

The Past, Present & Future of Carbon Offsets

CFTC convening

Kyle Harrison

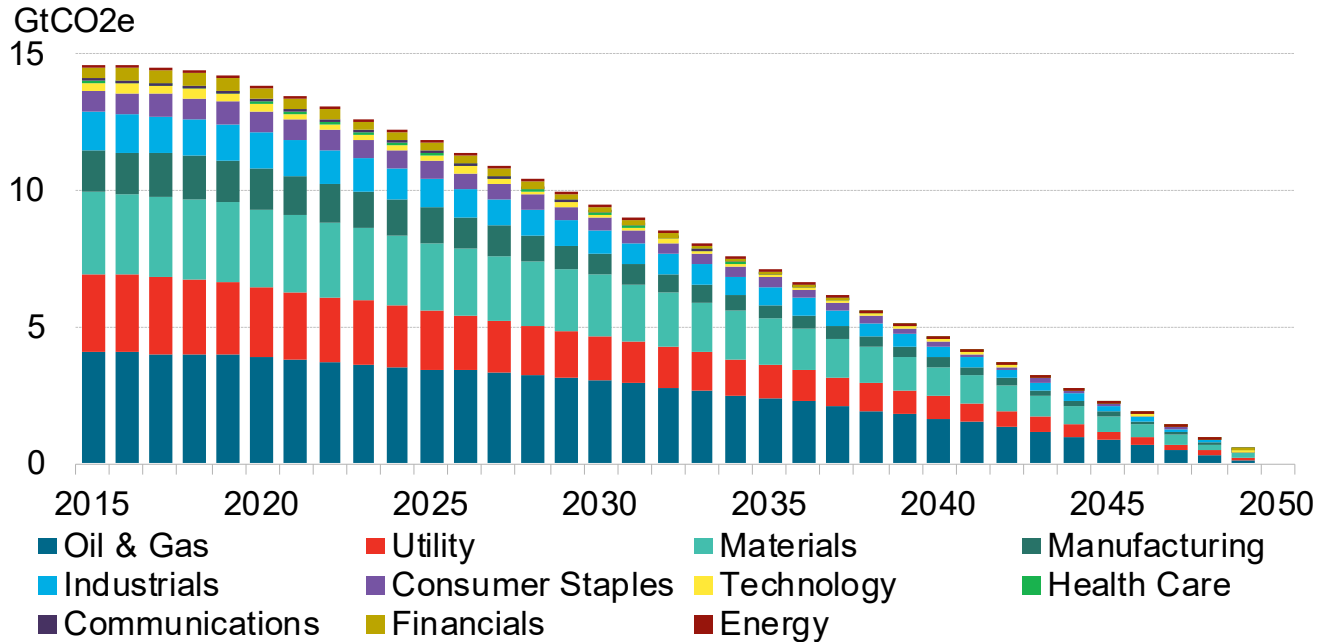
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BloombergNEF

Net-zero targets in aggregate call for gigatons of emission reductions

Net-zero targets by major companies



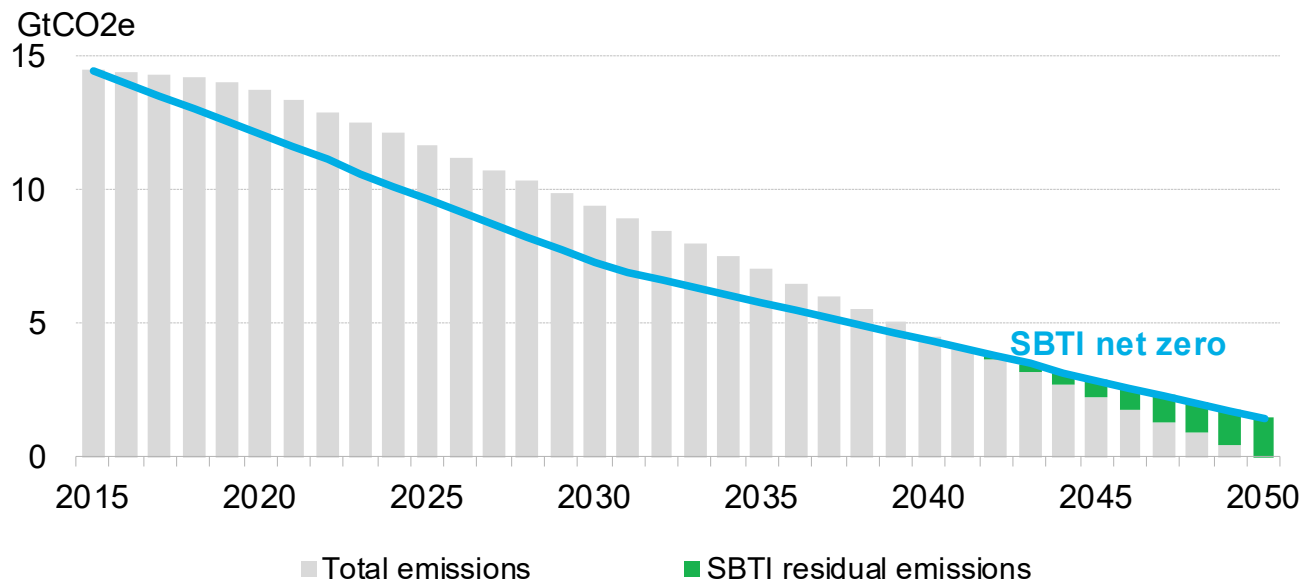
14.5GtCO₂e

Annual emission reductions needed for major companies to achieve net zero emissions, compared with 2015

Source: BloombergNEF, Bloomberg Terminal, company filings Note: Chart only includes emissions covered under a net-zero target.

