



IHS Markit™

# China's coal conundrum

What could enable an earlier coal and CO<sub>2</sub> peak?

**Xizhou Zhou**, *Senior Director*

*Head of Power, Gas, Coal & Renewables Group – Asia Pacific*

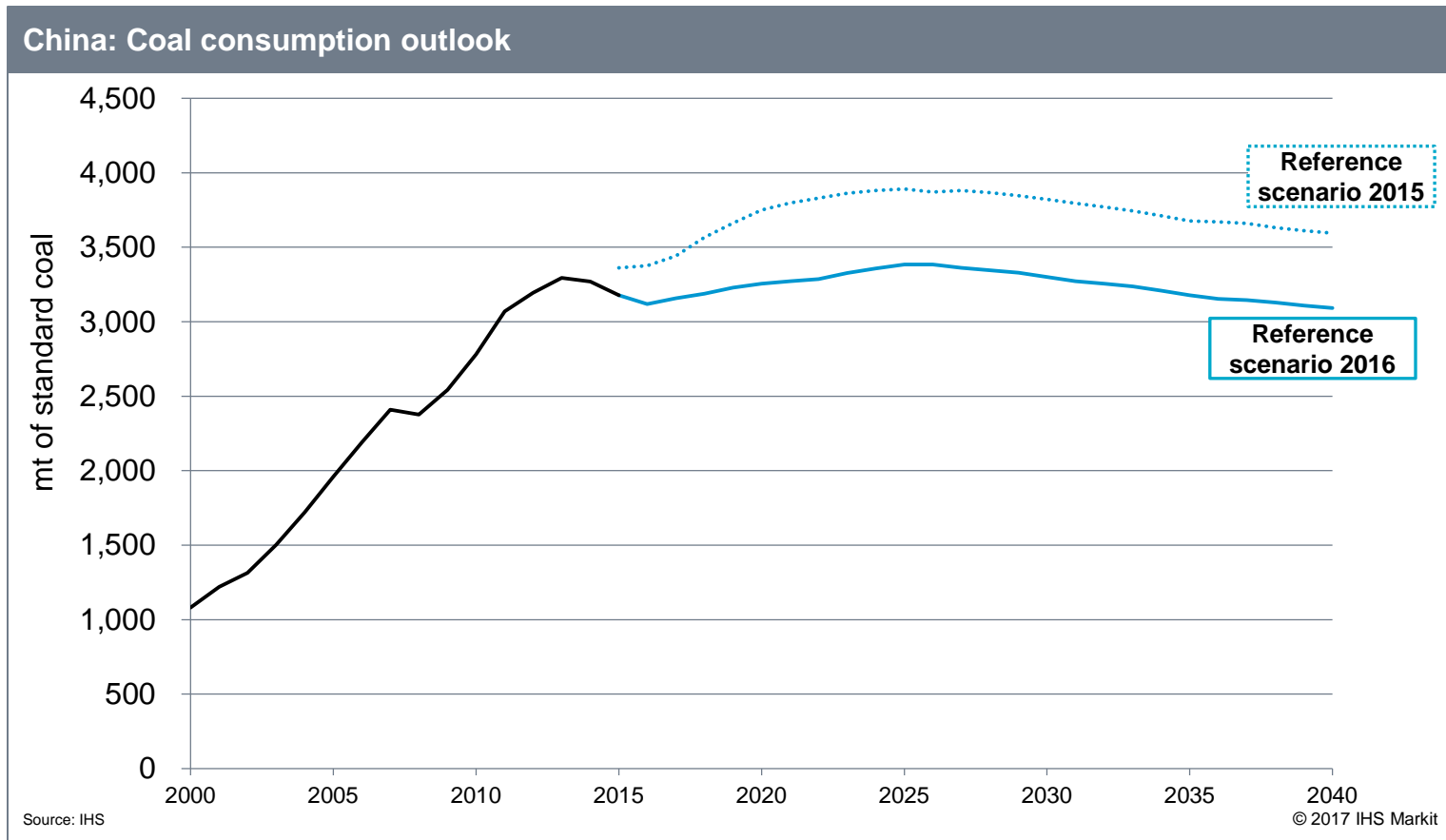
March 13, 2017 | China Environment Program | The Wilson Center

