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

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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1. **Short-term IEA and OPEC outlooks**
2. Medium-term IEA and OPEC outlooks
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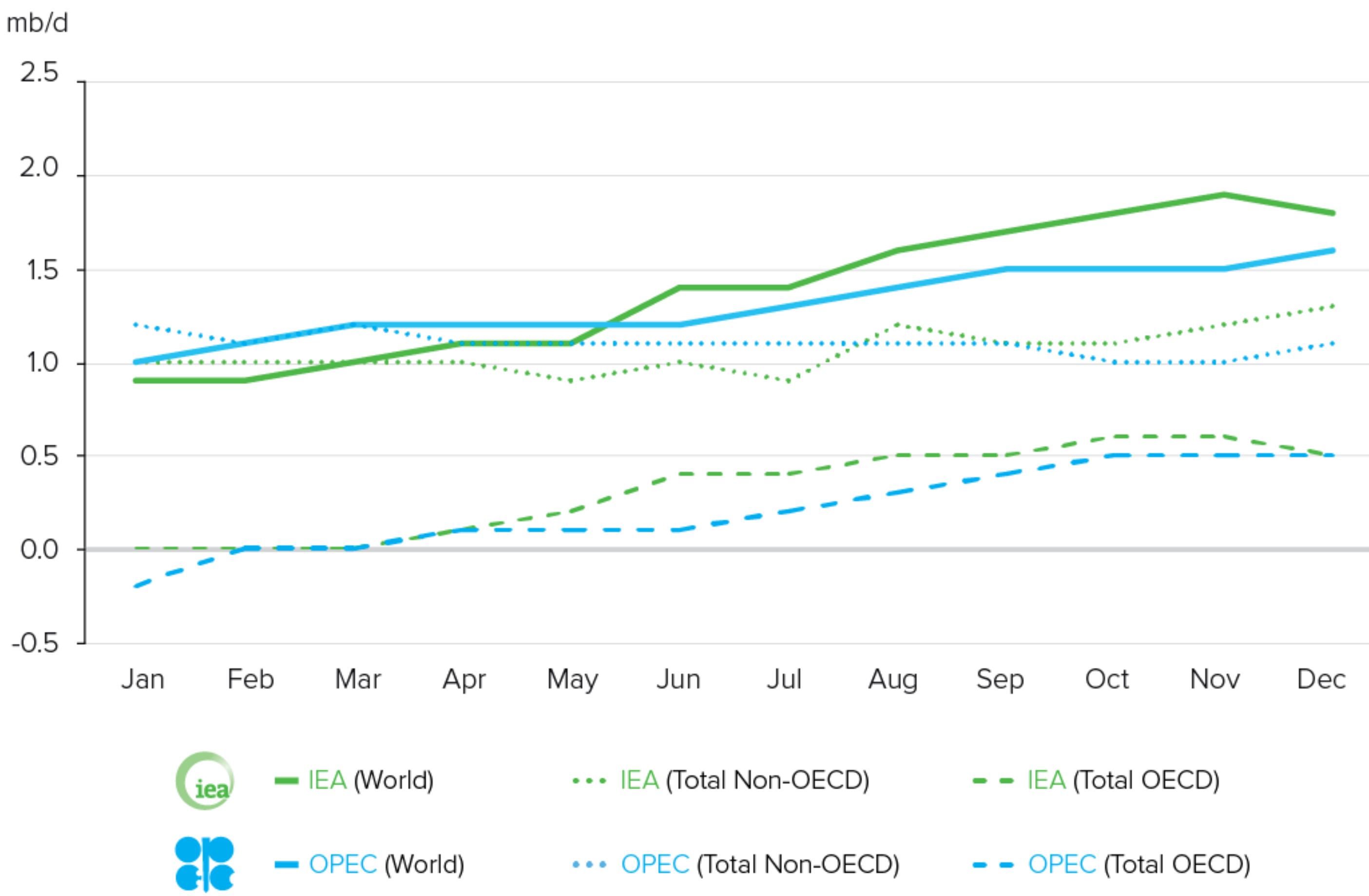
2015 Demand growth consistently revised up

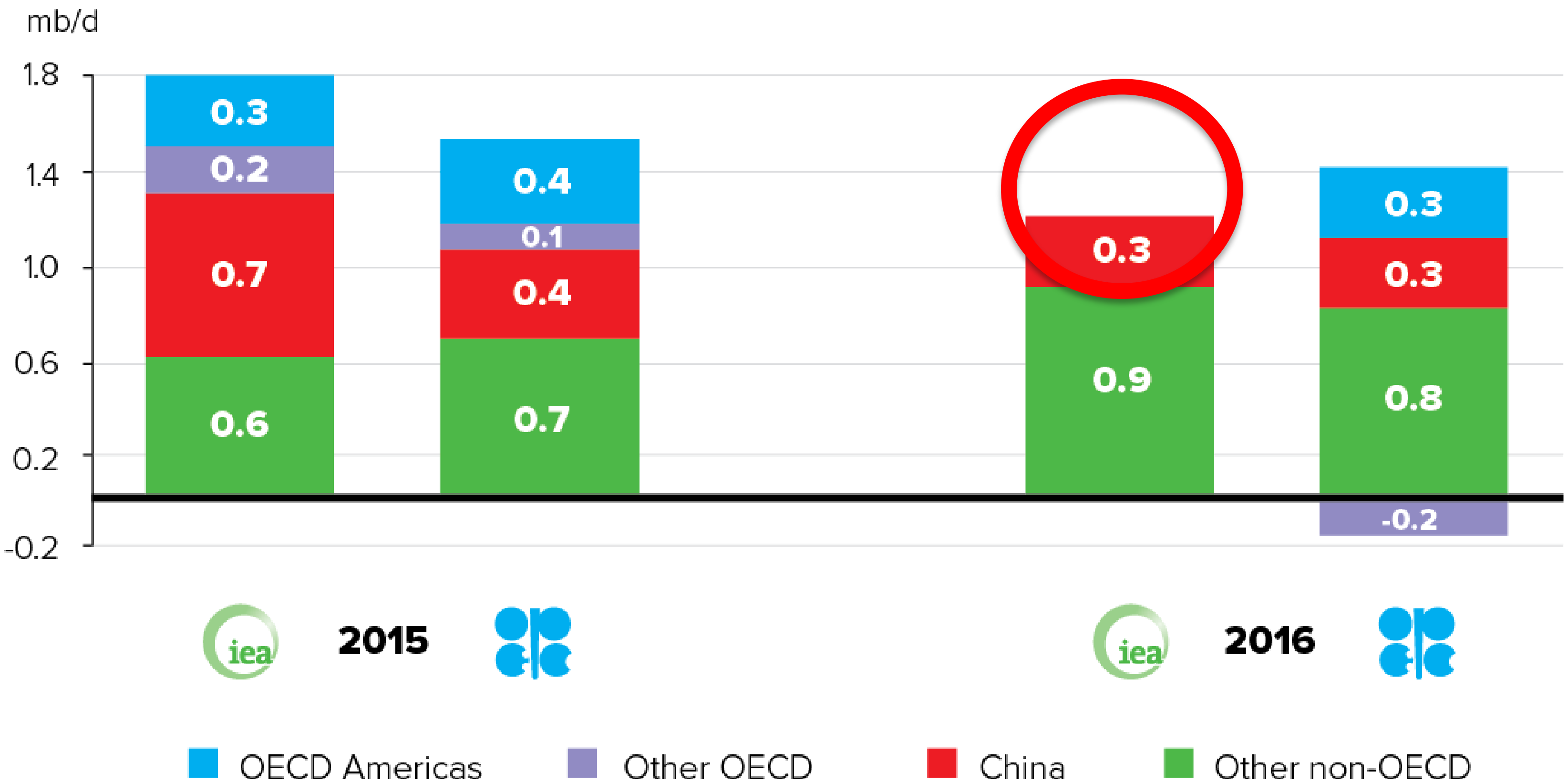
Monthly Revisions of Annual Estimates for 2015 World, OECD, and Non-OECD Liquids Demand Growth (mb/d)



