



EU ETS Carbon market outlook

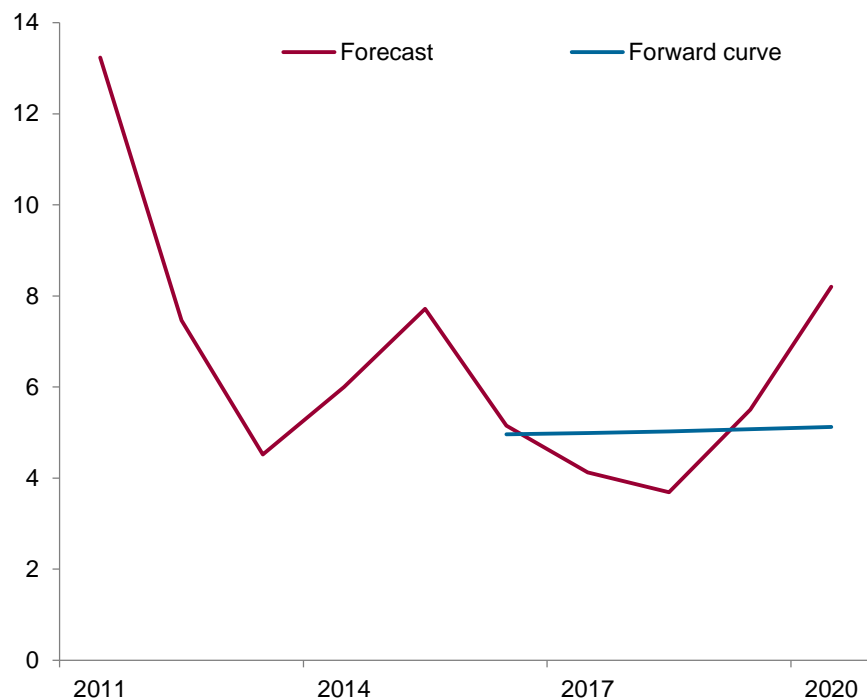
Trevor Sikorski, October 2016

EUA outlook: What challenges?

