Developing GHG Markets and Impact on Post 2012

Andrei Marcu, President
International Emissions Trading Association

Elements of Response to Increased GHG Emissions

- Technology development
- Technology diffusion
- Cost-Effective Use of Capital

Markets are Key

- Market-stimulated change
  - Must have global system encouraging innovation and cost-effective climate action
  - Must have strong market linkages to ensure global diffusion of beneficial technologies
- Must develop, identify and act on least-cost opportunities to minimize impact of that growth

Elements of the GHG Market

- Source of Demand -

Capped Economies/Economic Sectors

- Sovereign Demand (Kyoto Protocol)
- Corporate Demand
  - Regulatory (EU ETS)
  - Voluntary (CCX, retail market))

- Supply
  - Offsets – reductions from a BAU for sectors not capped
    - Domestic offsets
    - Kyoto offsets (Clean Development Mechanism)

Kyoto's fundamental architecture

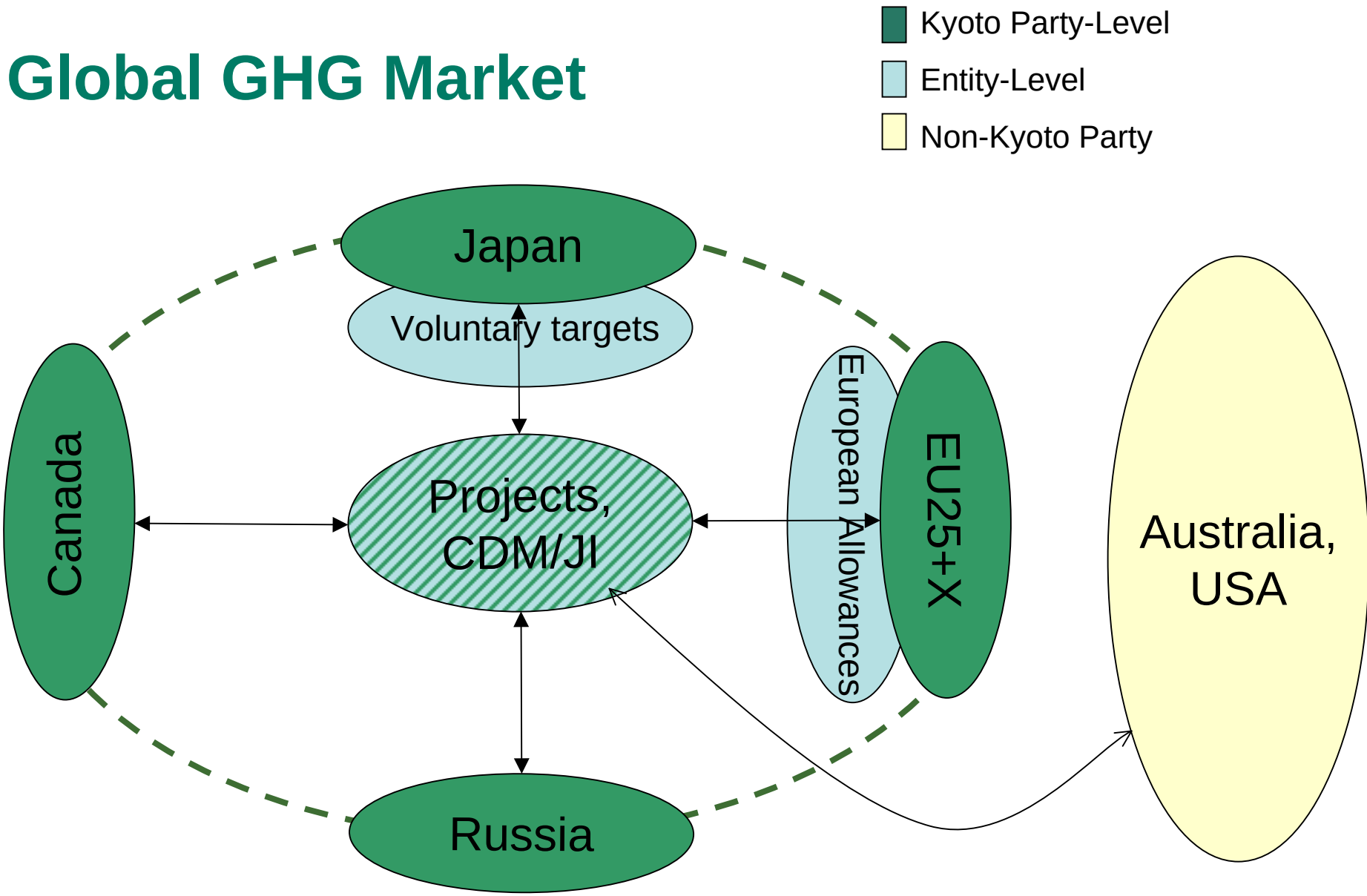
- National emissions caps, from countries according to stage of development and responsibilities
- Efficiency and incentives through international market mechanism
  - Trading in allocated instruments e.g. EUA
  - Global reach & creation of additional credits through project offsets e.g. CDM & JI

