

Summary¹

Membership continues to grow, with 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.

The market continues to grow in a relatively steady, cyclical manner. Transfers have stayed fairly constant for the last three years, while issuing and redemption have grown 30-50% per annum. Volumes issued, transferred and redeemed continue to increase faster in 2006 than in previous years; while more certificates have been issued in 2007 than ever before. Netherlands and Flanders are now the two major redeeming countries, Austria having virtually ceased to do so. Norway, Finland and Italy remain pretty much the same, but Germany and Belgian RECS has redeemed a substantially increased number of certificates for Wallonia, while Sweden has substantially increased its issuing. The major certificate issuing countries remain Norway and Sweden, then Finland and Netherlands (which are both diminishing as issuers); Norway now being responsible for issuing most certificates. The largest exporters remain Sweden, Norway and Finland; while Netherlands, Flanders (in March) and increasingly Germany remain the major importers.

Regarding technology, hydropower is by far the majority technology, most other technologies having virtually ceased to contribute; although wind power still contributes 5%. That being said, the number of issued hydropower certificates is not matched by the market for these certificates – 93% of issued certificates are for hydropower, but only 70% of the redeemed certificates: demand for other forms of certificate (particularly energy crops and wind) is proportionally higher.

For **Benelux**, RECS activity is diminishing with Wallonia about to start operations (it has now applied for membership of the EECS GO and CHP-GO). However, eCerte continues to import and redeem certificates for CWaPE. In Flanders, certificate issue has been slower recently, but redemption is three times greater and there have been some exports. Dutch redemption continues to grow at the same rate as 2006, but redemption is a little lower and exports considerably larger.

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 about the same as 2006; Norway continues to issue, export and redeem certificates at a higher rate than ever before, issuing activity easily exceeding previous years; 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, the French market continues to grow, but at a slower pace than last year; the Italian market is similar to last year, with no international transfers, but far higher redemption; Slovenia has redeemed a few certificates, but has otherwise been inactive for the past year; and there has been no activity in Spain since January 2007 (international transfers await a revised Domain Protocol).

For **central Europe**, Austria has been relatively inactive this year, although it is understood that activity later in the year is likely to be greater; Switzerland was relatively quiet; and Germany has imported and redeemed way over the number of certificates experienced in previous years.

Finally, on the **Atlantic** coast, the Irish market has yet to get off the ground, although a limited number of certificates was issued recently; 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) – 21st May 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 2007 from all members.

Figure 1: raw data – issuing and redemption

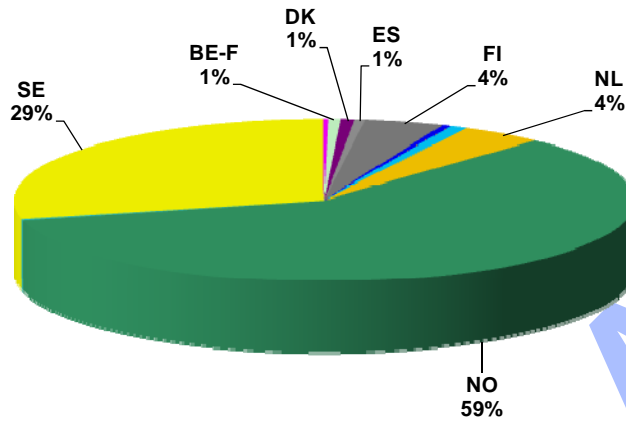
	Issuing & Redemption for all technologies															
	Total		2007		2006		2005		2004		2003		2002		2001	
	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed	Issued	Redeemed
Austria	7,375,901	14,981,895	72,675	124,052	280,671	4,602,618	1,560,474	3,122,146	2,452,748	6,129,706	1,950,584	918,704	1,057,599	84,669	1,150	
Belgium Flanders	1,462,454	5,301,516	228,057	4,306,589	1,234,397	994,927										
Belgium and Luxembourg	113,390	1,413,372		467,991		437,651		450,730		50,000		7,000	59,150		54,240	
Belgium Wallonia																
Switzerland	1,781,320	829,156	12,537	10,965	820,502	179,984	59,782	495,653	512,442	102,924	276,837	35,530	99,220	4,100		
Germany	48,351	2,028,574		1,343,798		616,653		25,036	5,963	43,087	41,789		450		149	
Denmark	2,437,521	25,846	246,323	668	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	38,319,299	10,862,847	1,450,046	364,542	8,142,938	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	2,359,493	1,481,848	159,551	108,213	906,969	610,996	701,808	461,004	443,948	214,878	142,665	86,757	4,552			
Greece																
Ireland	3,150		3,150													
Iceland																
Italy	2,366,472	1,154,807	315,023	251,544	1,185,323	573,660	418,397	241,048	73,970	76,873	59,549	10,557	302,814	1,125	11,396	
Netherlands	18,801,850	41,083,060	1,520,831	4,555,359	7,216,202	14,306,508	6,684,291	14,569,852	2,926,938	7,542,276	250,536	107,962	203,052	1,103		
Norway	71,993,635	8,893,140	20,781,475	1,088,089	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	313,407		89,349		173,857		50,201									
Sweden	63,072,319	13,331,941	10,064,688	203,396	25,293,491	9,749,209	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	3,799,763	1,824,297		31,653	31,653	23,462	167,396	1,769,182	3,600,714							
Turkey																
UK	90,158												90,158			
All countries	217,892,410	104,286,808	35,143,254	13,025,600	66,182,809	36,491,748	48,230,380	24,753,055	31,414,710	16,552,412	20,577,668	8,262,159	14,917,282	5,201,833	1,426,307	1
Percentage redeemed		48%		37%		55%		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	11,702,983	6,190,296	1,686,756	1,008,453	4,121,683	2,231,463	3,262,013	1,945,381	2,131,551	804,795	309,845	153,738	166,708	46,465	24,427	1
Offshore wind	193,725	40,384	111,077	34,664	68,202	2,995	1,542	2,995	9,636	2,539	4	186	2,008		1,256	
Photovoltaic	9,920	6,273	303	278	3,895	3,095	3,974	2,895	1,735	5	13					
Thermal																
Hydropower	164,974,642	66,340,131	32,801,896	9,074,178	54,244,791	28,393,574	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	675,655	1,965,267	34,175	1,437,147	367,016	334,420	68,909	70,643	59,023	56,457	66,513	52,078	36,033	14,522	43,986	
Forestry etc	30,218,498	23,332,847	144,917	766,357	3,413,042	2,708,333	3,435,969	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	740,163	296,405	48,761	95,448	342,918	108,838	220,105	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	237,374	70,901	59,698	17,483	141,529	35,603	26,405	16,316	9,112	1,499	630					
MSW	3,253,989	1,605,343	147,858	326,294	1,031,961	705,196	943,399	284,092	536,345	283,780	257,630	3,026	244,910	2,955	91,886	
IB&CW	5,587,740	4,300,486	107,813	265,298	2,446,806	1,966,401	2,144,396	1,583,570	787,571	398,367	18,388	54,886	82,766	31,964		
Total	217,892,410	104,286,808	35,143,254	13,025,600	66,182,809	36,491,748	48,230,380	24,753,055	31,414,710	16,552,412	20,577,668	8,262,159	14,917,282	5,201,833	1,426,307	1

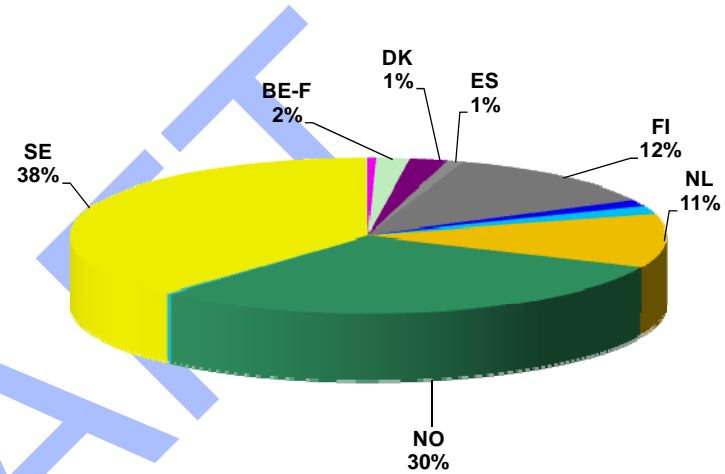
The tables above display issue and redemption statistics for each year to date, and for 2001-7 in total. These, and the following charts, show that volumes issued, transferred and redeemed continue to increase at a greater rate during 2006 than in previous years; while issued certificates during 2007 are substantially higher than ever before.

Comparing 2007 with 2006, the major certificate issuing countries remain Norway and Sweden, then Finland and Netherlands (which are both diminishing as issuers). Note that Norway is now responsible for issuing the majority of certificates.

Certificates Issued Per Country (2007)

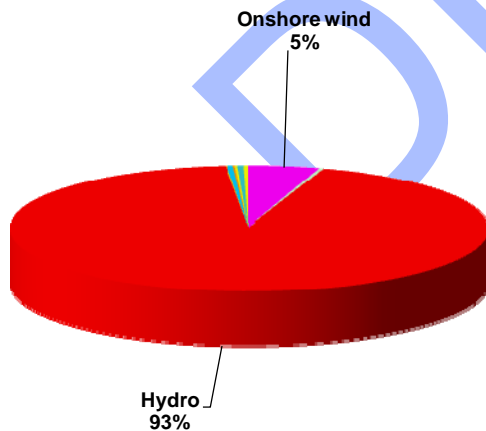


Certificates Issued Per Country (2006)

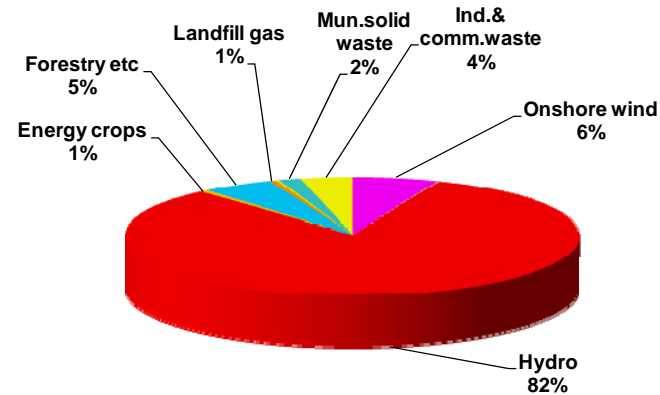


Regarding technology, hydropower is now by far the majority technology; most other technologies having virtually ceased to contribute; although wind power still contributes 5%.

