

Summary¹

Volumes issued and transferred continue to increase at a greater rate during 2006 than in previous years, while redemption increased markedly to 60% of all issued certificates. The major certificate issuing countries remain Norway and Sweden, then Finland and Netherlands (which are both diminishing as issuers). However, the position of Austria as a major issuer is being replaced by Belgium (Flanders). Netherlands and Austria remain the two major redeeming countries; and Norway, Belgium, France, Germany, Italy and Spain are redeeming an increasing number of certificates. Conversely, Slovenia has virtually ceased redeeming, and redemption in Finland has decreased sharply.

Regarding technologies, hydropower and municipal solid waste continue to grow; while forestry and wind decrease diminish. However, a smaller percentage of certificates redeemed are for hydropower than for other technologies.

The largest exporters remain Sweden, Norway and Finland; while Austria and Netherlands and increasingly Germany remain the major importers. Interestingly, transfers have stayed fairly constant for the last three years, at a time while issuing and redemption have grown 30-50% per annum.

Membership continues to grow, with Flanders joining, Ireland rejoining and Wallonia having applied for membership for 2007. Also in 2006, Grexel took over as issuing body for Finland and Sweden from Fingrid and Svenska Kraftnat.

For **Benelux**, Belgian RECS activity diminishes with the forthcoming membership of Wallonia (eCerte is currently acting as the agent of the CWaPE), and continued increasing activity in Flanders, where issuing continues to grow along with redemption and international trade; and Dutch issuing and redemption continue at 2005 rates, although exports are larger than in previous years and imports a little less.

Regarding the **Nordic** countries, Denmark continues to be a minor participant in the market, only issuing certificates this year; Finland issued and redeemed less than its usual large number of certificates, but still remains a major participant, exporting more than ever; Norway continues to issue, export and redeem certificates at a higher rate than ever before; and Sweden continues to issue more certificates than ever before, redeeming large numbers but still exporting the same as in previous years.

Of the **Mediterranean** countries, France is growing fast in issued, redeemed and imported certificates, although recently imports have started to replace issued certificates; the Italian market has been growing at a similar rate to the French market, but with no international transfers; Slovenia has redeemed a small number of certificates, but has otherwise been inactive for the past year; and Spanish issuing recommenced in late 2006, leading to higher redemption than in the past (international transfers await a revised Domain Protocol).

For **central Europe**, Austria issued very few certificates in 2006, but the volume of imported and redemption certificates continued to increase; Switzerland was relatively quiet this year until April, when redemption rose sharply, followed by issuing, since when there has been little activity; Germany imported and redeemed large numbers of certificates (the impact of the new Disclosure scheme has yet to be seen);

Finally, on the **Atlantic** coast, Ireland has yet to get off the ground, although there are signs that it may become active in 2007; and Portugal continues to issue larger numbers of certificates than in previous years, but has yet to transfer or redeem any.

Phil Moody (Secretary General) – 24th January 2007

¹ All certificates are 1MWh. As metering data is the basis for issuing certificates, there is always delay in gaining accurate statistics for a particular month, so the most recent quarter is understated and corresponding information should be treated with care. International trade statistics 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 seems to be increasingly replaced by electronic transfer. Finally, data has been collected for all of 2006, from all members of AIB except VREG (Belgium, Flanders).

Figure 1: raw data – issuing and redemption

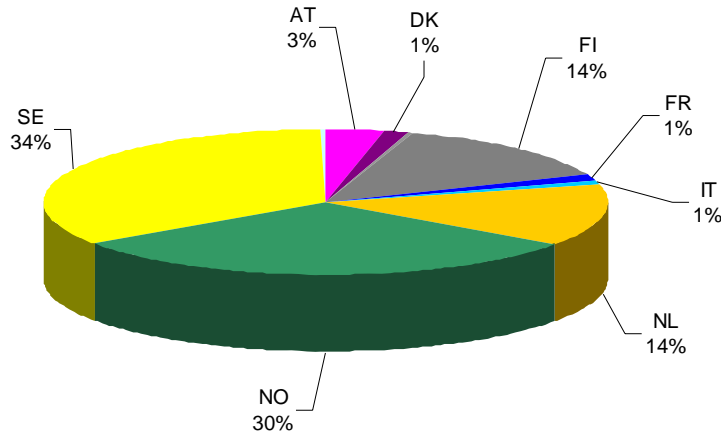
Issuing & Redemption for all technologies																
	Total		2007		2006		2005		2004		2003		2002		2001	
	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed
Austria	7,230,819	14,910,054		52,211	208,264	4,602,618	1,560,474	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	1,768,783	818,191			820,502	179,984	59,782	495,653	512,442	102,924	276,837	35,530	99,220	4,100		
Germany	48,351	684,776				616,653		25,036	5,963	43,087	41,789		450		149	
Denmark	2,191,198	25,178			529,882	564	631,304		777,965		24,686	24,614	74,233		153,128	
Spain	3,553,927	1,074,509	199,549	188,741	604,270	571,403	126,319	174,334	901,135	93,400	795,287	46,631	534,378		392,989	
Finland	35,782,681	10,618,498		120,193	7,056,366	1,112,145	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	2,199,942	1,387,035		13,400	906,969	610,996	701,808	461,004	443,948	214,878	142,665	86,757	4,552			
Greece																
Ireland																
Iceland																
Italy	2,051,449	903,263			1,185,323	573,660	418,397	241,048	73,970	76,873	59,549	10,557	302,814	1,125	11,396	
Netherlands	16,538,547	36,527,701			6,479,515	14,306,508	6,681,535	14,569,852	2,923,909	7,542,276	250,536	107,962	203,052	1,103		
Norway	52,083,010	8,107,777	870,850	282,726	19,762,654	2,711,968	14,506,286	1,101,274	5,625,516	827,342	7,817,149	725,706	3,500,555	2,458,761		
Poland																
Portugal	261,797		37,739		173,857		50,201									
Sweden	52,820,087	13,208,545		80,000	25,105,947	9,749,205	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	181,037,088	93,312,222	1,108,138	737,271	63,368,388	37,805,491	48,227,624	24,753,055	31,411,681	16,552,412	20,577,668	8,262,159	14,917,282	5,201,833	1,426,307	1
Percentage redeemed		52%		67%		60%		51%		53%		40%		35%		0%

Issuing & redemption for all countries																
	Report for all countries		2007		2006		2005		2004		2003		2002		2001	
	Issue	Redeem	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issue	Redeem	Issue	Redeem	Issue	Redeem	Issue	Redeem
Onshore wind	9,528,985	5,181,695	19,660		3,614,916	2,231,315	3,261,878	1,945,381	2,131,551	804,795	309,845	153,738	166,708	46,465	24,427	1
Offshore wind	56,104	5,720			41,658		1,542	2,995	9,636	2,539	4	186	2,008		1,256	
Photovoltaic	8,716	5,995			3,172	3,095	3,800	2,895	1,731	5	13					
Thermal																
Hydropower	131,923,667	58,879,192	1,088,478	737,263	52,907,234	29,269,550	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	278,923	196,478			4,459	2,778	68,909	70,643	59,023	56,457	66,513	52,078	36,033	14,522	43,986	
Forestry etc	29,924,741	23,336,055			3,264,234	3,477,890	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	654,758	200,957			306,379	108,838	220,000	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	129,340	53,418			93,194	35,603	26,404	16,316	9,112	1,499	630					
MSW	2,975,770	1,279,049			901,600	705,196	943,399	284,092	536,345	283,780	257,630	3,026	244,910	2,955	91,886	
IB&CW	5,258,363	4,035,188			2,230,576	1,966,401	2,142,087	1,583,570	784,546	398,367	18,388	54,886	82,766	31,964		
Total	181,037,088	93,312,222	1,108,138	737,271	63,368,388	37,805,491	48,227,624	24,753,055	31,411,681	16,552,412	20,577,668	8,262,159	14,917,282	5,201,833	1,426,307	1

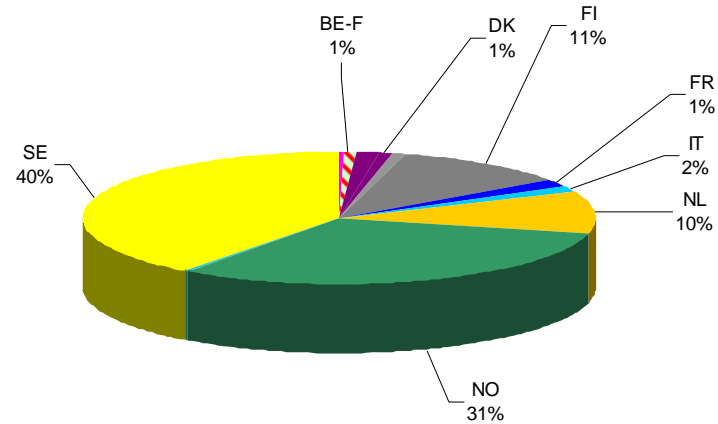
The tables above display issue and redemption statistics for each year to date, and for 2001-7 in total. These, and the following charts, show that volumes issued and transferred continue to increase at a greater rate during 2006 than in previous years, while redemption increased markedly to 60% of all issued certificates.

Comparing 2005 with 2006, the major certificate issuing countries remain Norway and Sweden, then Finland and Netherlands (which are both diminishing as issuers). However, the position of Austria has been replaced by Belgium (Flanders).

Certificates Issued Per Country (2005)

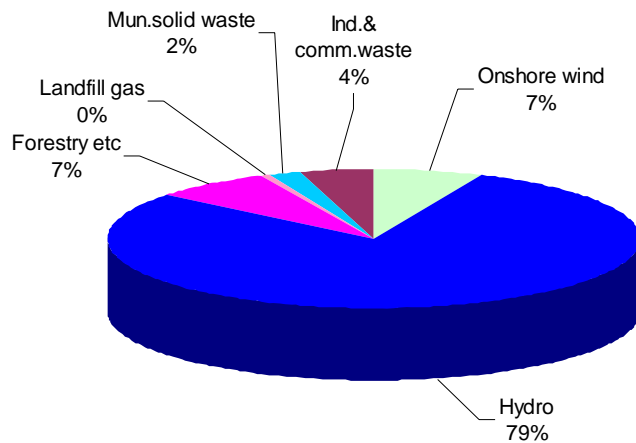


Certificates Issued Per Country (2006)

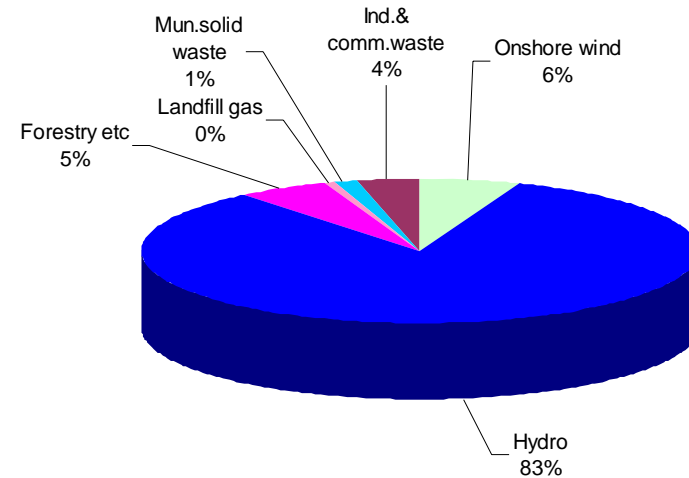


Regarding technology, hydropower and municipal solid waste continue to grow; while forestry and wind decrease diminish.

Certificates Issued Per Technology (2005)

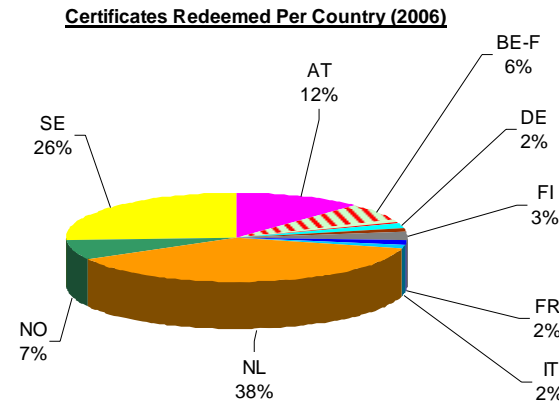
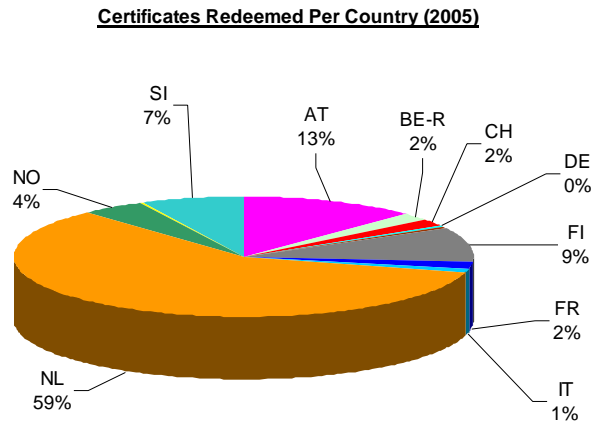


Certificates Issued Per Technology (2006)



Again comparing 2005 with 2006 to date, but this time for certificates redeemed, Sweden's redemption of a large number of certificates may reflect trading via redemption statements.