Carbon Markets

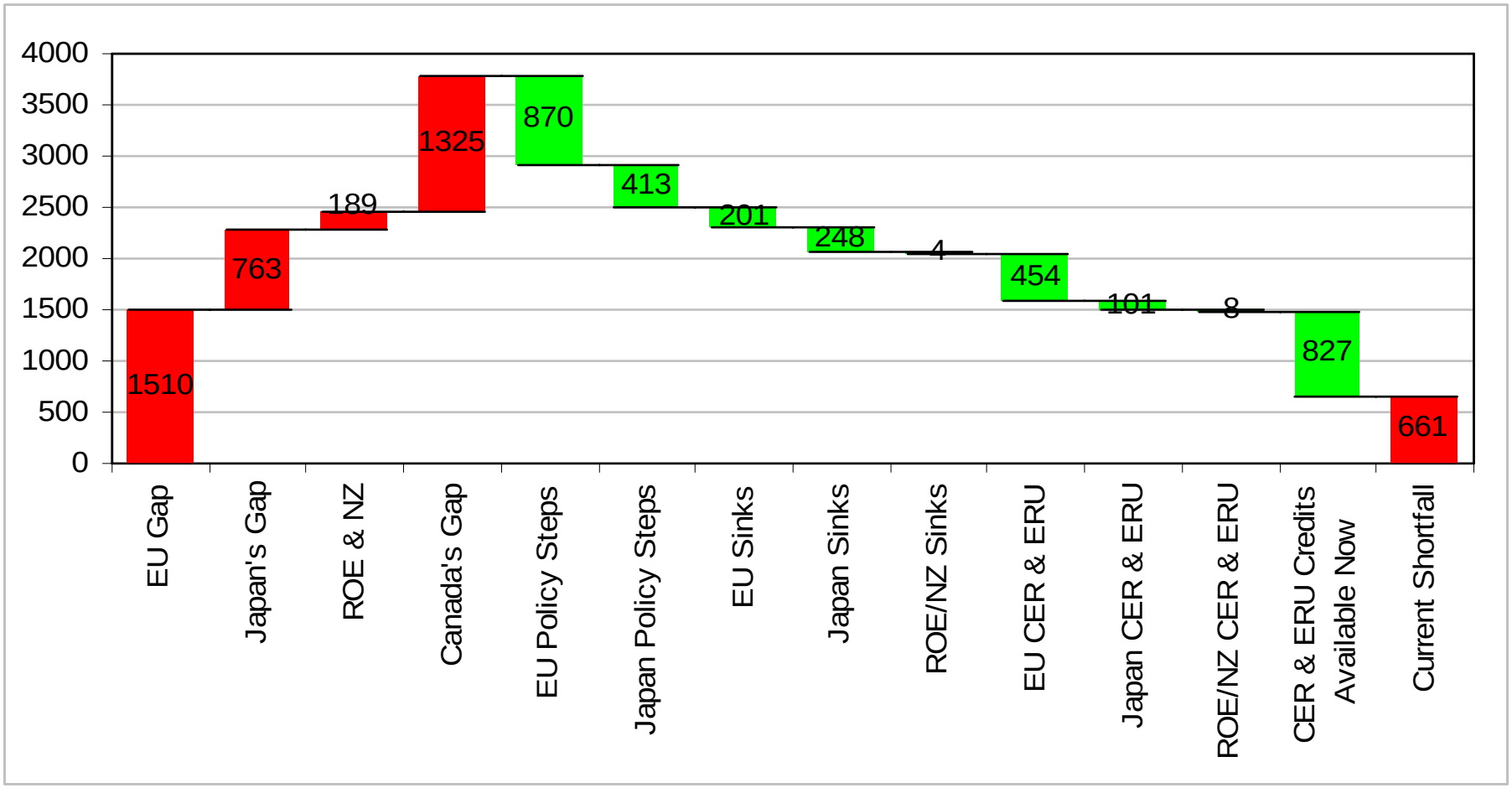
- What they don't do
  - Do not create reductions
  - Not Applicable to all sectors - not a silver bullet
- What they Do
  - Set a cap and put a price on a ton of carbon
  - Incentivize overcompliance – do more
