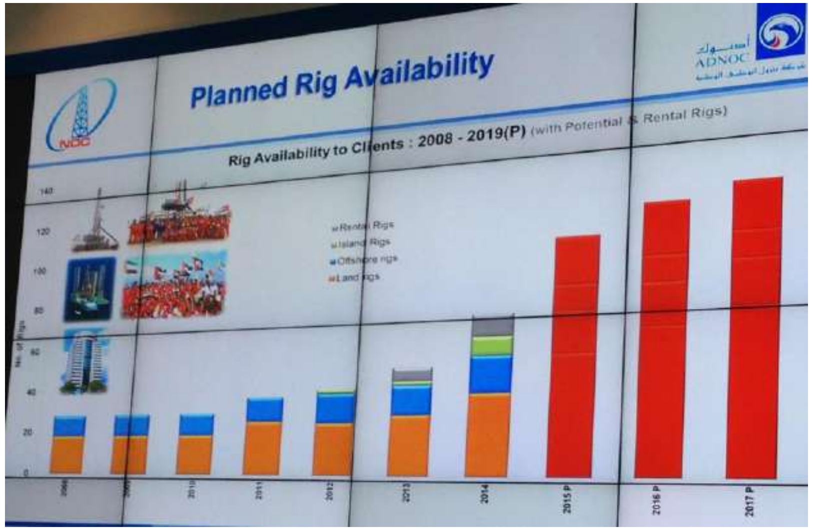


Slashing Capex
Development, exploration spending gets slashed following oil price drop
Pre-price fall view
Current view
800B
700
600
500
400
300
200
100
0
in $ (nominal terms)
2015
2016
2017
2018
2019
2020
Source: Wood Mackenzie
Bloomberg

ETAT DES LIEUX: NAM, UK, GULF



NDC rig expansion plans to 2018



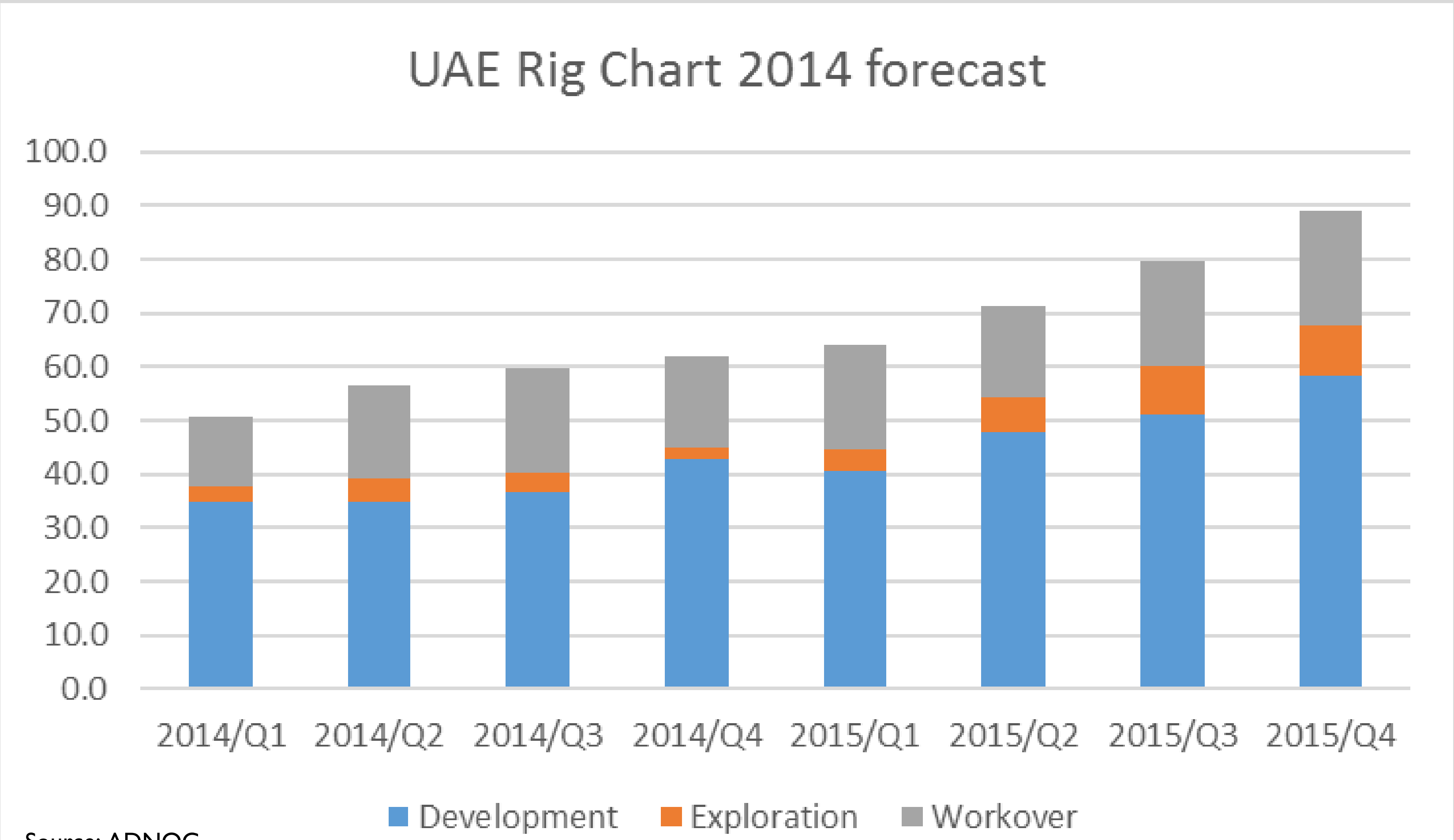
Growth Drivers

- Production Increase Objective
- Mature Production in Decline
- Need for Gas
- Increased Recovery

