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CHINA'S COAL MARKET: Did peak demand come and go?

EIA Energy Conference: World Coal Markets

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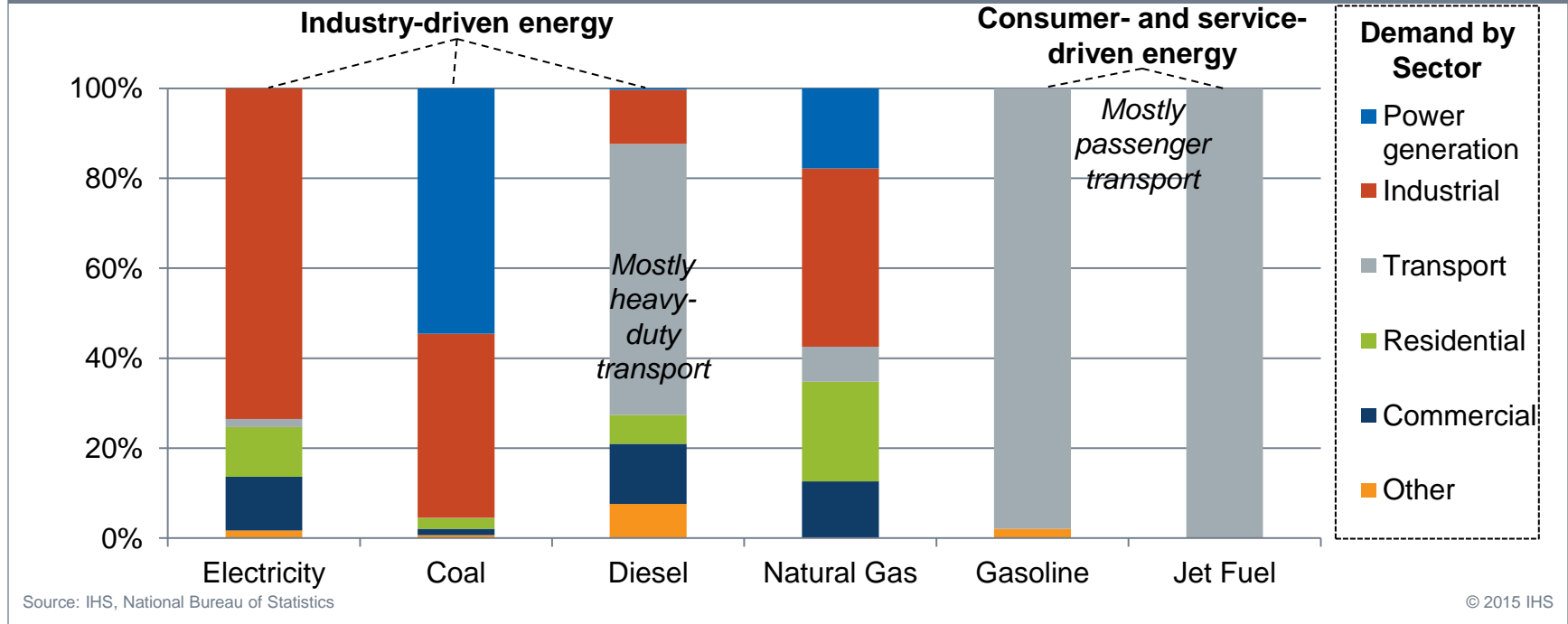
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Key implications

- China's **industrial economy is experiencing a “hard landing”** as the economic transition accelerates, impacting major industrial fuels, with coal feeling the most pain.
- This long-term restructuring will make the Chinese economy less energy intensive, **lowering the overall energy demand trajectory**.
- Meanwhile, **non-coal fuels and technologies are growing rapidly**, supported by environmental and climate policies.
- However, coal remains the cheapest energy source, and the **less developed regions in China will continue to rely on coal**, effecting a demand migration westward towards inland regions.
- IHS expects coal consumption growth to gradually recover—mainly supported by power generation and coal-chemical use in western provinces—reaching a **national peak by the mid-2020s**.
- This peak in coal demand is a precursor to **a peak in carbon emissions**, before 2030.