Even the most aggressive abatement strategies will have residual emissions

Residual emissions from major companies under the SBTI net zero pathway



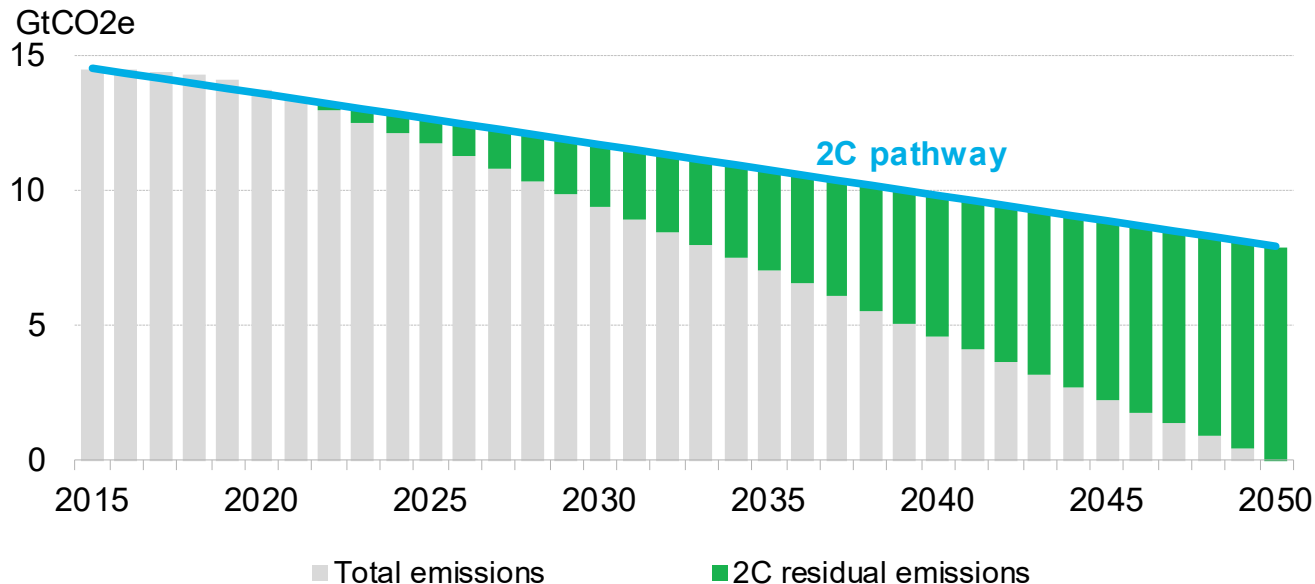
1.5GtCO₂e

Residual emissions from major companies after reducing gross emissions in line with SBTI net zero pathway

Source: BloombergNEF, Bloomberg Terminal, SBTI company filings Note: Chart only includes emissions covered under a net-zero target

Even the most aggressive abatement strategies will have residual emissions

Residual emissions from major companies under a 2C pathway



7.9GtCO₂e

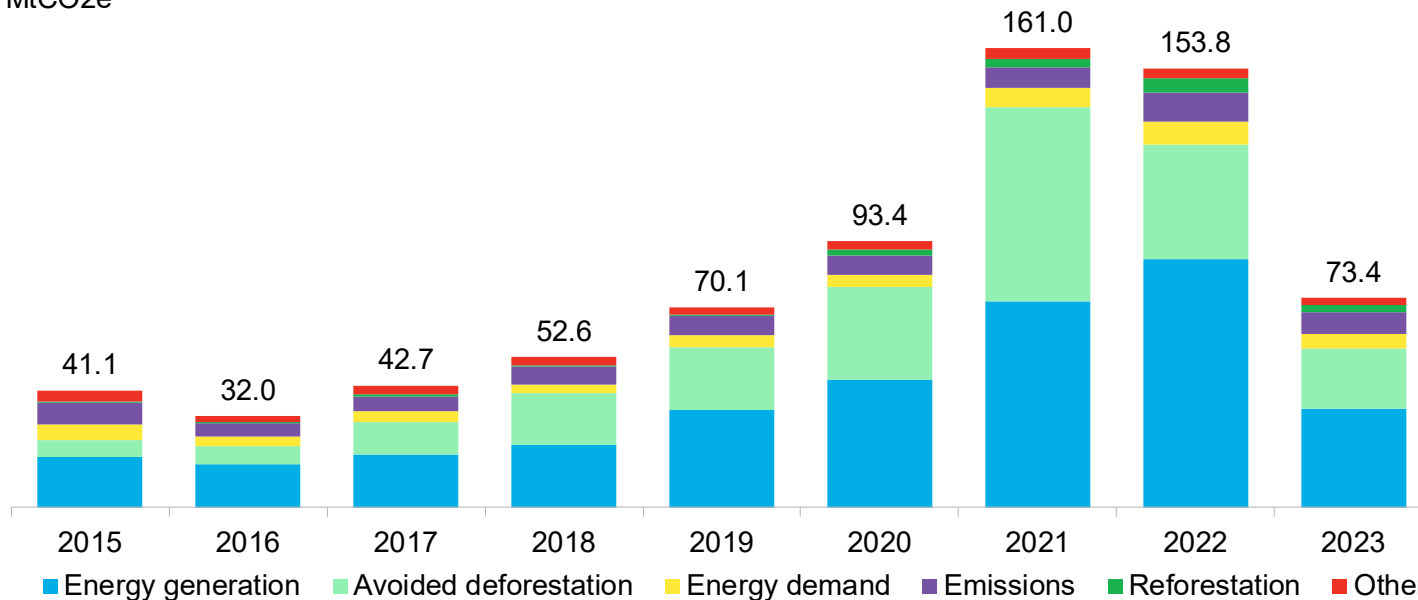
Residual emissions from major companies after reducing gross emissions in line with 2C scenario

