

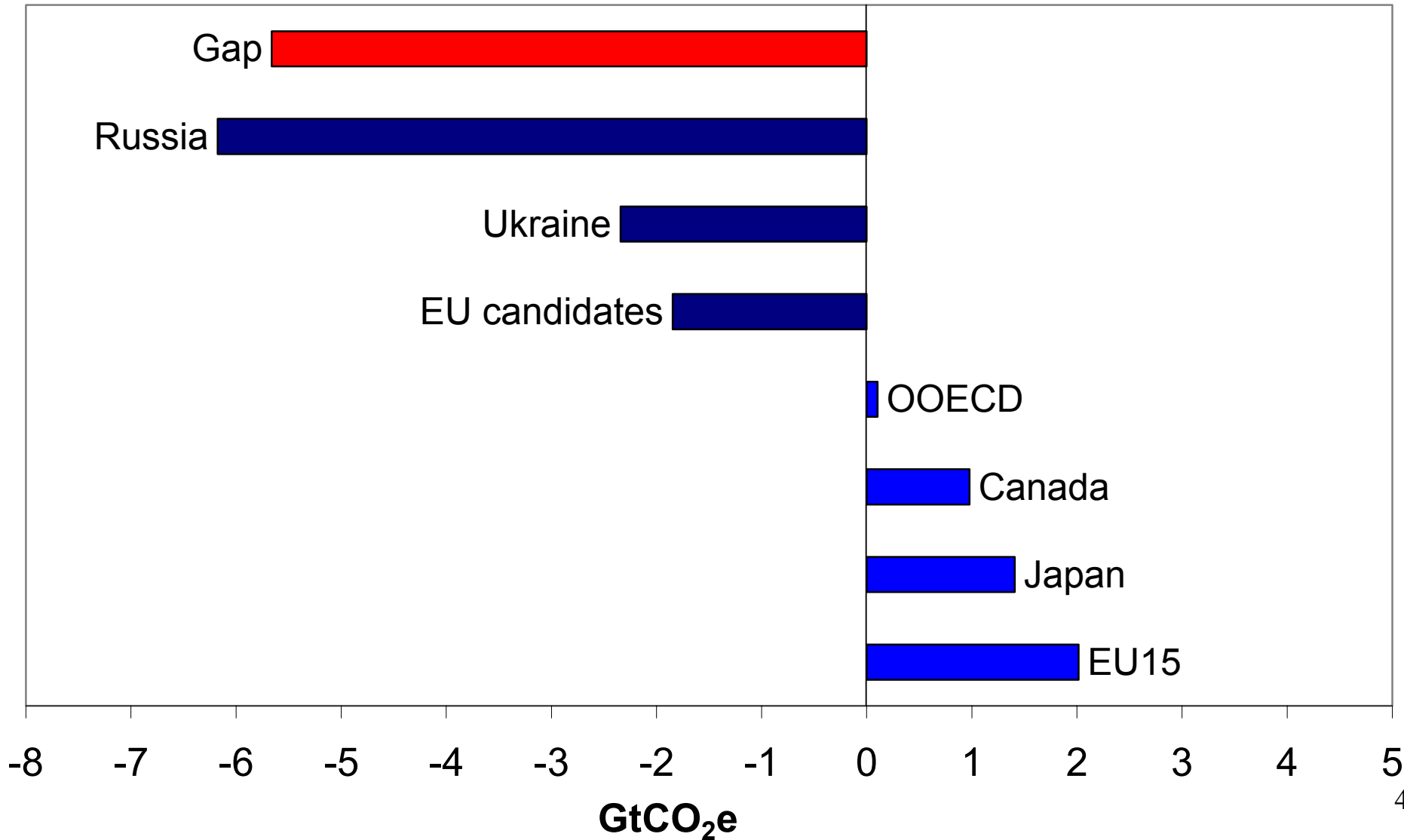
Trends in the global CDM market

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**Workshop, CDM & IKT
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- Background
- Demand
 - Carbon market overview
 - EU ETS and linking: Short description
- Supply
 - Methodologies & the CDM EB
 - Technologies
 - Volumes
- Prices