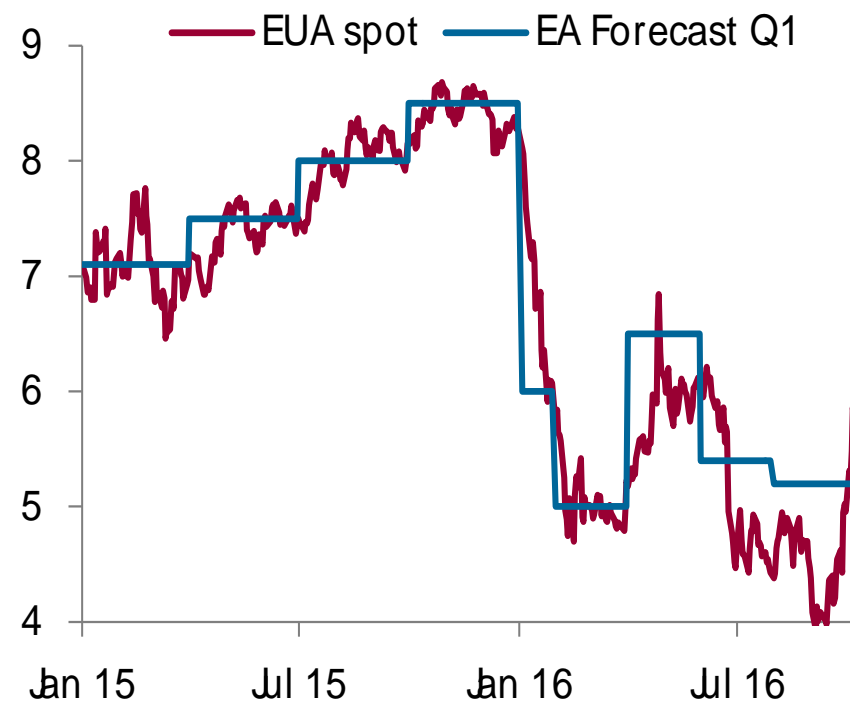


EUA prices: A rocky road

Forecast prices
€/t



Forecast against out-turn
€/t



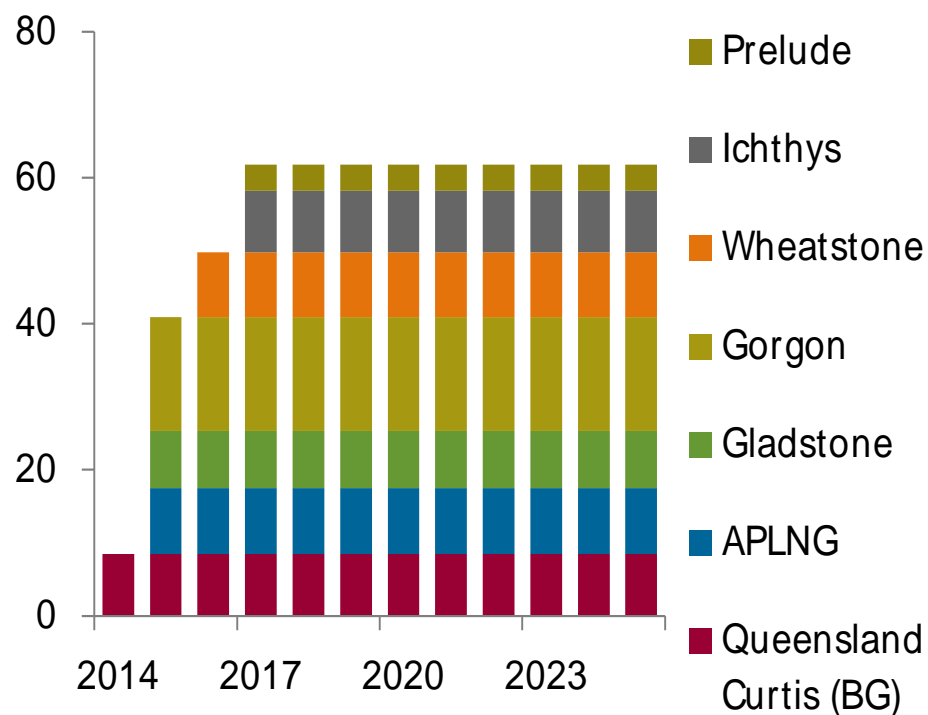
Brexit makes all price expectations lower...though forecasts assume BAU

