

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 the major redeemers. The largest exporters are Sweden, Norway and Finland; while Austria and Netherlands are major importers.

Belgium (Flanders) has now commenced activity, issuing, redeeming and importing certificates; and Germany has markedly increased imports and redemption. Ireland has now been accredited, and expects to commence activity soon.

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 55% overall (89% this year).

Phil Moody
General Secretary, Association of Issuing Bodies

19 August 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	7,062,988	13,522,528	40,433	3,267,303	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	449,307	1,659,023	449,307	1,659,023										
Belgium and Luxembourg	113,390	911,167		403,437		450,730		50,000		7,000	59,150		54,240	
Belgium Wallonia														
Switzerland	989,472	693,596	41,191	55,389	59,782	495,653	512,442	102,924	276,837	35,530	99,220	4,100		
Germany	48,351	653,123		585,000		25,036	5,963	43,087	41,789		450		149	
Denmark	1,870,109	24,616	208,793	2	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	31,896,502	9,888,401	3,170,187	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	1,727,916	1,147,090	446,269	384,451	690,482	461,004	443,948	214,878	142,665	86,757	4,552			
Greece														
Ireland														
Iceland														
Italy	1,511,214	491,022	645,088	161,419	418,397	241,048	73,970	76,873	59,549	10,557	302,814	1,125	11,396	
Netherlands	13,944,415	29,547,472	3,908,599	7,326,279	6,658,365	14,569,852	2,923,863	7,542,276	250,536	107,962	203,052	1,103		
Norway	41,424,497	6,298,142	9,974,991	1,185,059	14,506,286	1,101,274	5,625,516	827,342	7,817,149	725,706	3,500,555	2,458,761		
Poland														
Portugal	147,605		97,404		50,201									
Sweden	36,412,027	13,086,381	8,697,887	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	144,325,529	80,098,056	27,799,509	25,328,596	48,193,128	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		55%		91%		51%		53%		40%		35%		0%

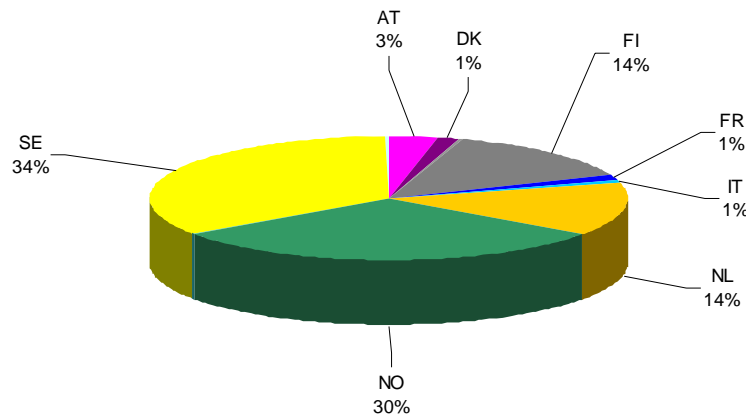
Issuing & redemption for all countries														
	Report for all countries		2006		2005		2004		2003		2002		2001	
	Issue	Redeem	Issued	Redeemed	Issued	Redeemed	Issue	Redeem	Issue	Redeem	Issue	Redeem	Issue	Redeem
Onshore wind	7,760,539	4,204,853	1,866,355	1,254,473	3,261,653	1,945,381	2,131,551	804,795	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	6,744	3,332	1,734	432	3,312	2,895	1,685	5	13					
Thermal														
Hydropower	100,588,689	49,160,495	22,660,734	20,288,116	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	102,898			35,627	36,081	53,431	55,175	6,434	10,517	166,024	1,125		
Energy crops	276,728	195,728	2,264	2,028	68,909	70,643	59,023	56,457	66,513	52,078	36,033	14,522	43,986	
Forestry etc	27,445,577	21,966,003	802,720	2,107,846	3,418,287	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	457,255	171,374	121,328	79,255	207,548	45,974	105,368	36,968	3,890	742	19,121	8,435		
Sewage gas	36,205	34,378	966	3,626	3,646	546	6,364	5,025	1,075	25,181	24,154			
Other biogas	89,036	33,669	53,629	15,854	25,665	16,316	9,112	1,499	630					
MSW	2,533,845	1,017,810	457,049	443,957	946,025	284,092	536,345	283,780	257,630	3,026	244,910	2,955	91,886	
IB&CW	4,854,949	3,201,796	1,832,730	1,133,009	2,136,519	1,583,570	784,546	398,367	18,388	54,886	82,766	31,964		
Total	144,325,529	80,098,056	27,799,509	25,328,596	48,193,128	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.

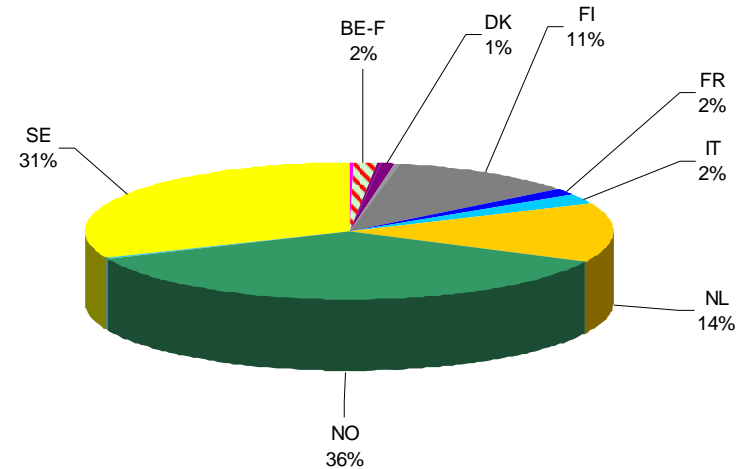
Comparing 2005 with 2006 to date, the major certificate issuing countries remain Norway and Sweden, then Finland and Netherlands. However, the position of Austria has been replaced by Belgium (Flanders).

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.

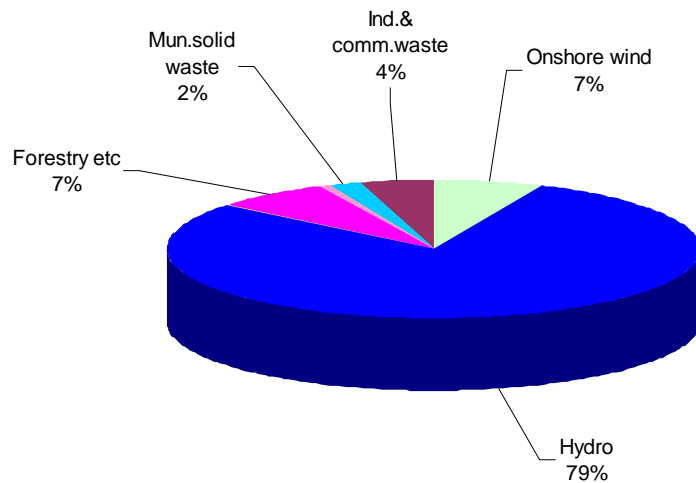
Certificates Issued Per Country (2005)



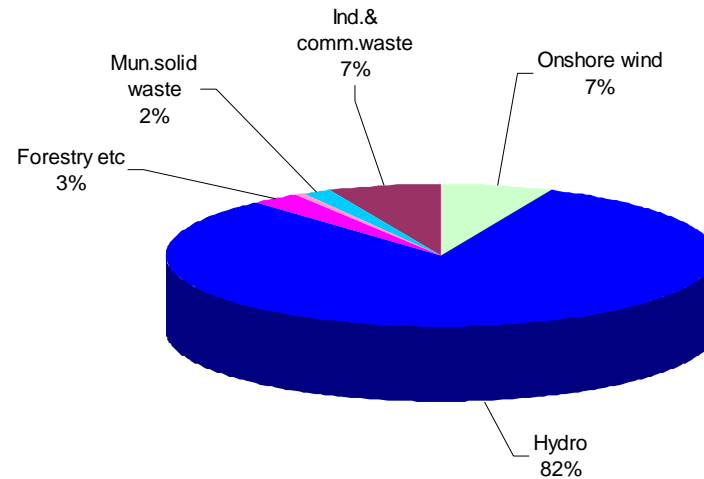
Certificates Issued Per Country (2006)



Certificates Issued Per Technology (2005)

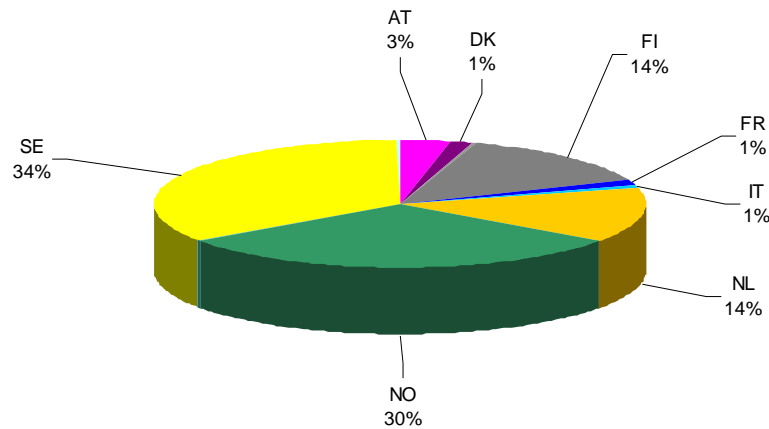


Certificates Issued Per Technology (2006)

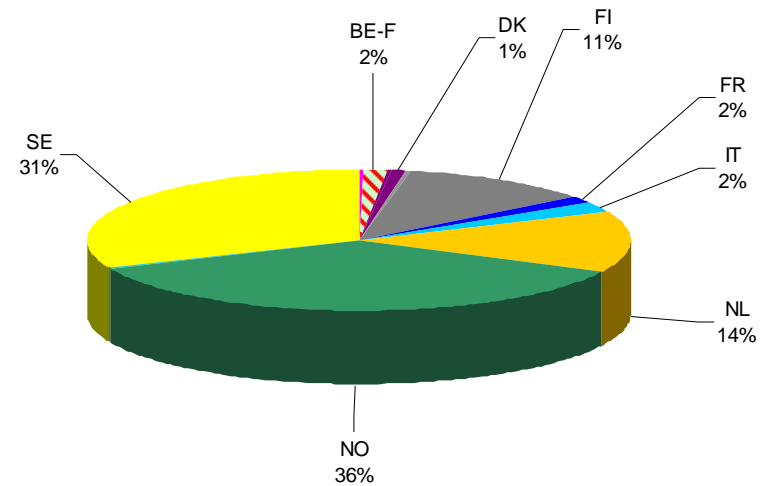


Again comparing 2005 with 2006 to date, and regarding redemption, Sweden seems to have redeemed an enormous number of certificates, although the reasons for this are unclear. Belgium (Flanders) is making its presence felt, and Germany is gaining a presence. On the other hand, Finland has decreased markedly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

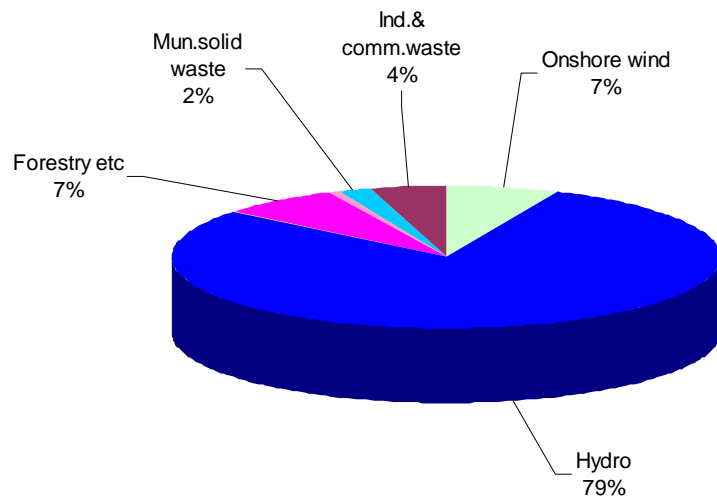
Certificates Issued Per Country (2005)



