

Current Carbon Market Fundamentals and Future Prospects

25 February 2010



Guy Turner, Director of Carbon Markets

Bloomberg
NEW ENERGY FINANCE

© Bloomberg New Energy Finance, 2004-2010

DISCLAIMER

THE INFORMATION IN THIS DOCUMENT IS DERIVED FROM PUBLIC SOURCES. INFORMATION USED IS BELIEVED TO BE RELIABLE BUT HAS NOT BEEN INDEPENDENTLY VERIFIED BY BLOOMBERG NEW ENERGY FINANCE. BLOOMBERG NEW ENERGY FINANCE MAKES NO GUARANTEE OF ITS ACCURACY AND COMPLETENESS AND IS NOT RESPONSIBLE FOR ERRORS OF TRANSMISSION OF FACTUAL OR ANALYTICAL DATA, NOR IS IT LIABLE FOR DAMAGES ARISING OUT OF ANY PERSON'S RELIANCE UPON THIS INFORMATION. ANY OPINIONS IN THIS DOCUMENT CONSTITUTE THE PRESENT JUDGEMENT OF BLOOMBERG NEW ENERGY FINANCE, WHICH IS SUBJECT TO CHANGE WITHOUT NOTICE.

THIS DOCUMENT IS NEITHER AN OFFER TO SELL, PURCHASE OR SUBSCRIBE FOR ANY INVESTMENT NOR A SOLICITATION OF SUCH AN OFFER. THIS DOCUMENT IS NOT INTENDED FOR DISTRIBUTION.

Contents

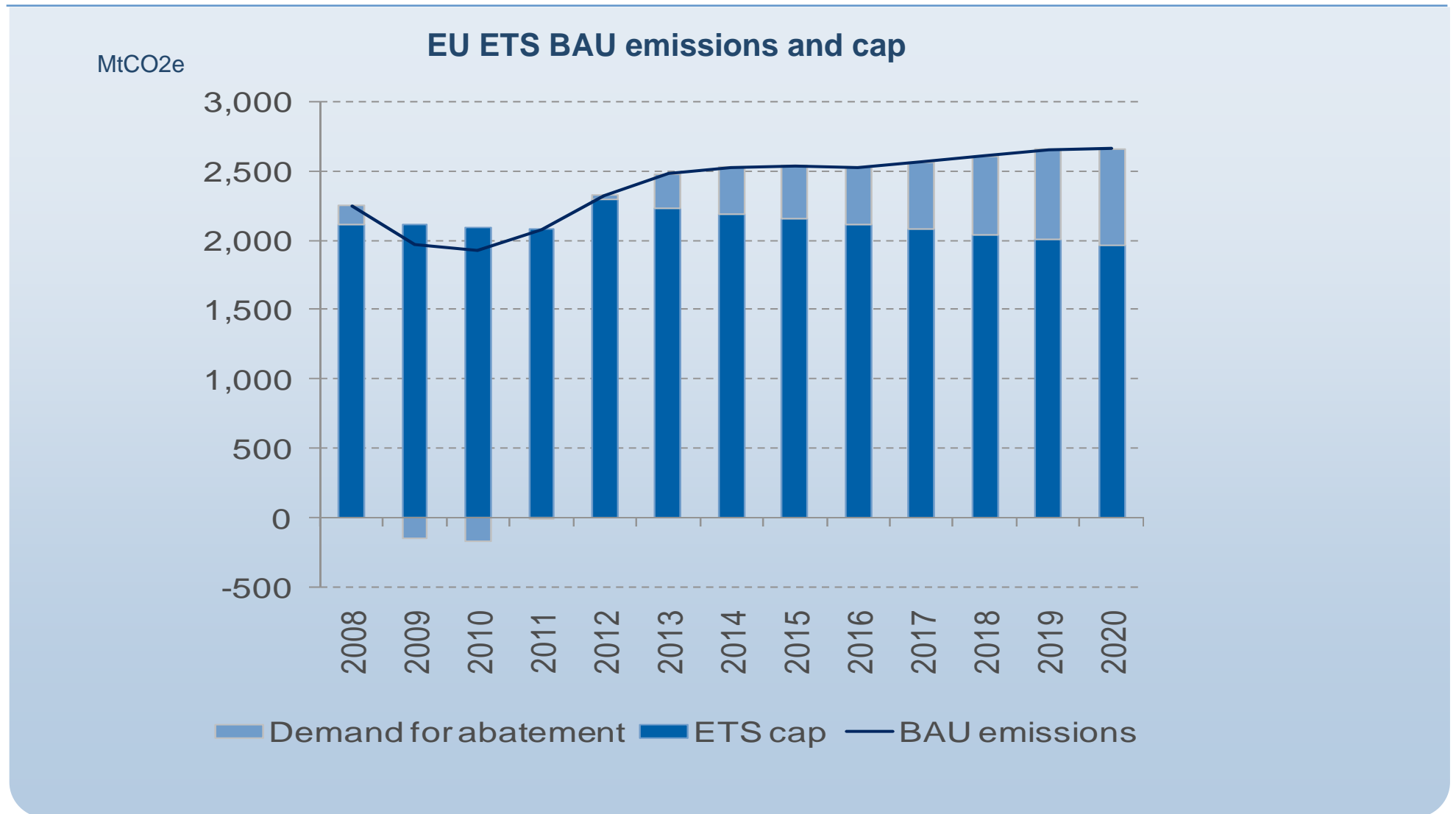
Carbon market dynamics to 2012

Supply and demand fundamentals post-2012

CER price scenarios

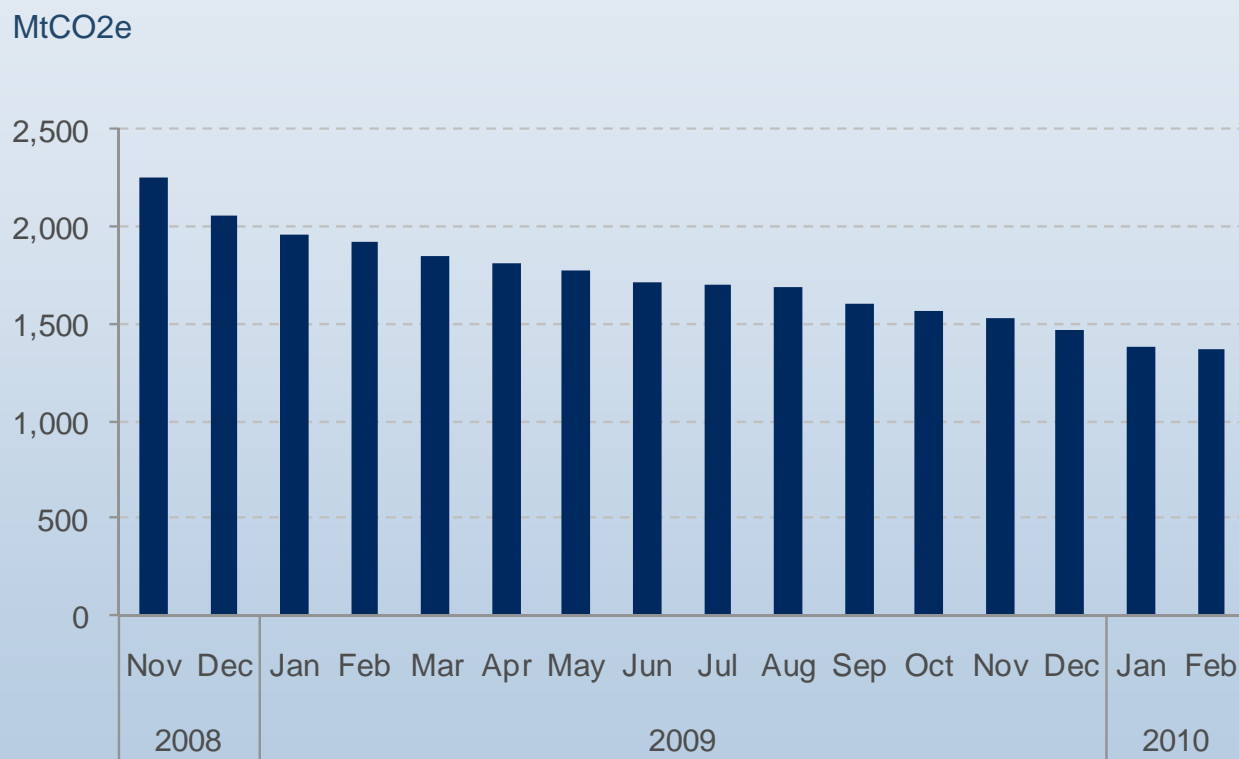
Take aways

The recession has significantly reduced demand for emission reductions in the short term...



