

Summary¹

The major certificate issuing countries are now Norway and Sweden, then Finland and the Netherlands; with Sweden, Netherlands and, to a lesser extent, Austria and Belgium are the major redeemers. The largest exporters are Sweden, Norway and Finland; while Netherlands is the major importer, followed by Germany, Flanders and Austria.

Regarding technologies, Hydro and industrial and commercial waste continue to increase at the expense of forestry; while activity relating to wind, municipal solid waste and agricultural waste has remained relatively static.

The proportion of certificates that are redeemed has risen sharply since 2005 to 53% overall (70% this year).

Phil Moody
General Secretary, Association of Issuing Bodies

1st November 2006

¹ Readers should note that:

1. All certificates are 1MWh.
2. As the base data for issued certificates derives from meter data, there is always an element of delay in gaining an accurate picture of certificates issued for a particular month. Thus the most recent [3] months will always be understated and the corresponding information should be treated with caution.
3. Historic import and export figures continue to be misleading due to the practice of redeeming certificates in one country and transferring the renewable benefit over national borders by means of redemption statements. This appears to be increasingly replaced by inter-CMO transfers.
4. Data has been collected for all months to date, from all parties.

Figure 1: raw data – issuing and redemption

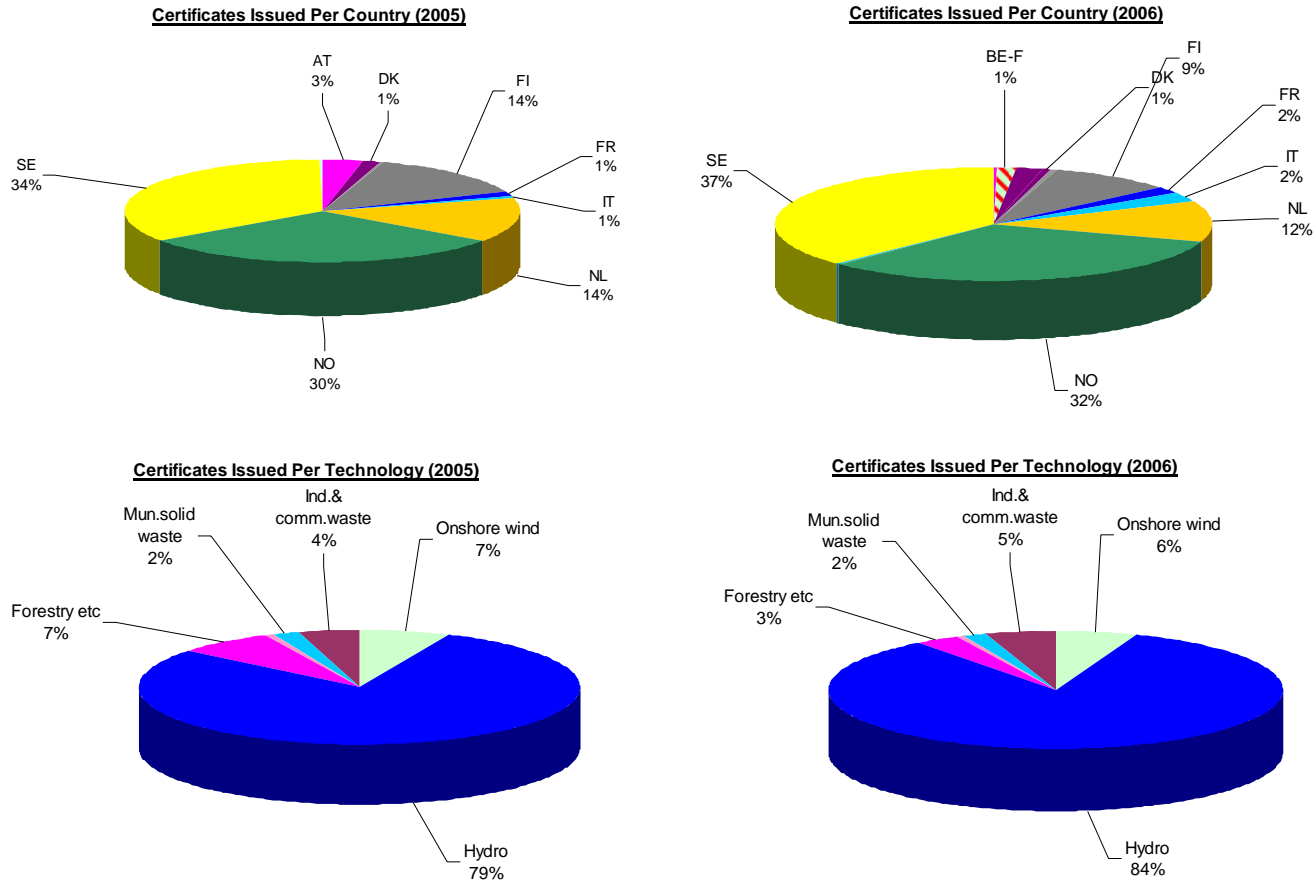
Issuing & Redemption for all technologies														
	Total		2006		2005		2004		2003		2002		2001	
	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed
Austria	7,137,660	13,596,895	115,105	3,341,670	1,560,474	3,122,146	2,452,748	6,129,706	1,950,584	918,704	1,057,599	84,669	1,150	
Belgium Flanders	534,839	2,308,670	534,839	2,308,670										
Belgium and Luxembourg	113,390	945,381		437,651		450,730		50,000		7,000	59,150		54,240	
Belgium Wallonia														
Switzerland	1,745,015	693,596	796,734	55,389	59,782	495,653	512,442	102,924	276,837	35,530	99,220	4,100		
Germany	48,351	657,323		589,200		25,036	5,963	43,087	41,789		450		149	
Denmark	1,935,338	24,621	274,022	7	631,304		777,965		24,686	24,614	74,233		153,128	
Spain	2,869,468	382,851	119,360	68,486	126,319	174,334	901,135	93,400	795,287	46,631	534,378		392,989	
Finland	32,499,150	9,888,401	3,772,835	502,241	6,734,247	2,254,194	8,260,681	1,412,330	7,177,954	4,192,610	5,840,401	1,527,025	713,032	1
France	2,025,634	1,276,720	732,661	514,081	701,808	461,004	443,948	214,878	142,665	86,757	4,552			
Greece														
Ireland														
Iceland														
Italy	1,838,209	681,746	972,083	352,143	418,397	241,048	73,970	76,873	59,549	10,557	302,814	1,125	11,396	
Netherlands	14,809,831	31,081,036	4,755,466	8,859,843	6,676,914	14,569,852	2,923,863	7,542,276	250,536	107,962	203,052	1,103		
Norway	44,455,053	6,493,299	13,005,547	1,380,216	14,506,286	1,101,274	5,625,516	827,342	7,817,149	725,706	3,500,555	2,458,761		
Poland														
Portugal	159,685		109,484		50,201									
Sweden	42,602,641	13,086,381	14,888,501	9,707,045	16,589,875	88,602	5,832,690	59,596	2,040,632	2,106,088	3,150,720	1,125,050	100,223	
Slovenia	3,768,110	1,792,644		23,462	167,396	1,769,182	3,600,714							
Turkey														
UK	90,158										90,158			
All countries	156,632,532	82,909,564	40,076,637	28,140,104	48,223,003	24,753,055	31,411,635	16,552,412	20,577,668	8,262,159	14,917,282	5,201,833	1,426,307	1
Percentage redeemed		53%		70%		51%		53%		40%		35%		0%

Issuing & redemption for all countries														
	Report for all countries		2006		2005		2004		2003		2002		2001	
	Issue	Redeem	Issued	Redeemed	Issued	Redeemed	Issue	Redeem	Issue	Redeem	Issue	Redeem	Issue	Redeem
Onshore wind	8,185,688	4,519,997	2,291,342	1,569,617	3,261,815	1,945,381	2,131,551	804,795	309,845	153,738	166,708	46,465	24,427	1
Offshore wind	14,446	5,720			1,542	2,995	9,636	2,539	4	186	2,008		1,256	
Photovoltaic	7,761	4,401	2,583	1,501	3,480	2,895	1,685	5	13					
Thermal														
Hydropower	111,564,213	50,795,884	33,636,258	21,923,505	38,084,395	16,185,307	19,947,434	7,989,926	11,967,408	1,759,895	7,325,326	2,937,251	603,392	
Onshore tidal														
Offshore tidal														
Onshore wave														
Offshore wave														
Geothermal	261,516	102,896			35,627	36,081	53,431	55,175	6,434	10,517	166,024	1,125		
Energy crops	277,160	195,955	2,696	2,255	68,909	70,643	59,023	56,457	66,513	52,078	36,033	14,522	43,986	
Forestry etc	27,888,153	22,414,533	1,227,646	2,556,376	3,435,937	4,579,255	7,767,140	6,917,876	7,945,838	6,201,910	6,850,232	2,159,116	661,360	
Landfill gas	545,751	182,024	198,498	89,905	218,874	45,974	105,368	36,968	3,890	742	19,121	8,435		
Sewage gas	36,205	35,577	966	4,825	3,646	546	6,364	5,025	1,075	25,181	24,154			
Other biogas	105,931	41,739	69,955	23,924	26,234	16,316	9,112	1,499	630					
MSW	2,683,565	1,165,219	606,769	591,362	946,025	284,092	536,345	283,780	257,630	3,026	244,910	2,955	91,886	
IB&CW	5,062,143	3,445,621	2,039,924	1,376,834	2,136,519	1,583,570	784,546	398,367	18,388	54,886	82,766	31,964		
Total	156,632,532	82,909,564	40,076,637	28,140,104	48,223,003	24,753,055	31,411,635	16,552,412	20,577,668	8,262,159	14,917,282	5,201,833	1,426,307	1

The tables above display issue and redemption statistics for each year to date, and for 2001-6 (in total). These, and the following charts, show that volumes issued and transferred continue to increase at a greater rate than last year while redemption has increased markedly.

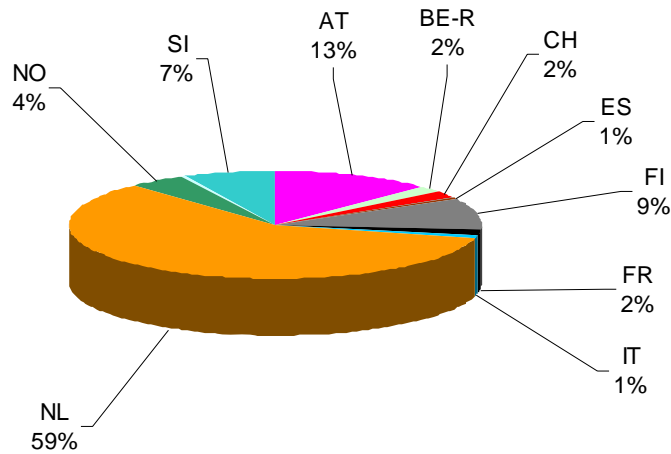
Comparing 2005 with 2006 to date, the major certificate issuing countries remain Norway and Sweden, then Finland and Netherlands. However, the position of Austria has been replaced by Belgium (Flanders) and France and Italy are growing.

Regarding technology, hydro and industrial & commercial waste continue to increase at the expense of forestry; while wind, municipal solid waste and agricultural waste hold their own.

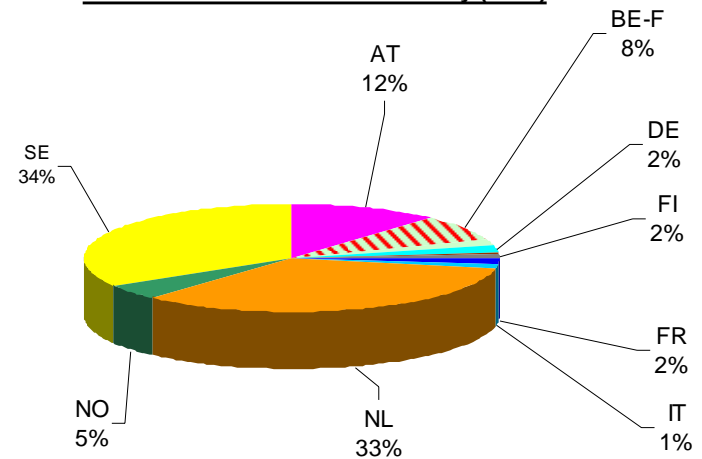


Again comparing 2005 with 2006 to date, and regarding redemption, Sweden seems to have redeemed an enormous number of certificates, although the reasons for this are unclear. Belgium (Flanders) is now evident, and Germany is gaining a presence. On the other hand, Finland has decreased markedly and Slovenia and Spain have disappeared altogether.