Source: BloombergNEF, Bloomberg Terminal, company filings Note: Chart only includes emissions covered under a net-zero target

This has led to an explosion in carbon offset popularity, across a range of sectors

Voluntary carbon offset retirements

MtCO₂e

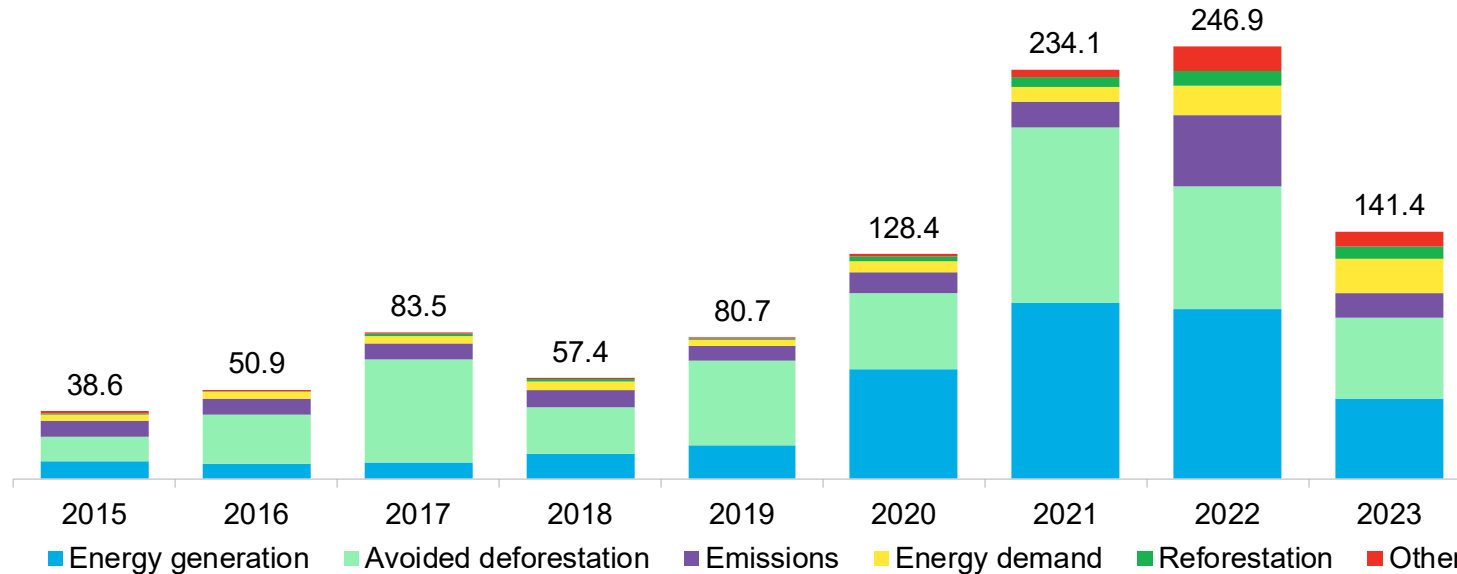


Source: BloombergNEF, Verra, Gold Standard, American Carbon Registry, Climate Action Reserve Note: Data through June.