## Key Implications

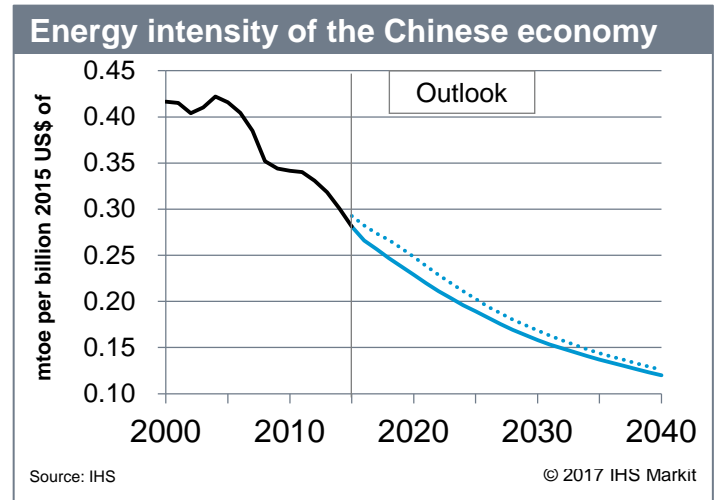
- Given current policies and investment trends, IHS expects that Chinese carbon emissions will peak before 2030, even with increasing investment in coal-fired power and coal-conversion sectors.
- The economic transition away from heavy manufacturing the past few years means that the carbon peak could come earlier and at a lower level than previously thought.
- In addition to economic growth, government policies (e.g., further environmental mandates) and market factors (e.g., cost competitiveness of alternative fuels and technologies) will also be critical for the future of coal – and thus any coal conversion projects.