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)



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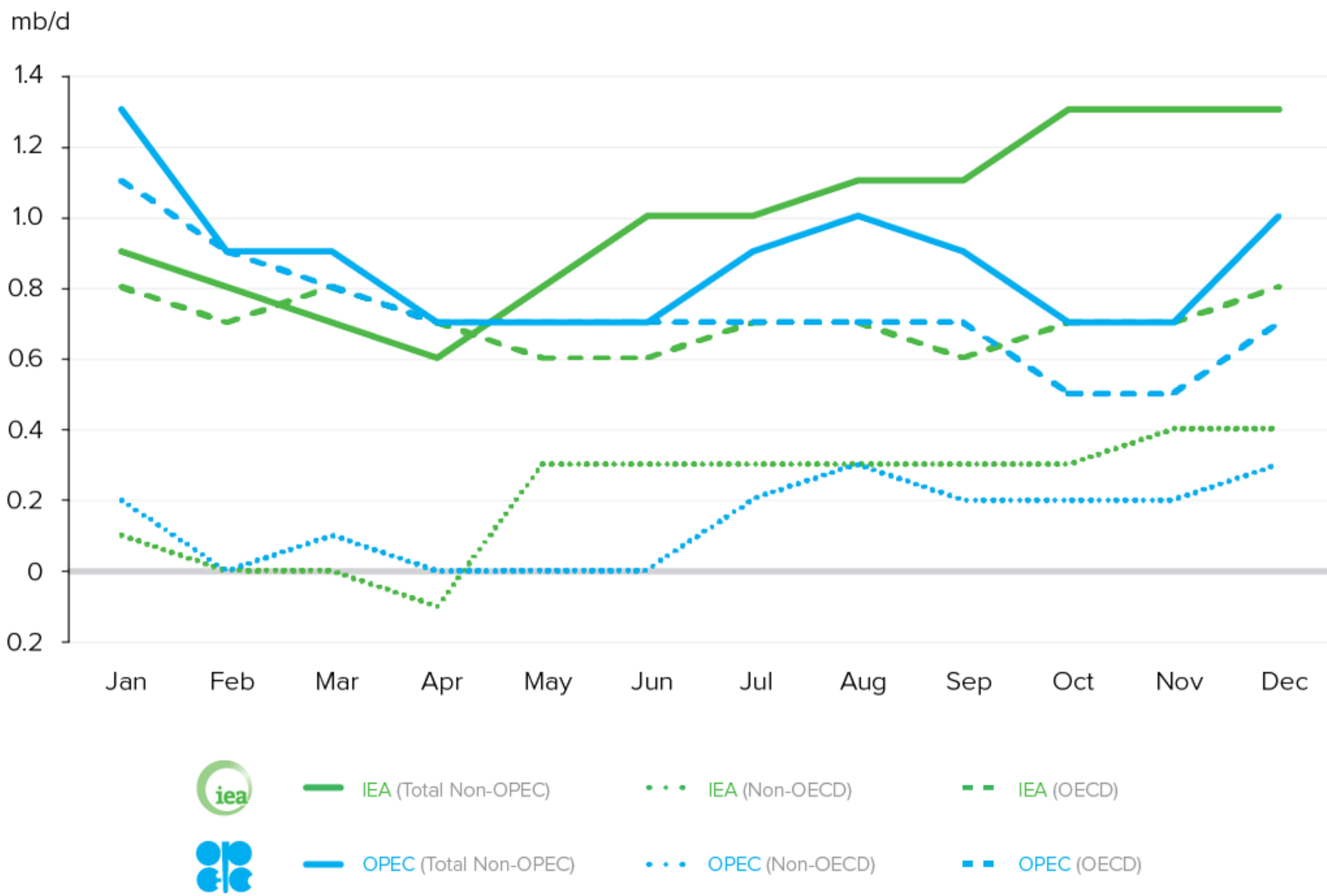
Greater resilience of Non-OPEC supply growth shows untested nature of unconventional estimates

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



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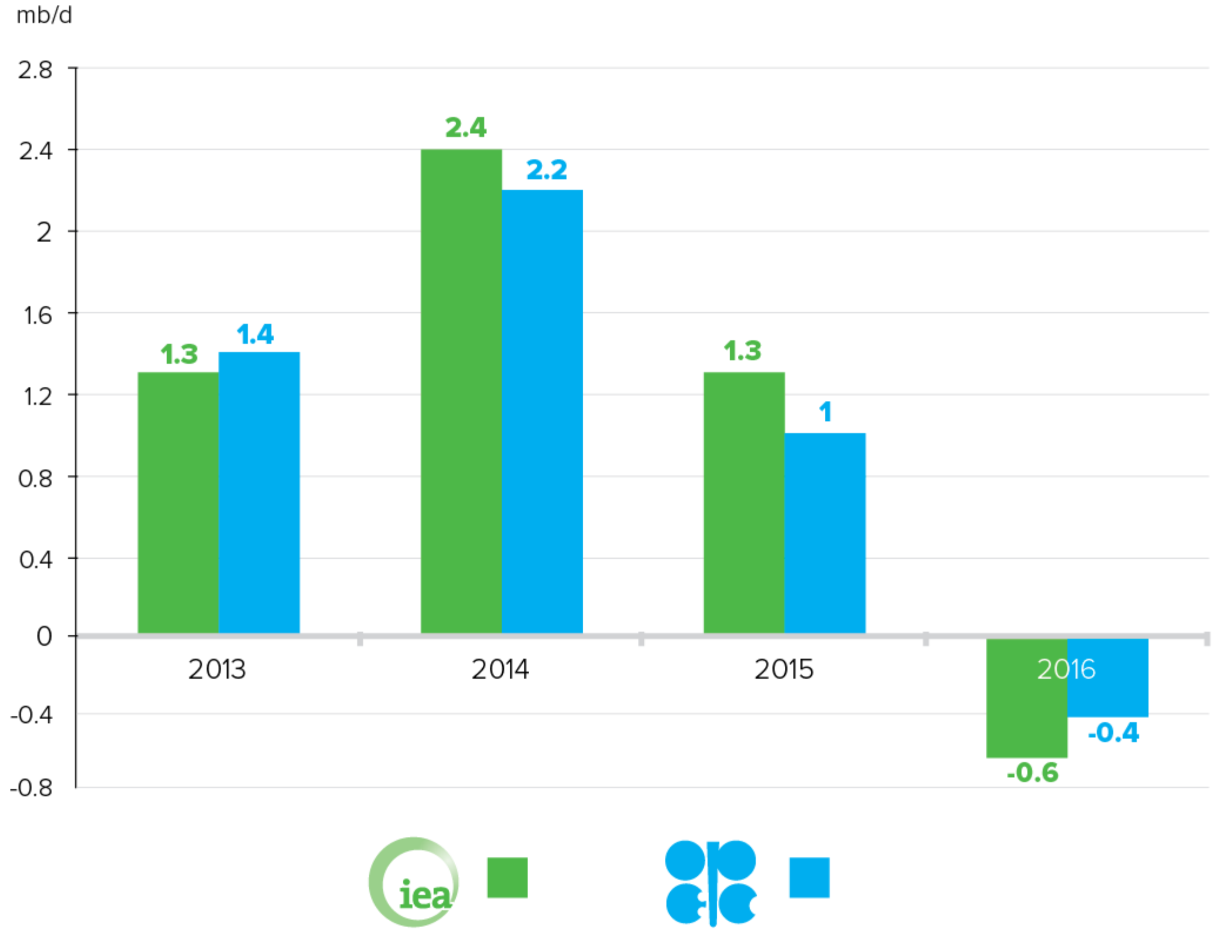
2016 Non-OPEC liquid supply growth to fall