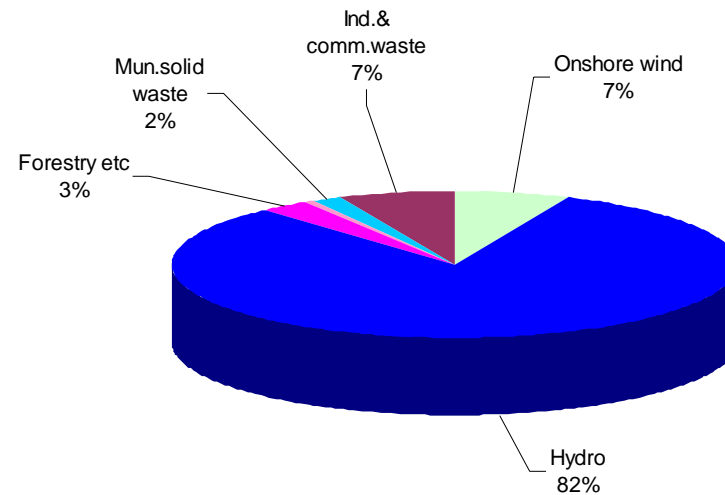
Certificates Issued Per Country (2006)



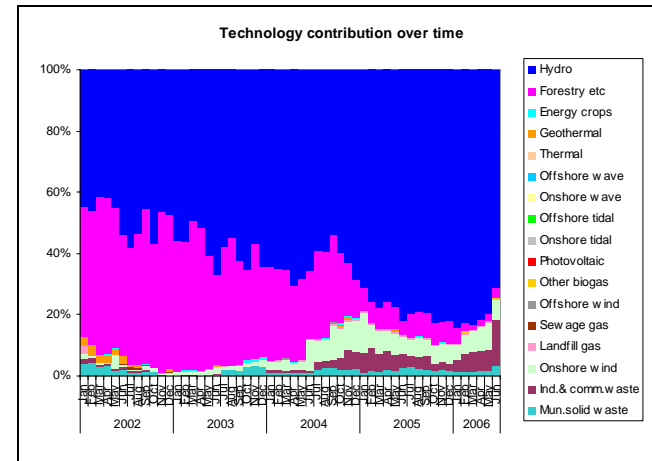
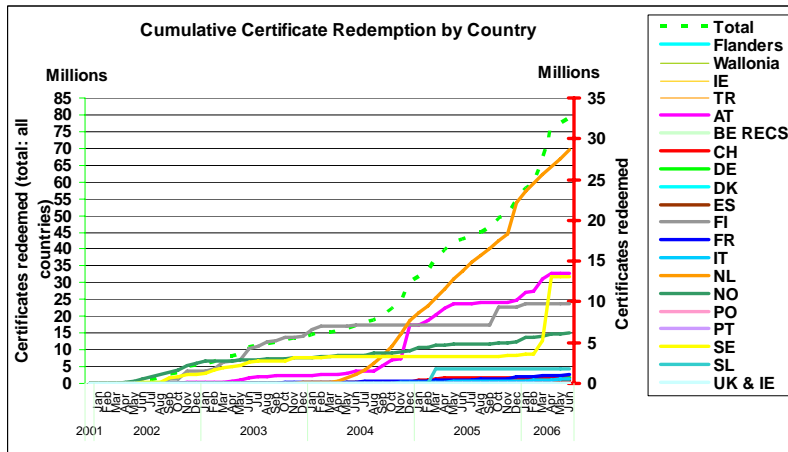
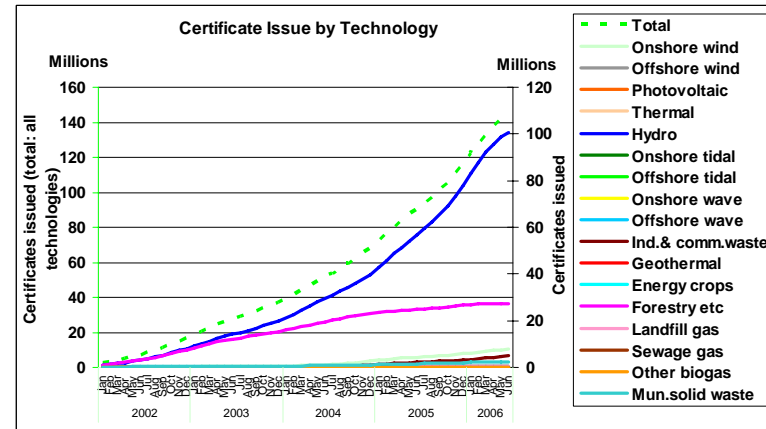
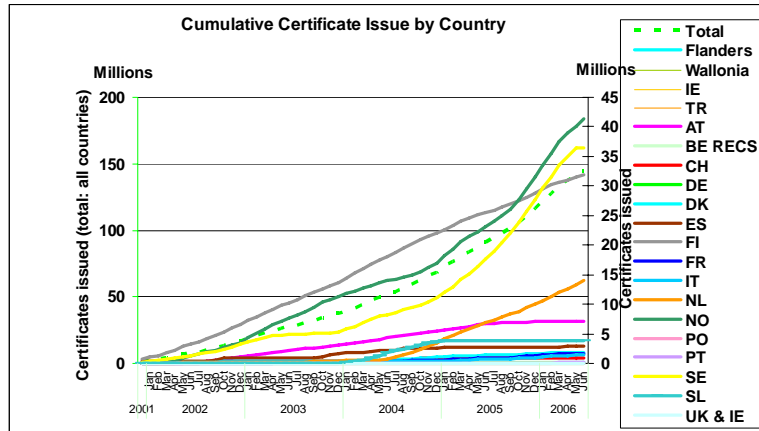
Certificates Issued Per Technology (2005)



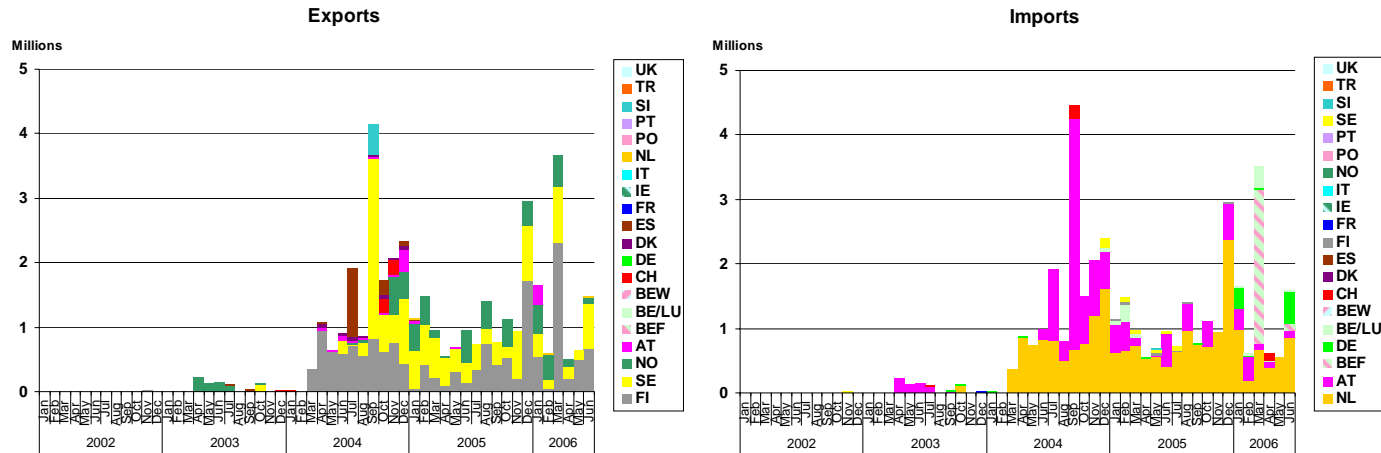
Certificates Issued Per Technology (2006)



Issuing and redemption continue to increase fairly steadily. Of further note is that the volume of hydro issued and redeemed has continued to increase substantially at the expense of forestry and agricultural waste, while wind and waste continue to grow.

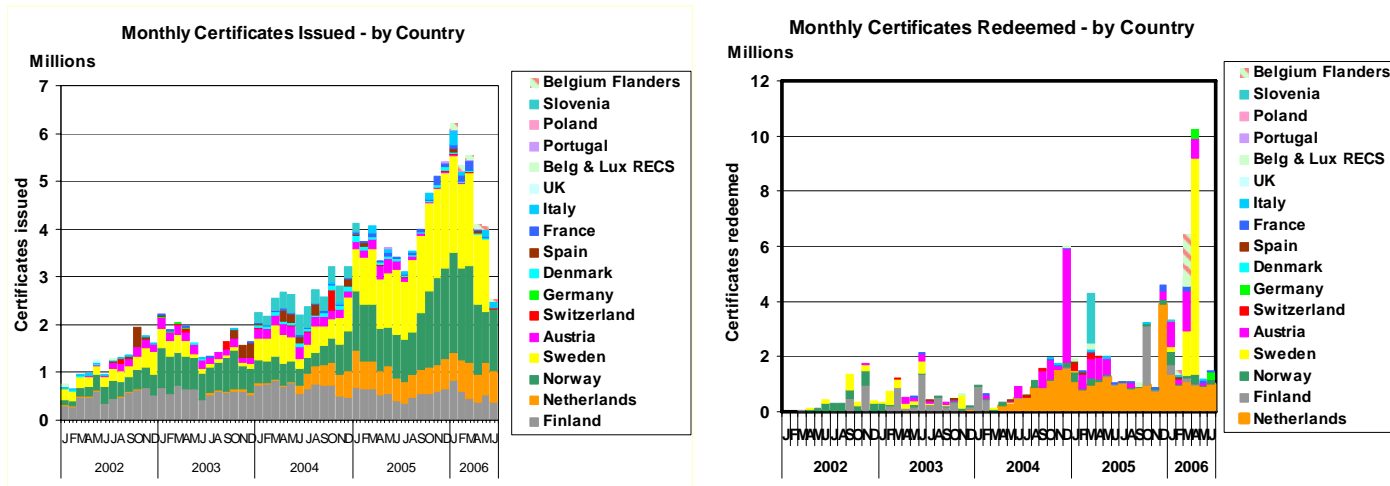


The largest exporters remain Sweden, Norway and Finland; while Austria and Netherlands remain the major importers. However, Belgium (Flanders) and Germany are now making their presence felt.