- Kyoto protocol
 - Entry into force (?)
 - Russian veto?
- EU ETS
- Project-based mechanisms (CDM/JI)



Demand

Actor	Planned investments/contracts
Austria	Up to € 11 million in 2004 on CDM and JI
Denmark	€ 13 million on CDM in 2004, € 27 mill on JI in 2004
Finland	€ 3 million on CDM, 2,5 mill on JI in 2004
Italian Carbon Fund	€ 10-15 million in 2004 on CDM and JI
The Netherlands (various)	€ 50 -60 million in 2004 on CDM and JI
Sweden	Around 10 million euros on CDM and JI in 2004
Japan Carbon Fund	€ 75 million. 15 million from JBIC and DBJ, rest from companies
World Bank Carbon Finance	€ 200 – 250 million on CDM and JI in 2004
German Development Bank	Hope to collect 50 million euros for CDM and JI
CDC IXIS	Aims for 100 million €, 25 million € from own pockets
Econergy Clean Tech Fund	28 million euros in first phase

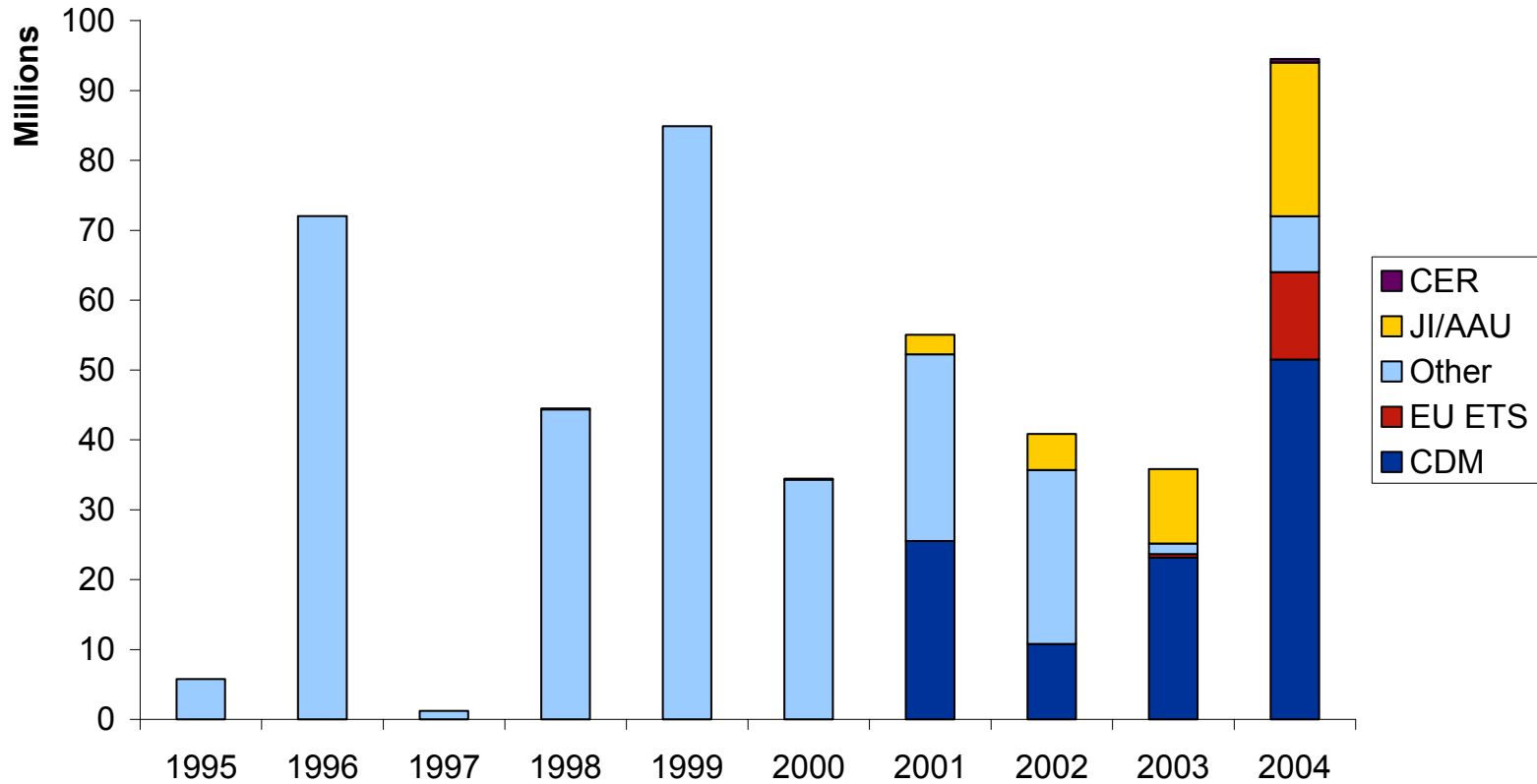
- o Cap-and-trade scheme
- o Approved as EU law in July 2003
 - Not dependent on Kyoto Protocol entry into force
- o Compliance Periods
 - 1. Period 2005-2007
 - 2. Period 2008-2012
- o National allocation plans are being prepared
 - UK published 1st draft on January 21. Several NAPs out now
 - Citicorp publishes analysis of implications for stock values
 - Likely target: 1-3% from business-as-usual