# IHS long-term scenario outlooks

Coal demand trajectory came down significantly between 2015 and 2016 outlooks

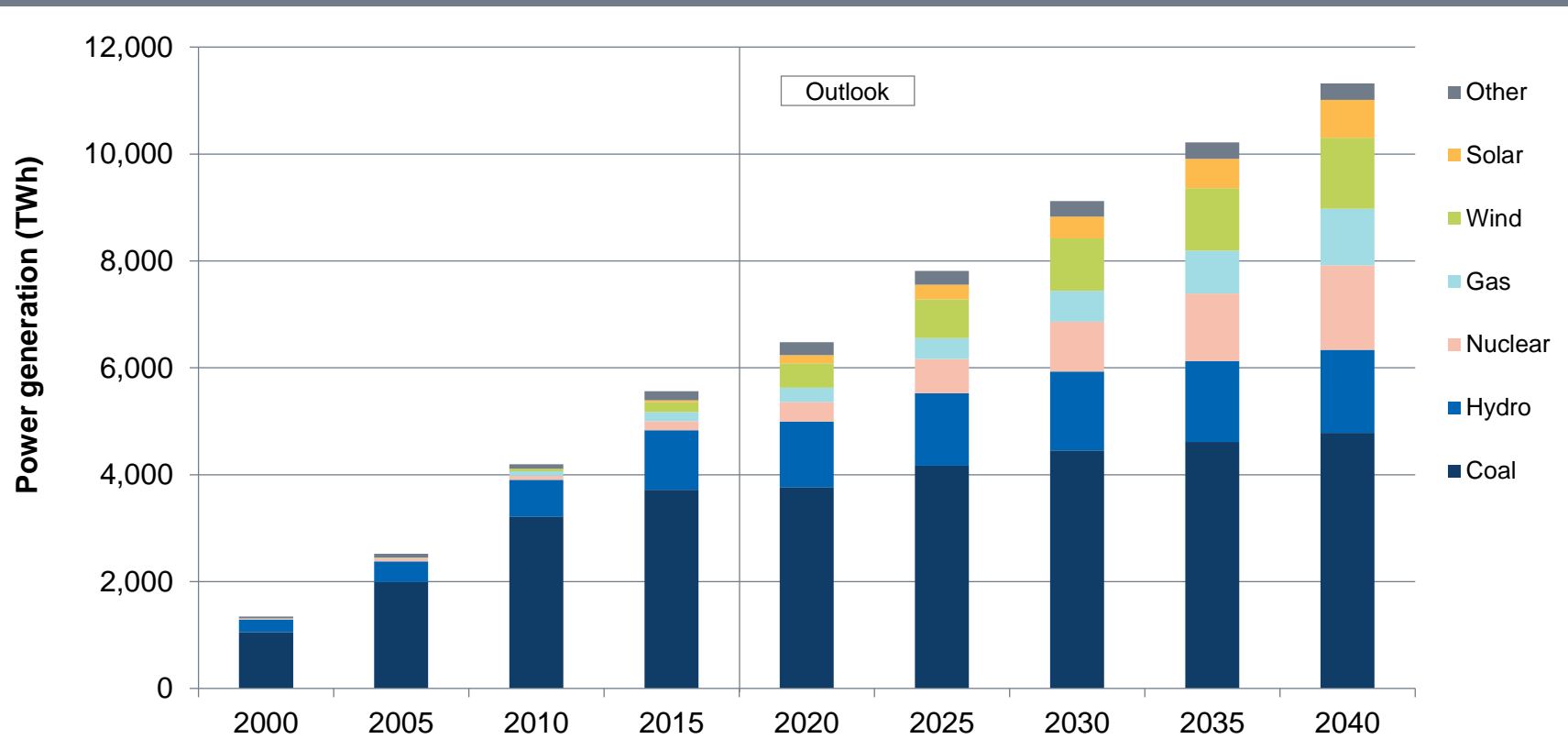


# Why the substantial drop in 2016 outlooks?