Growth Delivery

- Significant increase in rig fleet
- High drilling intensity
- Drive for rig efficiency

ETAT DES LIEUX: NAM, UK, GULF



Source: ADNOC

2011 Vs. 2010 +5%
- ADCO +4

2012 Vs. 2011 +17%
- ADCO +3
- ADMA +2
- Al Hosn +2

2013 Vs. 2012 +28%
- ADCO +3
- ADMA +1
- ADOC + 1
- Dana Gas + 1
- ZADCO +2
- KADOC/Wshall + 1

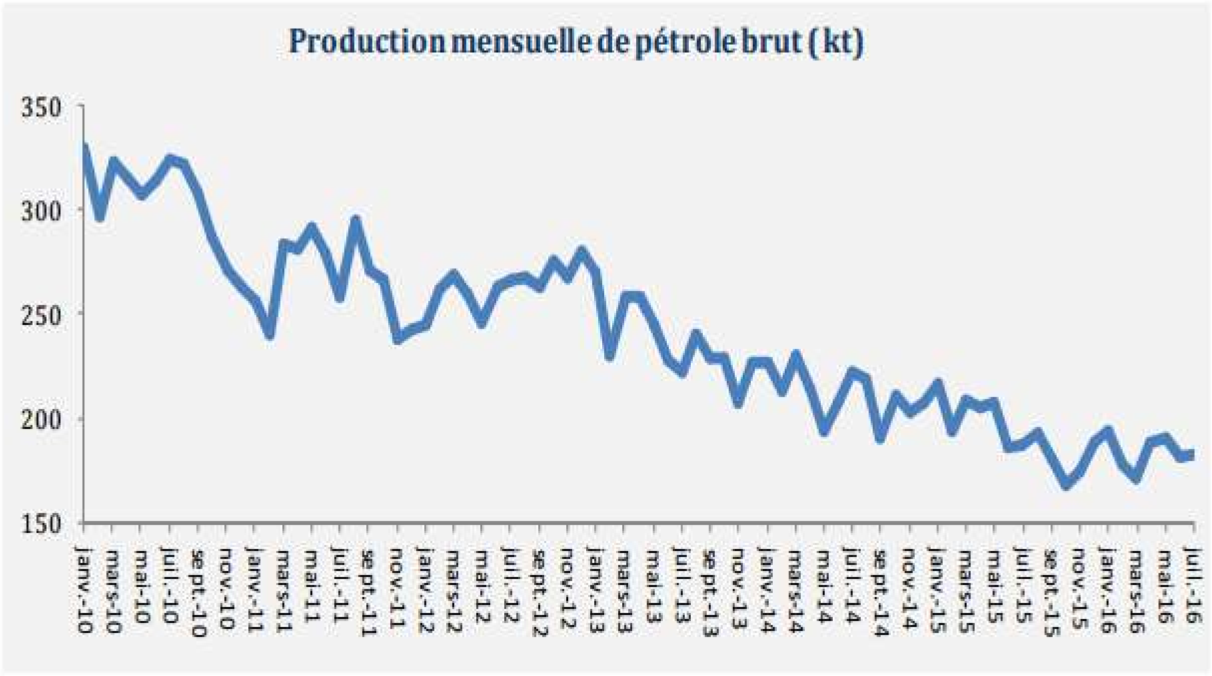
2014 Vs. 2013 +30*%

EVOLUTION DE L'ACTIVITÉ PÉTROLIÈRE EN TUNISIE
2010 - 2015

Baisse prévisible, raisons multiples:

- Déclin Naturel
- Problèmes techniques et operationnel
- Contexte social poste révolution
- Puits en service a faible réserve
- Restrictions budgétaires

Les deux graphiques suivant illustrent l'évolution de la production mensuelle de pétrole depuis l'année 2010 ainsi que sa variation mensuelle entre 2015 et 2016.



