



INTERNATIONAL ENERGY FORUM

IV International Forum Exploration, Production, Processing | Moscow | 9-11 November | 2016

A faint, stylized world map serves as a background for the title. The map is composed of a network of grey dots connected by thin grey lines, representing global energy connections or data flow. The continents are clearly outlined by this network structure.

Scenarios, Forecasts, and Statistics

IEF Dialogue Findings

Milestones in IEA-IEF-OPEC areas of cooperation

6 Annual Joint IEA-IEF-OPEC Symposia held in Riyadh since 2011 to exchange perspectives on the future of world liquids demand and supply, and primary energy consumption

5 Annual Joint IEA-IEF-OPEC Workshops held in London and Vienna since 2010 to exchange perspectives on physical and financial energy market interactions

5 Technical Meetings to better understand, data, methods, definitions, classifications, and assumptions

Seventh IEA-IEF-OPEC Symposium on Energy Outlooks **15 February 2017**



2008 Jeddah Meeting on **Oil Market Volatility**

2010 Cancún Declaration, Attachment II **IEA-IEF-OPEC Agree cooperation**

2015 Istanbul 2016 Beijing **G20 Energy Ministers: Continue fruitful collaboration**

2016 International Energy Forum Ministers **IEF15: Build on successful model**

Sixth IEA-IEF-OPEC Symposium on Energy Outlooks

3 Dialogue Insights

1. **Oil demand remains robust** on the medium-, and longer term and especially in Asian markets.
2. **A supply side correction** can rebalance markets as investments in new projects are stunted and **when financial market support tightens**.
3. **Dispersed production and technology**, as well as changing demand and policy patterns* create **a much more competitive energy market**.

* Repeal of US crude export ban, OPEC market stance, Entry into effect of the “Paris Agreement” on 4 November 2016

Flow

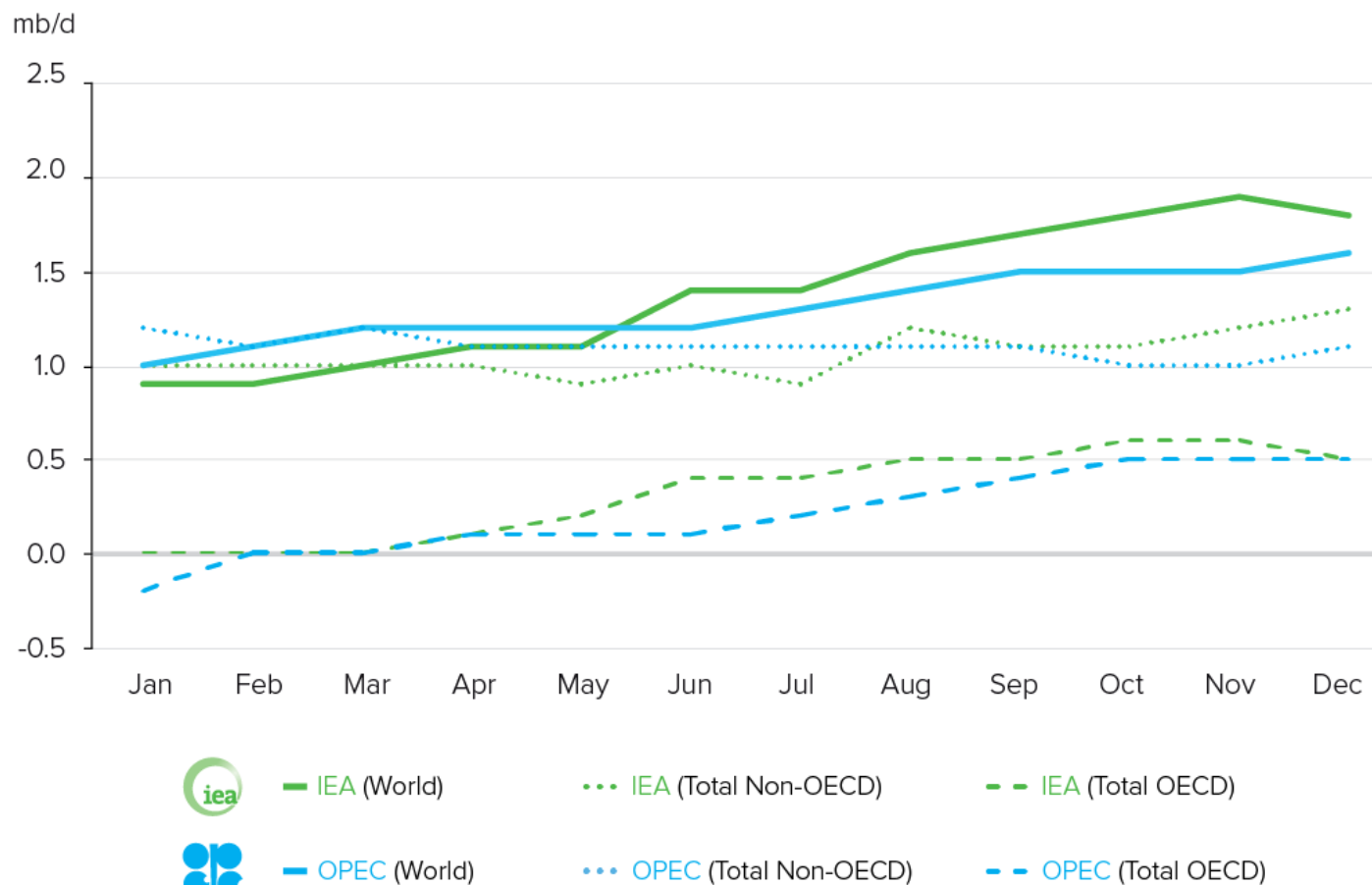
1. **Short-term IEA and OPEC outlooks**
2. **Medium-term IEA and OPEC outlooks**
3. **Long-term IEA and OPEC outlooks**
4. **Advancing the comparability of outlooks**

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2015 Demand growth consistently revised up

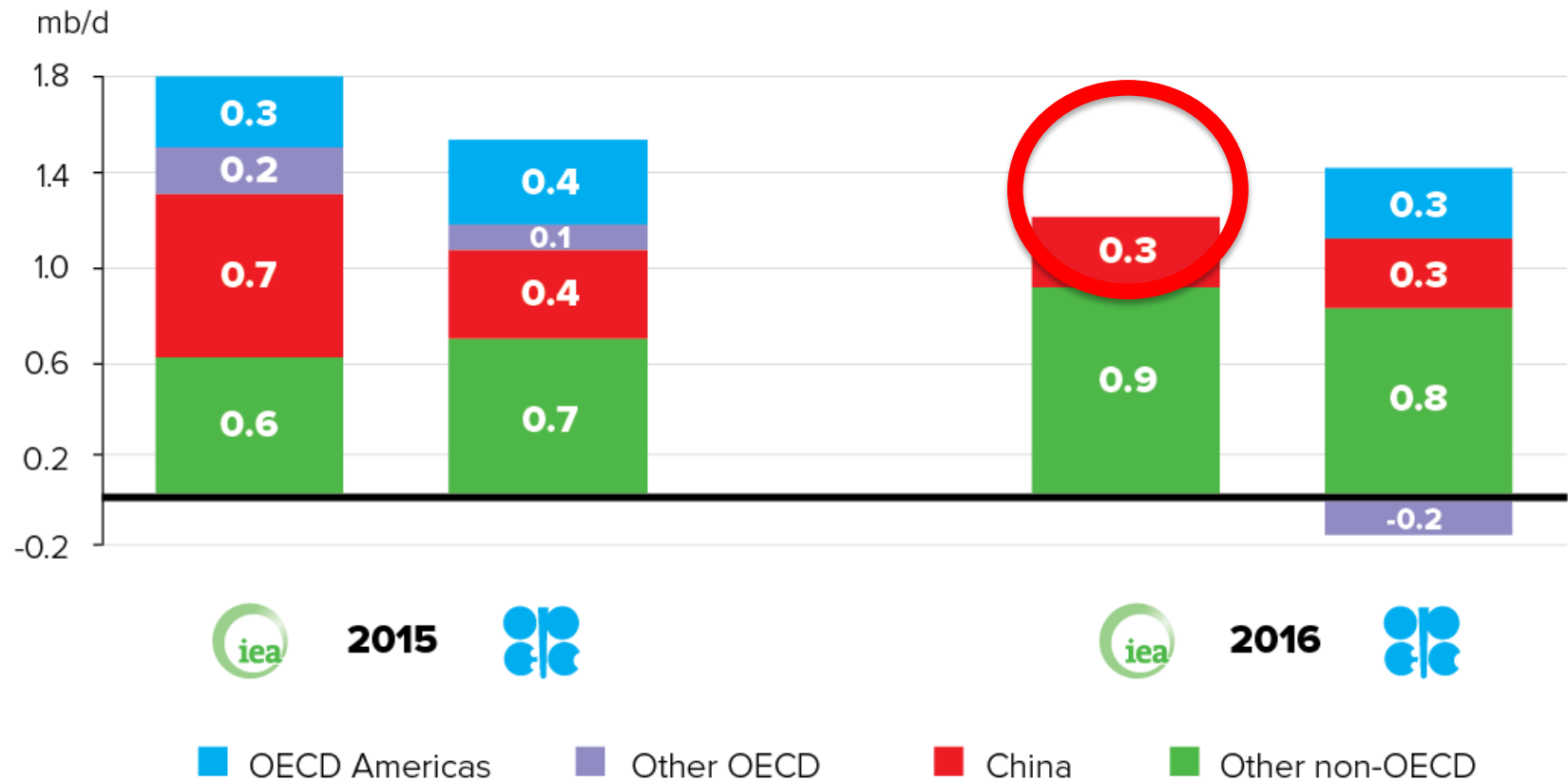
Monthly Revisions of Annual Estimates for 2015 World, OECD, and Non-OECD Liquids Demand Growth (mb/d)