Forecasts and out-turn: lots of volatility

The supply side has two waves of LNG in the coming five years

Wave 1: Australia – 2014 to 2018

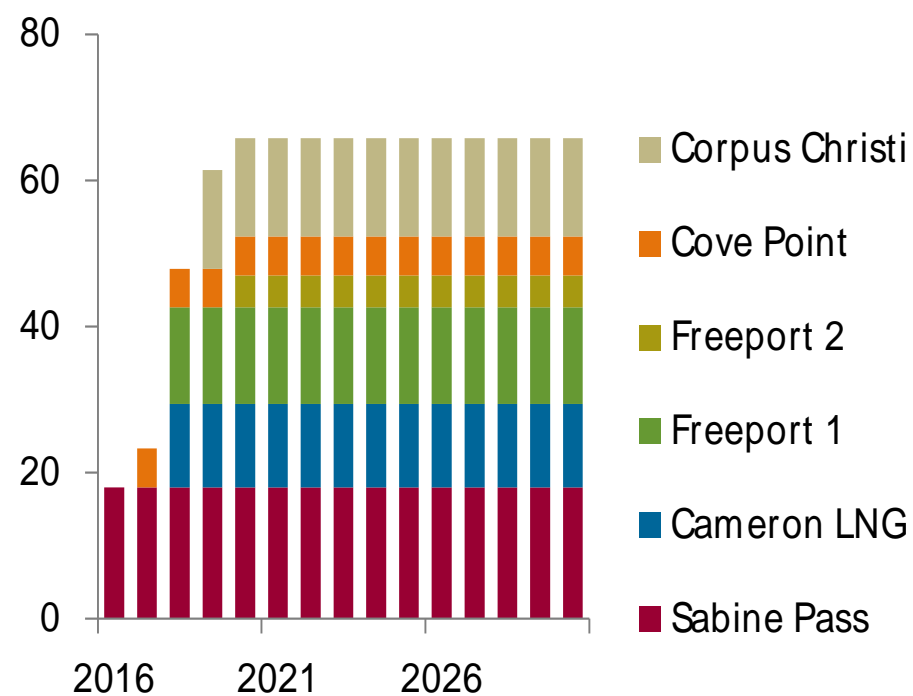
Mt



100+ Mtpa of Australian projects;
66 Mtpa new or under construction