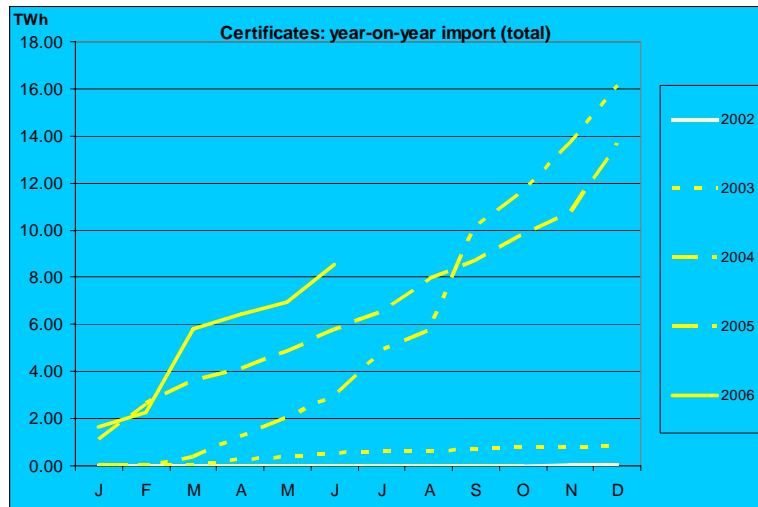
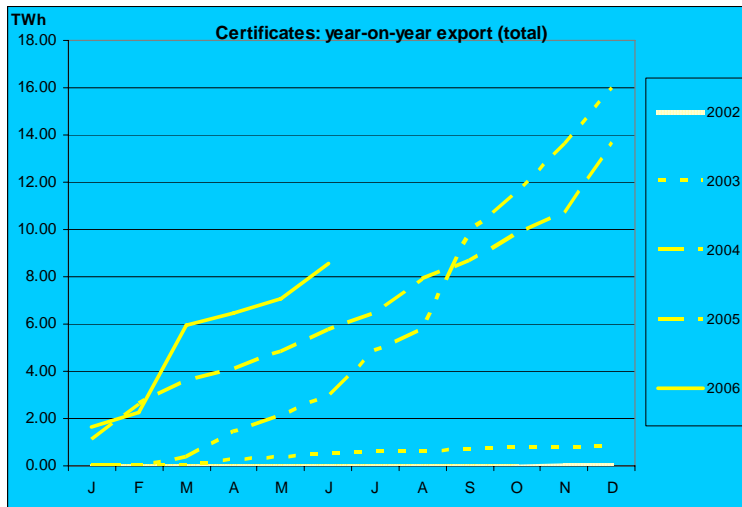
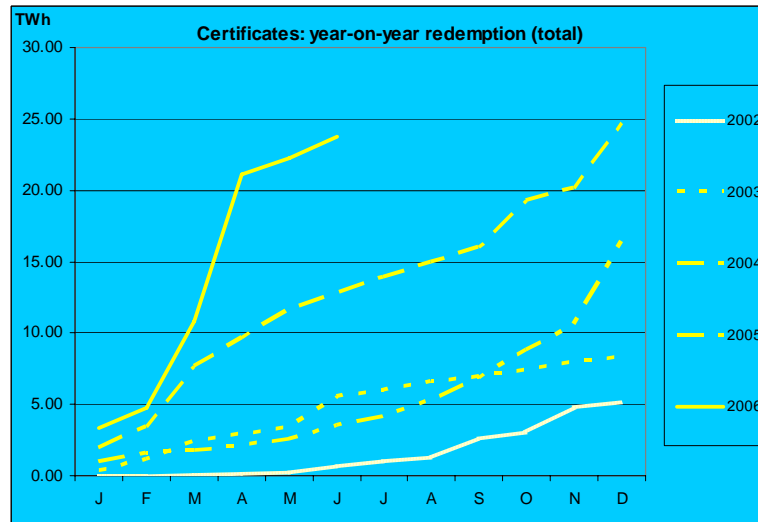
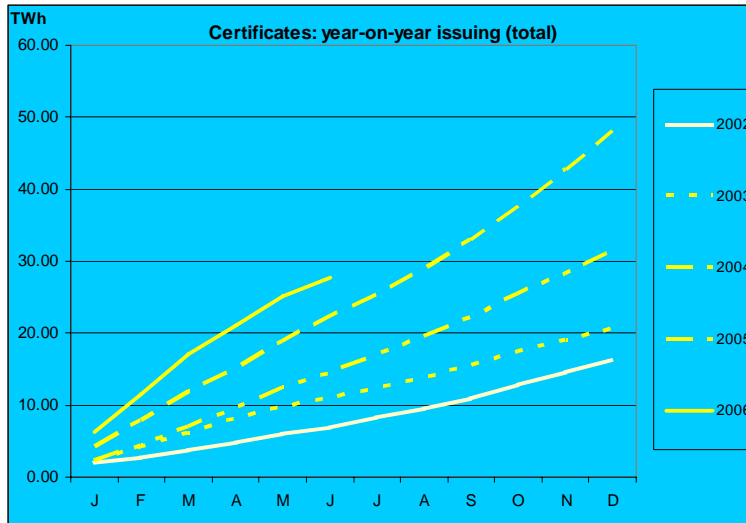
Monthly activity

The following bar charts summarise monthly activity, clearly showing the influence on international trade of the consuming countries – Netherlands and Austria; and of the producing countries - Finland, Norway, Sweden and Netherlands. The surprise has been the large number of redemptions by Sweden last April. Again, Belgium (Flanders) announces its arrival.

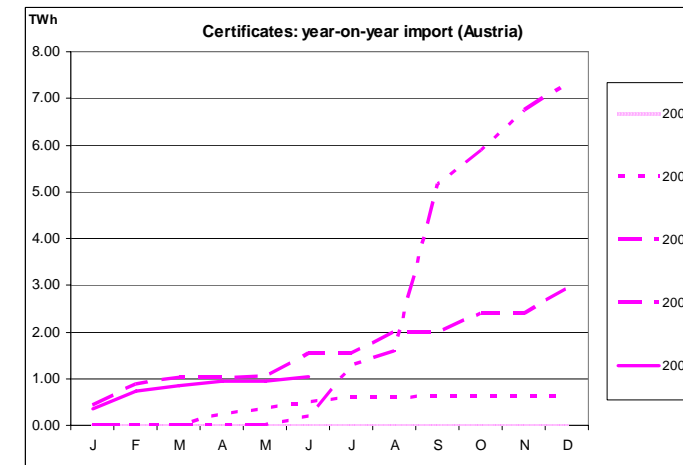
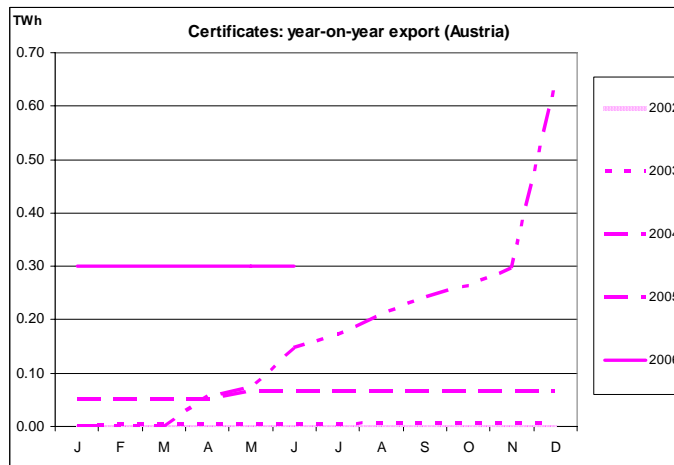
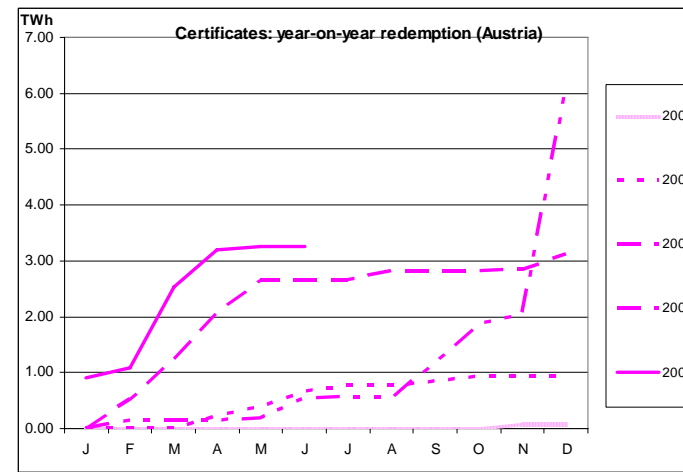
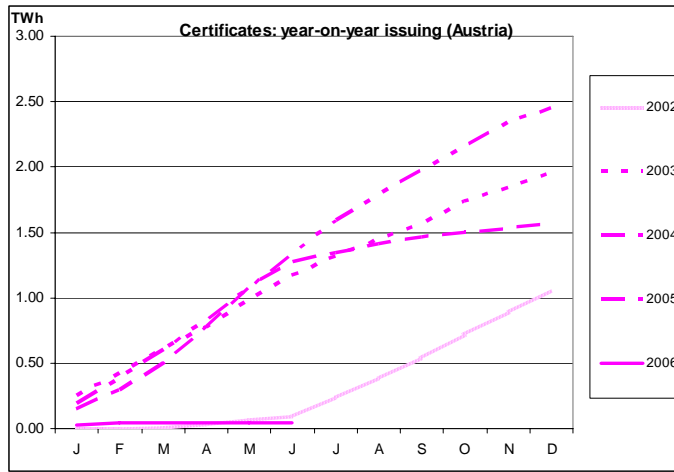


Year-on-year

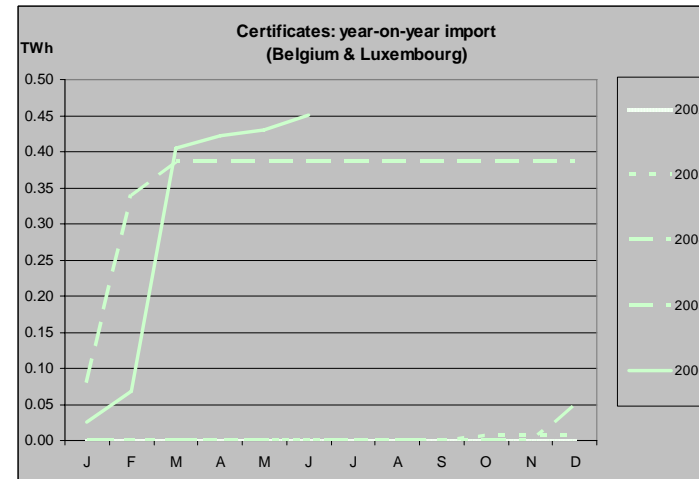
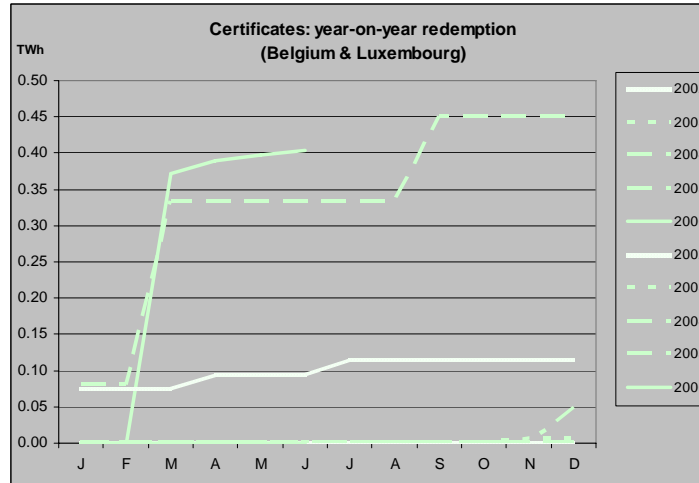
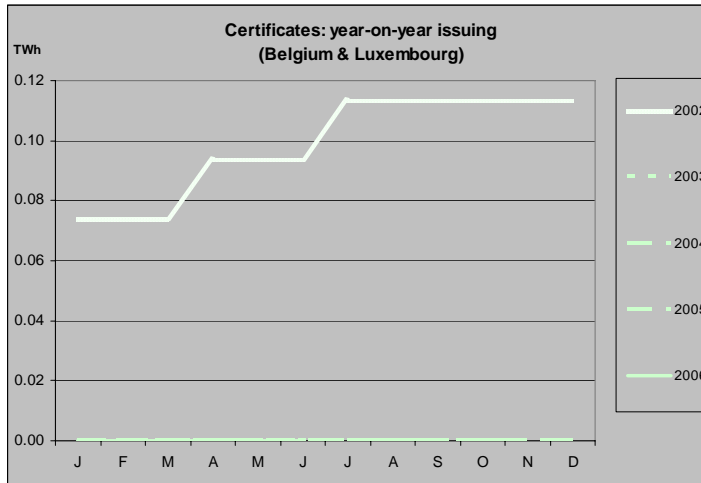
While issuing continues at a higher rate in the last year, redemption has increased dramatically.