A “Hard Landing” for China’s *industrial* economy, and thus industry-dominated energy sectors

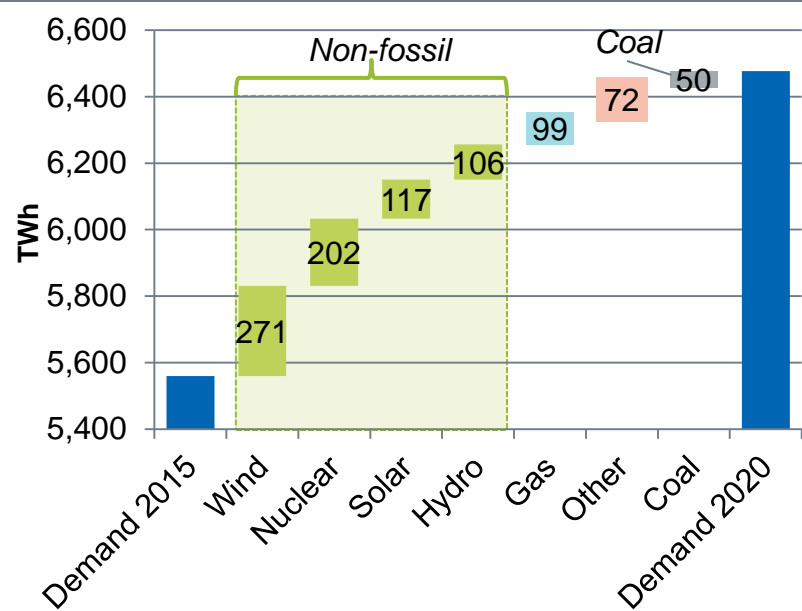
Key energy commodities and their driving sectors in China (2013)



Only slight recovery expected ahead for coal

Medium-term outlook for Chinese coal demand

China's incremental power generation by fuel 2015-20 (IHS Rivalry scenario 2016)



