

26th World Gas Conference

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Market Challenges & Opportunities from the Gas Exporters
Perspective

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What is GECF?



MEMBERS

-  Algeria
-  Bolivia
-  Egypt
-  Equatorial Guinea
-  Iran
-  Libya
-  Nigeria
-  Qatar
-  Russia
-  Trinidad and Tobago
-  United Arab Emirates

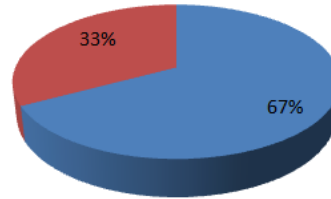
OBSERVERS:

-  Iraq
-  Kazakhstan
-  The Netherlands
-  Norway
-  Oman
-  Peru
-  Venezuela

GECF – Strengths

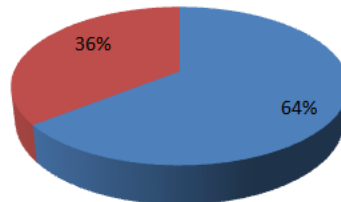
Gas Reserves

■ Total GECF ■ Rest of the World



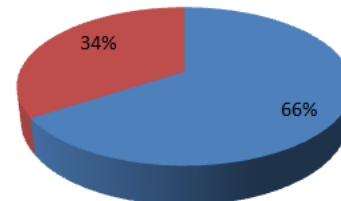
Pipeline Trade

■ Total GECF ■ Rest of World

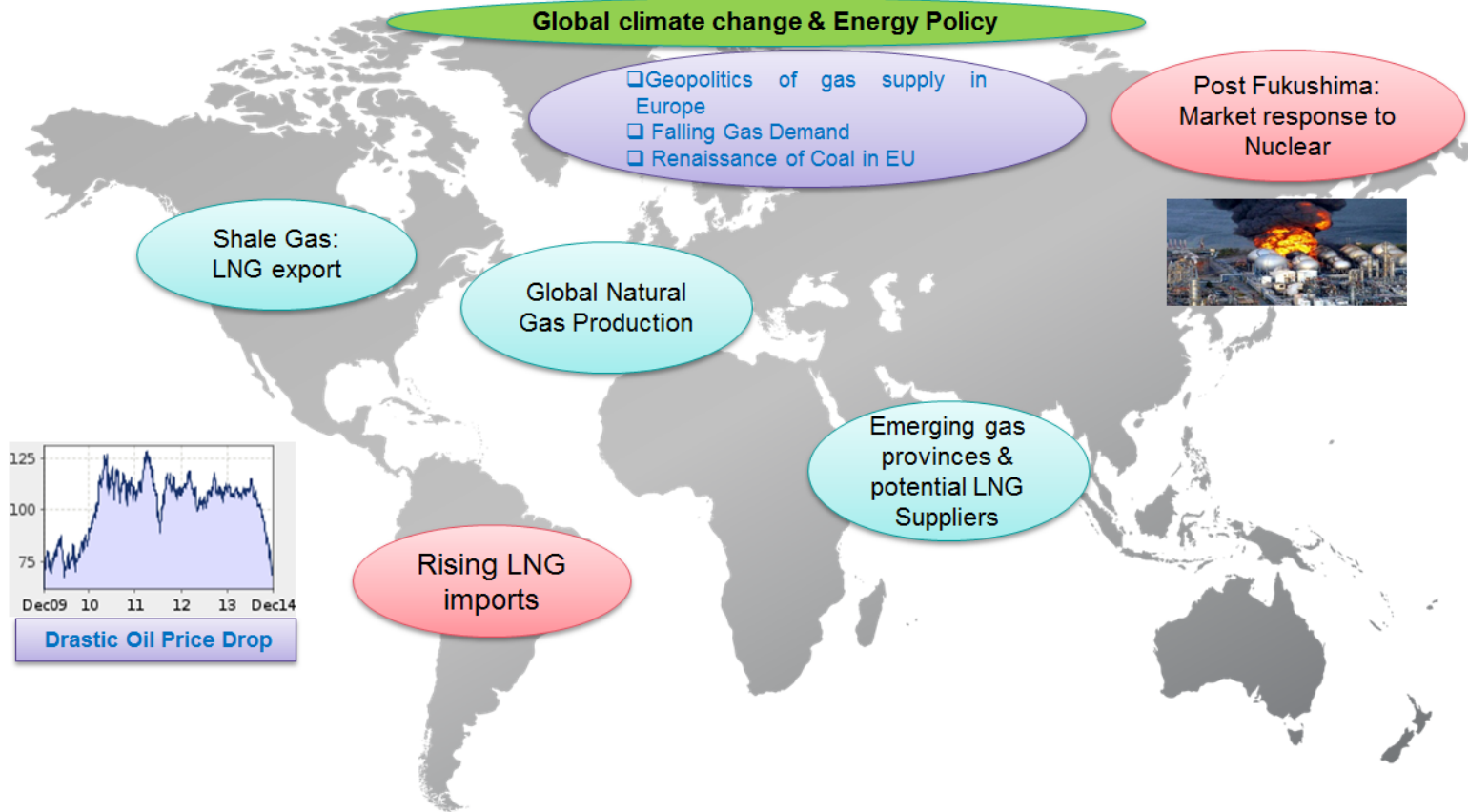


LNG Trade