...but we have also seen a contraction in expected supply of CERs

Evolution of BNEF 2008 – 2012 CER supply forecast

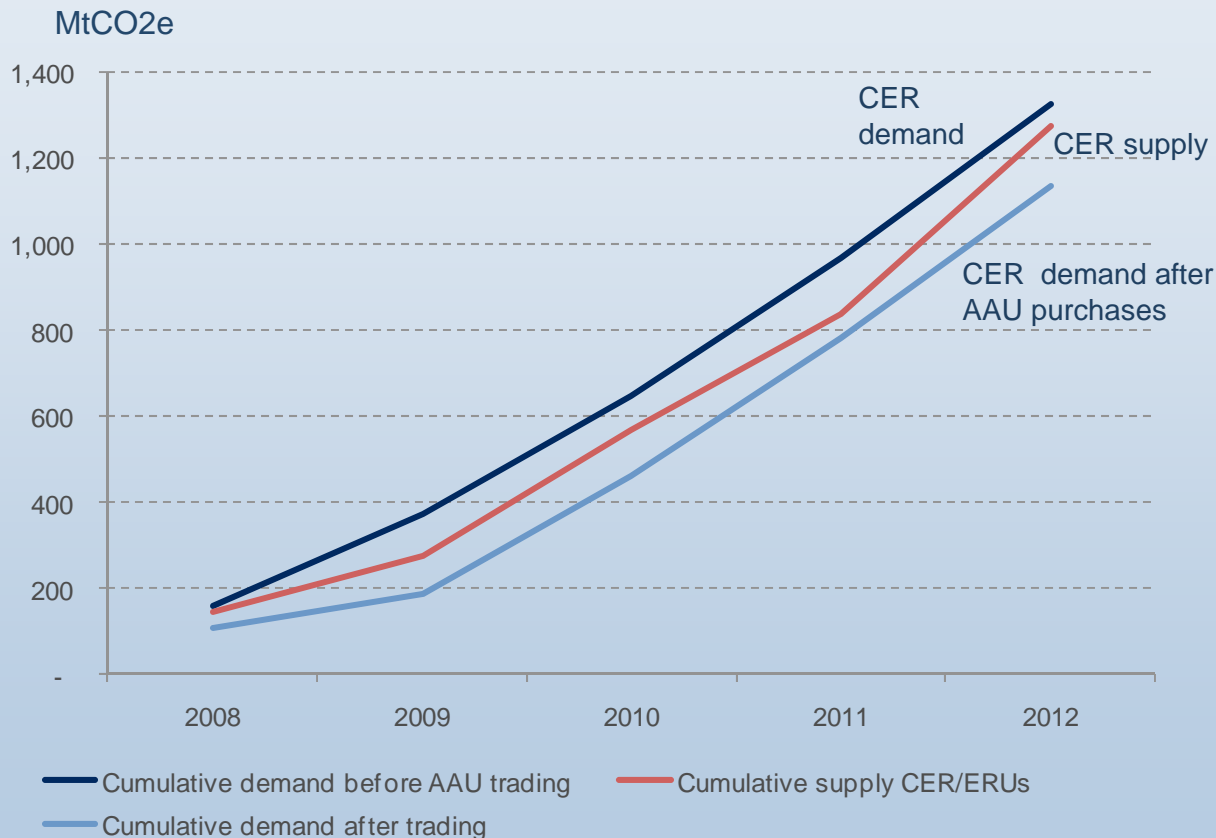


Other factors limiting supply

- EB decisions
- Low availability of capital for new projects (recession)
- Low project profitability as a result of low CER prices (recession)
- Post-2012 uncertainty

As a result the Kyoto period 2008-2012 is broadly in balance

Cumulative demand and supply of CERs



Supply of CERs / ERUs to 2012
= **1.3GtCO₂e**

Demand for CERs before AAU trades
= **1.3 GtCO₂e**

Demand for CERs after AAU trading
= **1.1GtCO₂e**

AAU purchasing has become more politically acceptable since the recession

Governments of Belgium, Spain, Ireland, Japan, Austria, Netherlands, Norway and Portugal have all engaged in the market

Contents

Carbon market dynamics to 2012

Supply and demand fundamentals post-2012

CER price scenarios

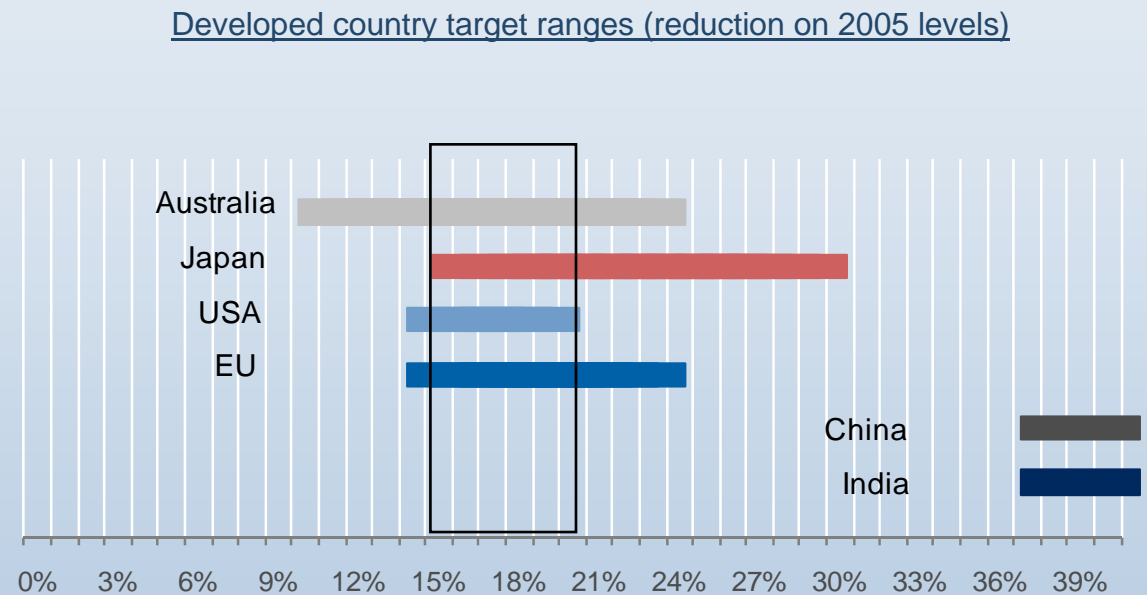
Take aways

Governments made pledges at Copenhagen, but only the EU's climate and energy package is a real deal