Developers have ramped up supply in response to growing demand

Voluntary carbon offset issuance

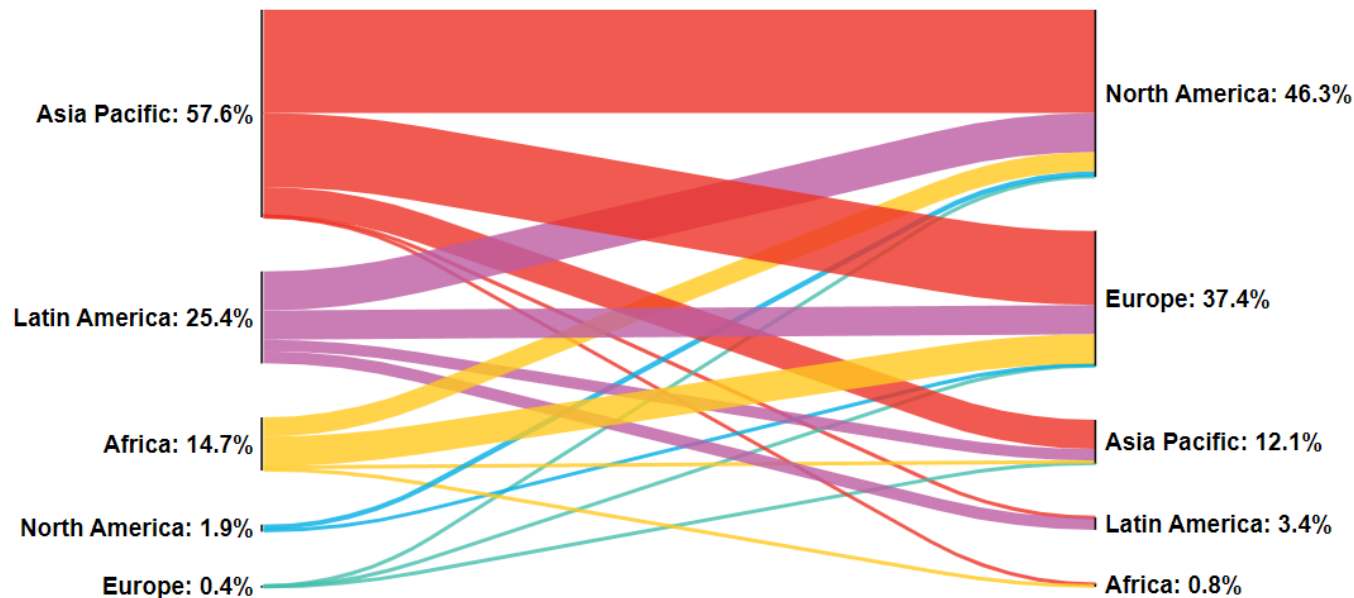
MtCO₂e



Source: BloombergNEF, Verra, Gold Standard, American Carbon Registry, Climate Action Reserve Note: Data through June.

Most supply comes from the Southern hemisphere

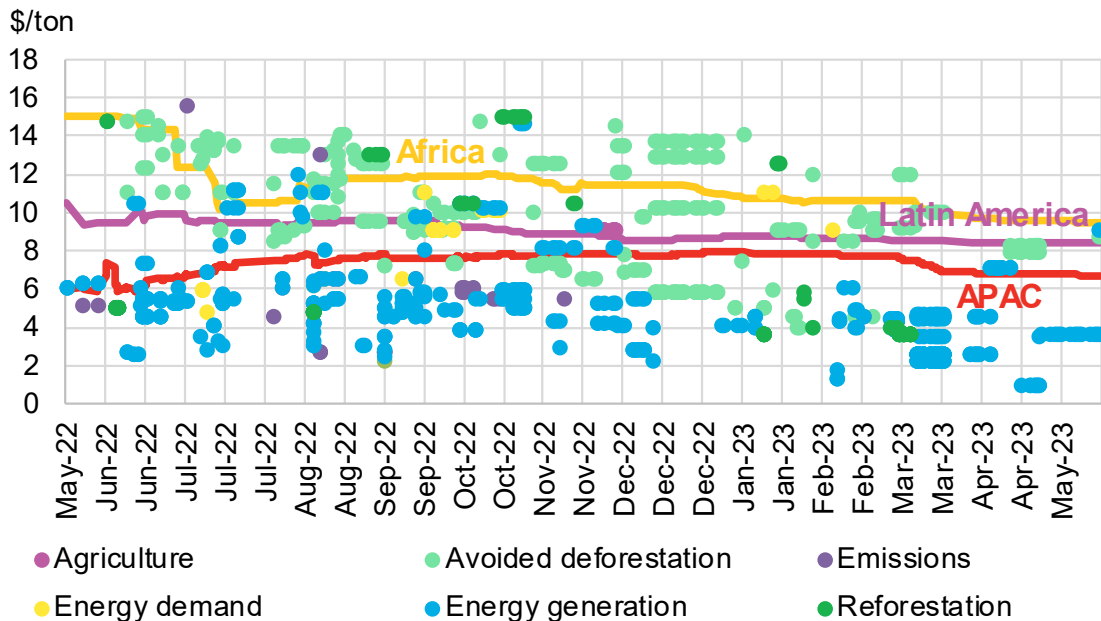
Carbon offset retirements, by geography of origin and demand



Source: BloombergNEF, Verra Note: Data based on publicly disclosed buyers.

