

Making CCS economically viable

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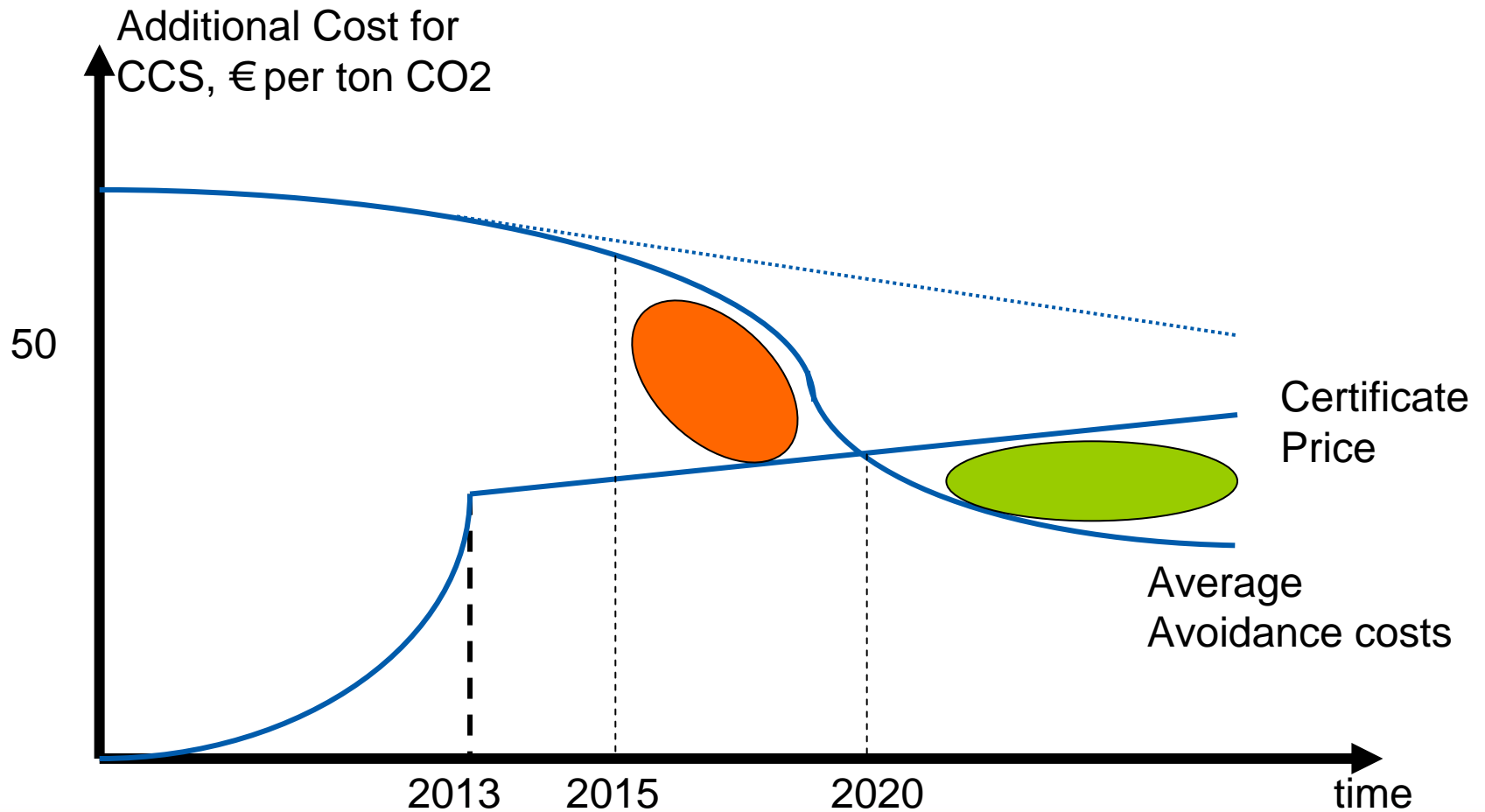


Two choices (and/or)

- Regulate
 - Problem is unfamiliar technology, performance, costs not reliably known, liberalised market
 - Rational response – get some experience
- Induce/incentivise/stimulate/support
 - Bring CCS down the cost curve
 - Get familiar, prepare for legislation



Economic viability of CCS under ETS







Been there, got the t-shirt

- Europe quite good at this
- Wind, Solar PV – Germany, Spain
- Simplicity and investor certainty is good
- Complexity and uncertainty is slow and expensive
- Easiest to work within national systems, and multiple, small, granular investment
- In time, new technologies leave the incubators and outgrow need for support