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



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2. **Medium-term IEA and OPEC outlooks**

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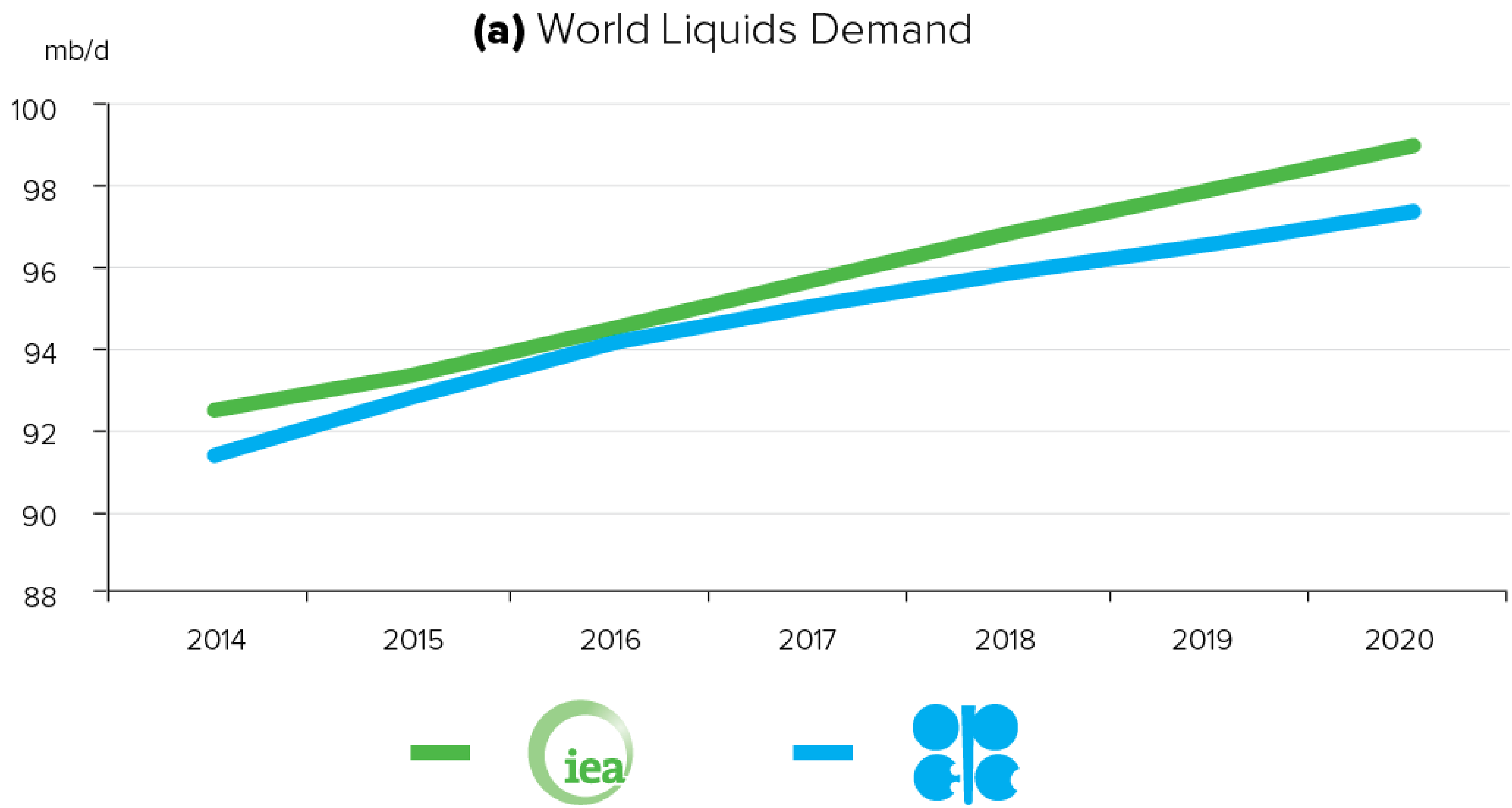
IEA projects demand growth to be slightly faster and reach higher levels than OPEC

Medium-term Liquids Demand (mb/d)



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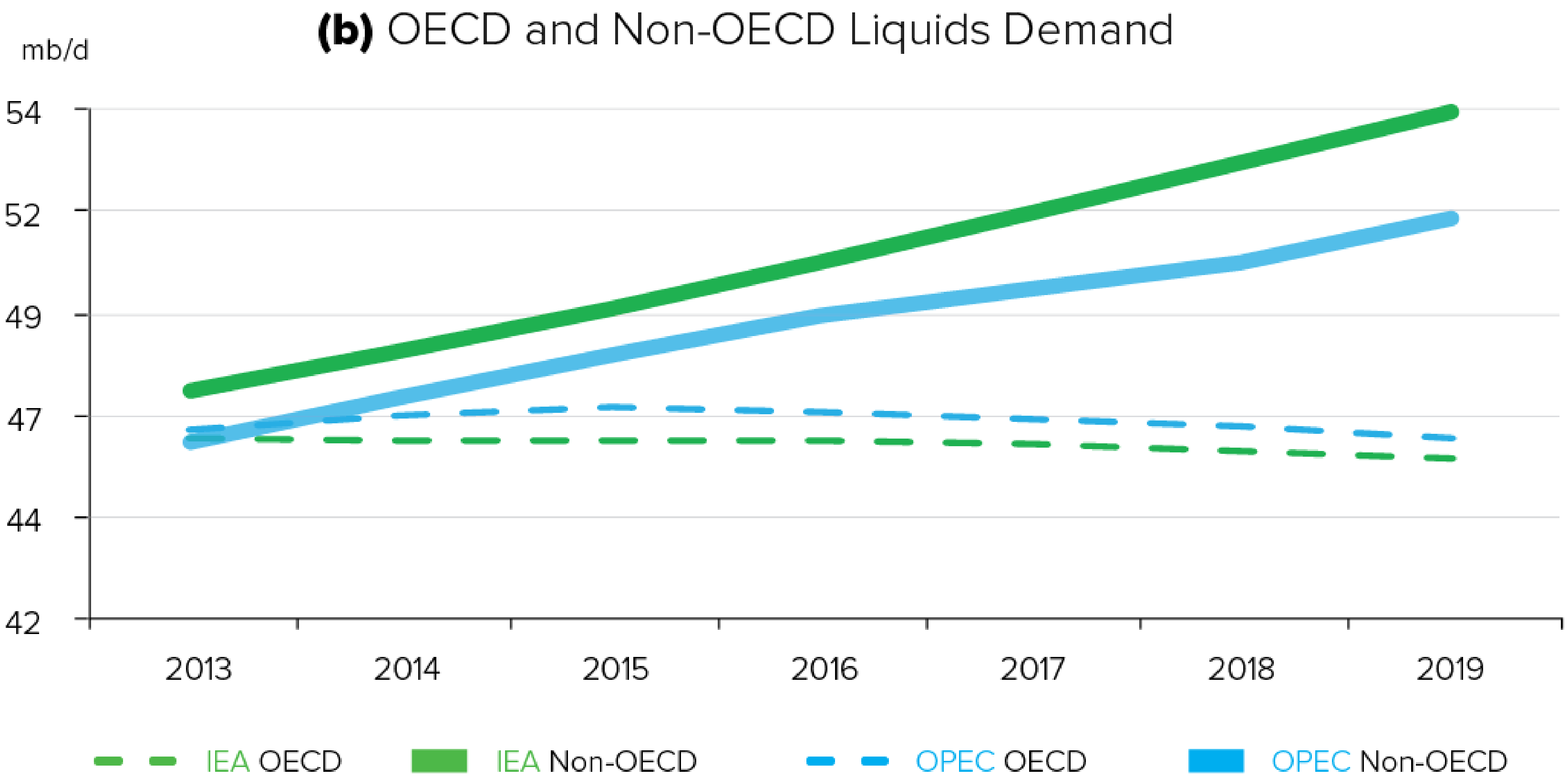
Differences in Non-OECD demand growth projections increase reaching 2.2 mb/d by 2020