The price of every offset is unique and they're generally cheap

APAC carbon offset prices, by transaction, and other regional averages

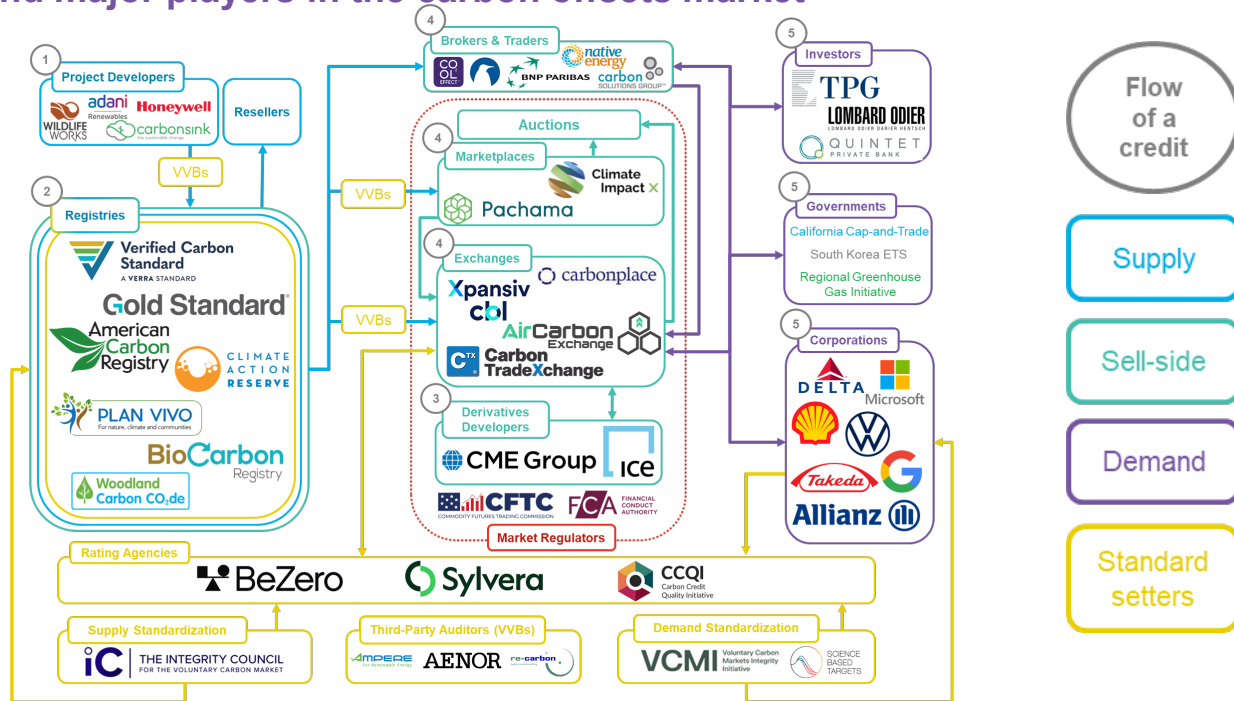


\$9.5/ton
Average broker-transacted offset prices for Africa as of May 2023

Source: BloombergNEF, Bloomberg Terminal Note: Data comes from broker-submitted transactions.

Better infrastructure is needed to support a bigger and more liquid market...

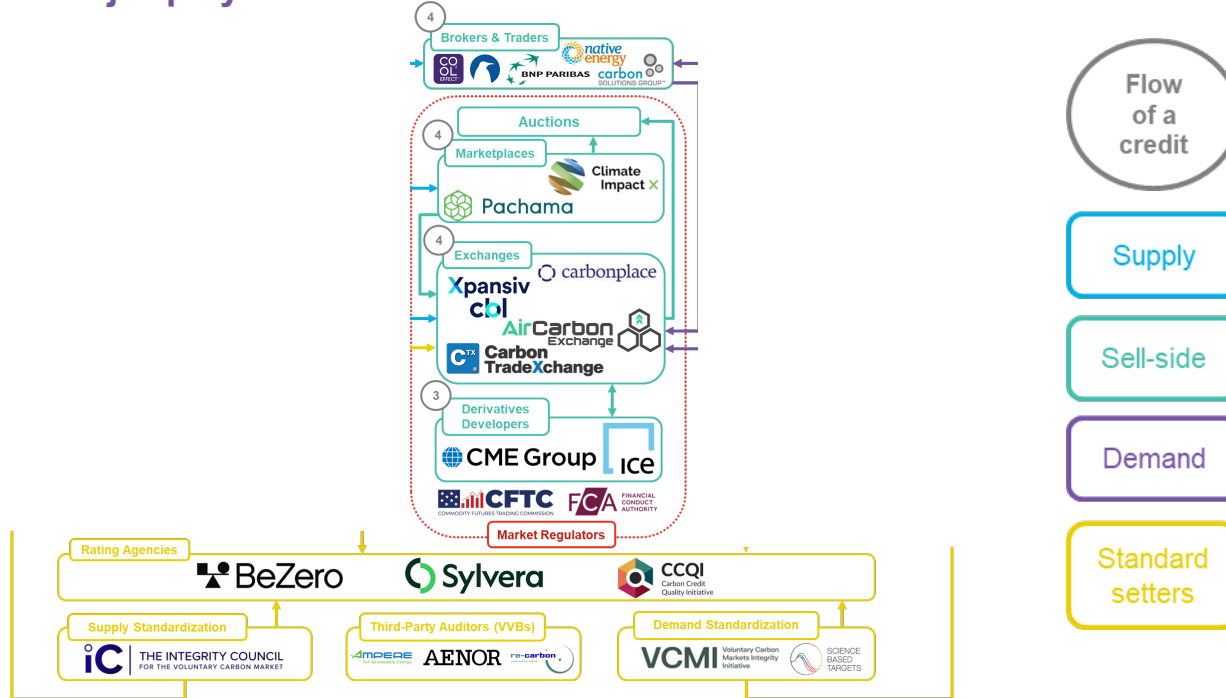
Infrastructure and major players in the carbon offsets market