Certificates Issued Per Technology (2007)

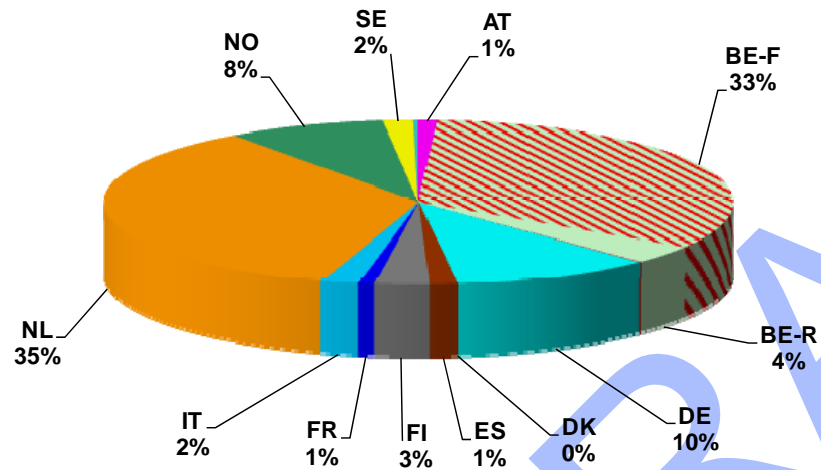


Certificates Issued Per Technology (2006)

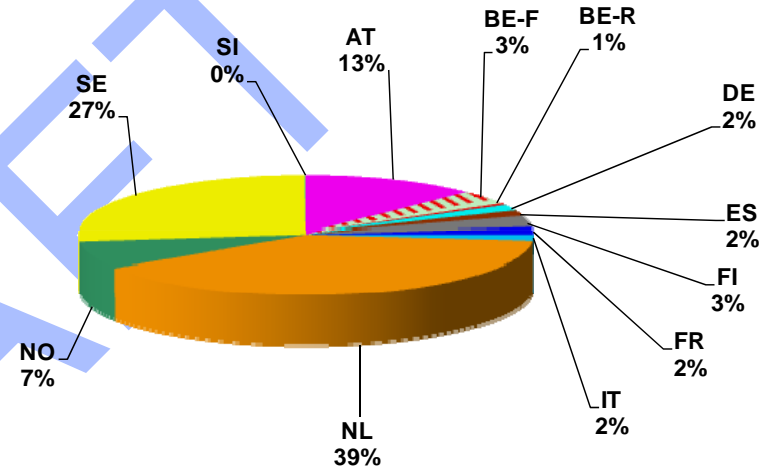


Again comparing 2006 with 2007 to date, but this time for certificates redeemed, Netherlands and Flanders are now the two major redeeming countries, Austria having virtually ceased to do so this year. Norway, Finland and Italy remain pretty much the same, but Germany and Wallonia (undertaken by Belgium (RECS)) are redeeming a substantially increasing number of certificates while Sweden has substantially decreased.

Certificates Redeemed Per Country (2007)

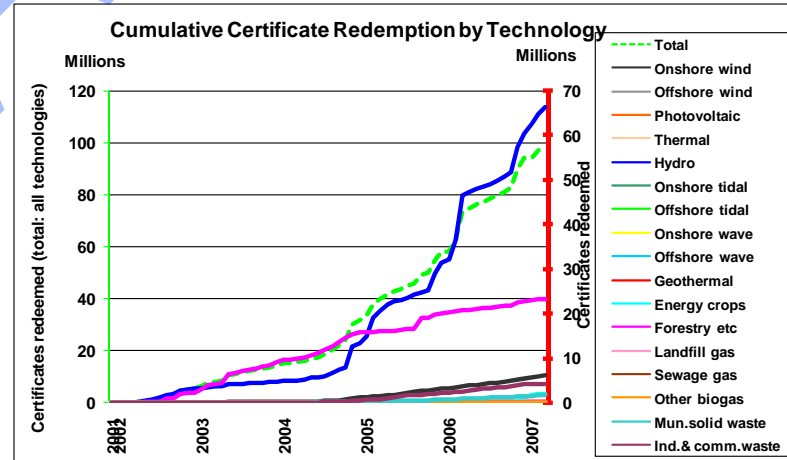
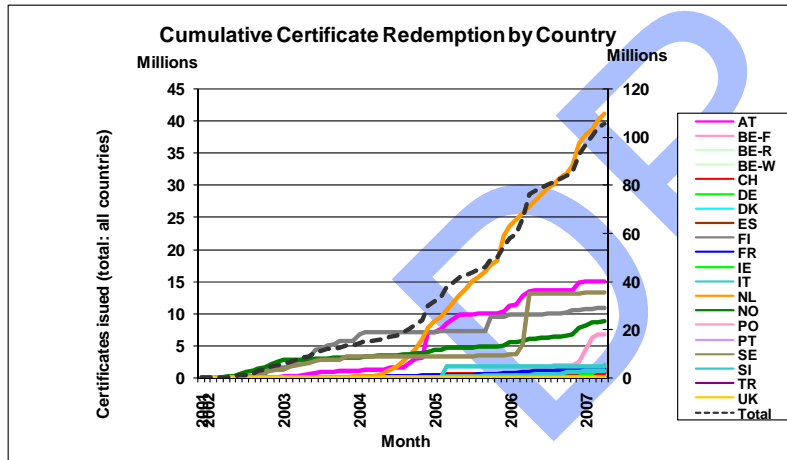
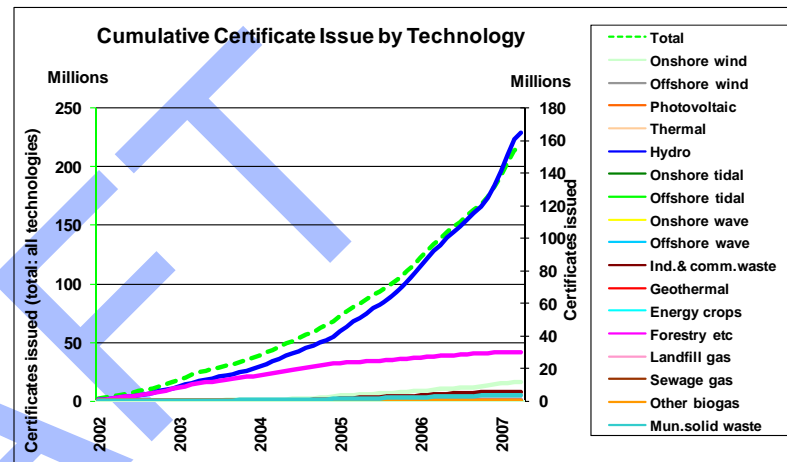
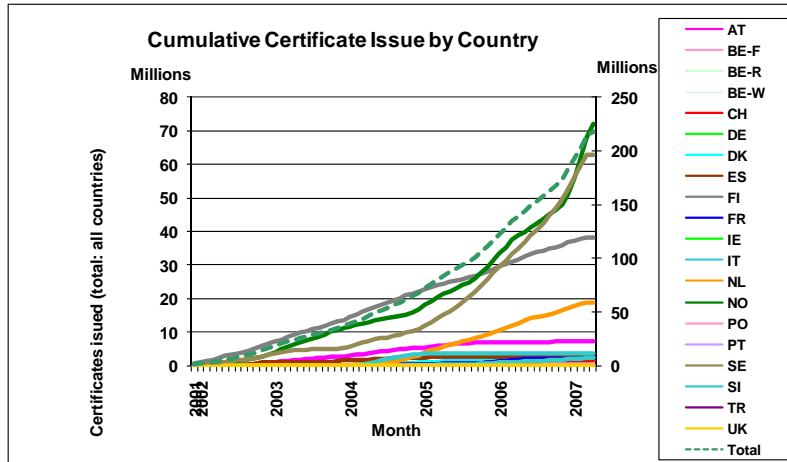


Certificates Redeemed Per Country (2006)



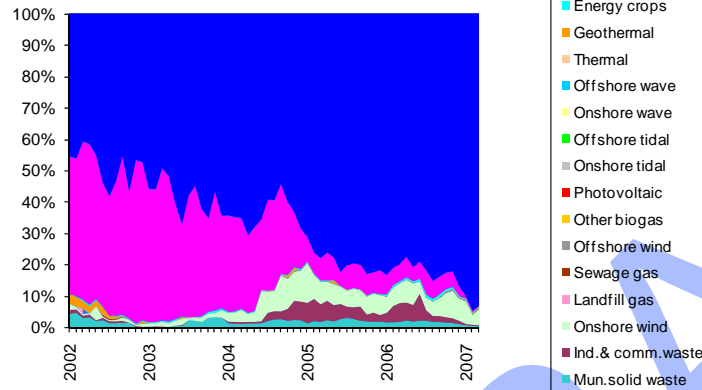
Overall, issuing and redemption continue to increase fairly steadily.

The volume of hydro issued and redeemed continues to increase substantially at the expense of everything else (except wind).

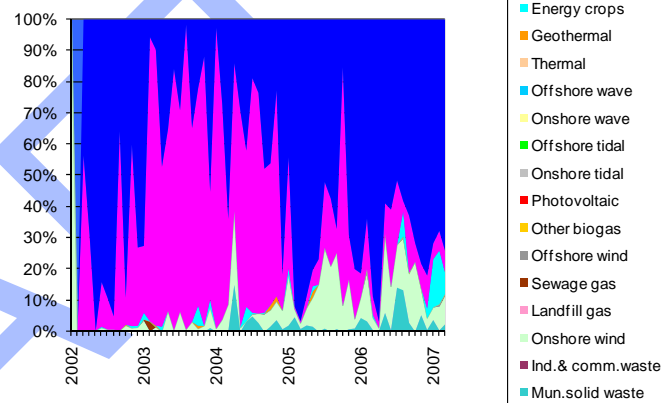


Another way of considering changing trends in technology is to consider the blend of technologies for which certificates are being issued and redeemed at any point in time. The following bar charts show that the growth in hydropower certificates is not matched by the market for these certificates – although around 93% of issued certificates are for hydropower, only 70% of the redeemed certificates are for hydropower – meaning that the demand for other forms of certificate (particularly energy crops and wind) is proportionally higher.

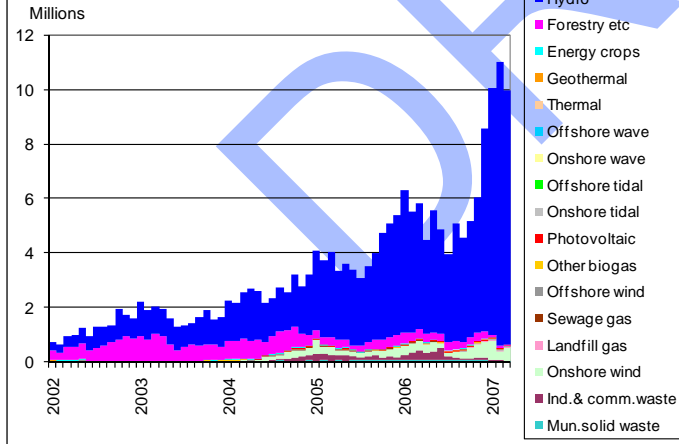
Technology contribution over time (issue)



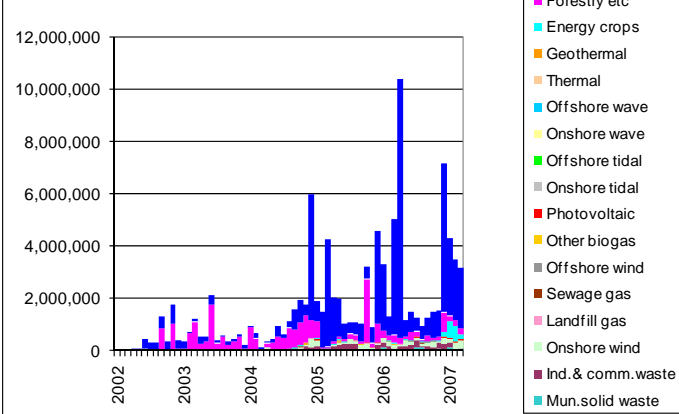
Technology contribution over time (redemption)