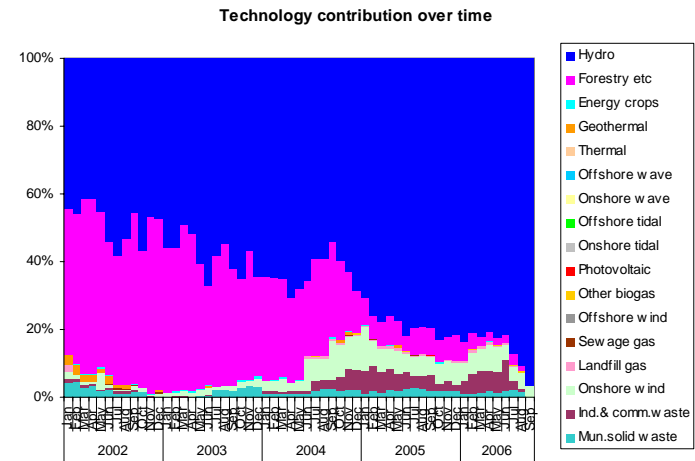
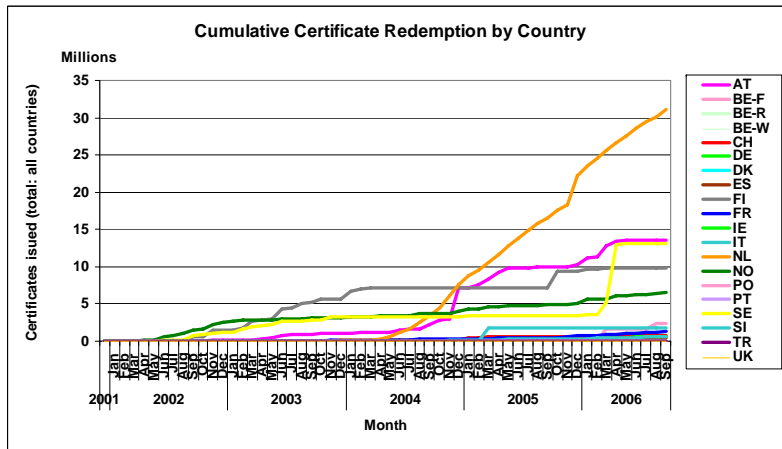
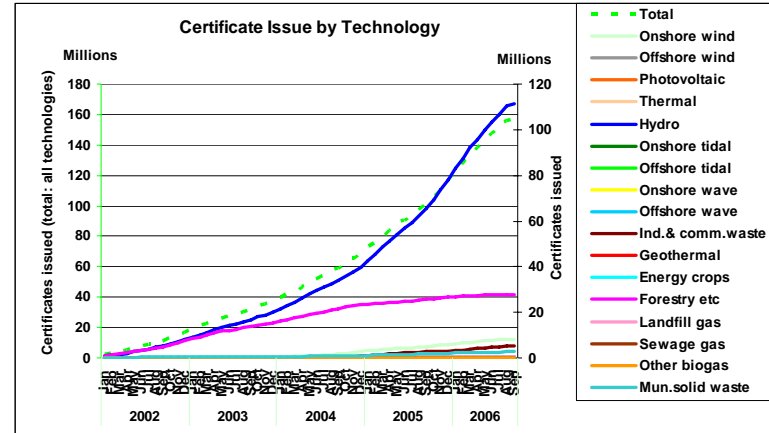
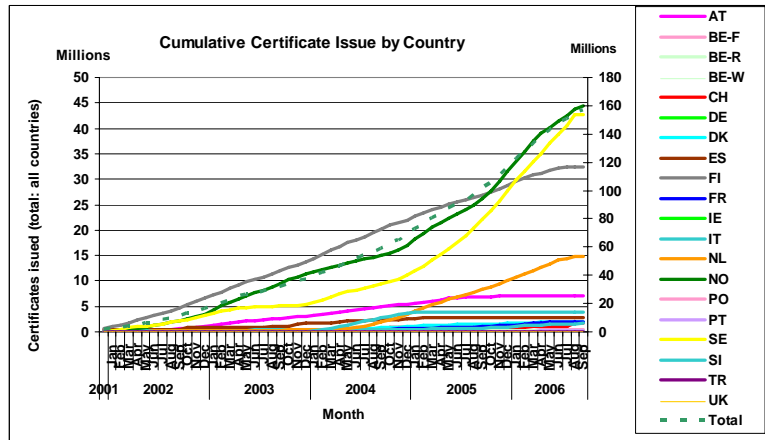
Certificates Redeemed Per Country (2005)



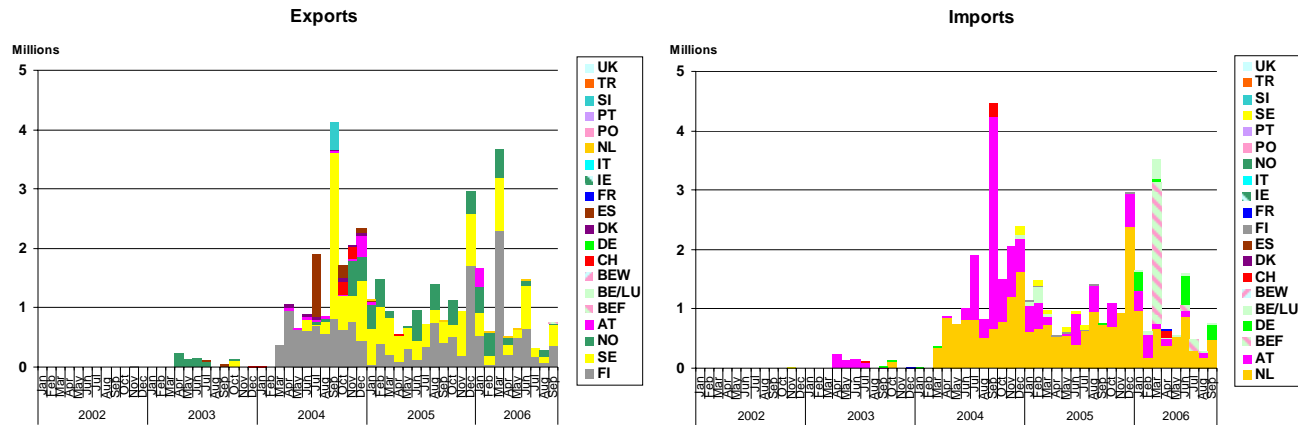
Certificates Redeemed Per Country (2006)



Issuing and redemption continue to increase fairly steadily. Of further note is that the volume of hydro issued and redeemed continues to increase substantially at the expense of forestry and agricultural waste, while wind and waste seem to have levelled out.

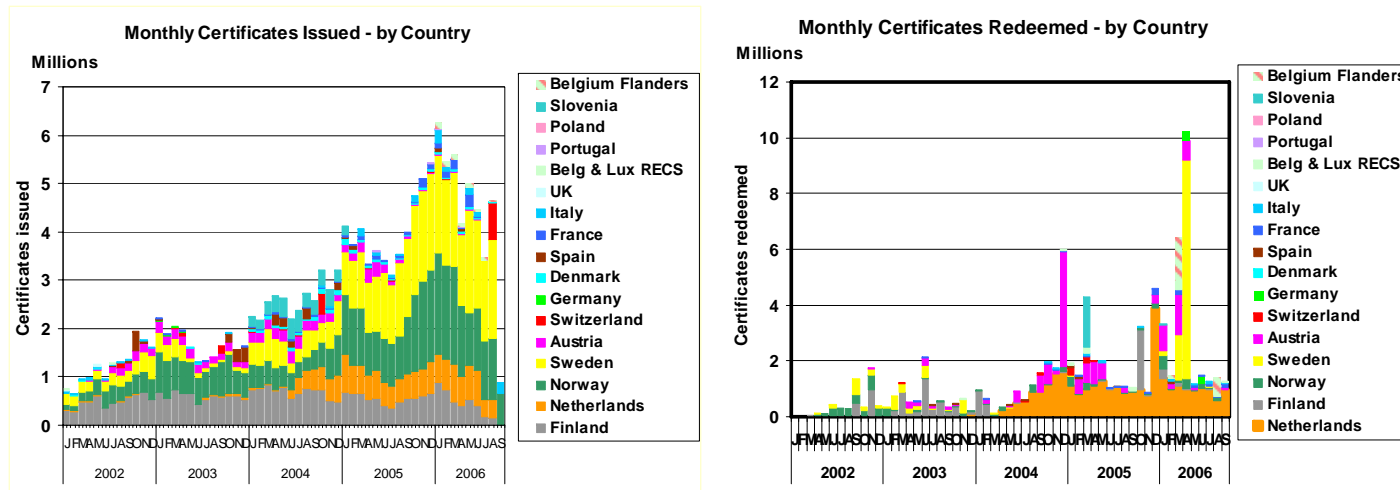


The largest exporters remain Sweden, Norway and Finland; while Austria and Netherlands remain the major importers. However, Belgium (Flanders) and Germany are now making their presence felt.



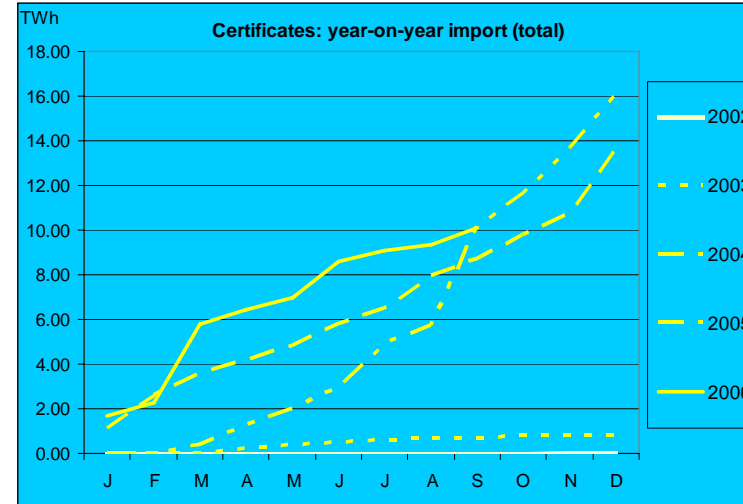
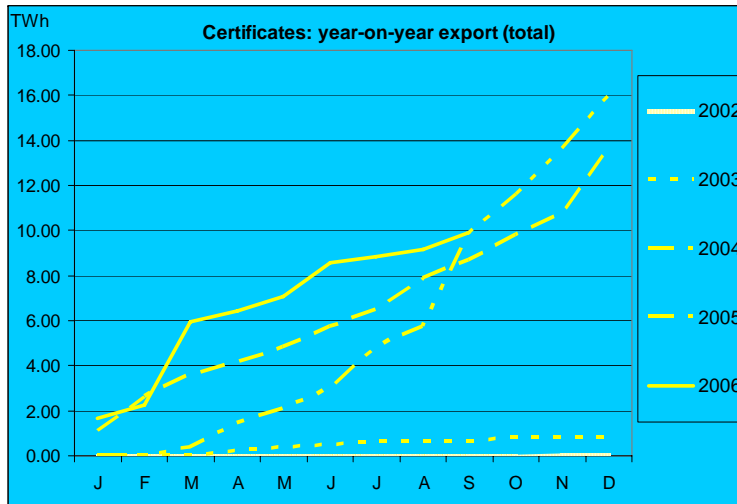
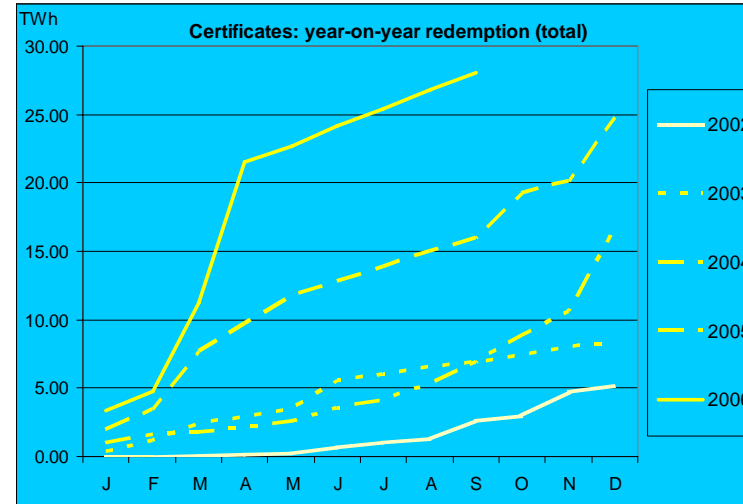
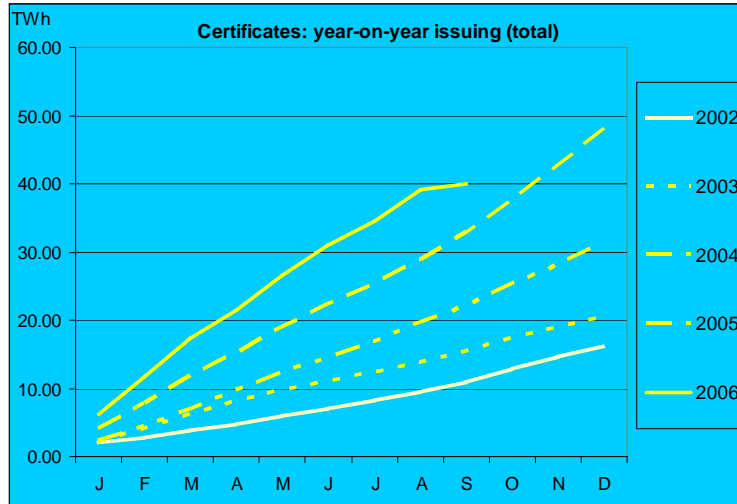
Monthly activity