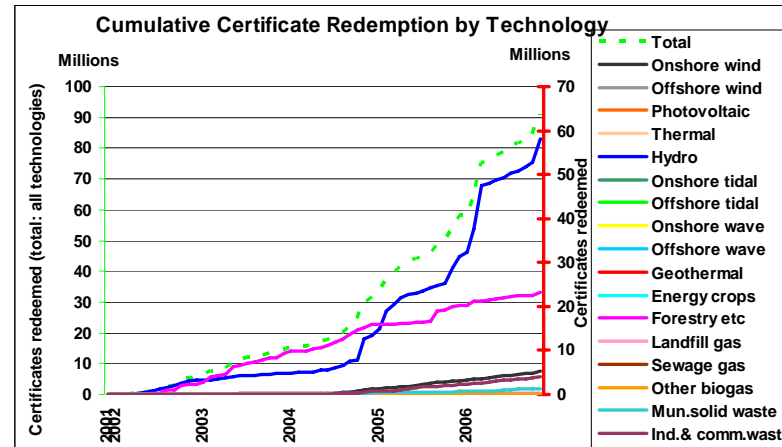
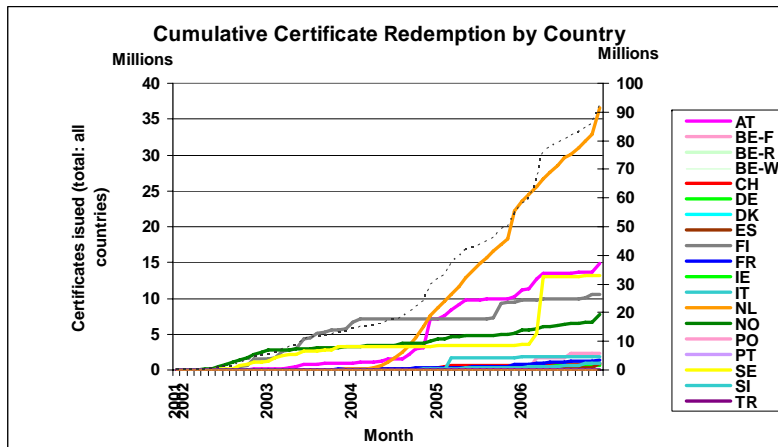
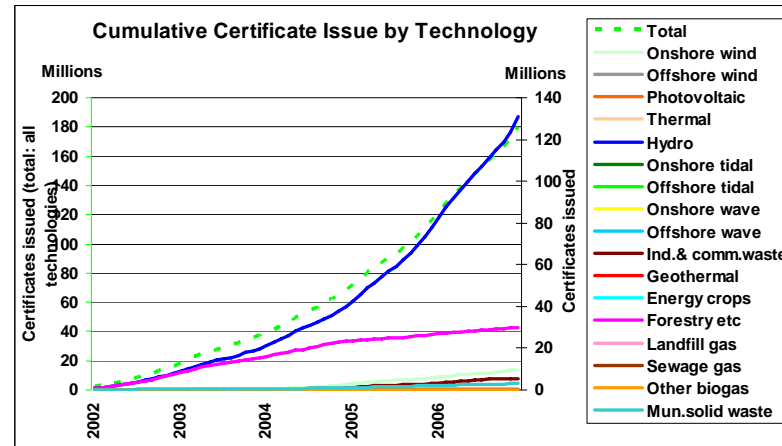
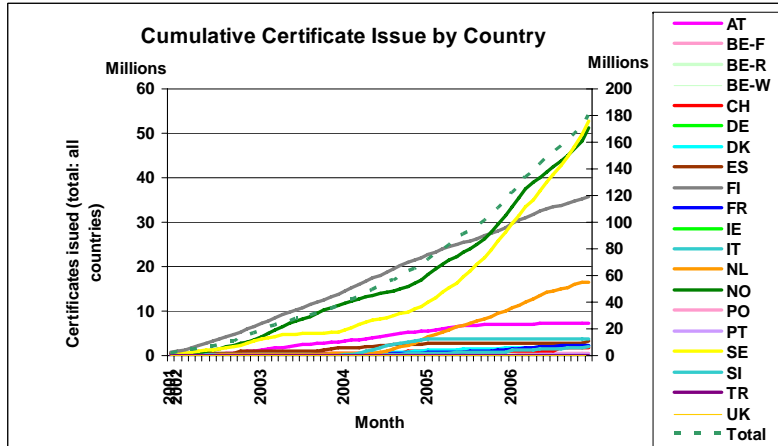
Otherwise, Netherlands and Austria remain the two major redeeming countries; and Norway, Belgium, France, Germany, Italy and Spain are redeeming an increasing number of certificates. Conversely, Slovenia has virtually ceased redeeming, and redemption in Finland has decreased sharply.



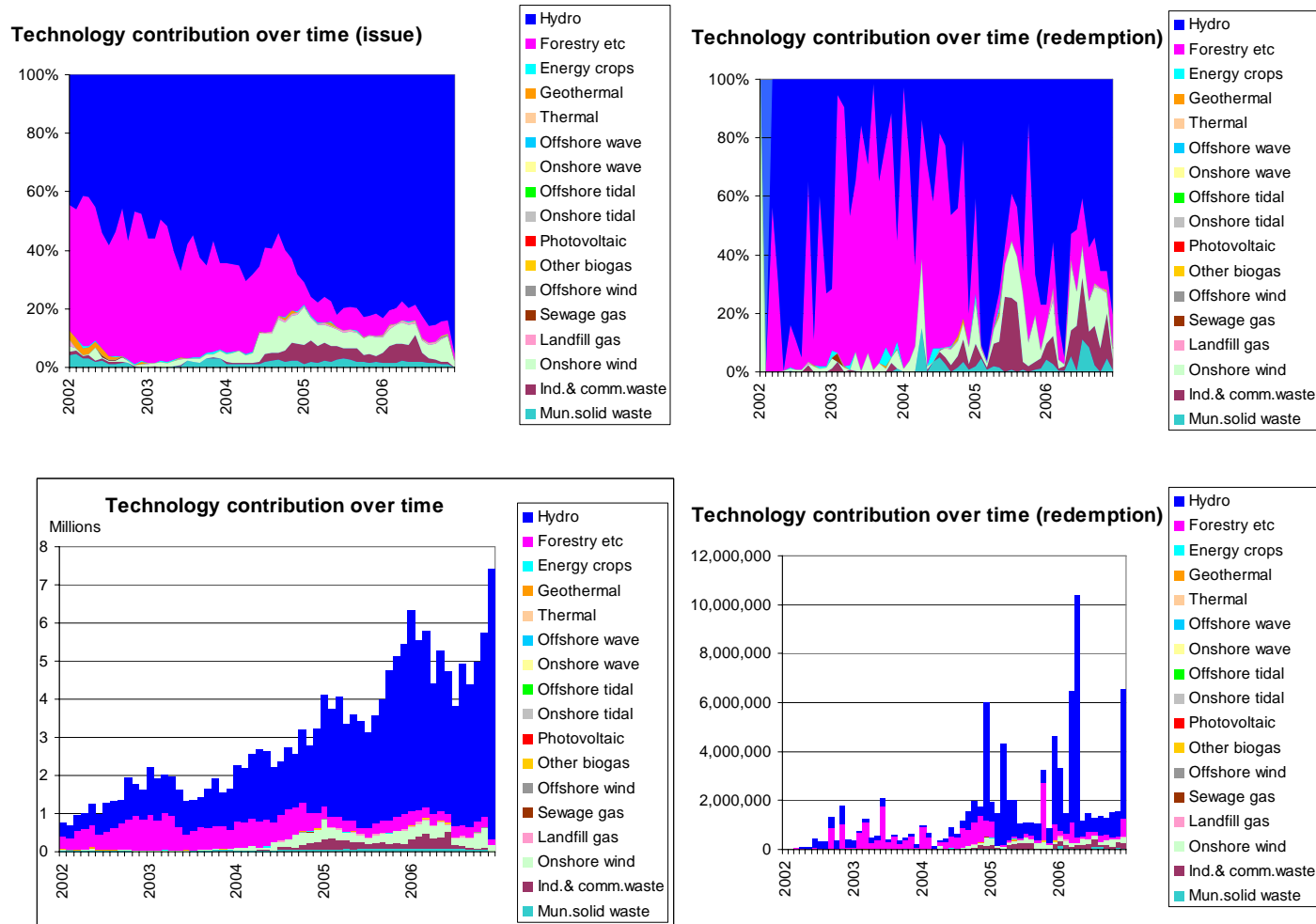
	2006	2005
	Redeemed	Redeemed
Austria	4,602,618	3,122,146
Belgium Flanders	2,308,670	
Belgium and Luxembourg	437,651	450,730
Belgium Wallonia		
Switzerland	179,984	495,653
Germany	616,653	25,036
Denmark	564	
Spain	571,403	174,334
Finland	1,112,145	2,254,194
France	610,996	461,004
Greece		
Ireland		
Iceland		
Italy	573,660	241,048
Netherlands	14,306,508	14,569,852
Norway	2,711,968	1,101,274
Poland		
Portugal		
Sweden	9,749,209	88,602
Slovenia	23,462	1,769,182
Turkey		
UK		
All countries	37,805,491	24,753,055

Overall, issuing and redemption continue to increase fairly steadily.

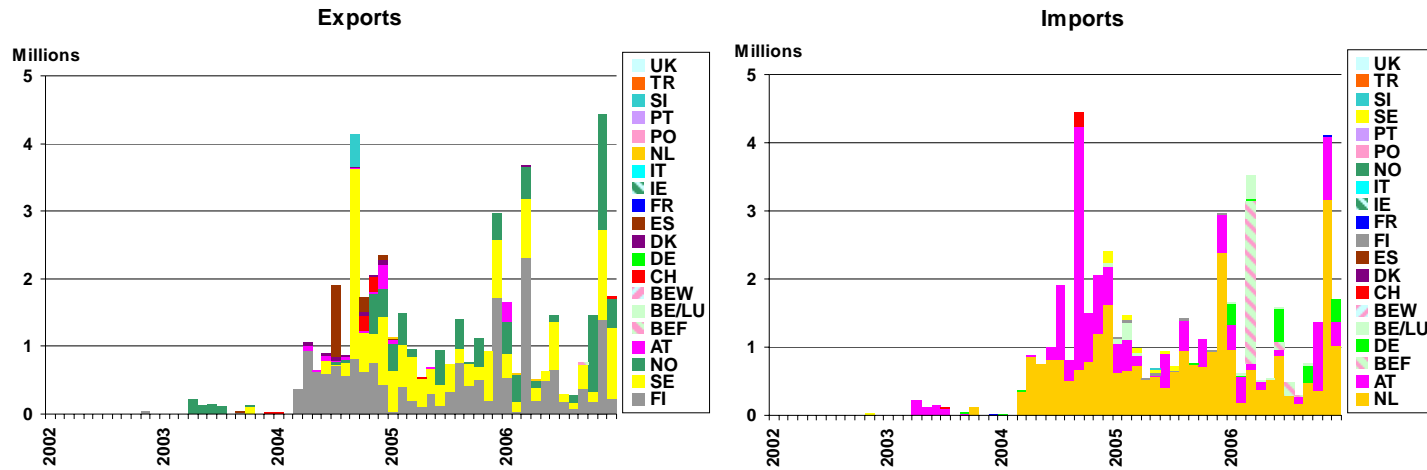
The volume of hydro issued and redeemed continues to increase substantially at the expense of forestry and agricultural waste, while wind and waste seem to have levelled out.



Another way of considering changing trends in technology is to consider the blend of technologies for which certificates are being issued and redeemed at any point in time. The following bar charts show that the growth in hydropower certificates is not matched by the market for these certificates – although around 90% of issued certificates are for hydropower, only 65% of the redeemed certificates are for hydropower – meaning that the demand for other forms of certificate is proportionally higher.

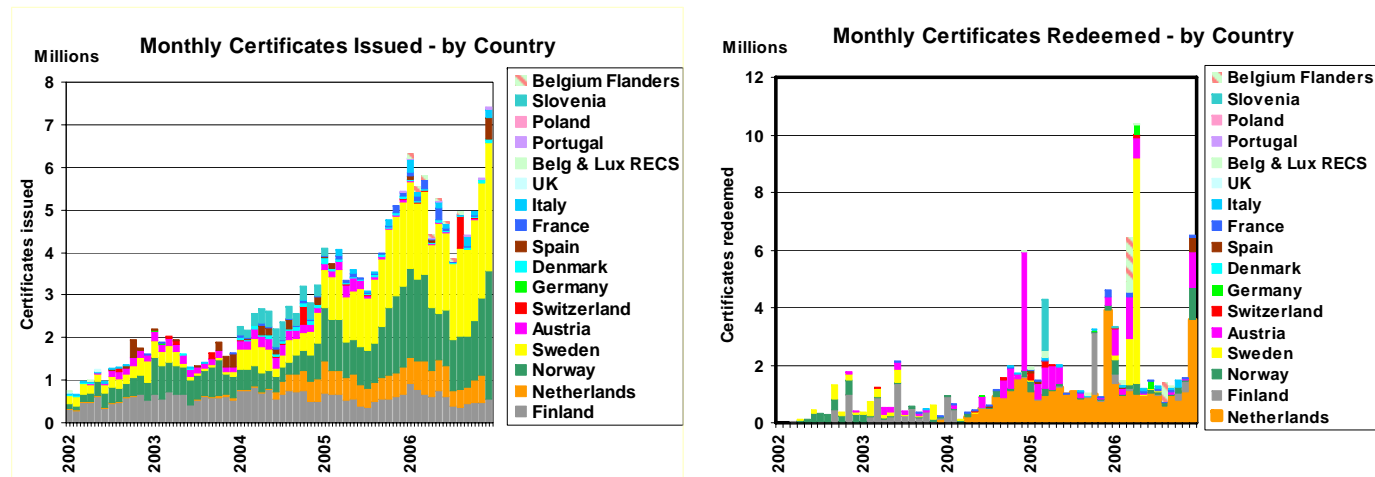


The largest exporters remain Sweden, Norway and Finland; while Austria and Netherlands and increasingly Germany remain the major importers.