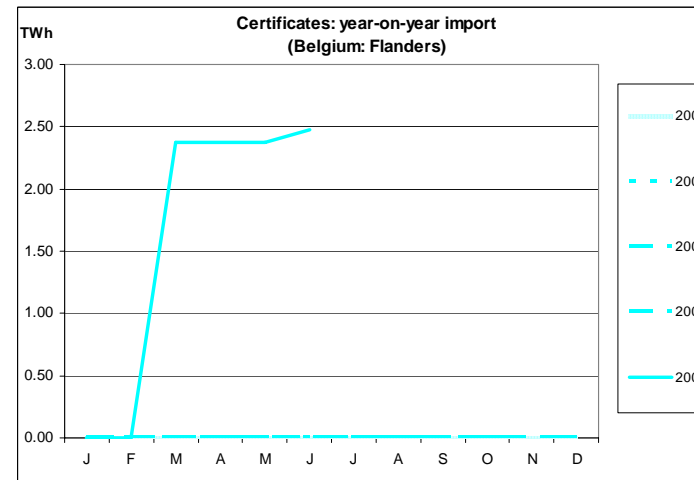
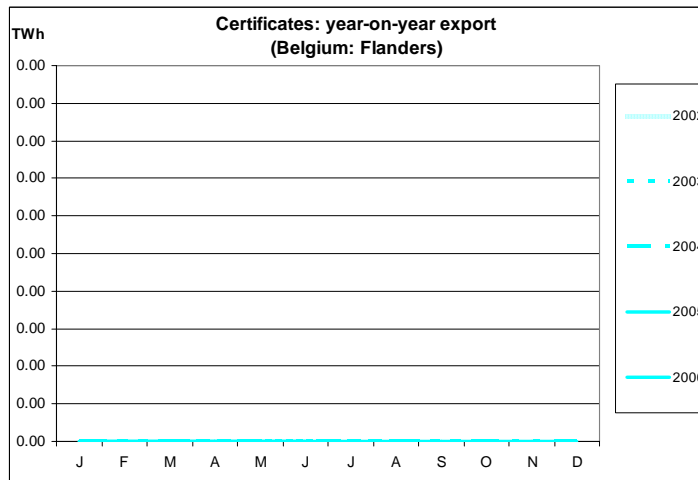
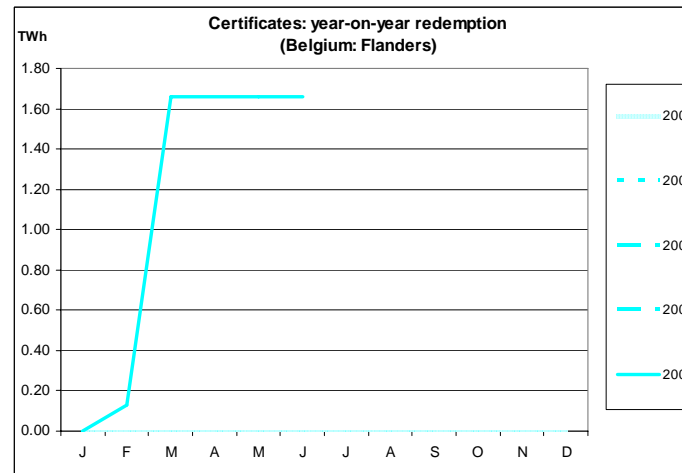
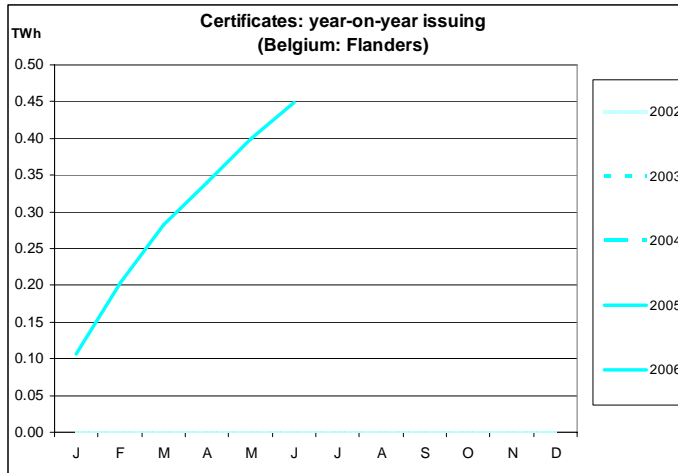
Austria has issued very few certificates this year, but continues to increase redemptions, mostly it seems from imported certificates.



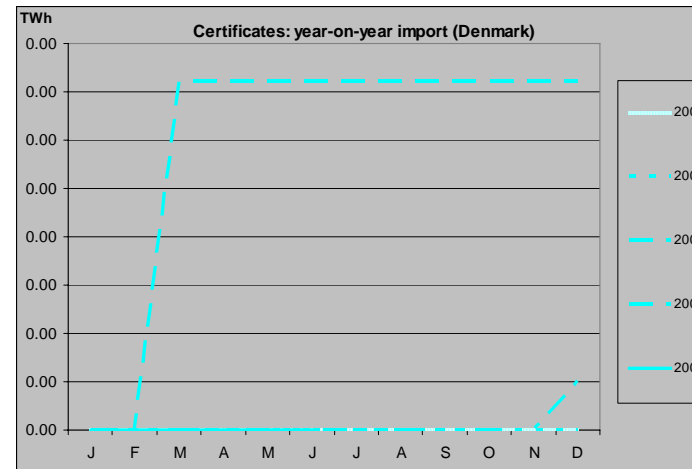
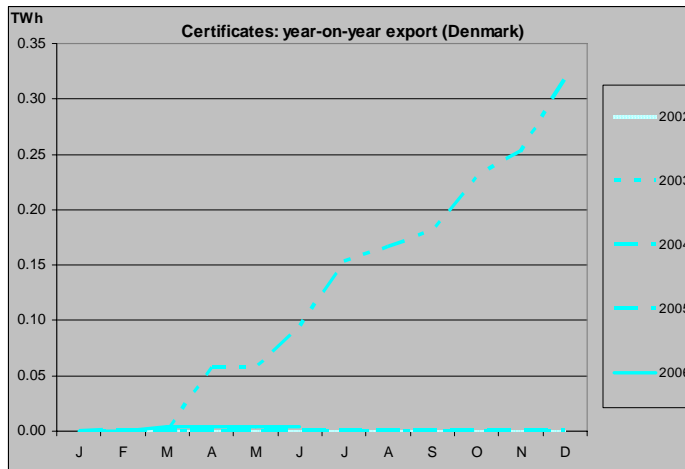
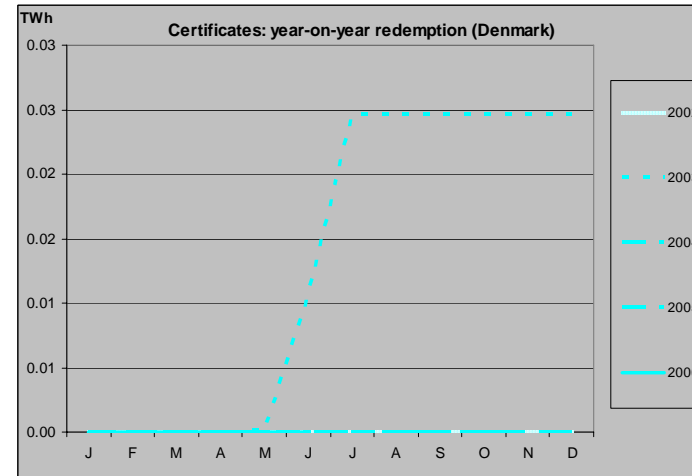
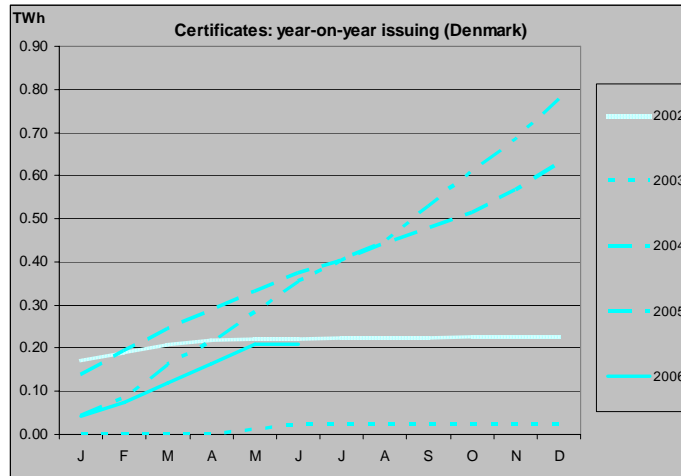
Belgium / Luxembourg. RECS activity looks likely to diminish markedly, with the advent of the Flemish GoO.



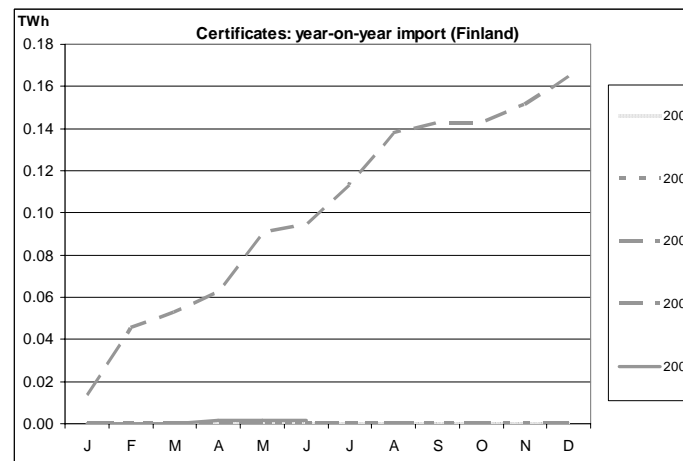
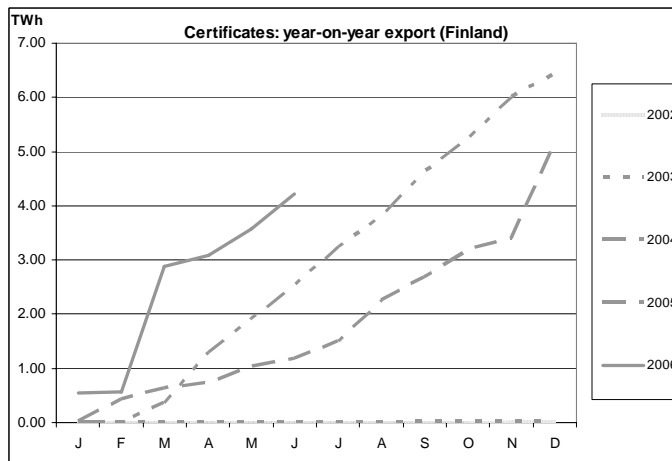
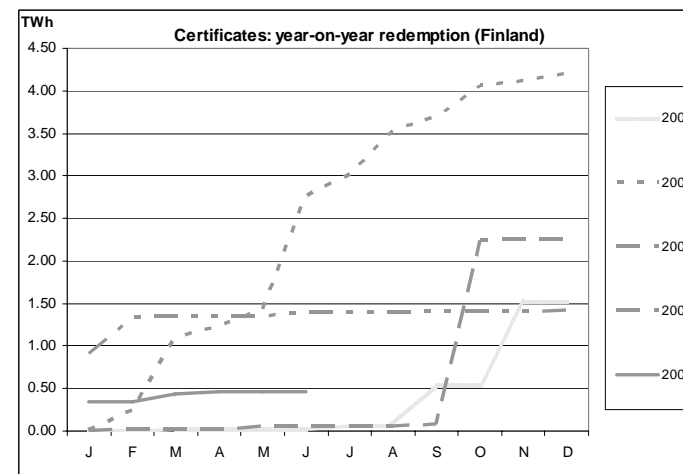
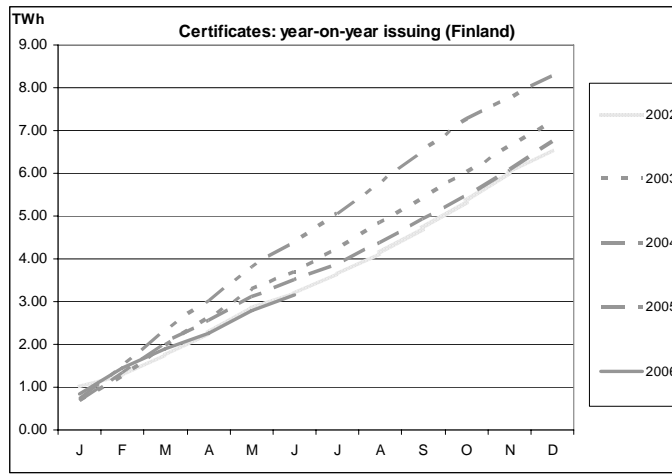
Belgium (Flanders). The Flemish GoO issuer (the VREG) is now a member. Certificate issue is increasing along with redemption – which is mostly of imported certificates.