The following bar charts summarise monthly issuing and redemption, clearly showing the influence on international trade of the consuming countries – Netherlands and Austria; and of the producing countries - Finland, Norway, Sweden and Netherlands, with Switzerland making a recent showing.

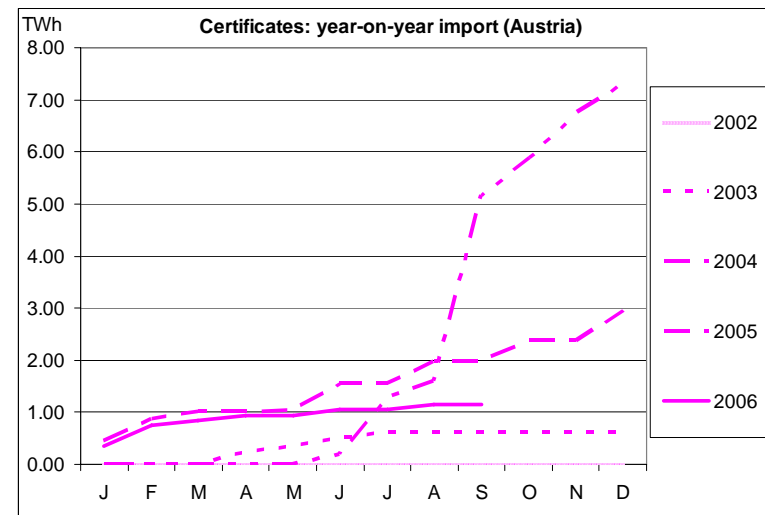
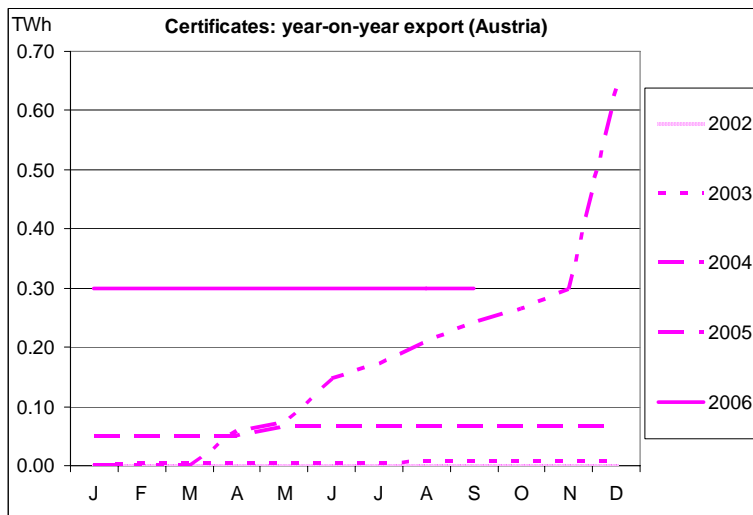
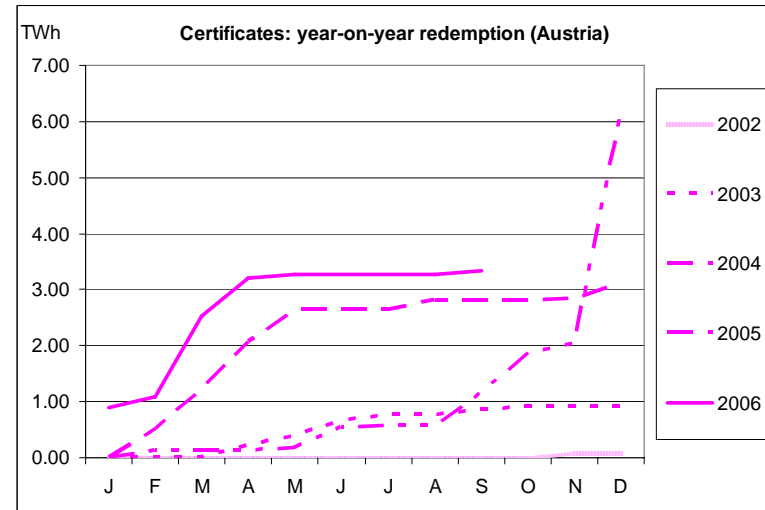
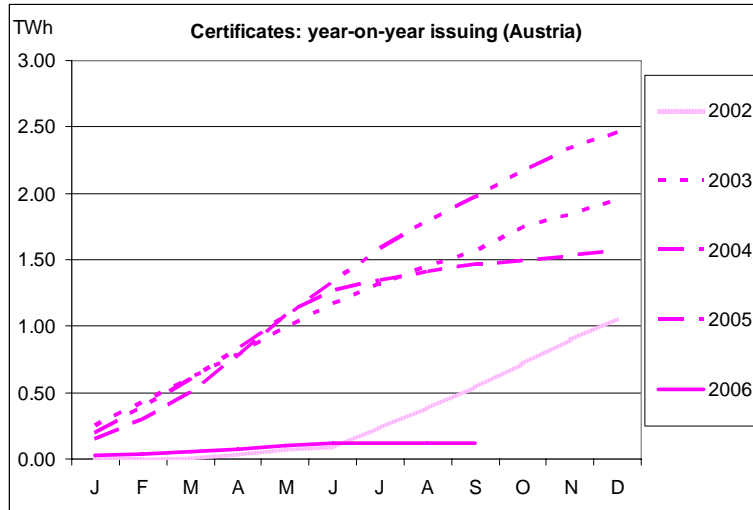


Year-on-year

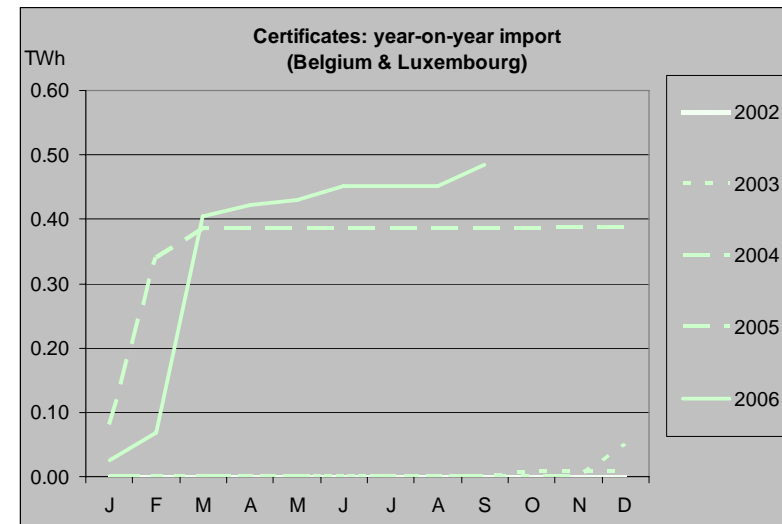
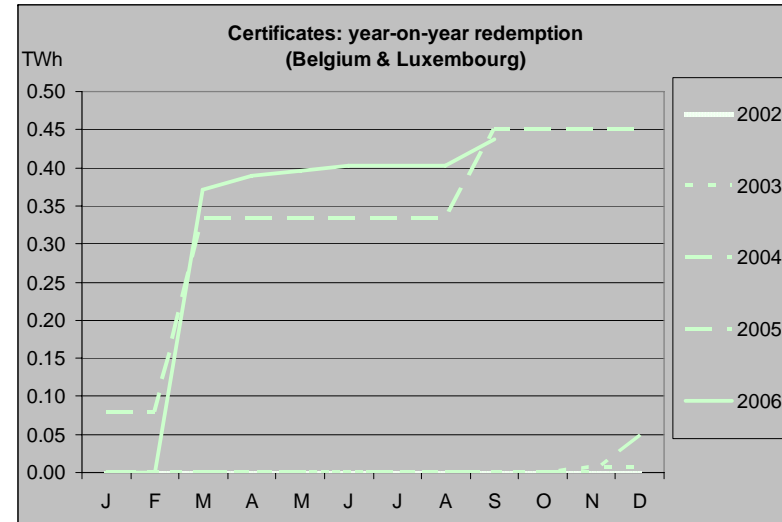
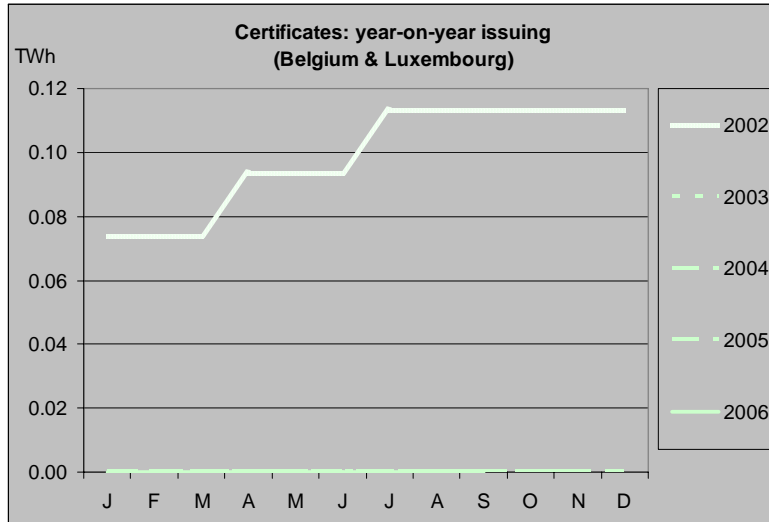
While issuing continues at a higher rate in the last year, redemption has increased dramatically. International trade continues at about the same rate as last year.