POLICY PERCEPTION INDEX

2. Perception de la Tunisie

Fraser institute, Global Petroleum Survey Results

BENCHMARK

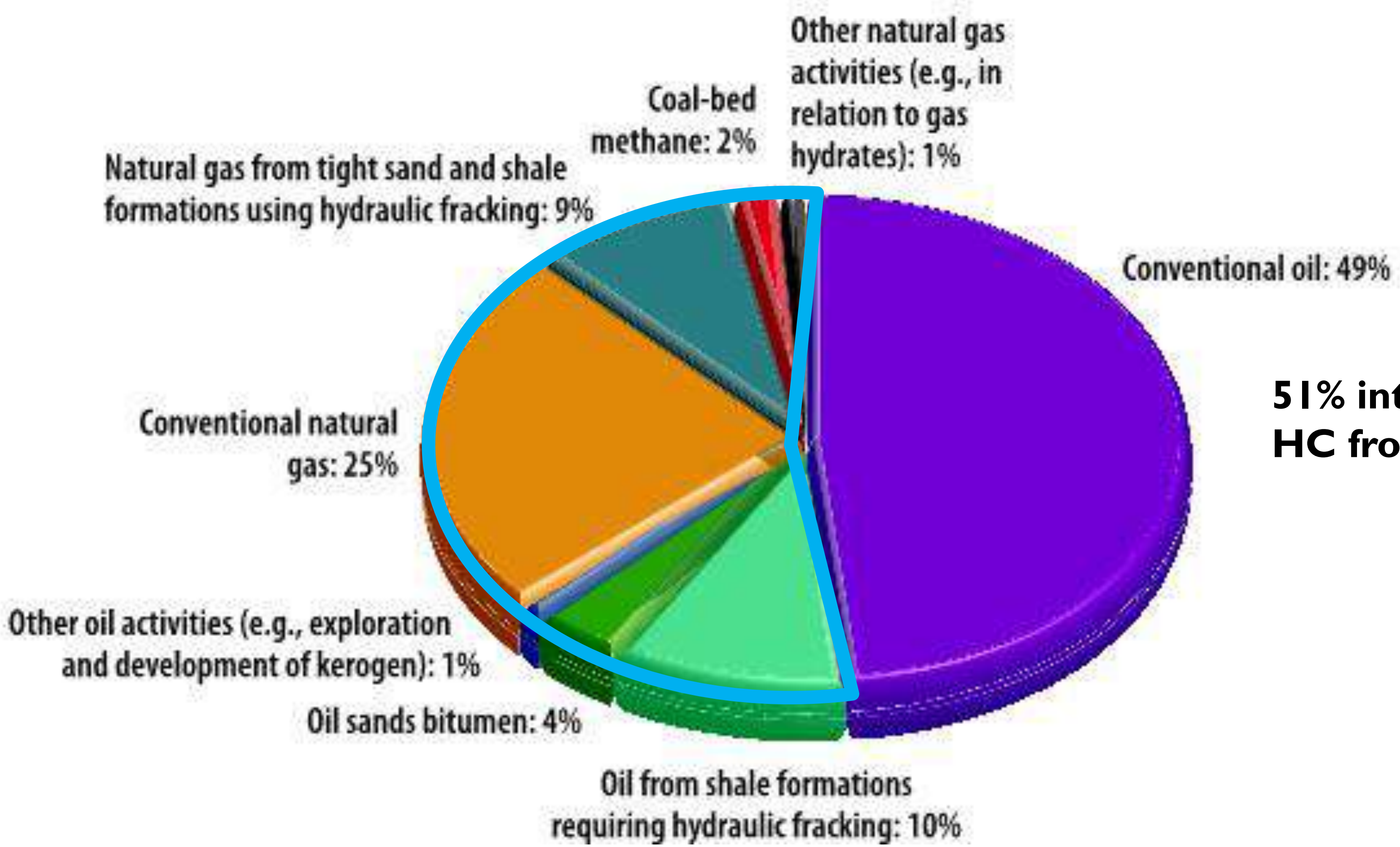
Table 1: Large Reserve Holder Comparisons

		Policy Perception Index Score	Proved reserves (bboe)
1	Texas	11.07	29.863
2	United Arab Emirates	31.33	138.002
3	Alberta	34.22	175.296
4	Qatar	36.32	188.143
5	Kuwait	45.58	115.868
6	China	48.18	55.293
7	Kazakhstan	69.57	45.887
8	Algeria	69.70	41.927
9	Nigeria	71.96	70.804
10	Iraq	73.44	165.054

PARAMETERS TAKEN INTO ACCOUNT

1. Fiscal
2. Taxation
3. Environment
4. Regulatory Enforcement
5. Cost of regulation
6. Protected areas
7. Trade Barriers
8. Labor regulation
9. Infrastructure
10. Quality of Geological Data
11. Labor & Skills Availability
12. Disputed land claims
13. Political stability
14. Security
15. Regulation
16. Legal