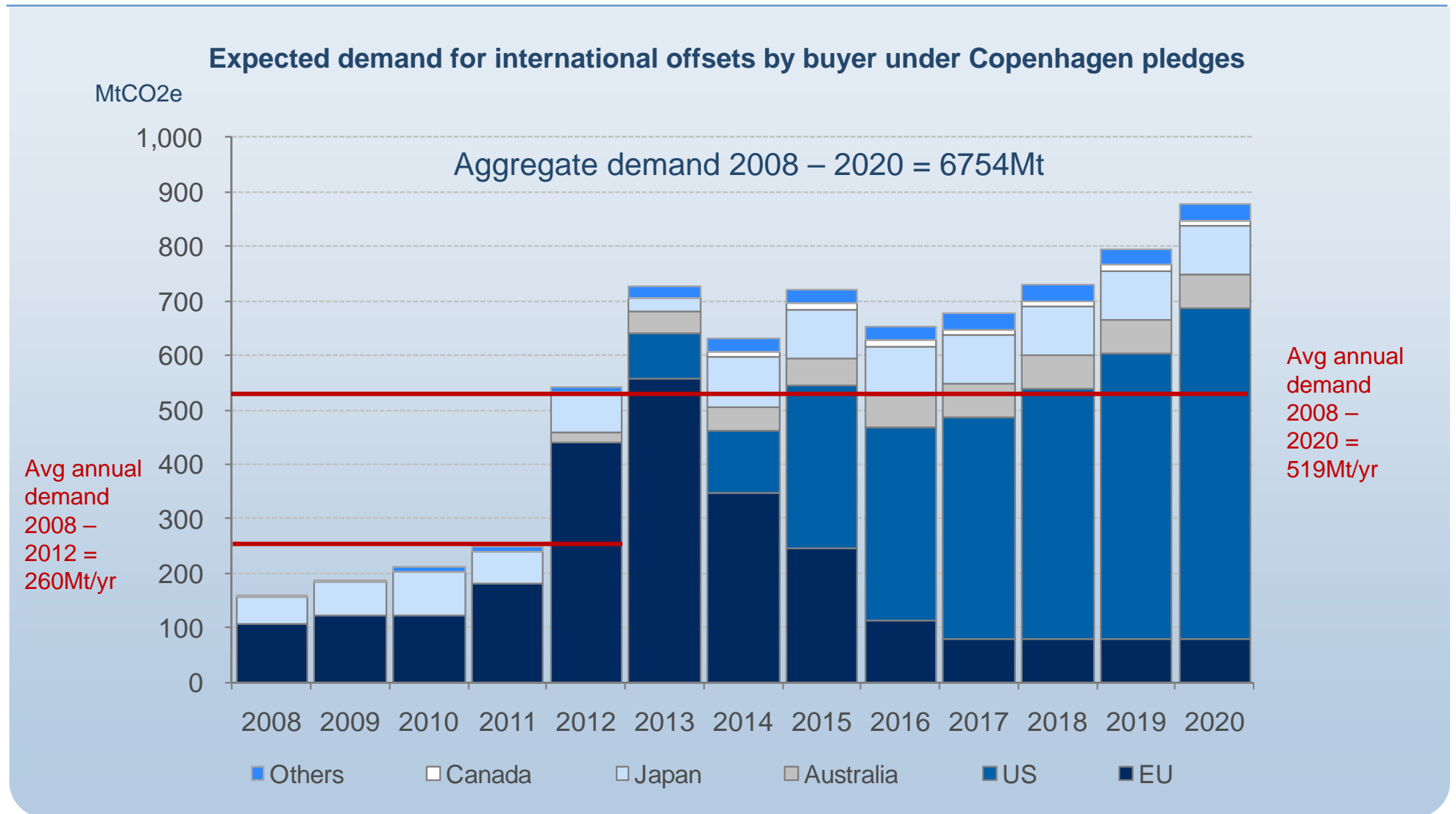
Submitted developed country targets

Country	Targets
Australia	5% on 2000 levels unconditionally 25% if certain conditions are met
Canada	17% on 2005, to be aligned with US legislation
EU	20% on 1990 unconditionally 30% if certain conditions are met
Japan	25% on 1990 (<i>this is too high</i>)
US	17% on 2005, consistent with anticipated US energy and climate legislation, final target will be fixed once the legislation is enacted

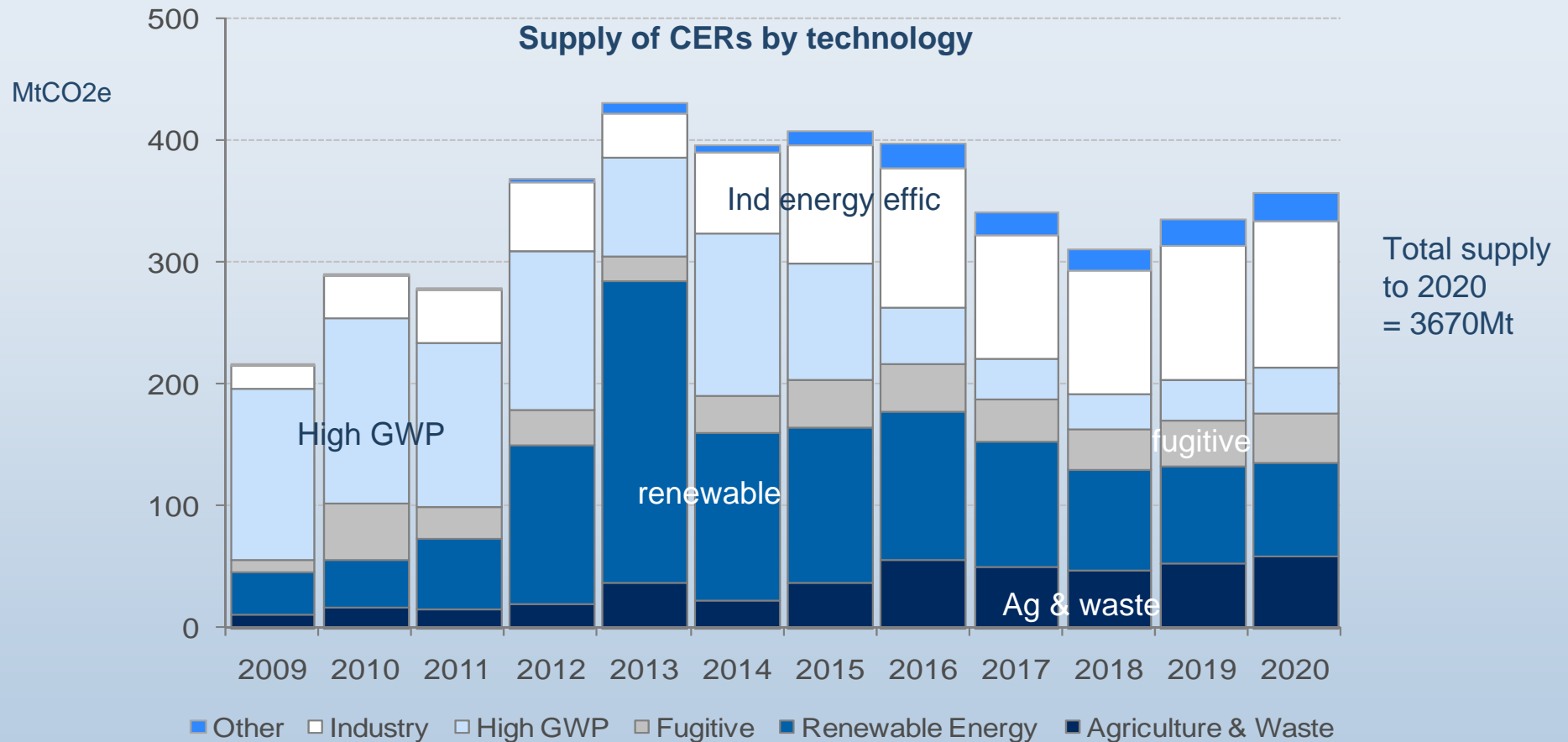
Aggregate developed country reduction targets on 1990 levels