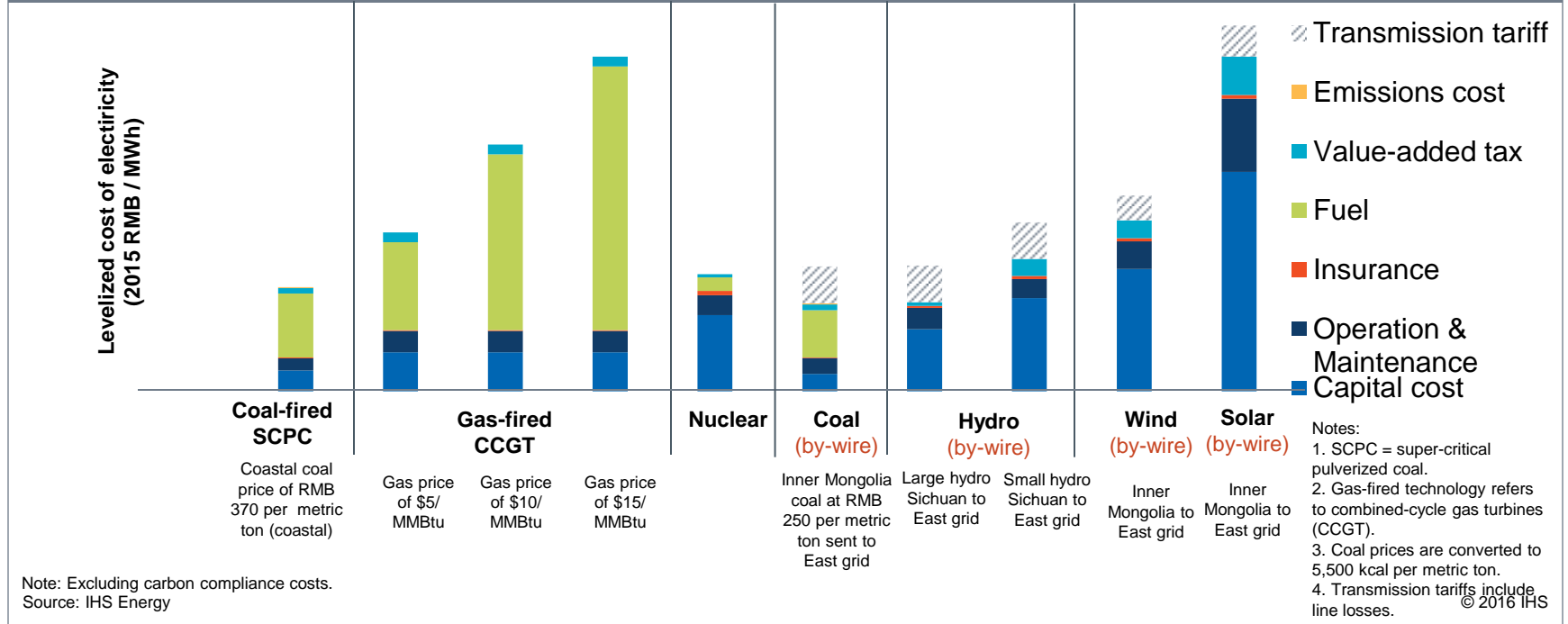
Source: IHS

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- Demand to “bottom out” by 2018, with a slight recovery by 2020.
- Coal-fired generation will continue to be squeezed by non-fossil generation resources.
- Renewable, nuclear, and gas plant additions will remain robust, and government support will continue to be strong – for both investment and dispatch.
- Wind and solar will account for over 40% of incremental generation; adding in nuclear and hydro, non-fossil generation resources will meet 76% of new power demand in the next five years.

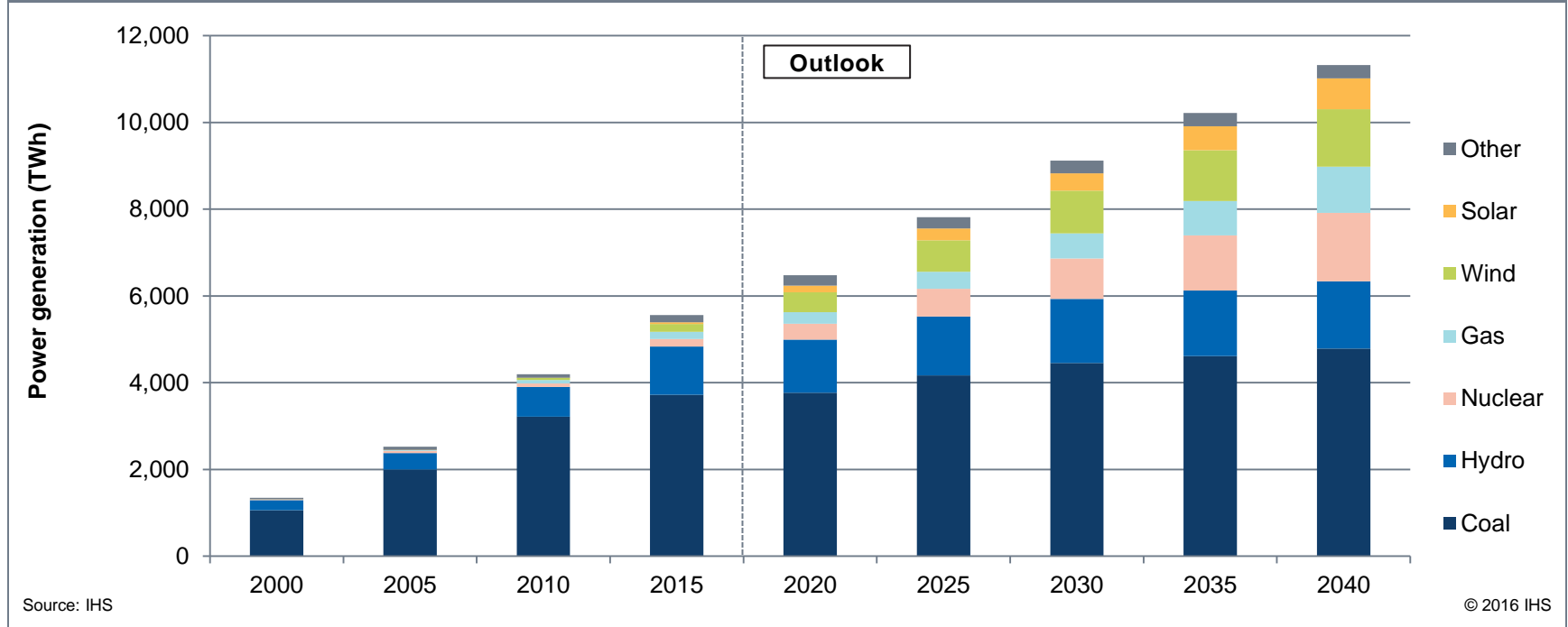
Coal remains the cheapest energy source, and will continue to grow in inland provinces