■ Total GECF ■ Rest of the World

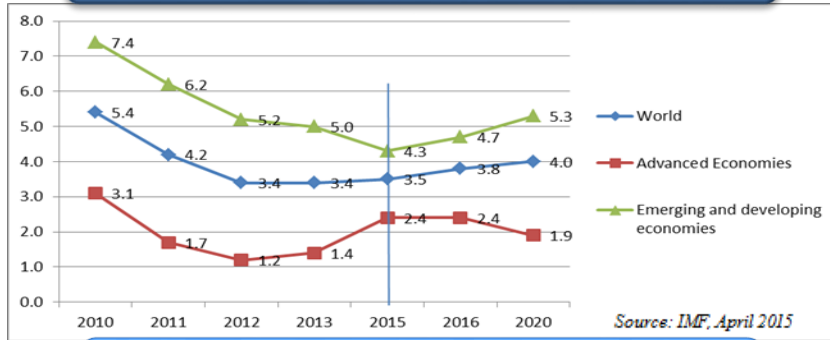


An Overview of Gas Market Challenges

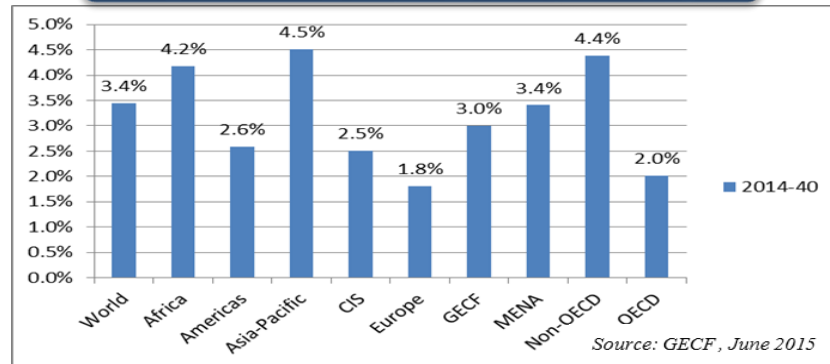


Macroeconomic Outlook

World GDP Growth in the short - term



Real GDP Growth long - term



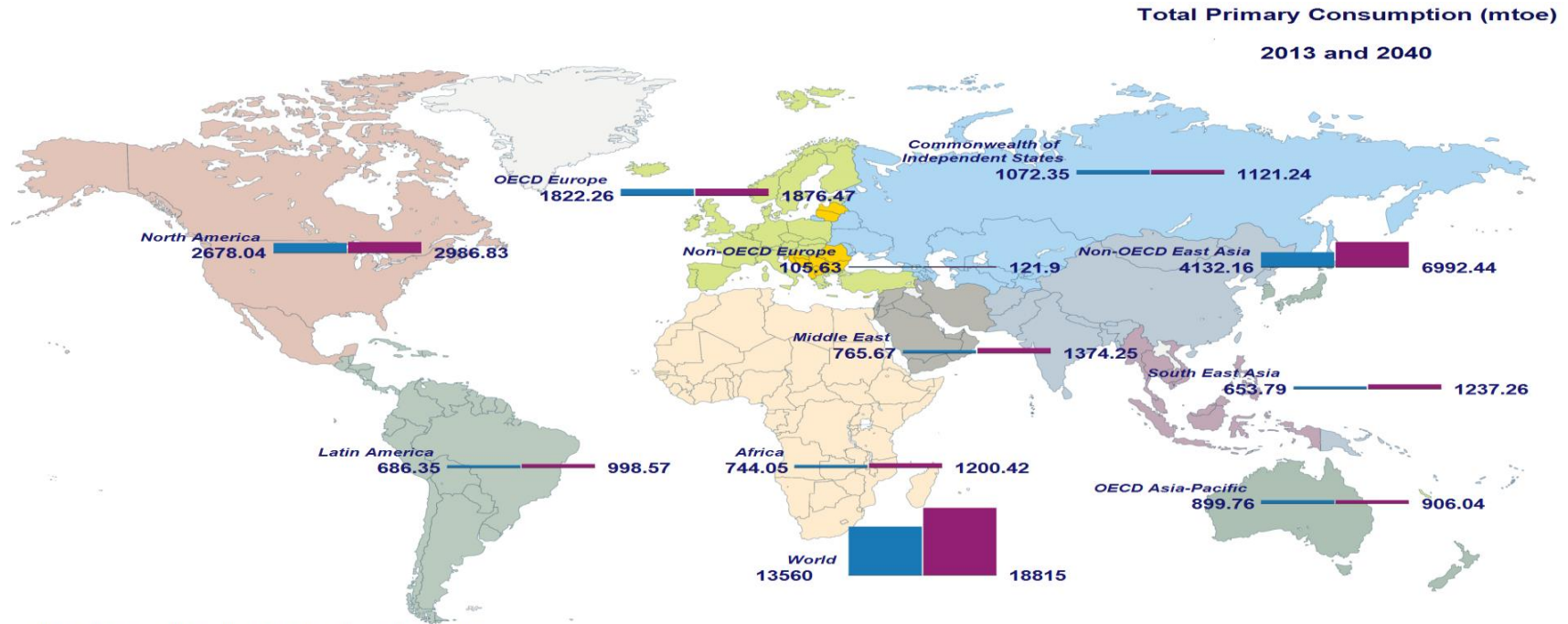
Current Situation & Short Term forecast

- Six years passed after the great crisis, but the economic environment is disappointing, inheritance of the financial turmoil is still felt across regions as well as some new factors contribute to lower growth in Europe, Latin America, Japan and US than forecasted, contraction in CIS
- Oil price tumbled about 40% from its previous summer peak, putting stress on energy exporters and at the same time giving limited support to the global economy