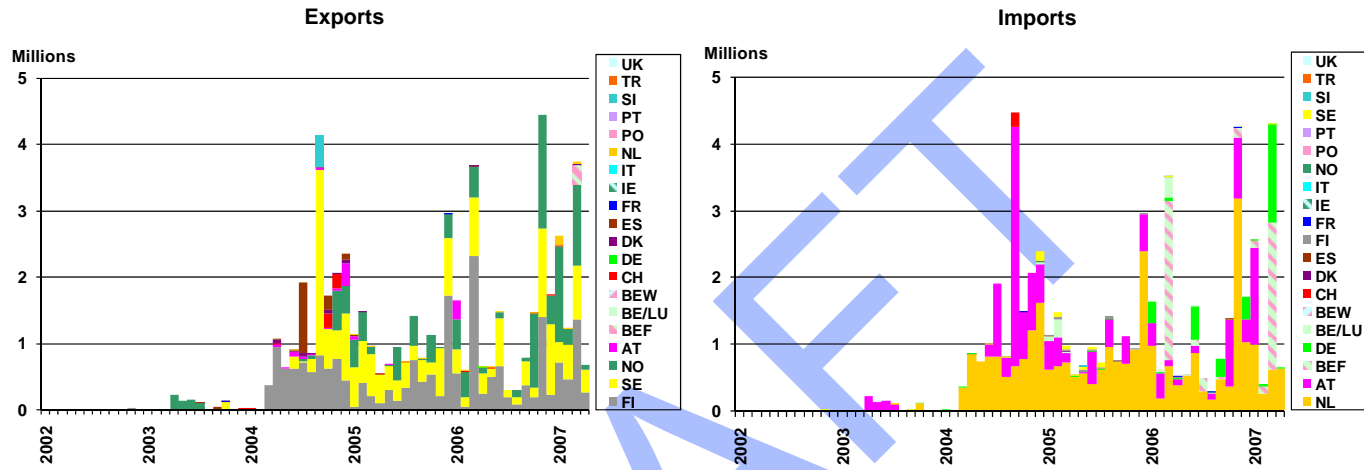
Technology contribution over time (issue)



Technology contribution over time (redemption)

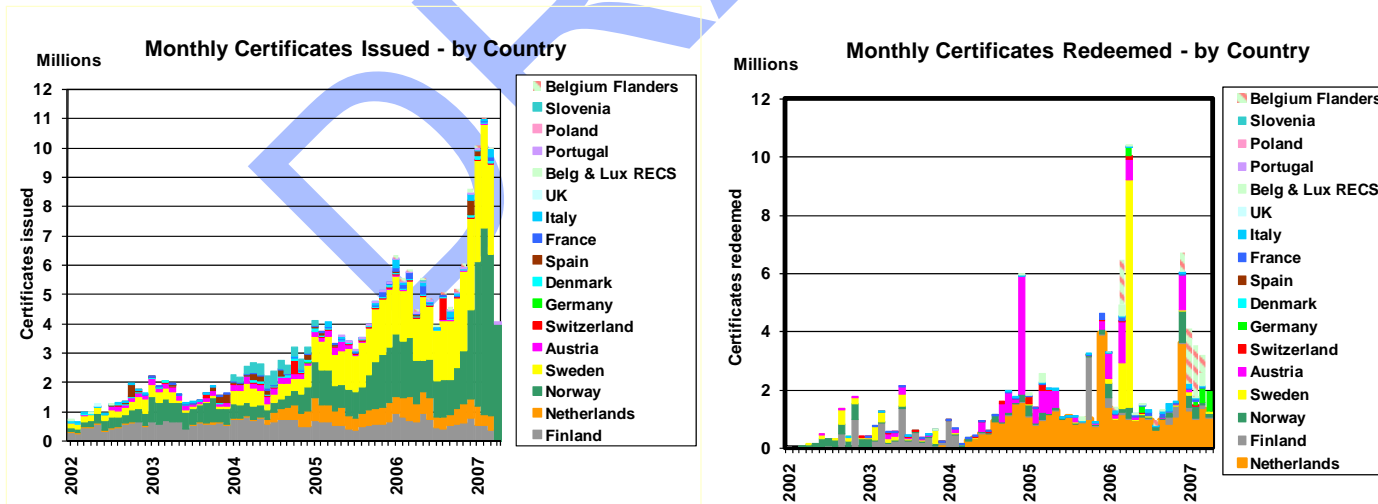


The largest exporters remain Sweden, Norway and Finland; while Netherlands, Flanders (in March) and increasingly Germany remain the major importers.



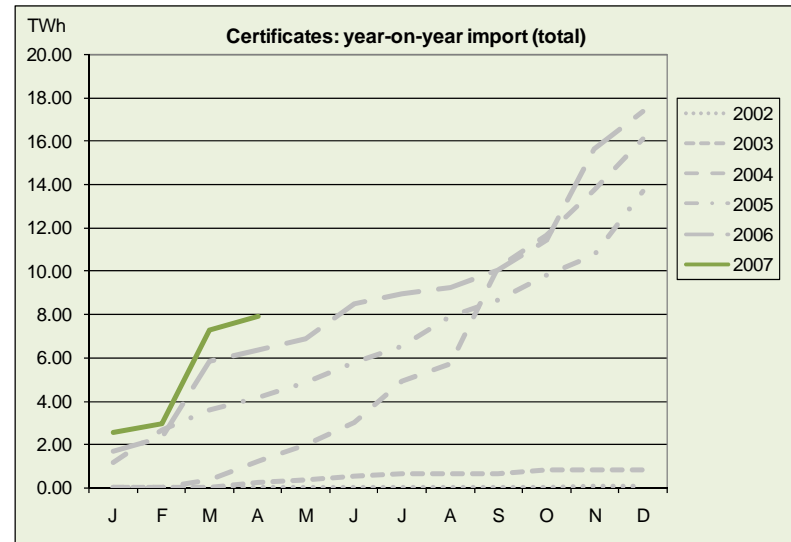
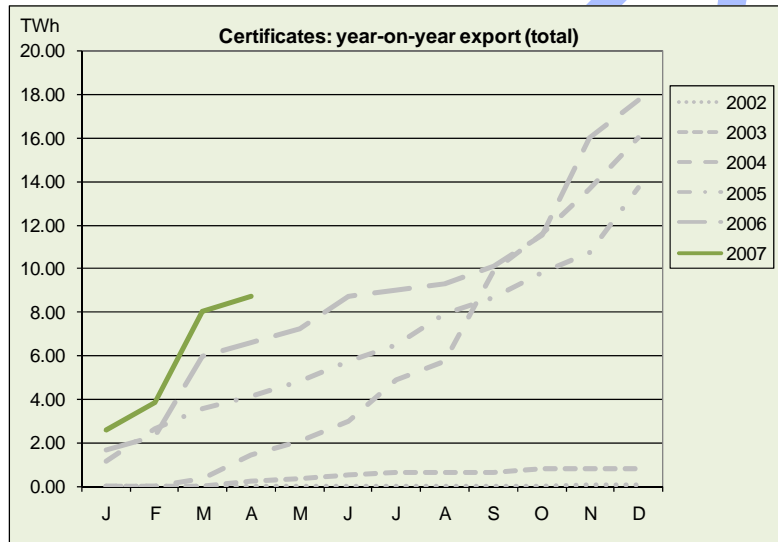
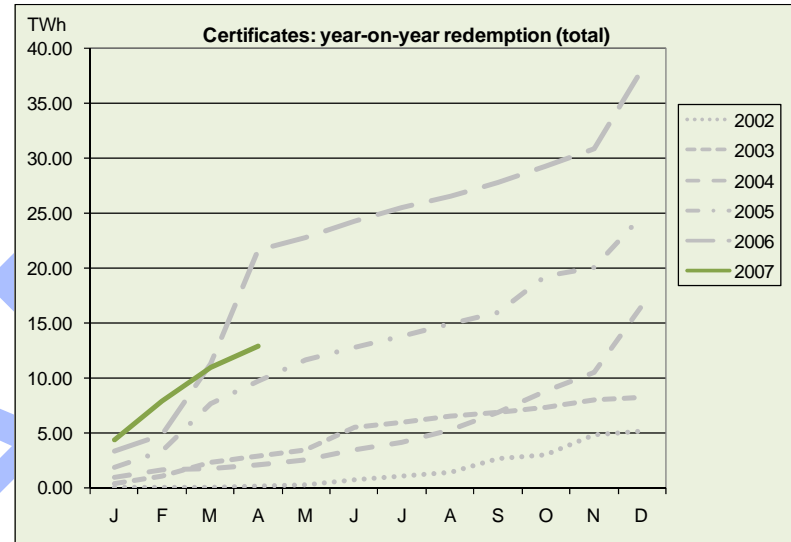
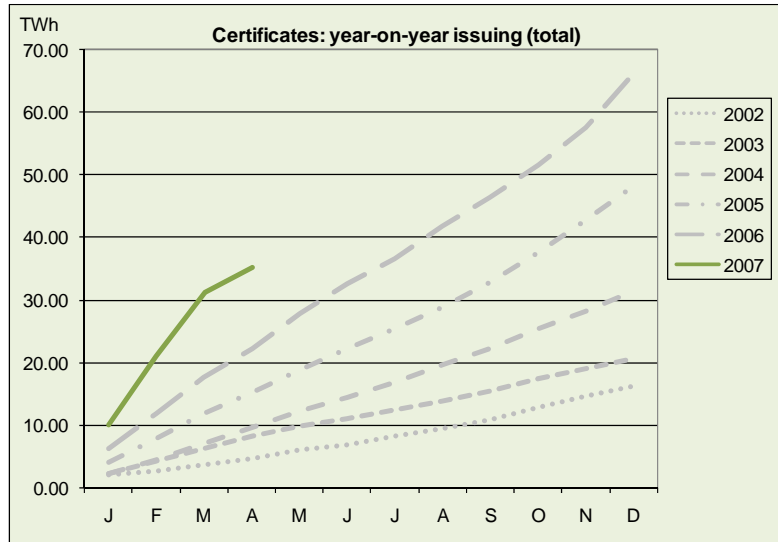
Monthly activity

The following bar charts summarise monthly issuing and redemption, clearly showing the influence on international trade of the consuming countries – Netherlands, Germany and Flanders; and of the producing countries - Finland, Norway, Sweden and Netherlands.