  - Economic signal for asset allocation
  - Provide incentive for the development of clean teach solutions
  - Provide flexibility

Source EC

Global GHG Market



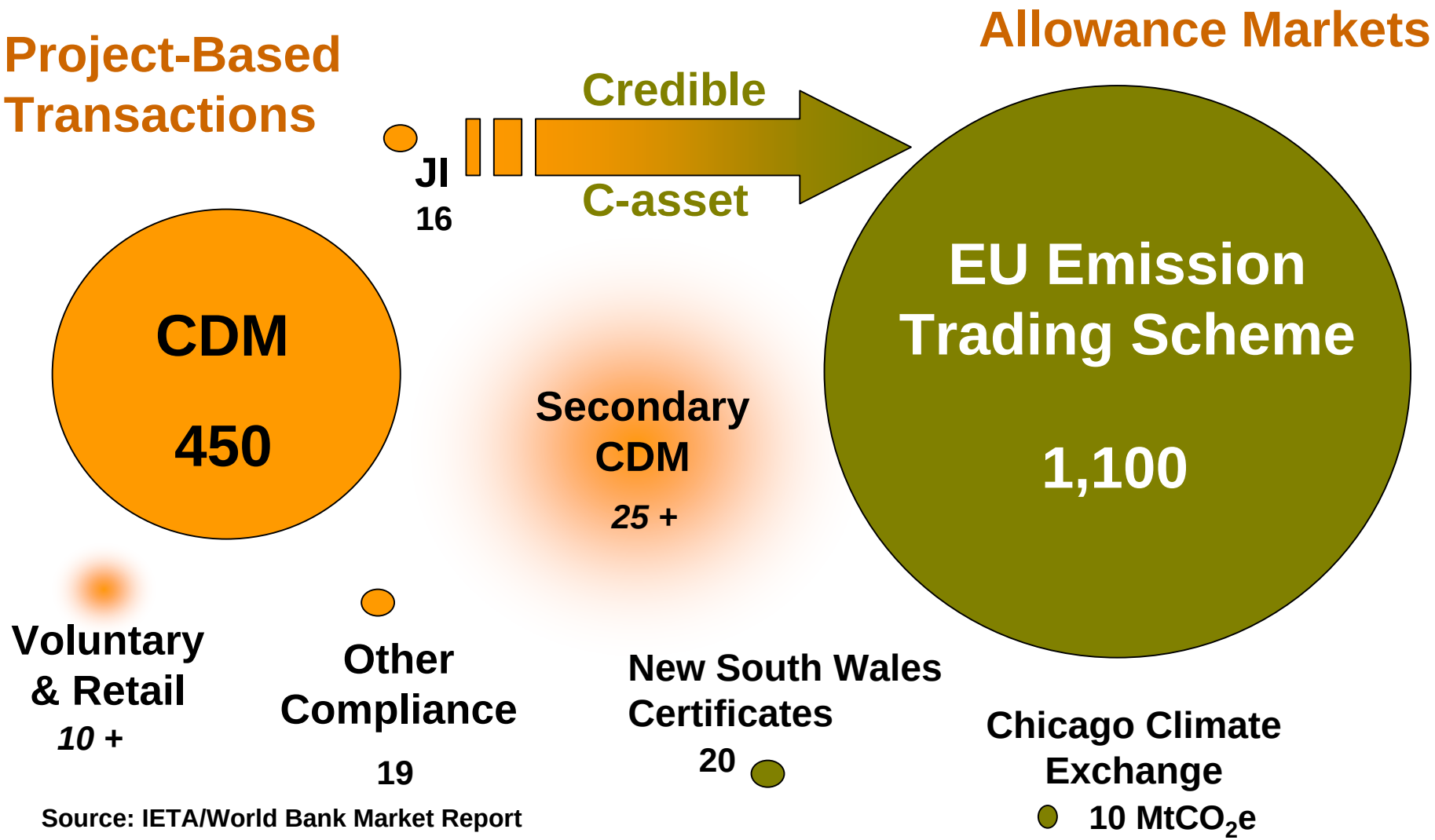
Supply/demand outlook until 2012 – the Kyoto Balance