# Renewables and gas played a role too, but coal-fired power continues to grow

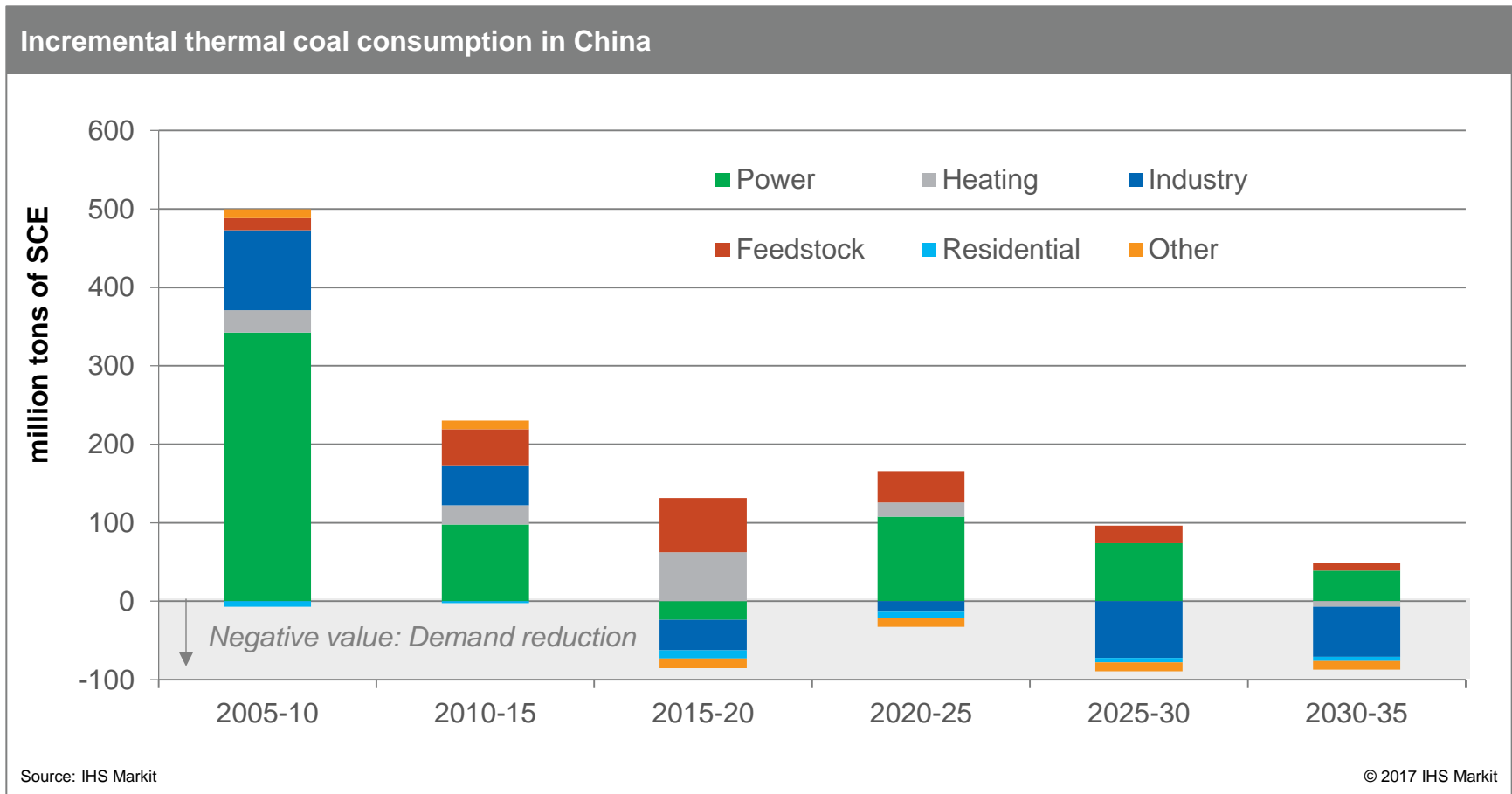
China power generation outlooks (Reference scenario 2016)