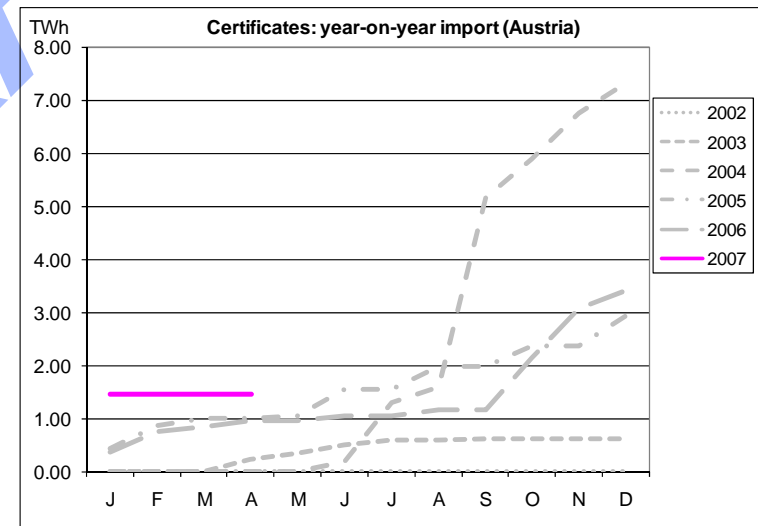
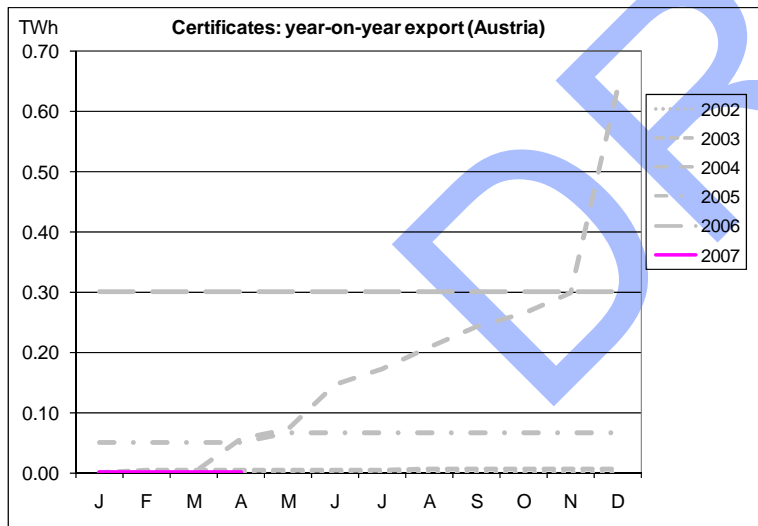
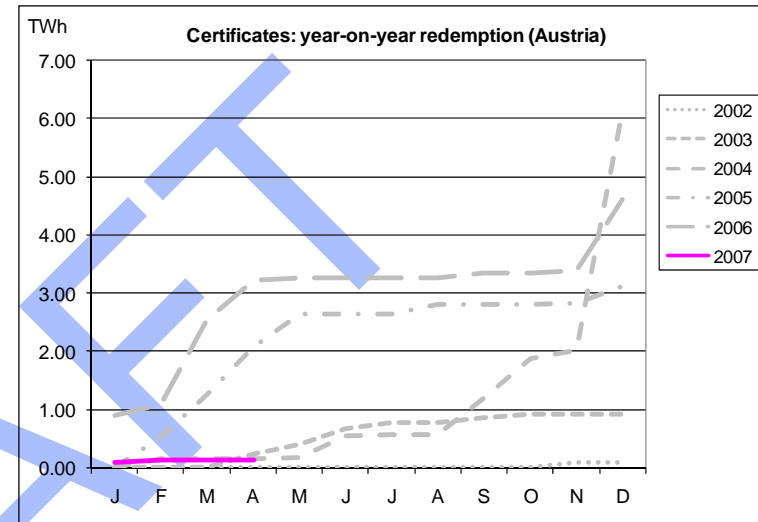
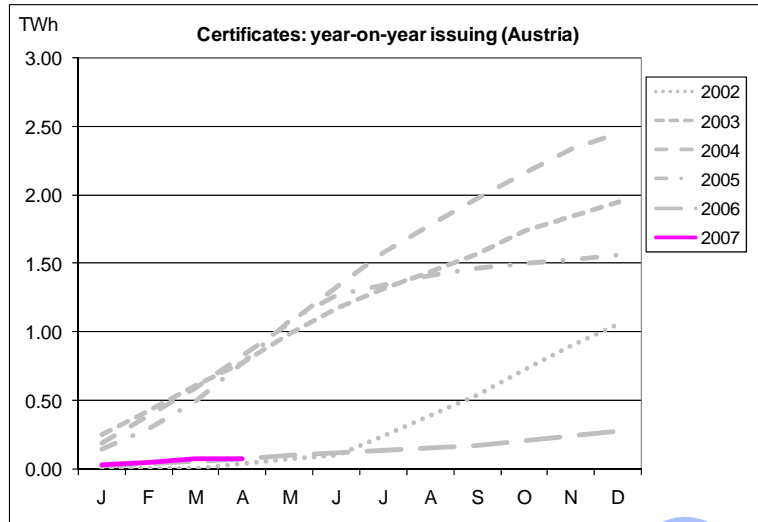


Year-on-year

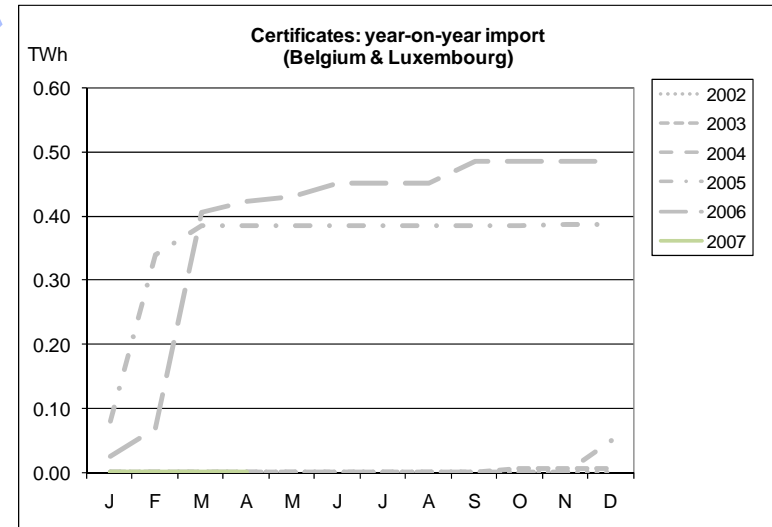
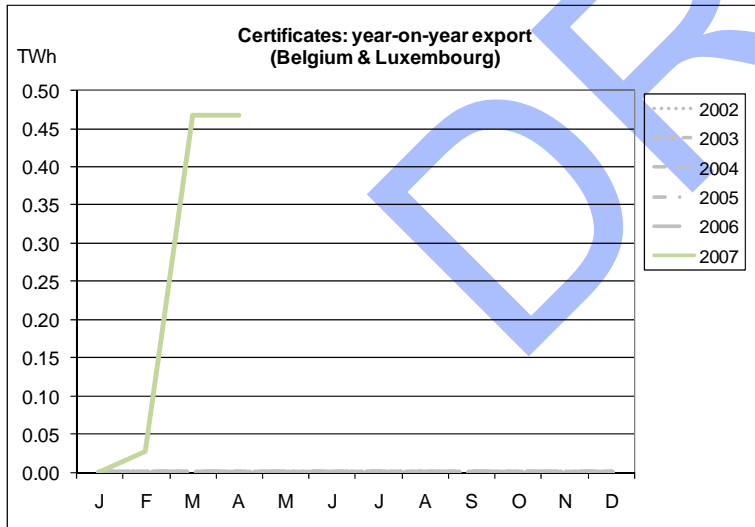
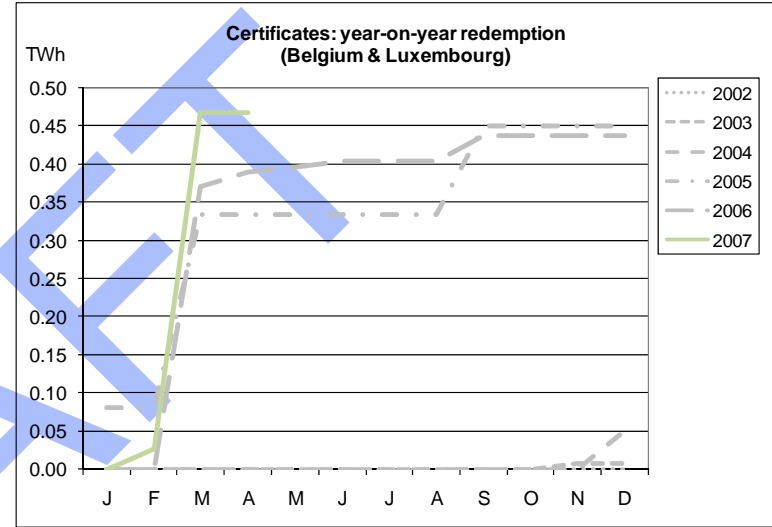
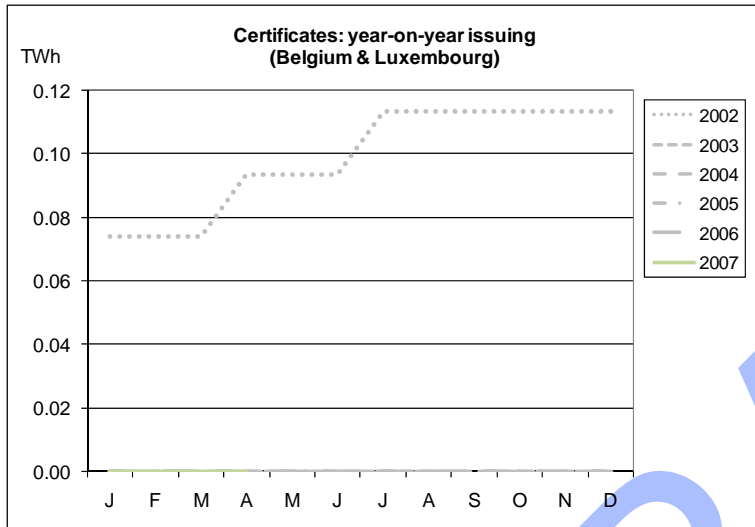
Issuing, international transfers and, to a lesser extent, redemption continue at a higher rate in the last year.