Wave 2: US – 2016 to 2020

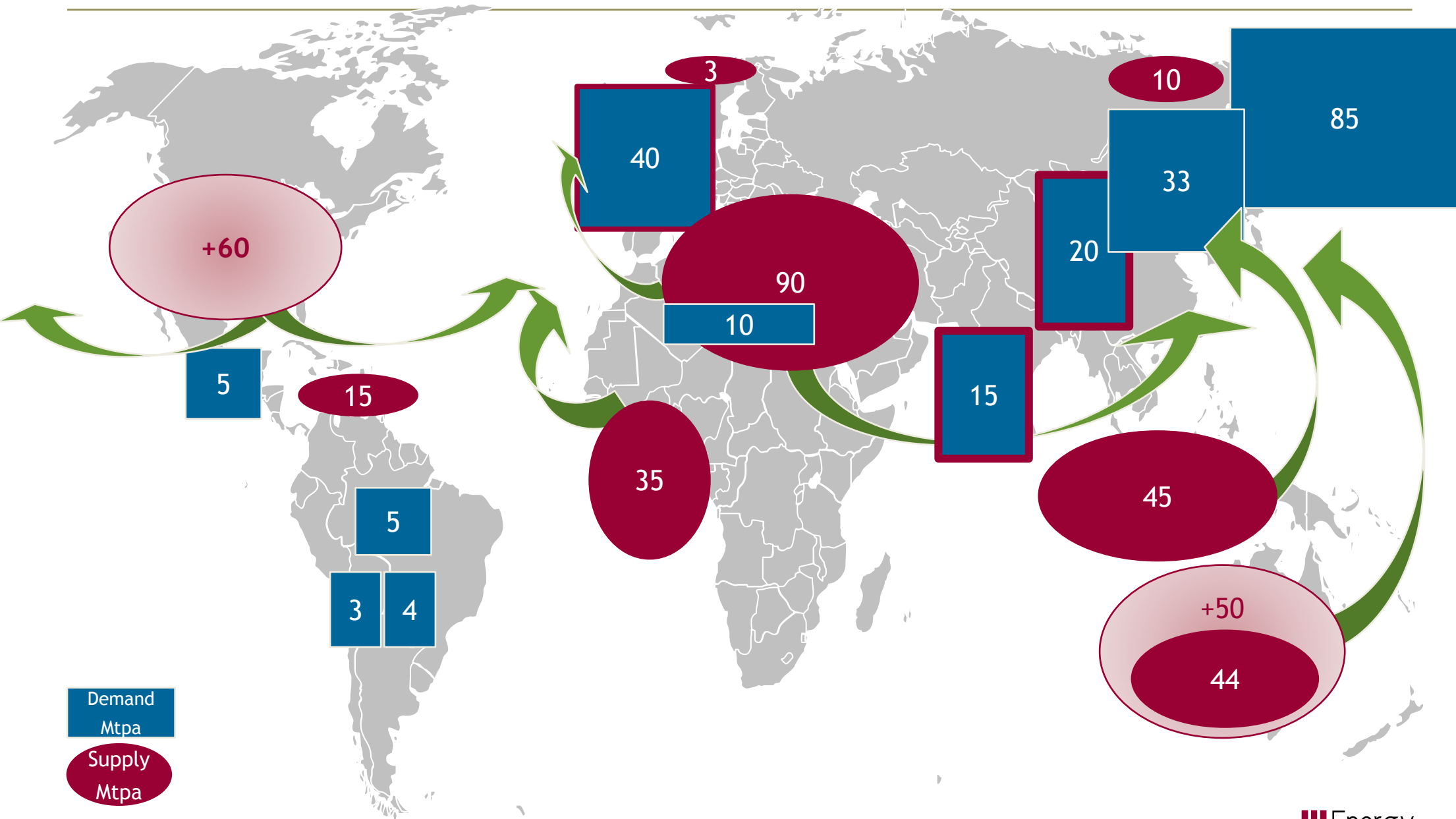
Mt



360+ Mtpa of US projects;
61 Mtpa new or under construction

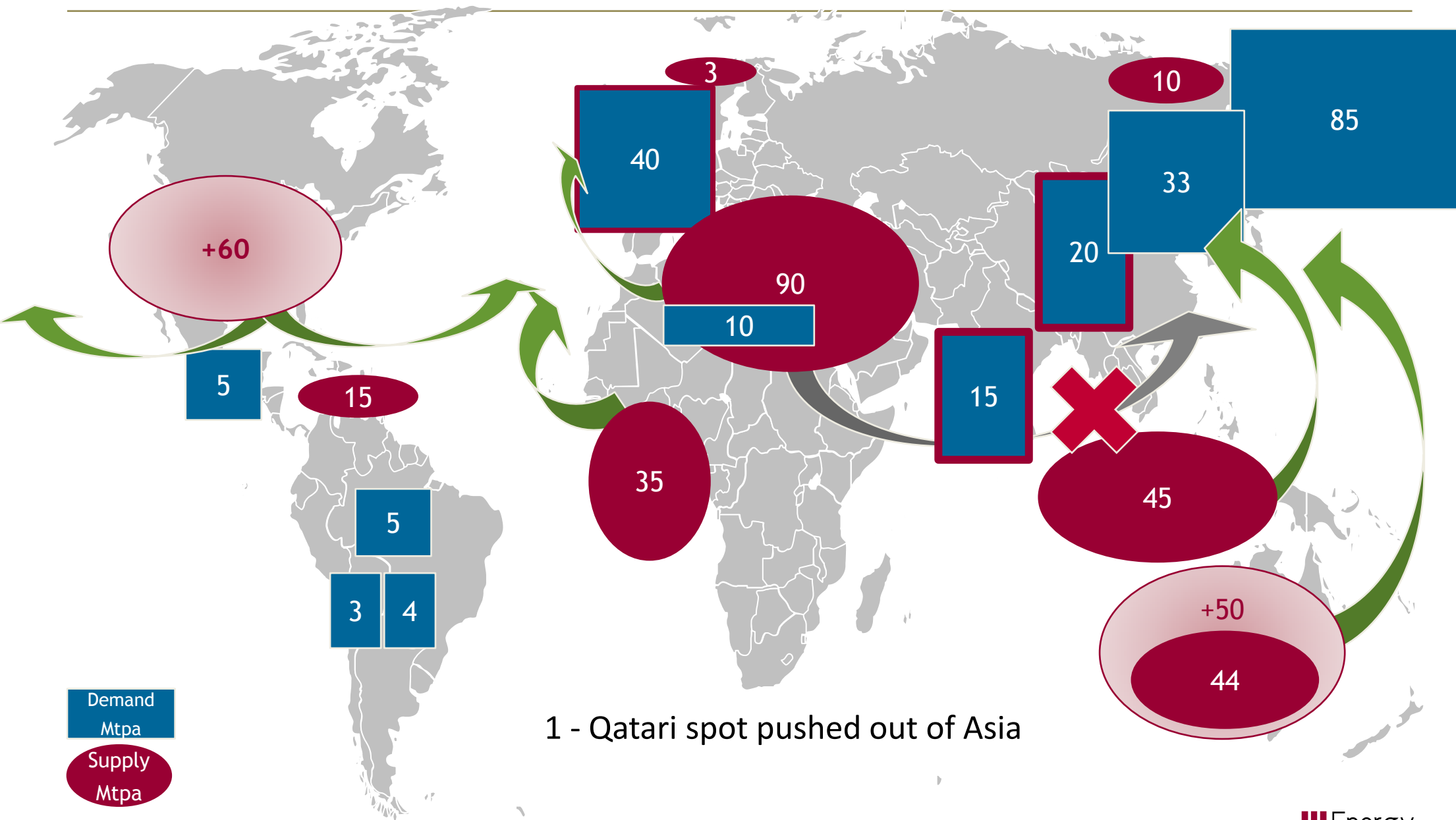
Source: Company websites, US DOE, Energy Aspects

How does the market balance?