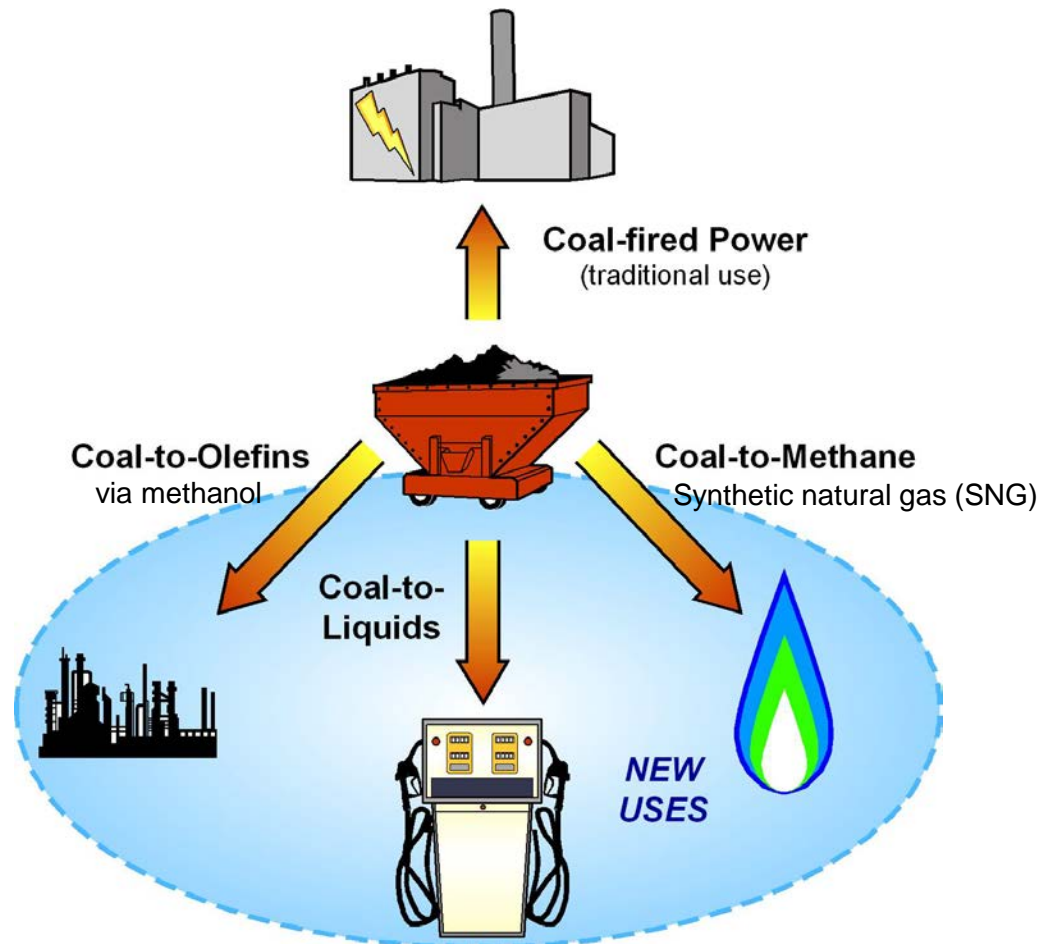
Source: IHS

© 2017 IHS Markit

# Power/heating and feedstock are the main sectors for future coal consumption growth in China



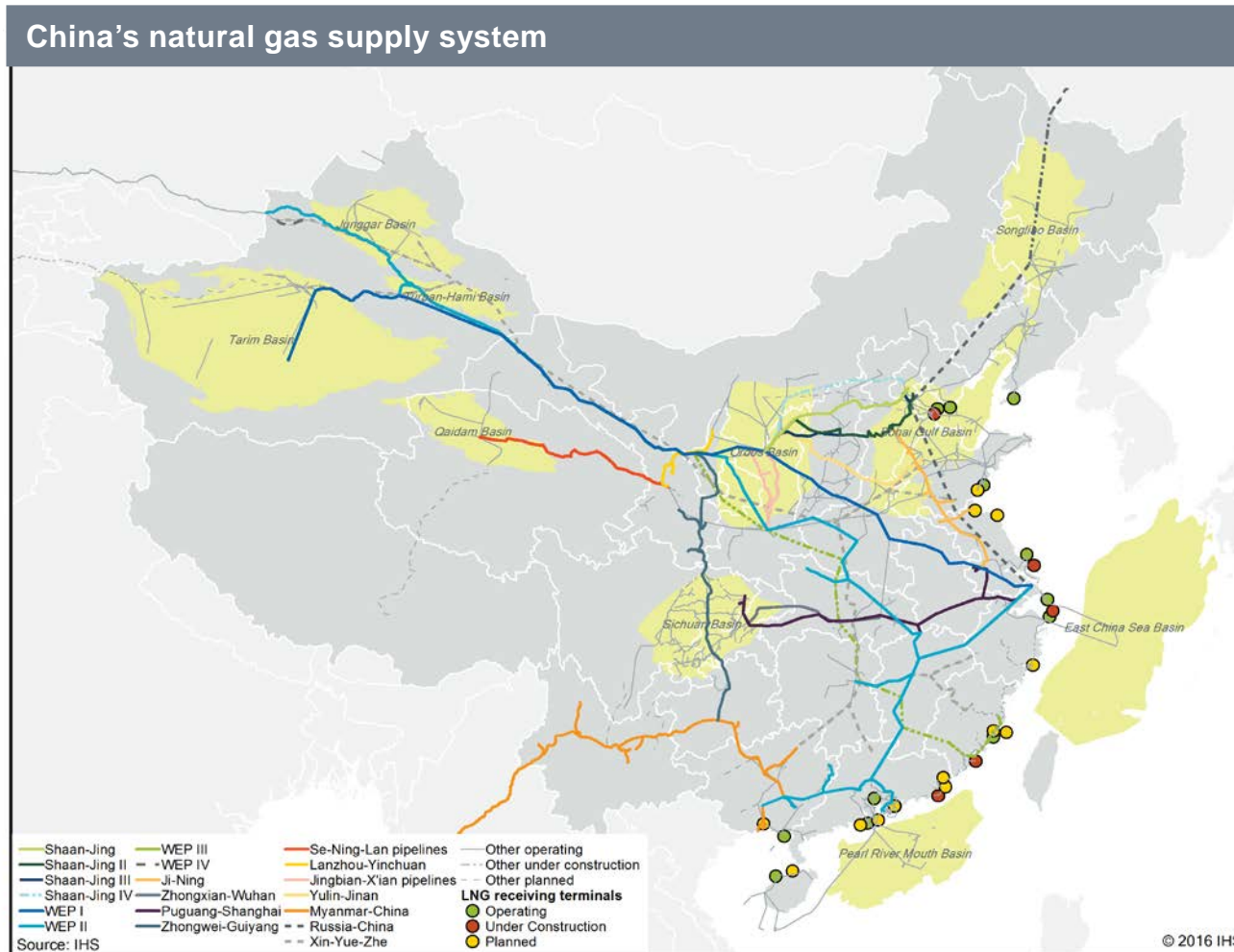
# Coal as a feedstock: the most versatile fuel