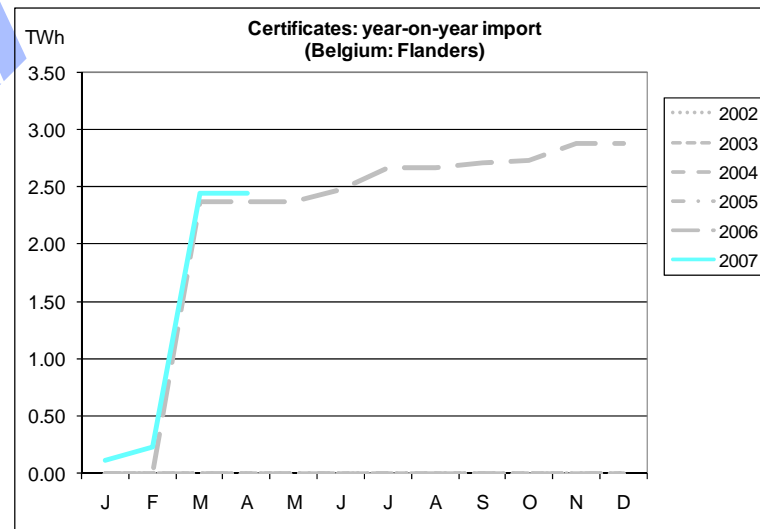
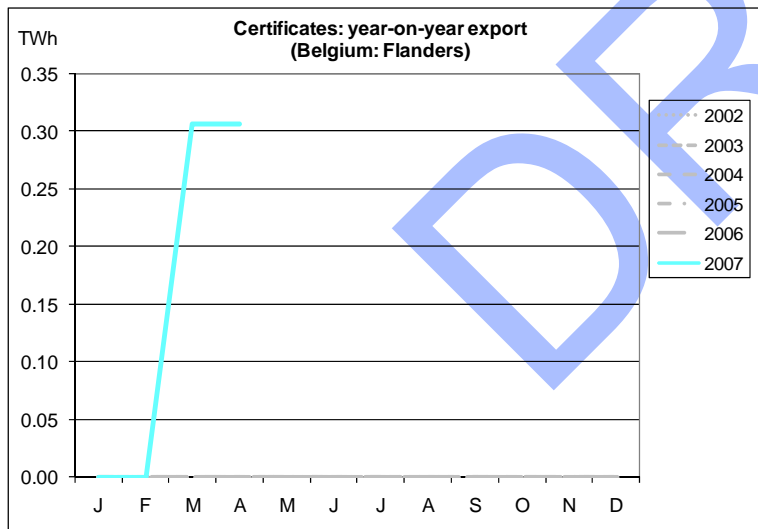
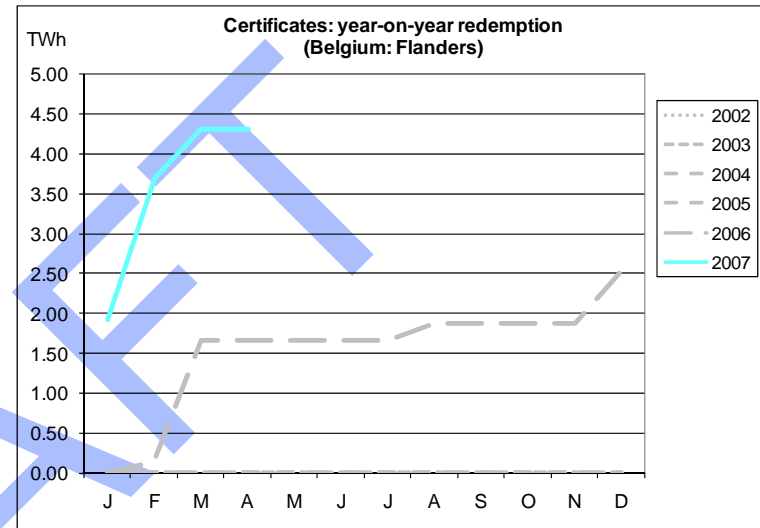
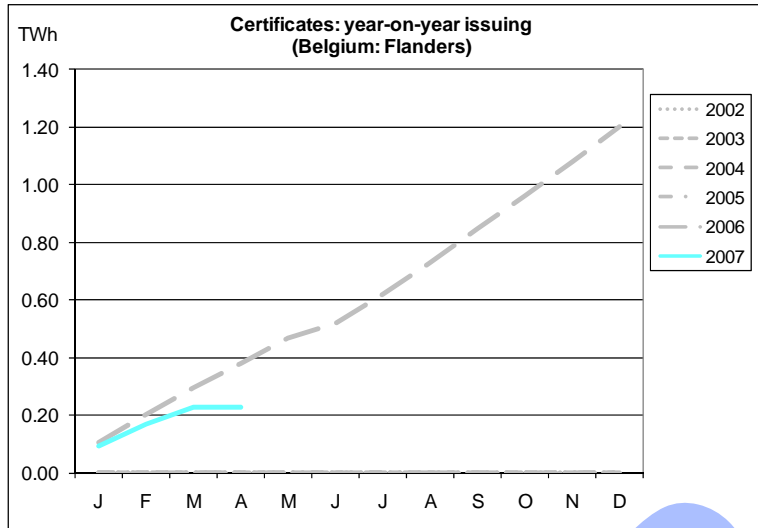
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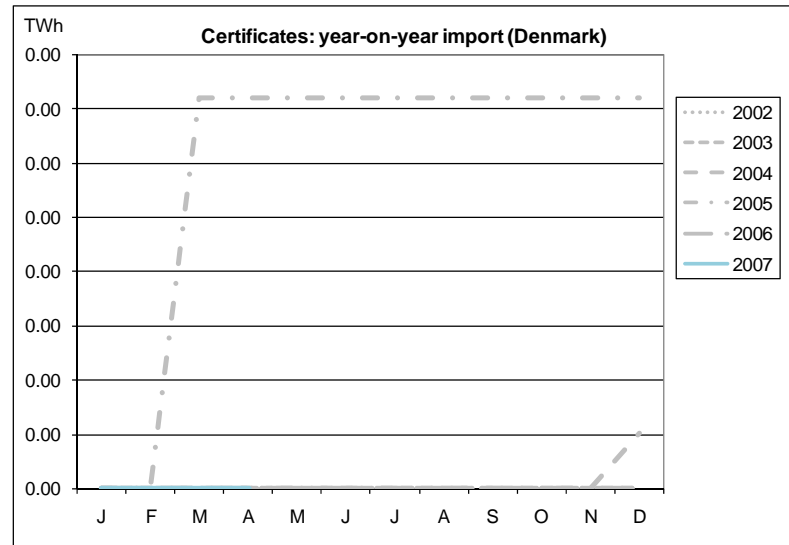
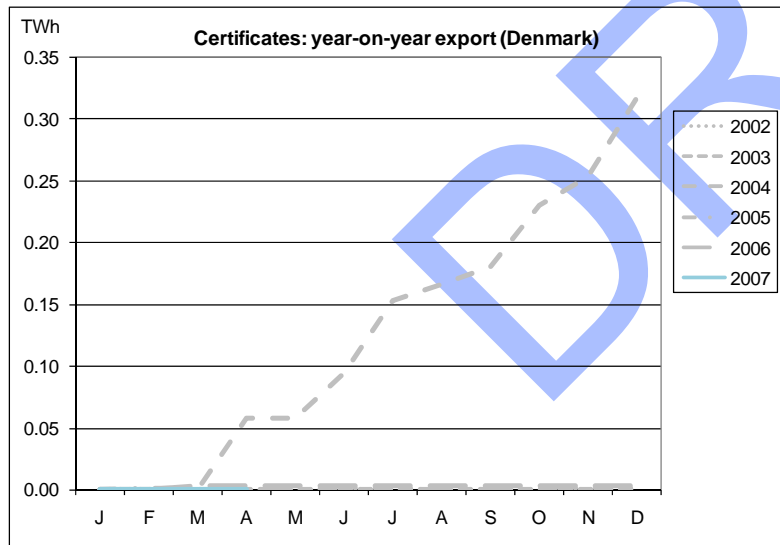
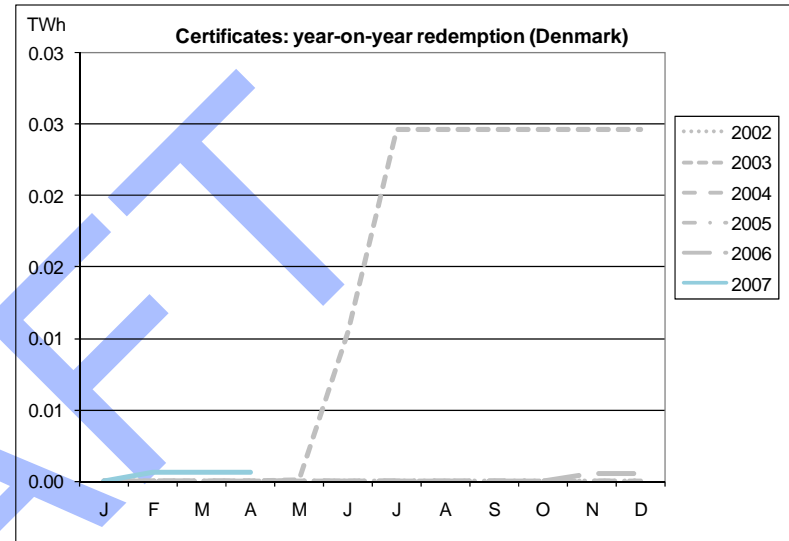
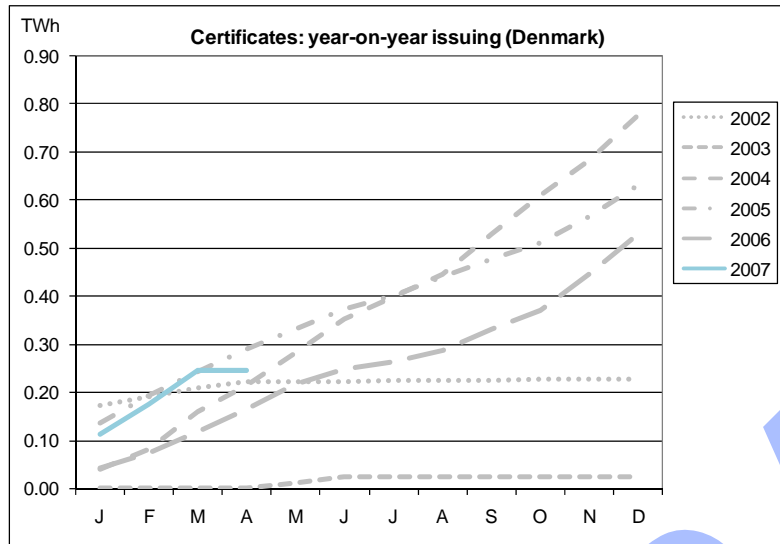
Belgium / Luxembourg. RECS activity, as expected, is diminishing with the promise of Wallonia commencing operations (Wallonia has now applied for AIB membership). In the meantime, eCerte continues to redeem certificates on behalf of the CWaPE, resulting in growing redemptions and exports.