- Overall global GDP forecast for the 2015 – 3.5% in 2016 projected at 3.8%

Challenges in the Medium - Long term

- Slowing potential output in both OECD & Non-OECD is a new post – crisis reality: aging population, lower productivity growth and capital accumulation rates negatively weigh on global long – term growth forecasts
- Current growth and forecasts follow a new trend which provides for by 1-2 % reduced yearly growth in the medium – to – long term. In the long – term we expect 3.4% growth globally (2040)
- Various Geopolitical tensions across the Globe - Ukraine, Middle East, China's disputes with its neighbors create a rather unsteady environment.

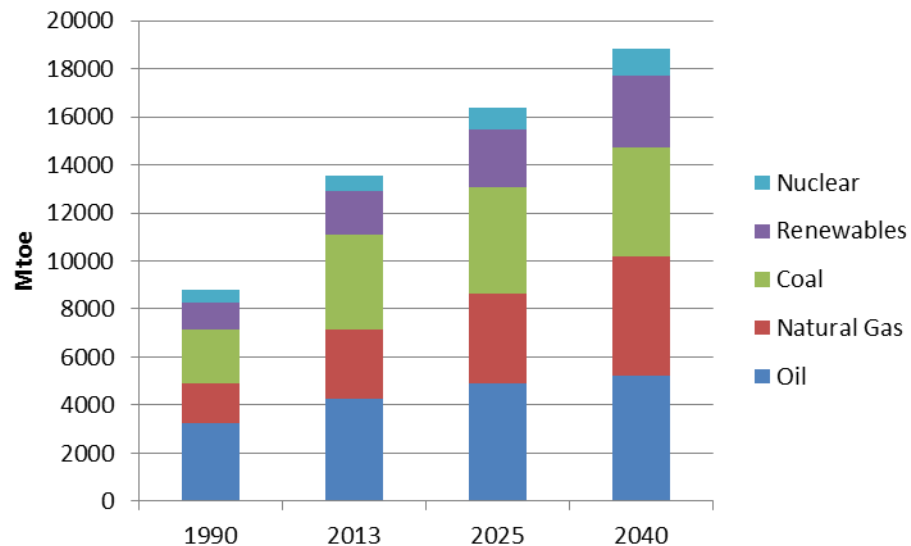
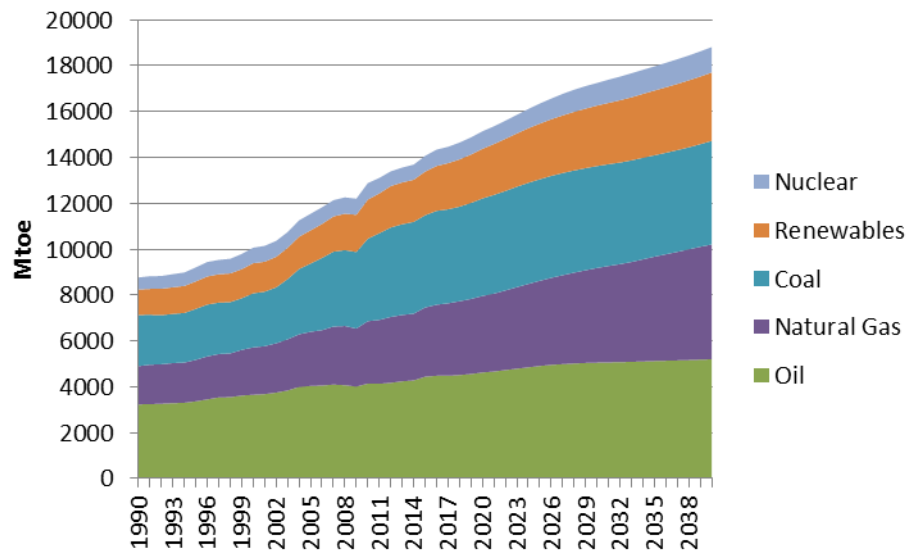
Energy Demand by Region