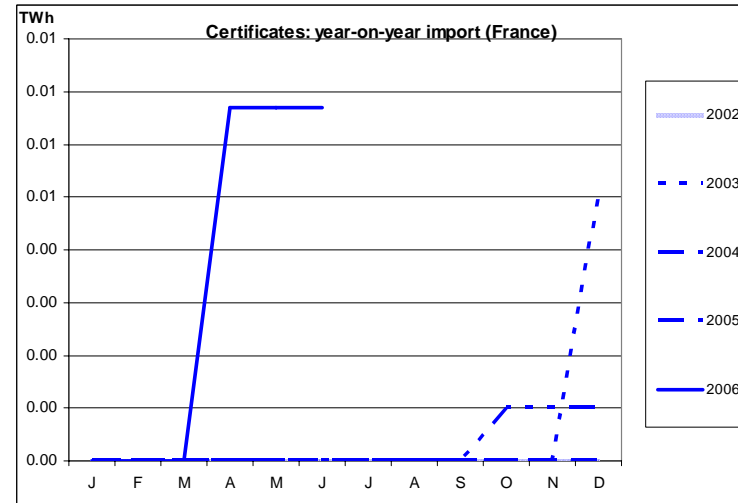
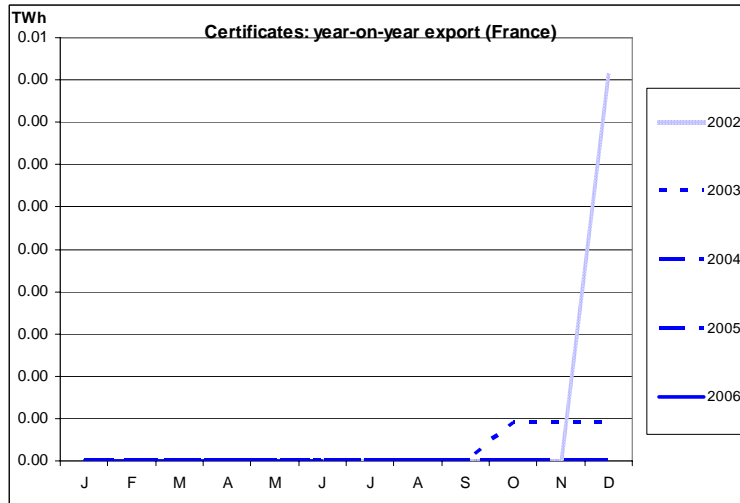
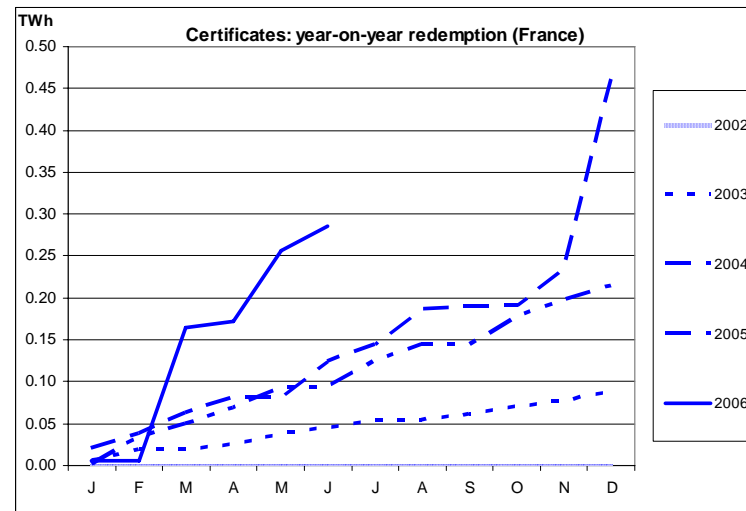
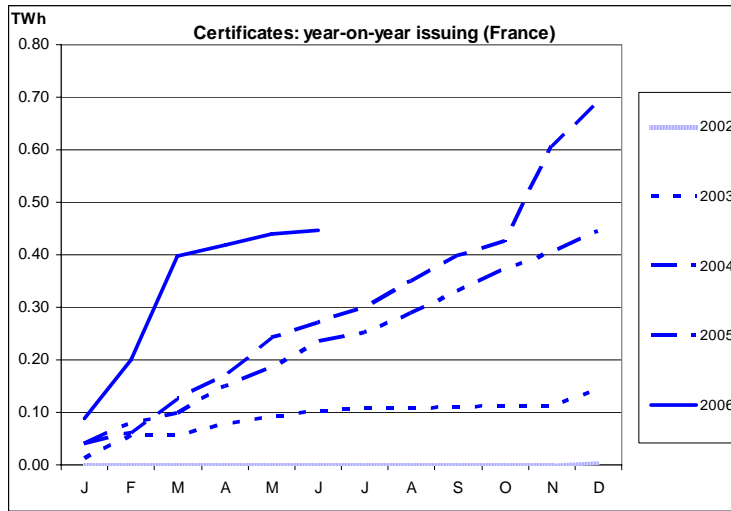
Denmark. Denmark continues to be a minor participant in the market.



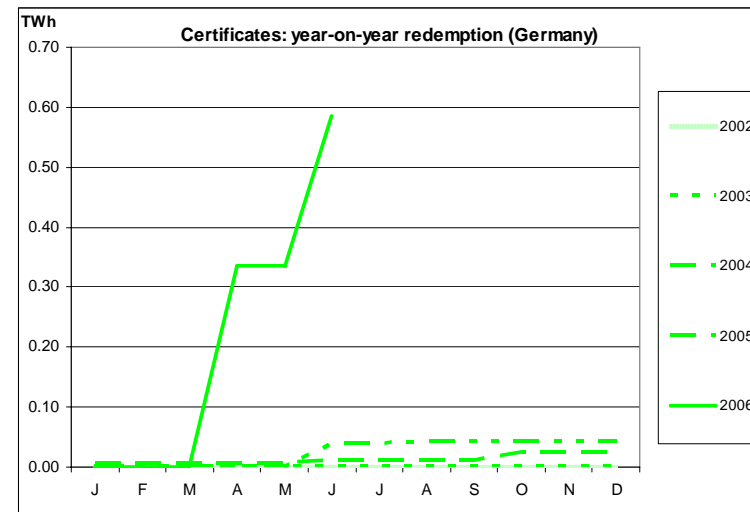
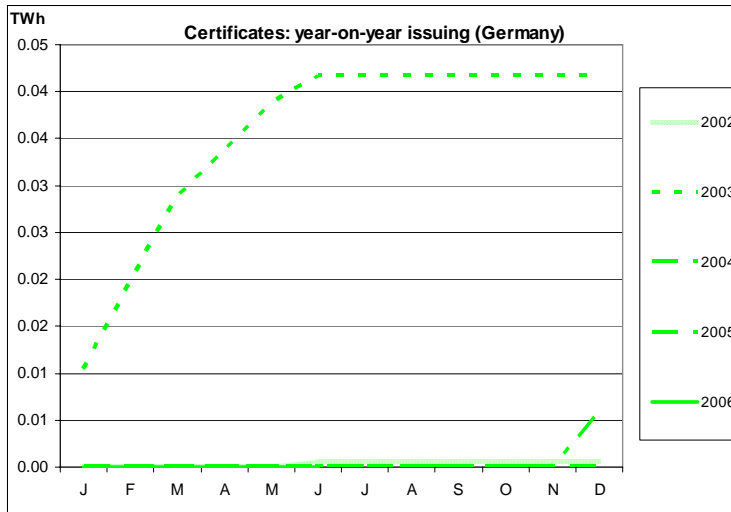
Finland has issued and redeemed below its usual large number of certificates, but still remains a major participant and has exported close to the 2005 total of certificates already.



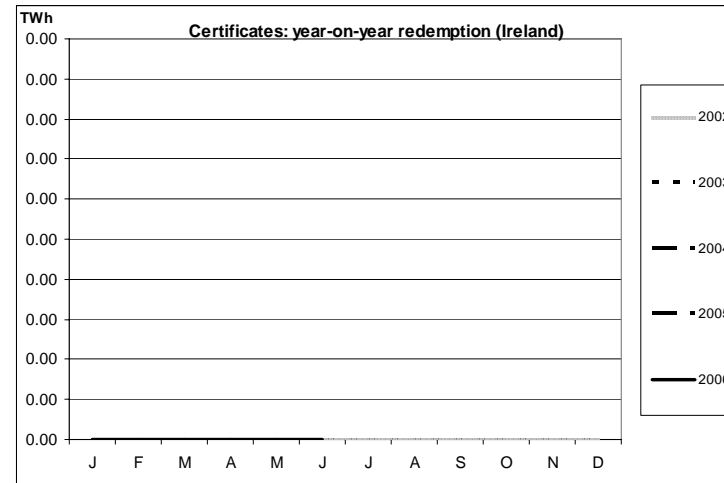
France. The French market, is now growing fast, both in terms of certificates issued and redeemed, mostly servicing its domestic market.



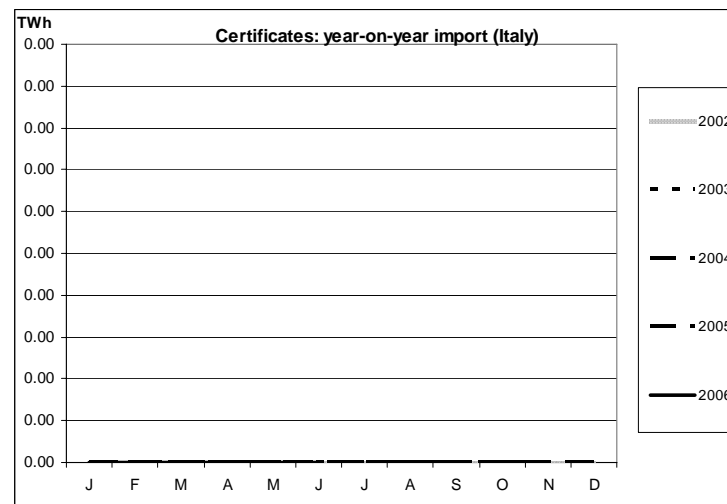
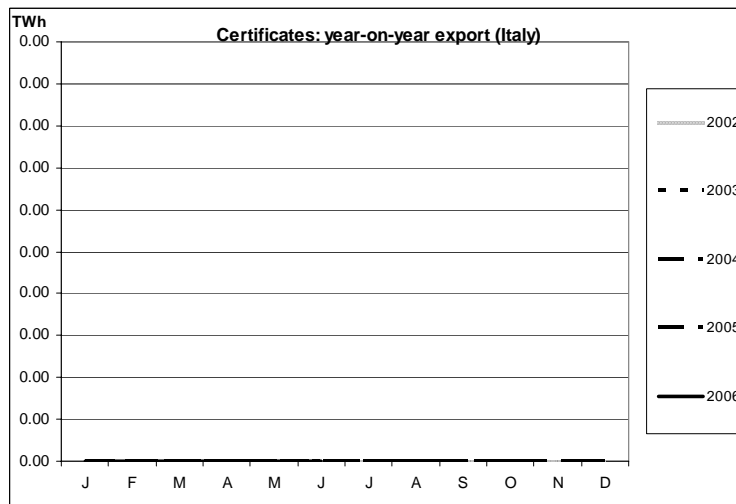
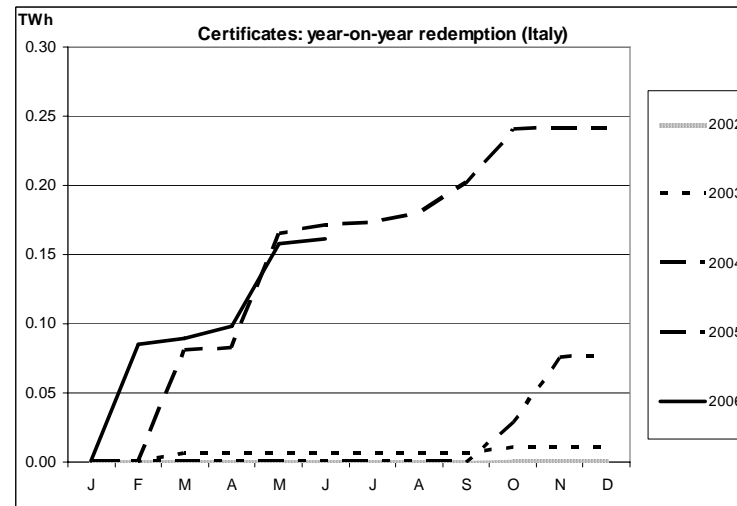
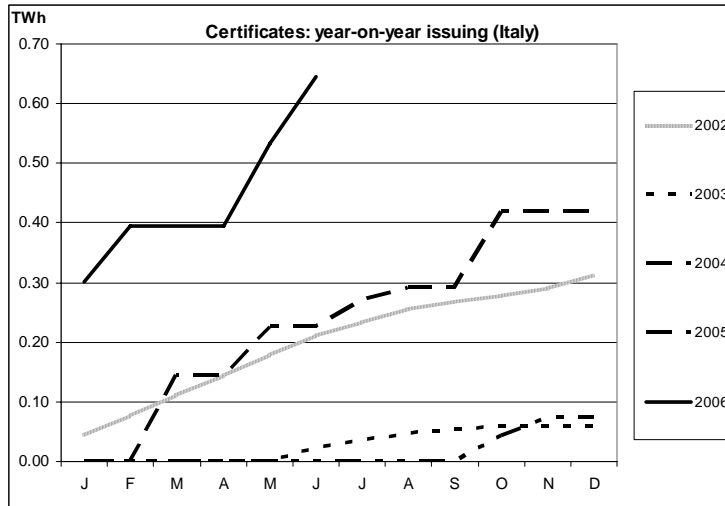
Germany has been started to import and redeem large numbers of certificates.