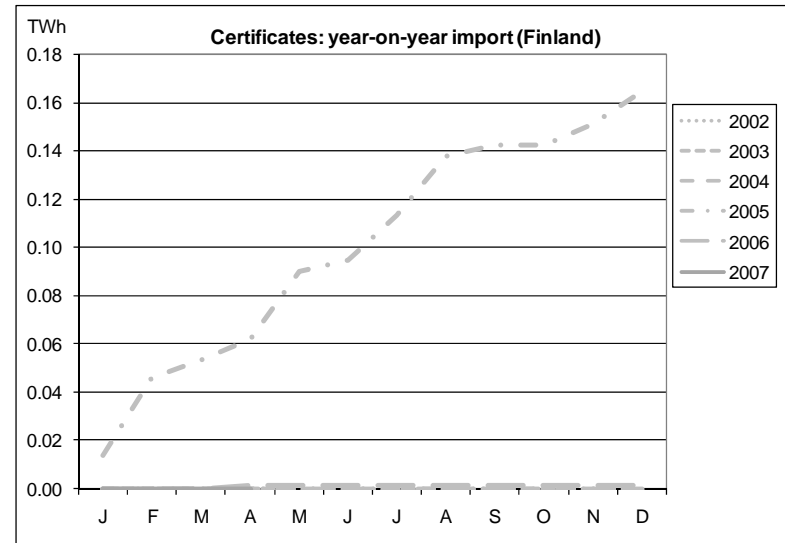
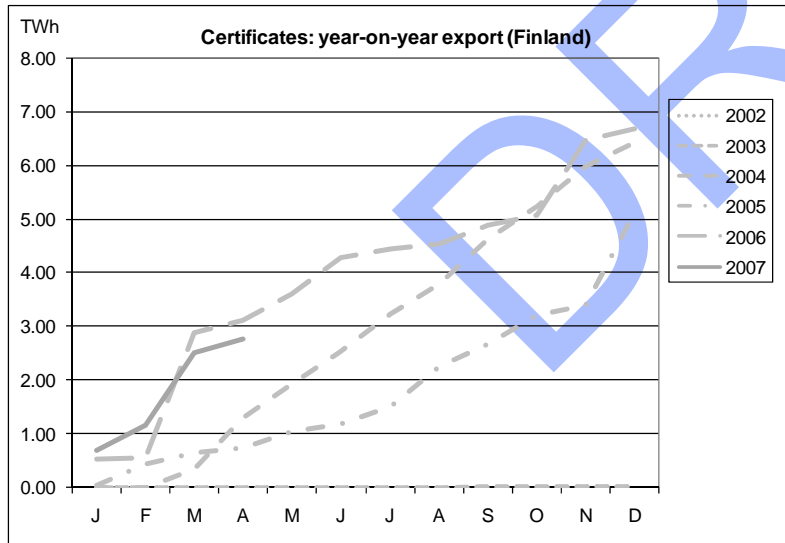
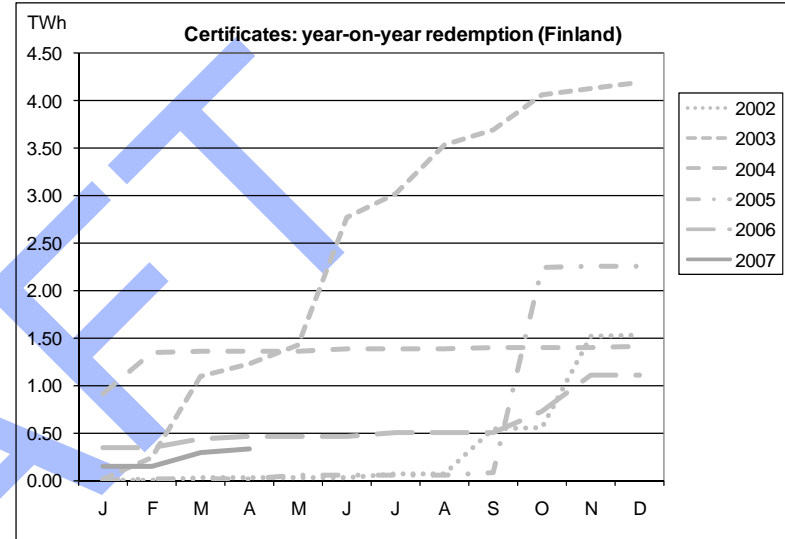
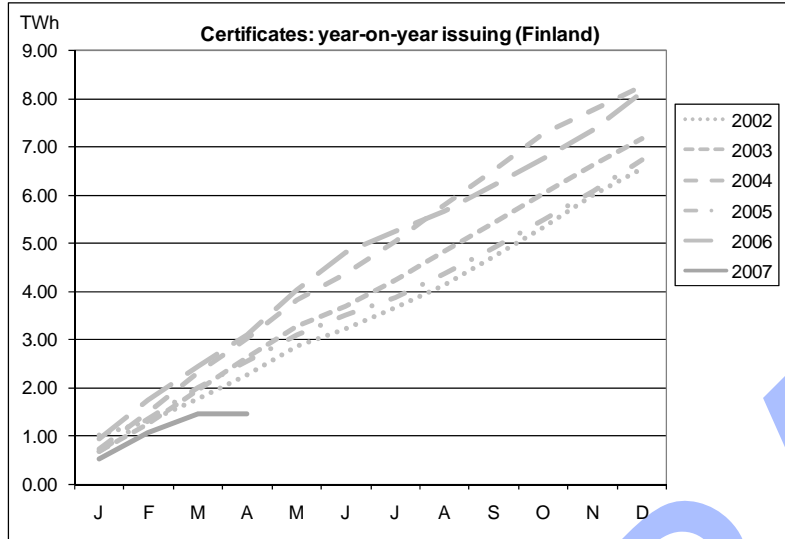
Belgium (Flanders). Certificate issue has been slower than last year, but redemption is significantly greater (about three times as much). Imports have been the same as last year, but for the first time there have been some exports.



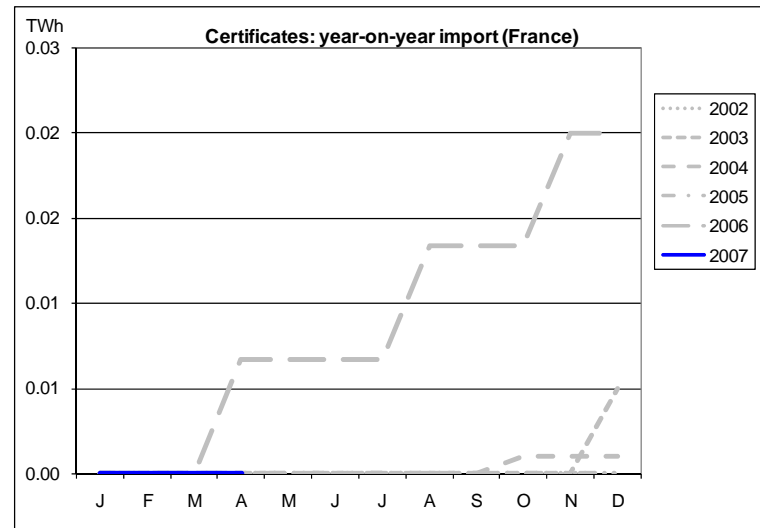
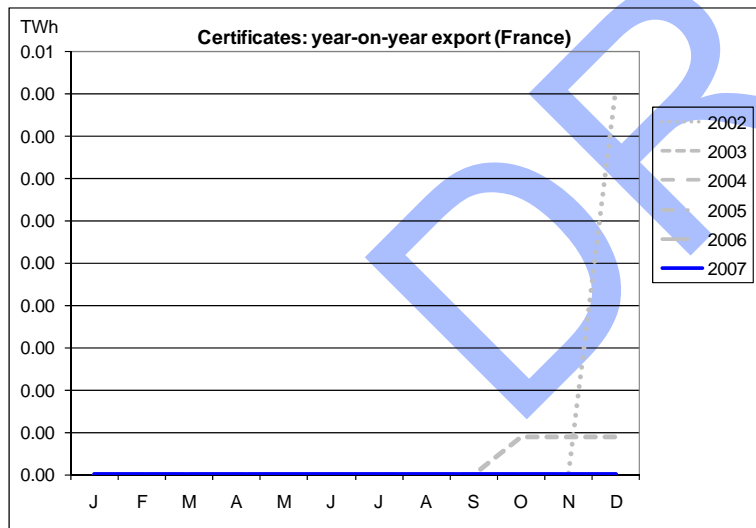
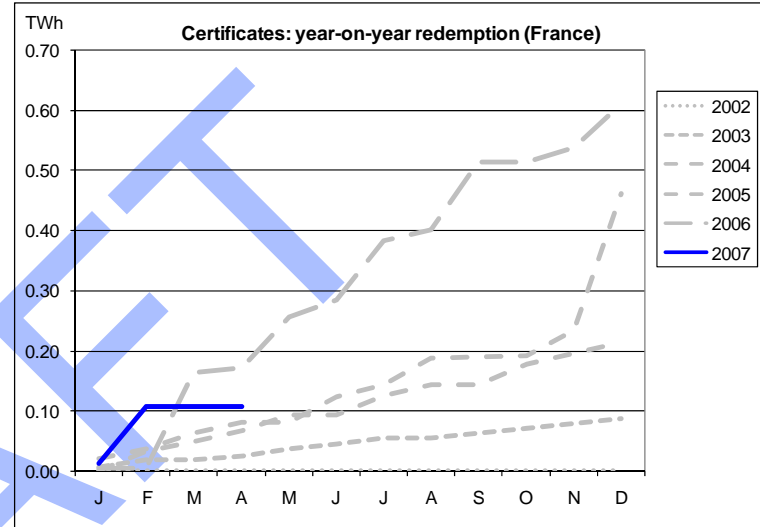
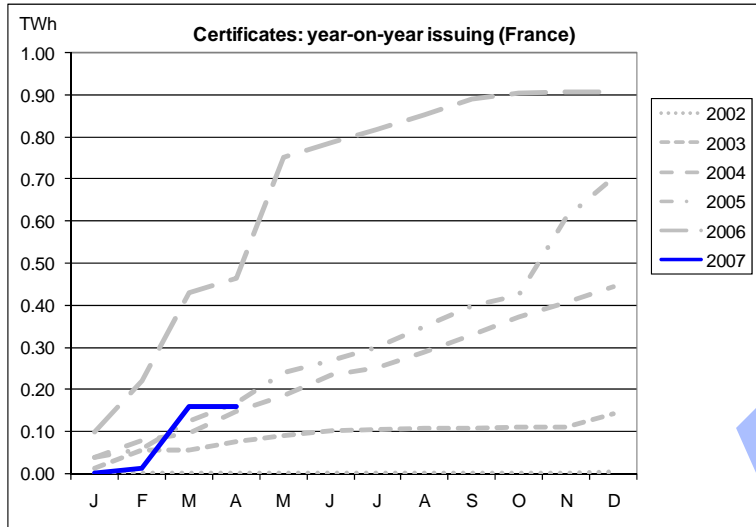
Denmark. Denmark continues to be a minor participant in the market, but is only issuing certificates this year.