FOCUS OF E&P COMPANIES



51% interested in gas and HC from tight formations

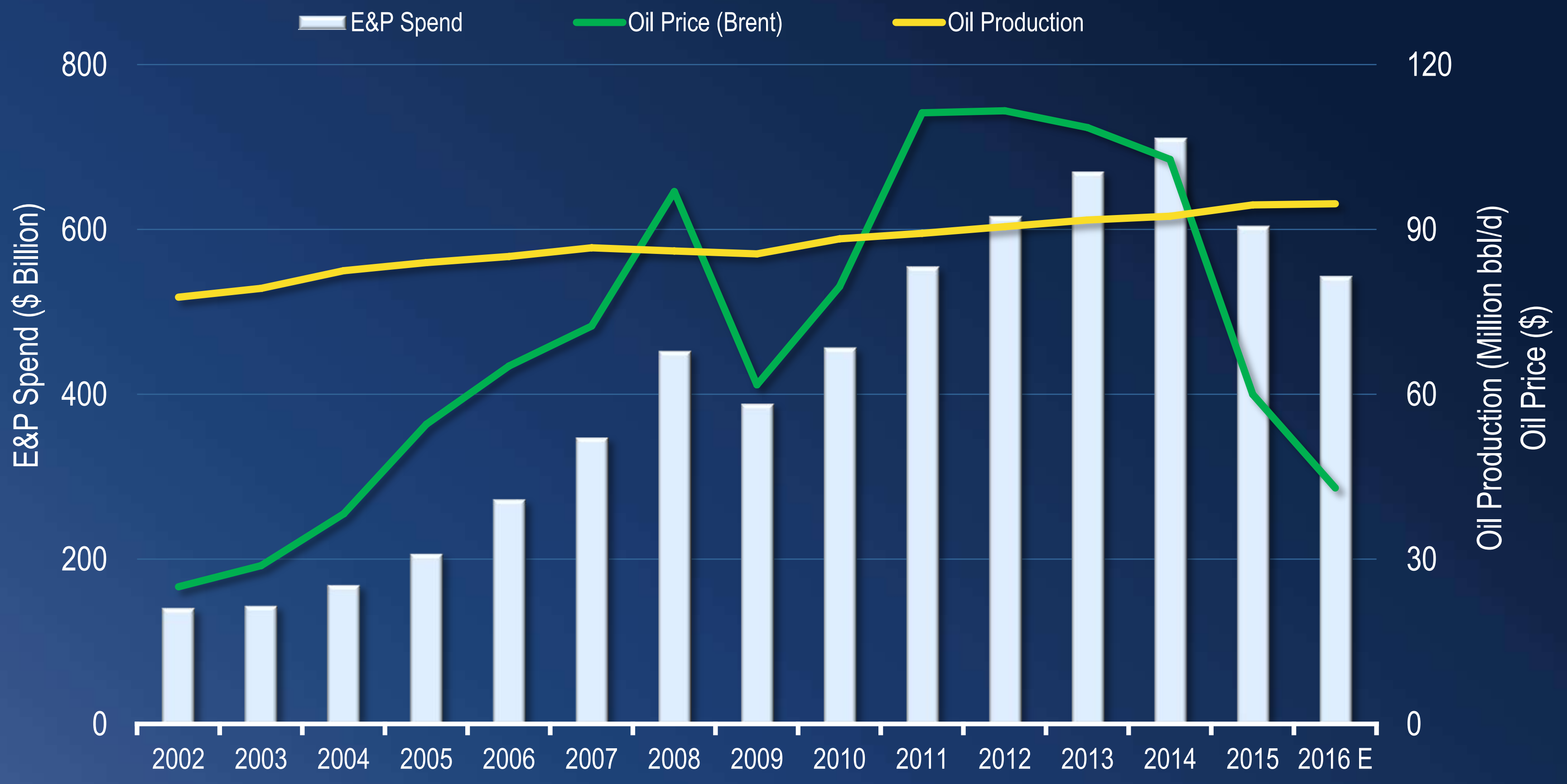
3. REFORMES EN COURS

- Nouvelle constitution, notament l'article 13
- La loi des energies renouvelables
- Decrets d'application de la loi sur le ER
- En cours:
  - Projet d'amendement du code des hydrocarbures,
  - Projets de modeles de conventiom type pour le conventionnel
  - Preparatifs pour le lancement d'une etude environmentale strategique pour le non conventionnel
- Transparence: Site http://data.industrie.gov.tn/

4. ÉLÉMENTS A CONSIDÉRER

- Coût des services
- Structure, organisation et outils de gouvernance
- Accès aux données
- Potentiel du non conventionnel et EnR

E&P Spend versus Oil Production Trend



Source: BP Statistical Review of the World Energy,IEA World Energy Outlook 2013, IEA Oil Market Reports, Barclays, IHS Herold, EIA, SLB Analysis.
Note: 2014 estimate for E&P spend and oil production; 2014 year-to-date average for oil price; Brent price November, 30, 2014

