

# World Energy Outlook 2016

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# The global energy context today

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Energy  
Outlook  
2016

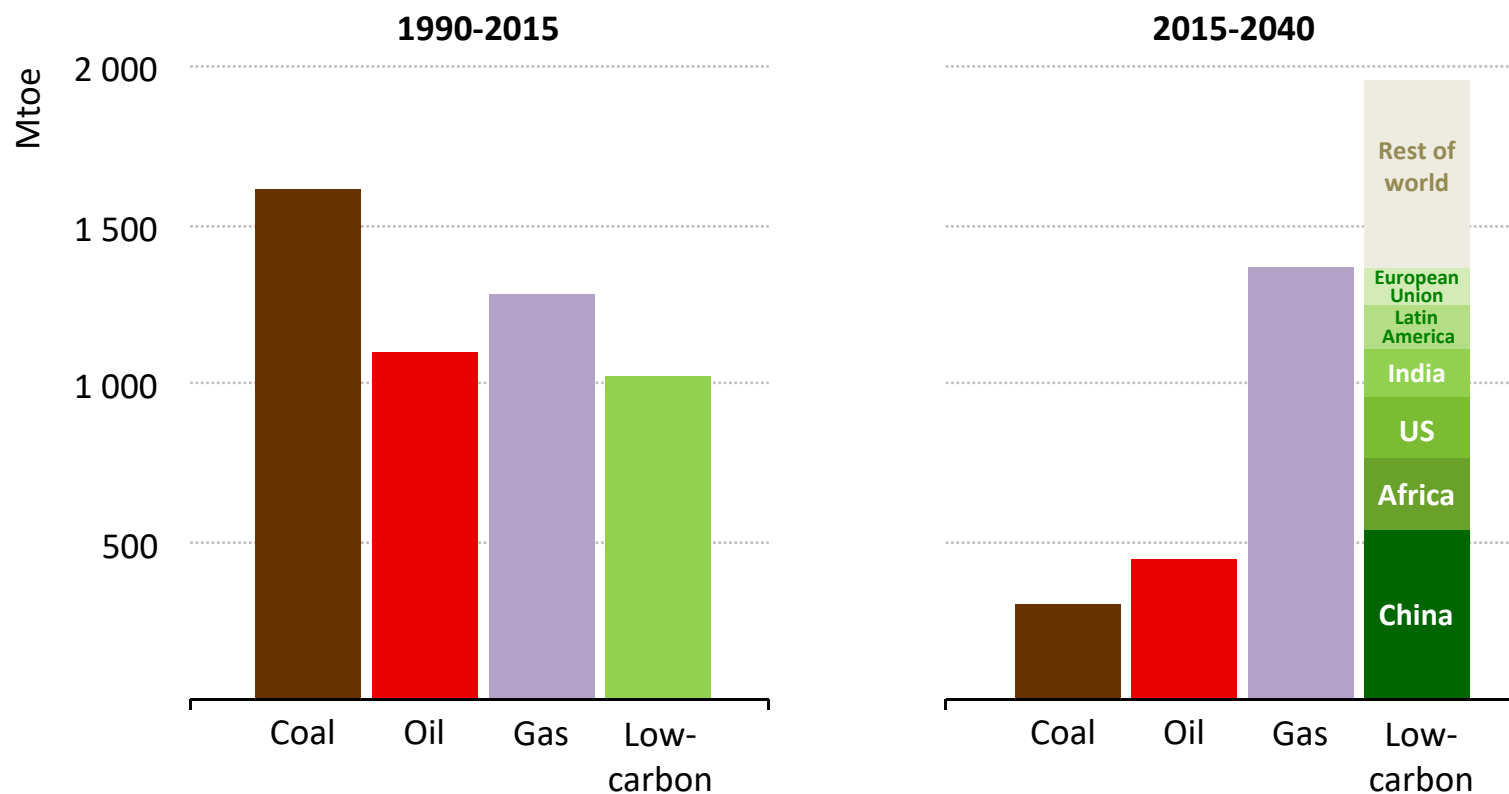
## ■ Key points of orientation:

- *Middle East share in global oil production in 2016 at highest level for 40 years*
- *Transformation in gas markets deepening with a 30% rise in LNG*
- *Additions of renewable capacity in the power sector higher in 2015 than coal, gas, oil and nuclear combined*
- *Energy sector in the spotlight as the Paris Agreement enters into force*
- *Billions remain without basic energy services*

## ■ **There is no single story about the future of global energy; policies will determine where we go from here**

# A new 'fuel' in pole position

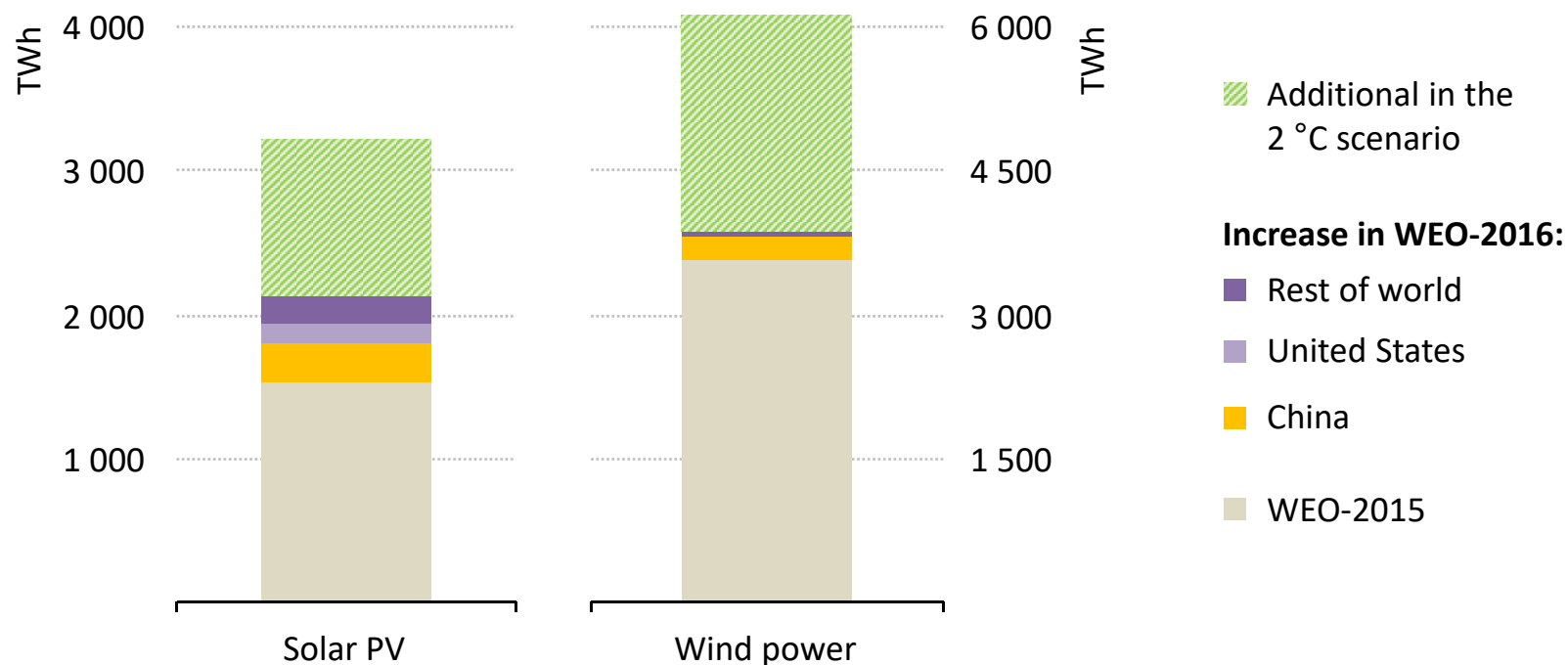
## Change in total primary energy demand