With current pledges, post 2012 CER demand could be twice that in the Kyoto period with most demand coming from EU and US

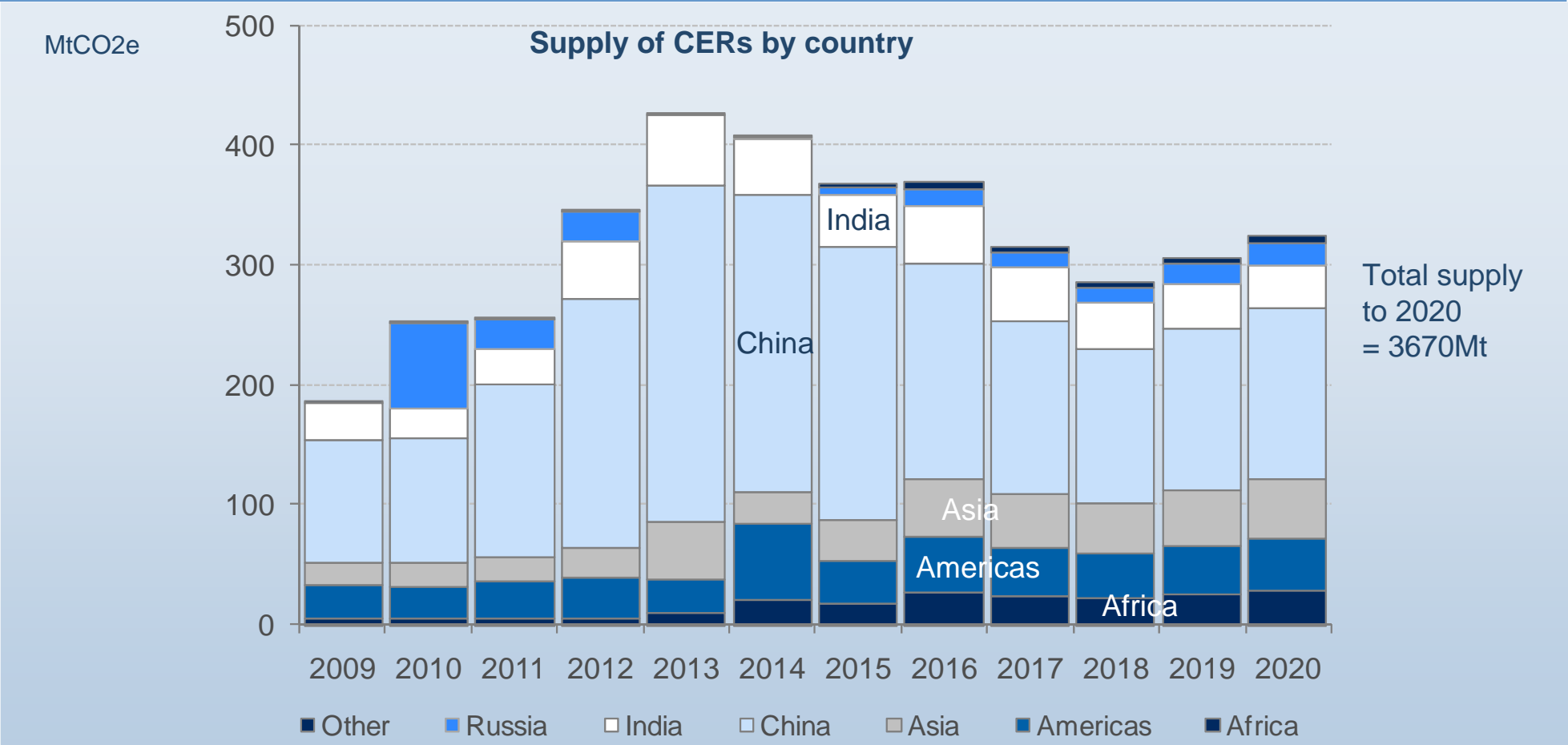


On the supply side, the CDM/JI world is changing



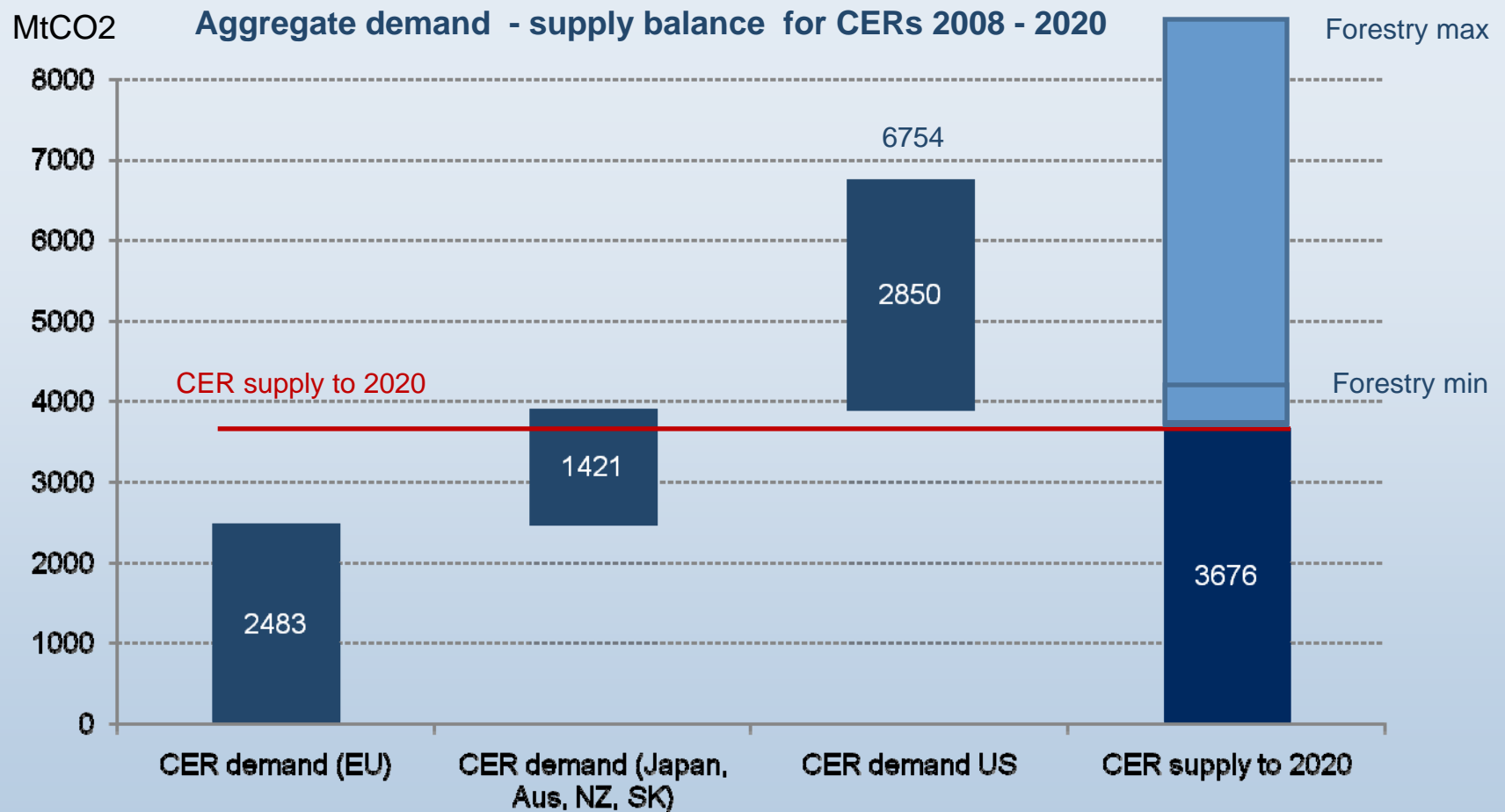
Assumptions: ignores potential supply from sectoral mechanisms, but supply from these sectors is reduced – eg fugitive, industrial energy efficiency. No crediting HFCs/N₂O after end of 7 years, 70% recrediting RE projects, 50% re-crediting other projects. Extrapolation of current trends in CER yields and registration risks. No implementation of sectoral CDM or changes to forestry mechanisms.