- The so-called linking directive
 - Still being debated and drafted
- Will allow for use of CDM and JI
- CERs and ERUs will be convertible to EAUs
- Key issues being debated
 - Restriction on use (quantitative threshold)
 - Start-up: 2005 or 2008?
 - Conditional on Russian ratification?

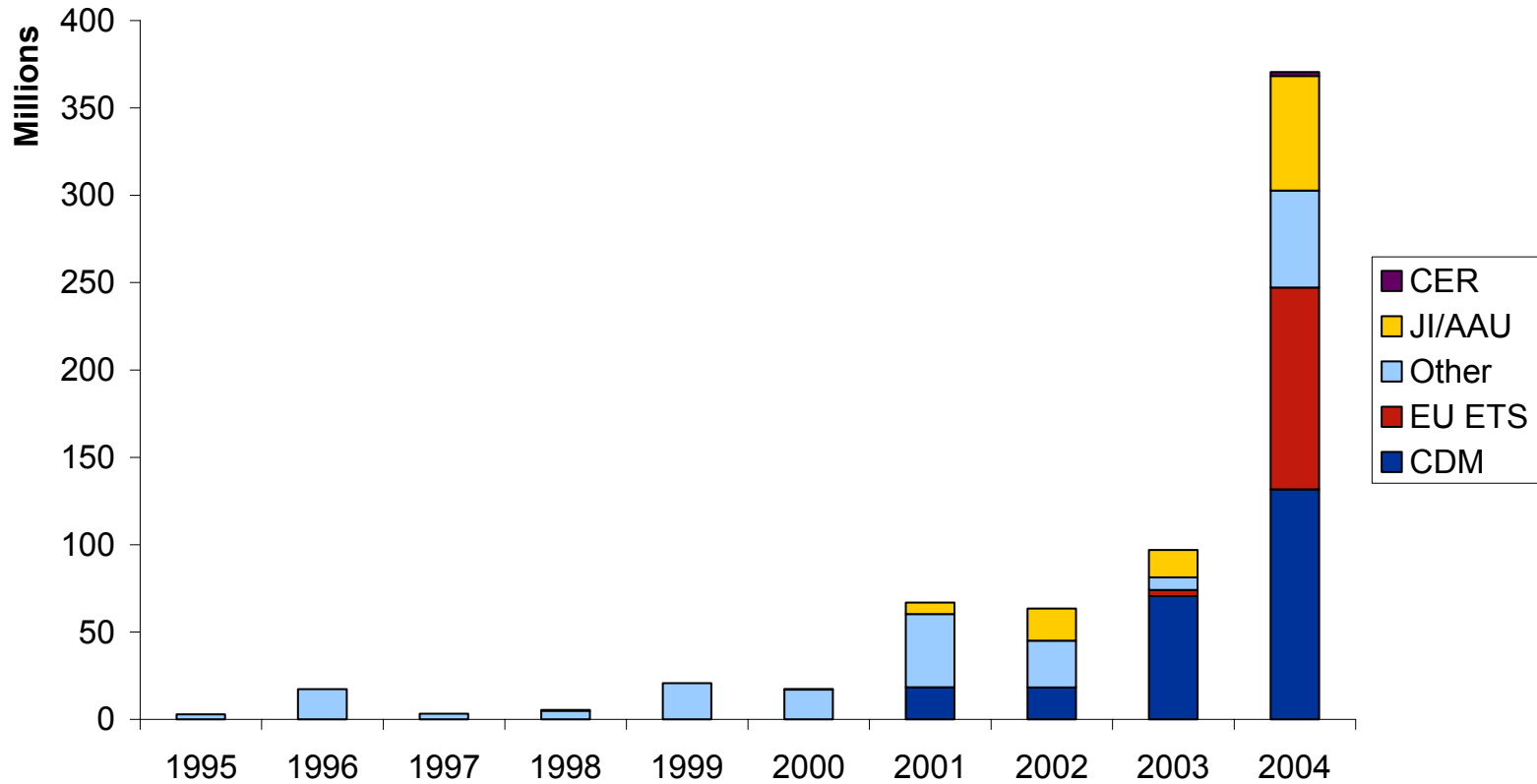
- Could cause a surge in the CDM market
- Prices for CERs and EAUs will be pegged
 - Higher CER prices than today
- Stronger competition
 - More difficult to find good projects
- Stronger pressure on CDM Executive Board
 - Quicker procedures or clogging?
- A market for CERs even if the Kyoto Protocol does not enter into force