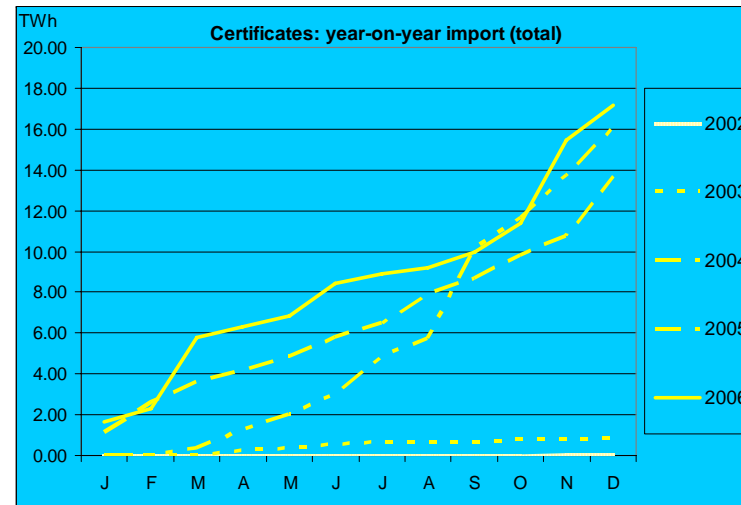
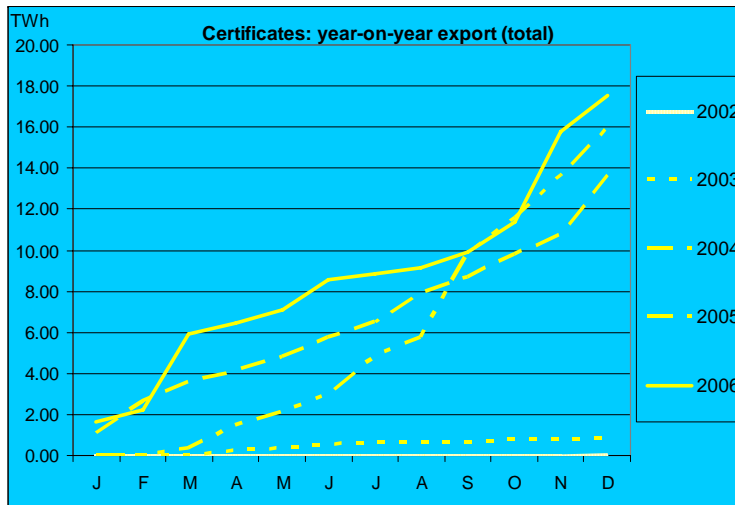
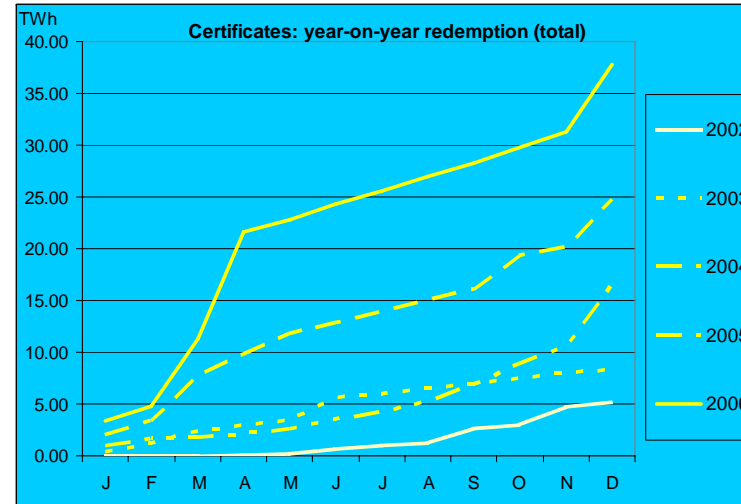
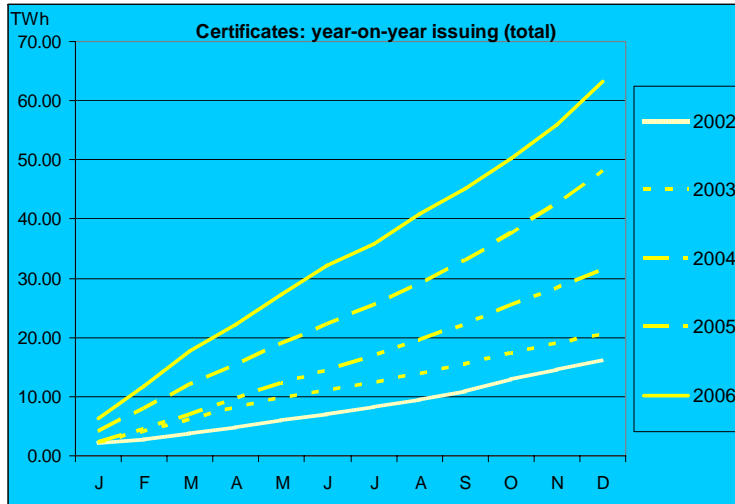
Monthly activity

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

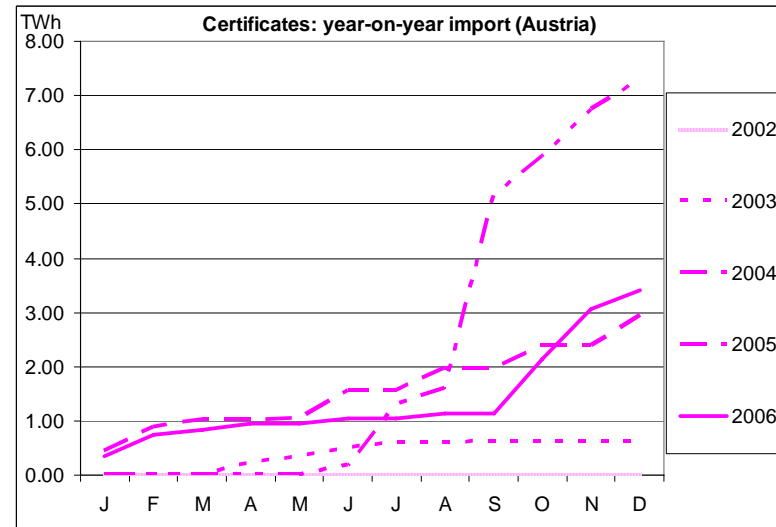
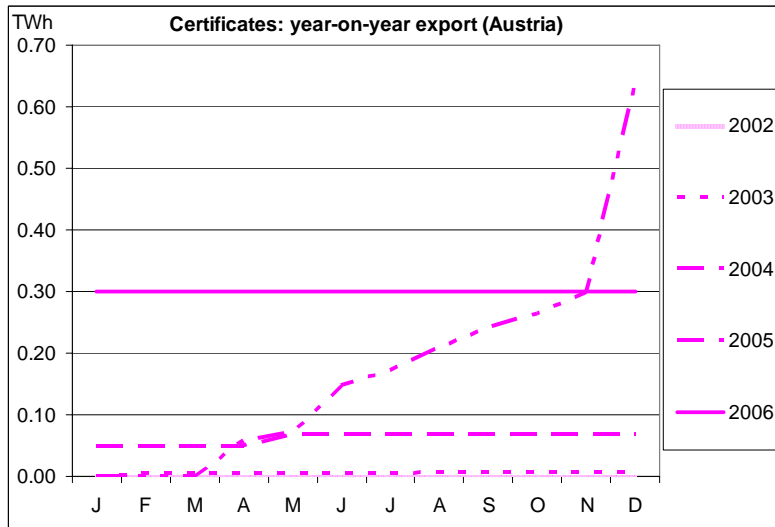
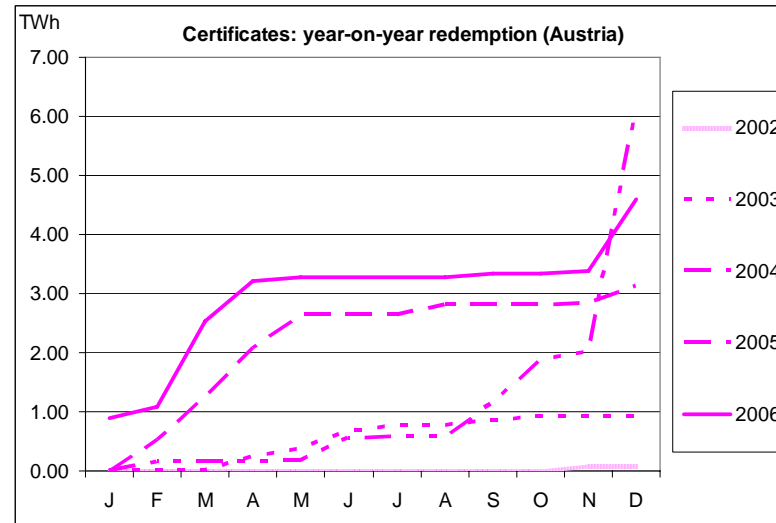
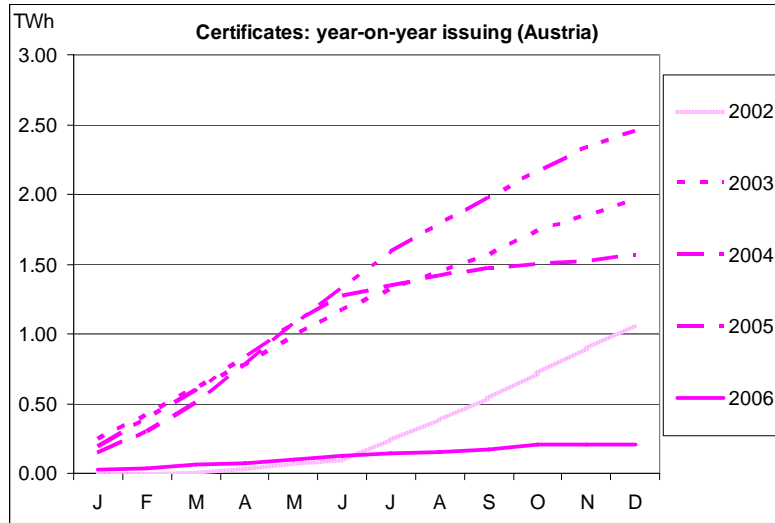


Year-on-year

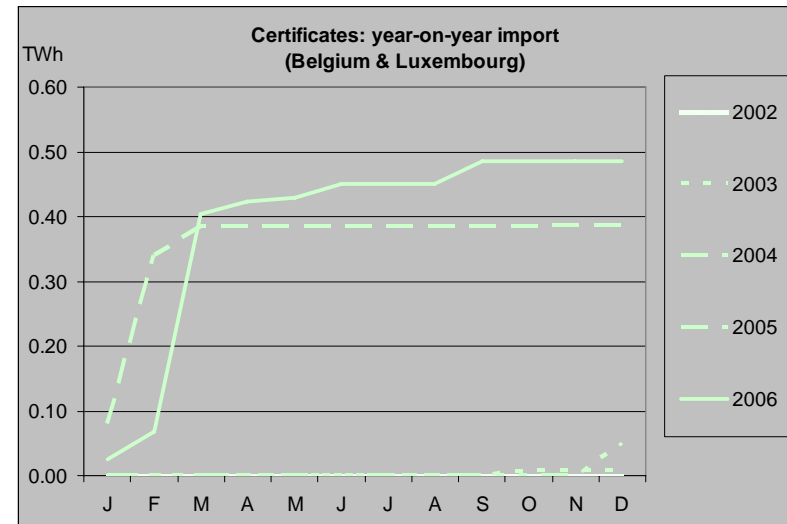
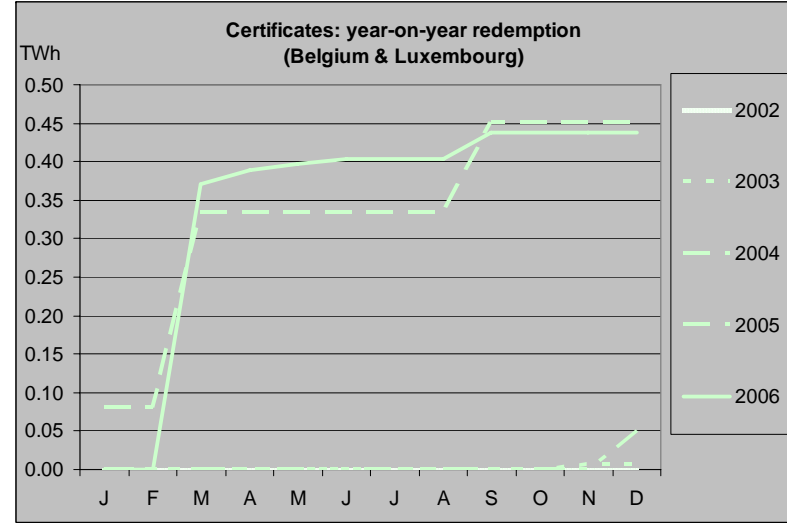
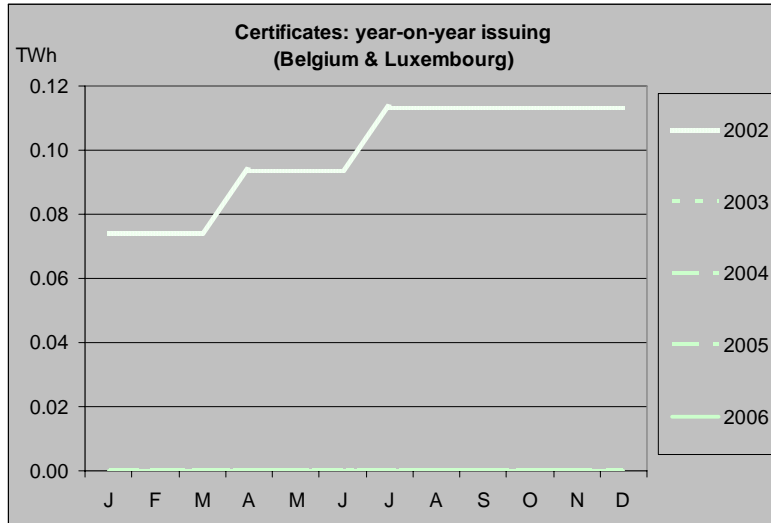
While issuing and (to a lesser extent) international transfers continue at a higher rate in the last year, redemption has increased dramatically.