***Low-carbon fuels & technologies, mostly renewables, supply nearly half of the increase in energy demand to 2040***

# Greater policy support boosts prospects for solar PV and wind

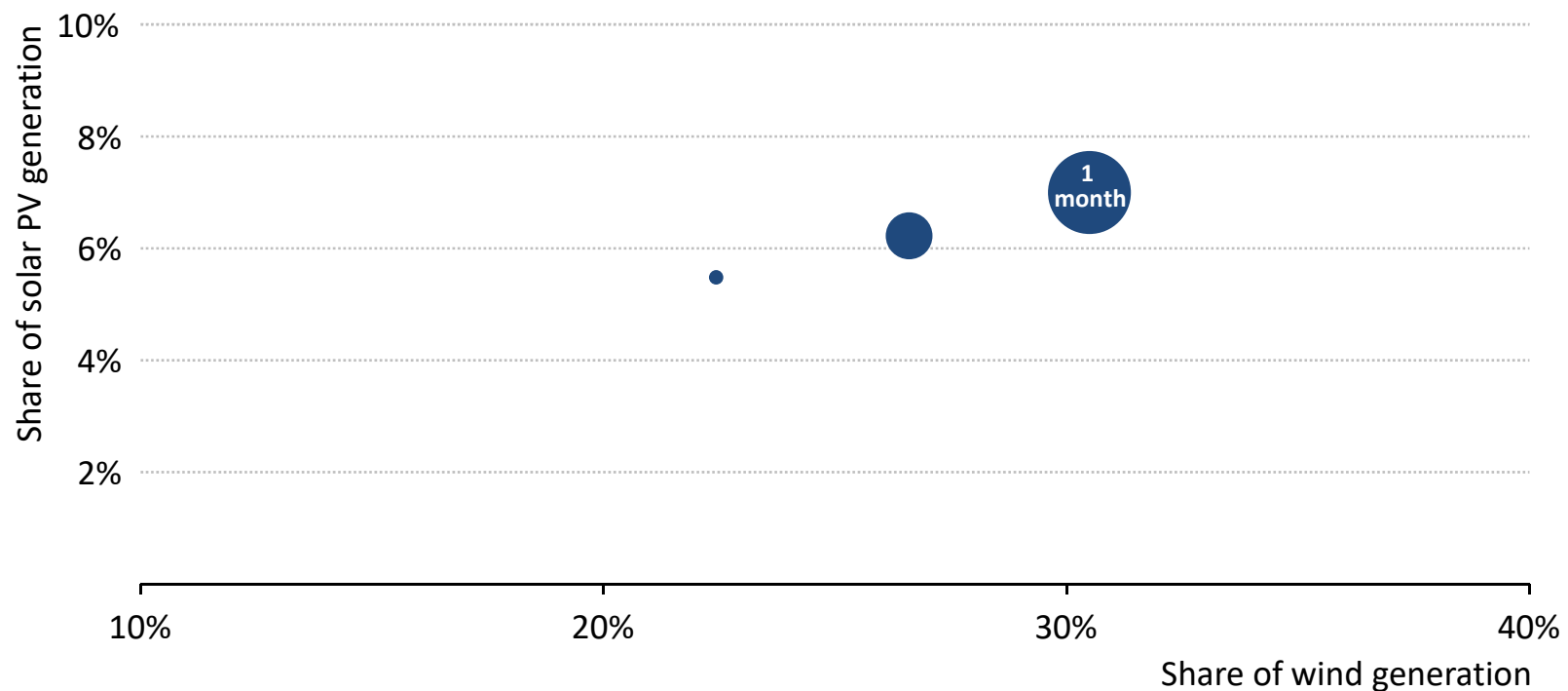
## Solar PV and wind generation, 2040



***Stronger policies on solar PV and wind help renewables make up 37% of electricity generation in 2040 in our main scenario – & nearly 60% in the 2 °C scenario***