- New market actors
 - European companies and funds
 - JP/CA companies and funds
- EU ETS prices well above CDM – potential benefits for both CDM investors and hosts.
- EU linking directive might be independent of Kyoto.
- Still high level of government participation. Important on both sides of the table

Trades (MtCO₂e)



Trades (USD)



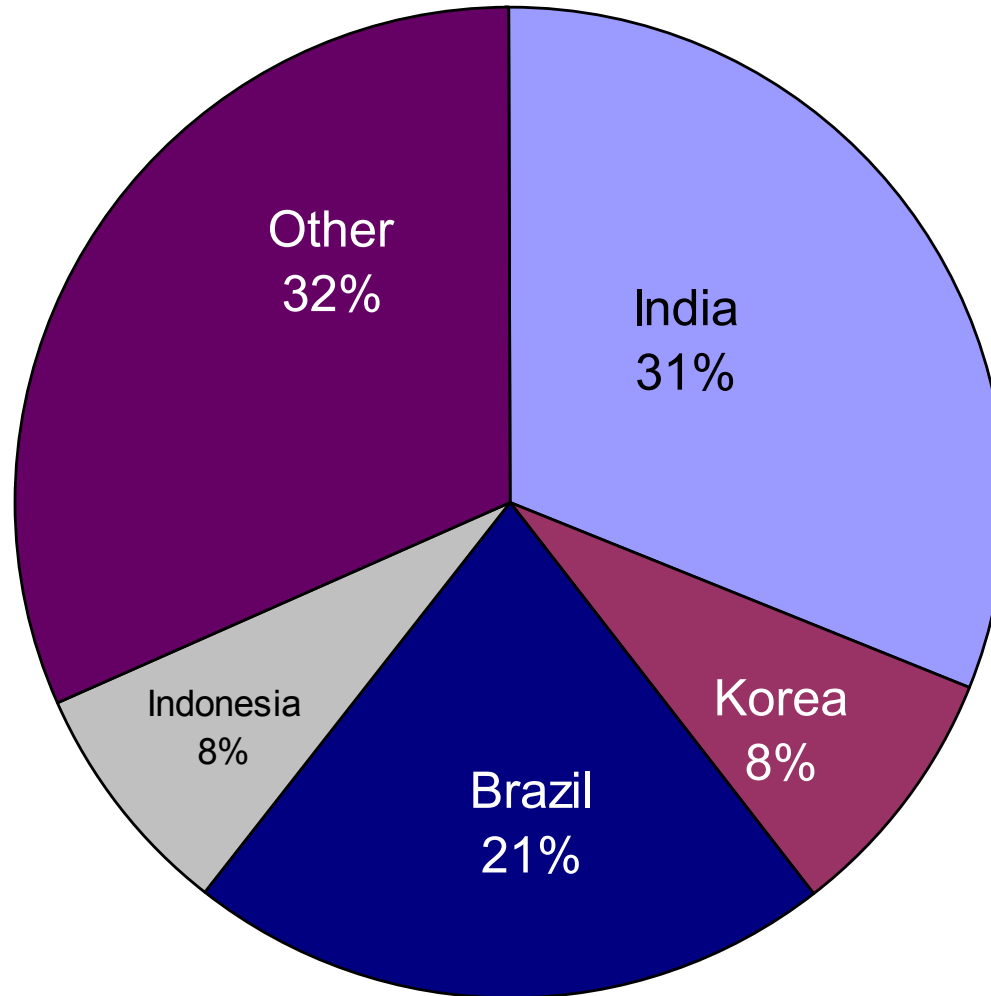
Supply

Project	Host country	Technology	Submitted by	Potential kCER before 2005
Salvador da Bahia	Brazil	Landfill gas	ICF Consulting	1085
Ulsan	South Korea	HFC decomposition/industrial	INEOS Fluor	1050
Durban	South Africa	Landfill gas to electricity	PCF	460
Vale do Rosario	Brazil	Bagasse cogeneration/biopower	Econergy Brazil	430
Nova Gerar	Brazil	Landfill gas to electricity	EcoSecurities	250
Cerupt LFG	Several	Landfill gas	Cerupt	230
AT Biopower	Thailand	Biopower	Mitsubishi Securities	0
Graneros	Chile	Fuel Switch, coal to gas	MGM international	0
El Gallo	Mexico	Run-of-river hydro	PCF	0

CERs to market in 2004: less than 1 MtCO₂e

- Pure industrial abatement will be dominating
- Major methodological issues unsettled.
 - Avoided fuel switch
 - Flaring (?)
 - Agriculture
- Approved:
 - Landfills w/wo power generation
 - HFC & industrial projects
 - Power: Hydro/Bio