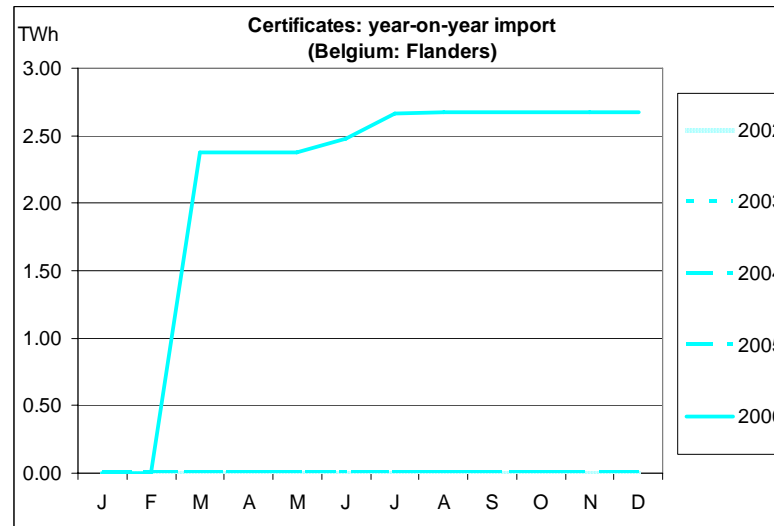
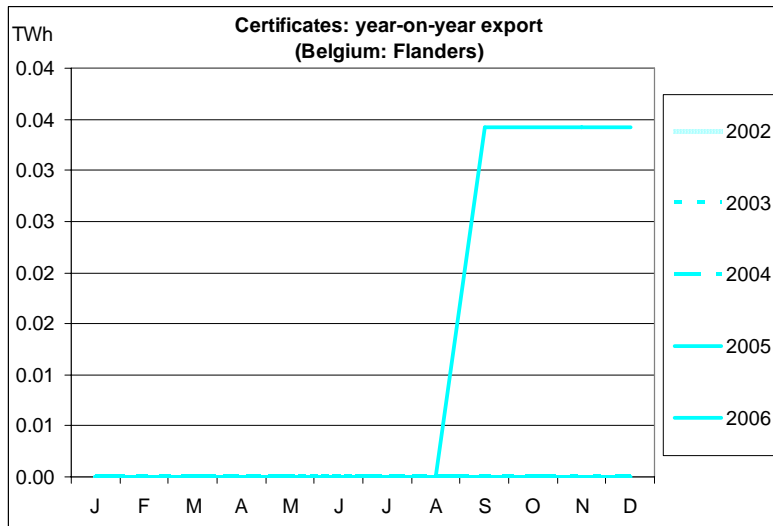
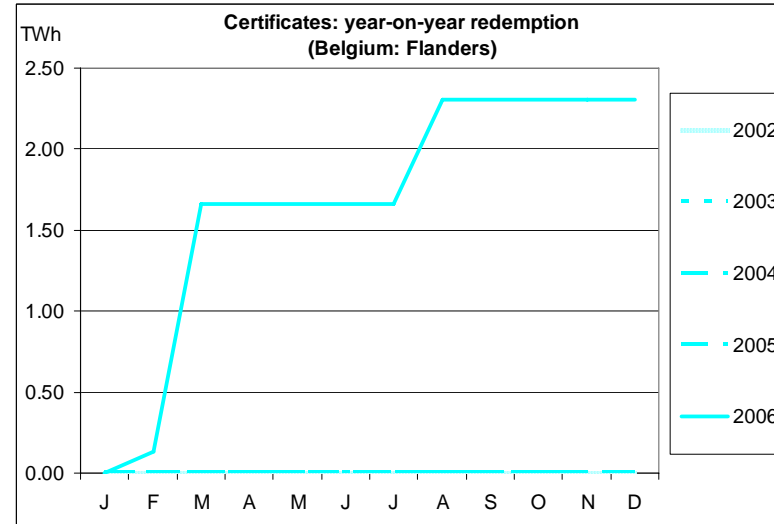
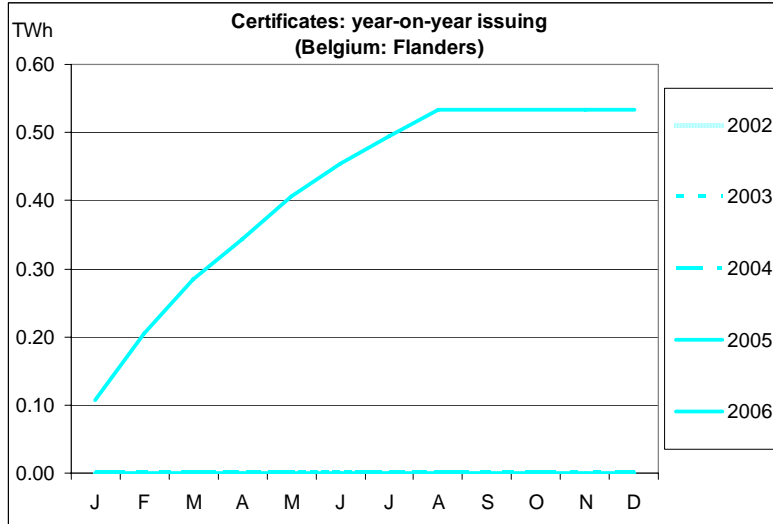
Austria has issued very few certificates this year, but the volume of redemption certificates continues to increase, mostly it seems from imported certificates, which have increased accordingly.



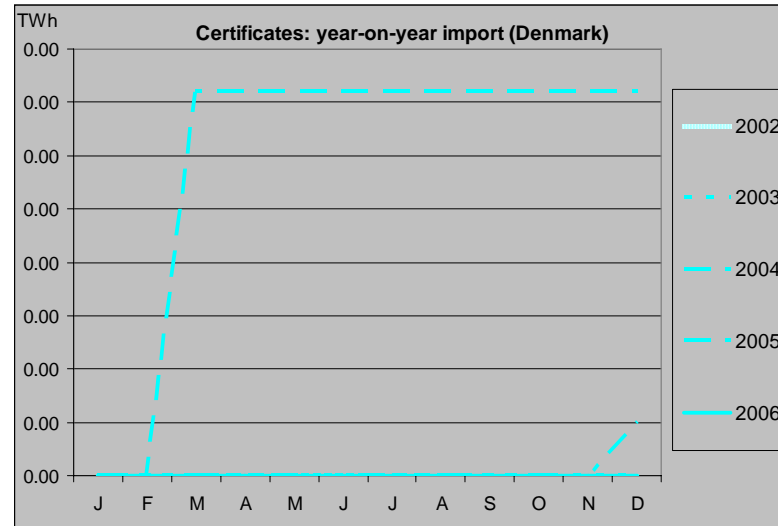
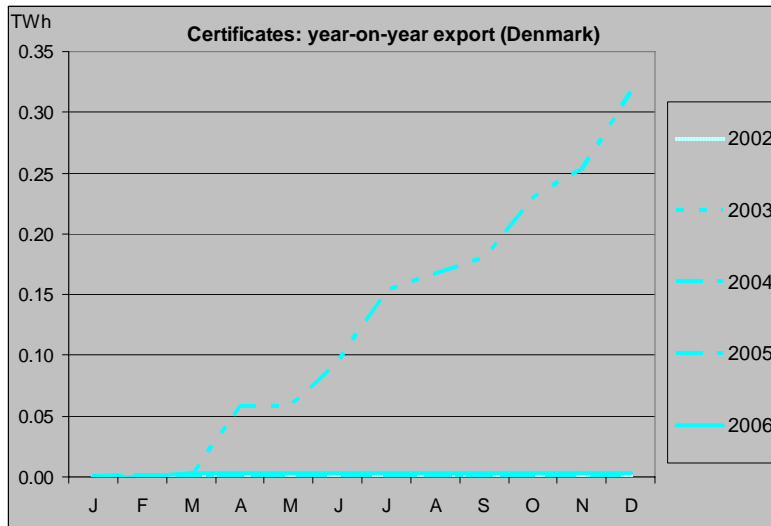
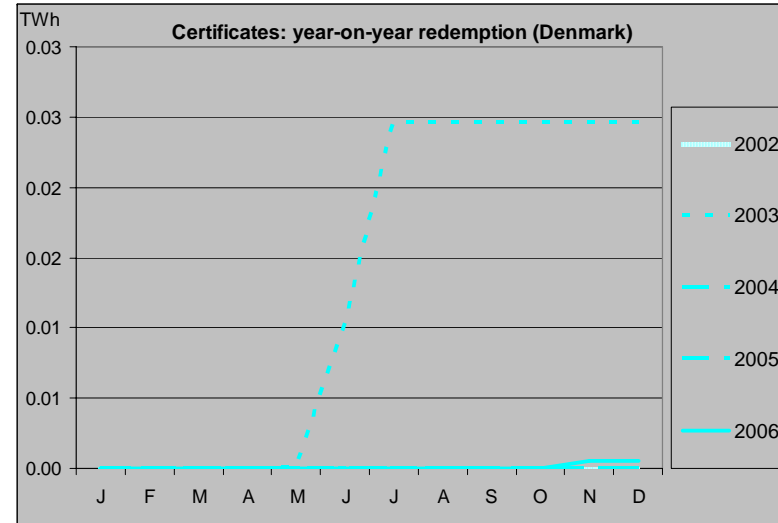
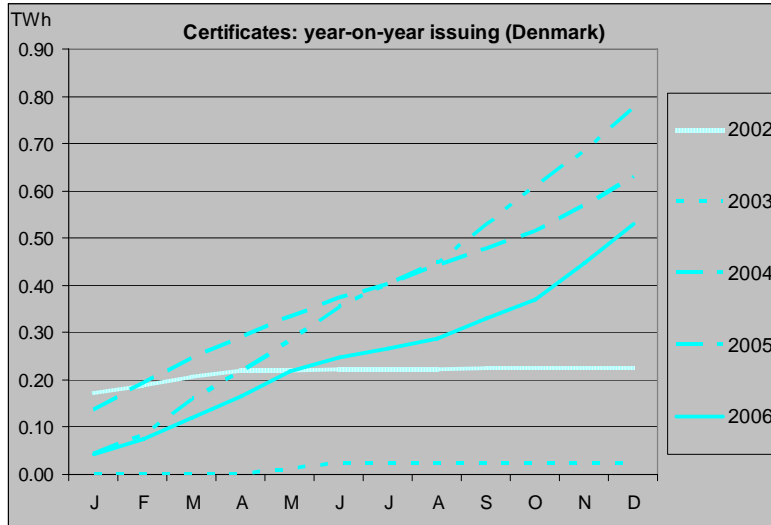
Belgium / Luxembourg. RECS activity, as expected, is diminishing with the promise of Wallonia commencing operations (Wallonia has now applied for AIB membership), but in the meantime eCerte continues to import and redeem certificates on behalf of the CWaPE.



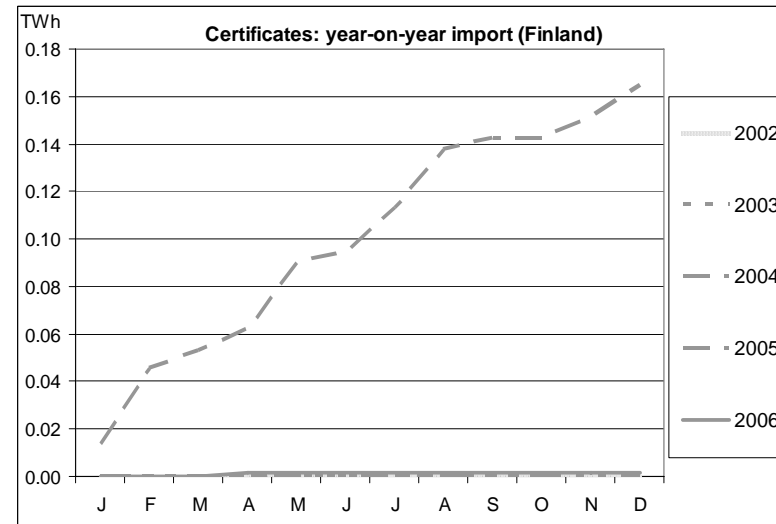
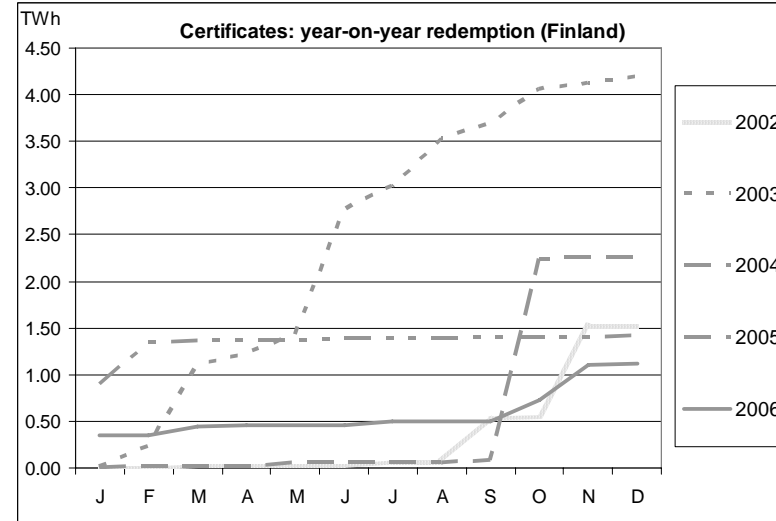
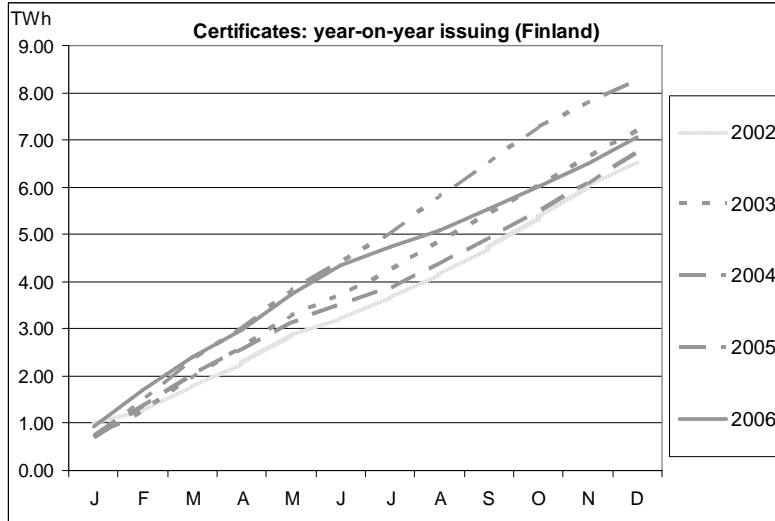
Belgium (Flanders). The January statistics for Flanders have been delayed until February 2007, and these statistics are therefore only valid for the period to October 2006. During this period, certificate issue continued to grow along with redemption and international trade.