Sources: IEF-Duke Introductory Paper A Comparison of Recent IEA and OPEC Outlooks 2016

Differences in annual demand growth estimates relate to both Non-OECD and OECD region

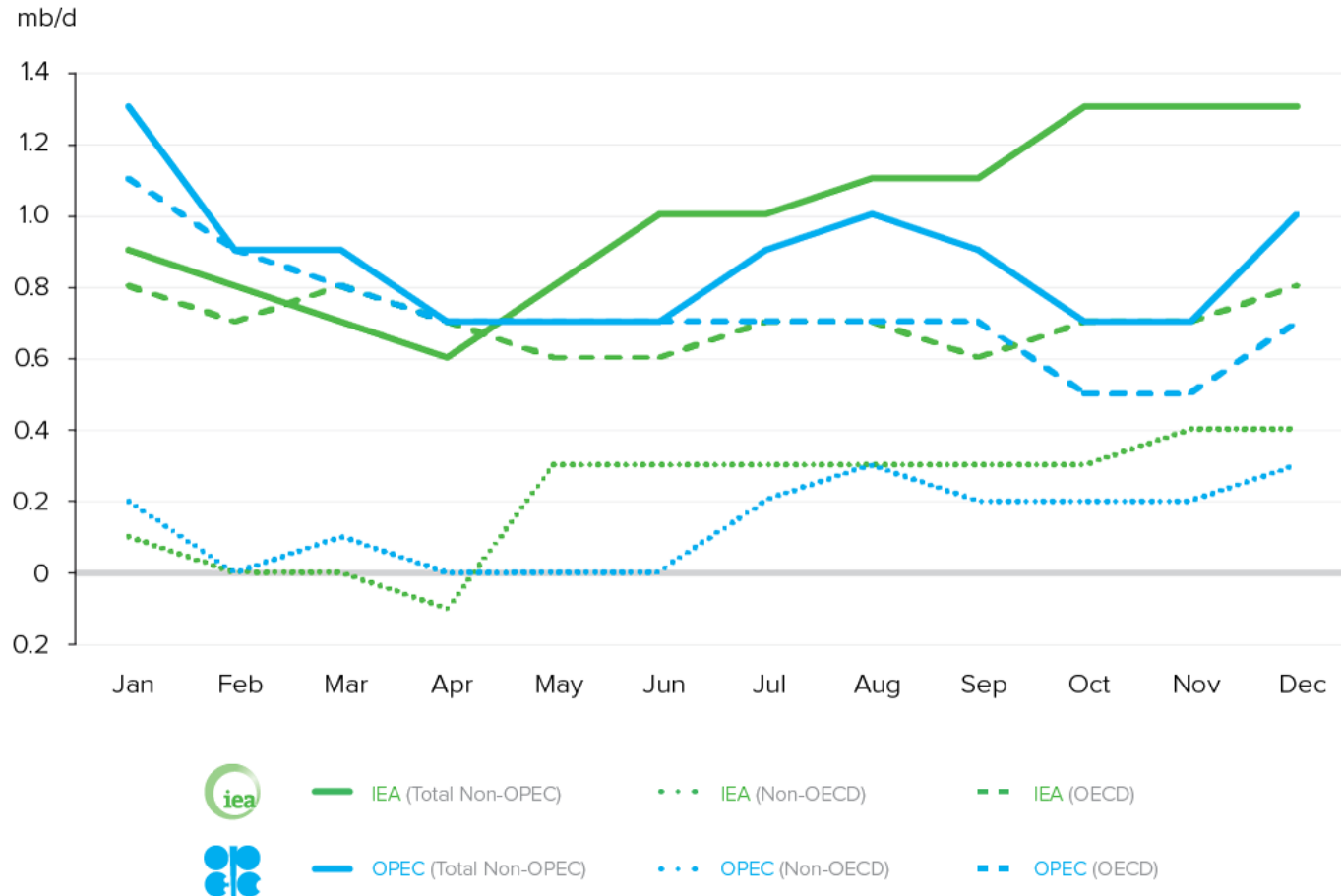
Short-term World Liquids Demand Annual Growth (mb/d)



Sources: IEF-Duke Introductory Paper A Comparison of Recent IEA and OPEC Outlooks 2016