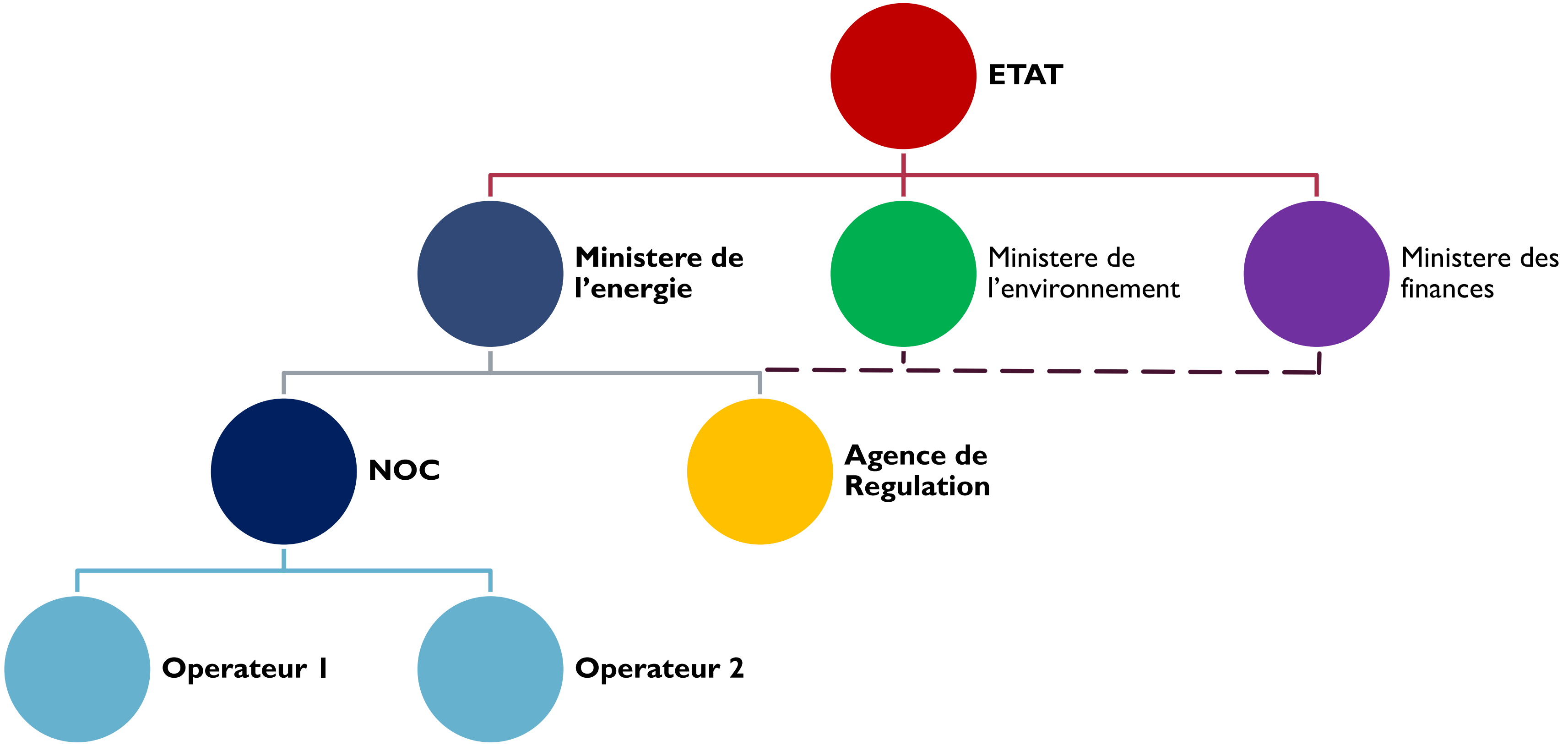
HOW TO COMPRESS COSTS

- 2002 – 2014: Spending 3 times more for similar production
- 2014 onwards: Average reduction of 25 – 30% in spending
- Integration of services
- More Risk transfer to service companies
- Active tendering strategy
- Return on Transformation

GOVERNANCE: ÉVITER LES CHEVAUCHEMENTS

- Transformation of resource wealth into prosperity fails due to weak governance.
- A successful strategy requires strong economics, accountability, capability of government institutions, and relationship with civil society
- Avoid overlap between regulator and NOC, otherwise it will create confusion and would be detrimental to good governance
- ***Examples of one independent regulator - NOC's:***
  - ***Norway, Mozambique advised by the Norwegians since 1980***
  - ***Algeria ANH and Al Naft on Norway model.***
  - ***Colombia***
  - ***…etc.***

ORGANISATION TYPE



GOVERNANCE STRUCTURE EXAMPLES

MISSION DE L’AGENCE (TYPE, RECURRENT)