Original Values for 'Total Primary Consumption (mtoe)' in 2013 and 2040

There is a shift in long term energy demand growth from OECD regions to Non-OECD regions. Almost two-third of the global energy increase between 2013 and 2040 is expected to come from non-OECD Asia.

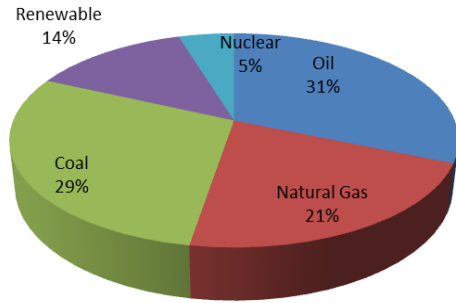
Energy Demand by Fuel



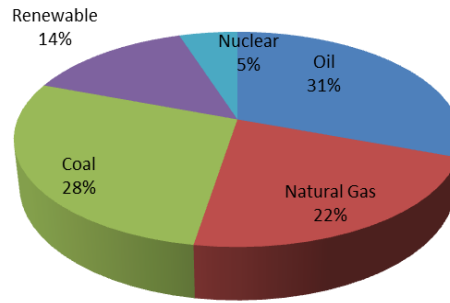
There has been more than 50% increase in global primary energy demand since 1990 and it is anticipated that we will see another near 40% increase by 2040.