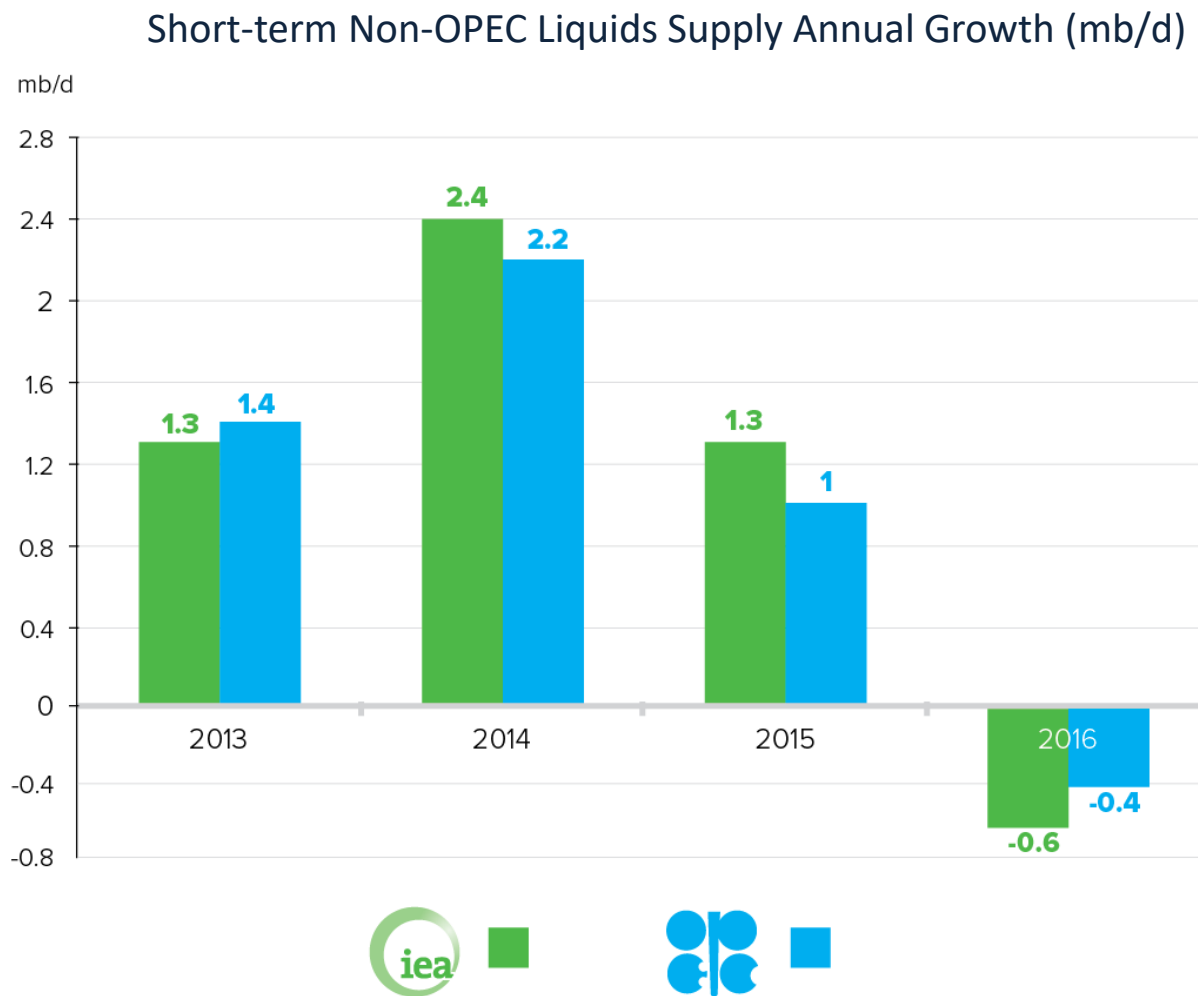
Greater resilience of Non-OPEC supply growth shows untested nature of unconventional estimates

Monthly Revisions of Annual Estimates for 2015 Non-OPEC Liquids Supply Growth (mb/d)



Sources: IEF-Duke Introductory Paper A Comparison of Recent IEA and OPEC Outlooks 2016

2016 Non-OPEC liquid supply growth to fall



Sources: IEF-Duke Introductory Paper A Comparison of Recent IEA and OPEC Outlooks 2016

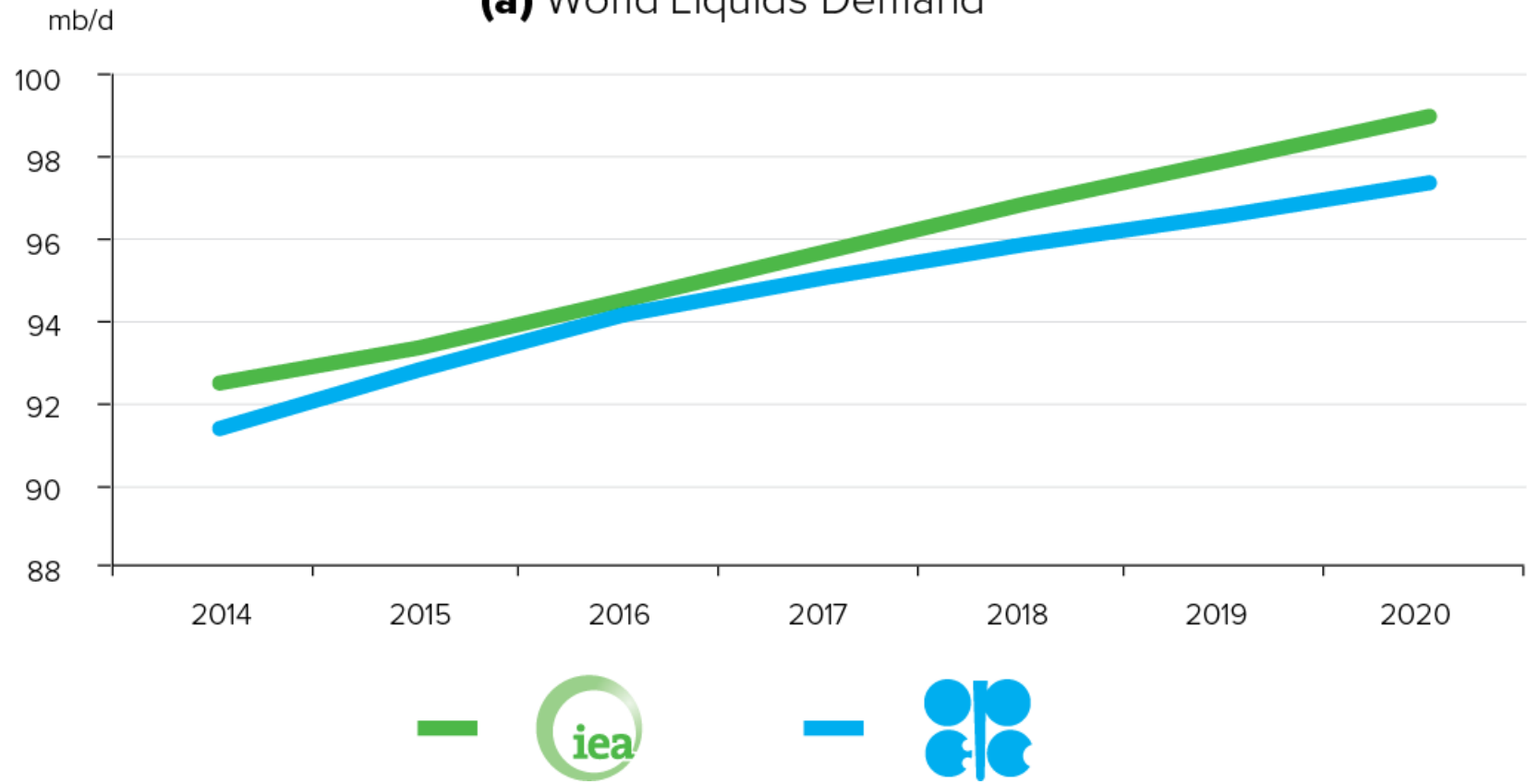
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IEA projects demand growth to be slightly faster and reach higher levels than OPEC

Medium-term Liquids Demand (mb/d)