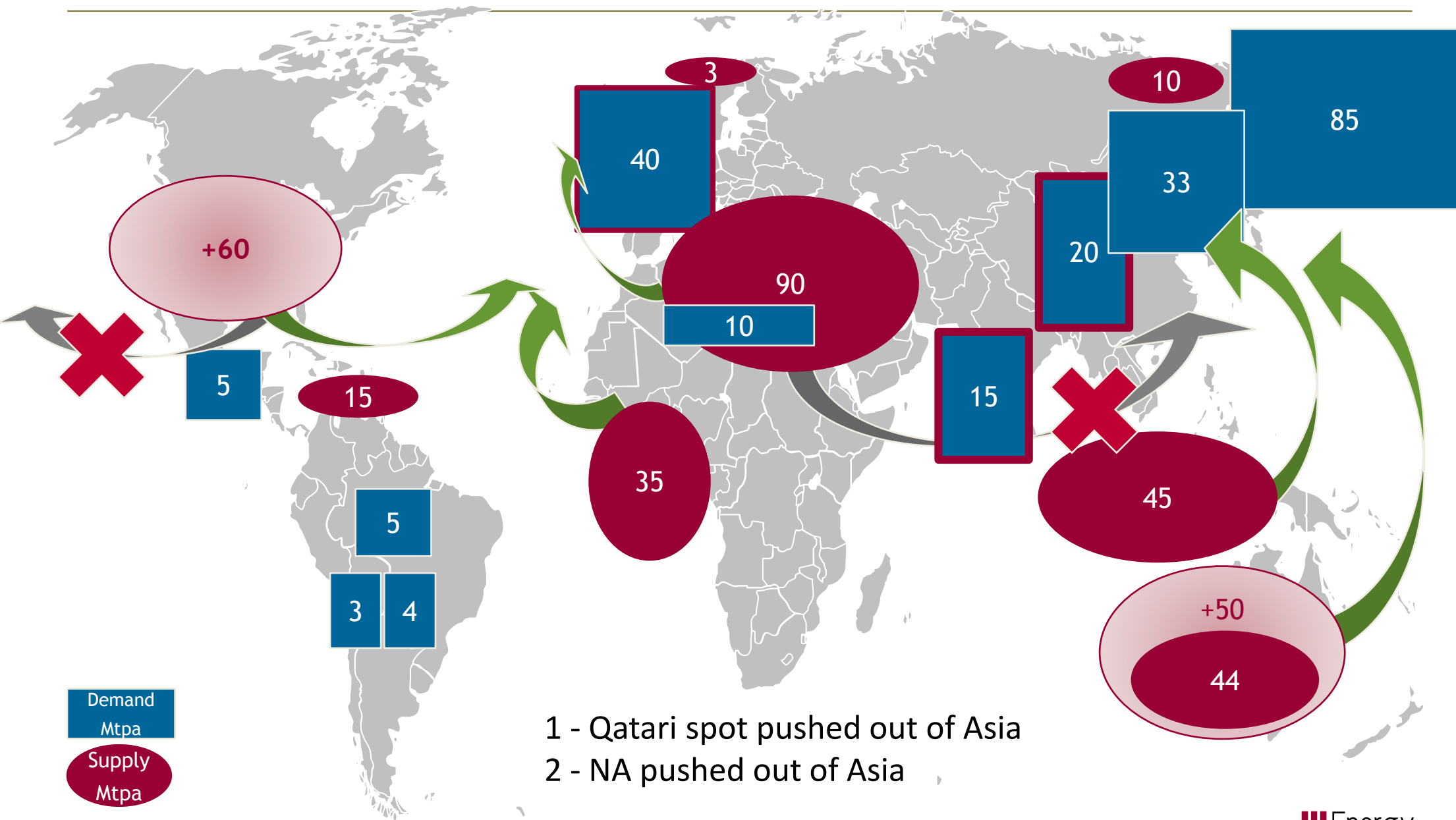
Source: Energy Aspects

How does the market balance?