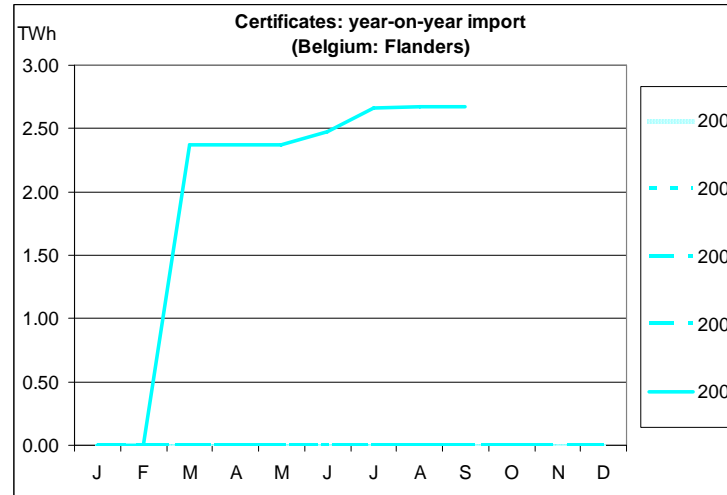
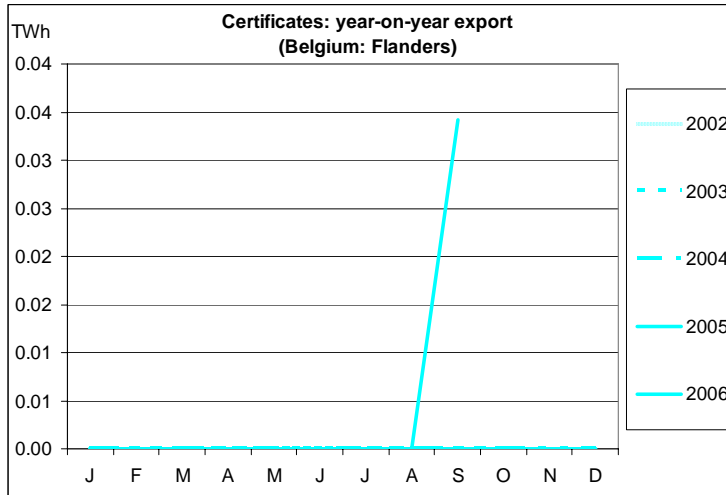
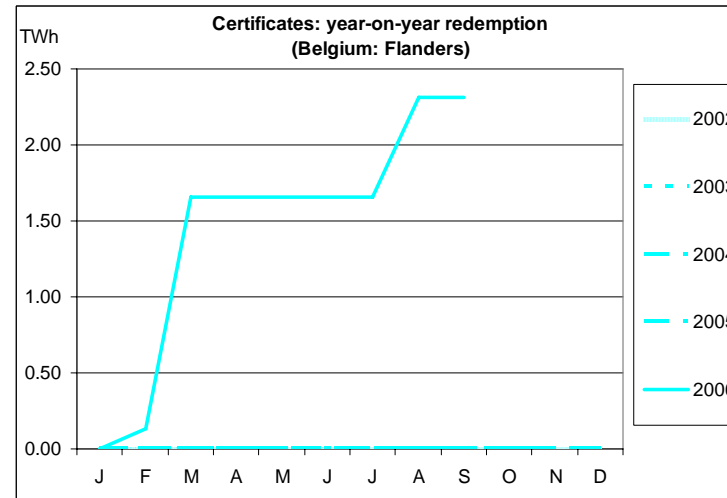
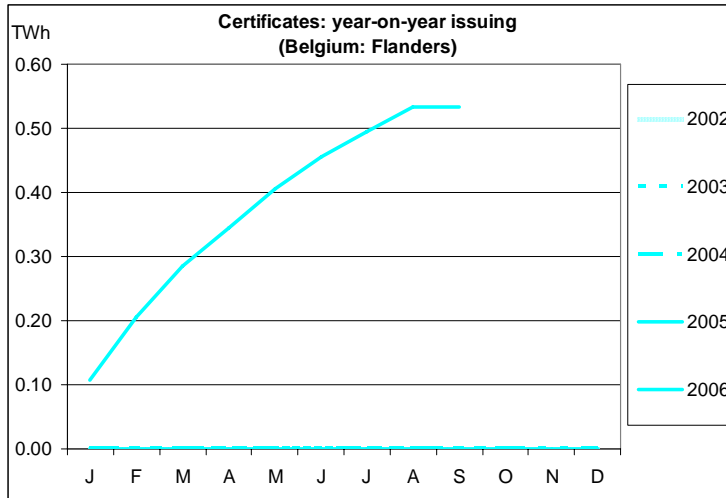
Austria has issued very few certificates this year, but continues to increase redemptions, mostly it seems from imported certificates.



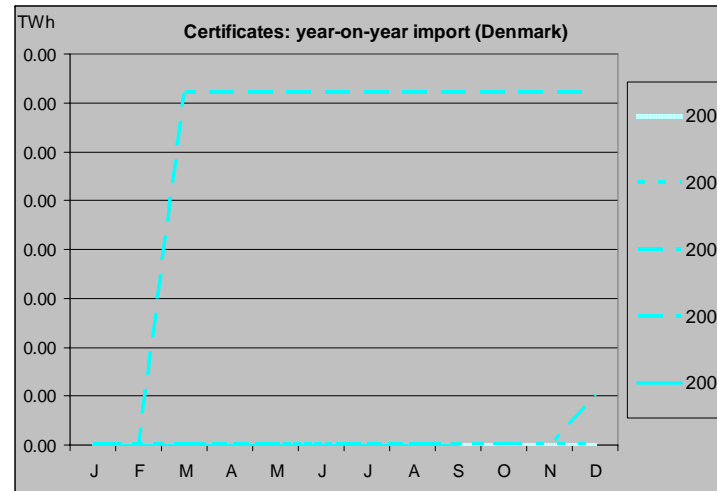
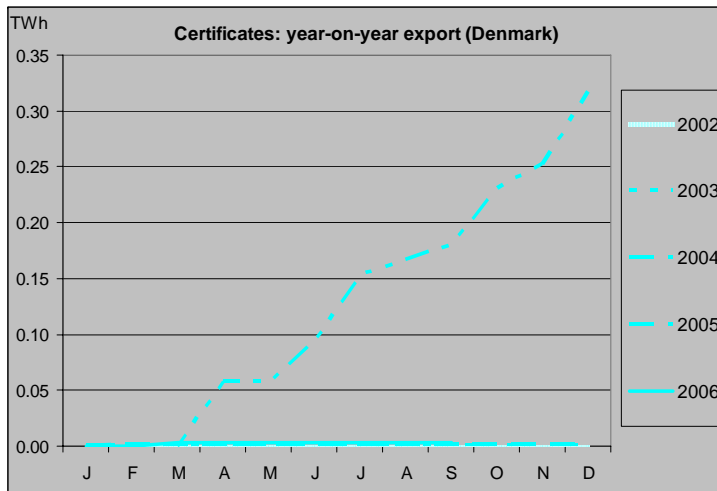
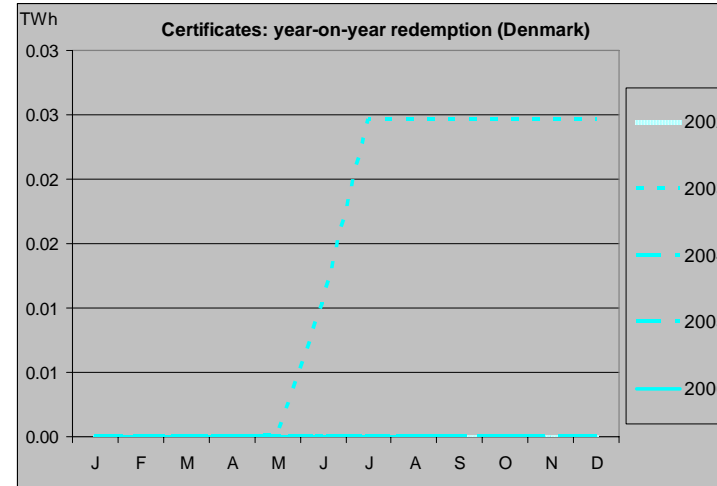
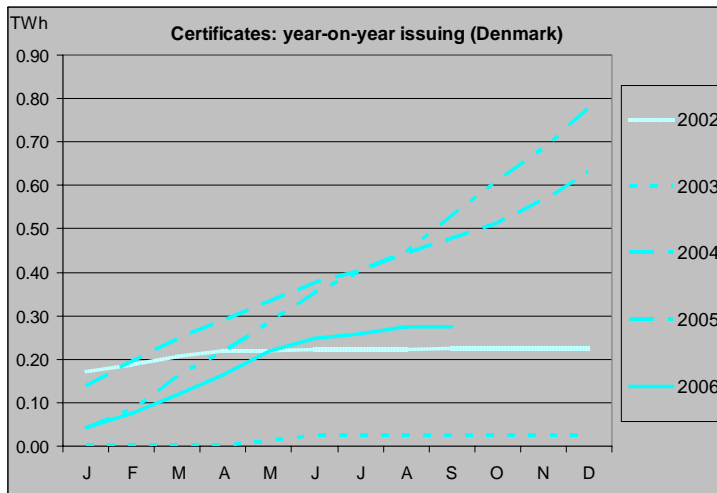
Belgium / Luxembourg. RECS activity is expected to diminish once Wallonia commences operations, but in the meantime eCerte continues to import and redeem certificates at above previous levels.



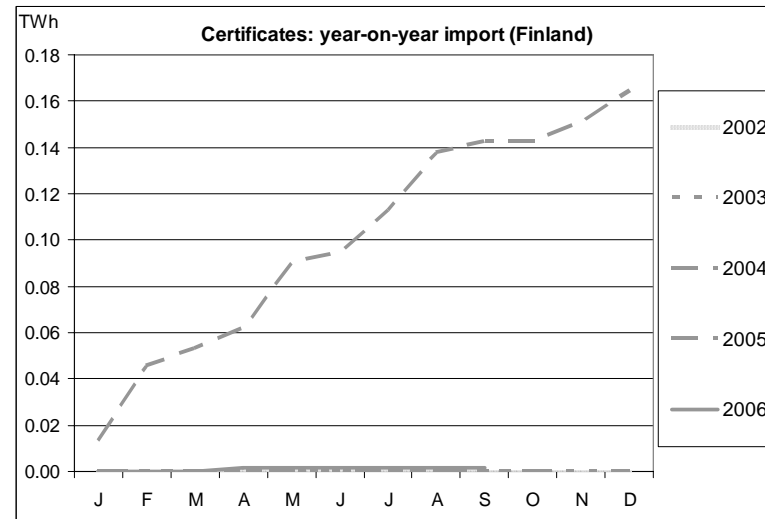
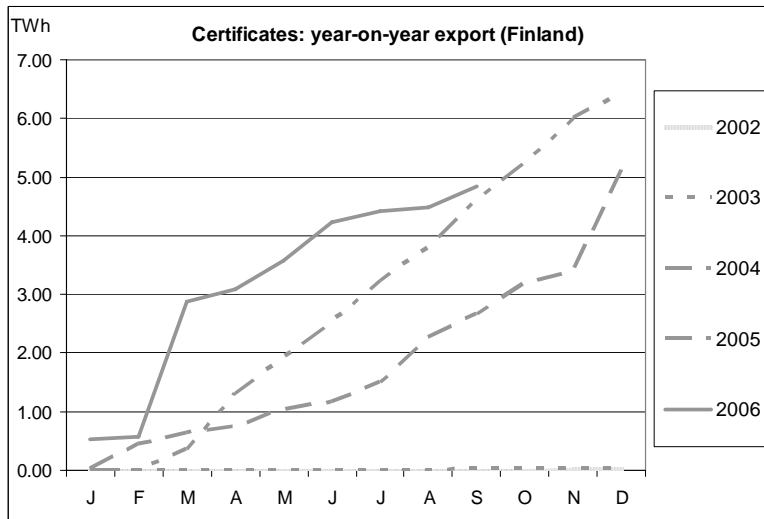
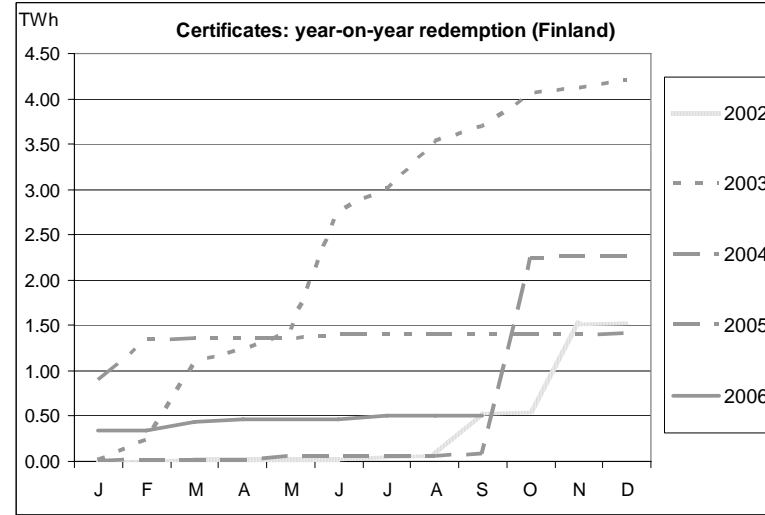
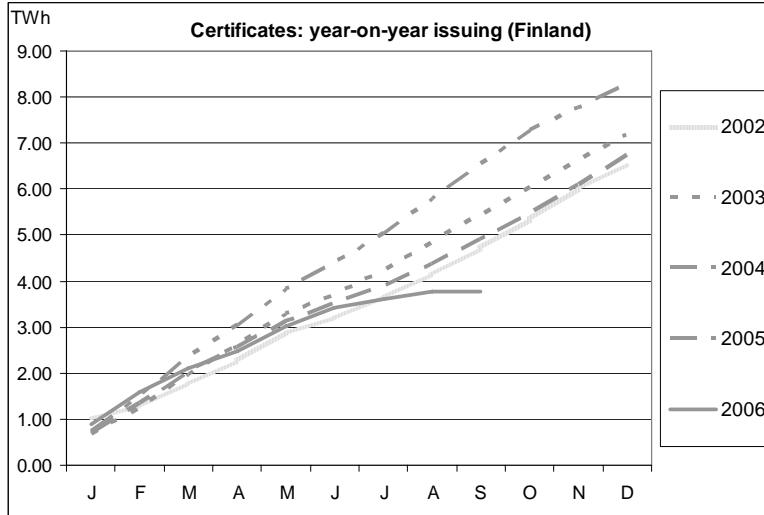
Belgium (Flanders). Certificate issue continues to grow along with redemption and international trade. Exporting has now commenced.