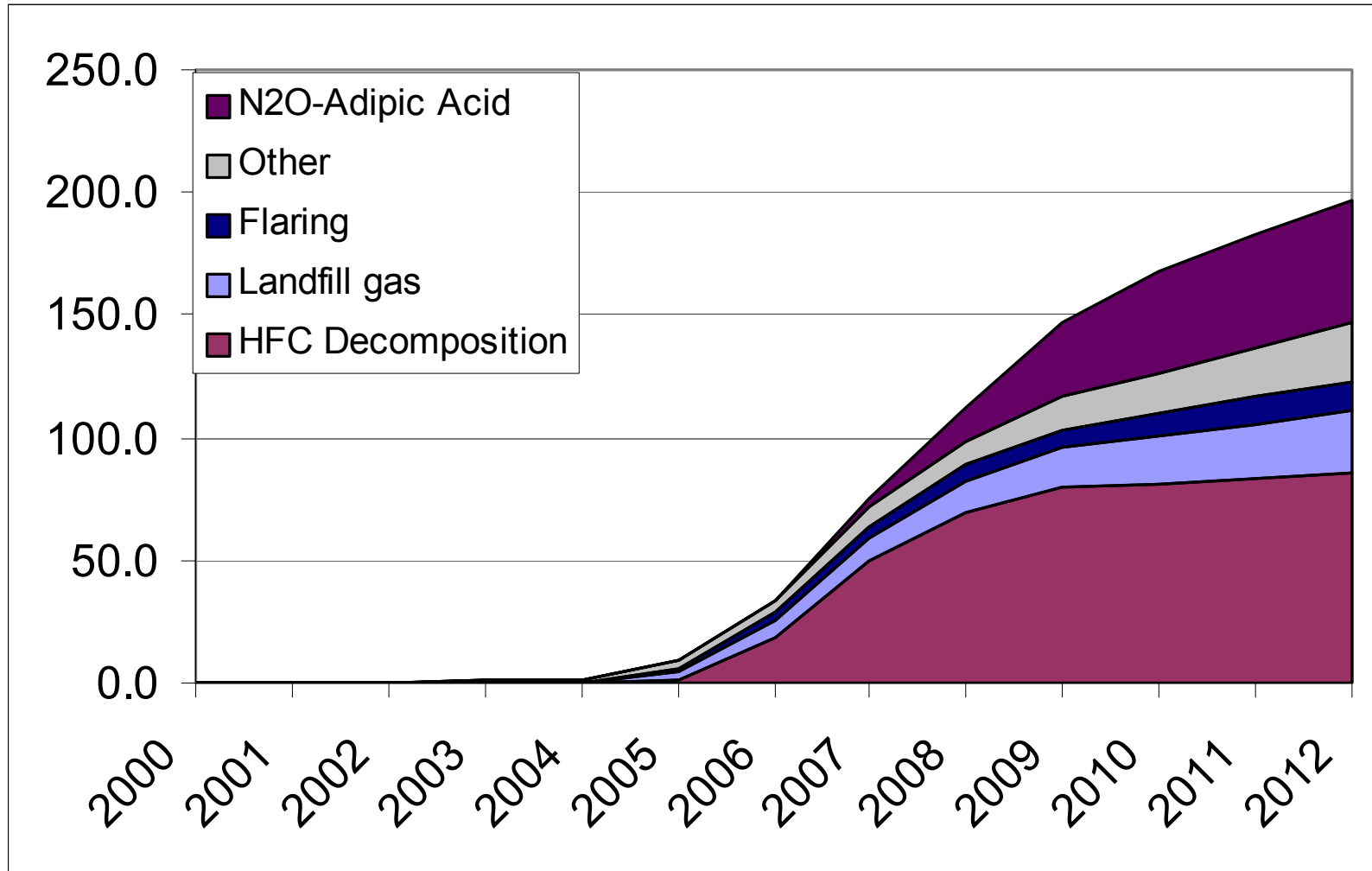
Countries (PDD volumes)



- Huge (but unclear) potential
 - Loads of ideas, quality varies. Many ideas expensive. Additionality cumbersome.
- Long lead times for many project types
- Short-term supply small
- Long-term supply dependent on 2nd commitment period and CDM EB