All values are in Mton CO2

Source: UNEP Risoe and IETA

Structure of the Market 2006



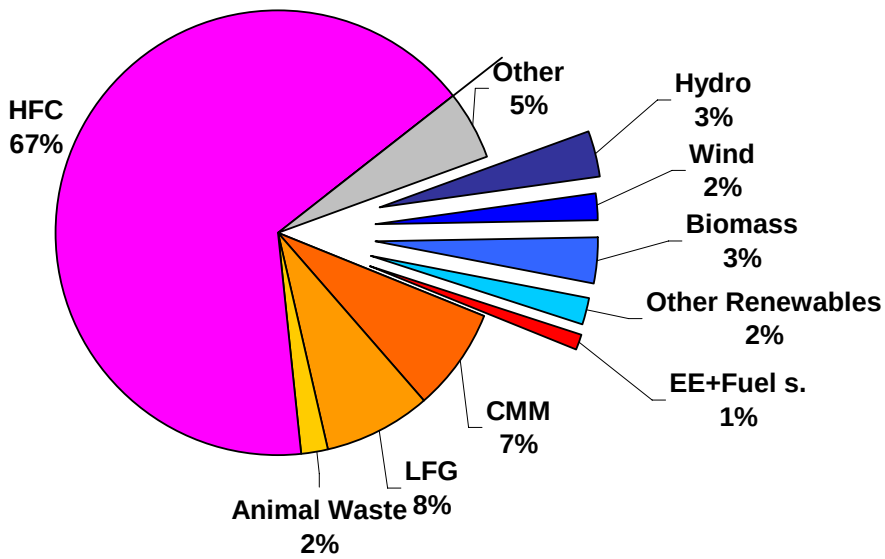
Source: IETA/World Bank Market Report

CDM Asset classes

Share of Clean Energy Rises

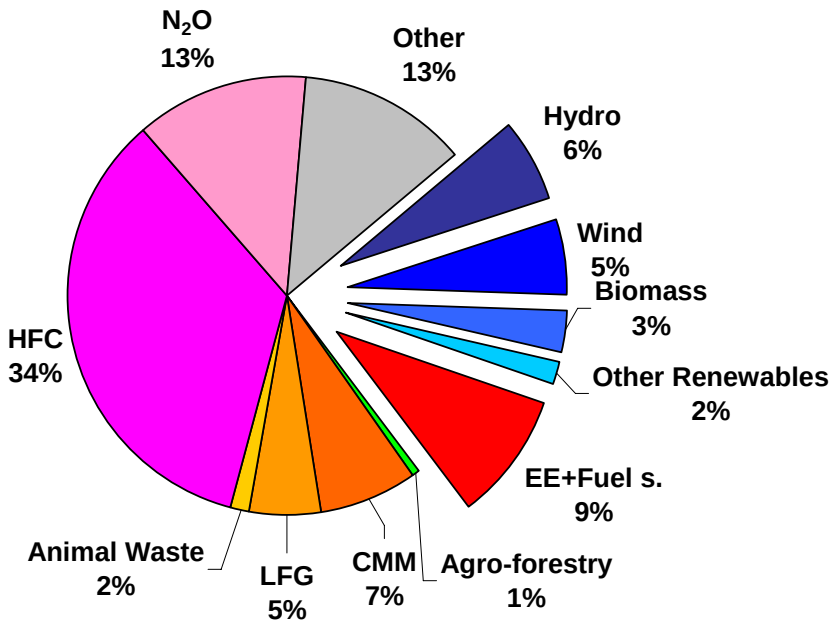
Clean energy: 11%

Jan. 2005 to Dec. 2005



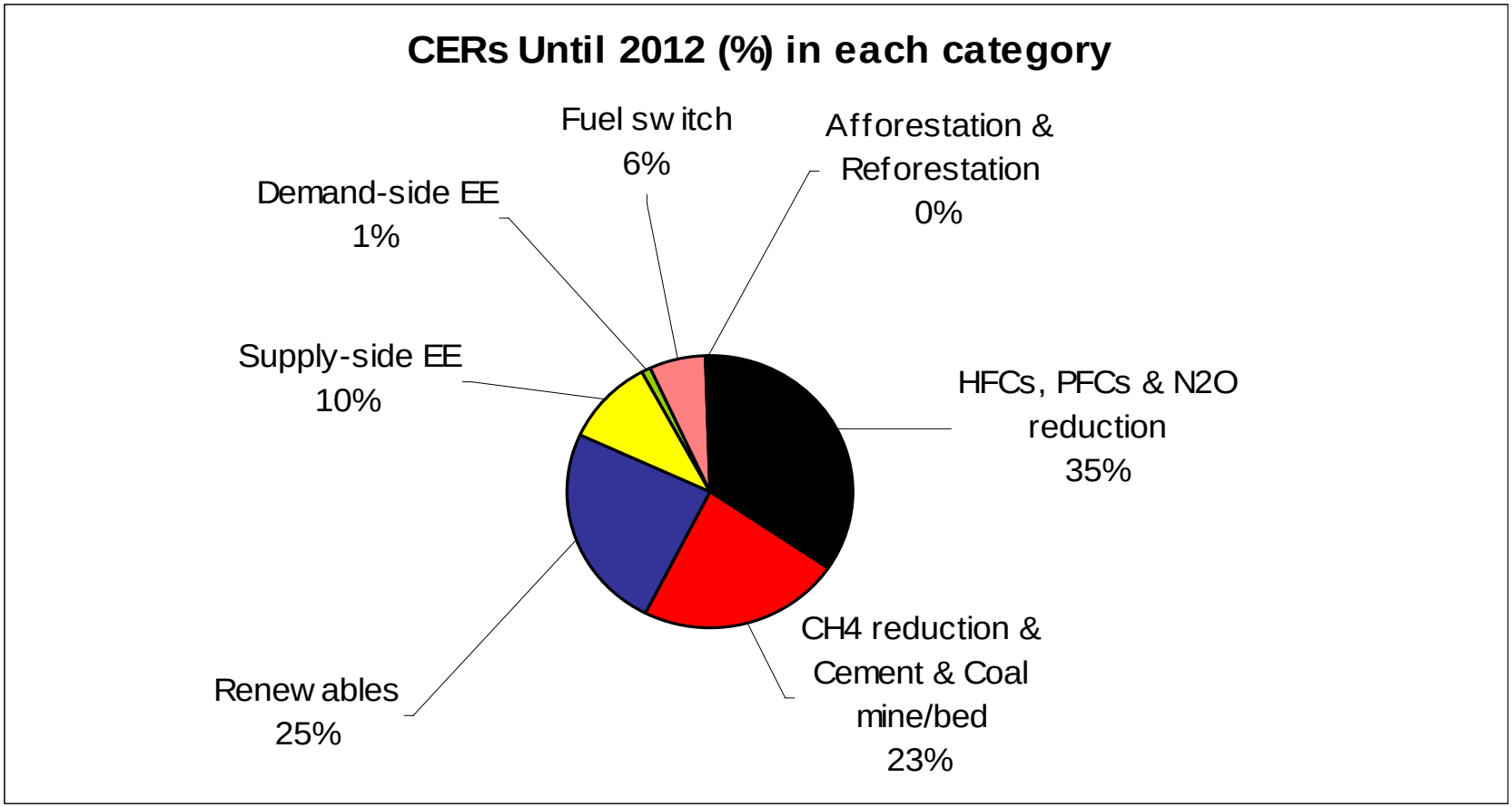
Clean energy: 25%

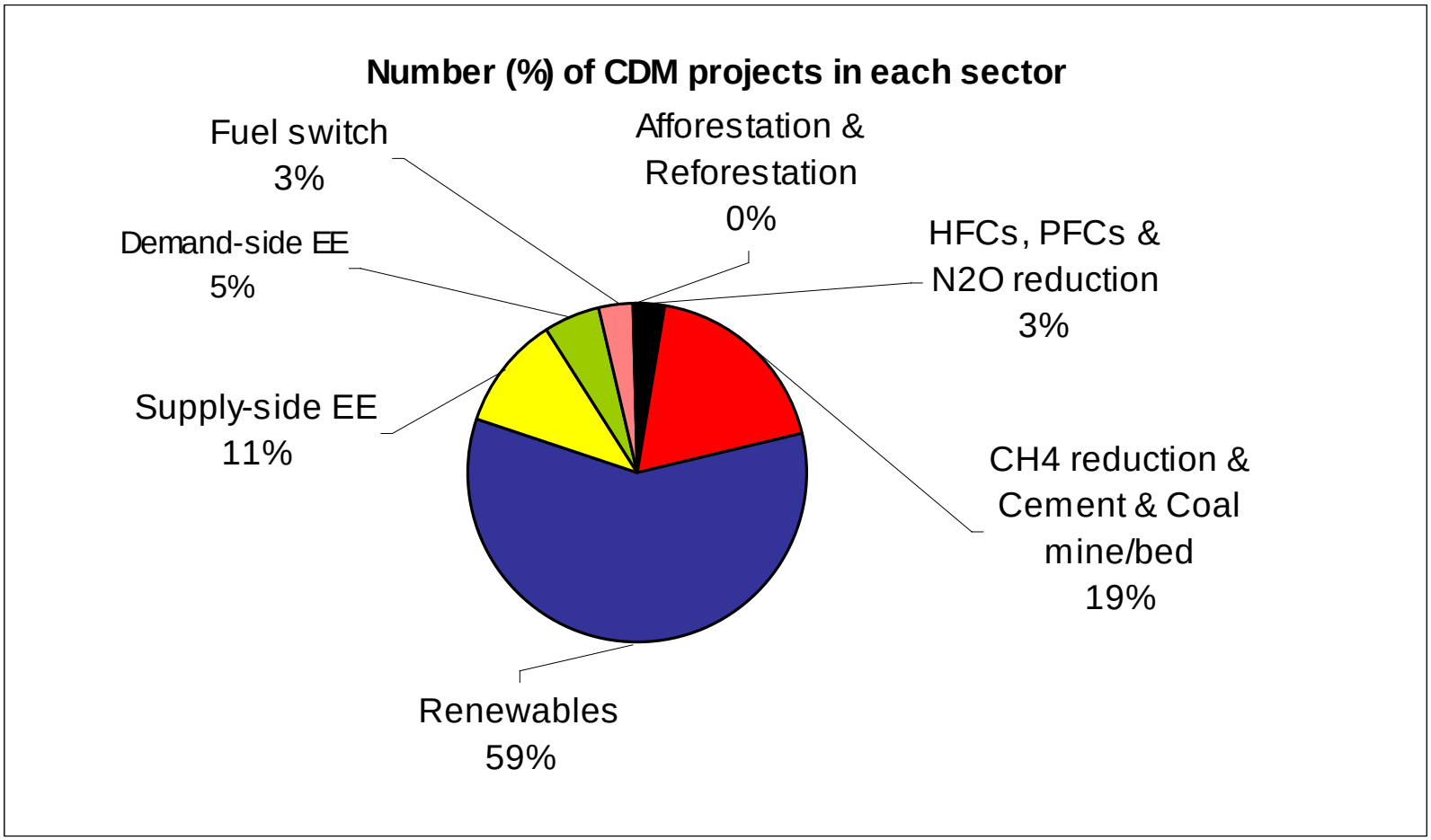
Jan. 2006 to Dec. 2006



(share of volumes)

Source: IETA/World Bank Market Report


CERs Until 2012 (%) in each category
Fuel switch 6%
Afforestation & Reforestation 0%
Demand-side EE 1%
Supply-side EE 10%
HFCs, PFCs & N2O reduction 35%
CH4 reduction & Cement & Coal mine/bed 23%
Renewables 25%


Number (%) of CDM projects in each sector
Fuel switch 3%
Afforestation & Reforestation 0%
HFCs, PFCs & N2O reduction 3%
Demand-side EE 5%
Supply-side EE 11%
CH4 reduction & Cement & Coal mine/bed 19%
Renewables 59%