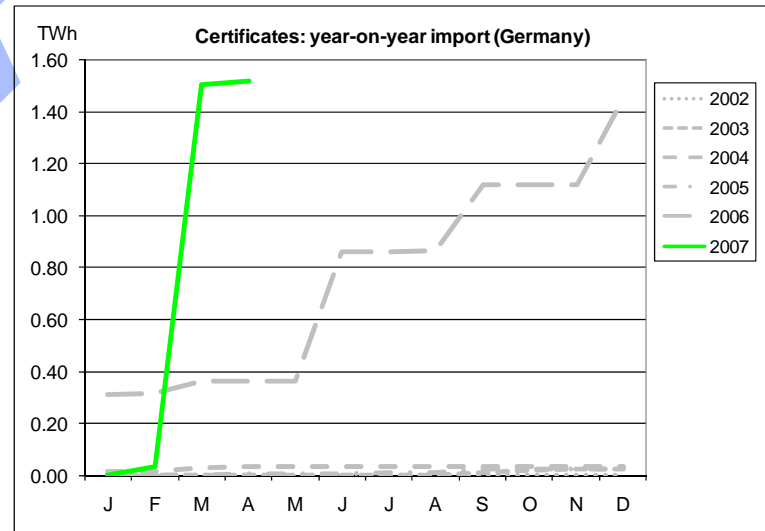
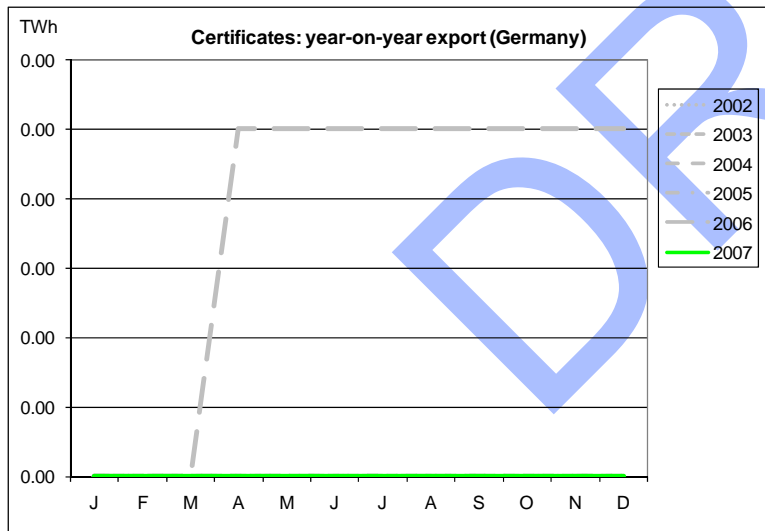
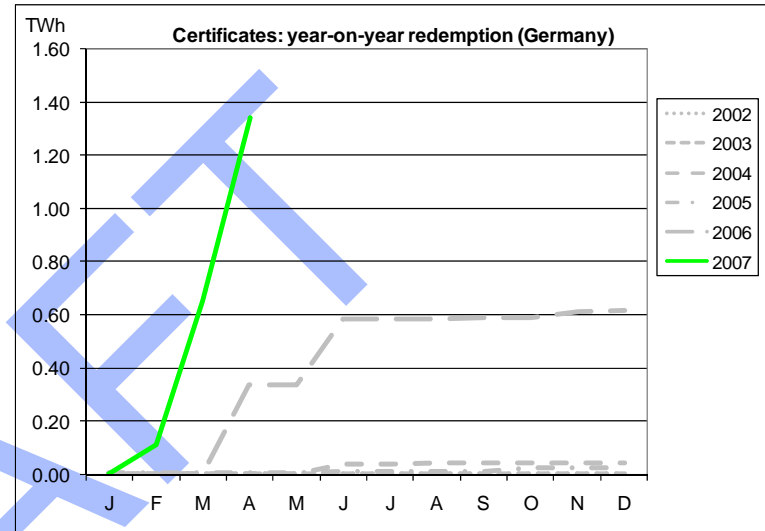
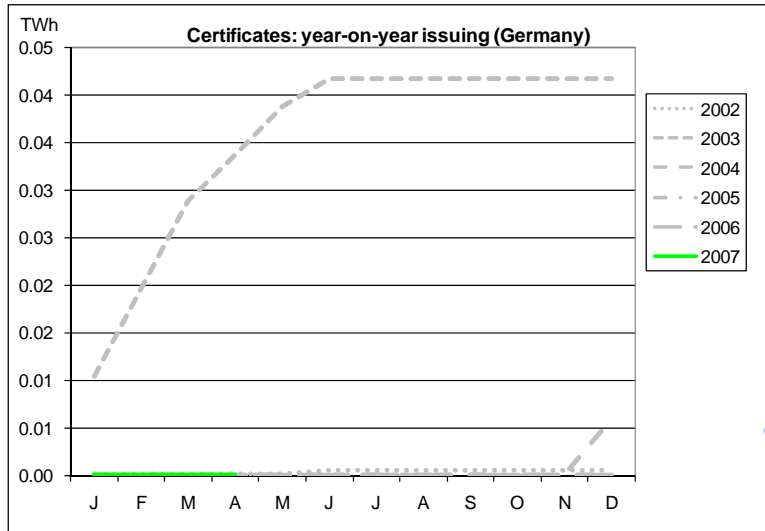
Finland has issued and in particular redeemed less than its usual large number of certificates, but still remains a major participant. It is exporting about the same as last year.



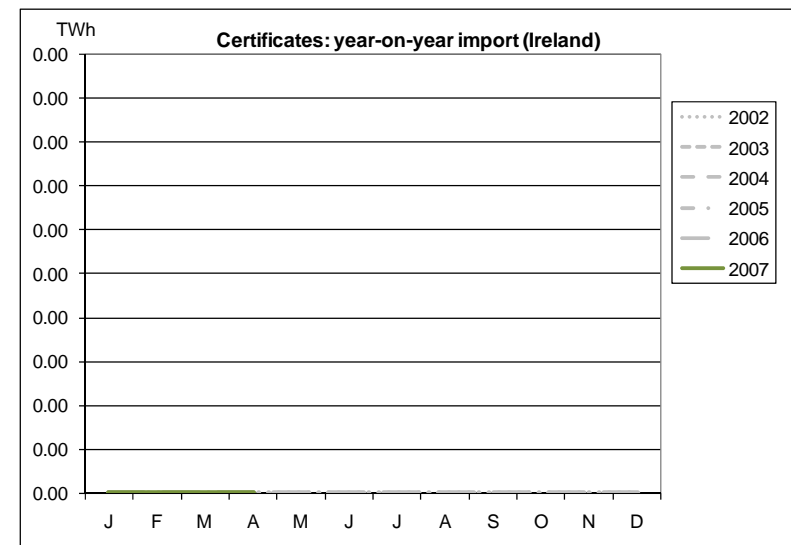
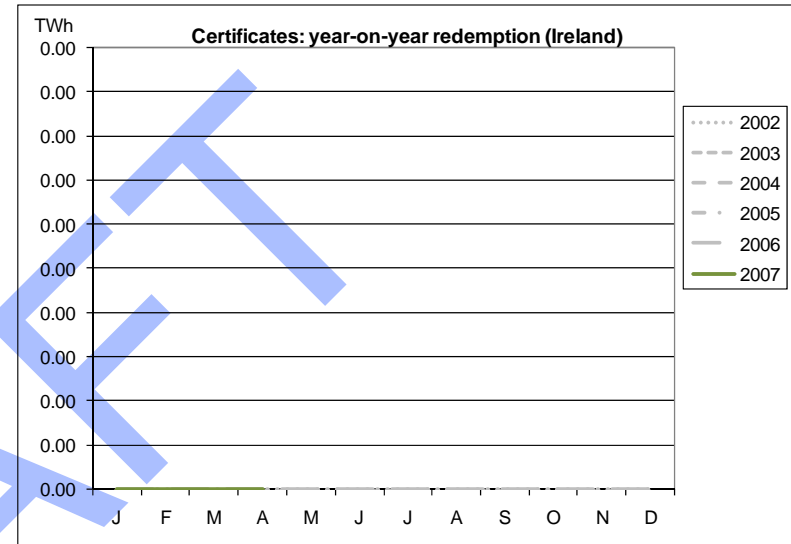
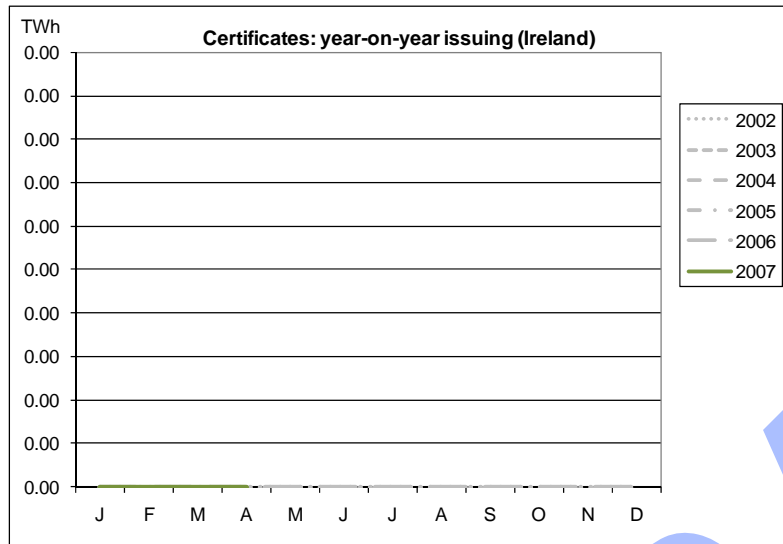
France. The French market continues to grow, albeit at a slower pace than last year.



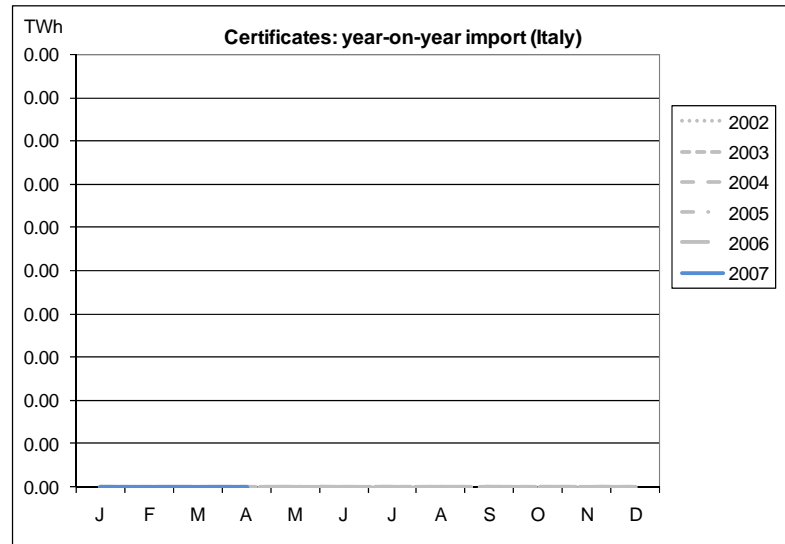
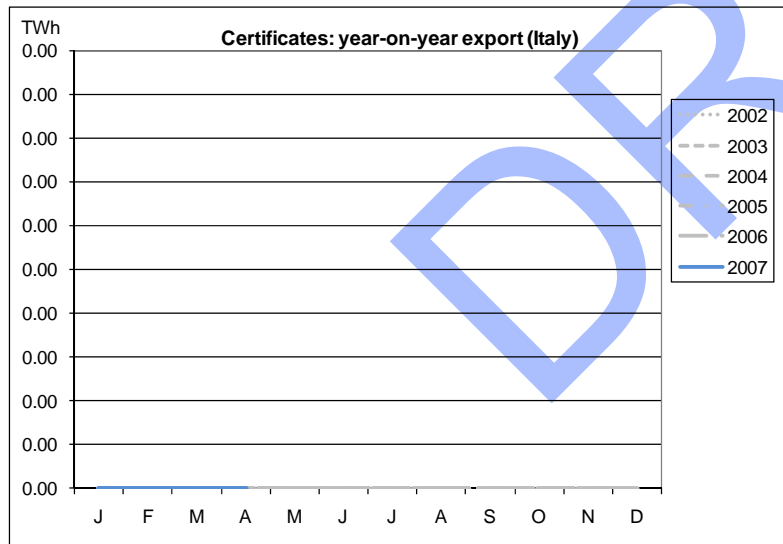
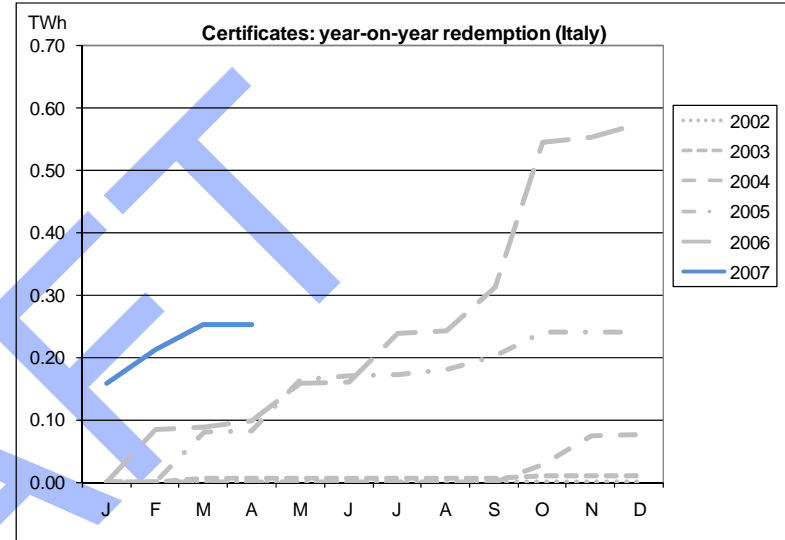
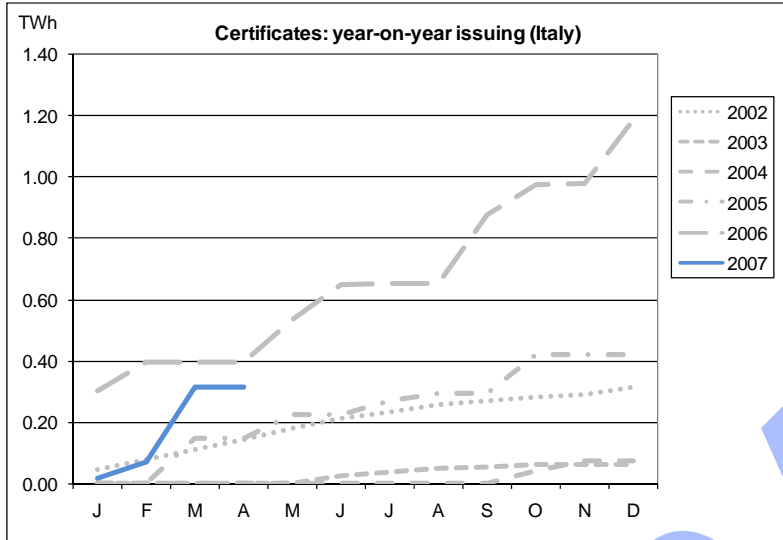
Germany has imported and redeemed large numbers of certificates, way over the numbers experienced in previous years.