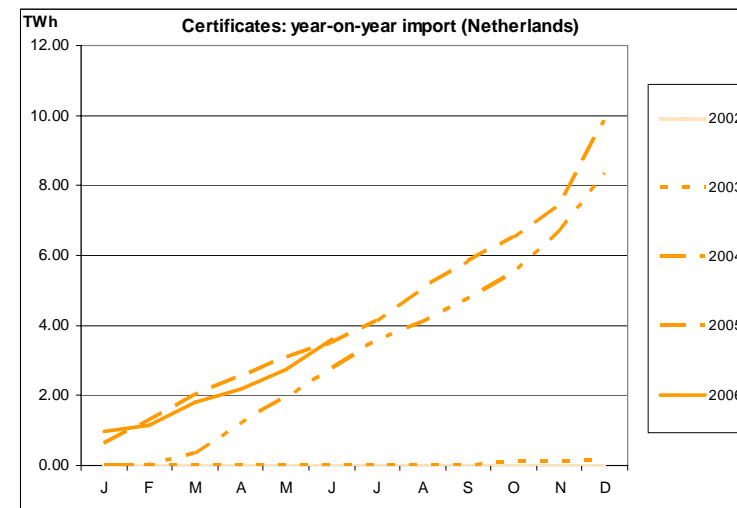
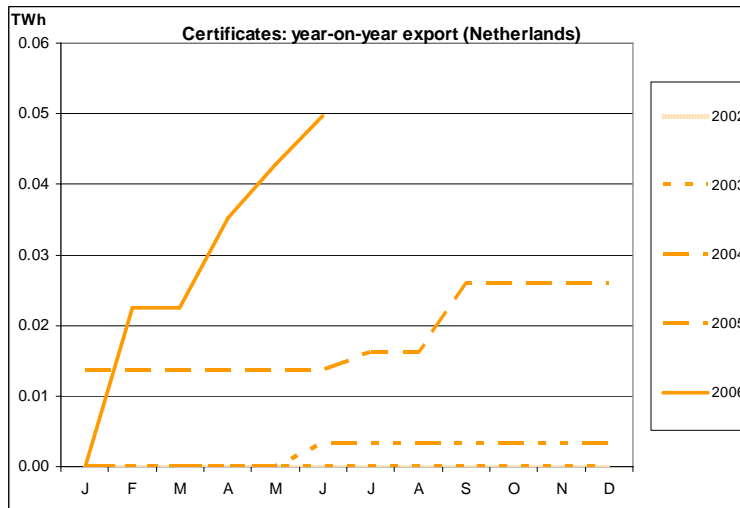
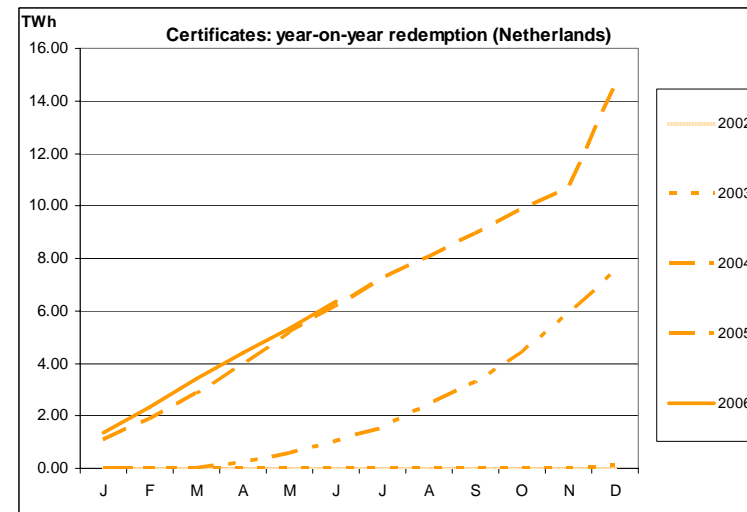
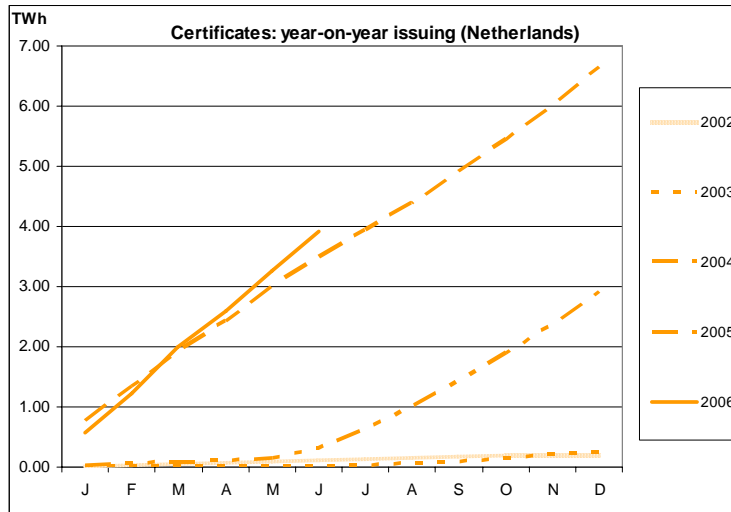
Ireland. The Irish market has yet to get off the ground, but is expected to do so soon.



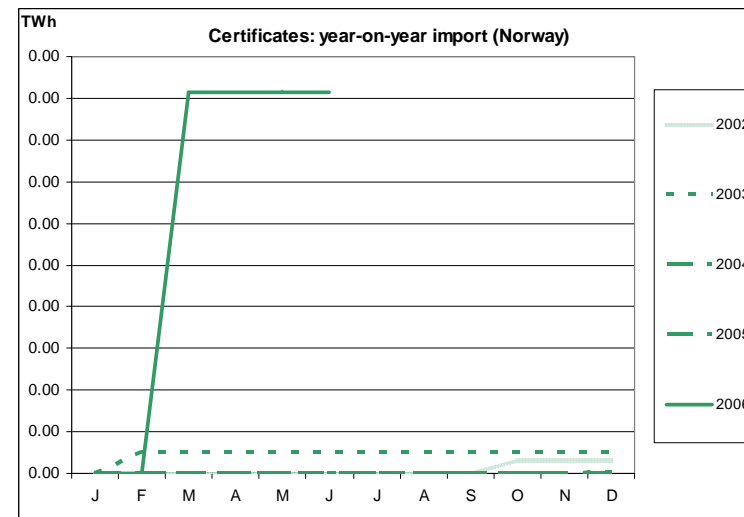
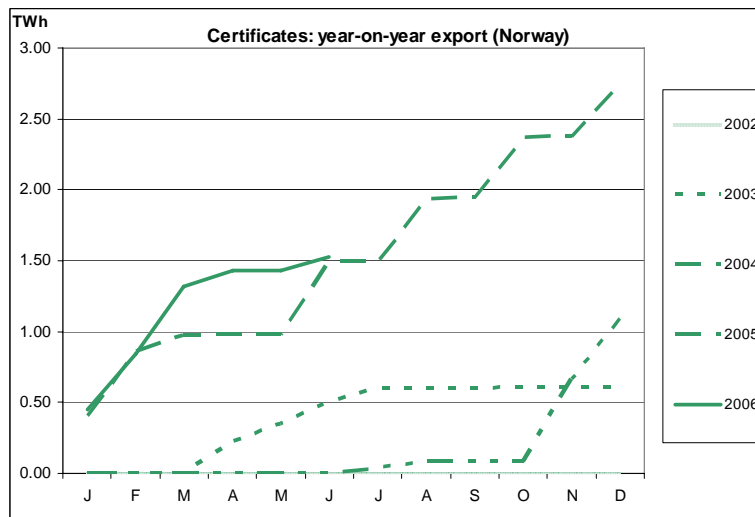
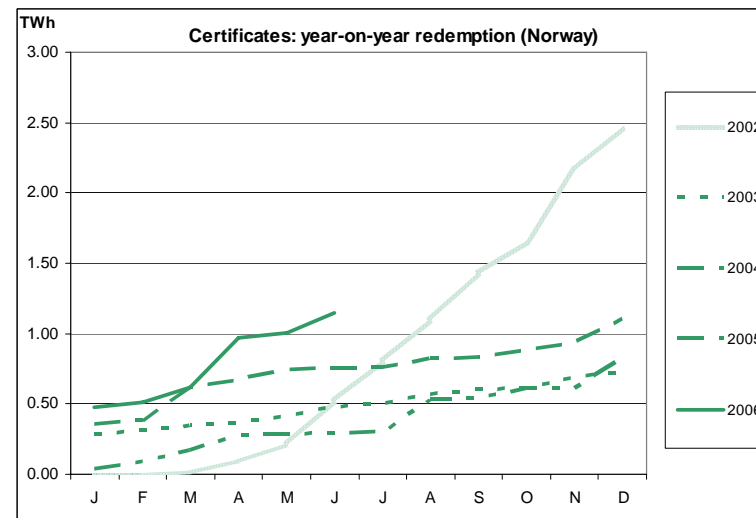
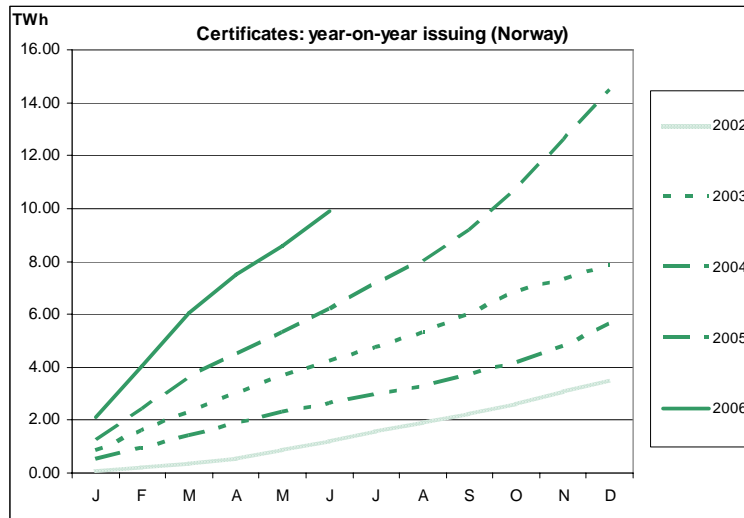
Italy. The Italian market has been growing at a similar rate to the French market, but with proportionally less redemption and no international transfers.