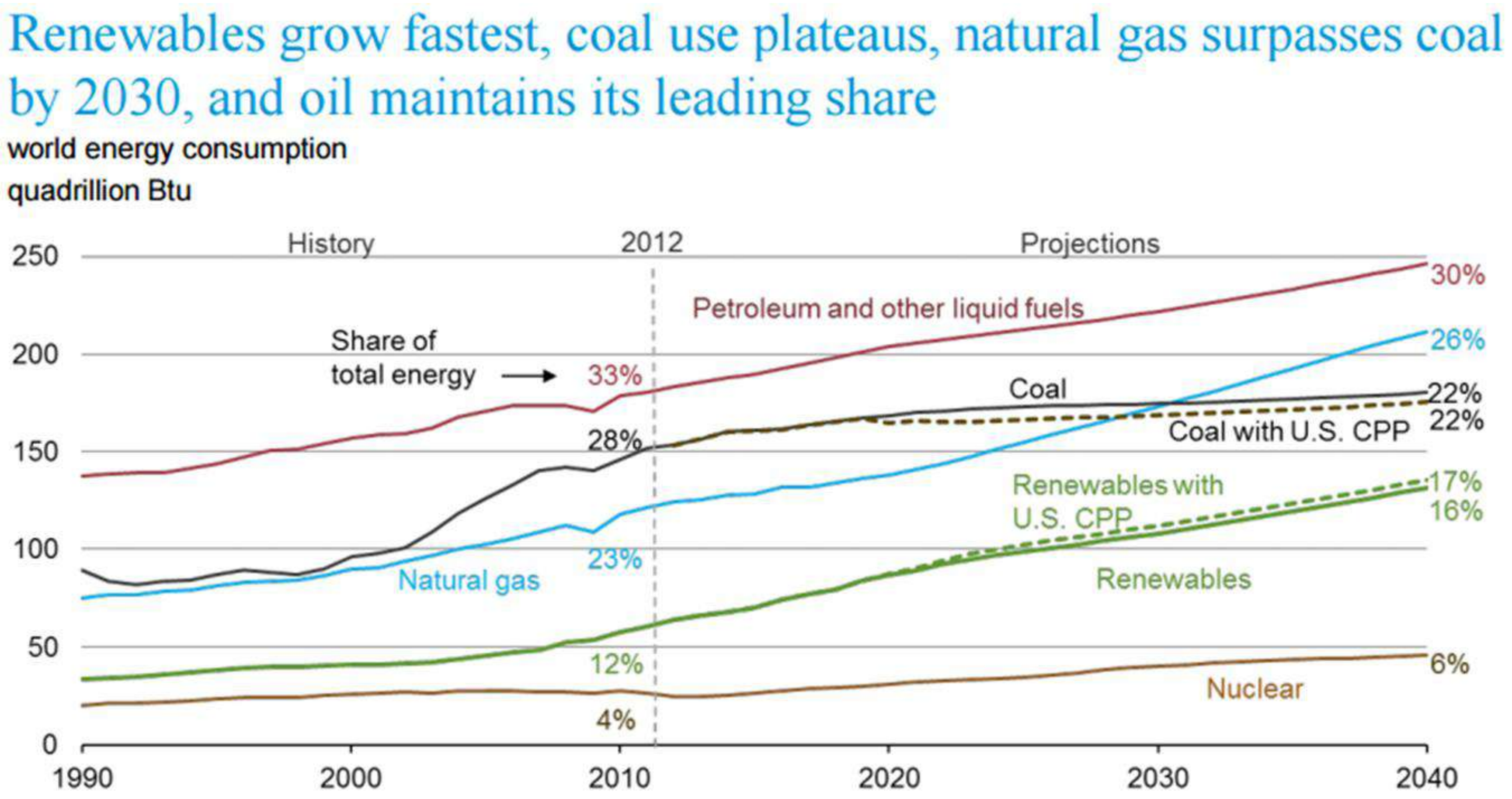
- **Promotion des investissements en recherche / Exploitation Hydrocarbures,**
- **Gestion / mise à jour banques de données**
- **Délivrer autorisations de prospection**
- **Organisation et lancement Appels à concurrence (LR) et évaluation des offres E&P**
- **Attribution périmètres de Recherche et/ou Exploitation,**
- **Conclusion de contrats Recherche et/ou Exploitation,**
- **Suivi, contrôle et administration des contrats signés**

NPD example

Source: Site Al NAFT, Ministere de l’energie, Algerie. NPD Norway, DGH India

Pourquoi faut il explorer le Non Conventionnel?

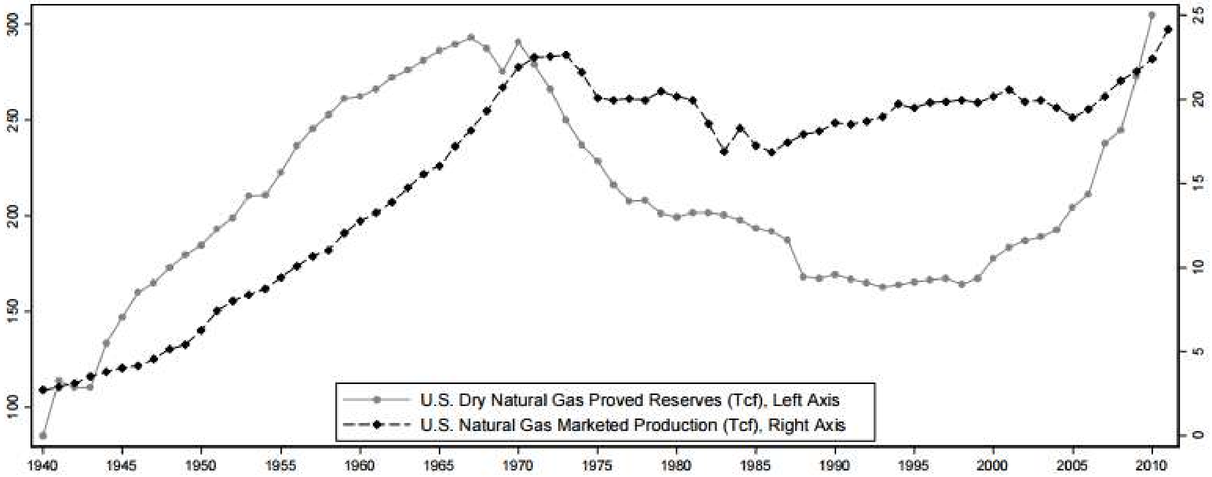
GLOBAL ENERGY MIX



Source: *EIA, International Energy Outlook 2016 and EIA, Analysis of the Impacts of the Clean Power Plan (May 2015)*