Medium-term Liquids Demand (mb/d)



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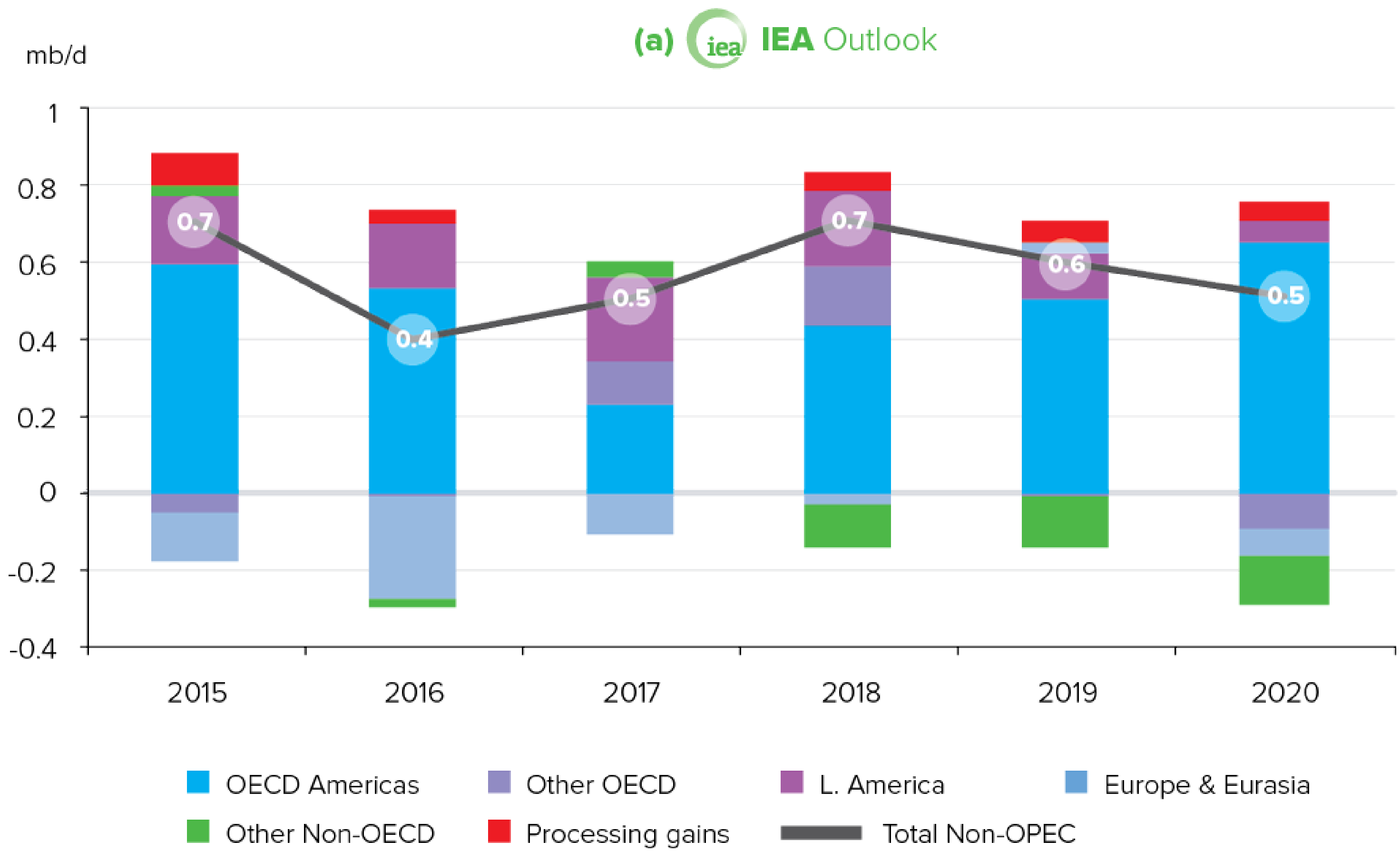
IEA sees OECD Americas' supply growth recover but Latin America and Other-Non-OECD slow

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



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

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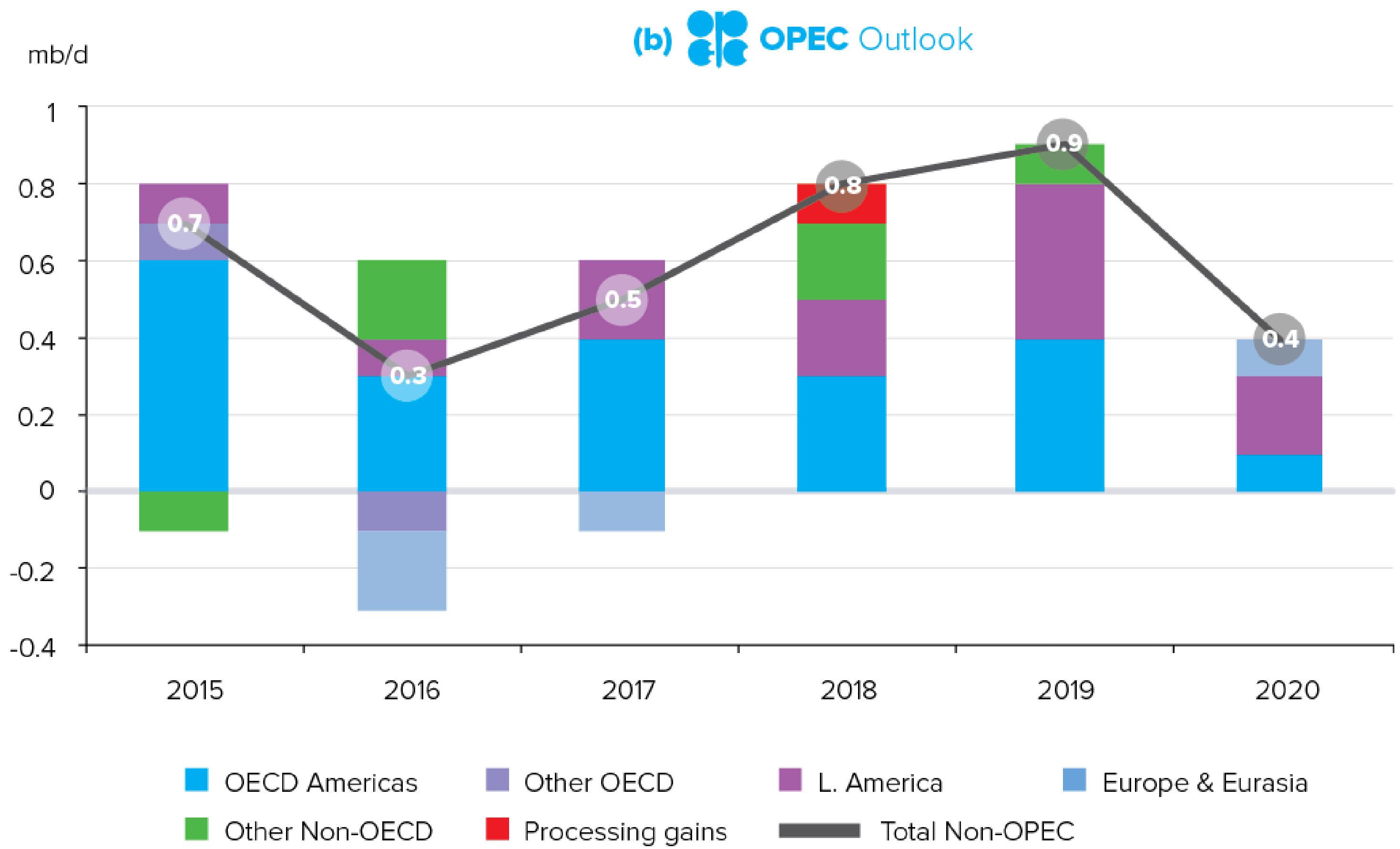