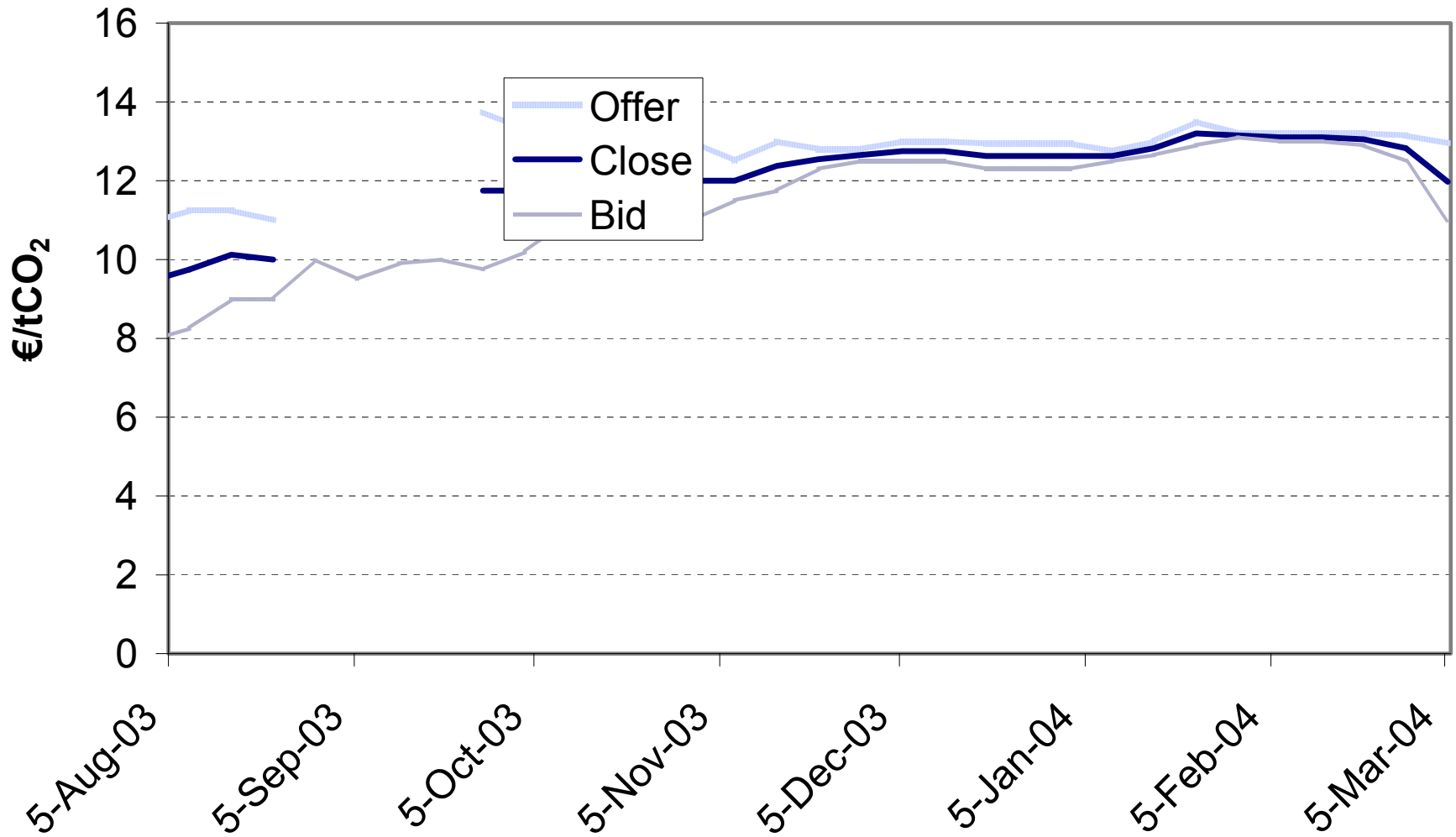
- Many large-scale projects in the pipeline
 - Larger volumes expected
- Streamlining of procedures
 - Methodologies and approval
 - Still a specialist market
- Few developed projects that can deliver substantial amounts of credits in the short run. Early mover advantages.
- Energy sector highly visible, but technology expensive.
- A spot market for CERs?

Volume forecast



- o A CER is a CER is a CER...(and might even be an EAU)
- o CDM projects: Price dependent on level of risk, who takes the risk, what commodity is sold, and solidity of parties
- o Upfront payments often necessary.
- o Gov't actors have been willing to differentiate on technology to promote "good projects".