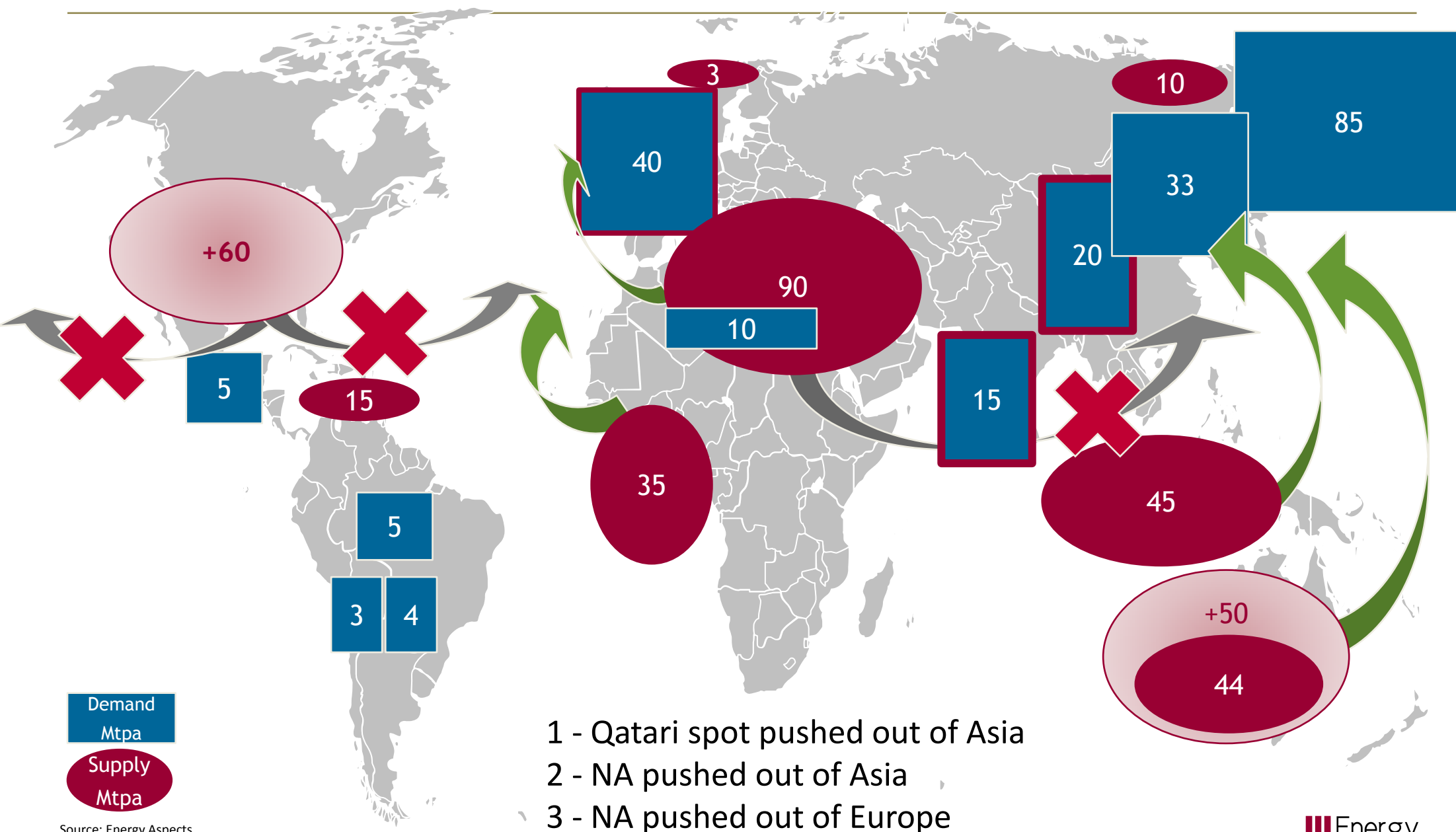
Source: Energy Aspects

How does the market balance?



Source: Energy Aspects

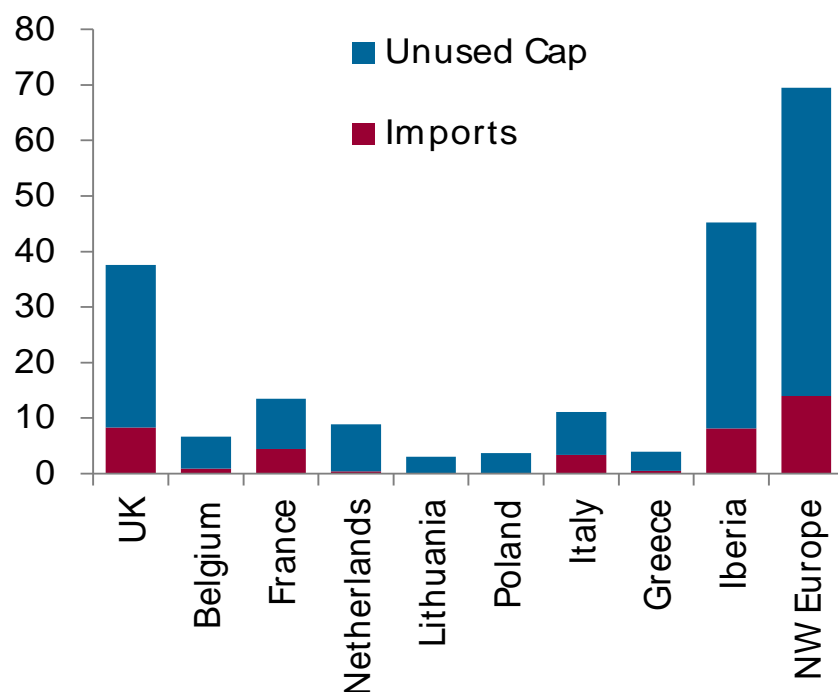
How does the market balance?