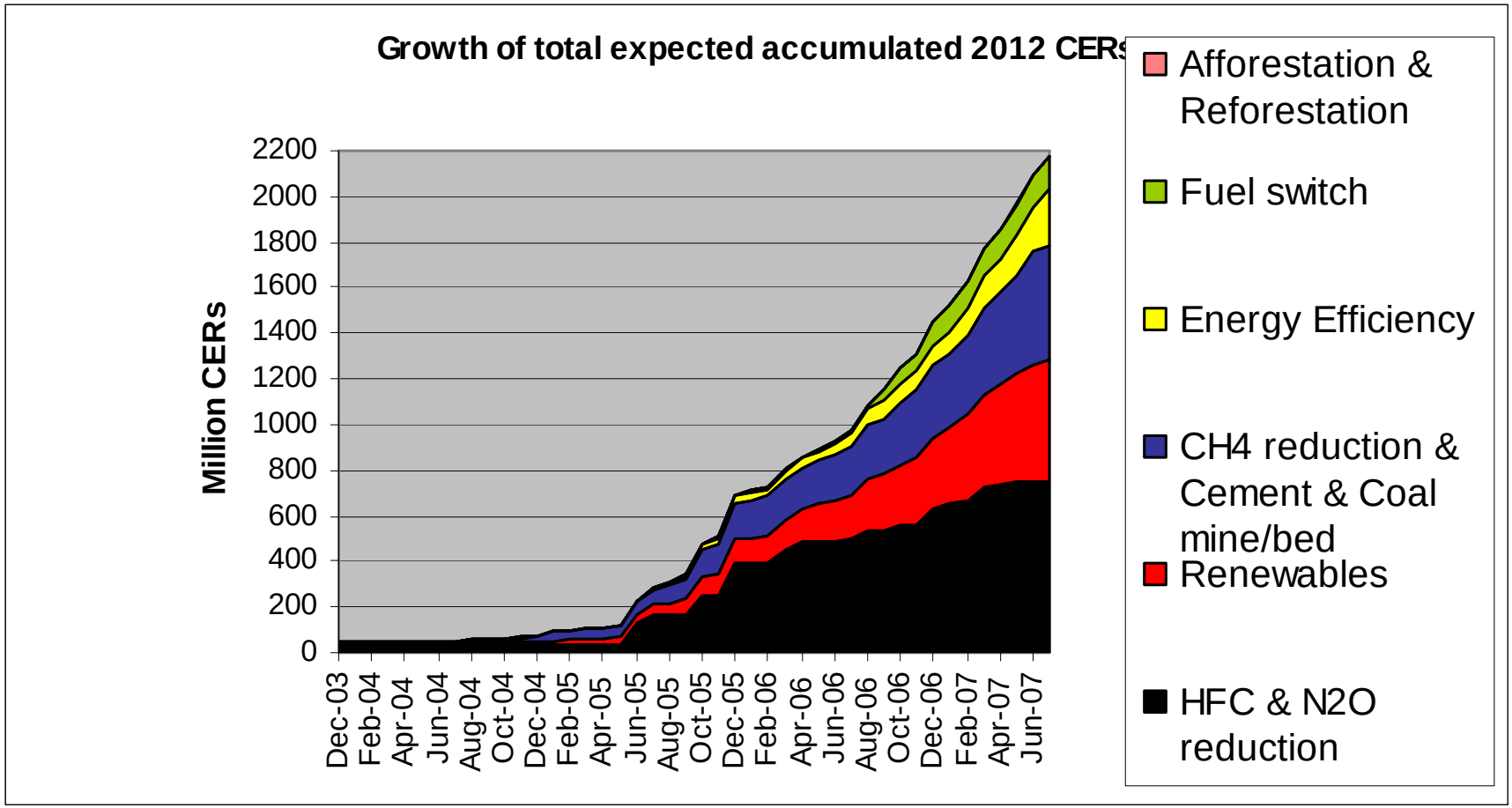
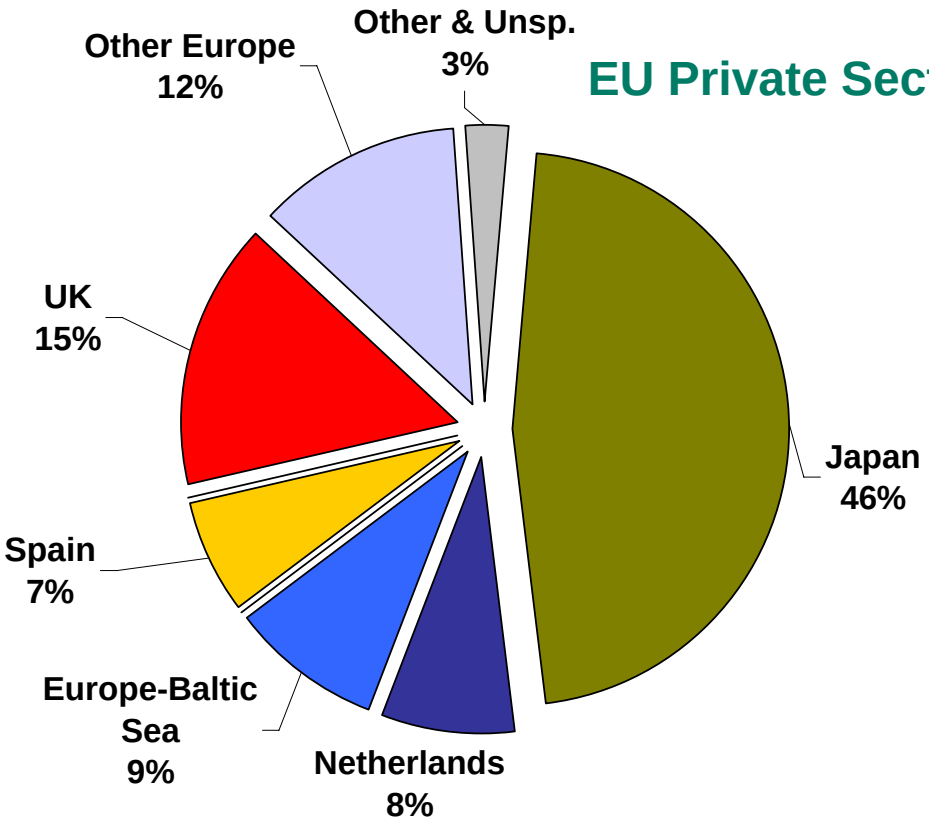

Growth of total expected accumulated 2012 CERs
Million CERs
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Dec-03
Feb-04
Apr-04
Jun-04
Aug-04
Oct-04
Dec-04
Feb-05
Apr-05
Jun-05
Aug-05
Oct-05
Dec-05
Feb-06
Apr-06
Jun-06
Aug-06
Oct-06
Dec-06
Feb-07
Apr-07
Jun-07
Afforestation & Reforestation
Fuel switch
Energy Efficiency
CH4 reduction & Cement & Coal mine/bed
Renewables
HFC & N2O reduction

Table10:

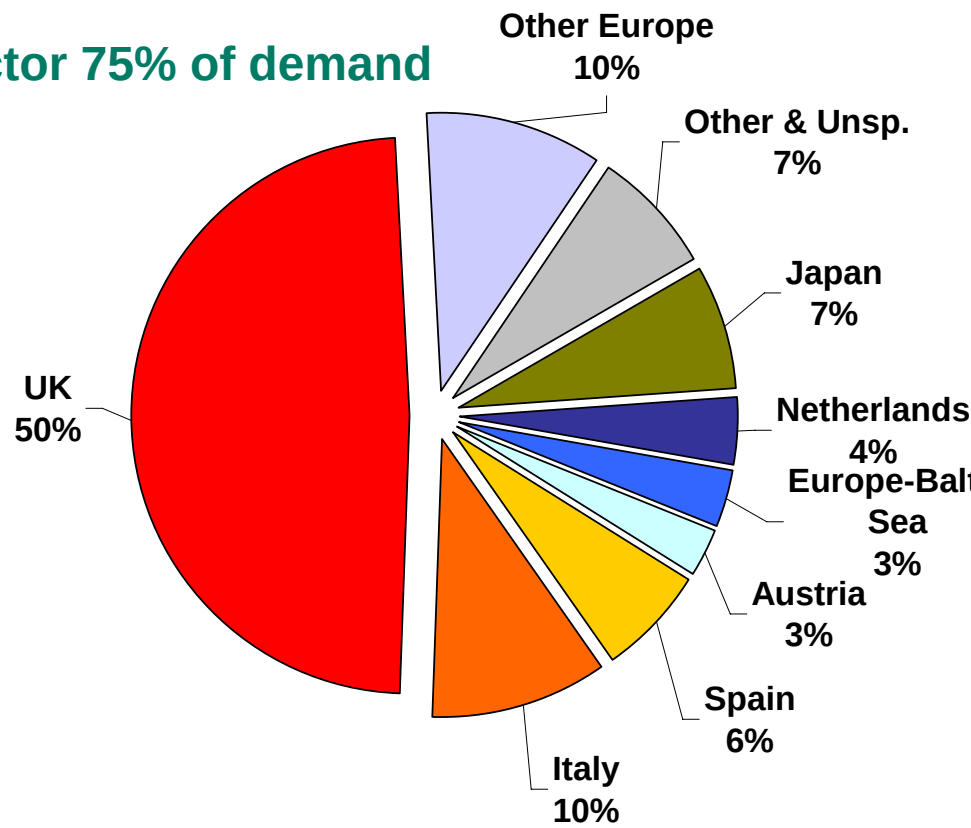
Type	CDM							
	number		CERs/yr (000)		2012 CERs (000)		CERs Issued (000)	
Biomass energy	431	19%	24880	7%	157721	7%	6592	10%
Hydro	500	22%	39960	11%	212661	10%	2304	4%
Wind	255	11%	19896	5%	116265	5%	1486	2%
EE own generation	225	10%	39463	11%	211879	10%	6200	10%
Agriculture	177	8%	6648	2%	44341	2%	1934	3%
Landfill gas	155	7%	32426	9%	194142	9%	2111	3%
Biogas	123	5%	6789	2%	36782	2%	240	0%
EE Industry	100	4%	3257	1%	19496	1%	369	1%
Fossil fuel switch	71	3%	25131	7%	140101	6%	640	1%
N2O	41	2%	42235	12%	248963	11%	9190	15%
Coal bed/mine methane	39	2%	19256	5%	153909	7%	0	0%
Cement	28	1%	3827	1%	29345	1%	594	1%
EE Supply side	25	1%	2640	1%	13663	1%	30	0%
Fugitive	21	1%	10897	3%	77668	4%	278	0%
HFCs	18	1%	81328	22%	501400	23%	31089	49%
EE Service	11	0%	42	0%	331	0%	0	0%
Geothermal	10	0%	1900	1%	11577	1%	102	0%
Afforestation & Reforestation	8	0%	842	0%	5460	0%	0	0%
Solar	7	0%	179	0%	1111	0%	0	0%
EE Households	5	0%	88	0%	517	0%	0	0%
Transport	4	0%	295	0%	2019	0%	0	0%
Energy distrib.	3	0%	112	0%	967	0%	0	0%
PFCs	2	0%	166	0%	944	0%	0	0%
Tidal	1	0%	315	0%	1104	0%	0	0%
Total	2260	100%	362577	100%	2182365	100%	63160	100%
HFCs, PFCs & N2O reduction	61	3%	123729	34%	751307	34%	40279	64%
CH4 reduction & Cement & Coal mine/bed	420	19%	73055	20%	499404	23%	4917	8%
Renewables	1327	59%	93921	26%	537220	25%	10725	17%
Supply-side EE	253	11.2%	42215	11.64%	226509	10.4%	6230	9.9%
Demand-side EE	120	5.3%	3683	1.02%	22363	1.0%	369	0.6%
Fuel switch	71	3.1%	25131	6.93%	140101	6.4%	640	1.0%
Afforestation & Reforestation	8	0.4%	842	0.2%	5460	0.3%	0	0.0%

Who is buying?