# Integration measures are key for more use of wind & solar PV

## Amount of hours of curtailment in the European Union

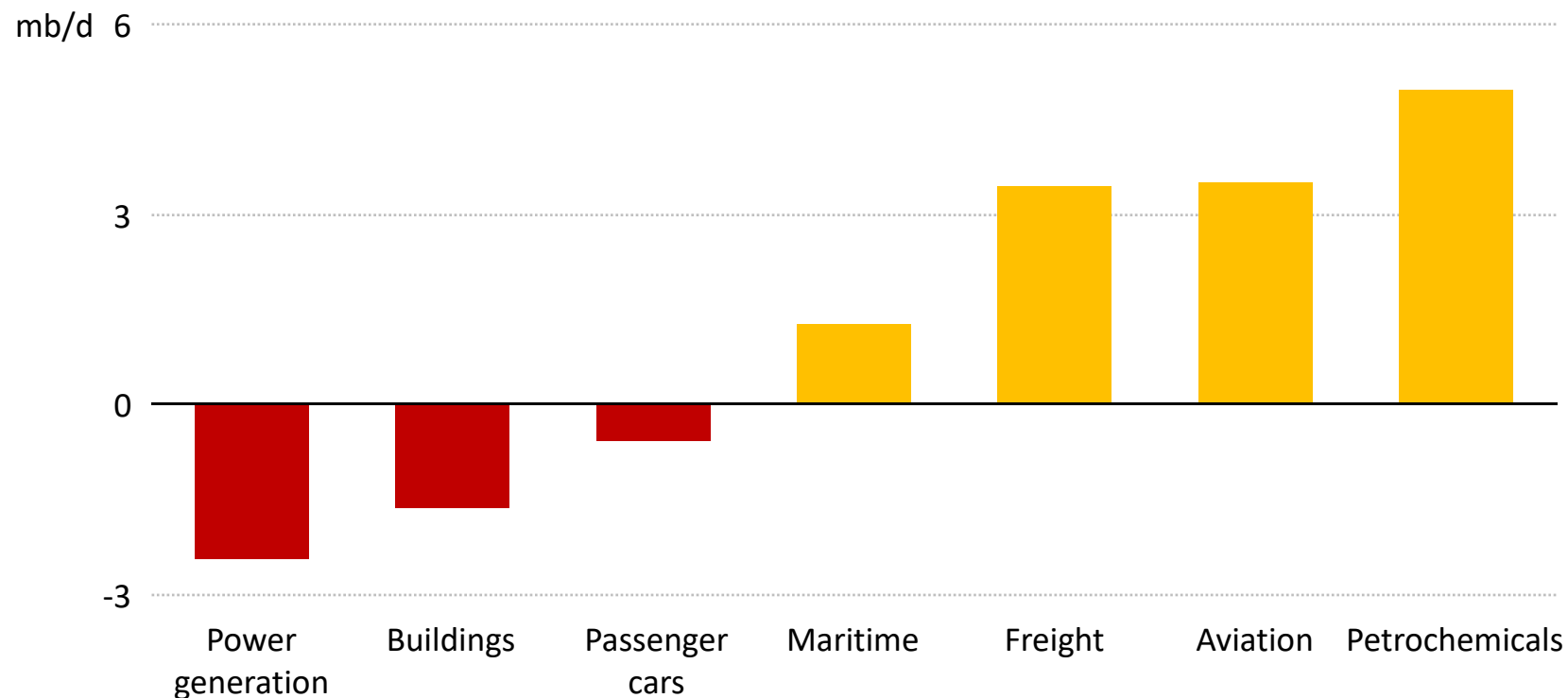


**Grid expansion & flexible plants can integrate wind & solar PV to close to 30% share. Beyond, demand-side response and storage are needed, requiring market reform**