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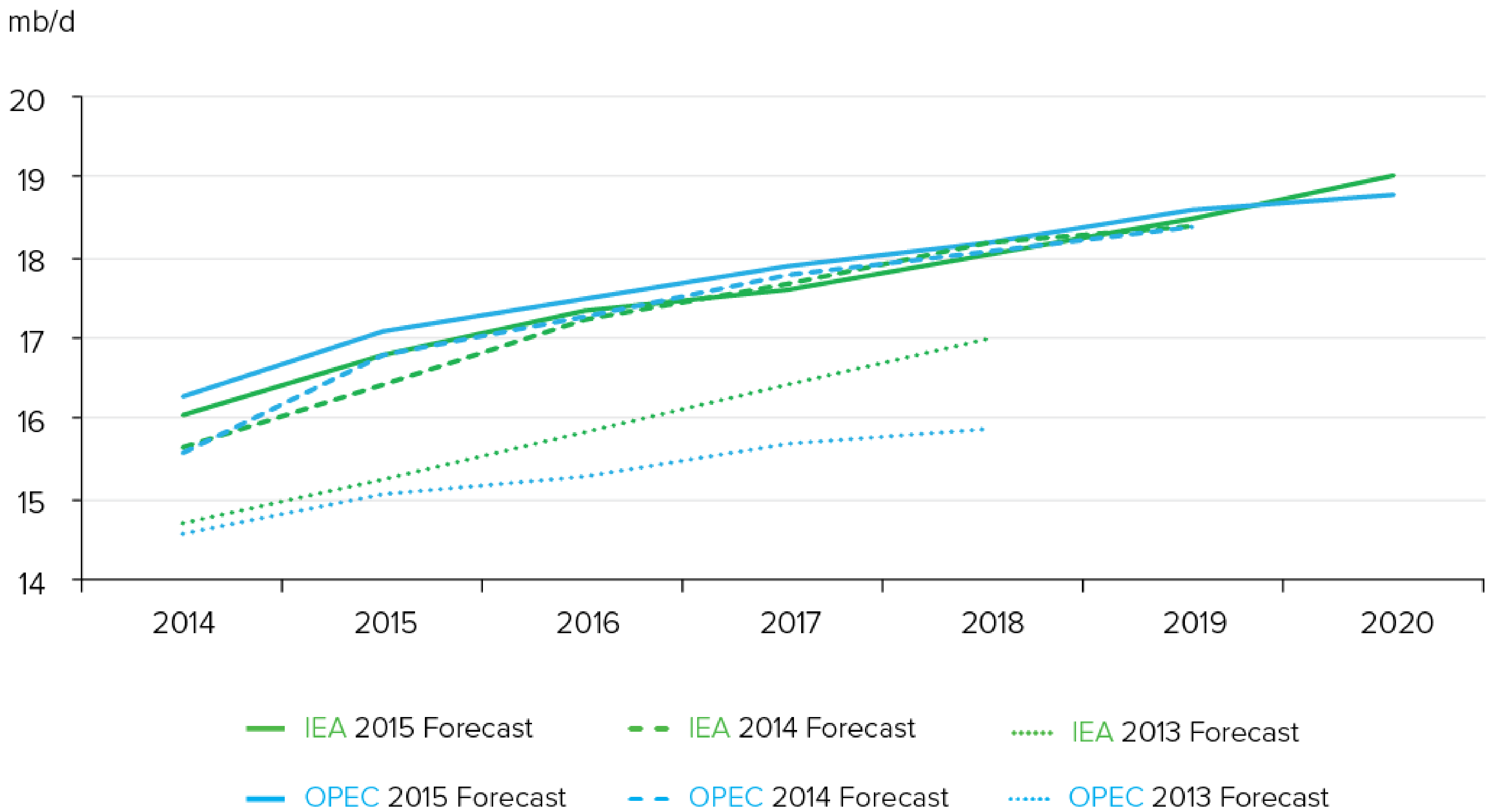
IEA and OPEC have adjusted and aligned US and Canadian supply growth outlooks