World Fuel Mix

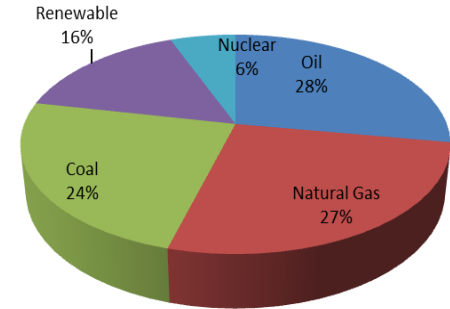
World - 2013



World - 2020

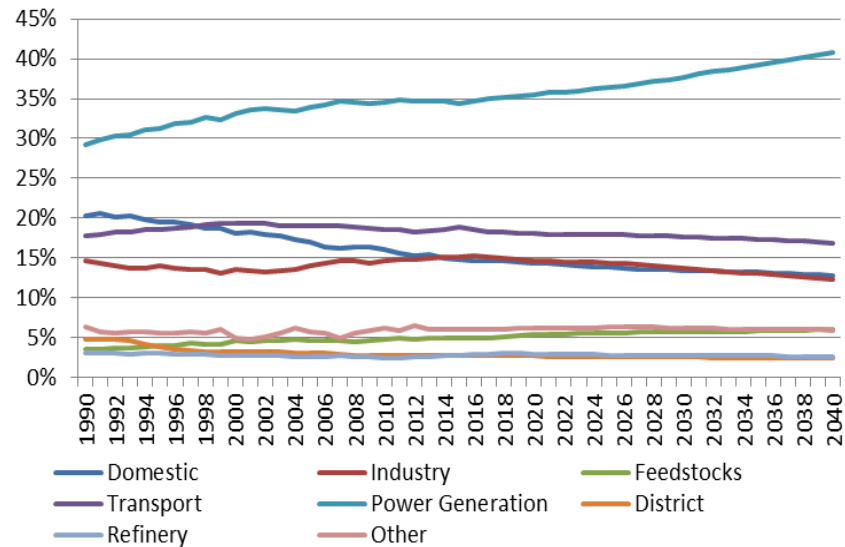
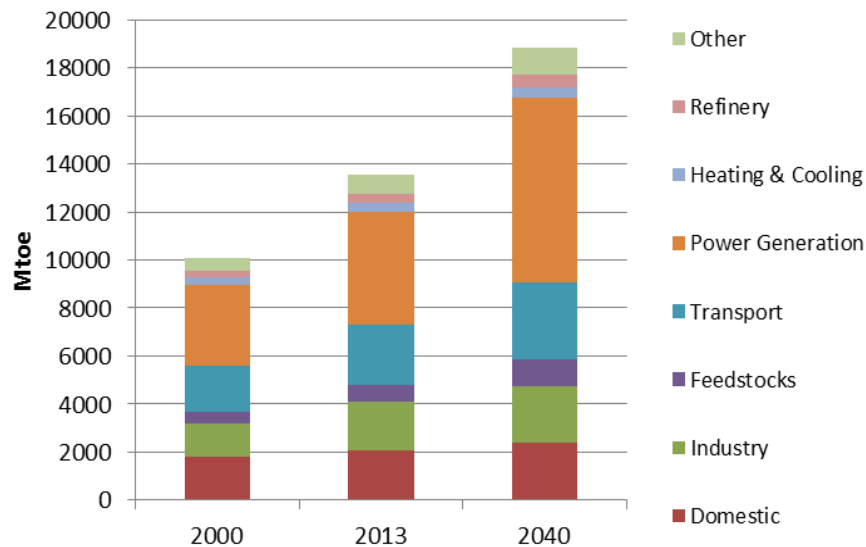


World - 2040



Fossil fuels still make up near to 80% of world energy mix by 2040. Oil will remain the fuel with largest share despite of losing ground to other fuels such as gas and renewable.