Source: BloombergNEF

...and boost integrity

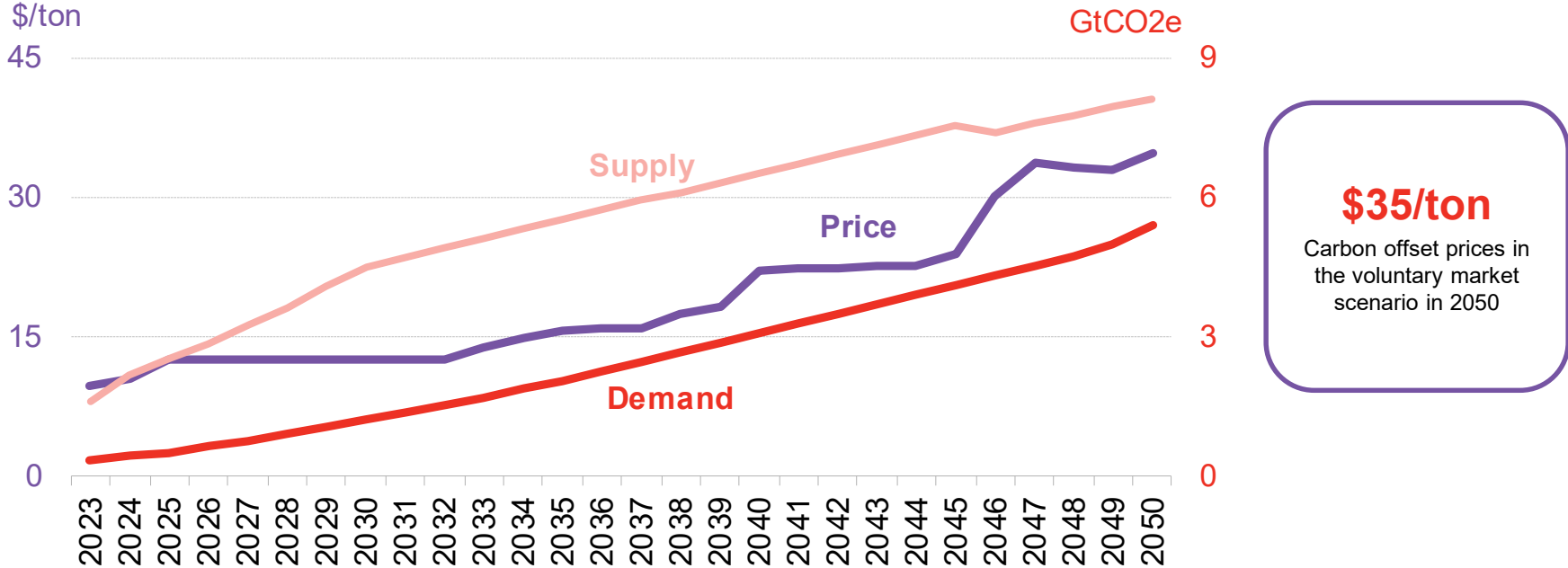
Infrastructure and major players in the carbon offsets market



Source: BloombergNEF

The market desperately needs reform

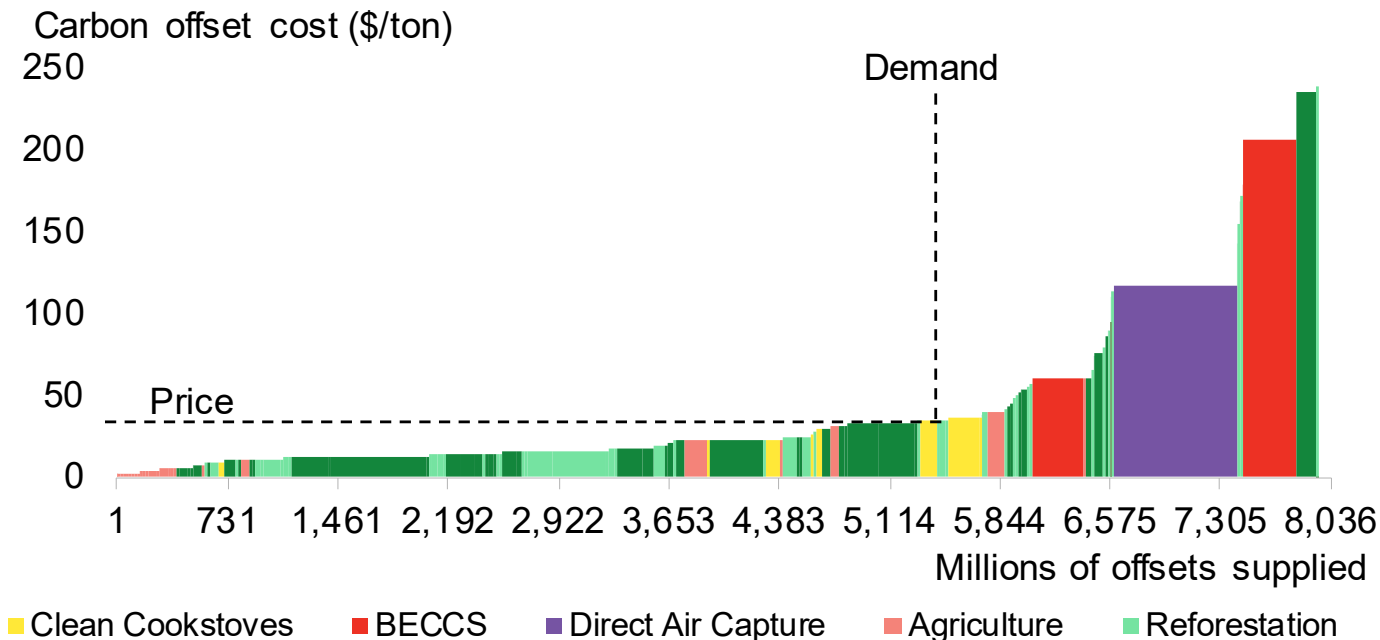
Carbon offset supply, demand and prices – voluntary market scenario