EU Price development

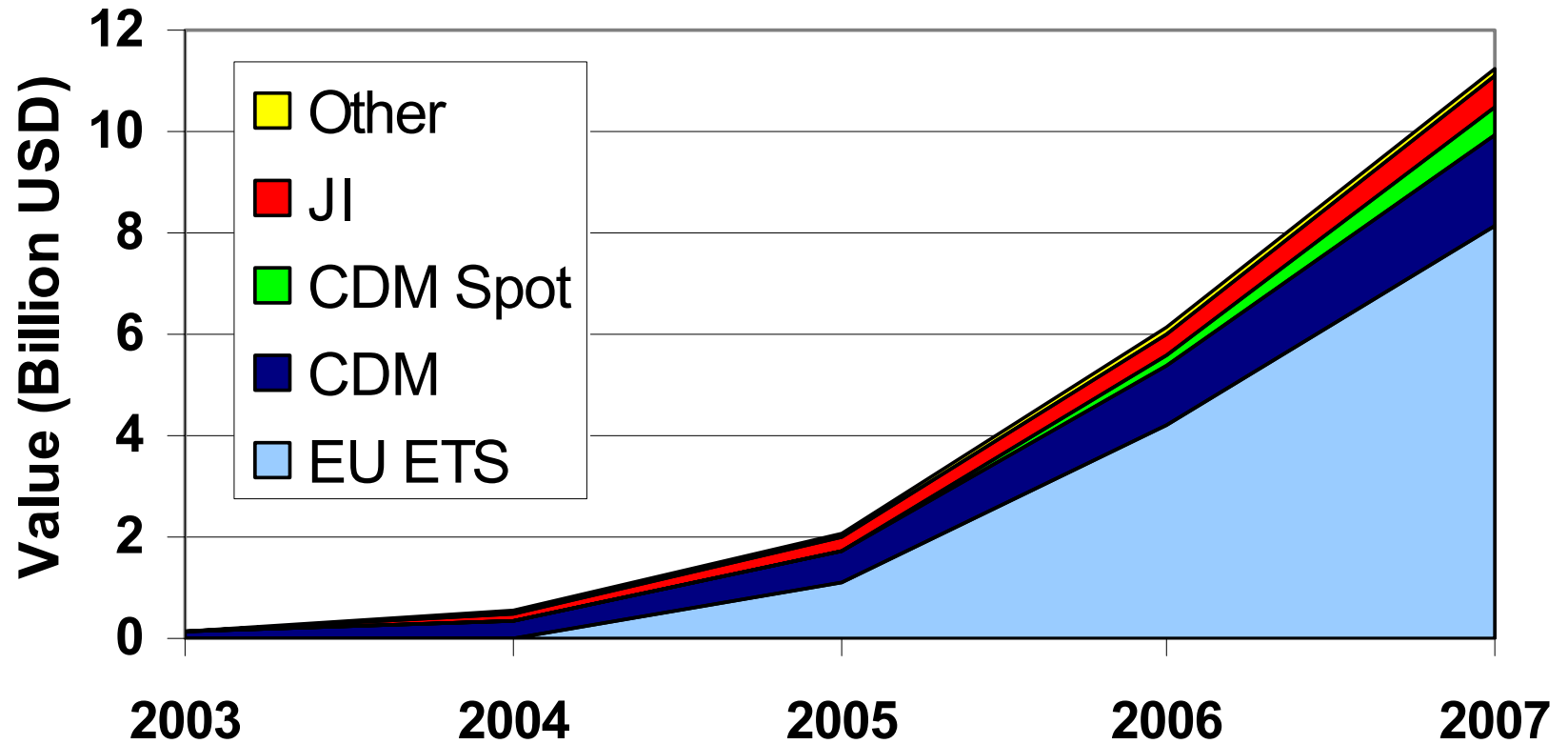


- o CDM Executive Board
 - Likely to issue first CERs in late 2004/early 2005
 - Will do so regardless of Russian ratification
- o CERs: A standardised product
 - Very different from projects
 - A traded "commodity" market will emerge
- o Will set a reference price for project investments
 - Will make negotiations easier

Future Prospects

- Few countries will be eligible for AAU trading
- EU will be the largest market
- CDM-projects: more investments than JI
 - Demand from the EU
 - Demand from Japan/Canada
 - EU Directive
- CER-market will be small but provide important price signals

Size of Future Market



- Many opportunities
- Demand could be substantial
- Supply: Potentially large, but many projects will disappear before implementation. Some large-scale projects have advantages
- Difficult & lengthy process
- (A small) CER spot market will influence the pricing of new CDM projects

Thank you for your attention!

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