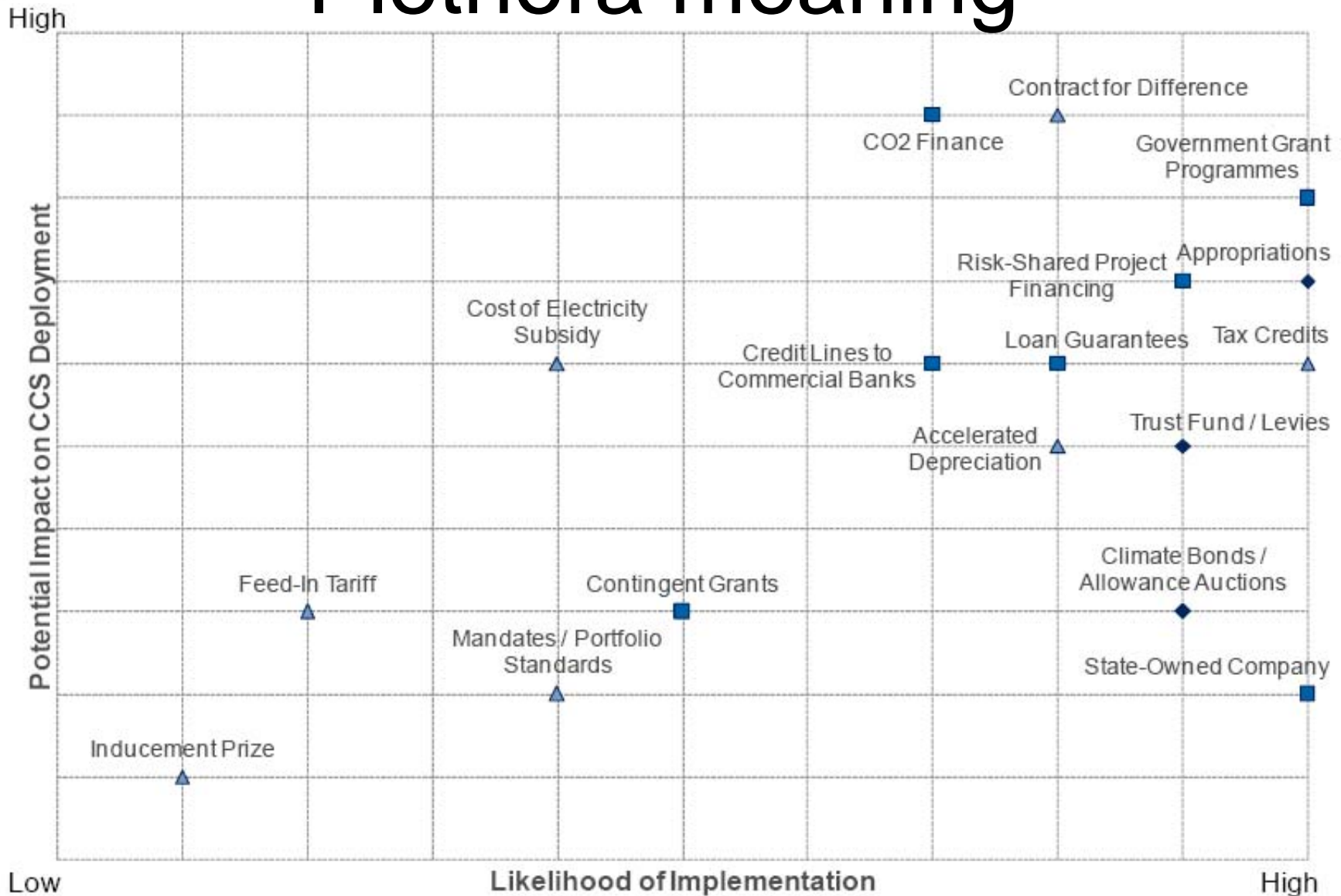


But

- CCS is composite of different technologies
- Stigma of providing public support to a mature 'dirty' industry
- Is extremely lumpy – small number of large projects > budgetarily 'challenging'
- Not adequately covered by national support systems > plethora of schemes



Plethora meaning



Source : New Energy Finance.