EU Private Sector 75% of demand



Jan. 2005 to Dec. 2005



Jan. 2006 to Dec. 2006

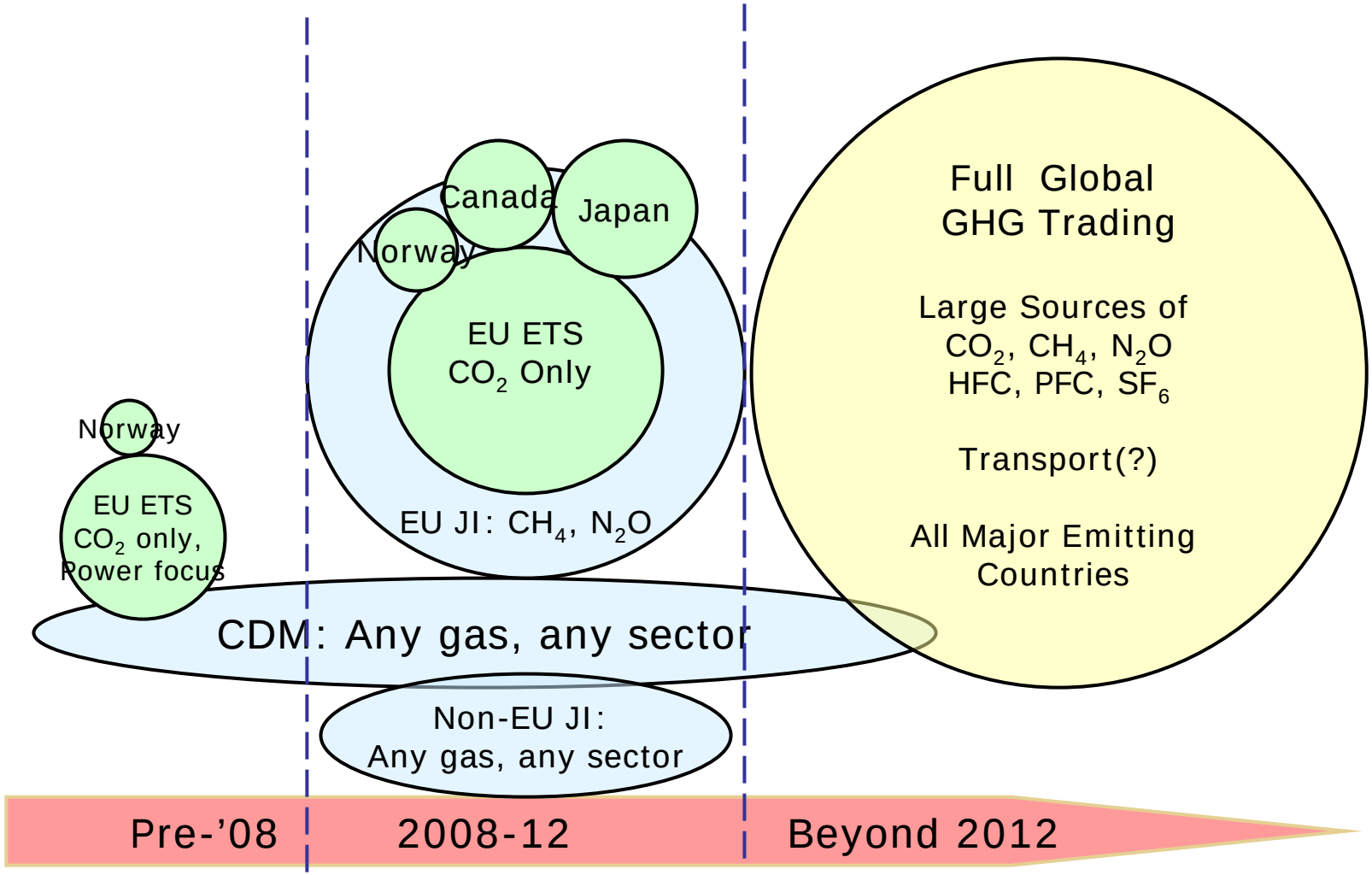
Source: IETA/World Bank Market Report

Sectoral distribution of CDM projects:

Demand-side Energy Efficiency and Forest projects are behind.

Type	number		CERs/yr (000)	
Hydro	426	21%	32143	10%
Biomass energy	411	20%	23515	7%
Wind	238	12%	18601	6%
Agriculture	177	9%	6650	2%
EE own generation	154	8%	28108	8%
Landfill gas	146	7%	30583	9%
Biogas	115	6%	6514	2%
EE Industry	94	5%	2802	1%
Fossil fuel switch	68	3%	24455	7%
N2O	38	2%	41789	12%
Coal bed/mine methane	36	2%	18825	6%
Cement	31	2%	4142	1%
Fugitive	21	1%	10897	3%
EE Supply side	20	1%	1164	0%
HFCs	18	1%	81328	24%
EE Service	11	1%	42	0%
Geothermal	8	0%	1774	1%
Solar	7	0%	179	0%
Afforestation & Reforestation	7	0%	831	0%
EE Households	4	0%	87	0%
Transport	4	0%	295	0%
Energy distrib.	1	0%	55	0%
PFCs	1	0%	86	0%
Tidal	1	0%	315	0%
Total	2037	100%	335181	100%
HFCs, PFCs & N2O reduction	57	3%	123203	37%
CH4 reduction & Cement & Coal mine/bed	411	20%	71096	21%
Renewables	1206	59%	83043	25%
Supply-side EE	175	8,6%	29326	8,7%
Demand-side EE	113	5,5%	3227	1,0%
Fuel switch	68	3,3%	24455	7,3%
Afforestation & Reforestation	7	0,3%	831	0,2%

IETA Vision: Global GHG Market Post-2012



- **All actions by government, whether labelled as "market-based" or not, fall on commercial actors to implement who take an economic, market-based approach to achieving obligations and reaping rewards.**
- **Key word is "investment" – all emission reductions require additional investment that is based on economic decision making in a market-driven context.**
- **Post-2012 structures should recognize, and not hinder, the *market* context for *all* policies and measures.**

- **The backbone of a GHG market approach should be through emissions trading and project offsets, and should build upon and improve the administrative and organisational frameworks that have already been put in place under the auspices of the Kyoto Protocol.**
- **Meaningful targets should be promoted in coordination with access to business friendly market approaches, especially offset programs such as the CDM and JI.**

- **Market-based regimes ensure broad participation and encourage over-compliance by GHG emitters.**
- **If there are gaps, uncertainties or inconsistencies in GHG reduction targets, capital markets find it difficult to depend on carbon pricing in financial models, thus undermining investment in lower carbon technologies.**
- **Barriers that limit access to market-based means of compliance raise cost and reduce flexibility.**

- **Market mechanisms should be central to compliance and eligible in all aspects of the post-2012 GHG regime.**
- **Access to market mechanisms (emissions trading, project-based crediting) should be allowed to all emitters across all jurisdictions for compliance.**
- **Market-based approaches are not limited to current mechanisms; new mechanisms added post-2012 should rely upon price signals sent by long-term commitments.**

- **IETA believes that CDM and JI are critical for the success and viability of a market-based approach.**
- **Since COP/MOP1 we have seen a more sophisticated private sector that is increasingly engaged in CDM projects and a regulator (CDM EB) that has finally been given more resources to discharge its mission.**
- **Post-2012 architecture needs to consider in detail what standards and mechanisms are best to support wider and deeper emissions trading among legal entities.**

- **Investors and market participants need predictability and certainty in order to plan new investments in lower carbon and higher efficiency technologies.**
- **It is essential that a post-2012 price for carbon be available & that continuity exist between pre/post-2012.**
- **It is increasingly apparent that such continuity must be clarified *now* to support long-term planning and continue to expand investment.**