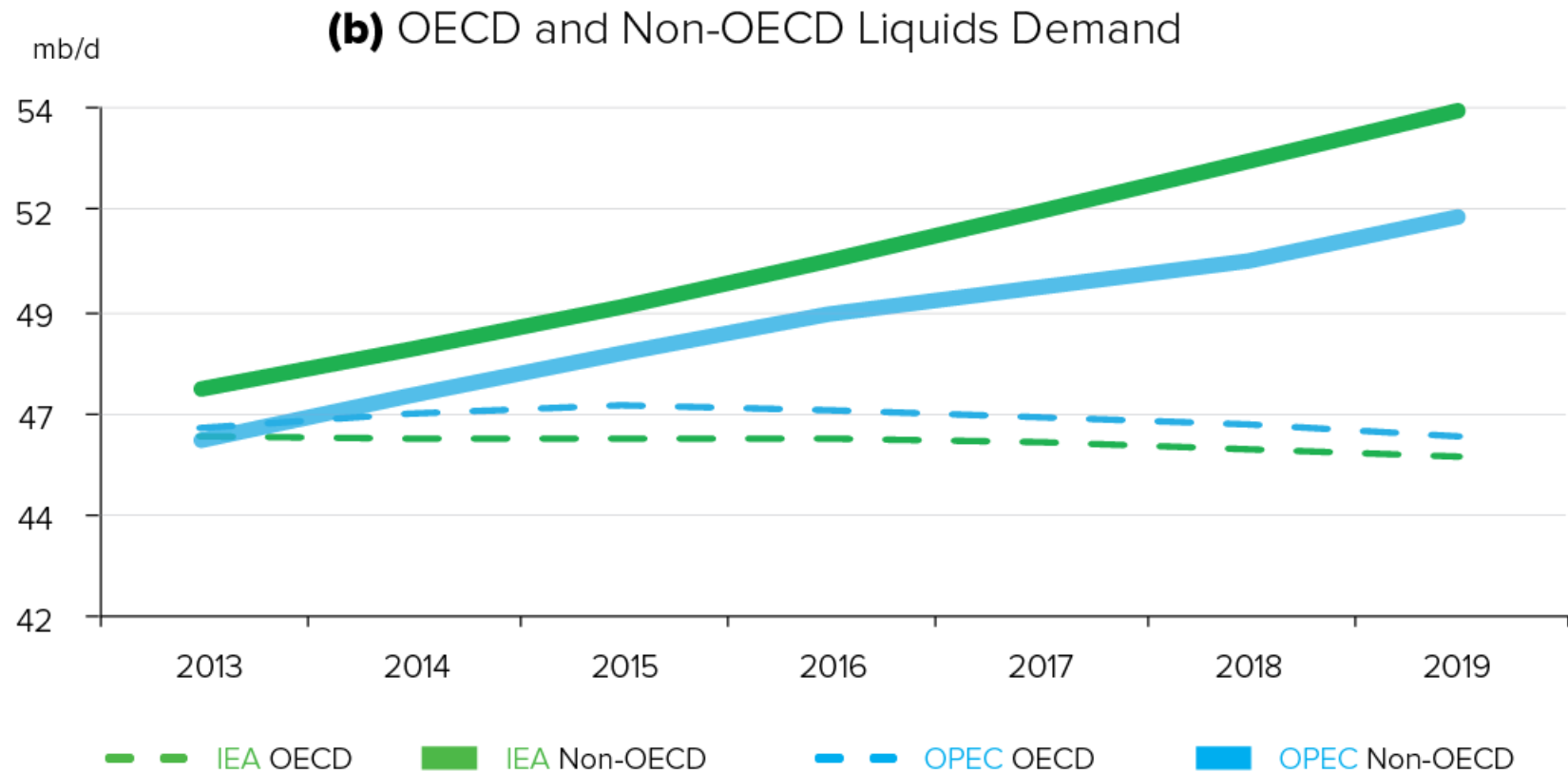
(a) World Liquids Demand



Sources: IEF-Duke Introductory Paper A Comparison of Recent IEA and OPEC Outlooks 2016

Differences in Non-OECD demand growth projections increase reaching 2.2 mb/d by 2020

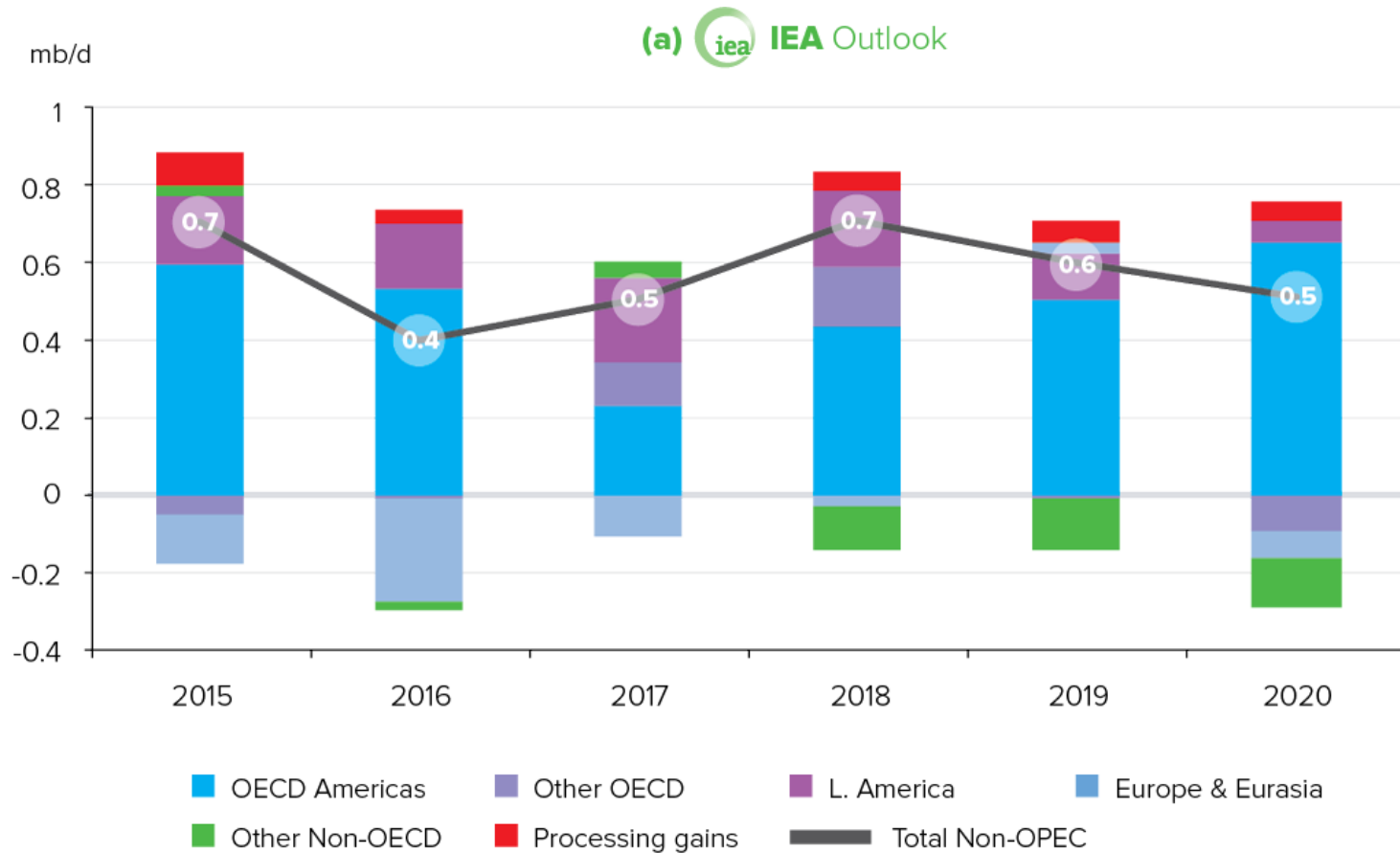
Medium-term Liquids Demand (mb/d)



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IEA sees OECD Americas' supply growth recover but Latin America and Other-Non-OECD slow