Source: IHS Markit  
01112-8

# Where does coal-to-methane fit in China's gas supply?

Multiple gas supply sources competing for China's gas market

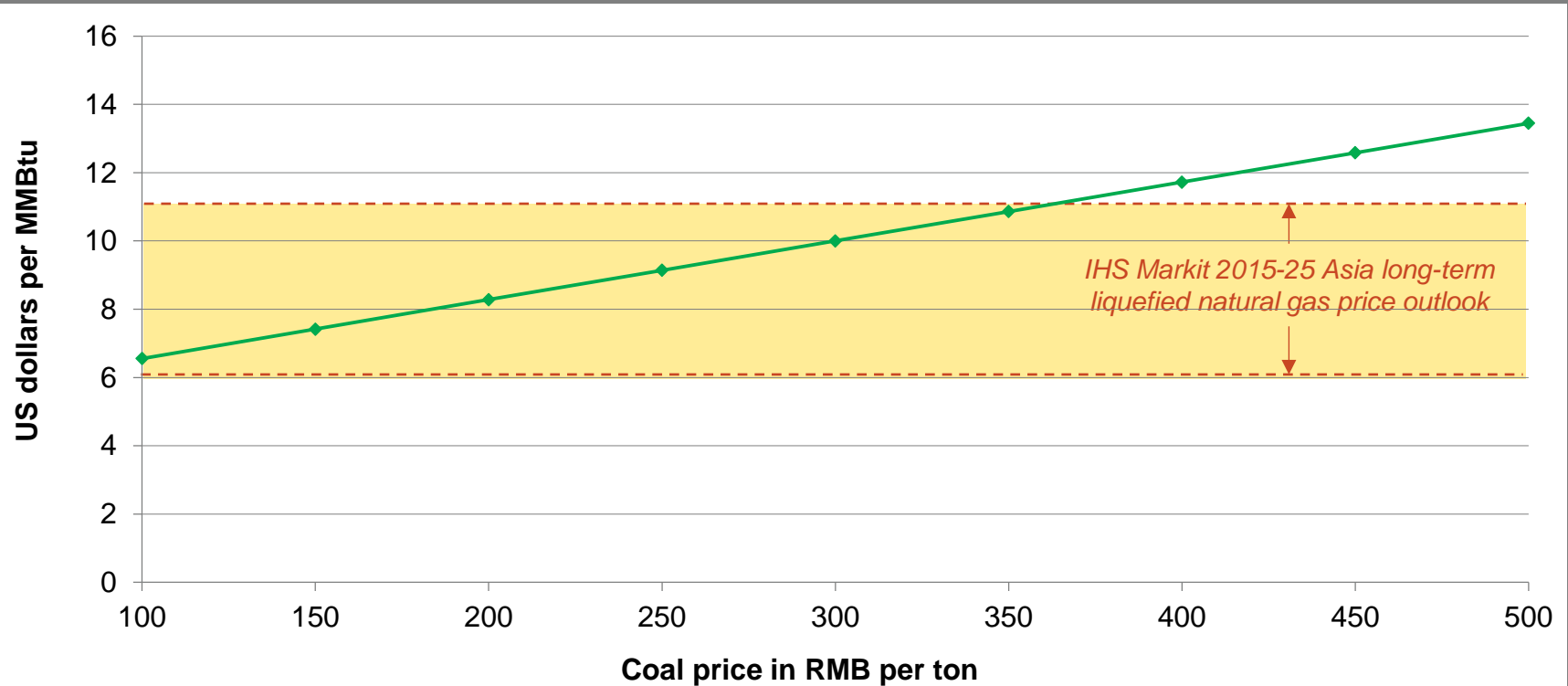




# How do energy companies examine their supply strategies?

## Will coal-based SNG be economically competitive

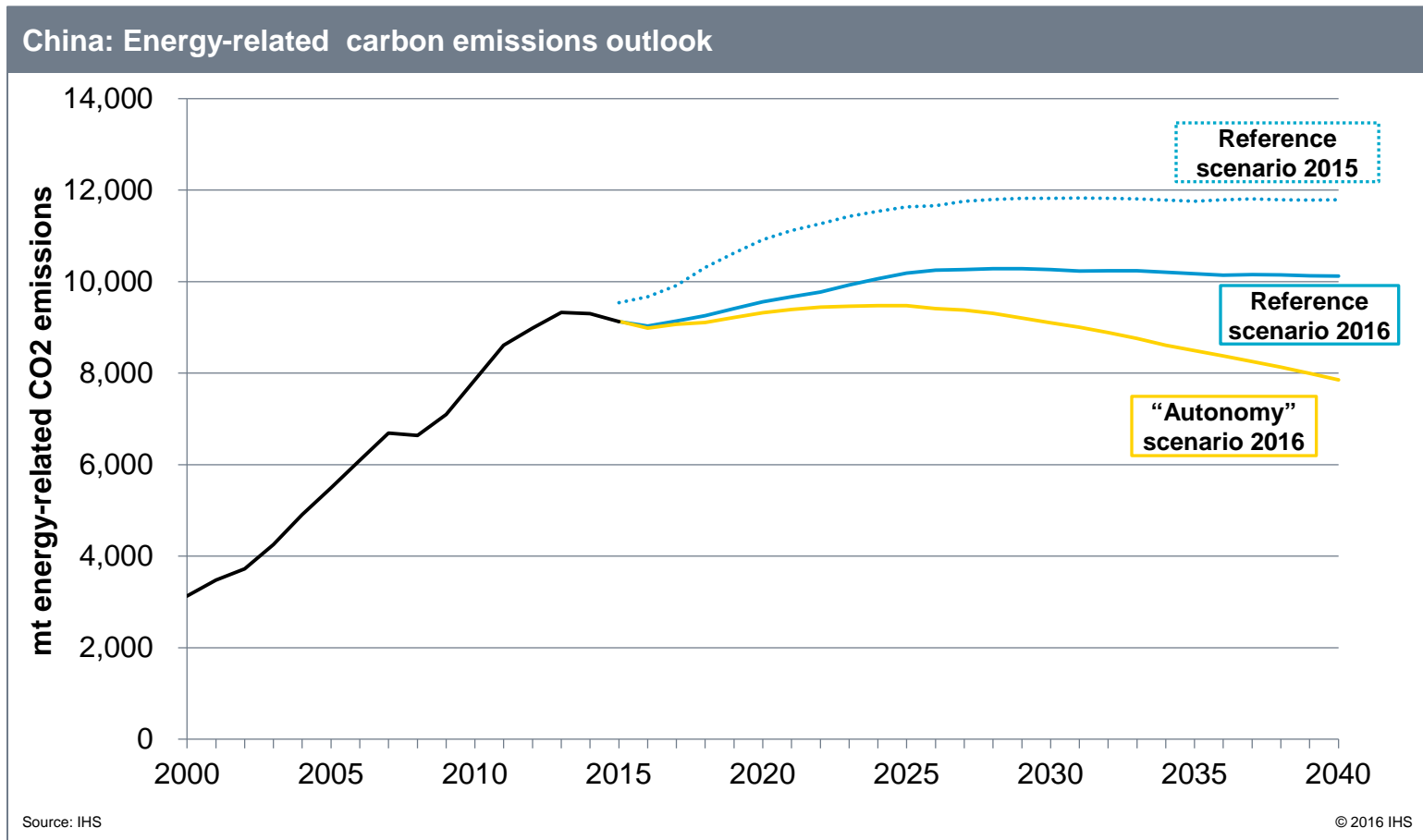
SNG production cost vs coal price



Note: Assume 75% utilization rate. Coal prices are based on lignite 3800 kcal.  
 Source: IHS Markit

© 2017 IHS Markit

# Current policies will enable China's reach its COP21 commitments, but deeper cuts are possible



## Summary of key implications

- **2030 peak carbon is very much achievable for China**, even with higher coal usage in the power and coal conversion sectors.
- **Economic restructuring is key to lowering coal consumption**, and any changes in the restructuring will alter future carbon trajectory.
- **Environmental policies and market factors will determine the future of coal conversion.** More regional coal ban? Future fossil fuel prices?