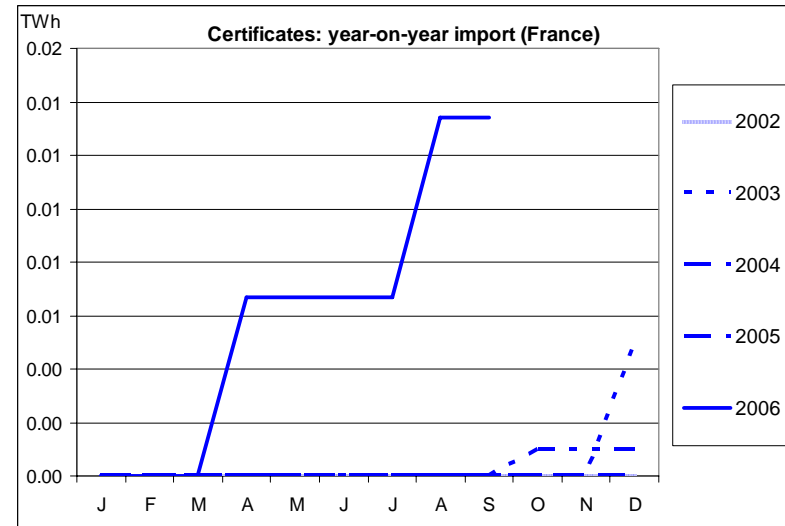
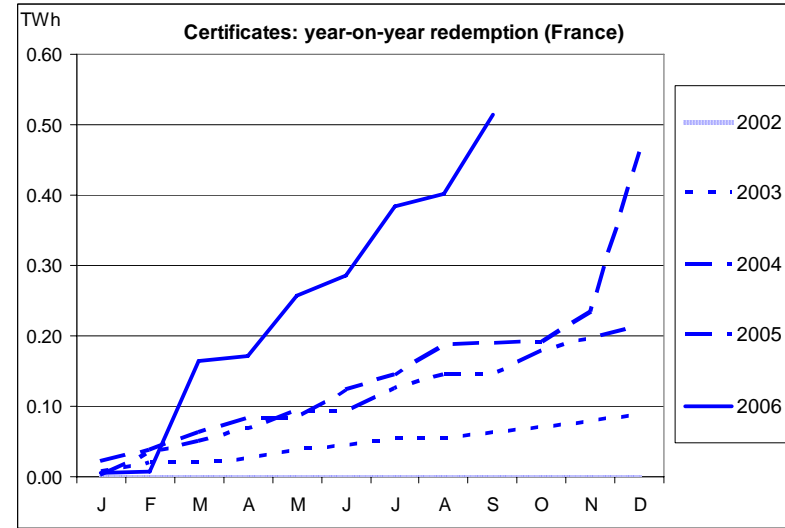
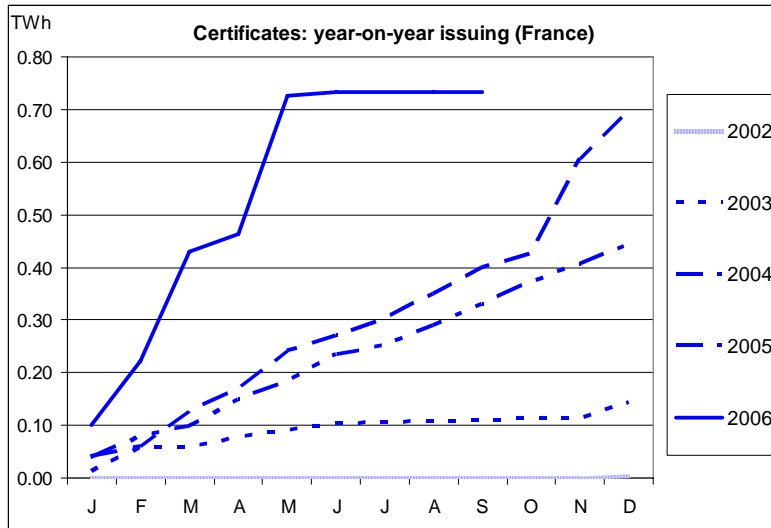
Denmark. Denmark continues to be a minor participant in the market.



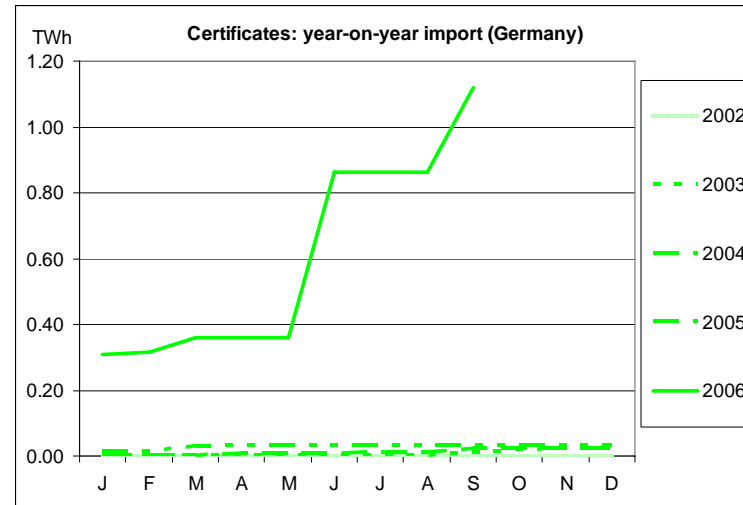
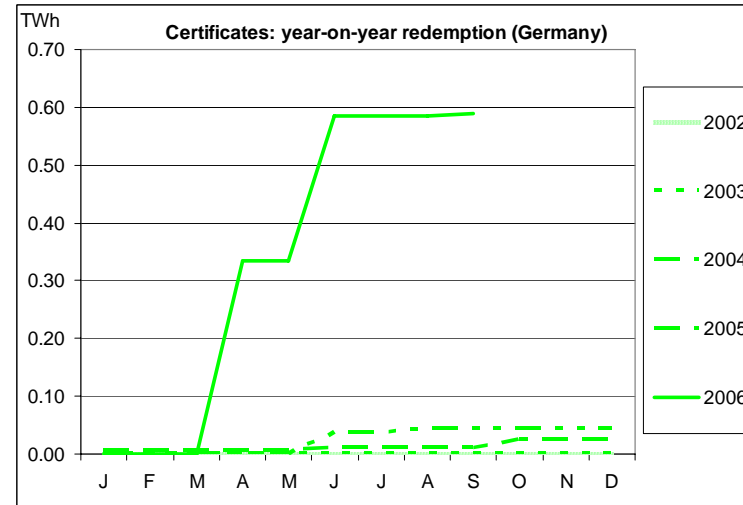
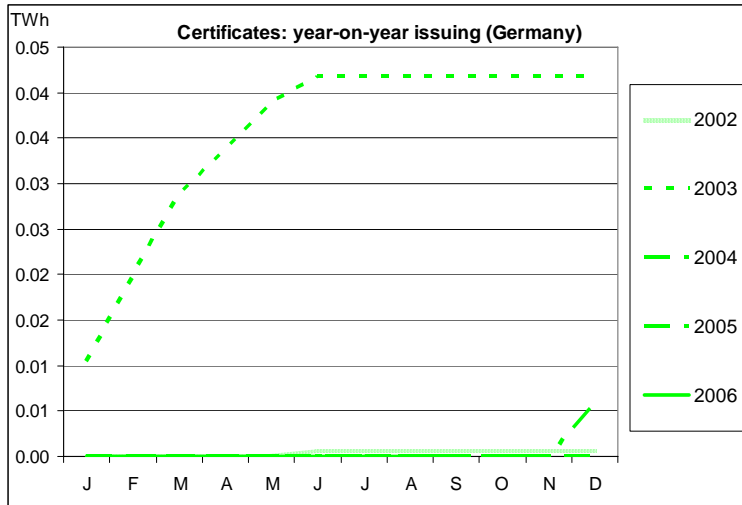
Finland has issued and redeemed below its usual large number of certificates, but still remains a major participant. It is exporting more than ever before, and has already exported close to the 2005 total.



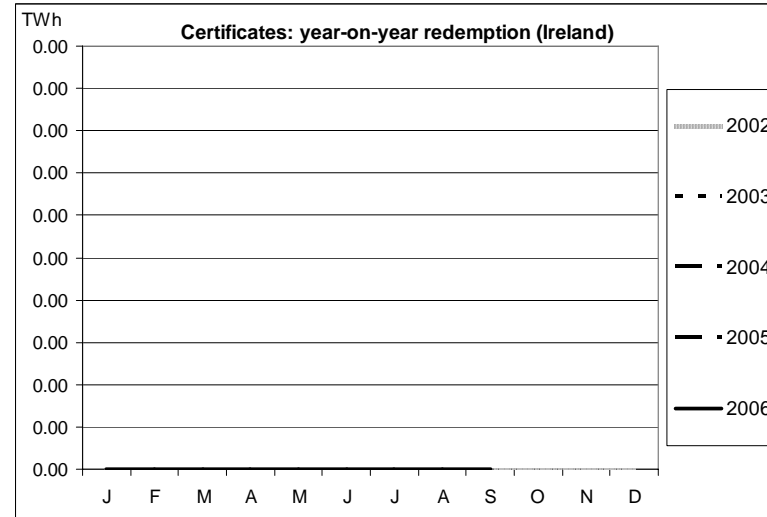
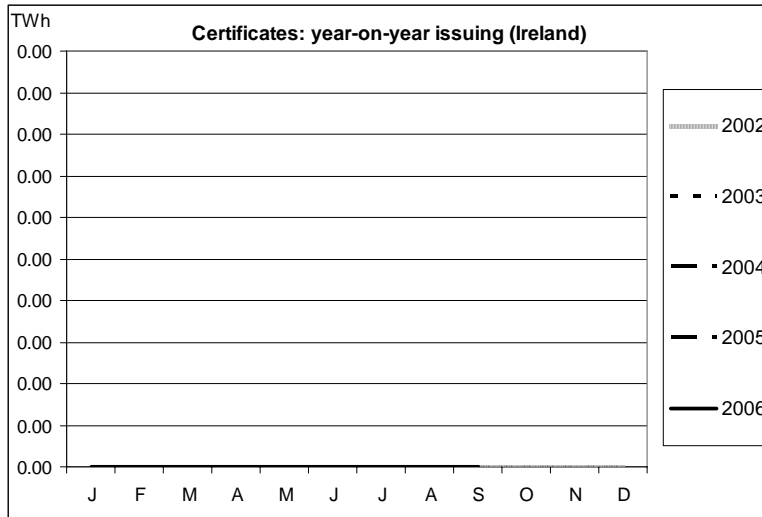
France. The French market is now growing fast in redeemed and imported certificates, mostly servicing its domestic market.