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



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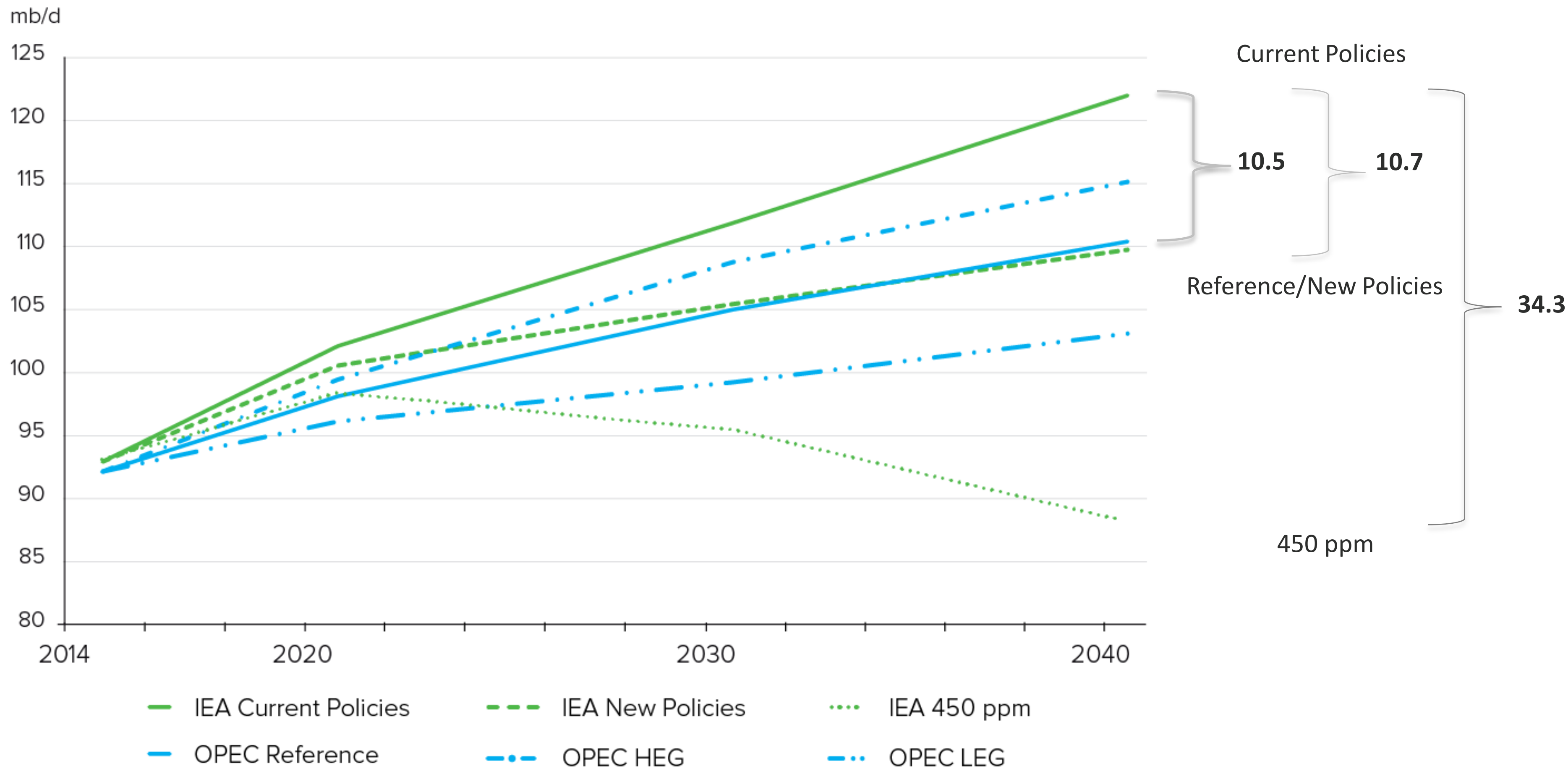
Demand projections vary strongly across scenarios leading to a gap of ~34 mb/d by 2040

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



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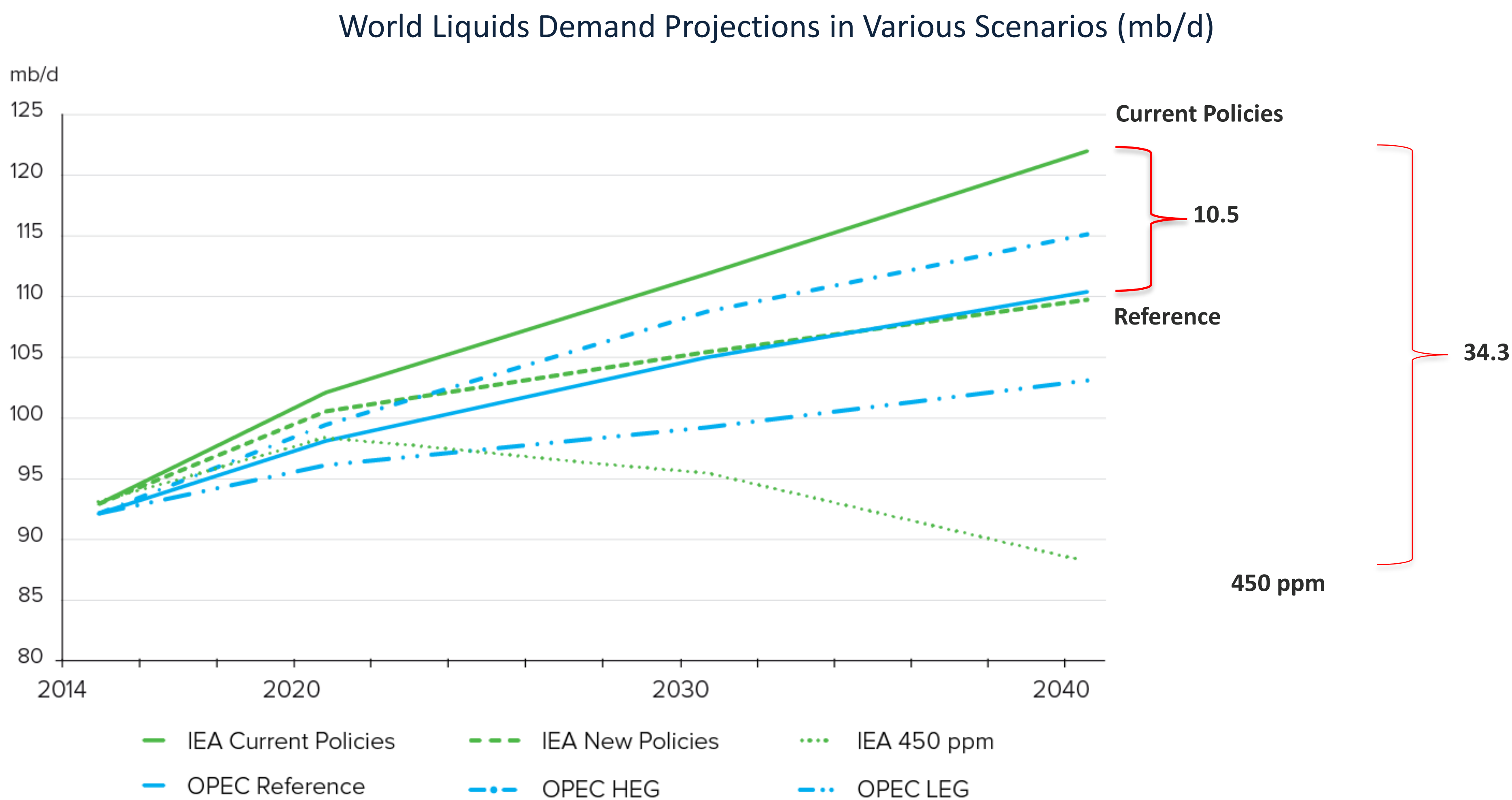
What's the relevant scenario to pay attention to?