On the supply side, the CDM/JI world is changing



Assumptions: ignores potential supply from sectoral mechanisms, but supply from these sectors is reduced – eg fugitive, industrial energy efficiency. No crediting HFCs/N₂O after end of 7 years, 70% recrediting RE projects, 50% re-crediting other projects. Extrapolation of current trends in CER yields and registration risks. No implementation of sectoral CDM or changes to forestry mechanisms.

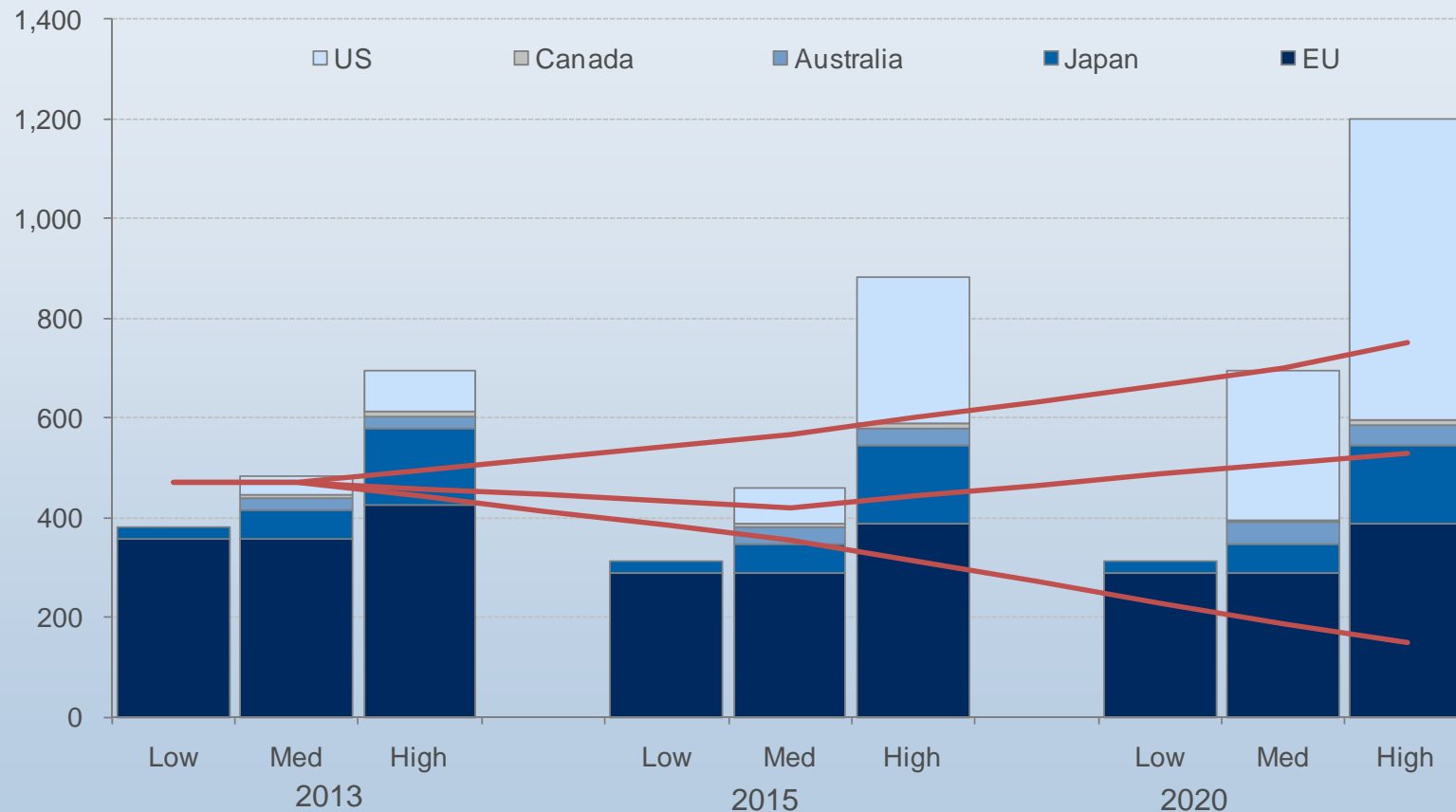
In summary, there are wide ranges in potential demand and supply outcomes



Assumptions: ignores potential supply from sectoral mechanisms, but supply from these sectors is reduced – eg fugitive, industrial energy efficiency. No recrediting HFCs/N2O after end of 7 years, 70% recrediting RE projects, 50% recrediting other projects. Extrapolation of current trends in CER yields and registration risks. No implementation of sectoral CDM.