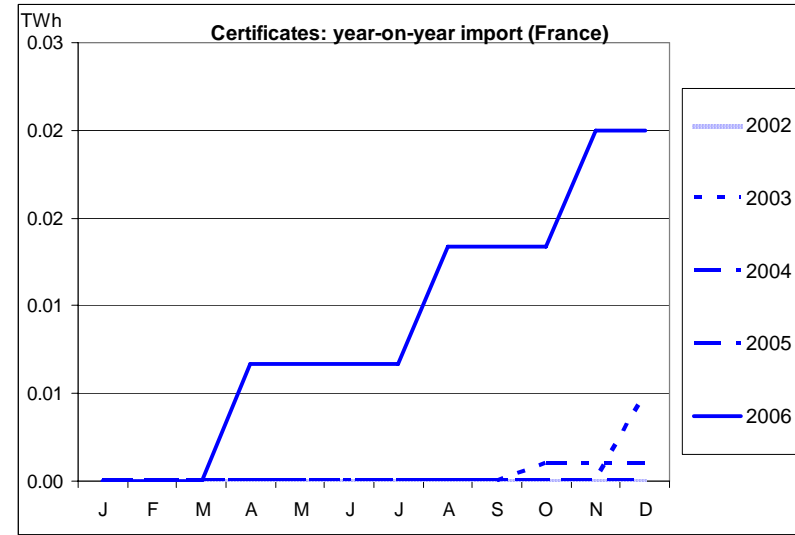
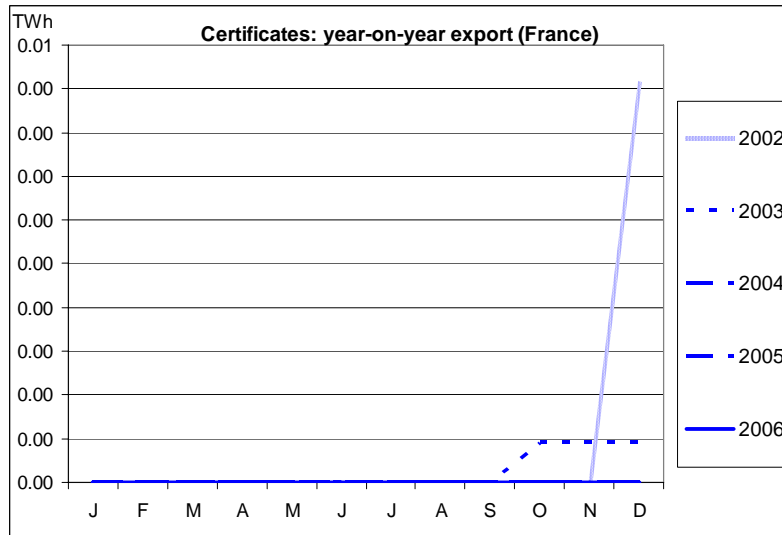
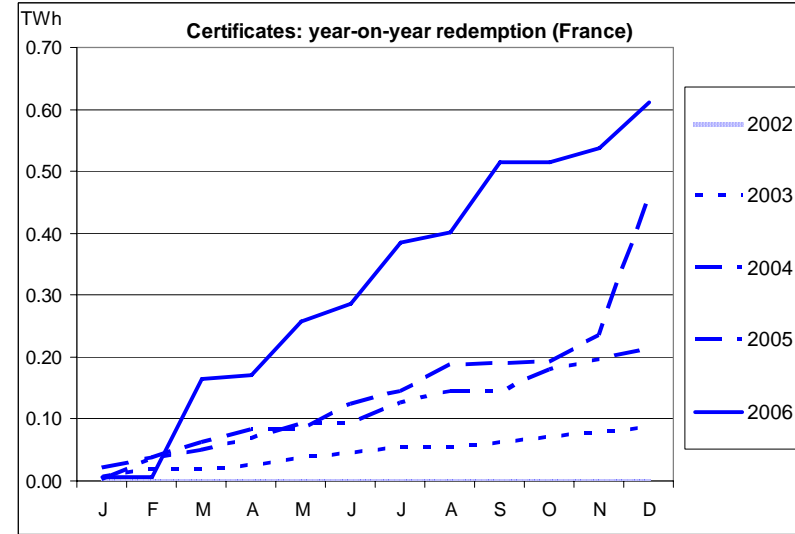
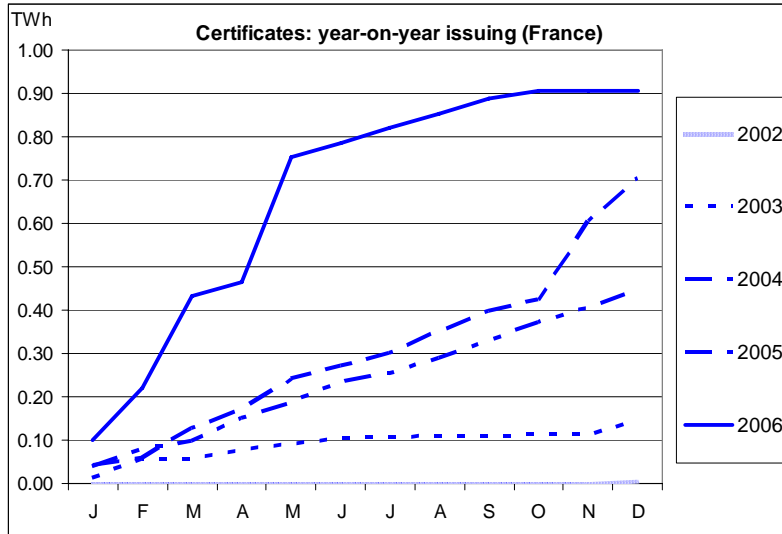
Denmark. Denmark continues to be a minor participant in the market, but only issuing certificates this year.



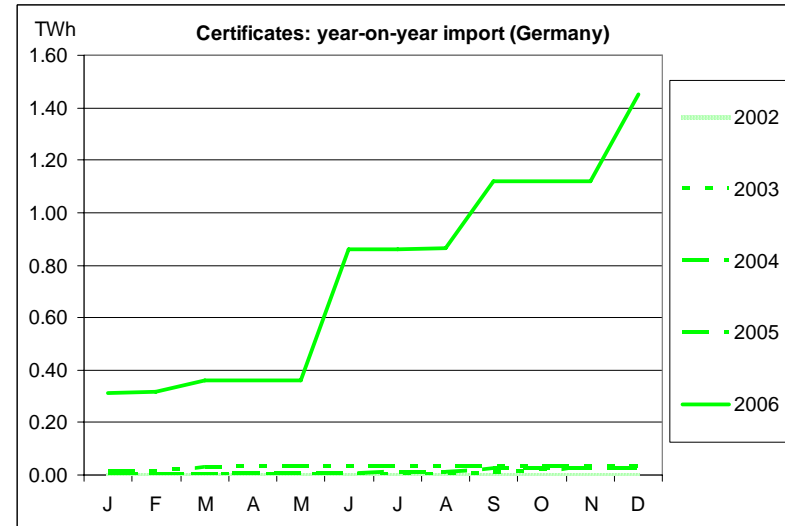
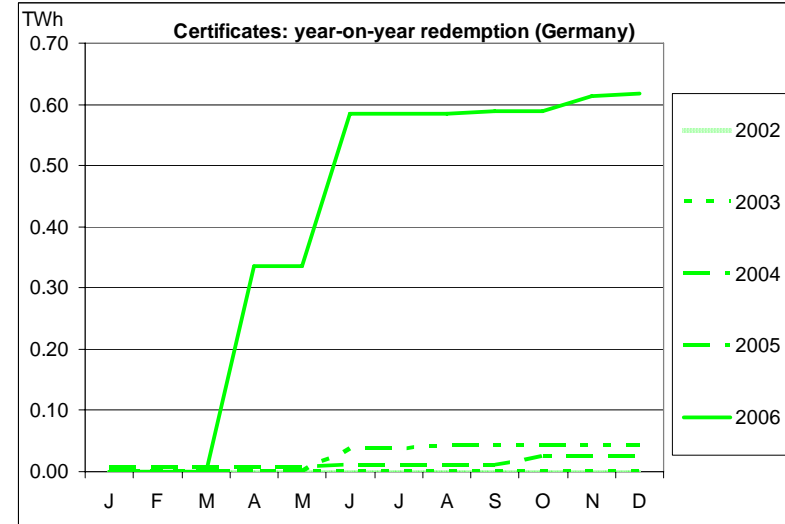
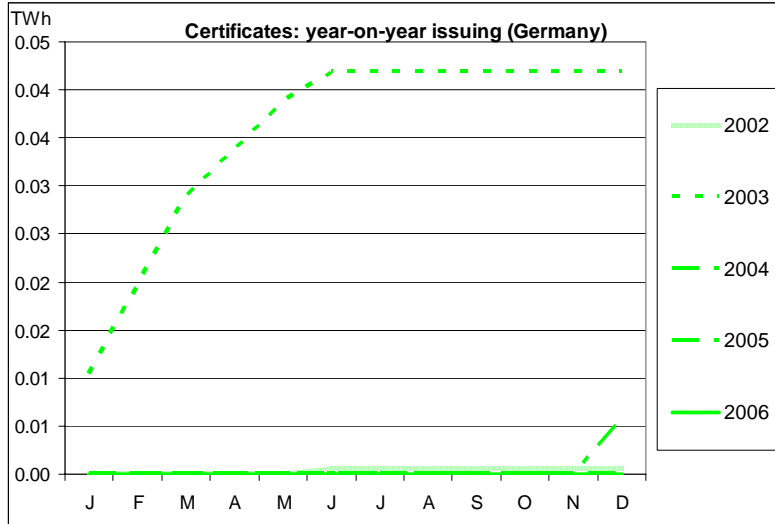
Finland has issued and in particular redeemed less than its usual large number of certificates, but still remains a major participant. It is exporting more than ever before - close to the 2004 total.



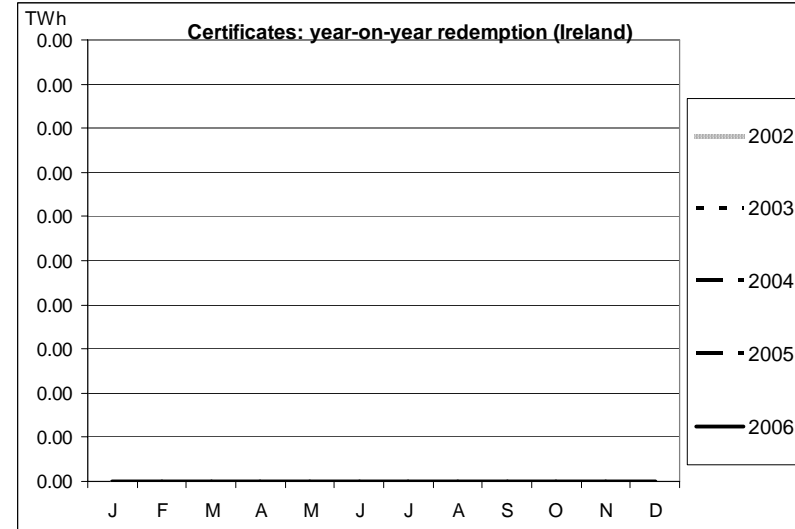
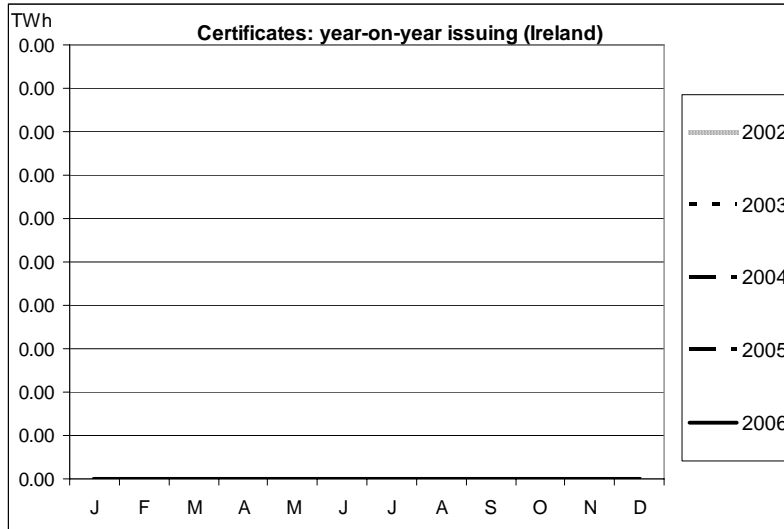
France. The French market is growing fast in issued, redeemed and imported certificates. Recently, issued certificates have fallen off, and imports are increasingly playing a role.