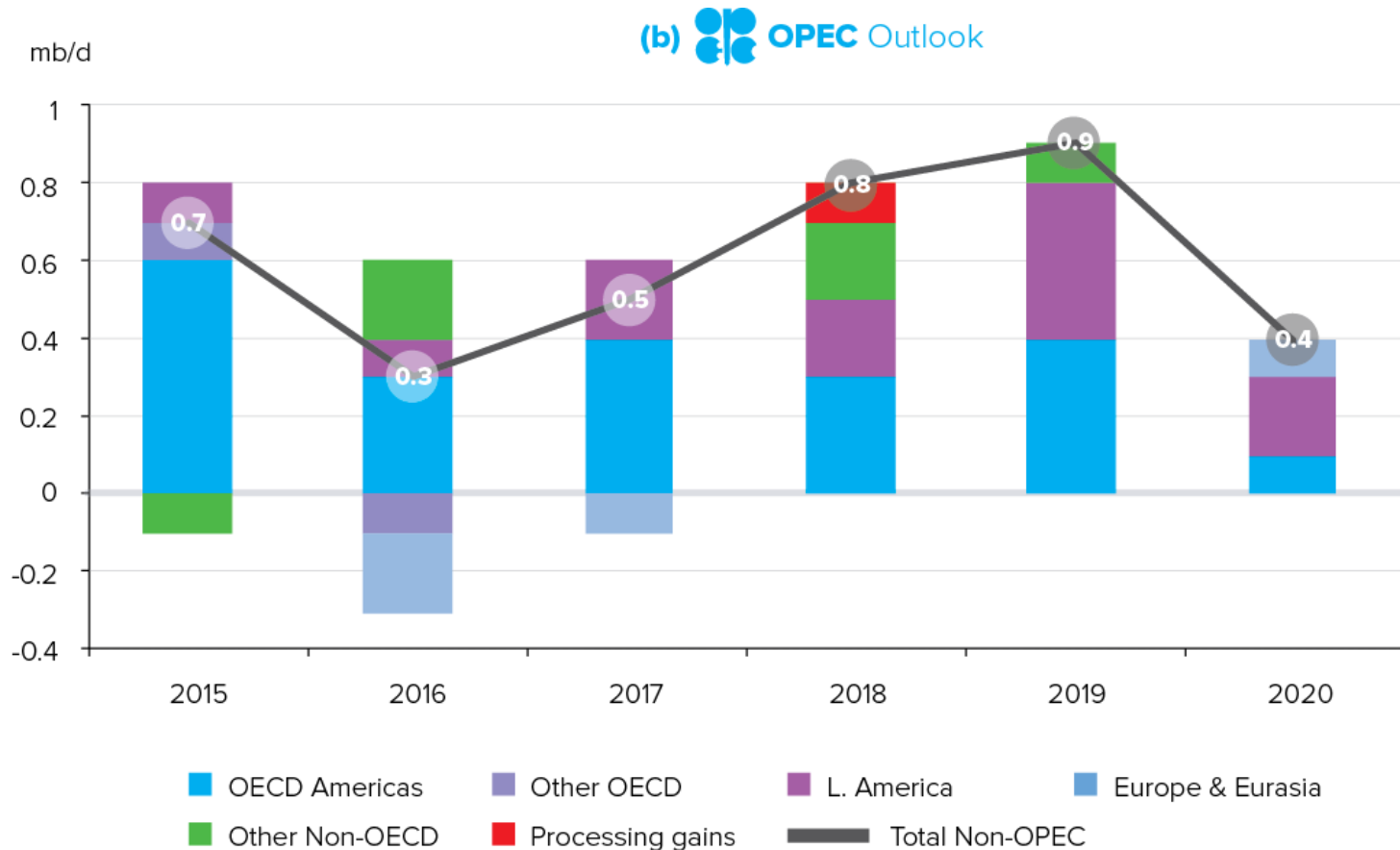
Medium-term Non-OPEC Liquids Supply Annual Growth (mb/d)



Sources: IEF-Duke Introductory Paper A Comparison of Recent IEA and OPEC Outlooks 2016

OPEC shows Latin Americas'- and other Non-OECD growth recover

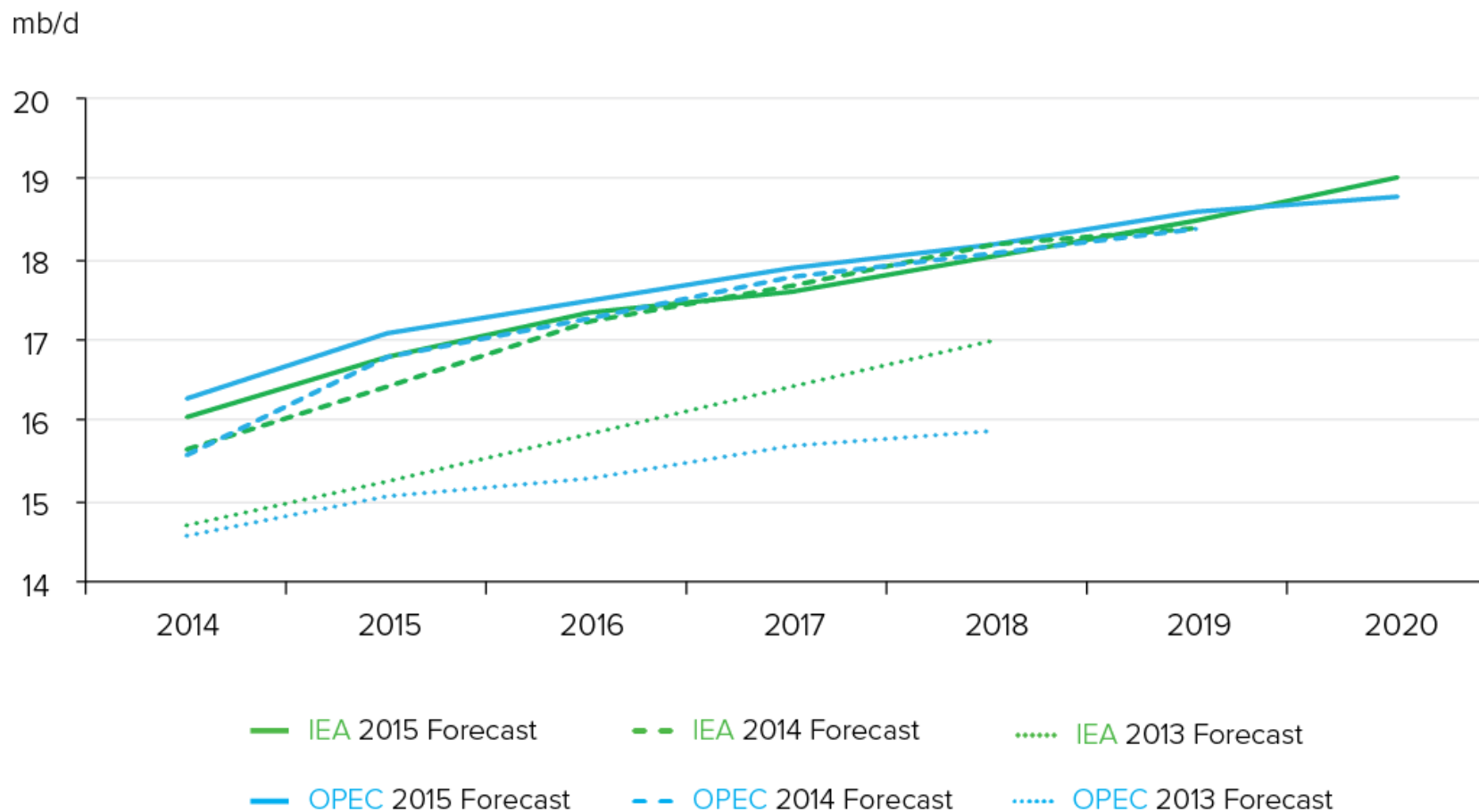
Medium-term Non-OPEC Liquids Supply Annual Growth (mb/d)



Sources: IEF-Duke Introductory Paper A Comparison of Recent IEA and OPEC Outlooks 2016

IEA and OPEC have adjusted and aligned US and Canadian supply growth outlooks

Medium-term US and Canadian Oil Supply (mb/d, excluding biofuels)