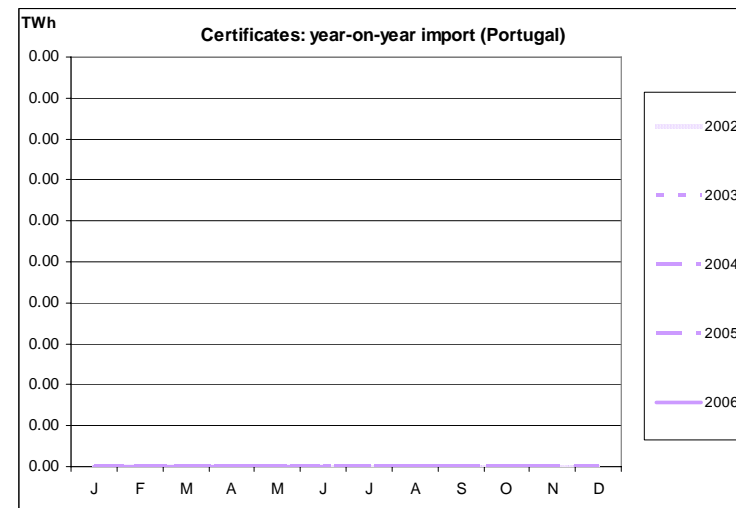
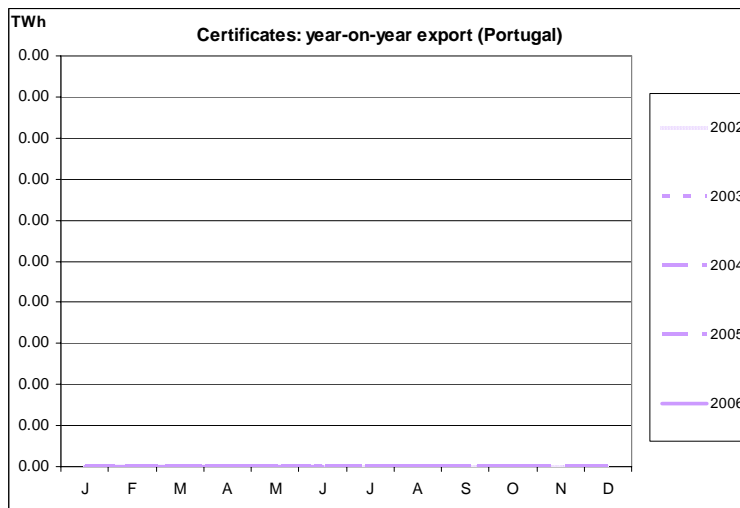
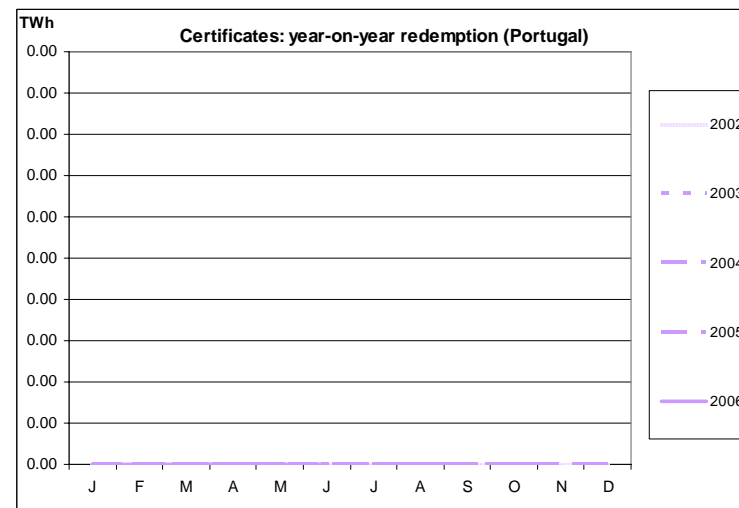
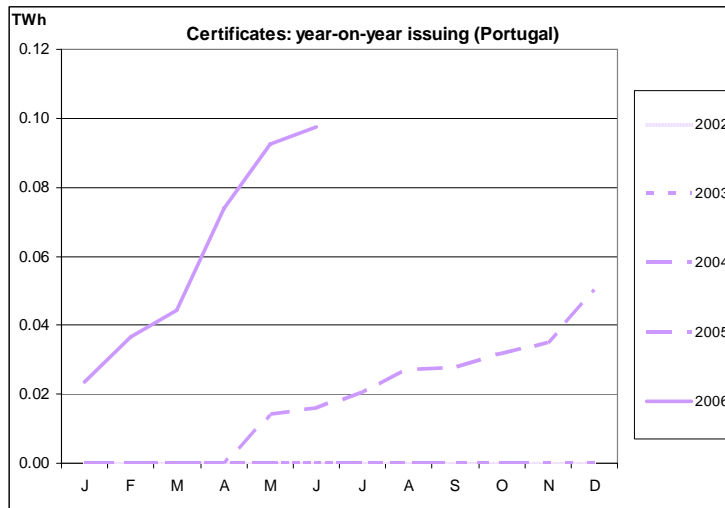
Netherlands continues to grow marginally faster than 2005, although exports are considerably larger than in prior years.



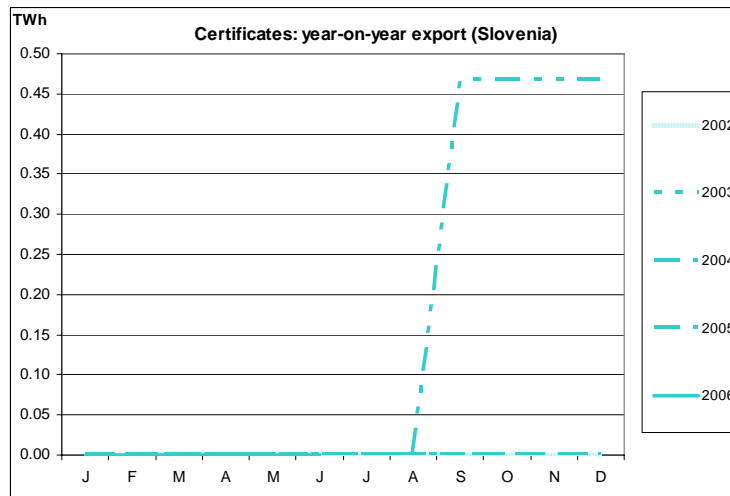
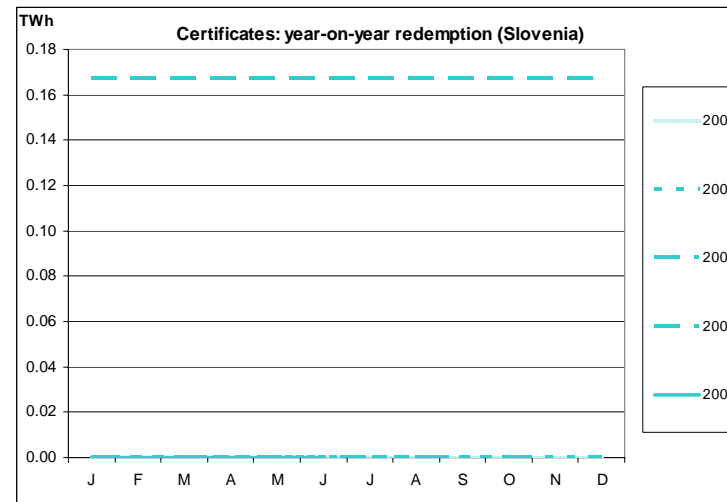
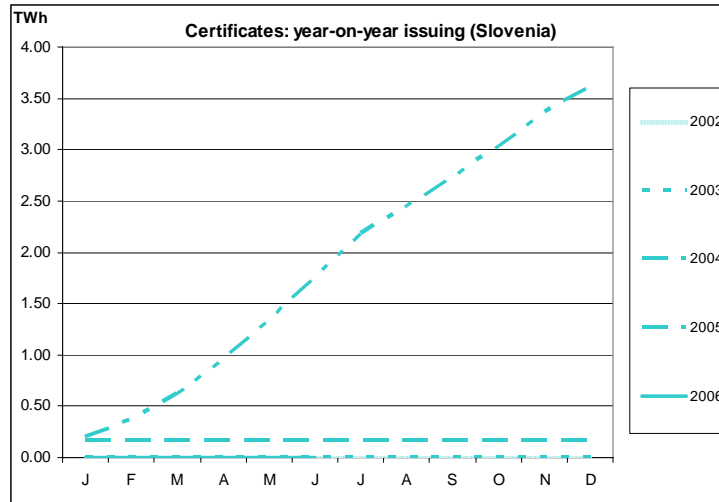
Norway continues to issue at a higher rate than ever before, both in terms of certificates issued and redeemed, and of international transfers.



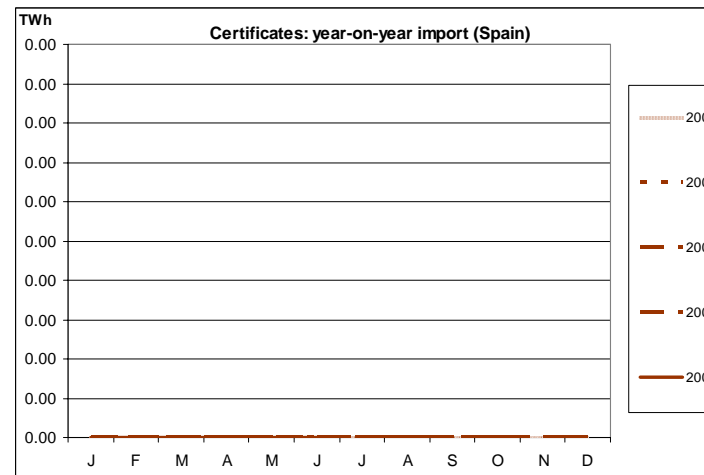
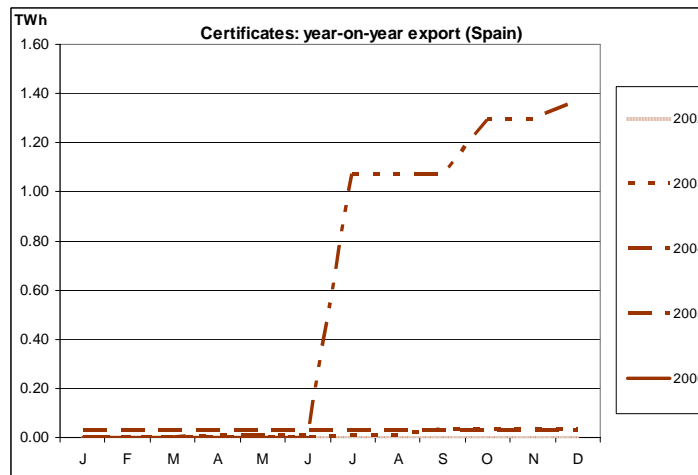
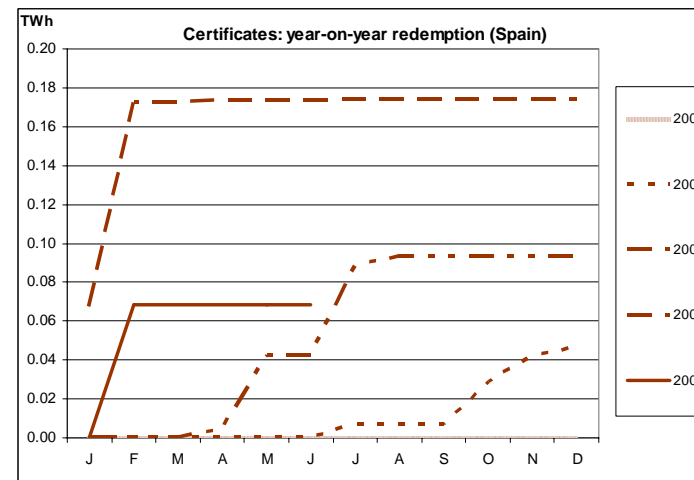
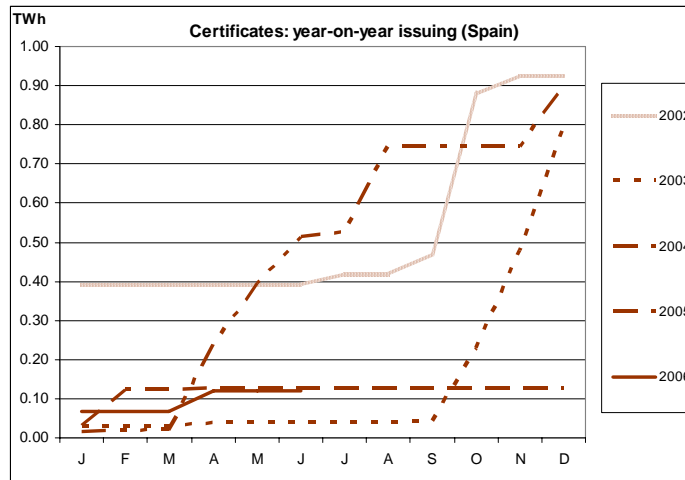
Portugal continues to issue small numbers of certificates, but has yet to transfer or redeem any.