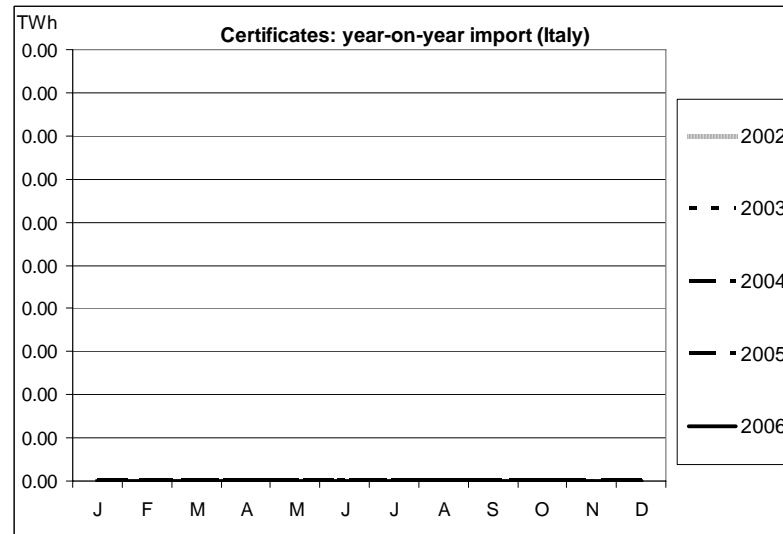
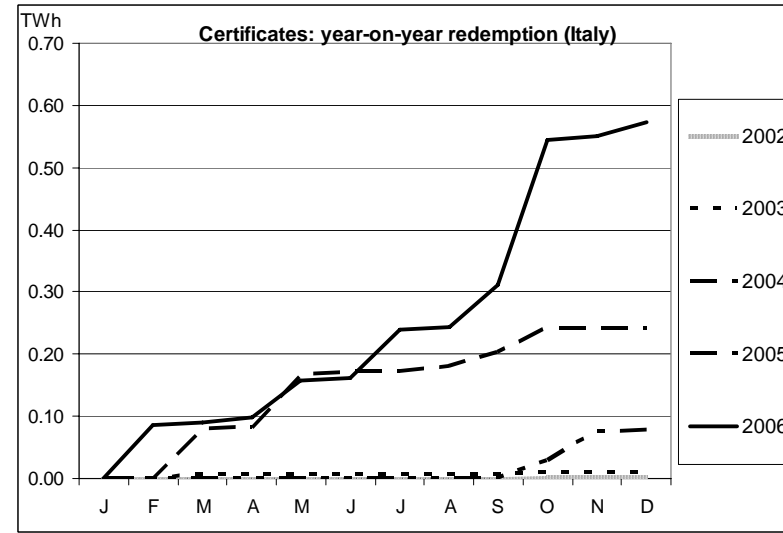
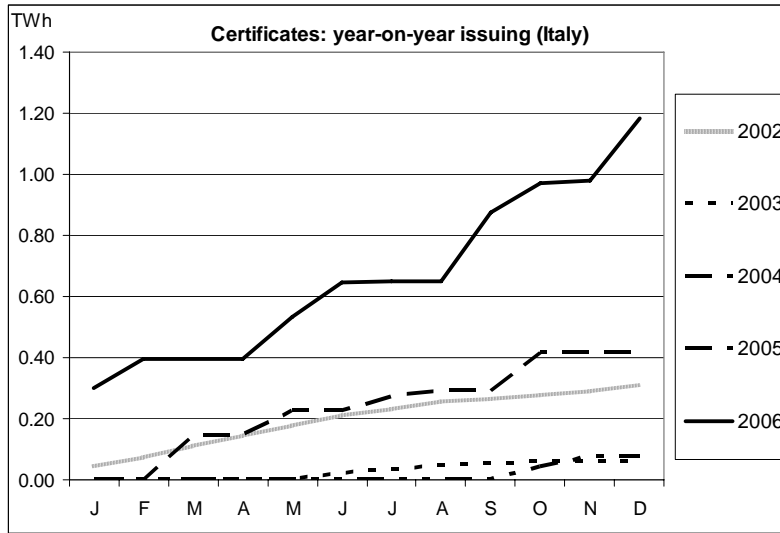
Germany has imported and redeemed large numbers of certificates. The impact of Germany recently implementing the Disclosure chapter has yet to be seen.



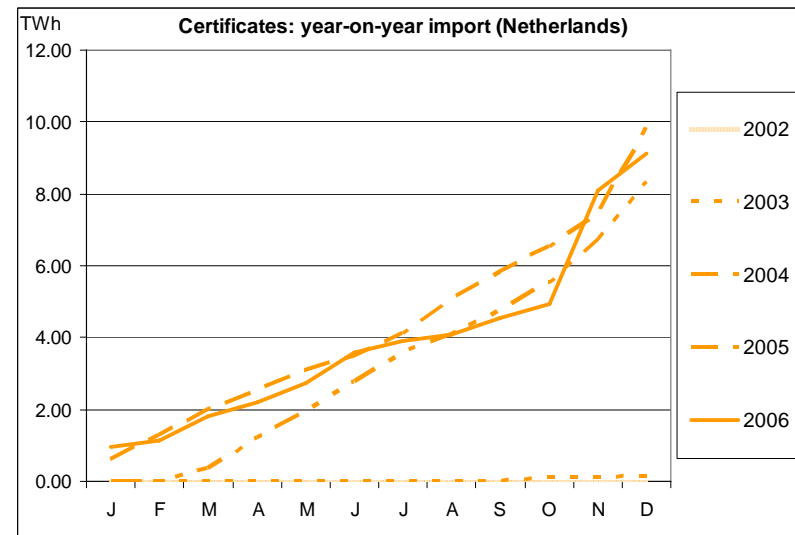
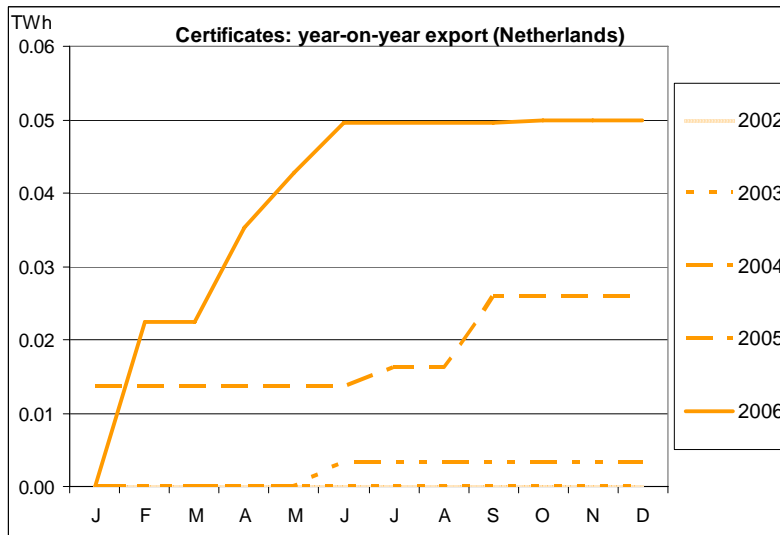
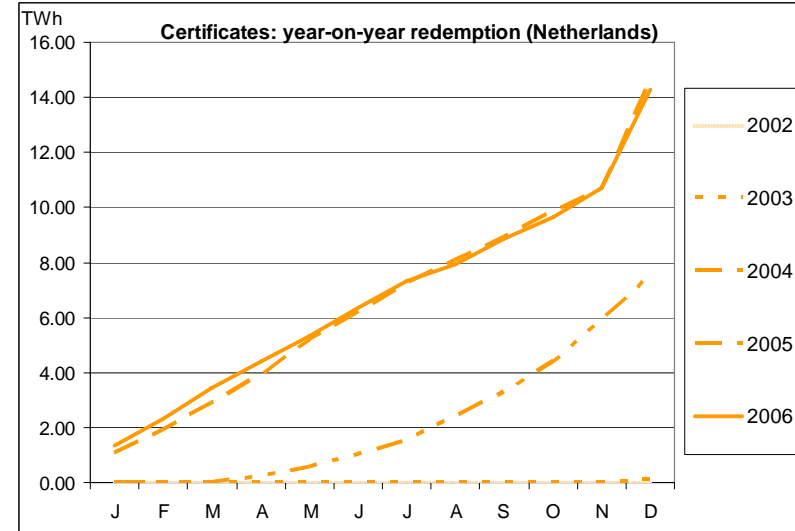
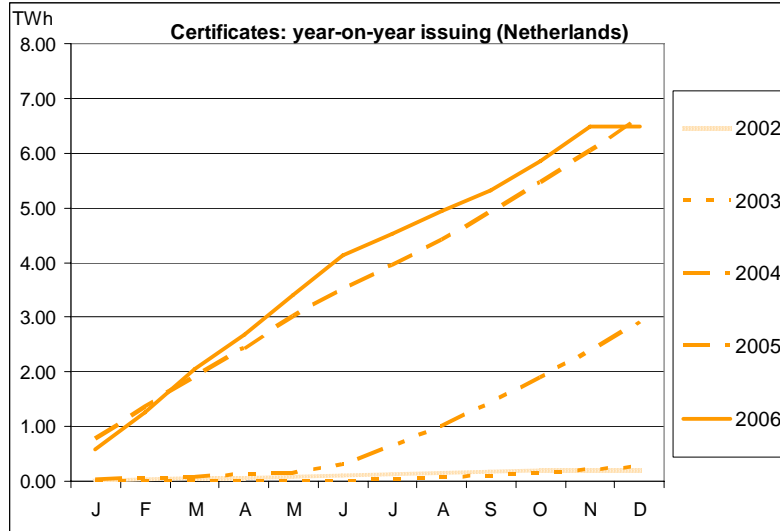
Ireland. The Irish market has yet to get off the ground, although there are signs (registrations of 100MW capacity of wind power on 1st January 2007) that next year it may become active.



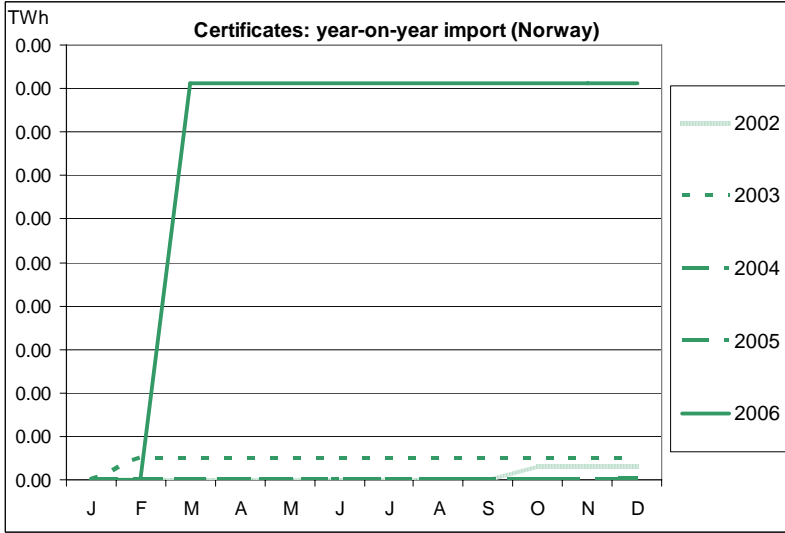
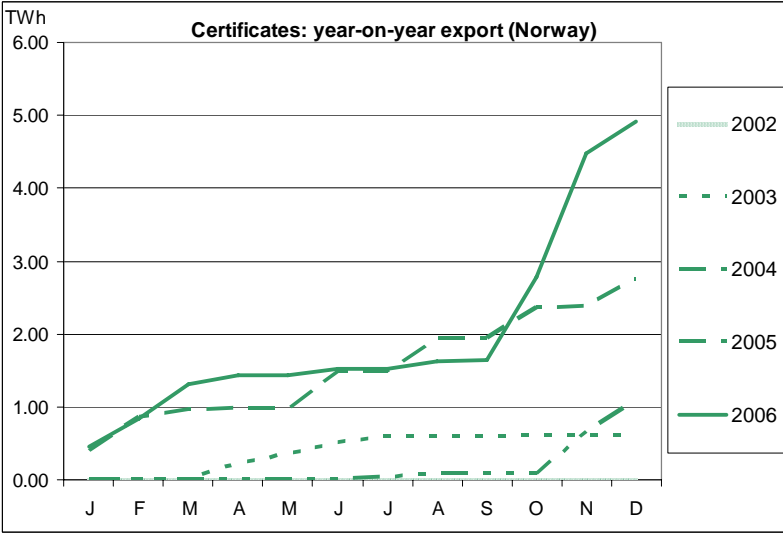
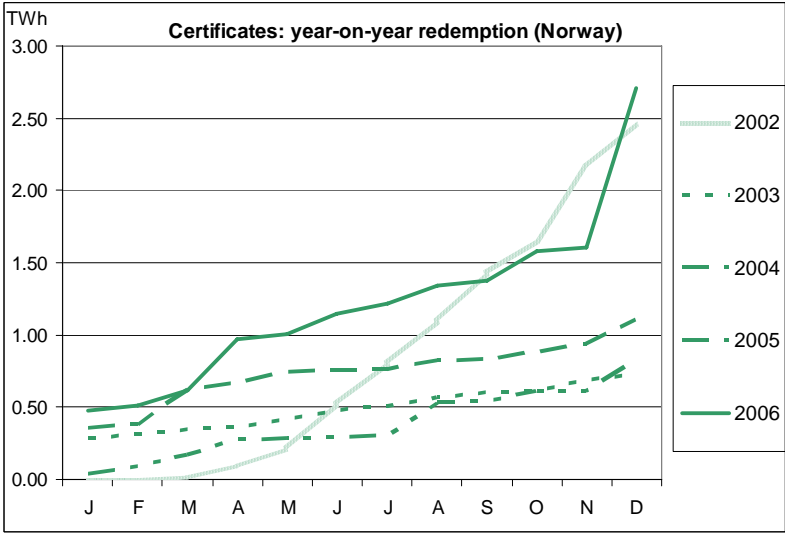
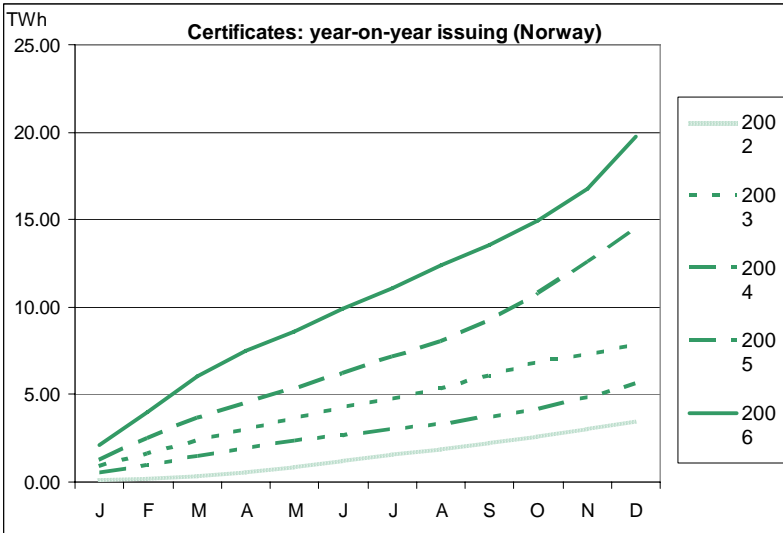
Italy. The Italian market has been growing at a similar rate to the French market, but with no international transfers.