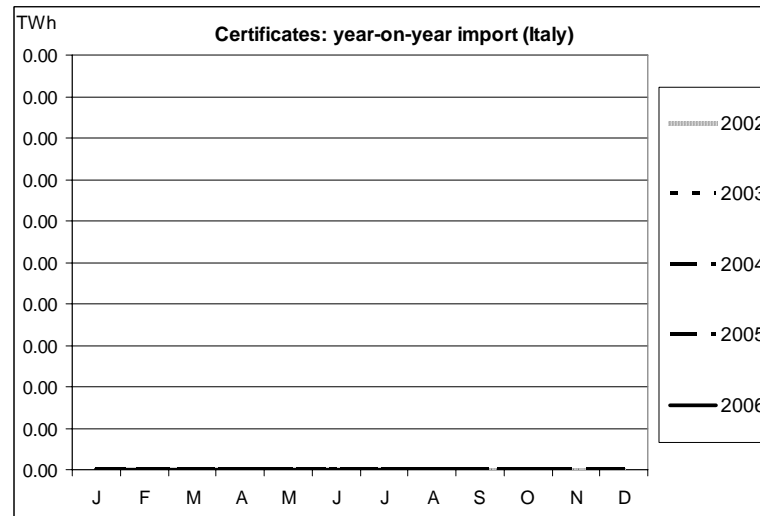
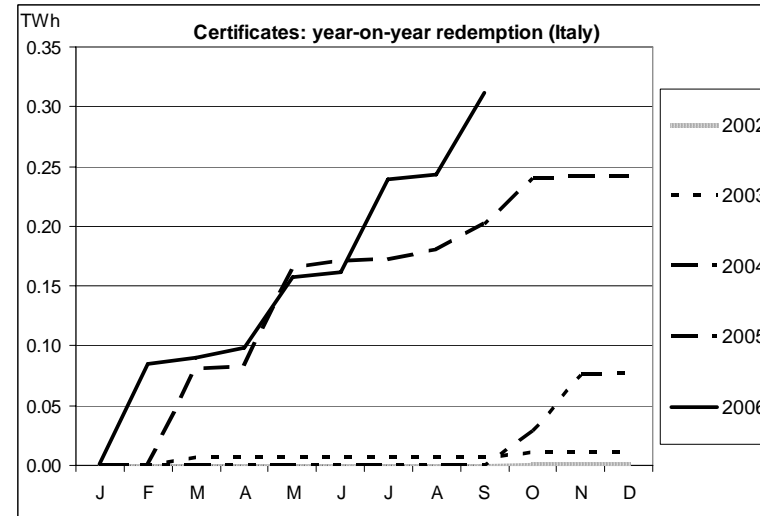
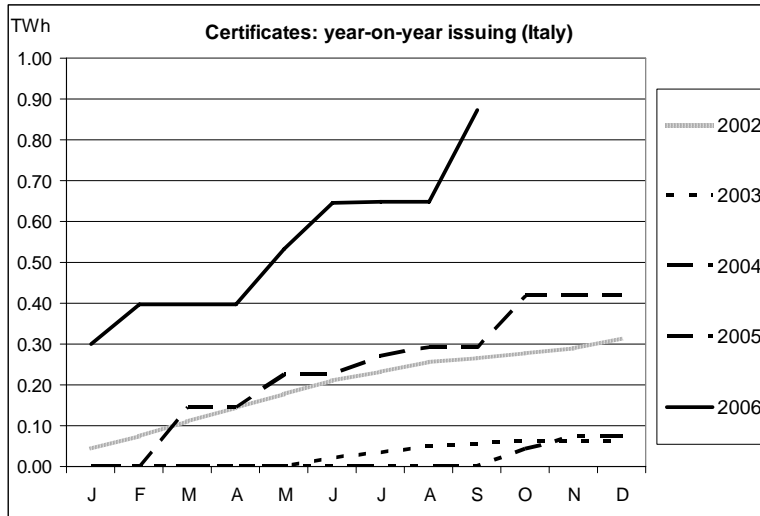
Germany has been started to import and redeem large numbers of certificates.



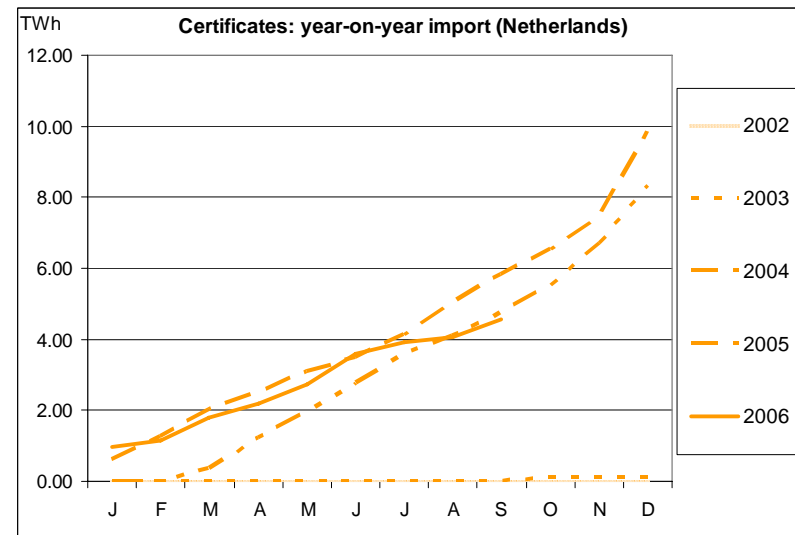
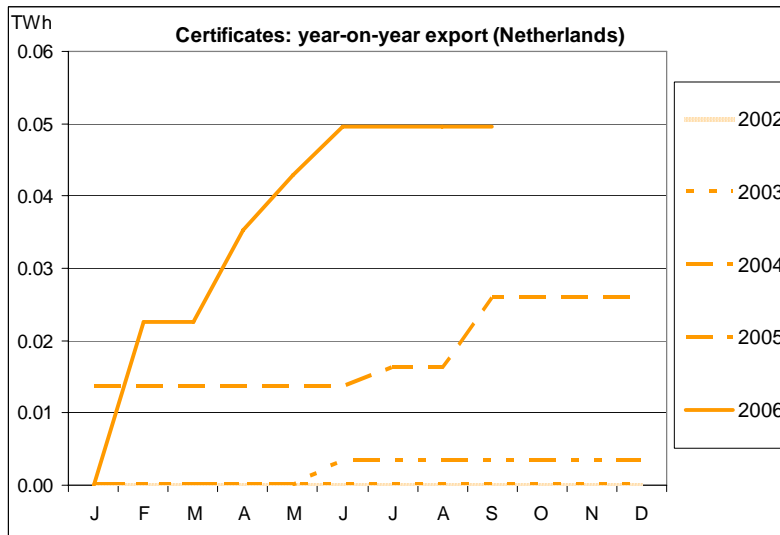
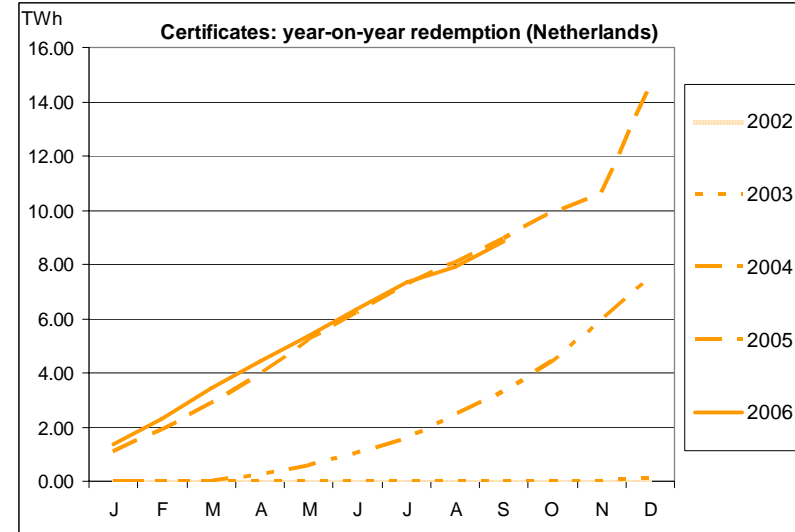
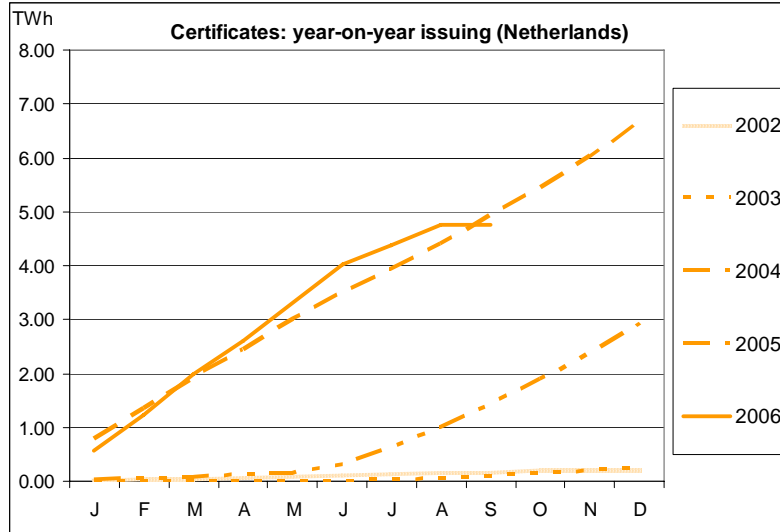
Ireland. The Irish market has yet to get off the ground.



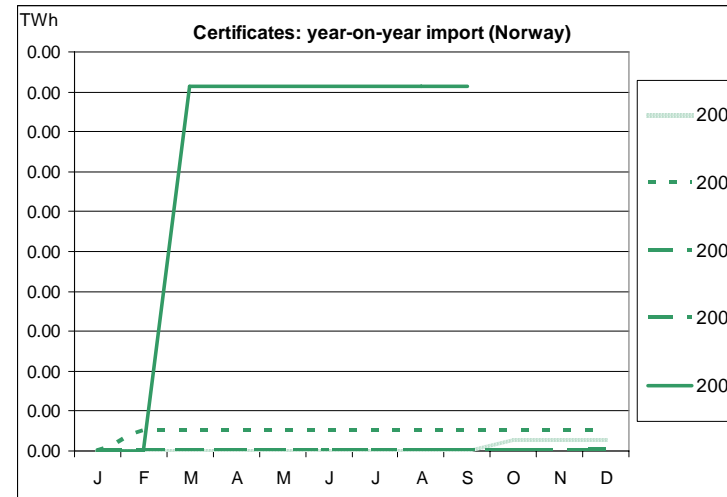
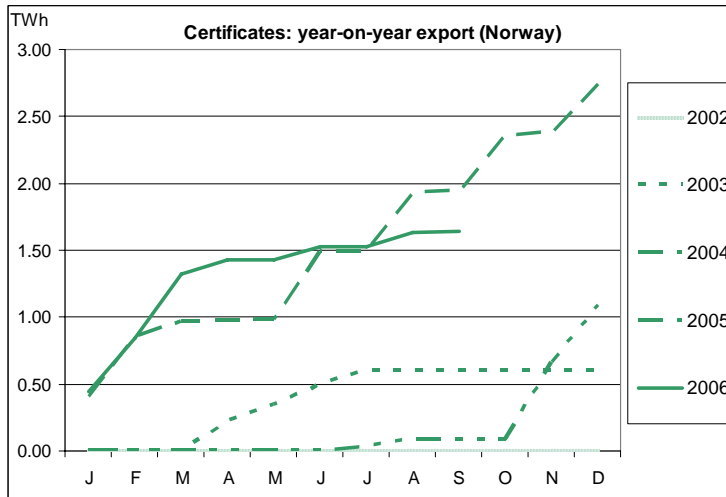
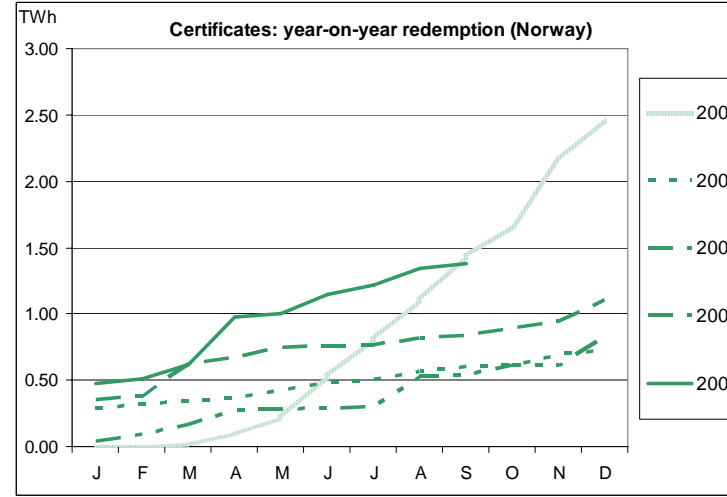
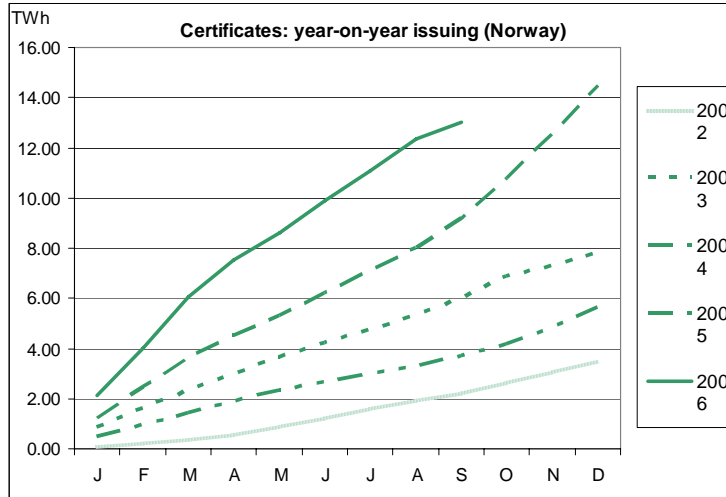
Italy. The Italian market has been growing at a similar rate to the French market, but with no international transfers.