Estimated levelized cost of electricity



Coal plant additions slows substantially, with coal's share in total generation declining to 42% by 2040

China power generation by fuel/technology (IHS Rivalry scenario 2016)



The Great Migration of power generation in China

New capacity increasingly sited west and transmitted eastward

Inter-regional power transmission flows



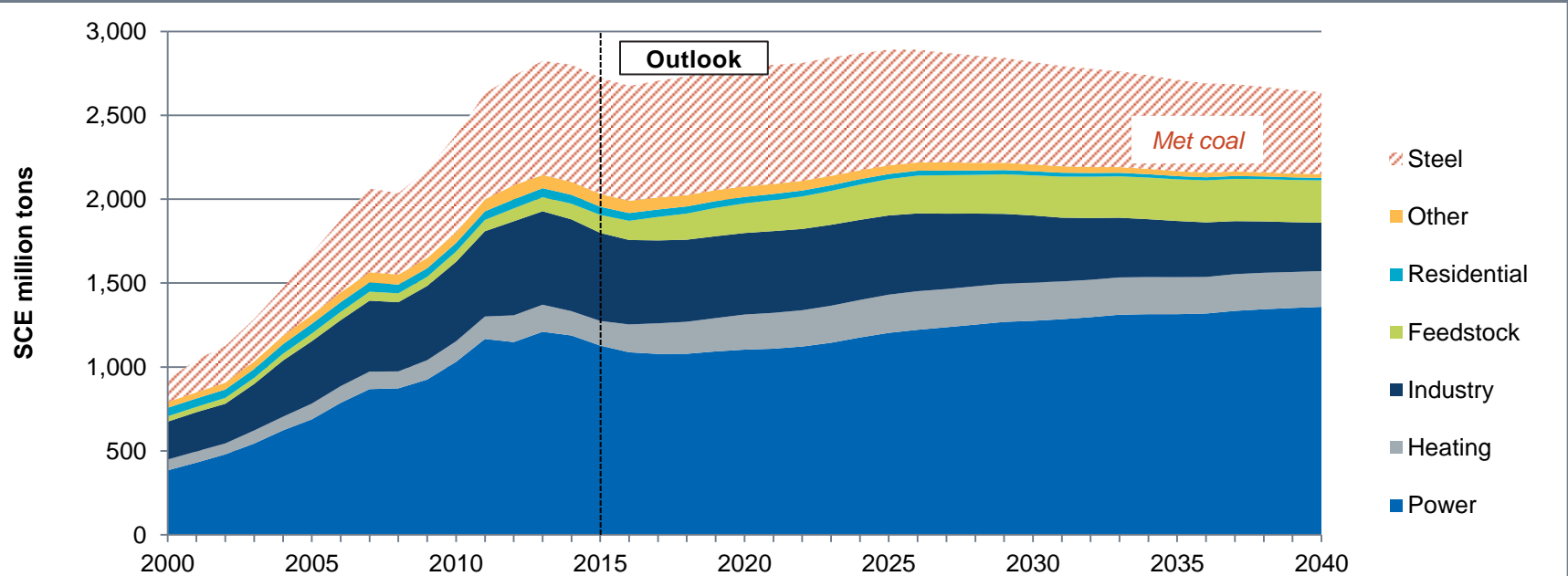
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Total coal demand will peak in the mid-2020s