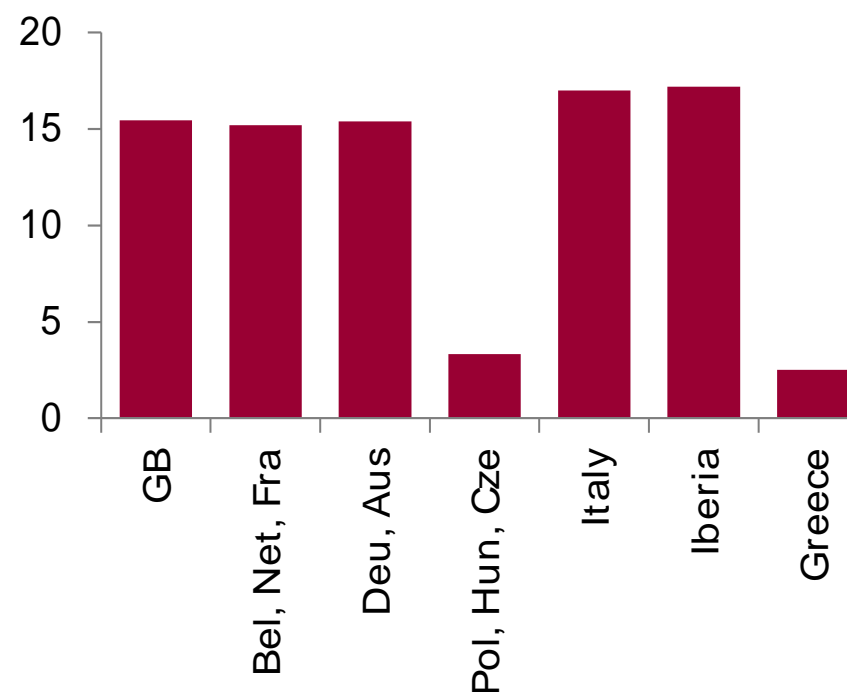
Source: Energy Aspects

Europe - the residual LNG taker

EU: gas imports versus terminal capacity
Mt



EU: fuel switching capacity
bcm

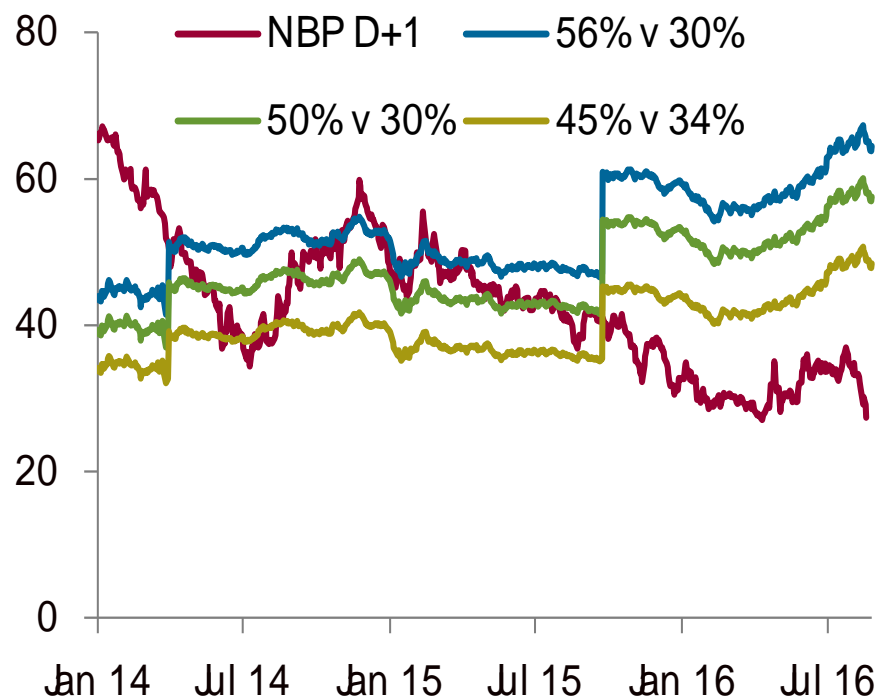


Plenty of capacity, with around 160 bcm/y of unused regas—maybe 120 bcm is realistic factoring in maintenance

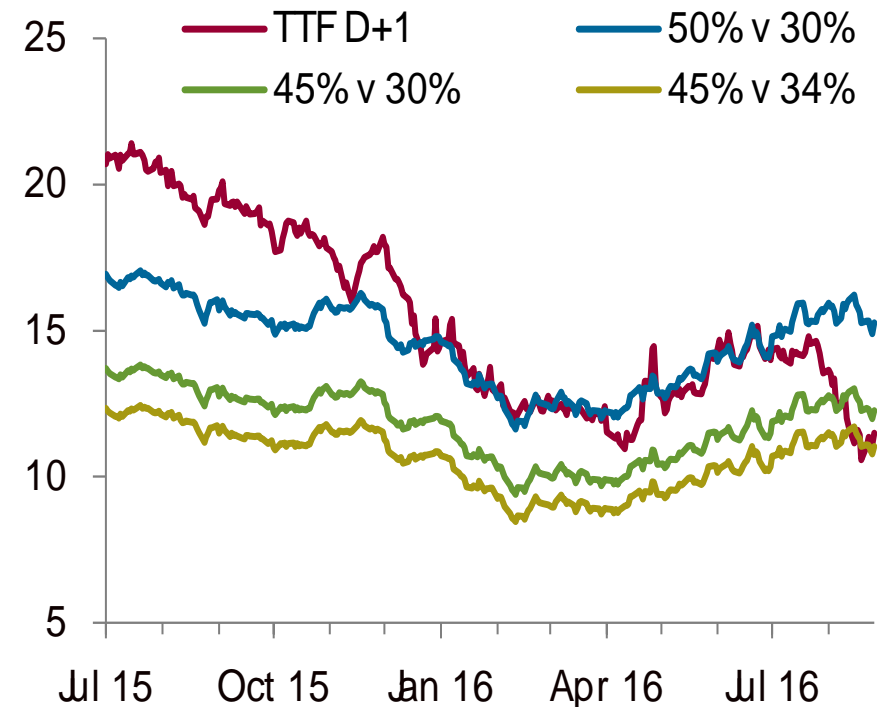
Plenty of latent power sector demand to stimulate...about 90 bcm in total. Actual realisable around 50-70 bcm

Any evidence coal to gas is happening now?