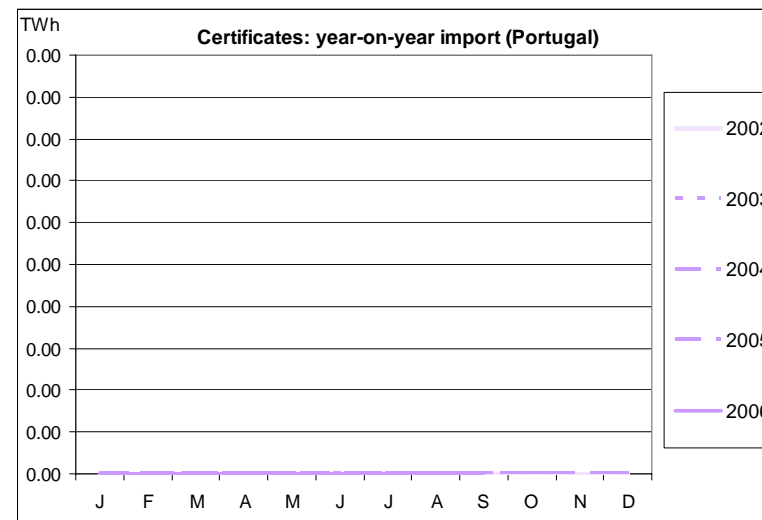
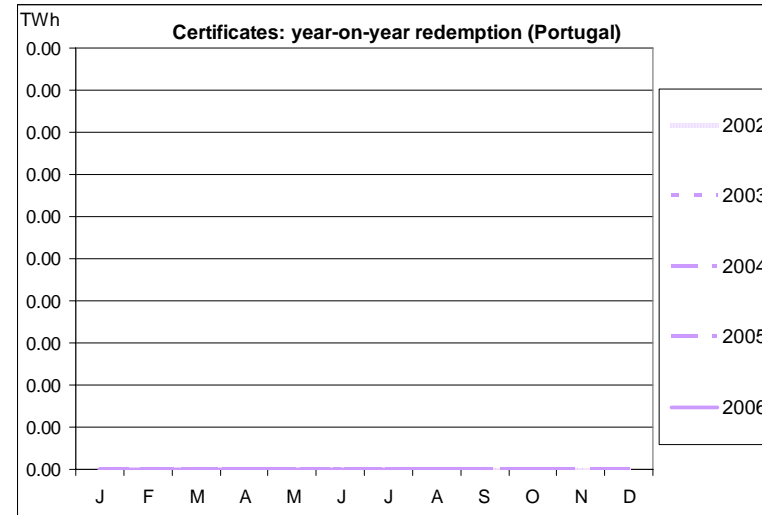
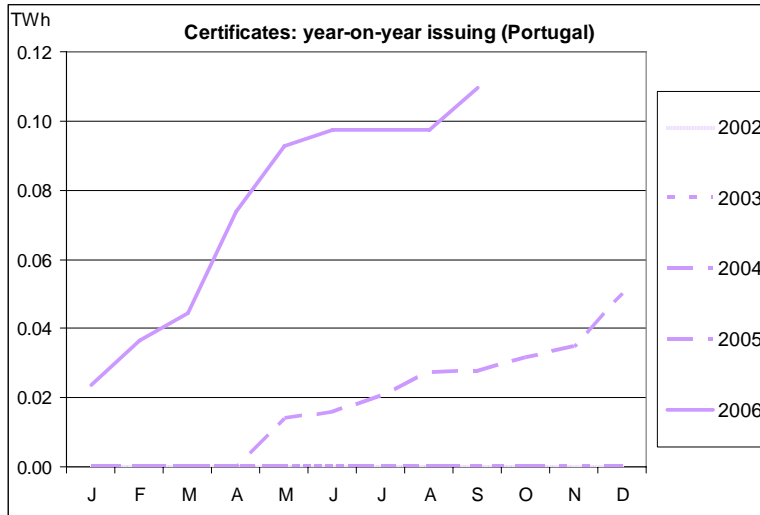
Netherlands issuing and redemption continue to grow marginally faster than 2005, although exports are considerably larger than in previous years and imports are a little less.



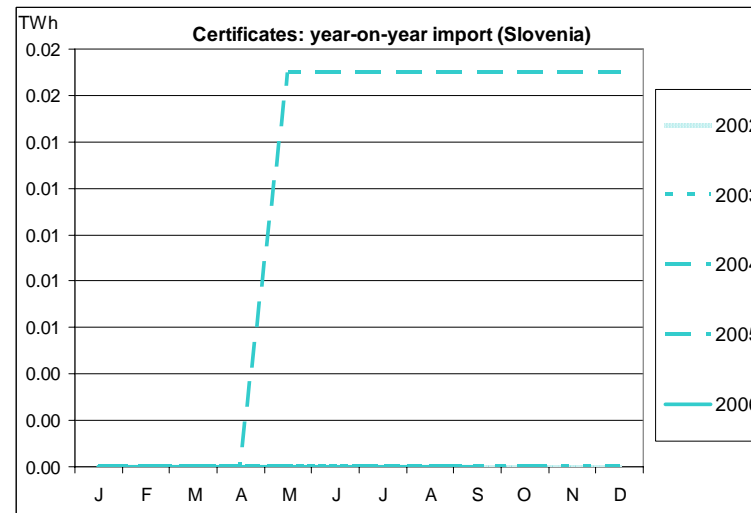
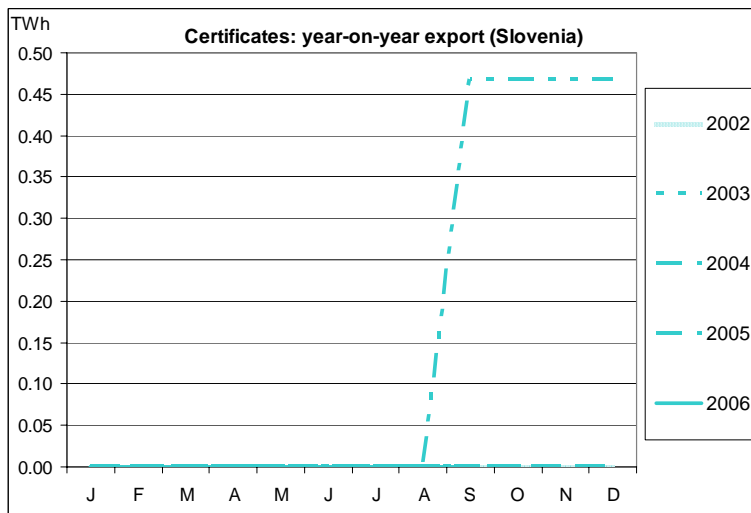
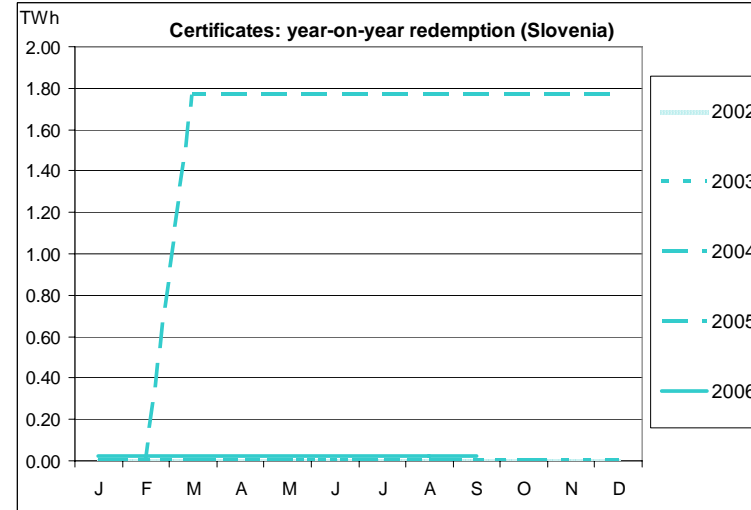
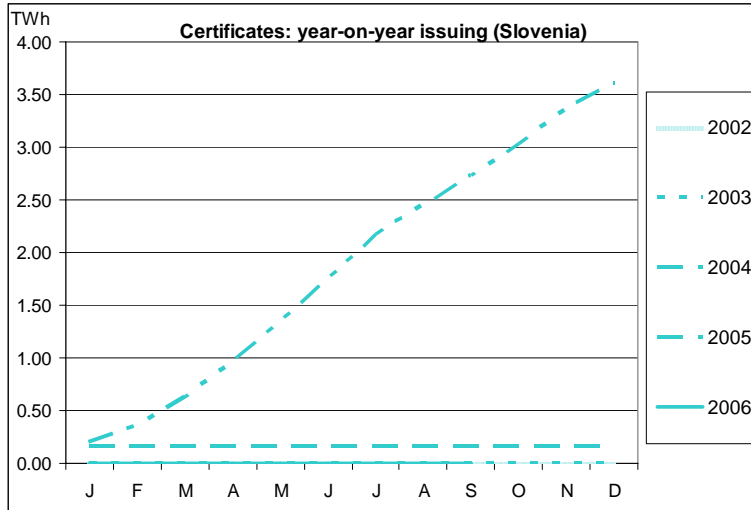
Norway continues to issue and redeem certificates at a higher rate than ever before, although exports have fallen off recently.