# No peak yet in sight, but a slowdown in growth for oil demand

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## Change in oil demand by sector, 2015-2040

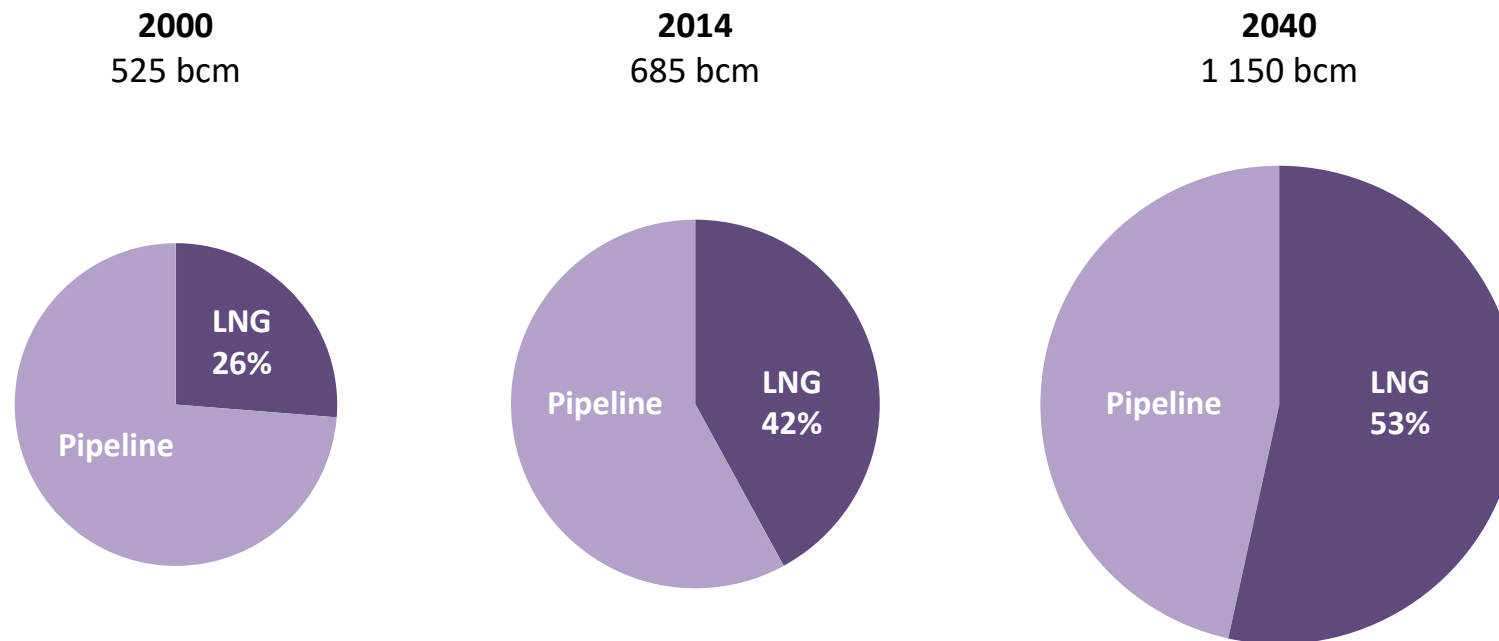


*The global car fleet doubles, but efficiency gains, biofuels & electric cars reduce oil demand for passenger cars; growth elsewhere pushes total demand higher*

# A wave of LNG spurs a second natural gas revolution

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## Share of LNG in global long-distance gas trade