Energy Demand by Sector

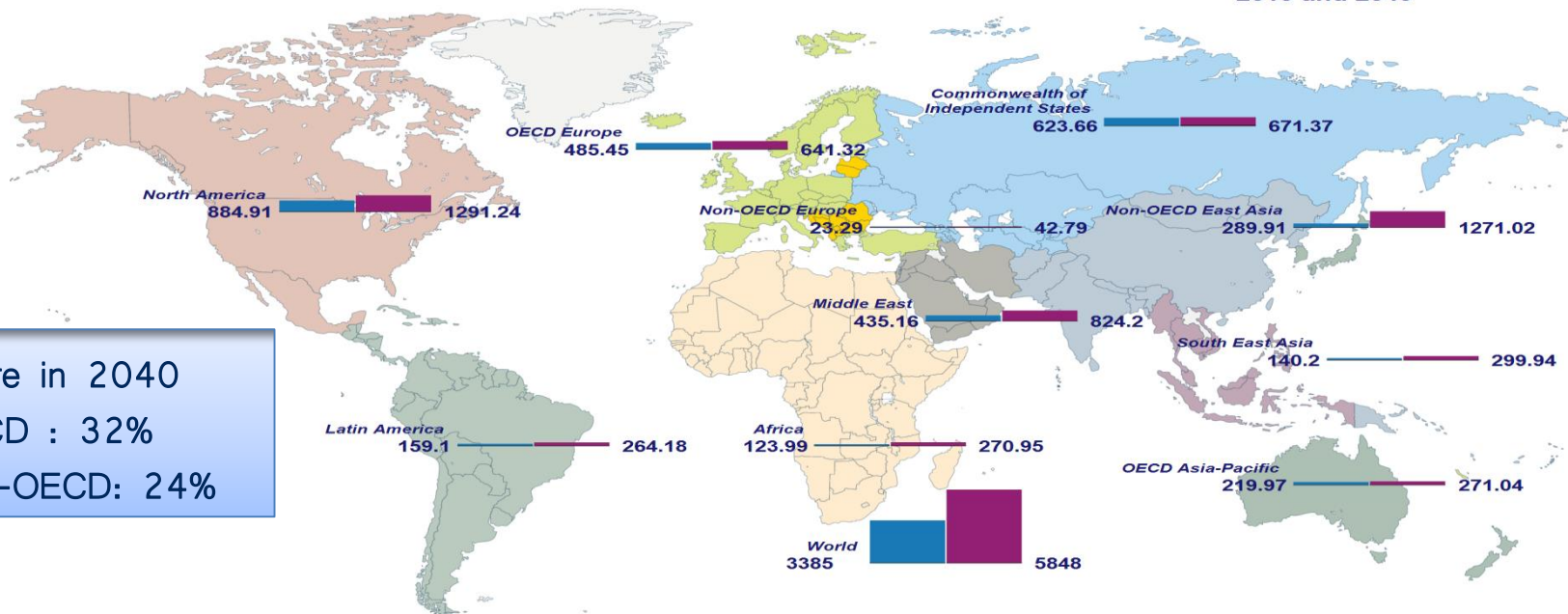


The power sector is the largest energy demand sector , accounting for 41% of the global primary energy sector total by 2040.

Gas Demand by Region

Primary Consumption of Natural Gas (Bcm)

2013 and 2040



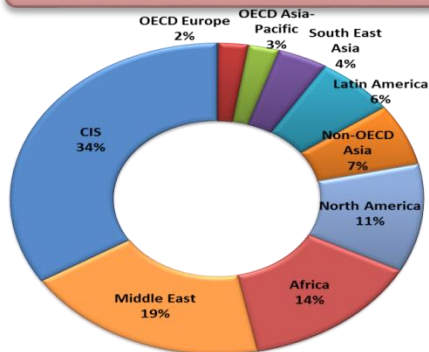
Share in 2040
 OECD : 32%
 Non-OECD: 24%

Original Values for 'Primary Consumption of Natural Gas (Bcm)' in 2013 and 2040

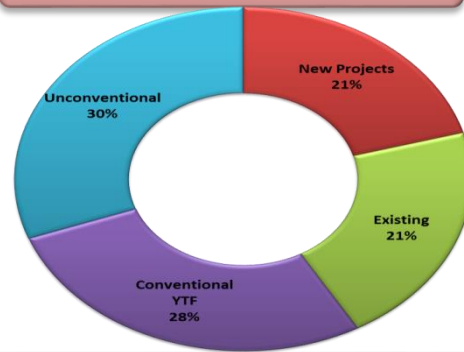
World Natural gas demand projected to increase by 2440 bcm (2100 Mtoe) or 70 percent of its level in 2014 and reach to 5850 bcm (5000 Mtoe) by 2040.

Natural gas resources (504 tcm)