NATURAL GAS RESERVES IN THE US

Figure 4. US Natural Gas Proved Reserves and Marketed Production, 1940–2011

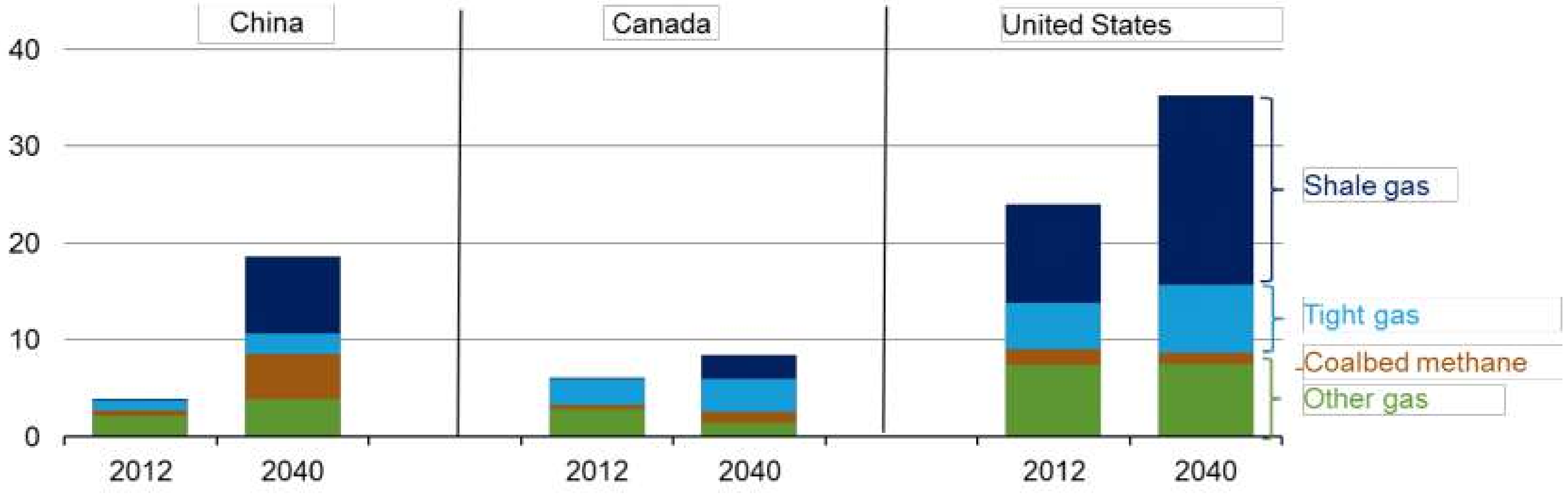


Source: Energy Information Administration, natural gas data: http://www.eia.gov/naturalgas/data.cfm.

FUTURE OF UNCONVENTIONAL

Shale gas, tight gas, and coalbed methane will become increasingly important to gas supplies, not only for the U.S., but also China and Canada

natural gas production by type
trillion cubic feet



Note: Other natural gas includes natural gas produced from structural and stratigraphic traps (e.g. reservoirs), historically referred to as 'conventional' production.

Source: EIA, International Energy Outlook 2016

FRACTURATION HYDRAULIQUE A GRANDE ECHELLE

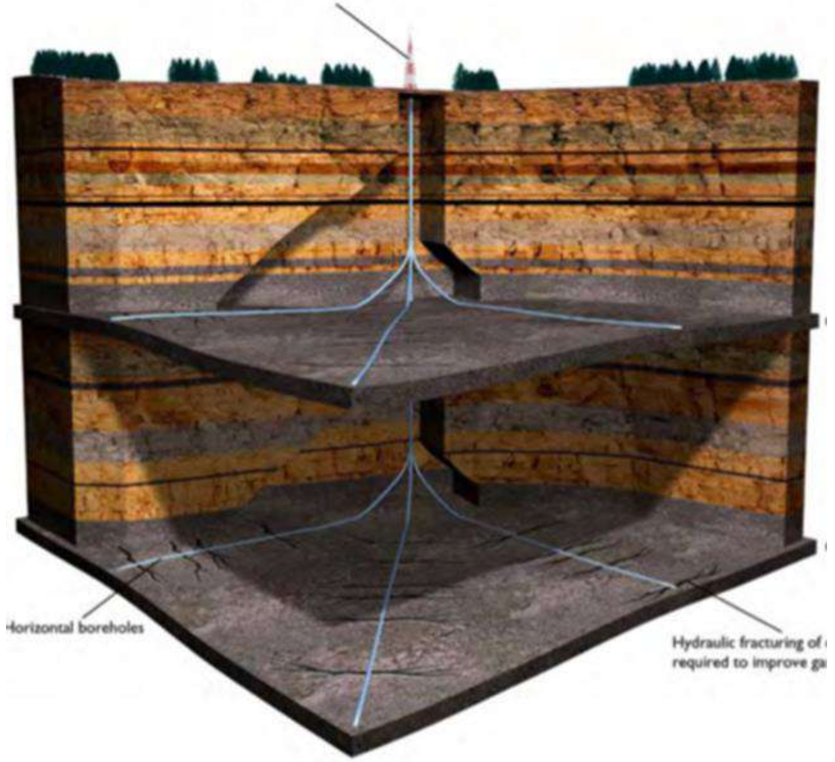
- Somme nous prêts?