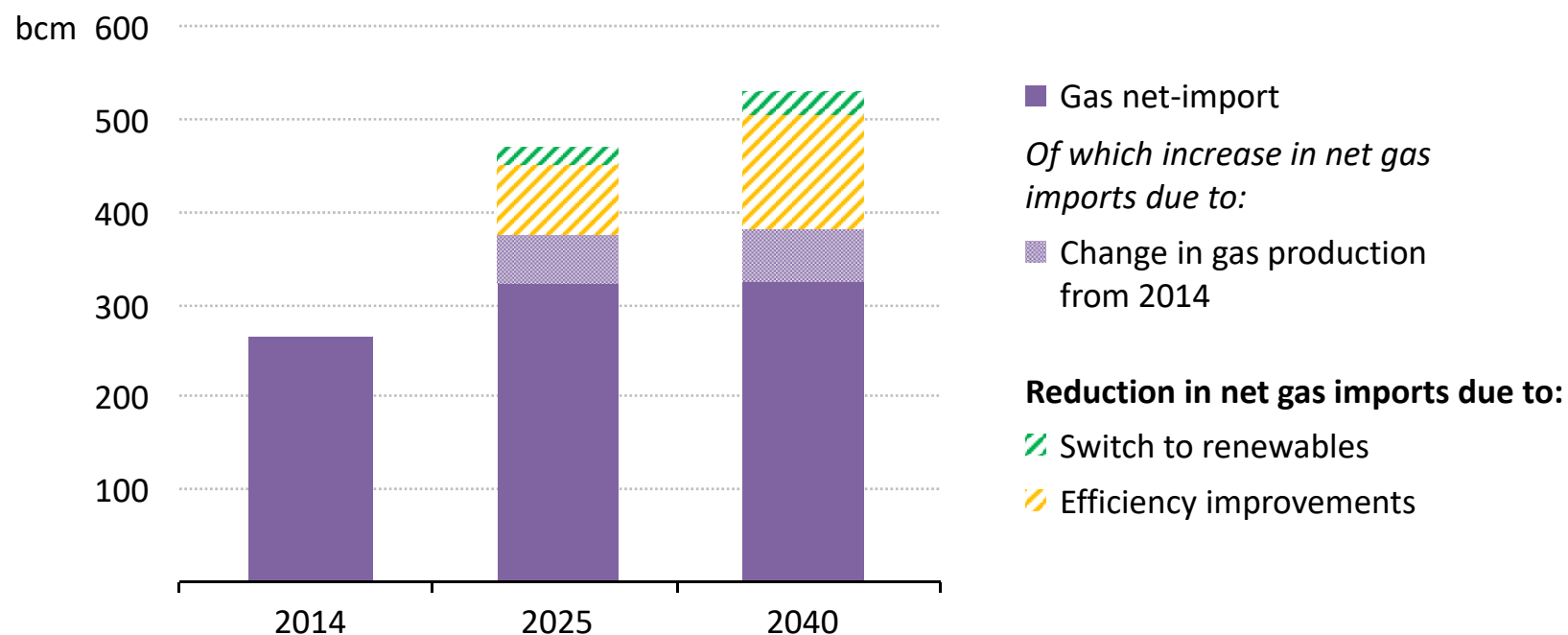


***Contractual terms and pricing arrangements are all being tested as new LNG from Australia, the US & others collides into an already well-supplied market***

# A suite of tools to address energy security

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## Net gas imports in the European Union