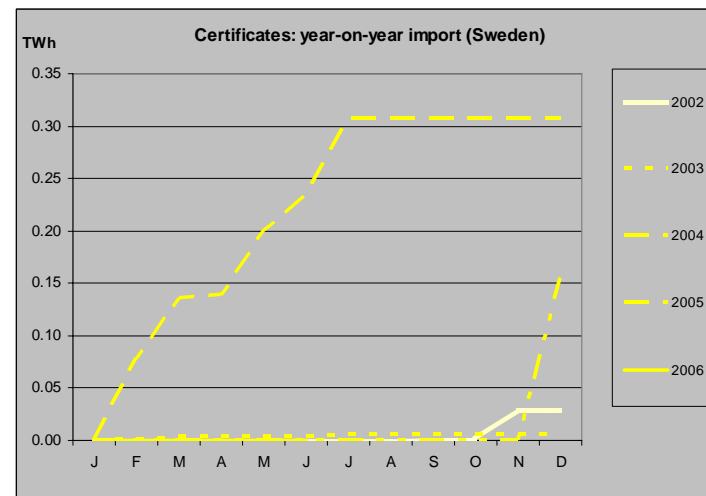
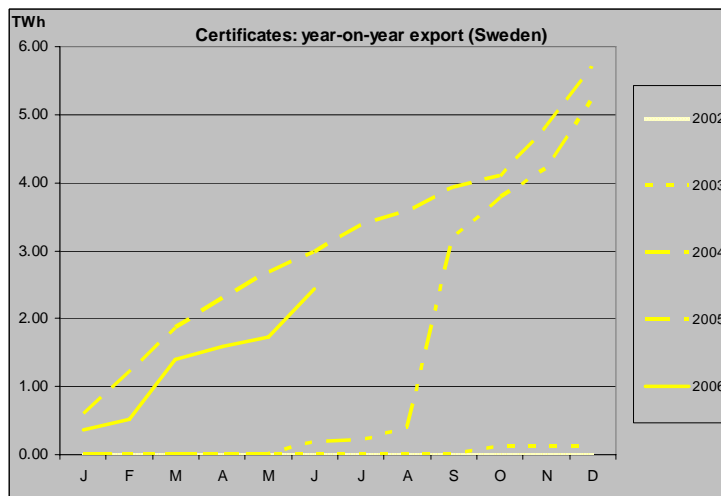
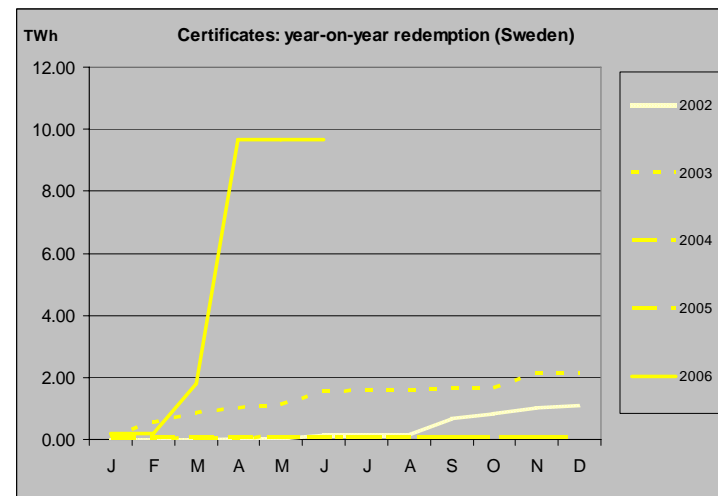
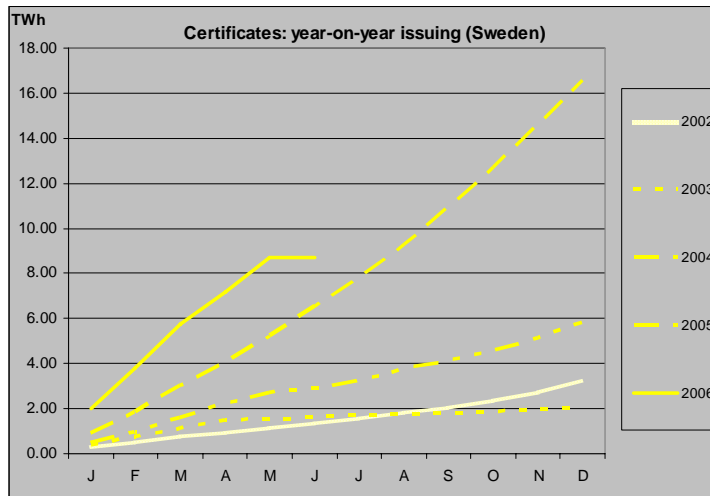
Slovenia has redeemed small number of certificates, but has otherwise been quiet for the past year.



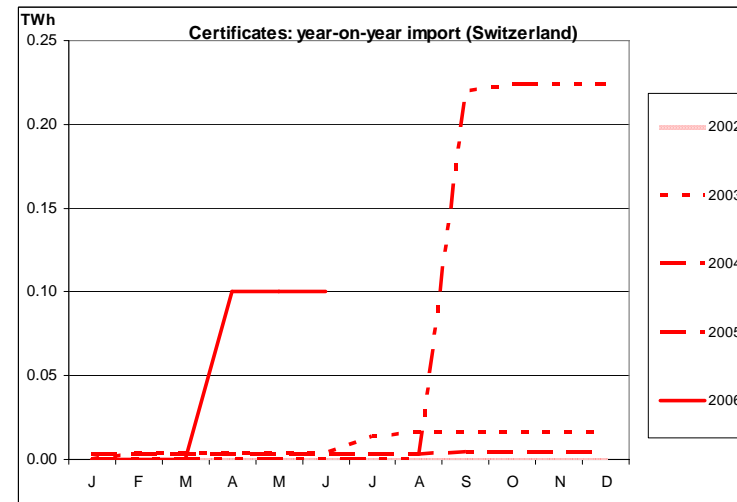
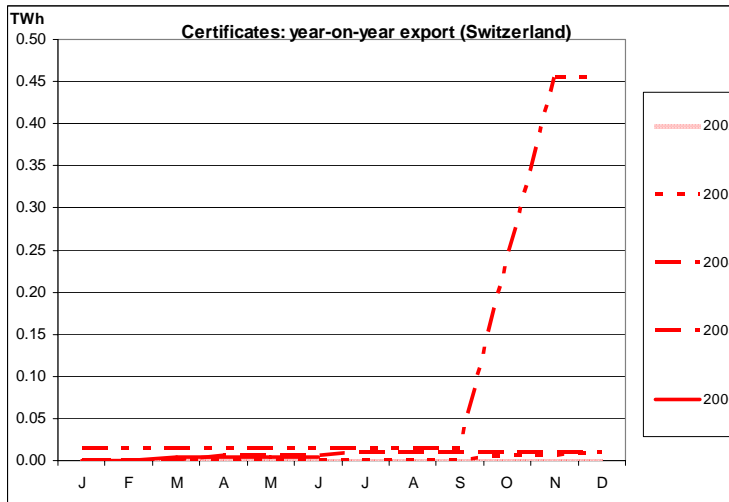
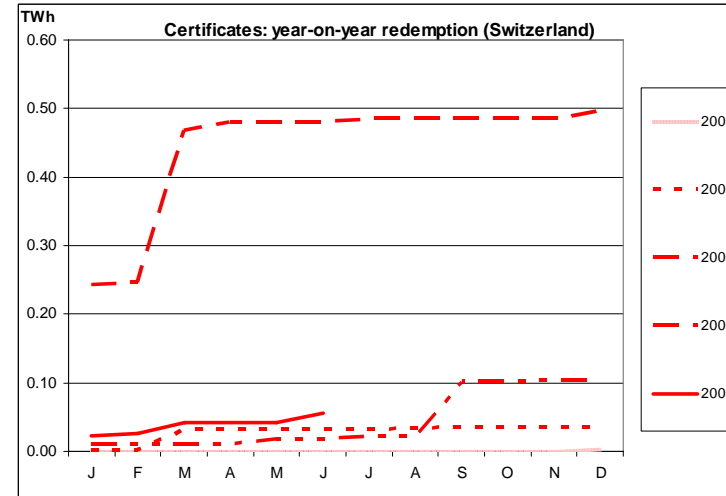
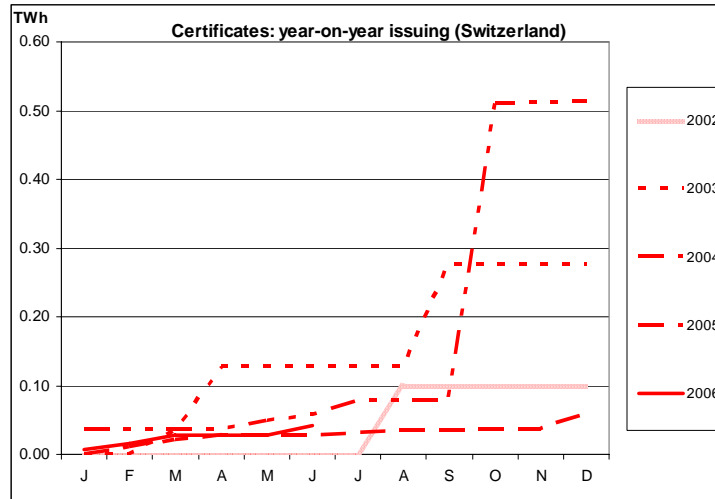
Spain has been quiet this year, and further activity now awaits approval of the revised Spanish Domain Scheme (Spanish activity was suspended on 16 June 2006 in the absence of a PRO-compliant Domain Protocol).



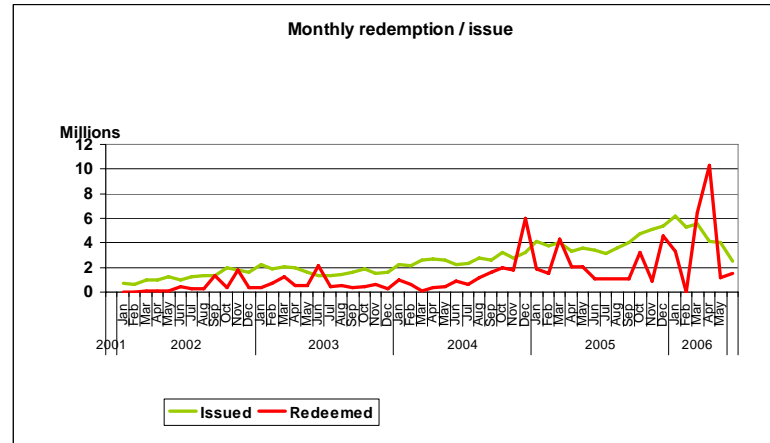
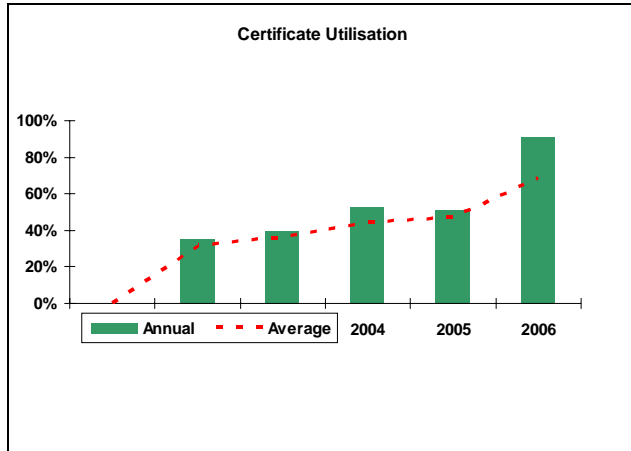
Sweden continues to issue more certificates than ever before, redeeming very large numbers of these but still managing to export substantial amounts.



Switzerland has been relatively quiet this year, although ETRANS has now taken over from VUE as issuing body and this may have an impact.



Realisation of value: The proportion of certificates that are redeemed has risen sharply to 55% overall, and 89% 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.