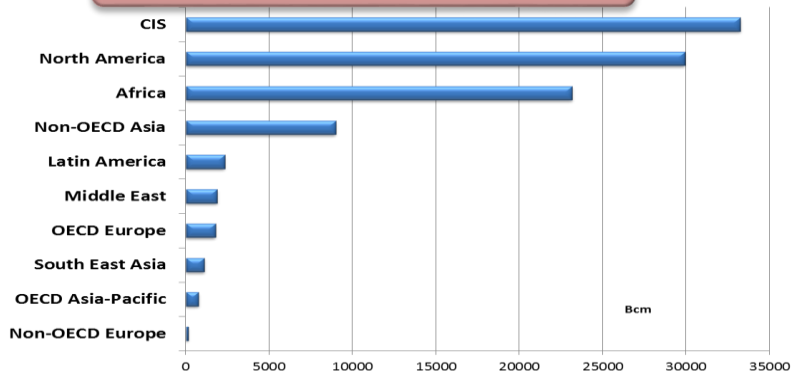
By region



By HC type



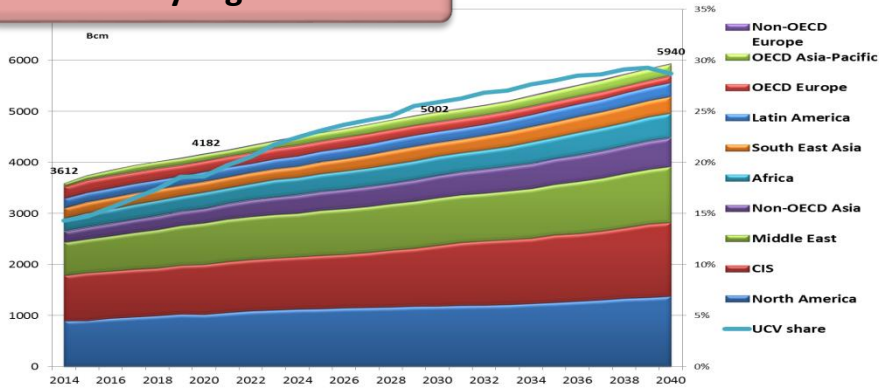
Shale gas resources by region



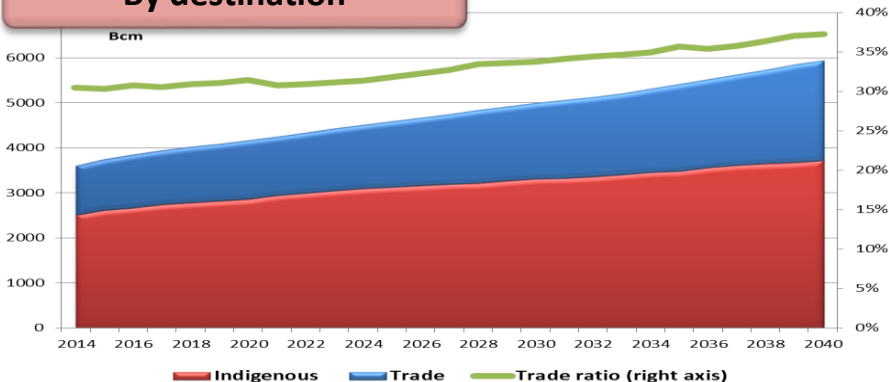
- The world holds a plenty of natural gas resources (~500 tcm: trillion cubic meters), of which around 210 tcm are identified proven reserves and 290 tcm undiscovered resources including all the unconventional gas (shale gas, coal bed methane and tight gas).
- GECF share (member countries only) within total gas resources is about 55%.
- The unconventional gas resources and especially the shale gas will be an important driver of gas supply growth, due to its potential availability in many regions of the world (mainly Russia, North America, Africa, Non OECD Asia and Latin America).

Natural gas production forecasts

By region

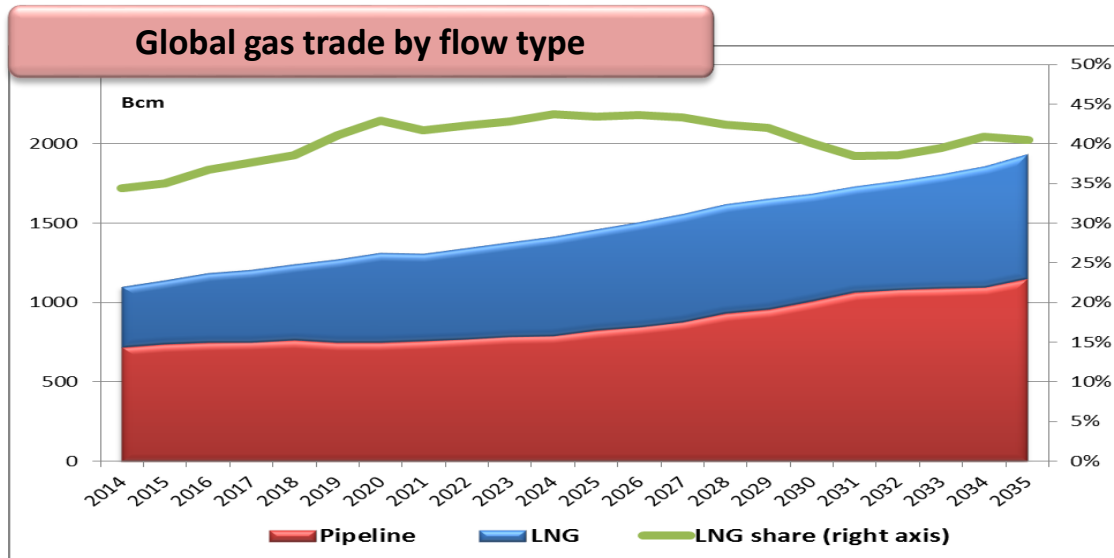


By destination



- Basically, the main regions producing natural gas now (North America, CIS and Middle East) will remain so by 2040, although many new players will enter the market like in Africa or East Mediterranean, and many current producers will increase their production like in Australia or non OECD Asia.
- The share of GECF in natural gas production will remain around a level close to 40% of global natural gas production.
- Natural gas trade will increase significantly by 2040, from about 1 Tcm currently it is expected to reach 2.2 Tcm by 2040 which represents 2.7% growth per year.
- The share of GECF in the international gas trade will be maintained and will increase slightly to about 55% during the outlook period by 2040.