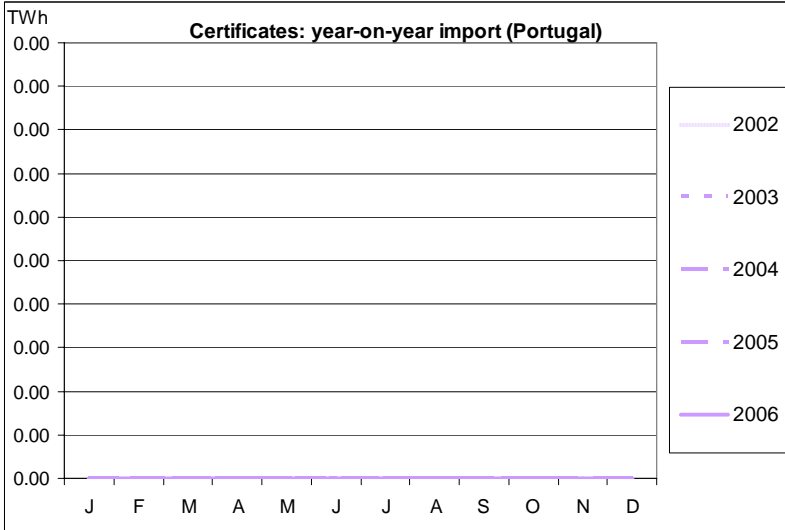
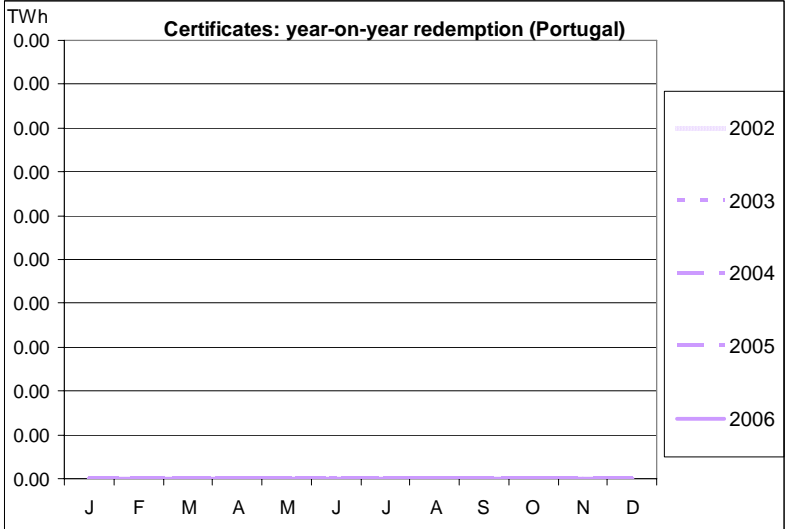
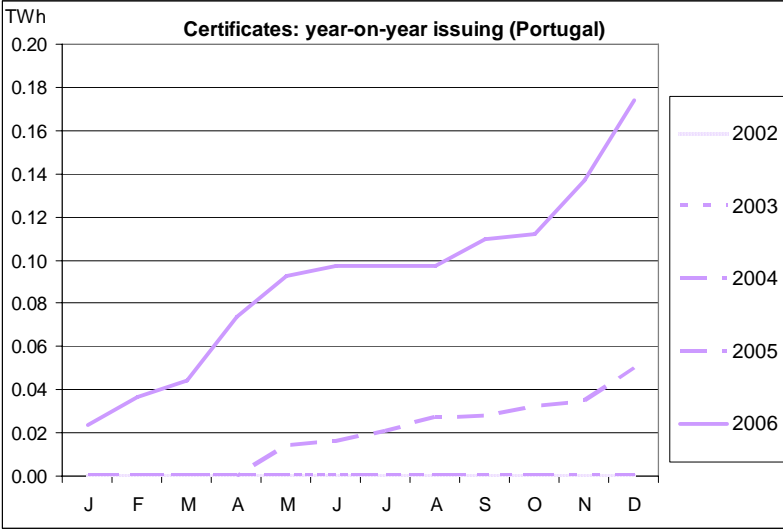
Netherlands issuing and redemption continue to grow at around the same rate as 2005, although exports are proportionately larger than in previous years and imports are a little less.



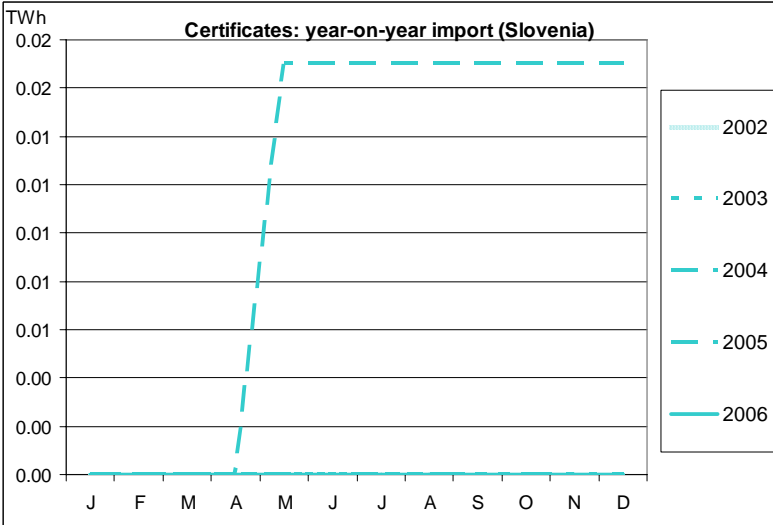
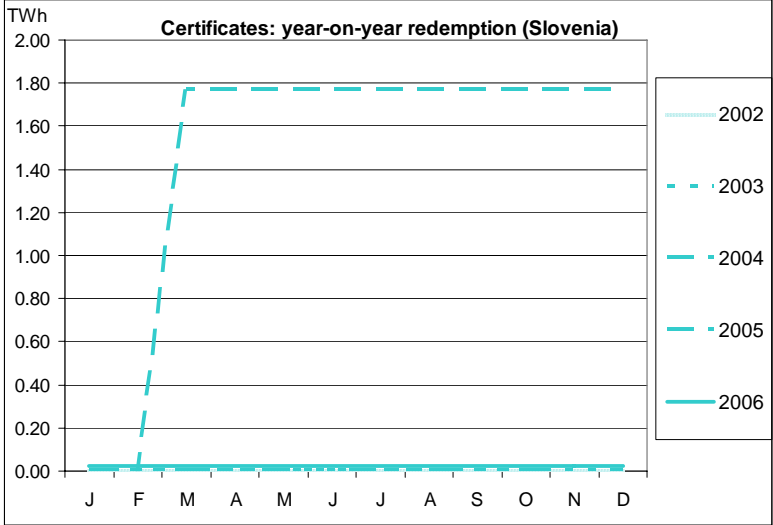
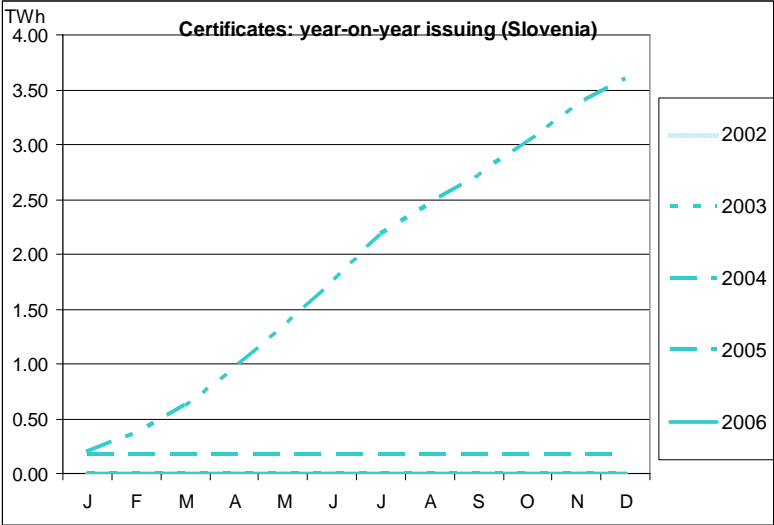
Norway continues to issue, export and redeem certificates at a higher rate than ever before. Imports are negligible, as is to be expected with a predominantly renewable national portfolio.



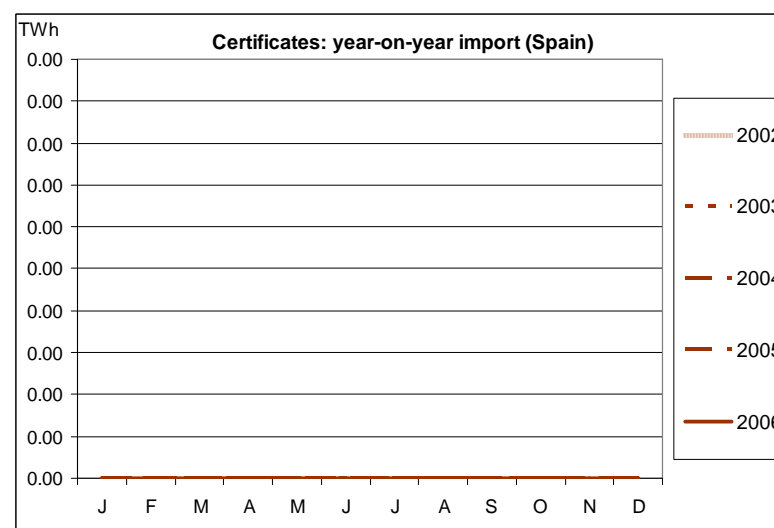
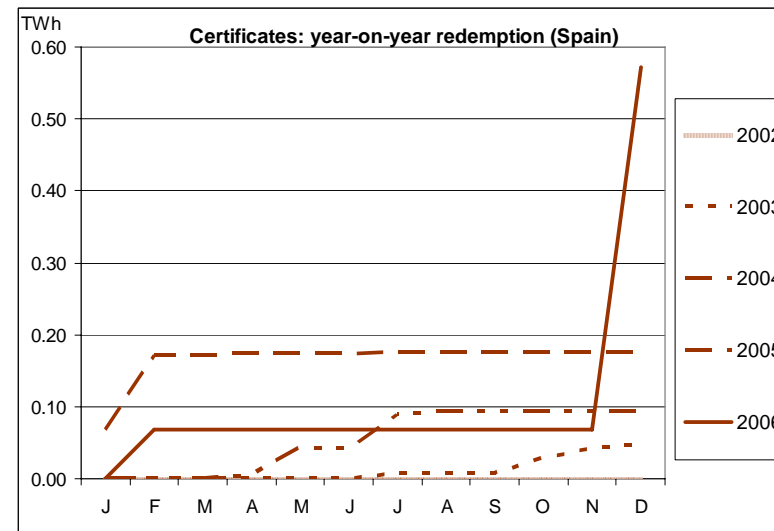
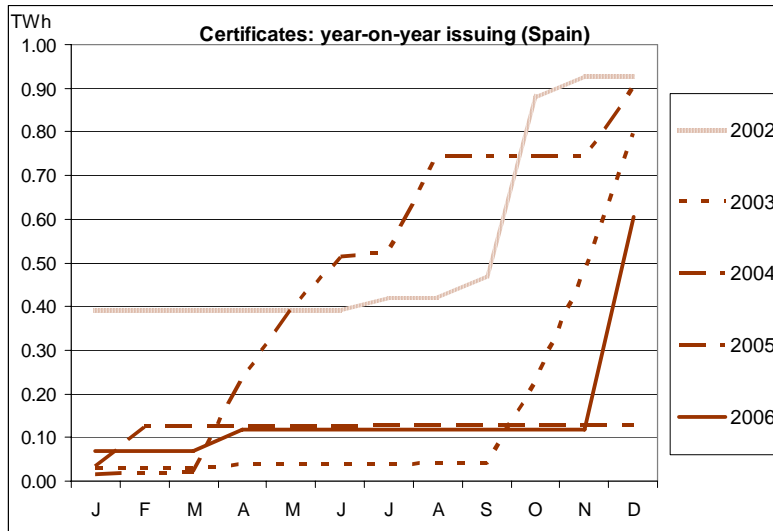
Portugal continues to issue larger numbers of certificates than in previous years, but has yet to transfer or redeem any.