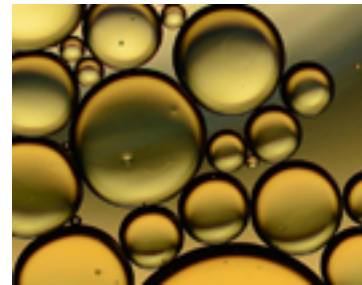
# IHS Markit: Industries we serve



**Financial Markets**



**Energy**



**Chemical**



**Automotive**



**Aerospace,  
Defense & Security**



**Product Design**

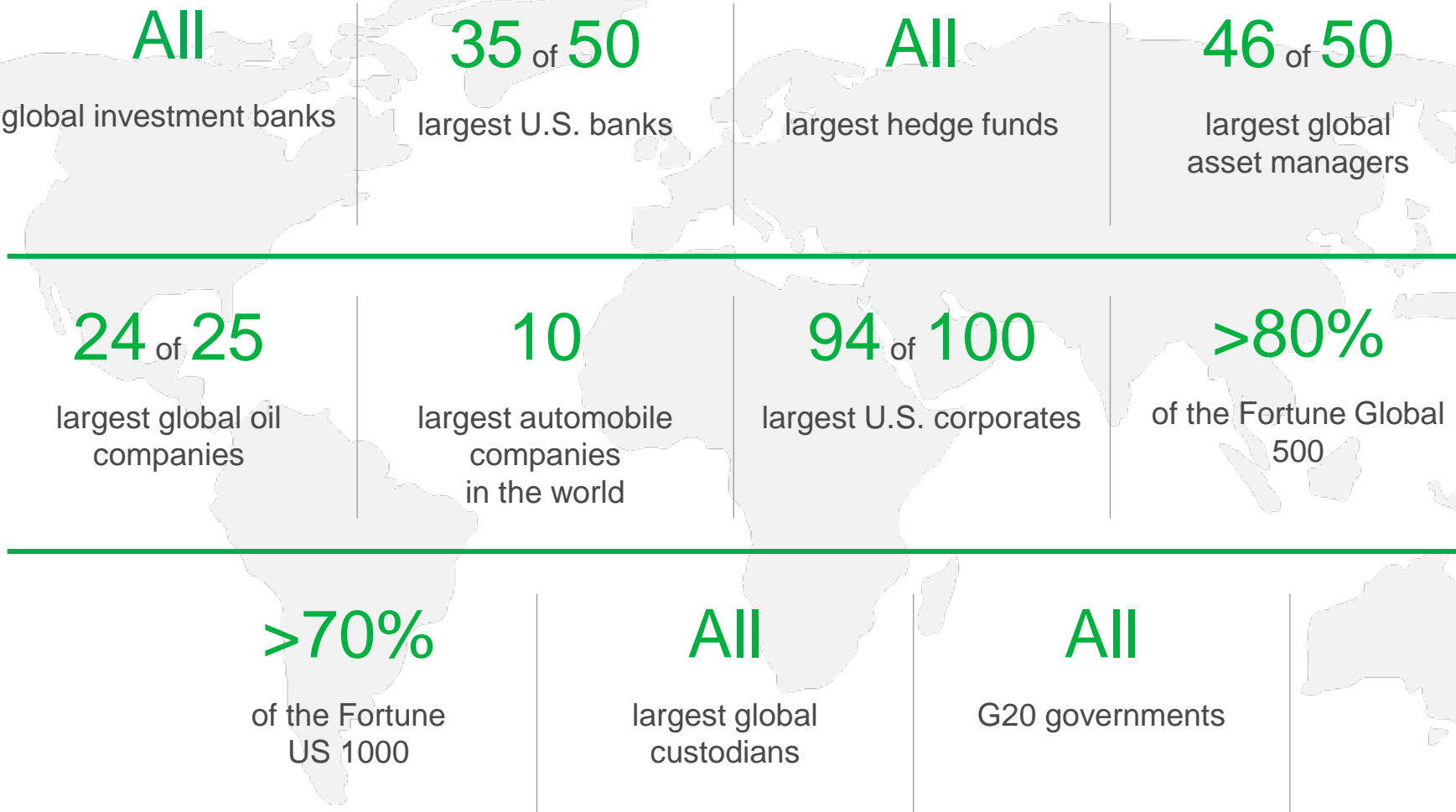


**Technology, Media  
& Telecom**



**Maritime & Trade**

# Who we serve



# Our Energy & Natural Resources Group

## Energy-Wide Perspectives



**Upstream  
Oil & Gas**



**Oil Markets,  
Downstream, and  
Chemicals**



**Power, Gas, Coal  
& Renewables**







## We're hiring!

Multiple position in the Power, Gas, Coal and Renewables group in Asia

### Beijing

Associate Director, Power & Renewables (80604)

Senior Research Analyst, Gas & Power (80983)

Account Manager / Sales, Gas & Power (82504)

### Delhi / Gurgaon

Associate Director, Gas & Power (82803)

Senior Research Analyst, Gas & Power (TBD)

### Singapore

Associate Director, Gas & Power (80605)

Senior Research Analyst, Gas & Power (80984)

To locate the job descriptions and apply, please visit:  
<https://www.ihs.com/about/careers.html>

*Please reference the Req ID numbers after each position.*

## IHS Markit Customer Care

CustomerCare@ihsmarkit.com

Americas: +1 800 IHS CARE (+1 800 447 2273)

Europe, Middle East, and Africa: +44 (0) 1344 328 300

Asia and the Pacific Rim: +604 291 3600

---

### Disclaimer

The information contained in this presentation is confidential. Any unauthorized use, disclosure, reproduction, or dissemination, in full or in part, in any media or by any means, without the prior written permission of IHS Markit Ltd. or any of its affiliates ("IHS Markit") is strictly prohibited. IHS Markit owns all IHS Markit logos and trade names contained in this presentation that are subject to license. Opinions, statements, estimates, and projections in this presentation (including other media) are solely those of the individual author(s) at the time of writing and do not necessarily reflect the opinions of IHS Markit. Neither IHS Markit nor the author(s) has any obligation to update this presentation in the event that any content, opinion, statement, estimate, or projection (collectively, "information") changes or subsequently becomes inaccurate. IHS Markit makes no warranty, expressed or implied, as to the accuracy, completeness, or timeliness of any information in this presentation, and shall not in any way be liable to any recipient for any inaccuracies or omissions. Without limiting the foregoing, IHS Markit shall have no liability whatsoever to any recipient, whether in contract, in tort (including negligence), under warranty, under statute or otherwise, in respect of any loss or damage suffered by any recipient as a result of or in connection with any information provided, or any course of action determined, by it or any third party, whether or not based on any information provided. The inclusion of a link to an external website by IHS Markit should not be understood to be an endorsement of that website or the site's owners (or their products/services). IHS Markit is not responsible for either the content or output of external websites. Copyright © 2017, IHS Markit™. All rights reserved and all intellectual property rights are retained by IHS Markit.