Source: BloombergNEF

With today's structure, offset supply sources that need financing would fail to get it

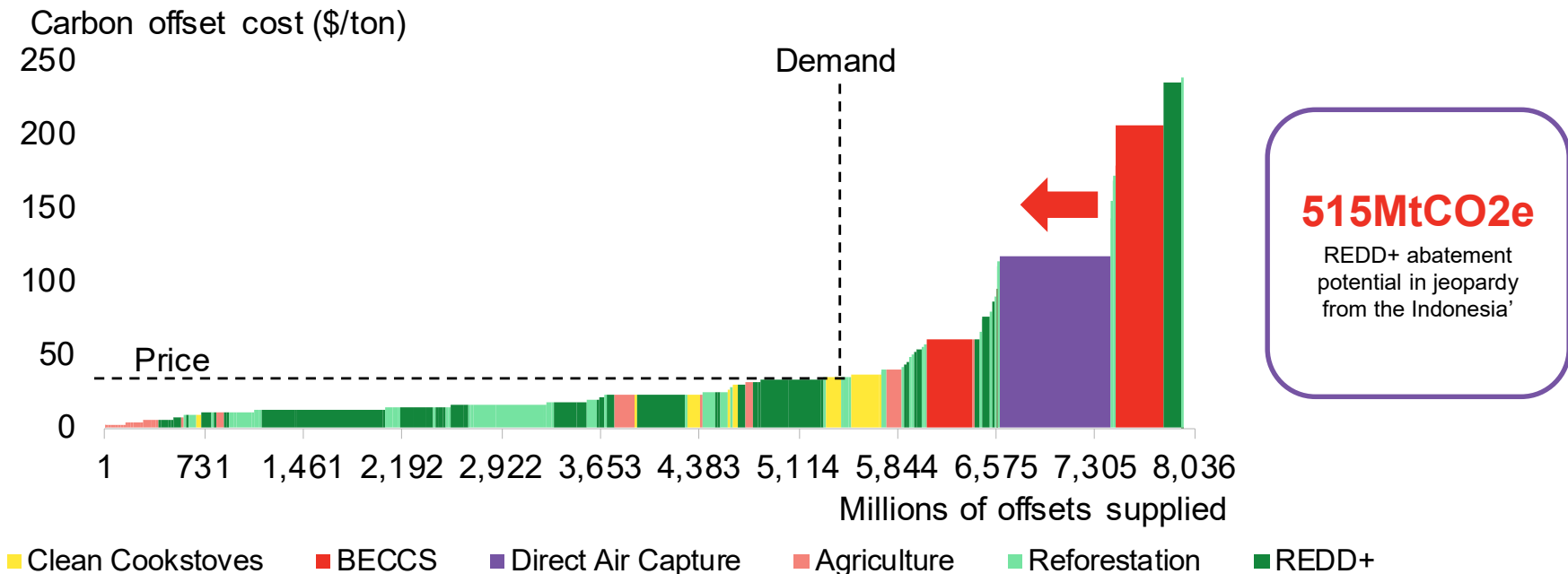
Carbon offset supply curve in 2050 – voluntary market scenario