Non

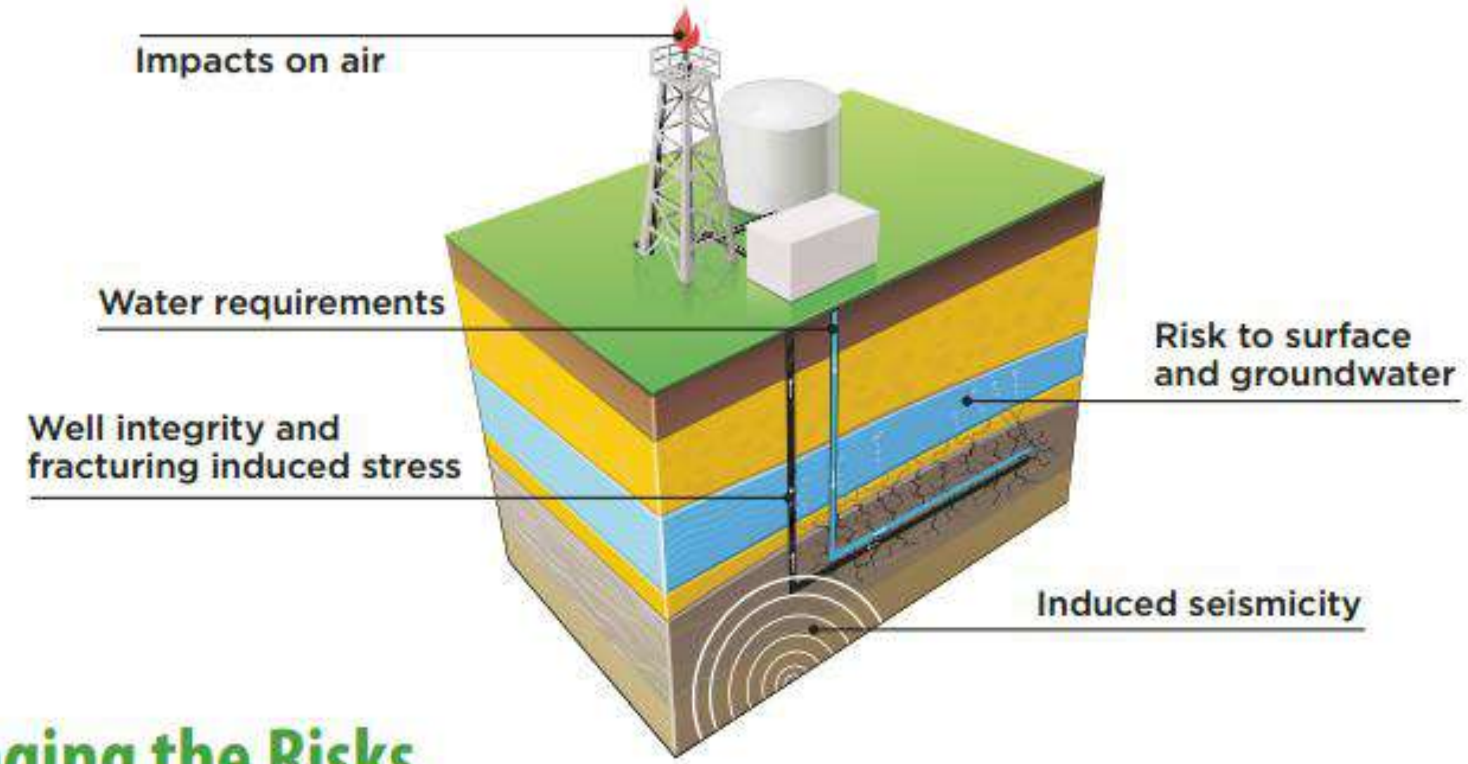
- Quels sont les risques et comment les maîtriser
- Importance de l'information et de la vulgarisation (ARP, Societe Civile)
- Quel type de contrat et quelle réglementation: Avantageux pour

la Tunisie tout en attirant l'investisseur

- La simplicité est de mise: **Make it simple**



ASSOCIATED RISKS



Managing the Risks
of Hydraulic Fracturing: An Update

5. CONCLUSION: THINK OUT OF THE BOX

Quelques idées a considérer comme éléments de la stratégie:

1. Coût des services
2. Considérer des structures alternatives de governance (ministère, régulation, opération)
3. Accès aux données en ligne, moyennant des procès transparents et rapides. Partage de l’information
4. Potentiel du non conventionnel et importance des EnR
5. Importance de données séismiques mises a jour et de qualité (3D)
6. considérer toutes les alternatives de Marketing: (Licensing Rounds…etc)
7. développement Ressources Humaines (a tous les niveaux), formation, encadrement…etc.
8. Conseil supérieur de l’energie

Each Country is unique, Tunisia is unique

What works in other countries does not necessarily work here

Thank you for listening