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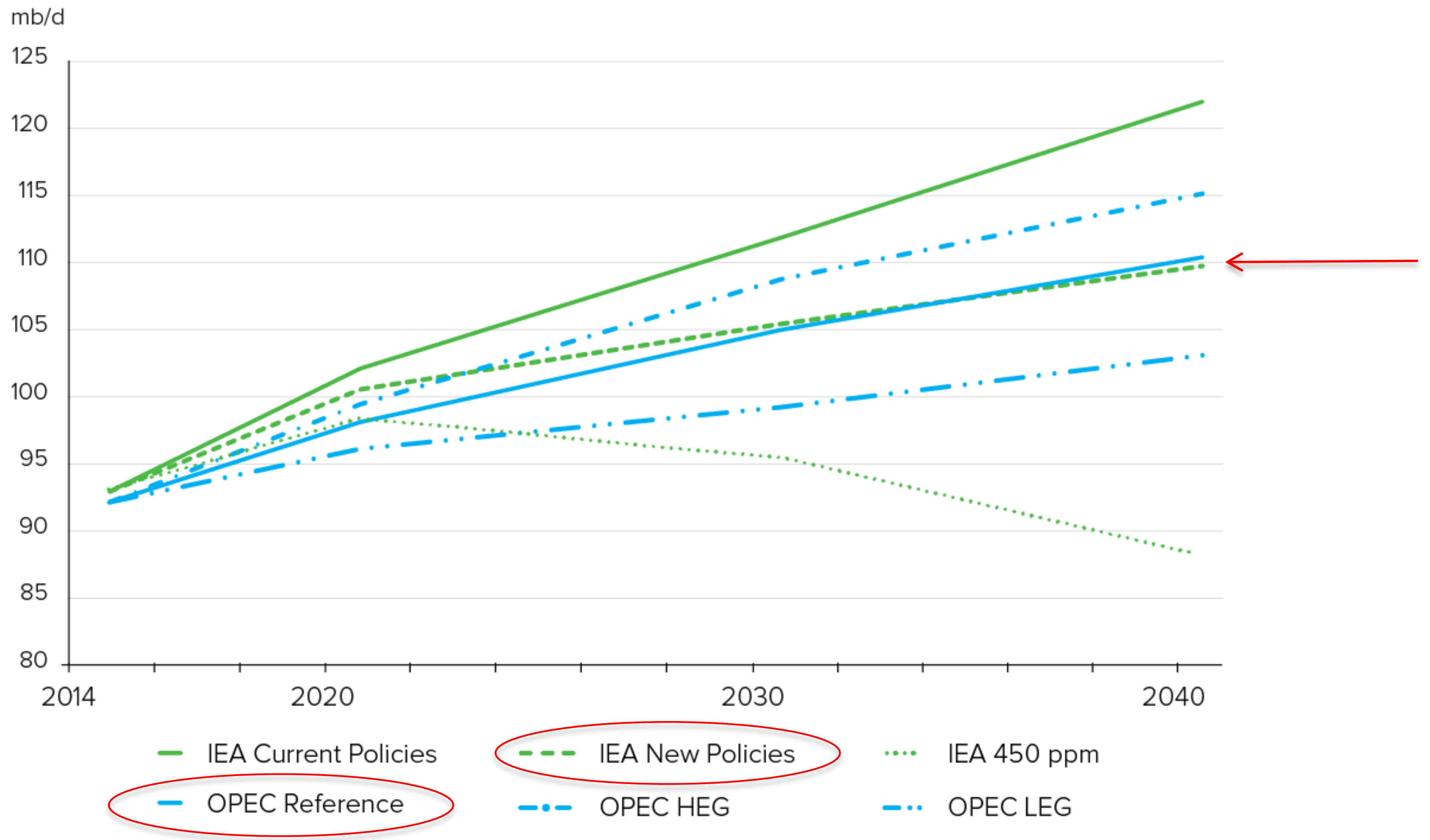

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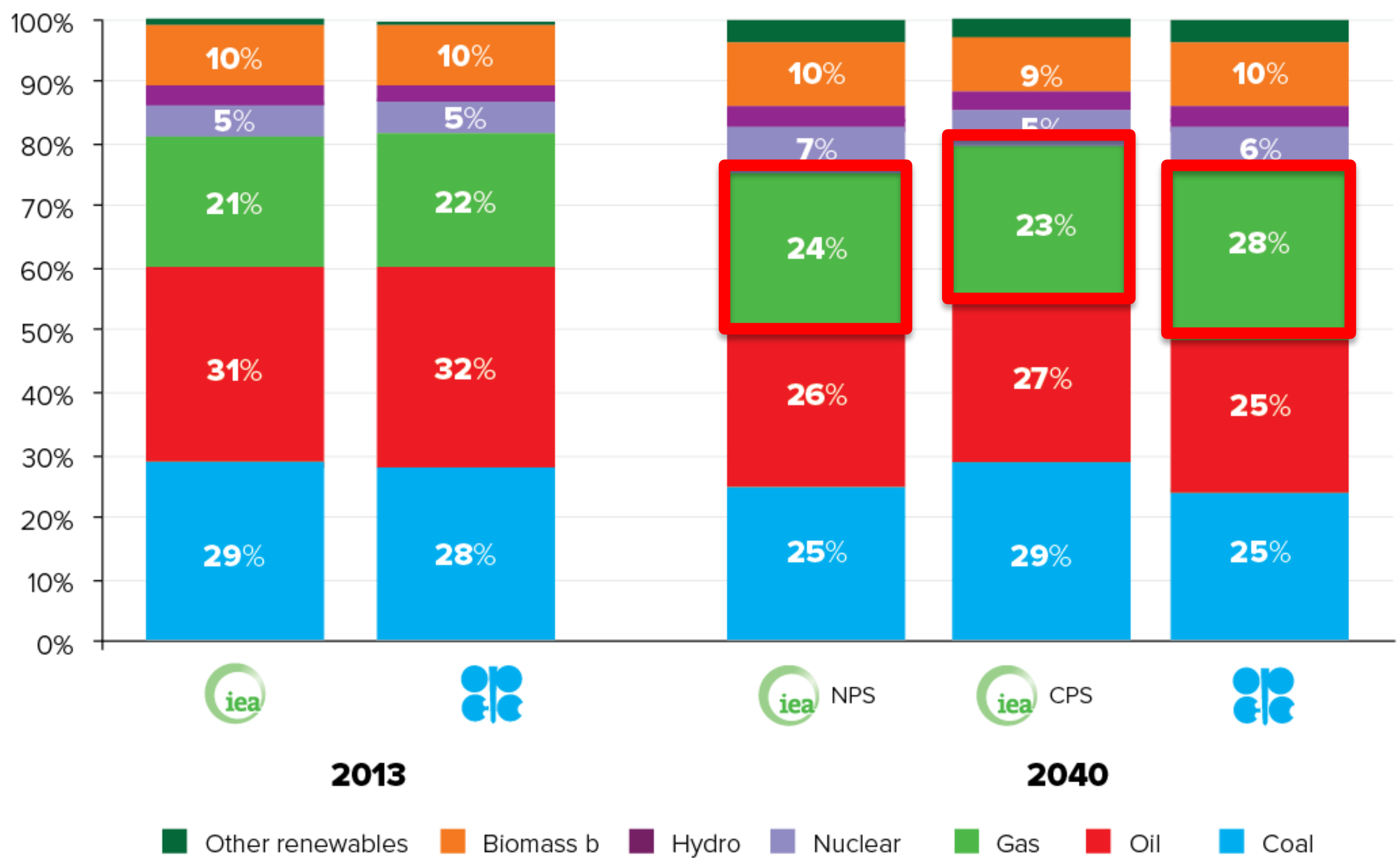
IEA – OPEC gas share outlooks vary