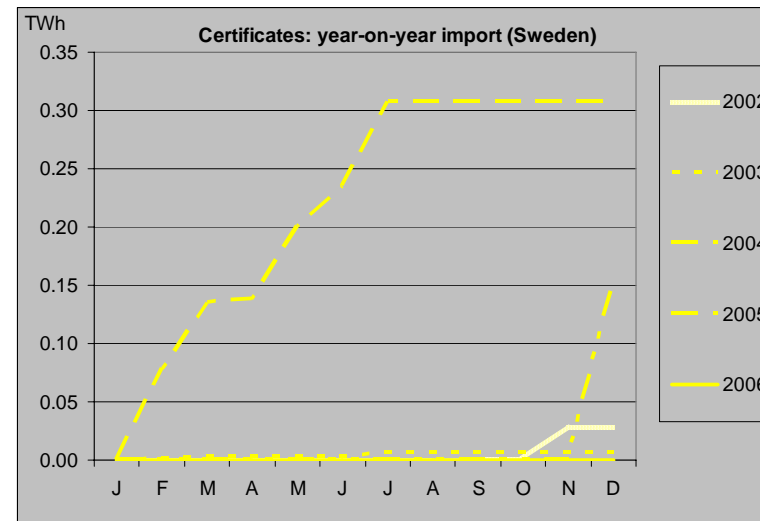
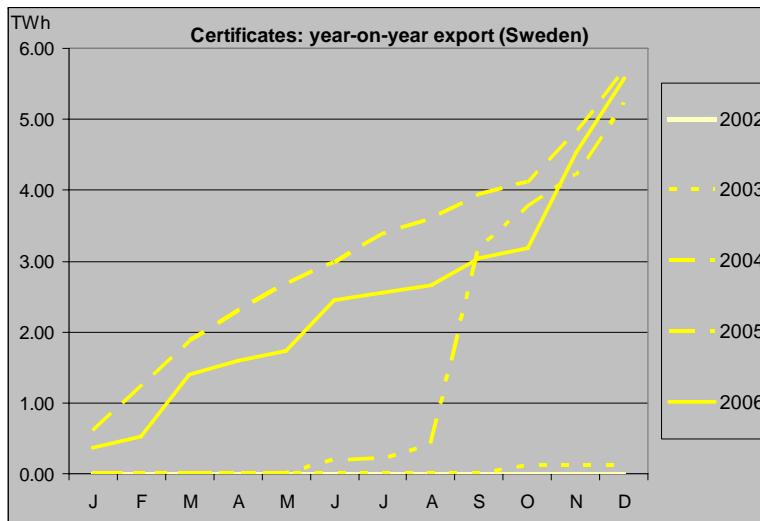
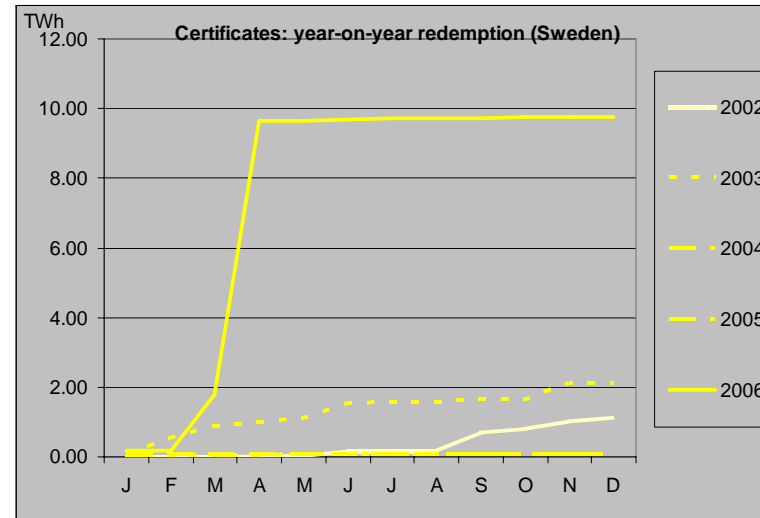
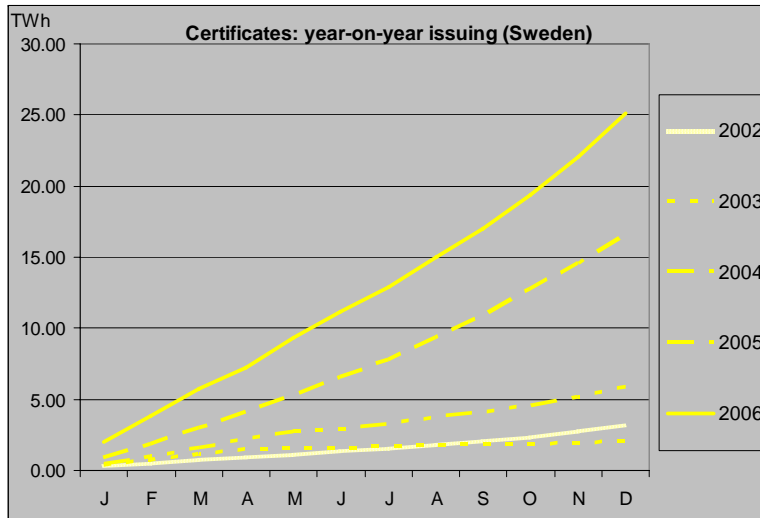
Slovenia has redeemed a small number of certificates, but has otherwise been inactive for the past year.



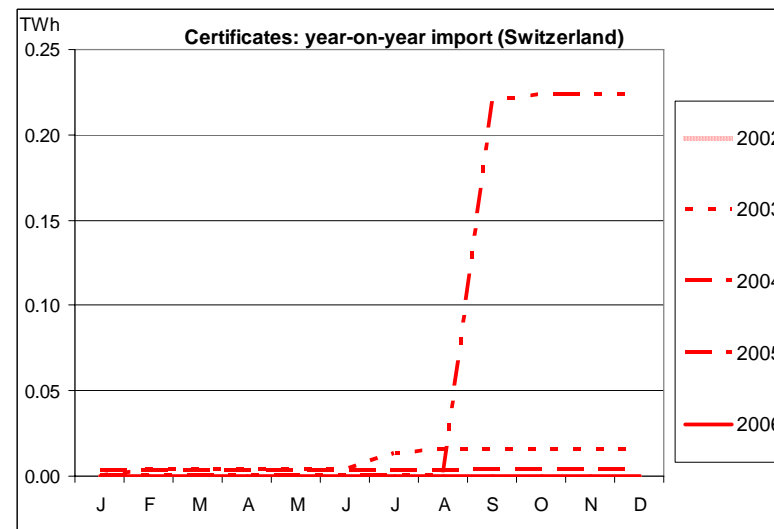
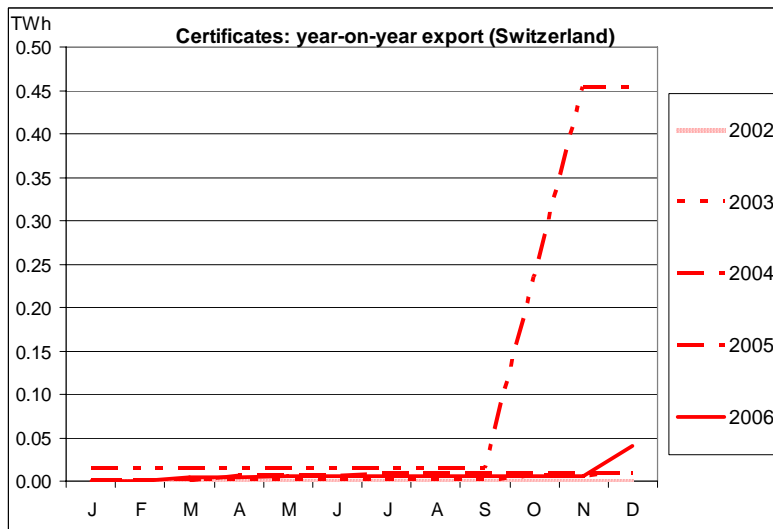
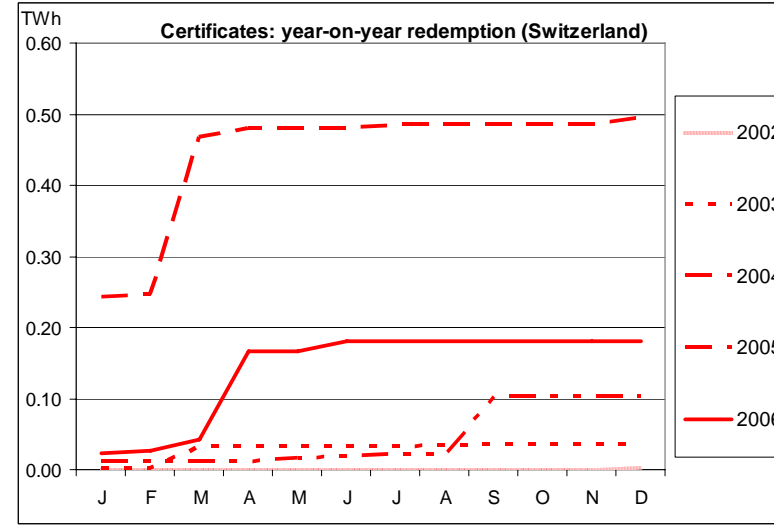
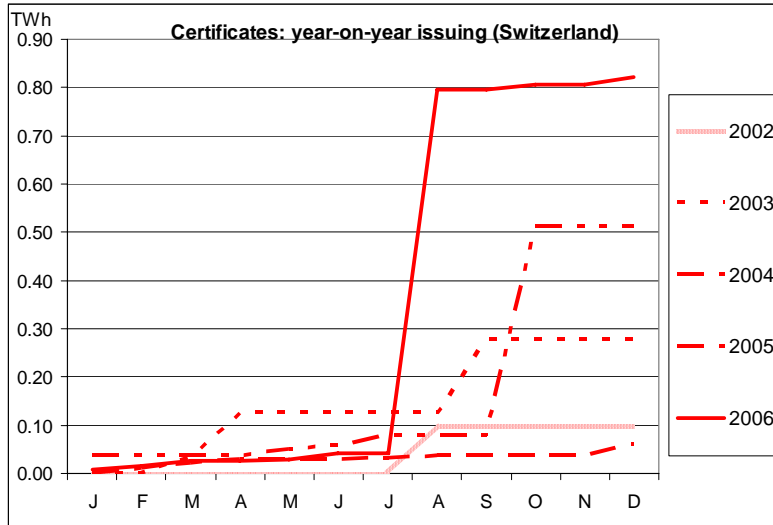
Spain was quiet until the later part of 2006, when issuing and redemption recommenced, leading to higher redemption than at any time in the past. International transfers now await development and approval of the revised Spanish Domain Scheme (note that Spanish activity was suspended on 16 June 2006 in the absence of a PRO-compliant Domain Protocol).



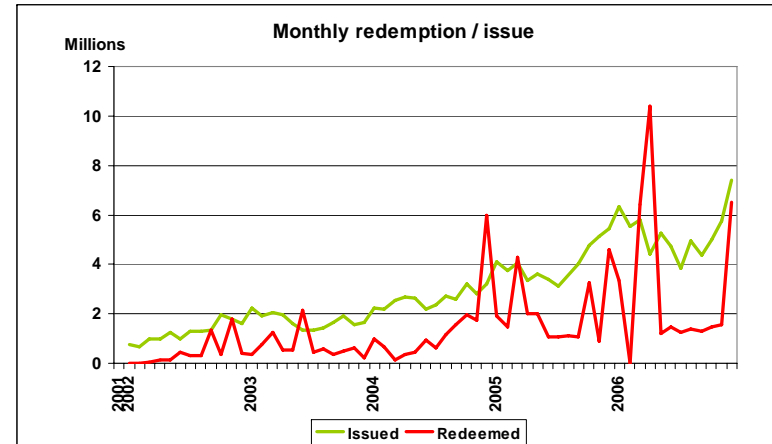
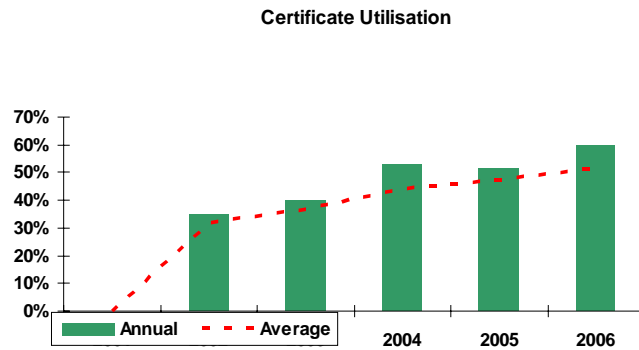
Sweden continues to issue more certificates than ever before, redeeming very large numbers of these but still managing to export the same amount as in previous years.



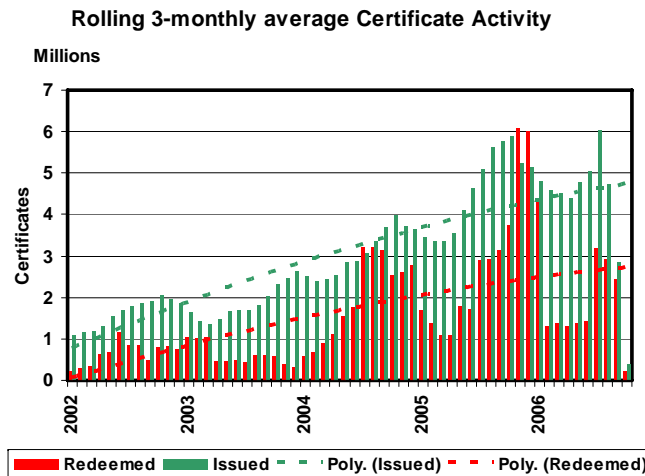
Switzerland was relatively quiet this year until April, when redemption rose sharply, followed by issuing, since when there has been little activity.



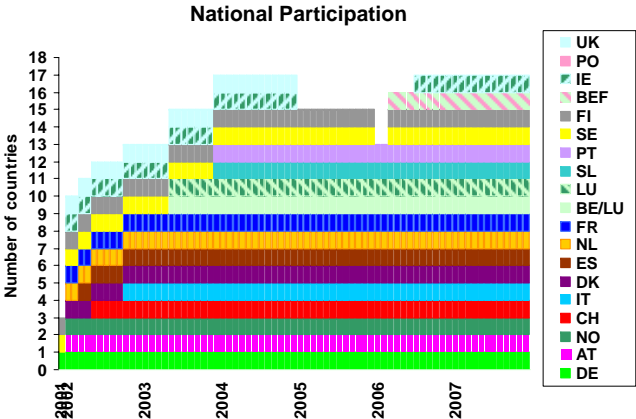
Realisation of value: The proportion of certificates that are redeemed has risen to 52% overall, and 60% this year.



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



Membership continues to grow, with Flanders joining, Ireland rejoining and Wallonia having applied for membership for 2007. Note that there was a short gap between Fingrid and Svenska Kraftnat ceasing membership, and Grexel taking over their roles.



Growth. Finally, we can compare the growth in issuing, transfers and redemption: it is interesting to see that transfers have remained fairly consistent for the last three years, at a time while issuing and redemption have grown 30-50% per annum.