◆ fundraising/siting ■ financing/construction ▲ incentivising/O&M

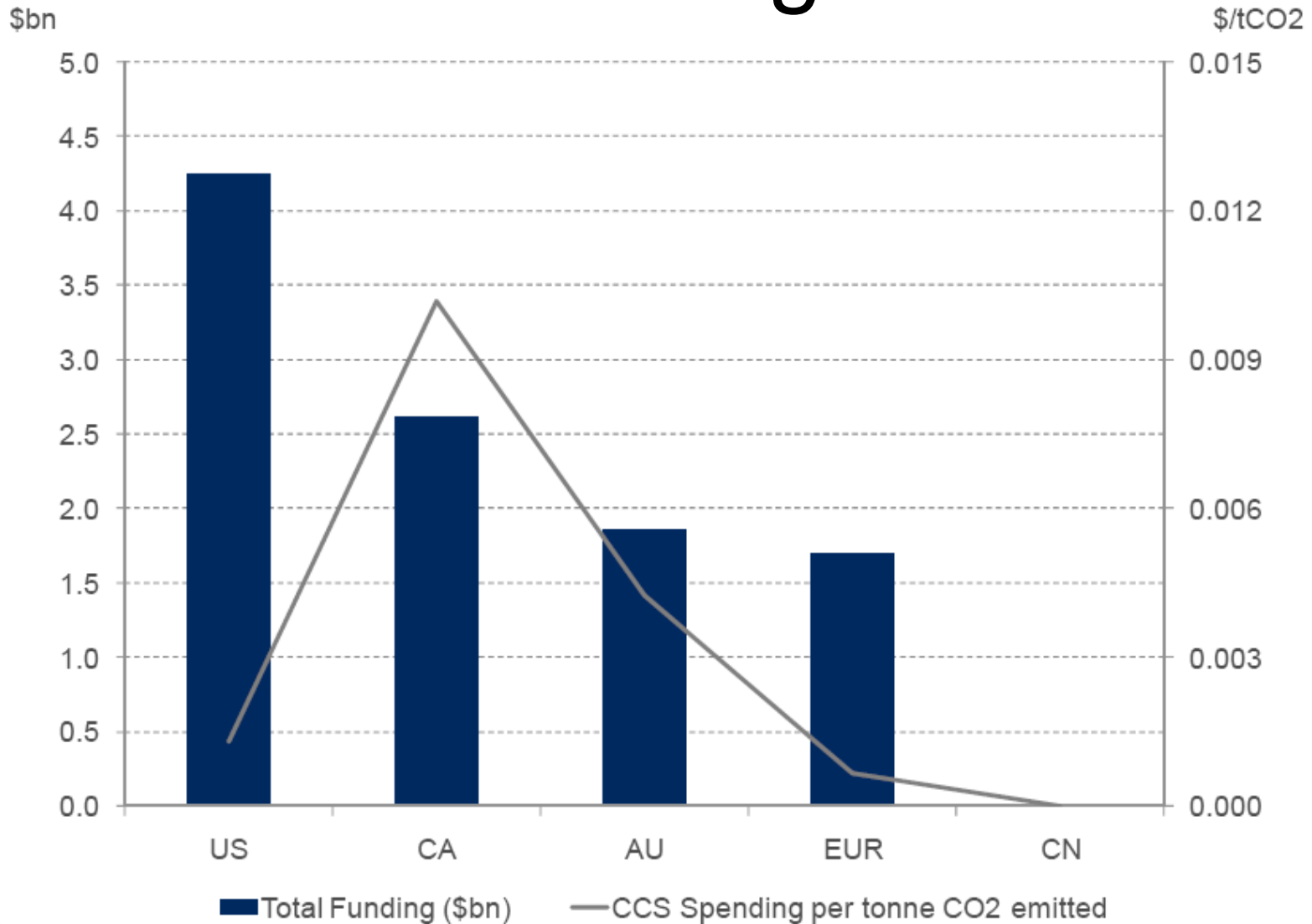


So, in Europe

- Evolving towards an EU level support system, alongside national support
- EEPR and NER 300
- Is it perfect?
- Already €1.2 bn allocated from EEPR; potentially another ?€5.0 bn from NER 300



Is EU funding a lot ?



Source : New Energy Finance.

This chart considers only country/regional emissions from the power and industrial sectors.



NER 300m

- Portfolio of CCS and Innovative RES
- Balanced (technology and geography)
- Performance risk with the sponsors
- $NER300+EEPR \leq 50\%$ Net costs after sponsor
- Tendering: 1st round of 200m by Dec 2011, 2nd round of 100m by Dec 2013
- Criteria: portfolio and NER 300 leverage
- Projects Operational by Dec 2015



NER CCS portfolio

1. Power Pre Combustion, 400MW,
2. Power post Combustion, 250MW,
3. Power Oxyfuel, 250MW
4. Industry, 500kt/y stored CO₂
 - Each time both saline aquifer and depleted hydrocarbon ≥ 8 projects
 - All @85% capture from flue gas, full chain, heat integration



Commission role

- Overall responsibility
 - For project selection
 - Monetisation and distribution to MS
 - Award decisions, specifying cash award, start date, performance (CO₂ stored 10 yrs for CCS projects), disbursement and implementation conditions



MS role

- Screen projects for tender entry
- Disburse NER cash to projects (annually)
- Monitor project compliance with award decisions
- Report annually to the EC



EIB role (as agent for EC)

- Technical support for project selection
- Monetise the 300m and cash to MS
- Liquidity management for EC



EIB role as potential lender

- Independent process and decision, sequential not simultaneous (no conflict of interest, no double dipping!)
- Classic EIB loan candidates (capital intensive, long term, strong policy value)
- RSFF if sub-investment grade risk



CONTACT

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