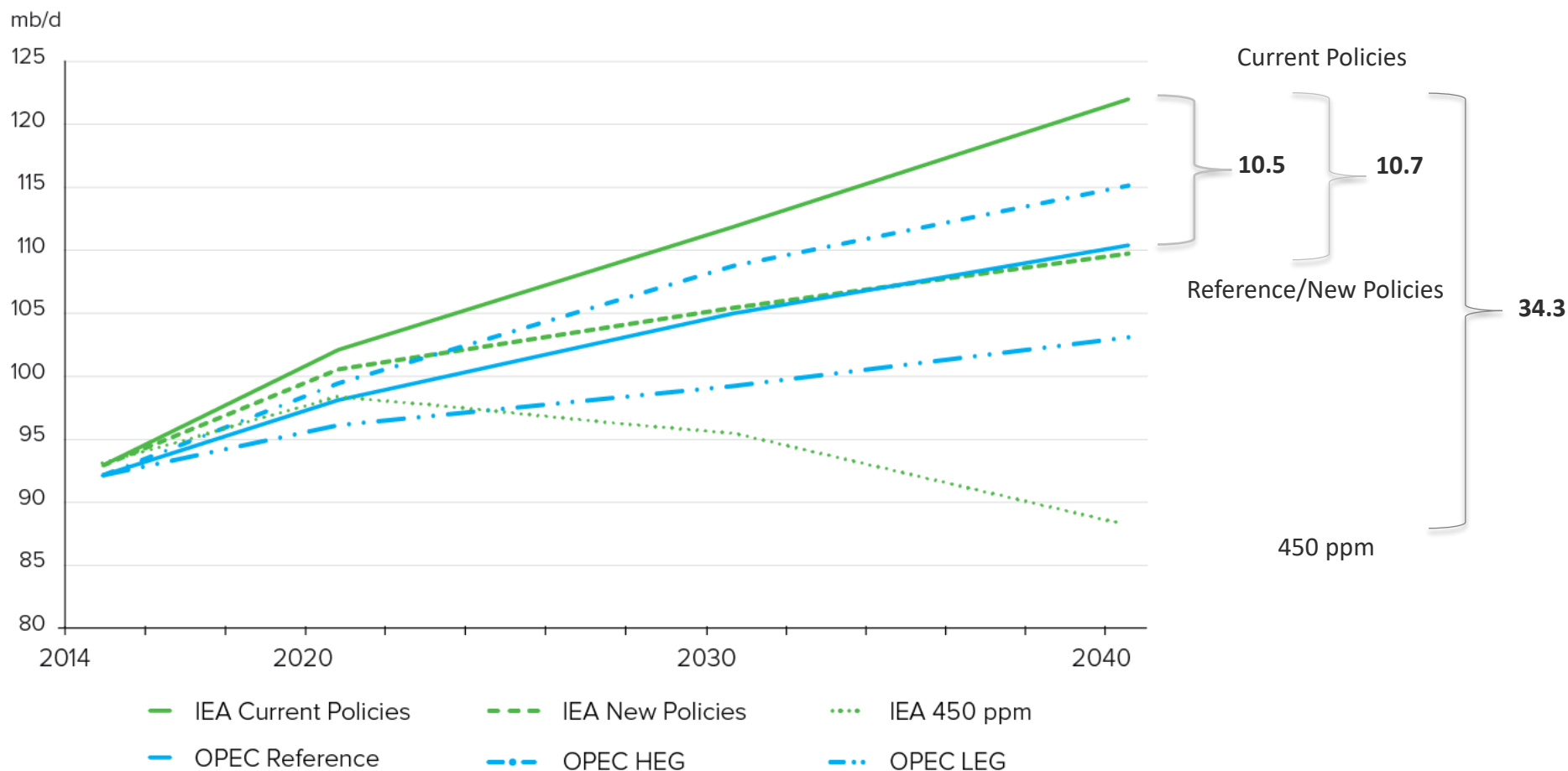


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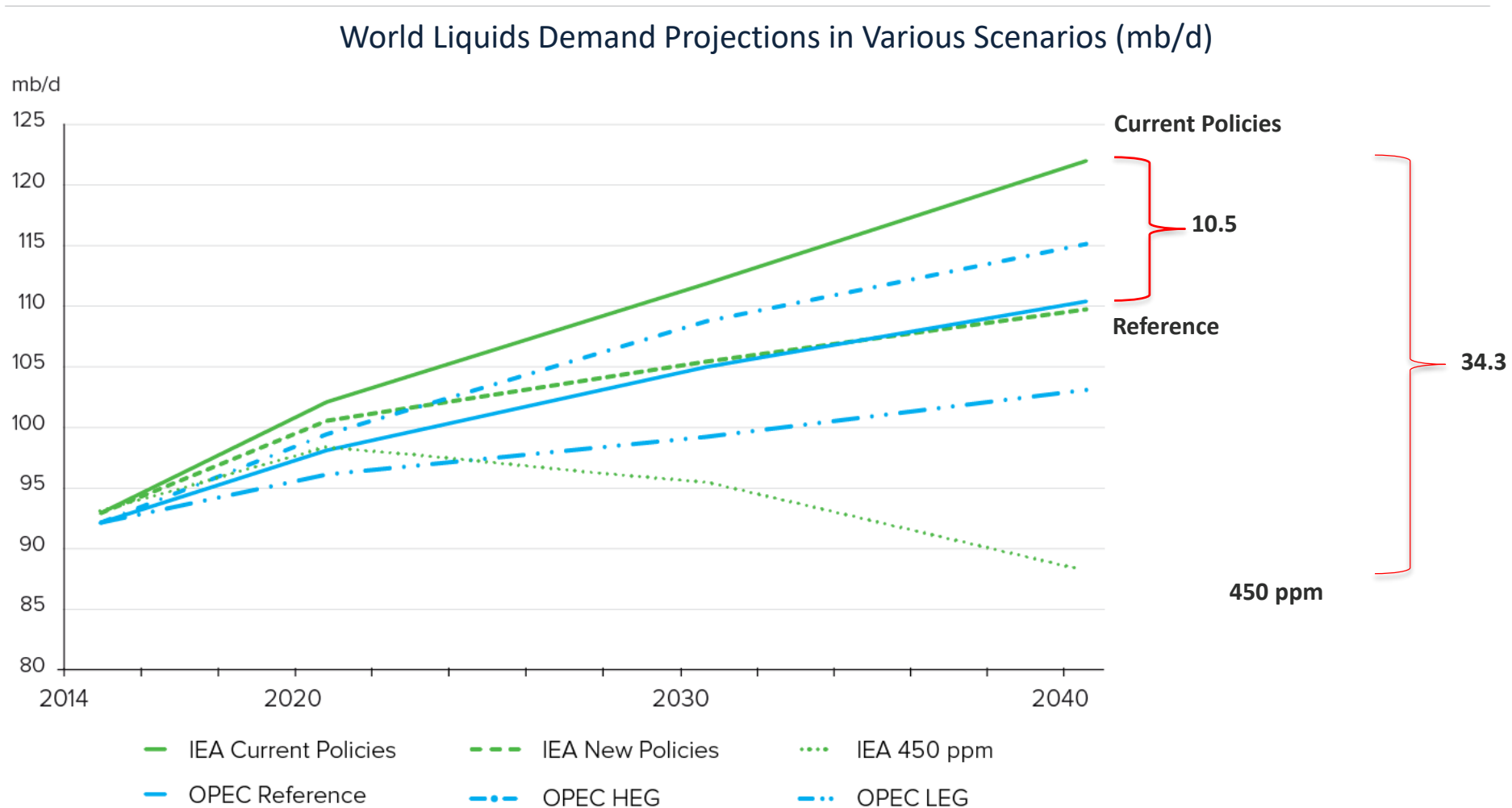
Demand projections vary strongly across scenarios leading to a gap of ~34 mb/d by 2040

World Liquids Demand Projections in Various Scenarios (mb/d)



Sources: IEF-Duke Introductory Paper A Comparison of Recent IEA and OPEC Outlooks 2016