By ~4%-5% in 2040

World Primary Energy Fuel Shares in 2013 and Outlook for 2040



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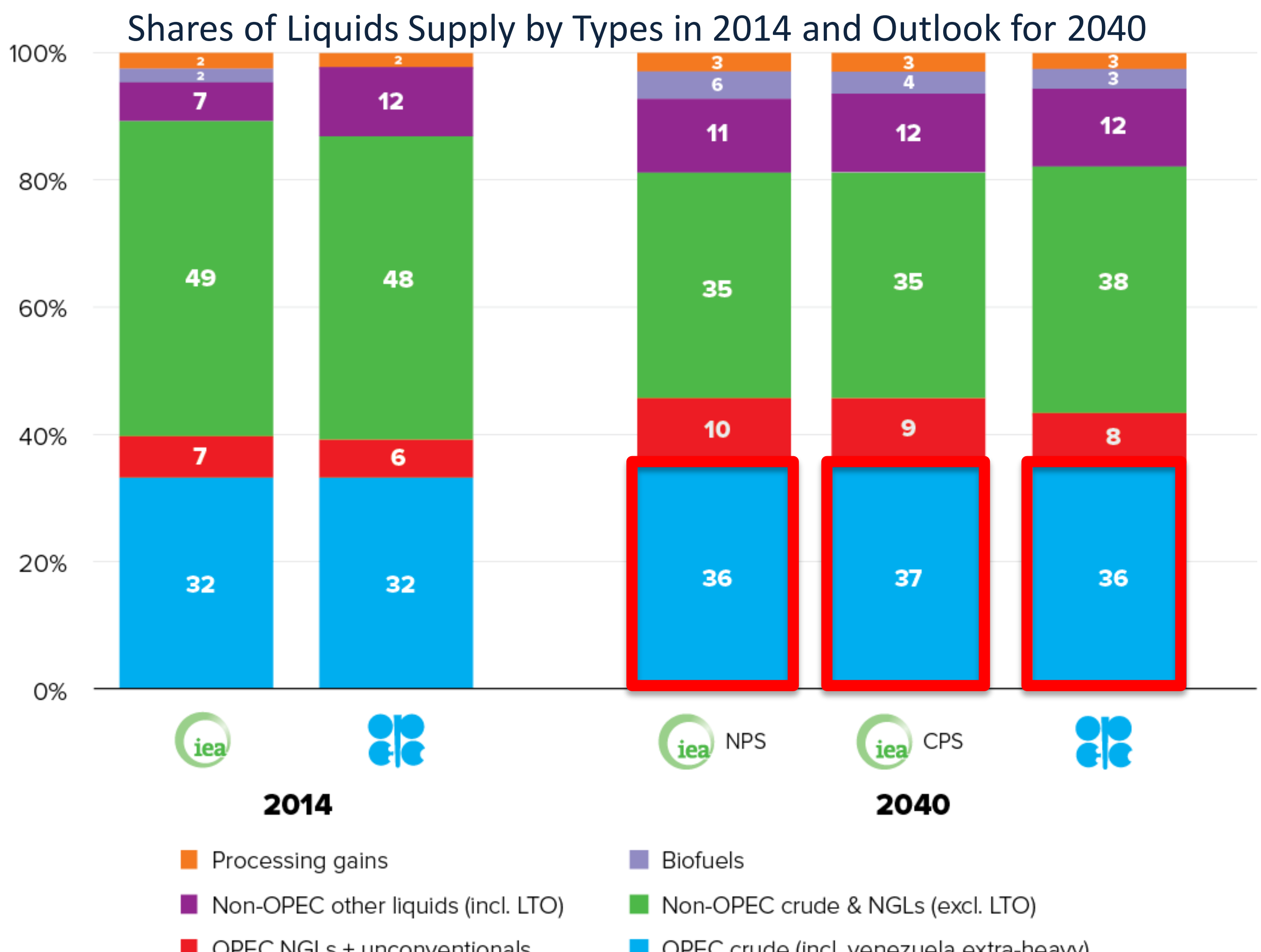
The share of OPEC supply increases equally in all scenarios



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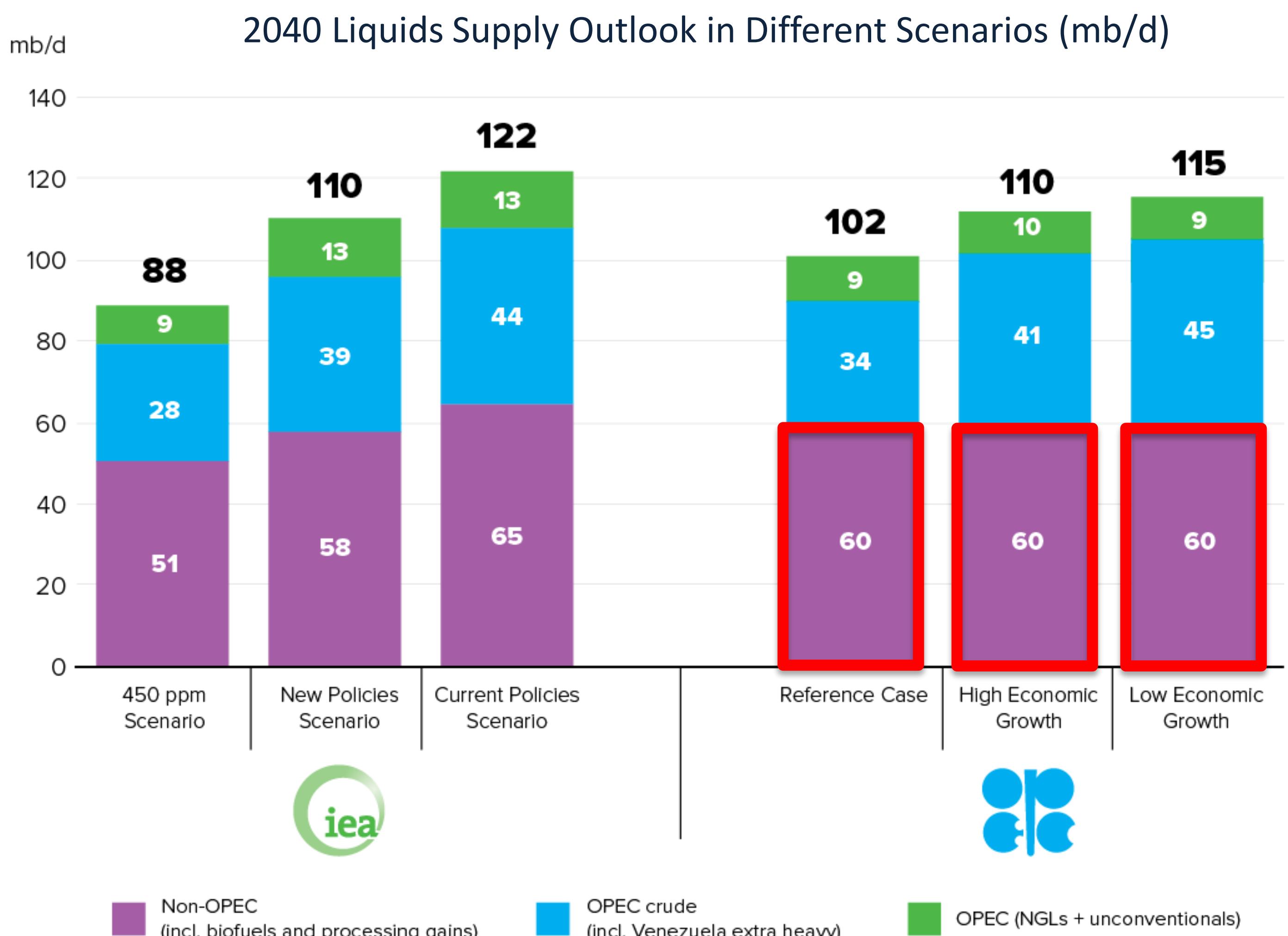
But IEA sees Non-OPEC supply vary, OPEC shows a 60 mb/d limit beyond which OPEC balances market



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Achievements	Opportunities
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2. Projection period time frames 2013-3014 to 2021-2040	2. Regional and global classification of OPEC member Countries, bunkers, and biofuels
3. Historical baseline data 2008-2013 Non-OECD (excl. China) FSU	3. Components of NGLs/unconventional supplies
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Thank You

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