Source: BloombergNEF

Carbon nationalism could restrict supply

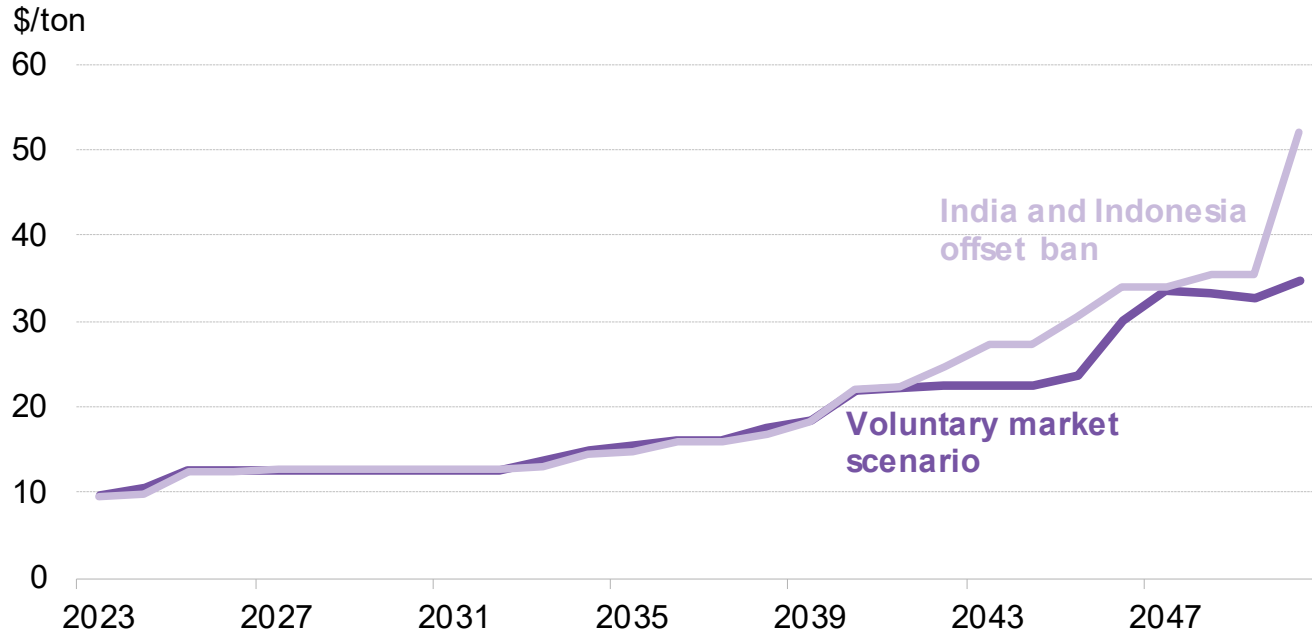
Carbon offset supply curve in 2050 – voluntary market scenario



Source: BloombergNEF

Leading to noticeable impacts on pricing

Baseline and adjusted carbon offset prices in the voluntary market scenario

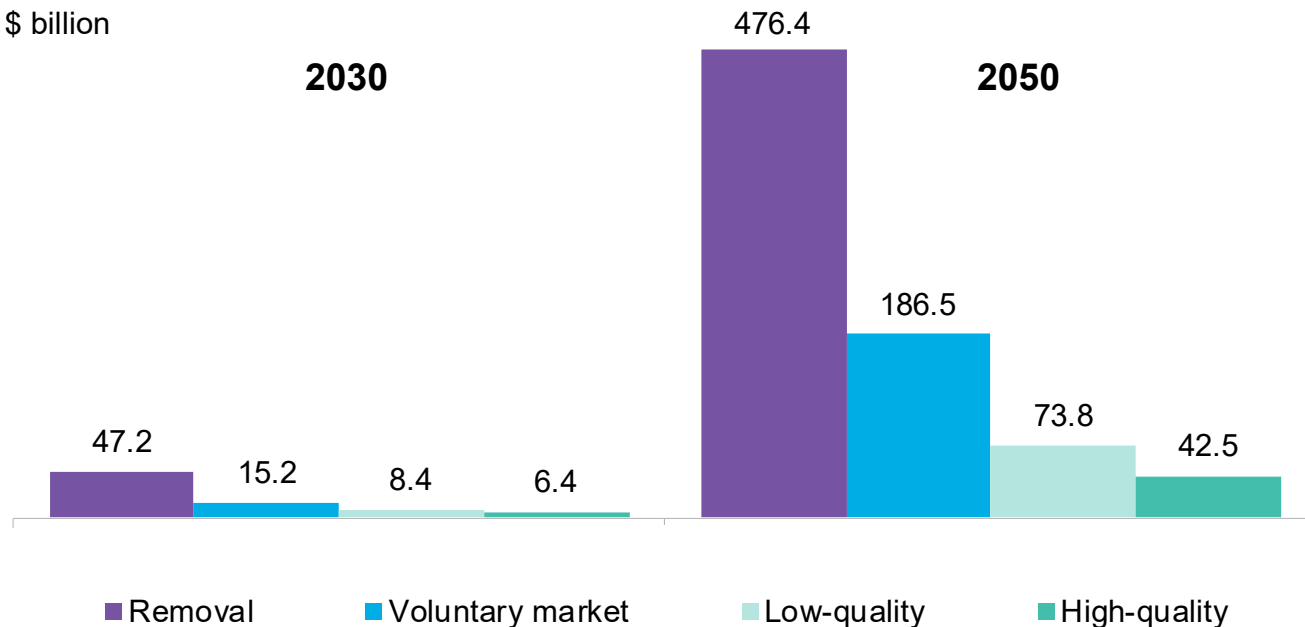


Source: BloombergNEF

The market could be valued at hundreds of billions if handled properly

Annual carbon offset market value, by scenario

\$ billion



Source: BloombergNEF

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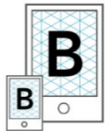
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