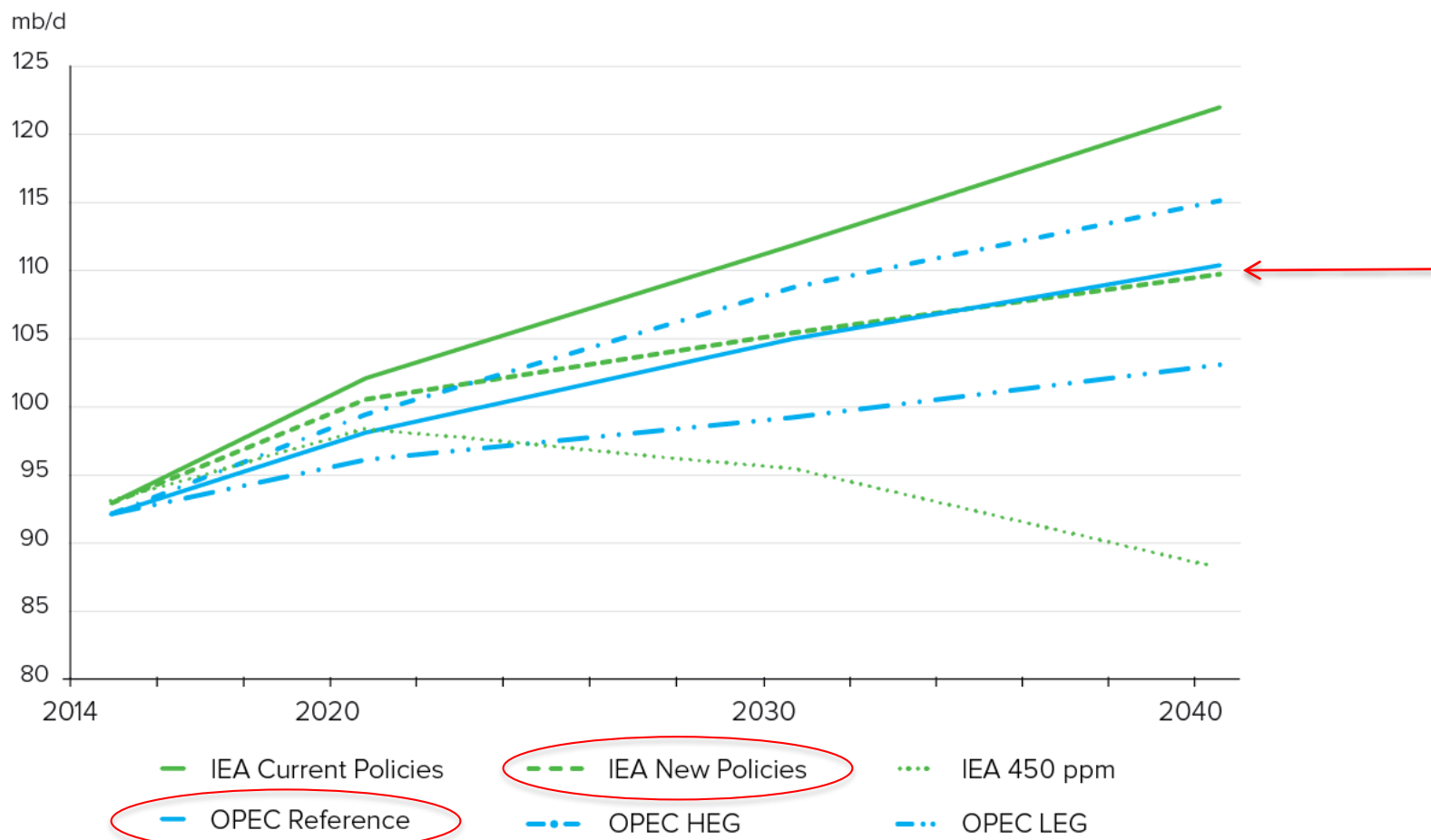
What's the relevant scenario to pay attention to?



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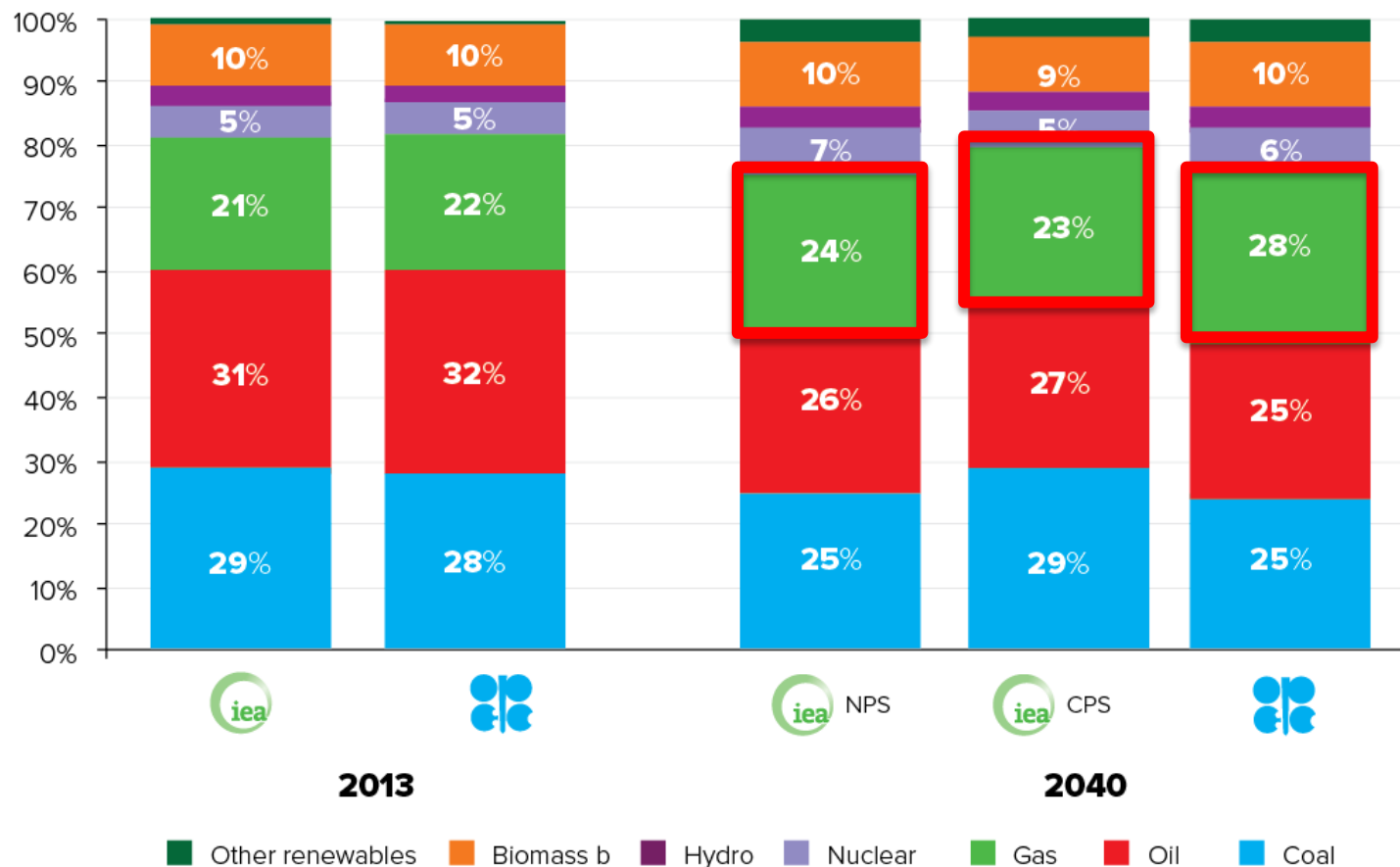


Sources: IEF-Duke Introductory Paper A Comparison of Recent IEA and OPEC Outlooks 2016