Gas prices- NBP is already fully in the money
p/therm



Gas prices- TTF supported at first switching level
€/MWh

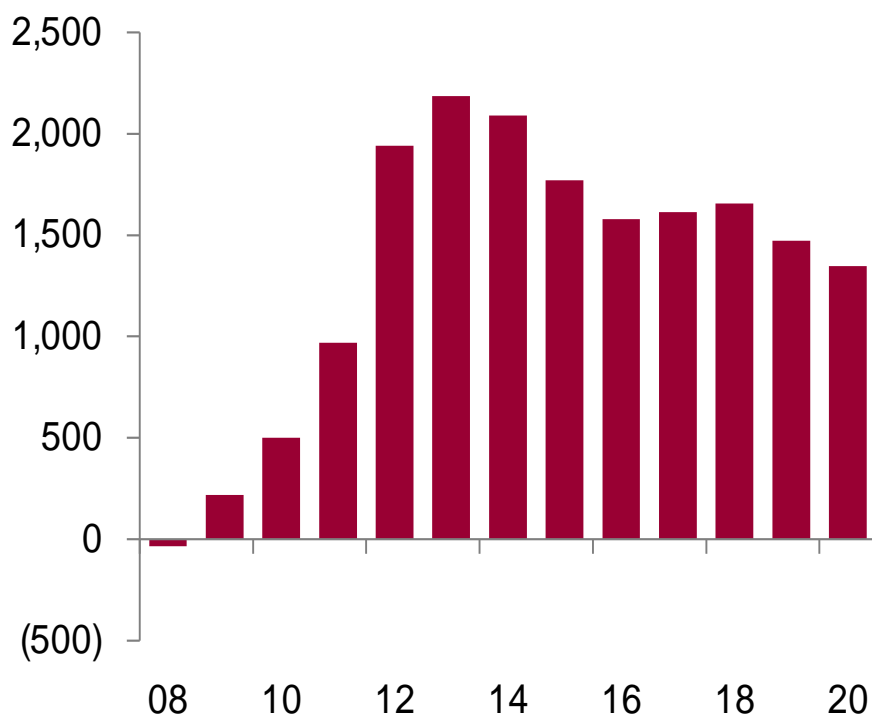


Impact of carbon "price floor" tax

While this episode might not last into Q4, it is a warning of what is to come.

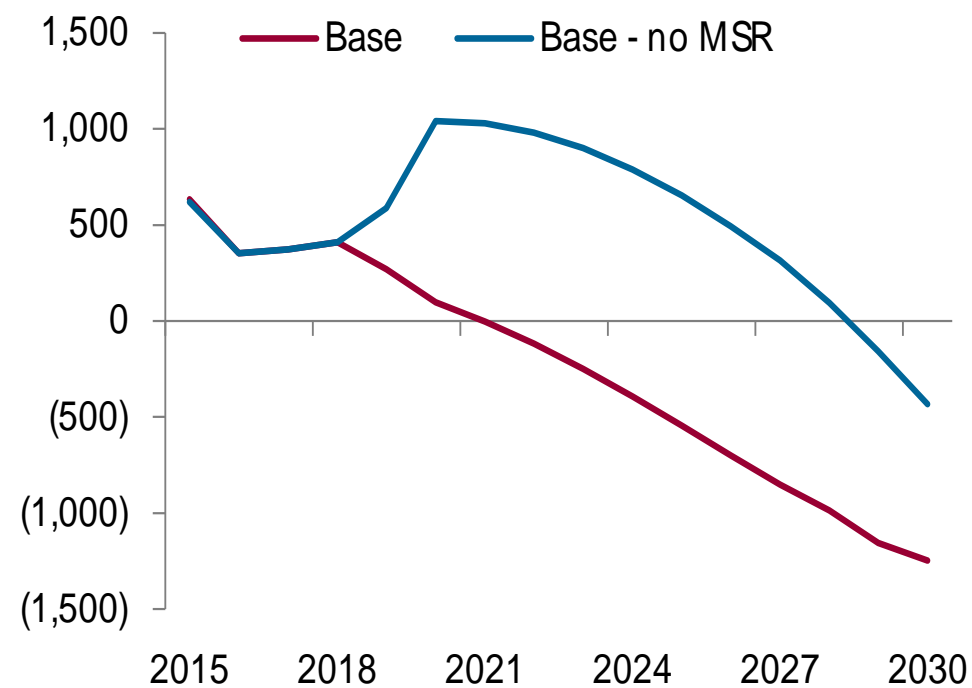
Watch the inventory...

EUA Inventory per year
Mt



Aggregate length starts to fall....

EUA Inventory – Desired Carbon Inventory
Mt



Market starts to dip against desired carbon inventory...

So what questions does this raise?

- *Do even lower EUA prices matter?*
- *Does it matter if emissions reductions are delivered from somewhere else?*
- *Will the market be better if there is rapid upwards price volatility?*

- *The goal of the carbon market is a zero price*



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