Scenarios for examining supply / demand for CERs

MtCO₂e **Aggregate demand - supply balance for CERs 2008 – 2020 by scenario**

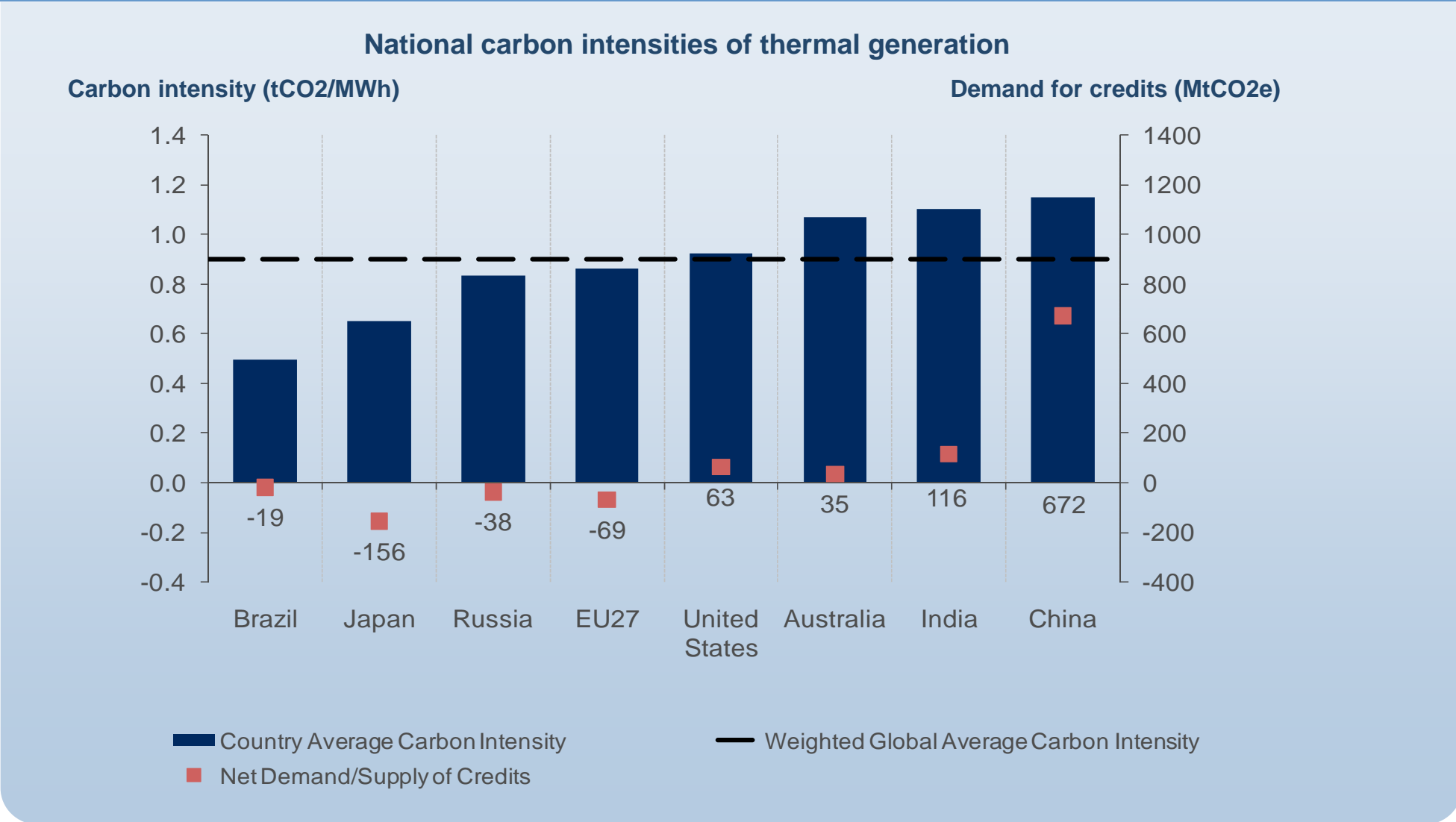


Low: EU 20% and Japan 8% reduction

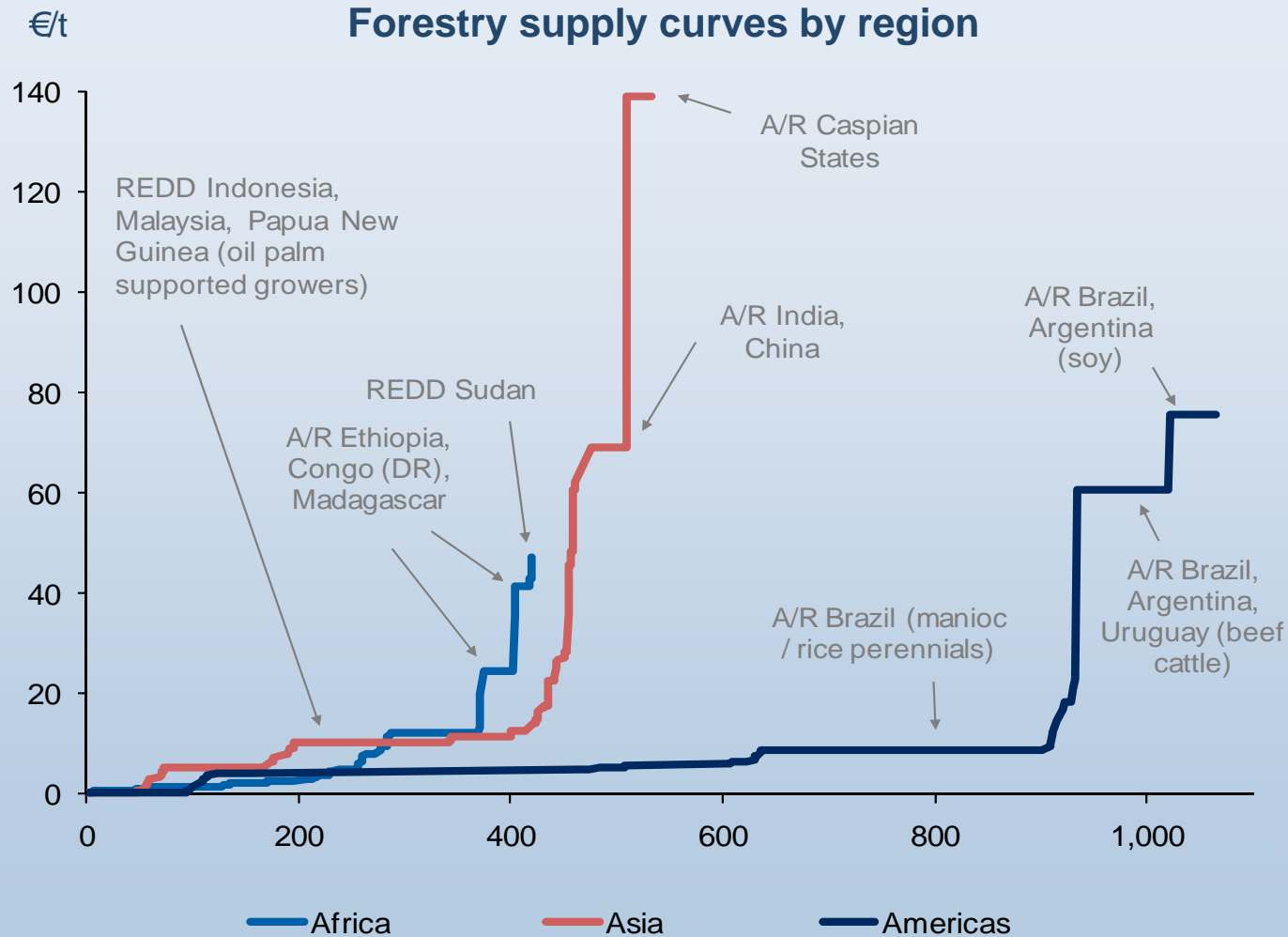
Med: EU stays at 20%, all other parties take on very modest targets, US adopts a power sector only ETS

High: EU moves to 25% reduction, US adopts economy-wide cap-and-trade

Sectoral crediting could change the game completely



Access to international forestry offsets could significantly reduce global CER prices.