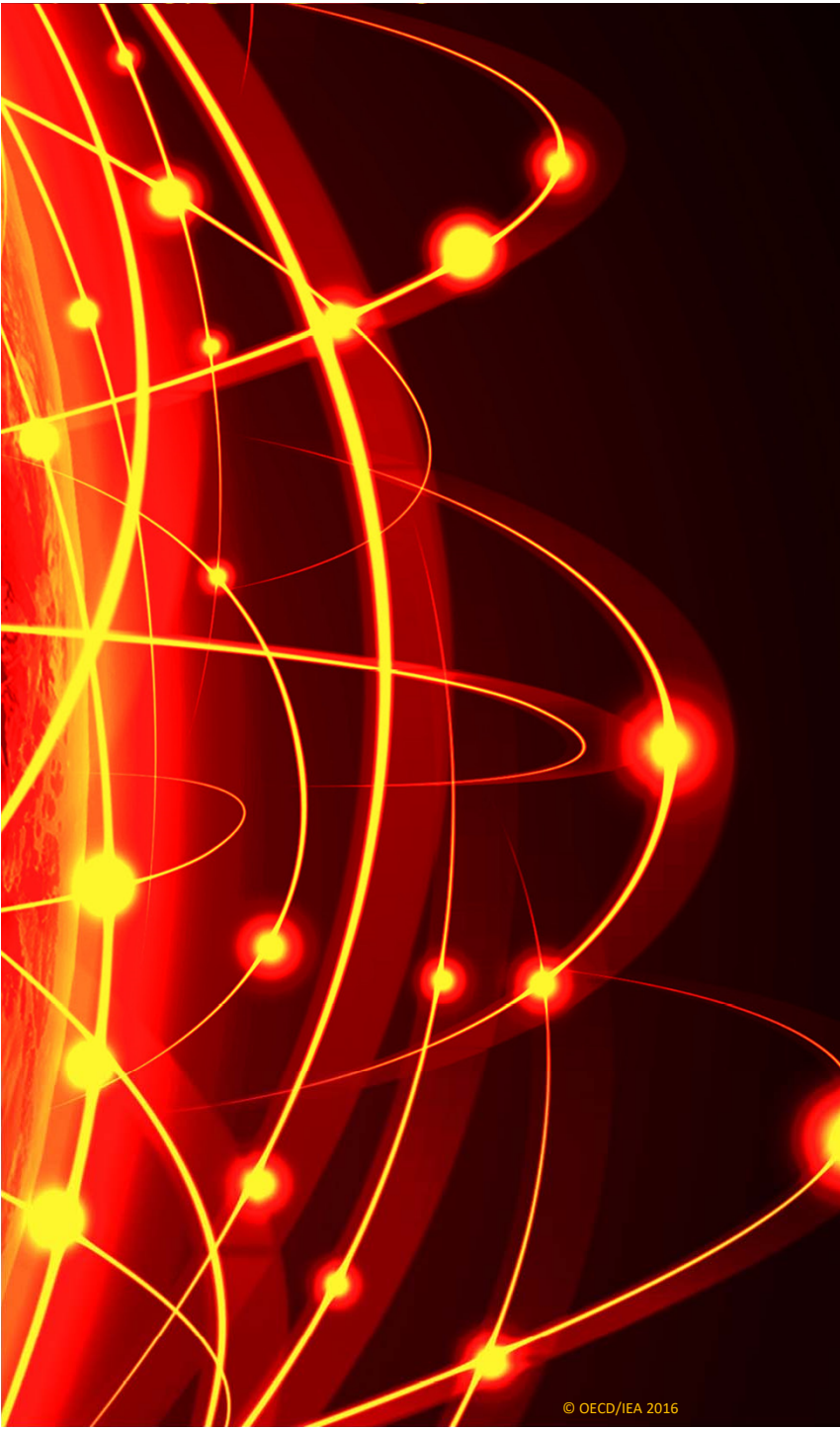


***The energy transition provides instruments to address traditional energy security concerns, while shifting attention to electricity supply***



# Conclusions

- **Energy security remains a major concern; potential vulnerabilities are growing, so too is the range of tools available to address them**
- **New oil market dynamics & subdued upstream investment are ushering in a period of greater market volatility**
- **A wave of LNG is the catalyst for a second natural gas revolution, with far-reaching implications for gas pricing & contracts**
- **Expiration of gas contracts in Europe opens up possibilities to diversify supply**
- **Energy Union is an excellent framework: its impact on energy security depends on how it is implemented**



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