All of the growth will come from western provinces

National coal demand outlook (IHS Rivalry scenario 2016)

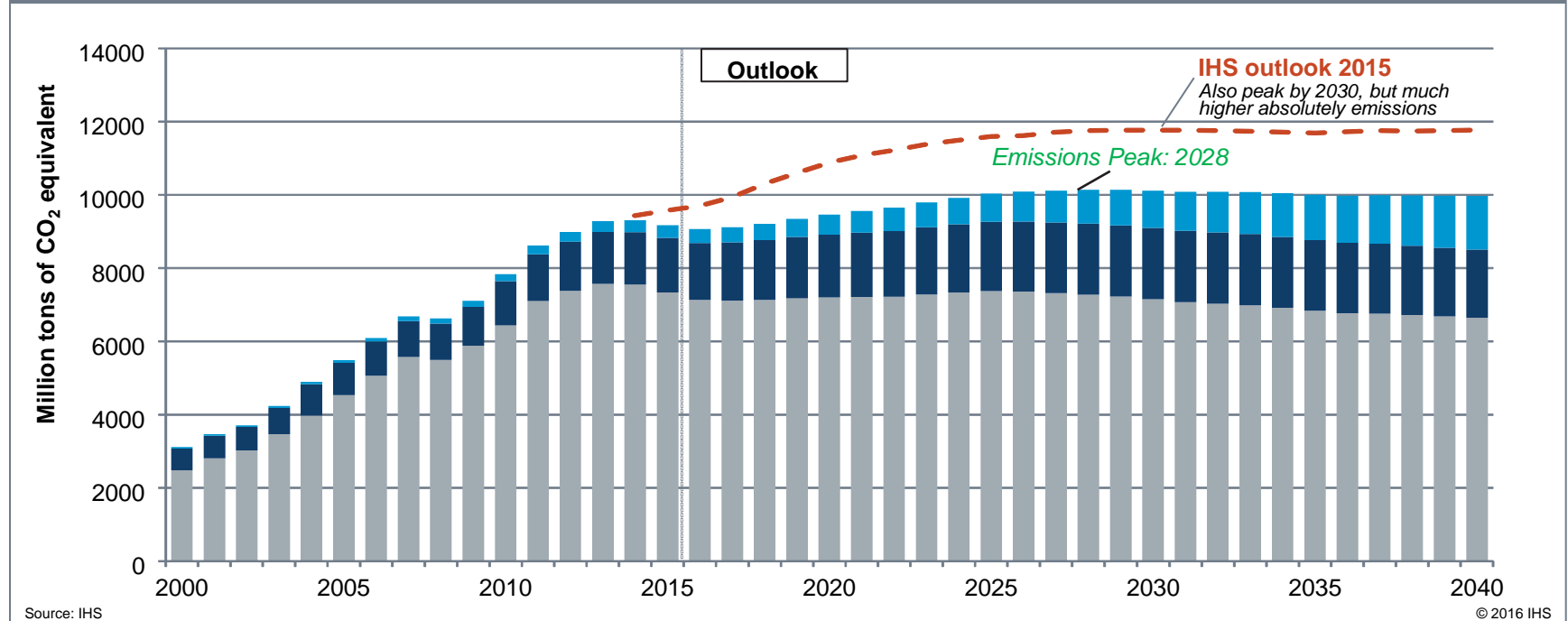


Note: SCE = Standard coal equivalent, calorific value at 7,000 kcal/kg
Source: IHS

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“Peak carbon” achieved by 2030, with total emissions growing only by 9% between now and 2028

China's Energy-related CO₂ emissions (IHS Rivalry scenario 2016)



Source: IHS

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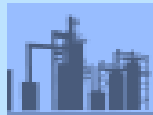
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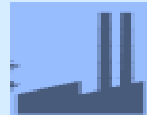
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