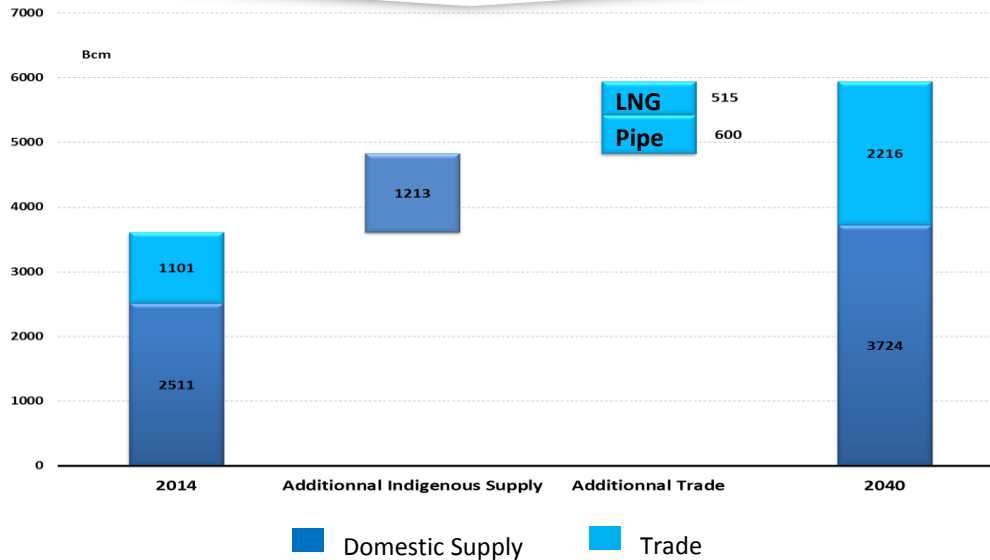
Global gas trade growth



- While international gas trade growth is expected to grow by 2.7% each year, the LNG trade will grow faster at about 3.4% per year pace allowing it to double in twenty years time.
- Therefore, from about currently 30% of the international gas trade, the LNG will make a significant leap to represent about 40% by 2040.
- Due to the multiplicity of LNG export projects in GECF countries and many non GECF countries like in Australia and the US, there will be an increasing pressure on LNG markets.

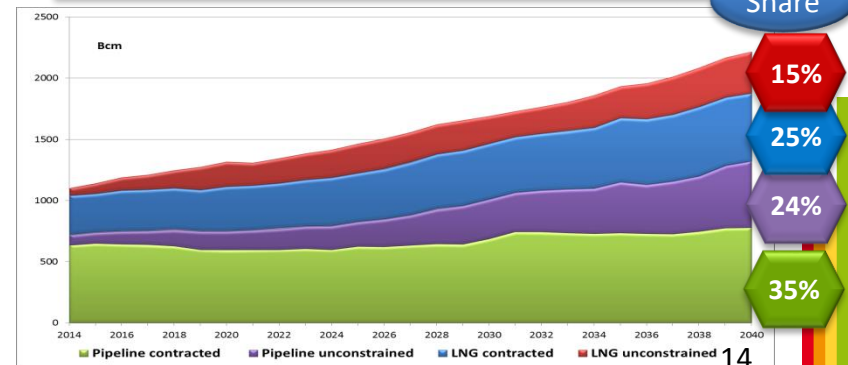
International Gas Trade

Gas Production Growth by Market Destination 2014-2040



Source: GECC GGM

- From 2014, marketed gas production will have to grow by more than 2 Tcm in order to cope up with the growing demand, which is a 50% increase in absolute levels.
- 50% of additional gas production will be assigned to domestic market.
- International additional trade of gas will be allocated almost equally between LNG and Pipeline (50/50) indicating that LNG trade will play more important role from today level of 30%.
- By 2040, there will be around 880 bcm competitive gas supply or 15% of total marketed gas production which is not bonded with any contract.



Conclusion

- Convergence on the importance of natural gas role in the energy mix for its virtues over the other fuels.
- New Promising markets for natural gas: NGVs, Petrochemicals, LNG exports, GTL, LNG for transportation.
- GECF is determined to play its role as reliable supplier of natural gas to the market over the next decades, with the involvement of all the market players : Energy companies, financial companies and technology holders, all together should partner and allow the development of the resources with the access to technology on a fair basis.
- Long-term contracts should remain to be the backbone of gas contracts to secure the long term partnership and support the investment required.
- The good news is that a replacement of old coal power plant with new gas fired power plant, reduces CO2 emissions by more than 65%, and natural gas will be replacing aging coal power plants in most of the countries.
 - Natural gas will be the answer of the prospective 2050 and the related roadmaps: Available, Accessible, Sustainable, Environmentally friendly: **what a good choice!**