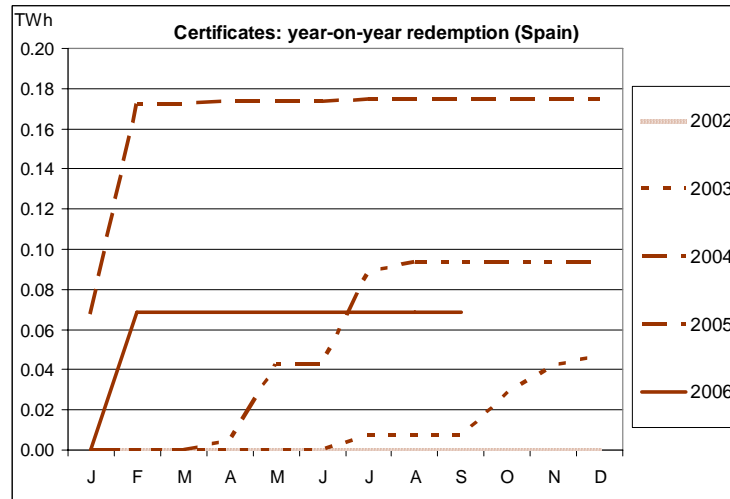
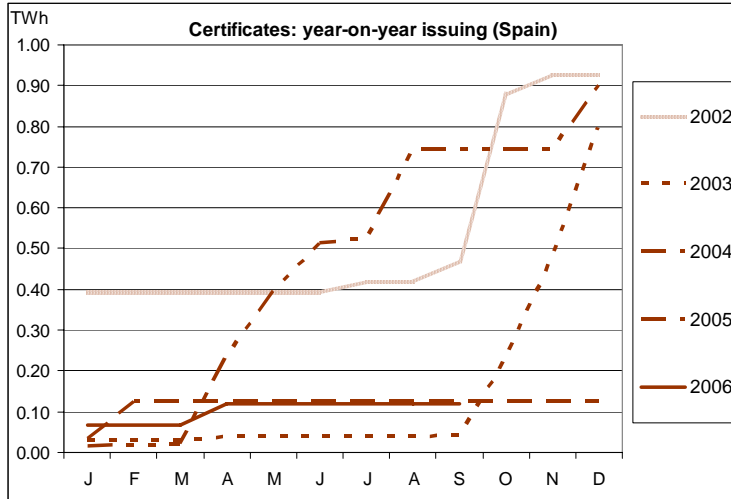
Portugal continues to issue small numbers of certificates, but has yet to transfer or redeem any.



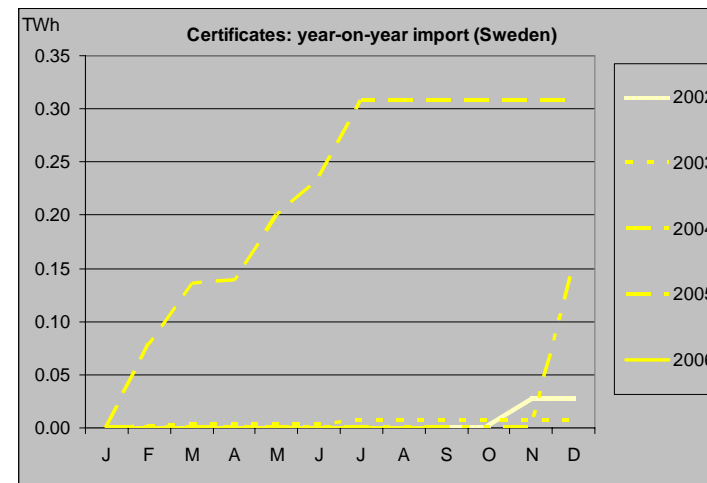
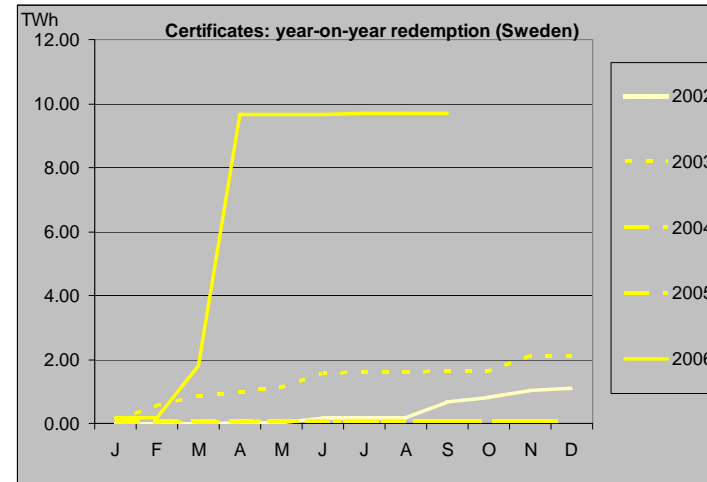
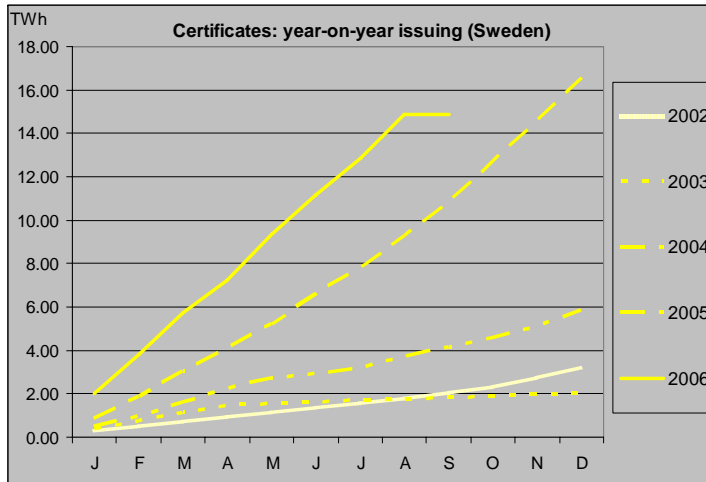
Slovenia has redeemed small number of certificates, but has otherwise been quiet for the past year.



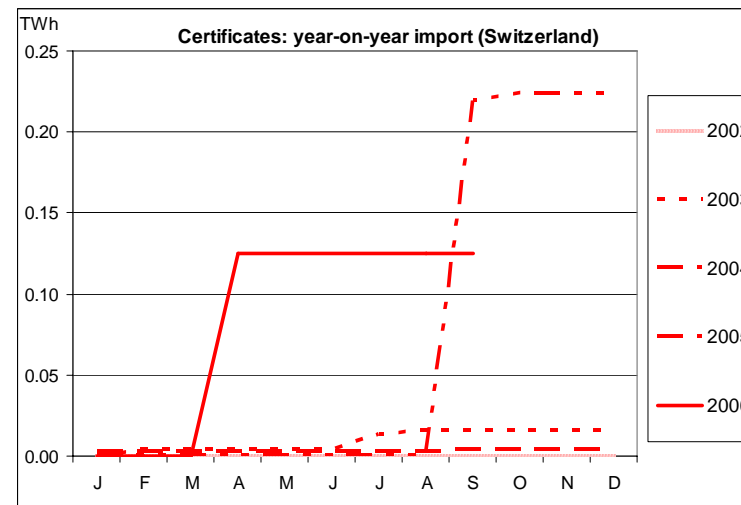
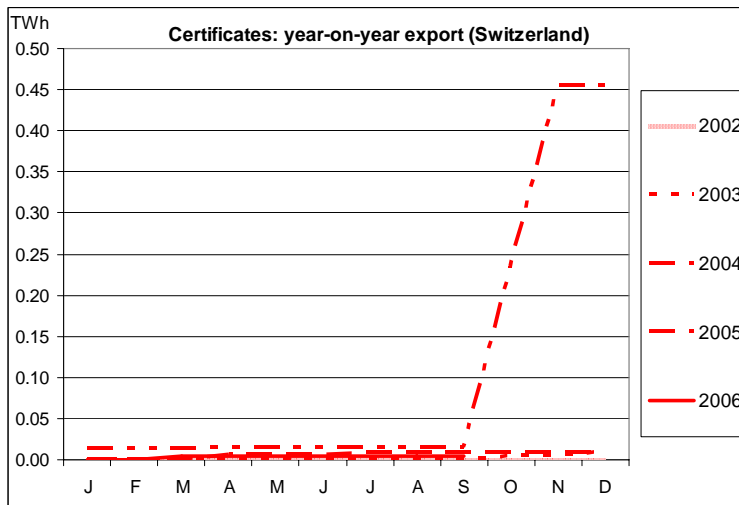
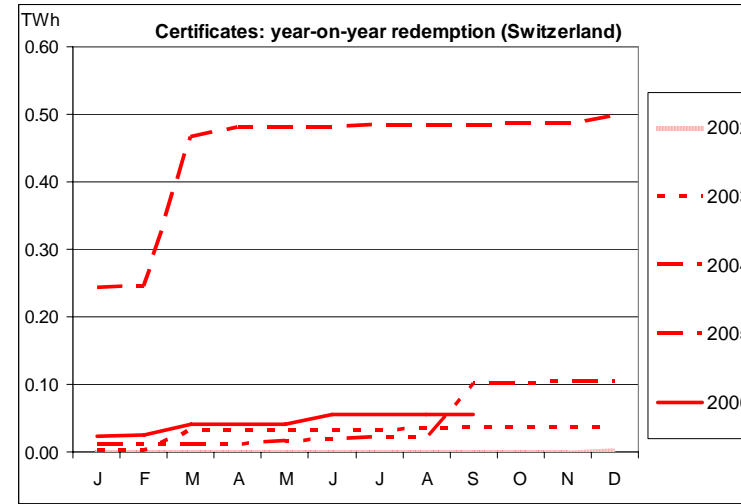
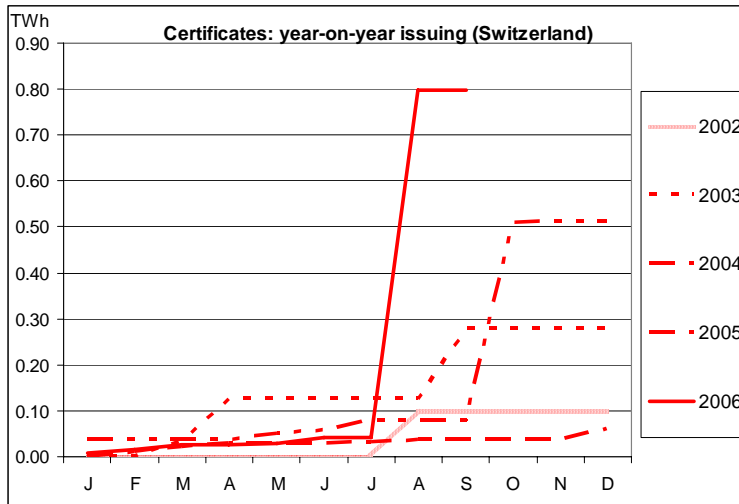
Spain has been quiet this year, and further activity now awaits approval of the revised Spanish Domain Scheme (Spanish activity was suspended on 16 June 2006 in the absence of a PRO-compliant Domain Protocol).



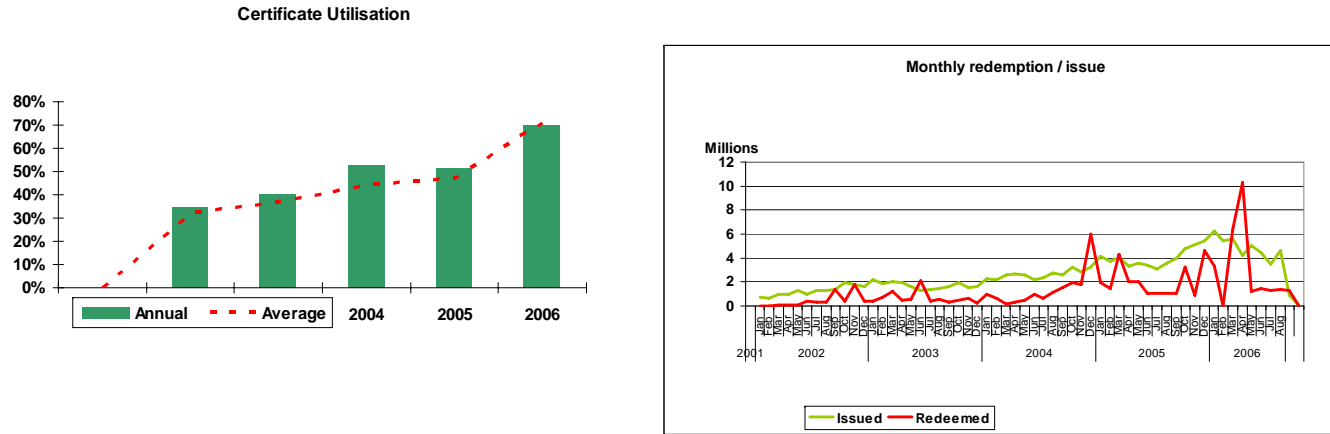
Sweden continues to issue more certificates than ever before, redeeming very large numbers of these but still managing to export substantial amounts.



Switzerland was relatively quiet this year until June, when issuing rose sharply.



Realisation of value: The proportion of certificates that are redeemed has risen to 53% overall, and 70% this year.



Rolling three-month averages show that the market continues to grow at a relatively steady rate – the growth of international trade can be seen below.