70% of the potential for abatement can be done for €10/t or less

Contents

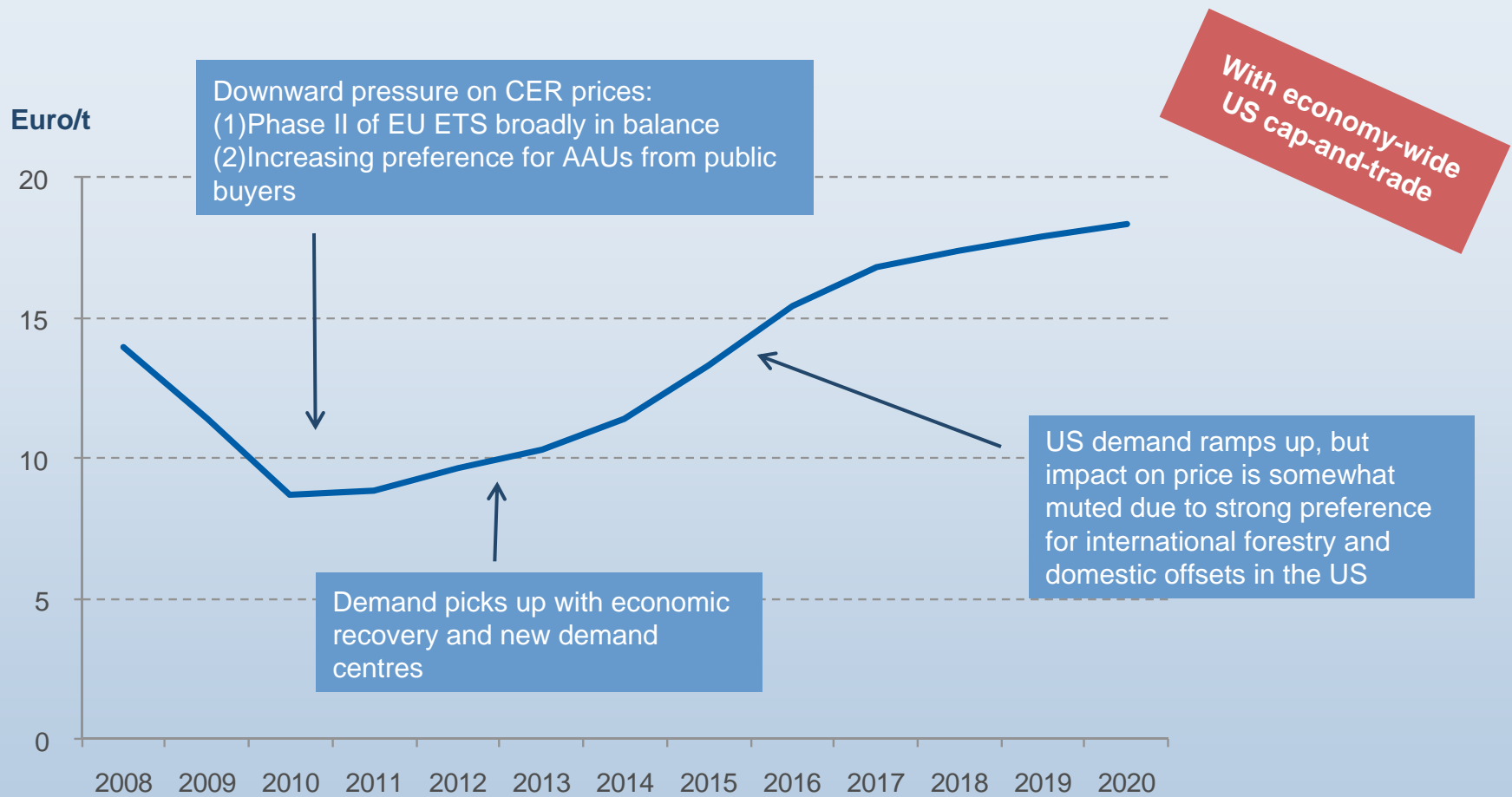
Carbon market dynamics to 2012

Supply and demand fundamentals post-2012

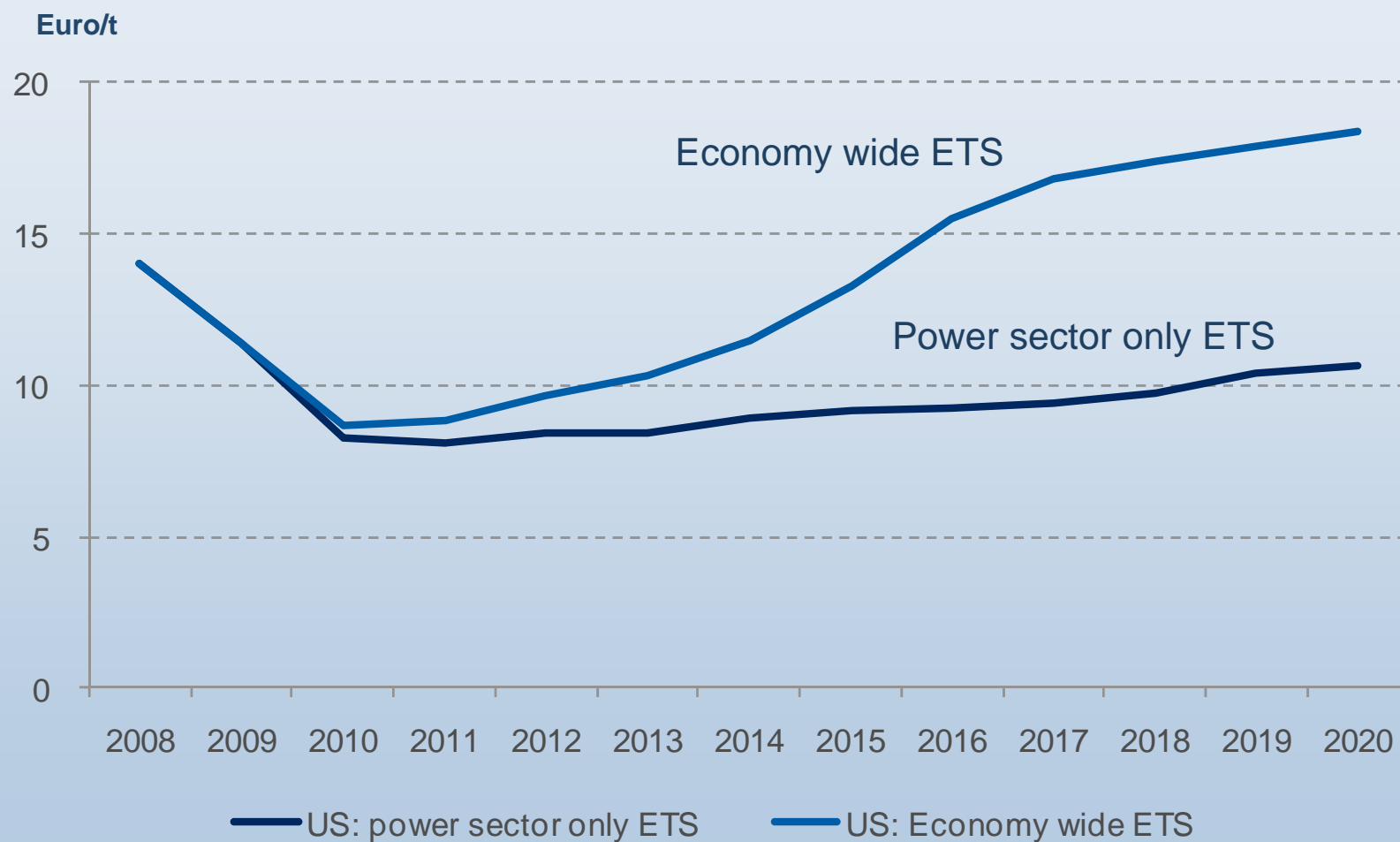
CER price scenarios

Take aways

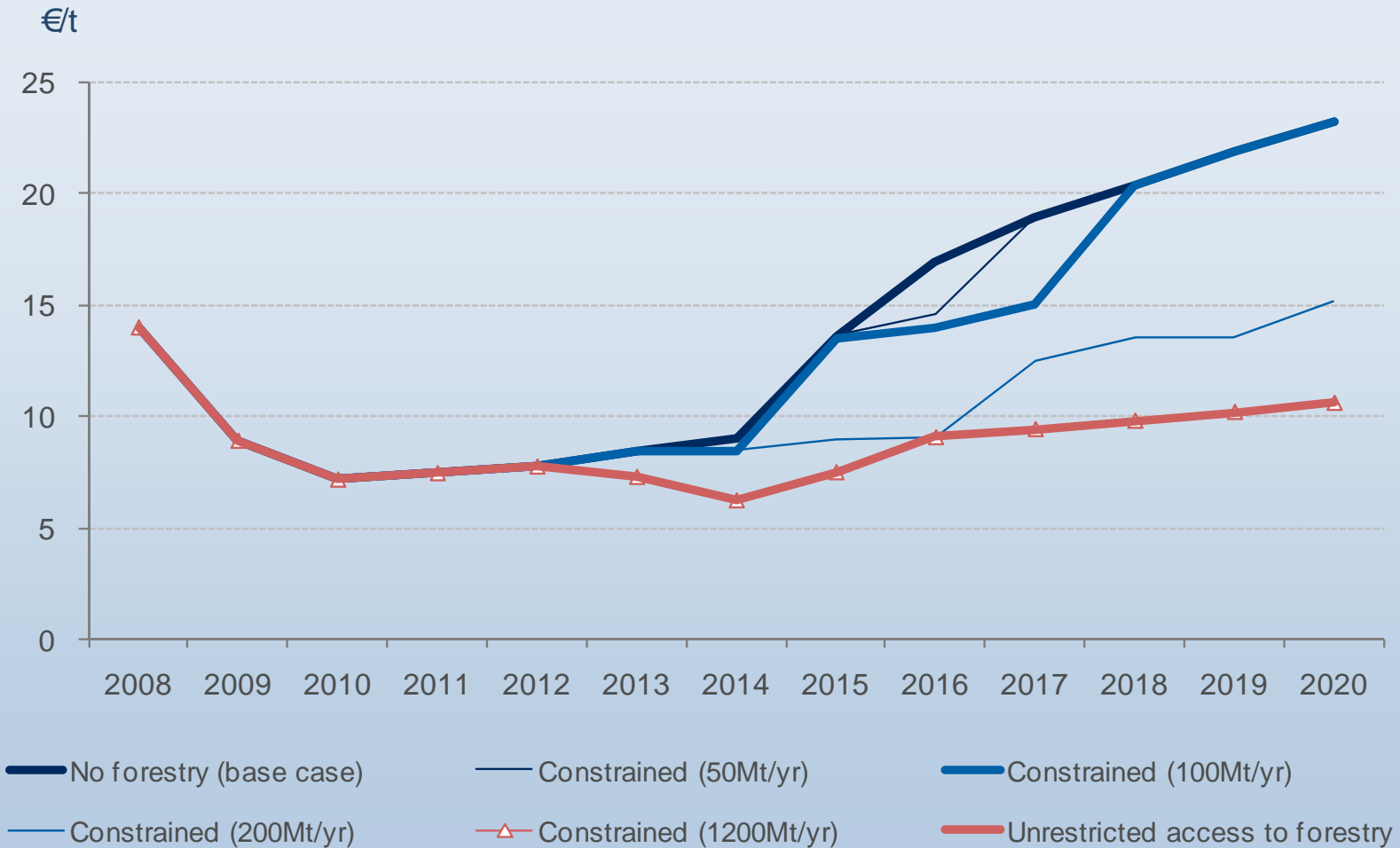
Even though our price outlook is bearish in the short term, there is a recovery with US participation



The outlook for CER prices is less optimistic with limited US participation

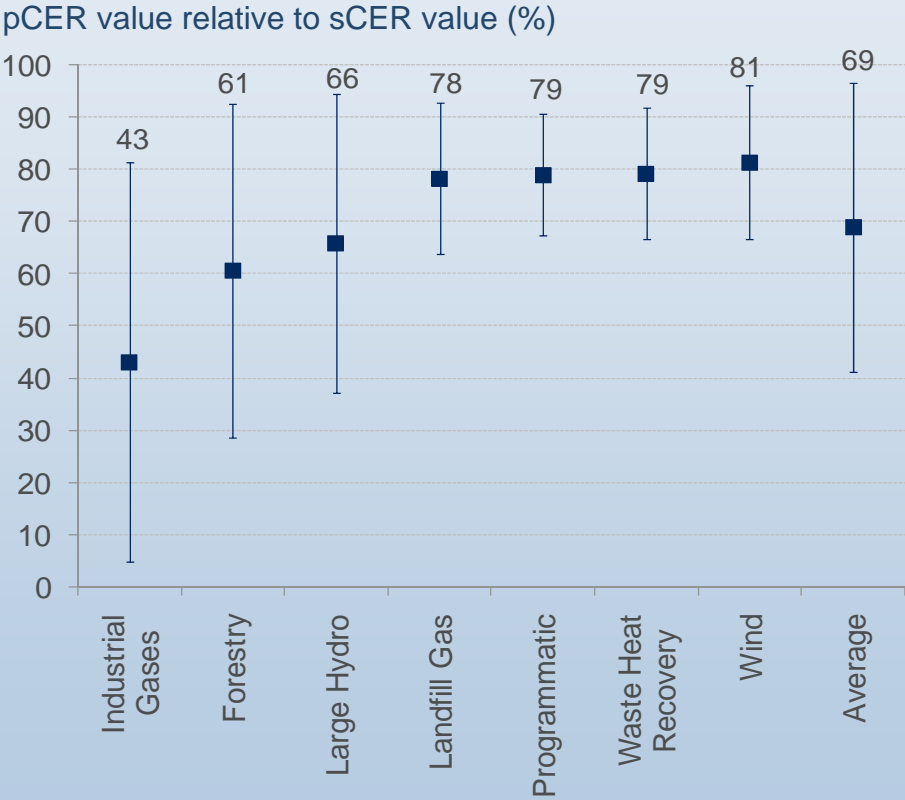


Access to international forestry offsets could significantly reduce global CER prices.

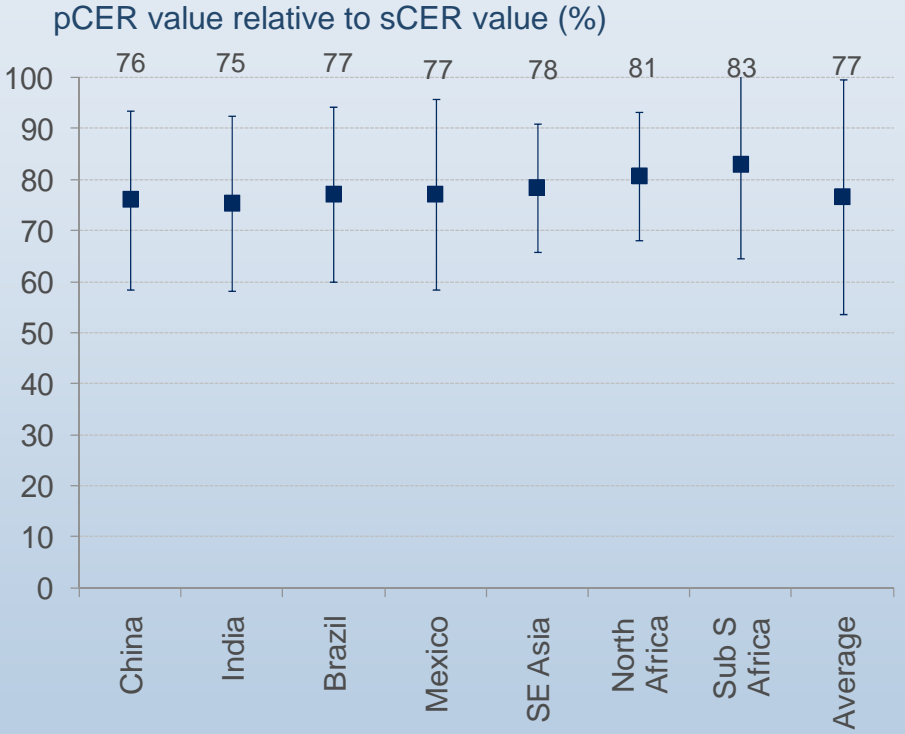


CER eligibility constraints starting to affecting pCER prices

CER price discount by technology



CER price discount by country



Contents

Carbon market dynamics to 2012

Supply and demand fundamentals post-2012

CER price scenarios

Take aways

Take away

Very difficult to price CERs post 2012 - wide range of potential demand / supply outcomes to 2020.

Key swing factors:

- US involvement
- Inclusion of forestry
- Sectoral crediting

To avoid runaway prices or system collapse need to carefully consider demand and supply

My thoughts on sectoral mechanisms:

- power -> sectoral crediting with nationally differentiated targets
- industry -> sectoral trading with mandatory intensity targets

Guy Turner
Director of Carbon Markets
Bloomberg New Energy Finance

guy.turner@newenergyfinance.com



Bloomberg New Energy Finance, London

City Gate House
39-45 Finsbury Square
London, EC2A 1PQ
Phone: +44 20 3216 4086

Bloomberg
NEW ENERGY FINANCE