IEA – OPEC gas share outlooks vary

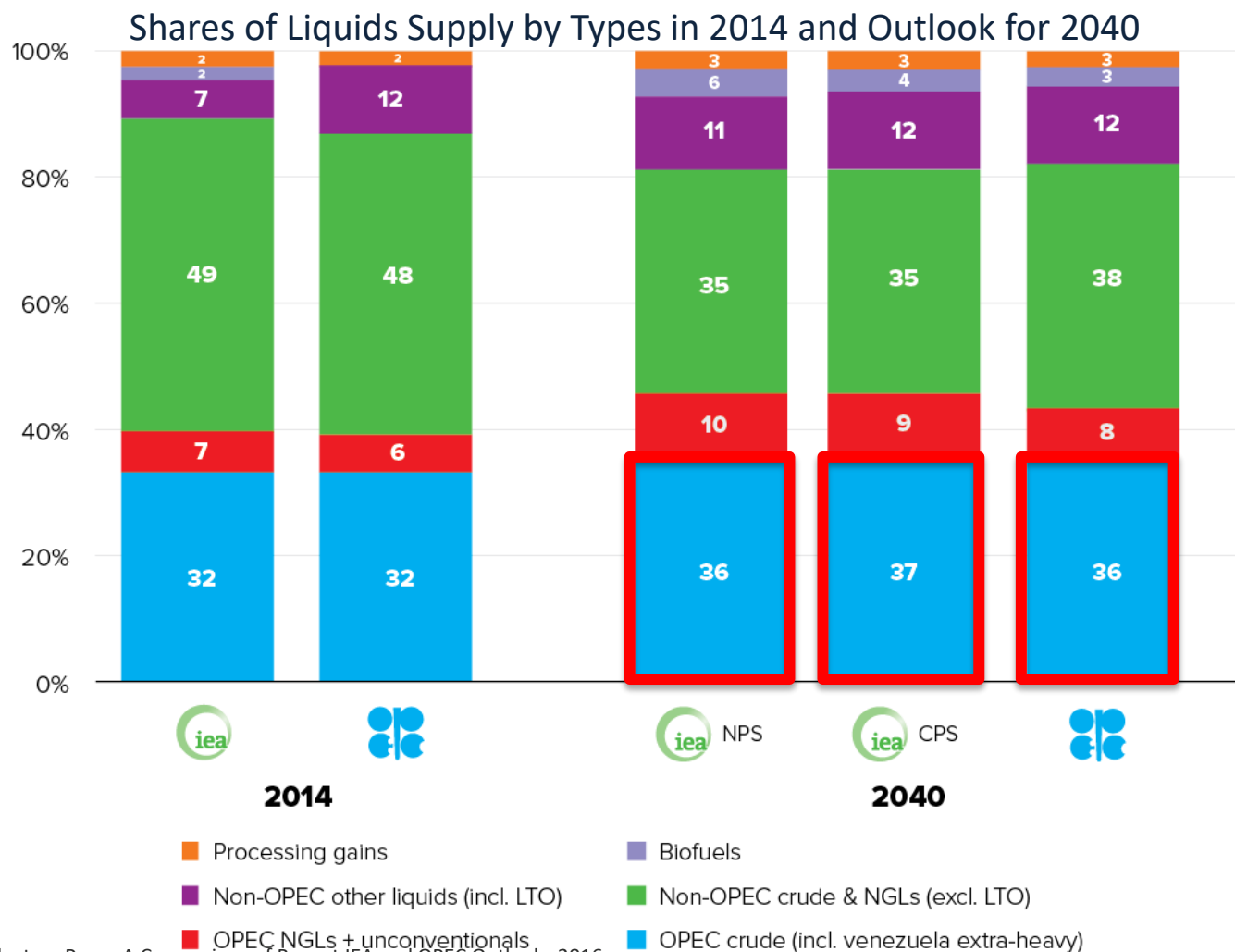
By ~4%-5% in 2040

World Primary Energy Fuel Shares in 2013 and Outlook for 2040



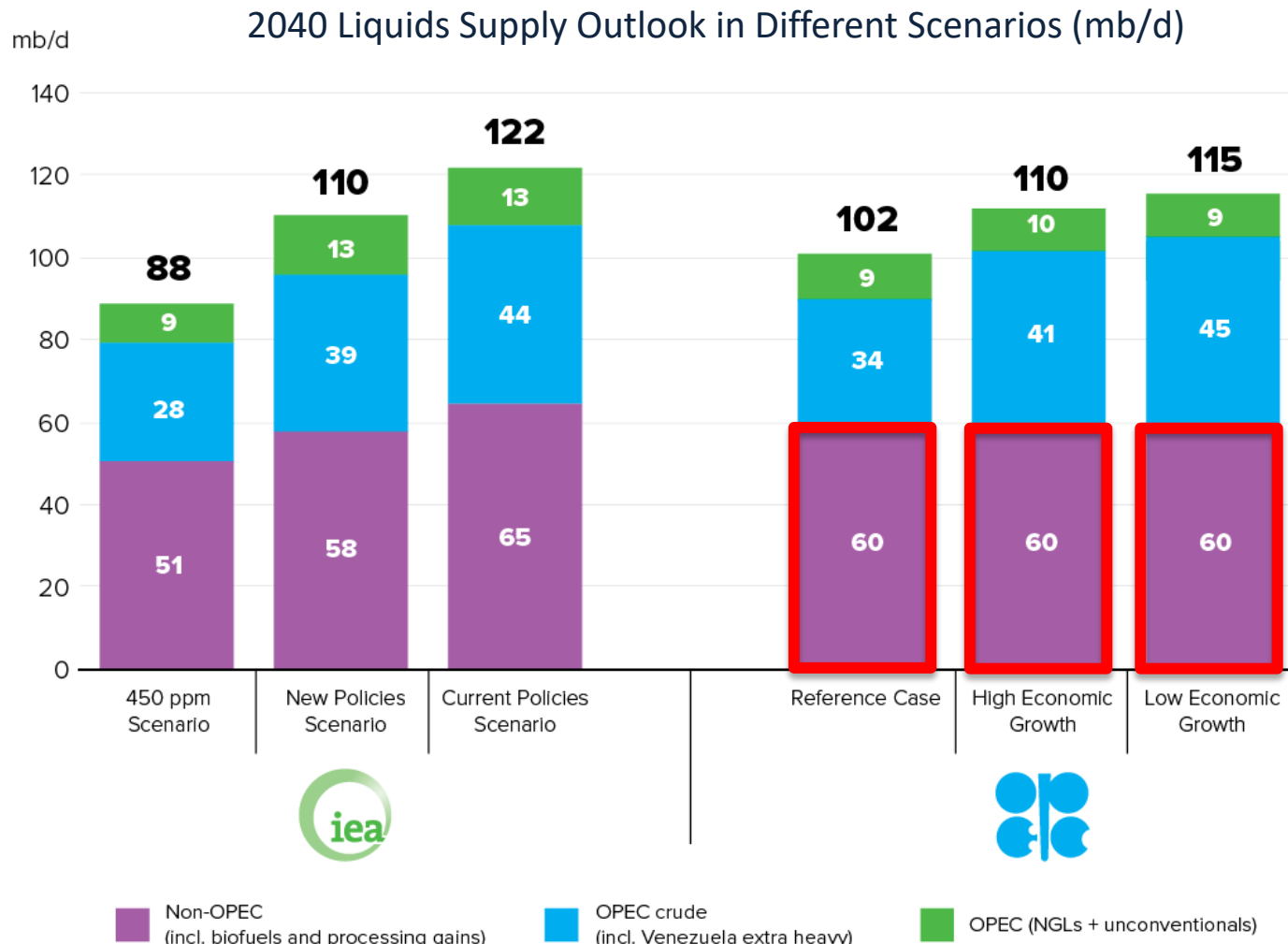
Sources: IEF-Duke Introductory Paper A Comparison of Recent IEA and OPEC Outlooks 2016

The share of OPEC supply increases equally in all scenarios



Sources: IEF-Duke Introductory Paper A Comparison of Recent IEA and OPEC Outlooks 2016

But IEA sees Non-OPEC supply vary, OPEC shows a 60 mb/d limit beyond which OPEC balances market



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Achievements

1. Publication dates
2. Projection period time frames 2013-2014 to 2021-2040
3. Historical baseline data 2008-2013 Non-OECD (excl. China) FSU
4. Regional biofuels classification in monthly-, and medium-term outlooks
5. Disaggregation of LTO by region, and NGL from crude
6. Disaggregation of OPEC Member Country demand in long-term energy outlooks

Opportunities

1. Historical baseline data 2014 incl. other regions
2. Regional and global classification of OPEC member Countries, bunkers, and biofuels
3. Components of NGLs/unconventional supplies
4. Methods underlying key assumptions incl. policy, oil price-, GDP growth-, and oil supply projections
5. Liquid fuel supply categories
6. Measurement units incl. volumetric vs. energy content, and conversion factors

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Thank You



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