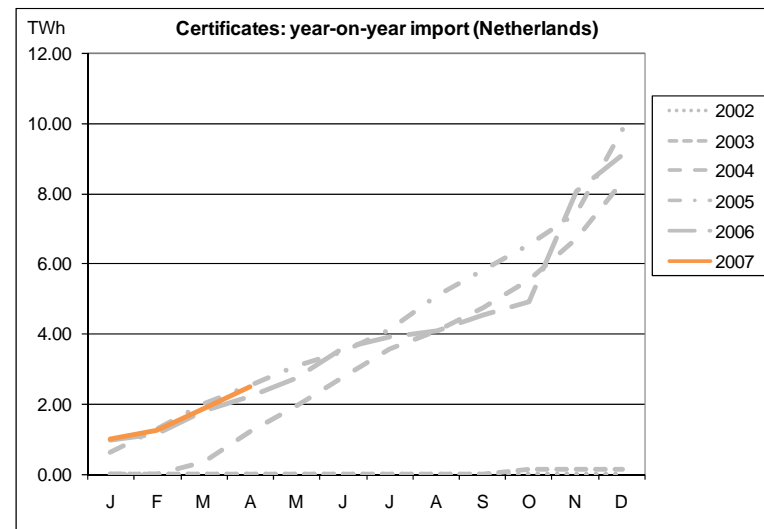
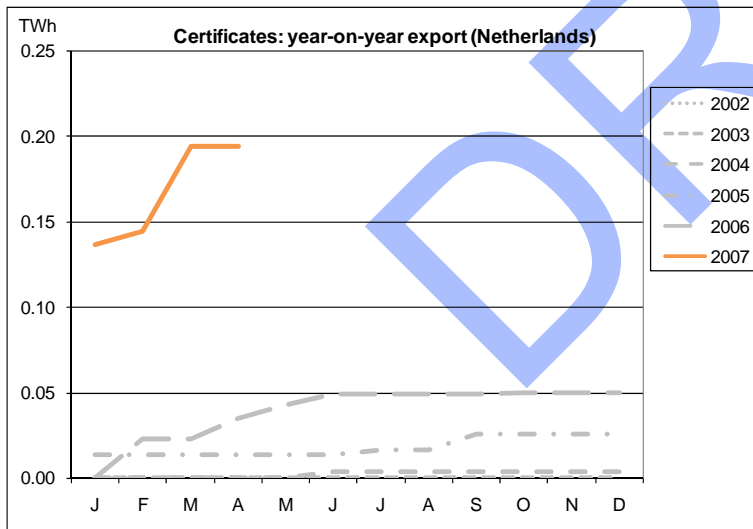
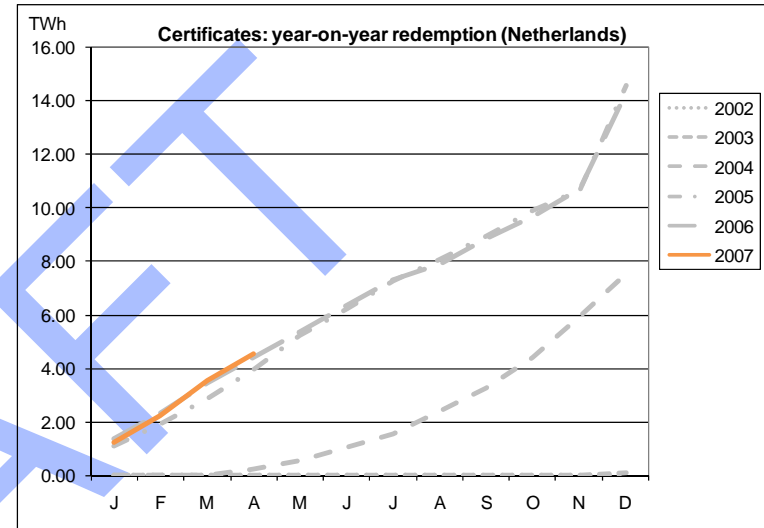
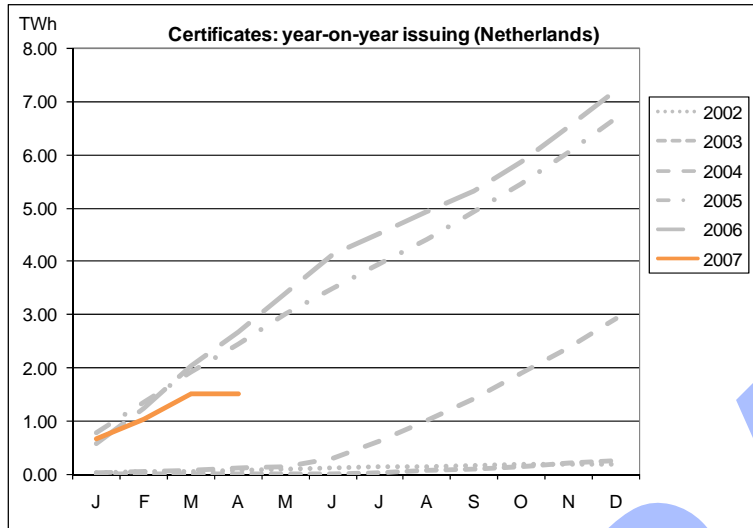
Ireland. The Irish market has yet to get off the ground, although a limited number of certificates was issued recently.



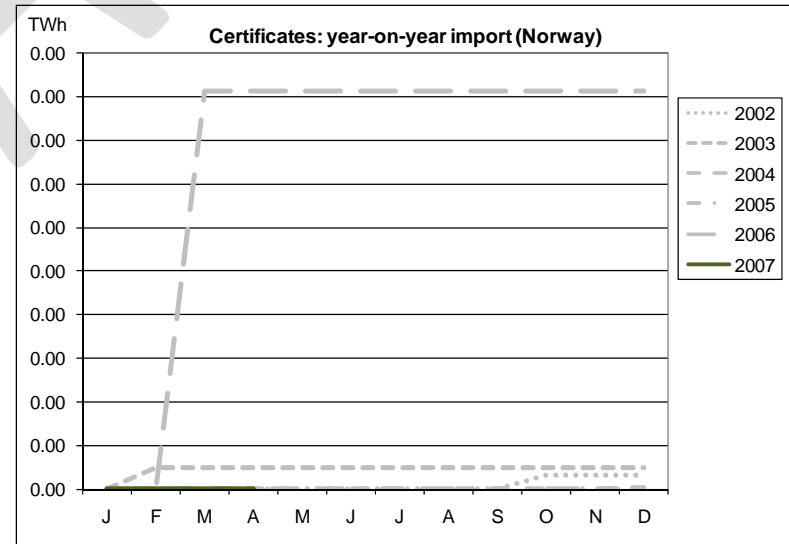
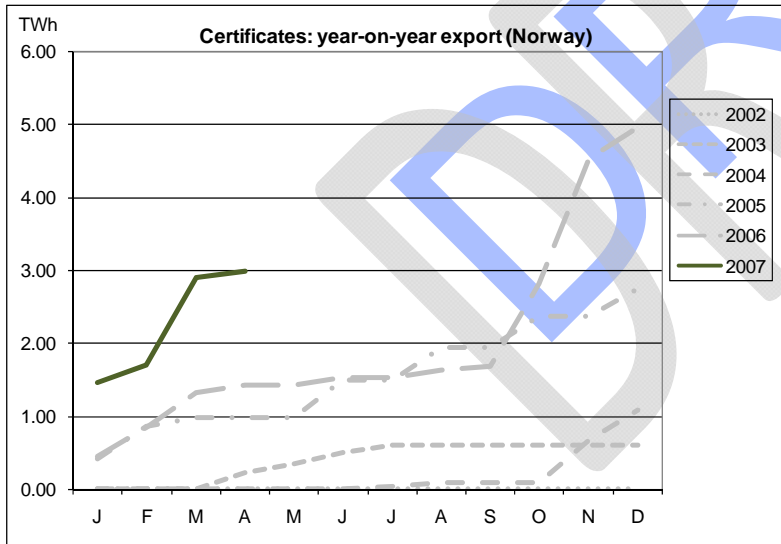
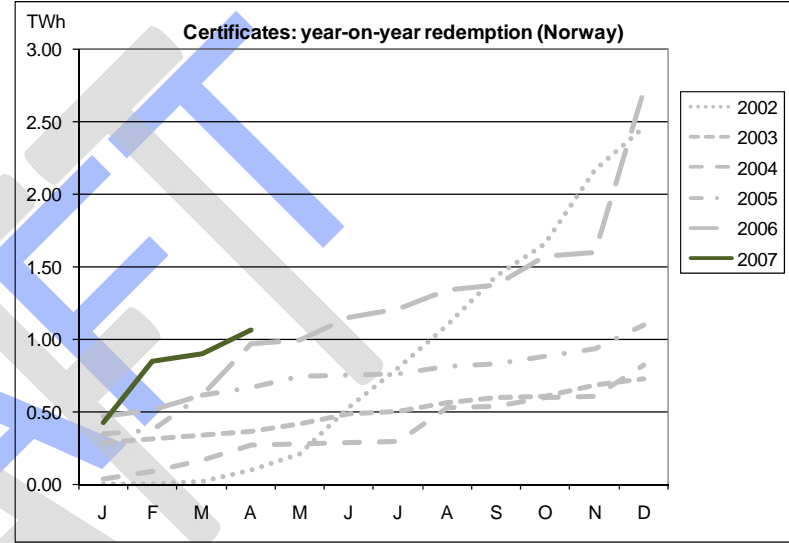
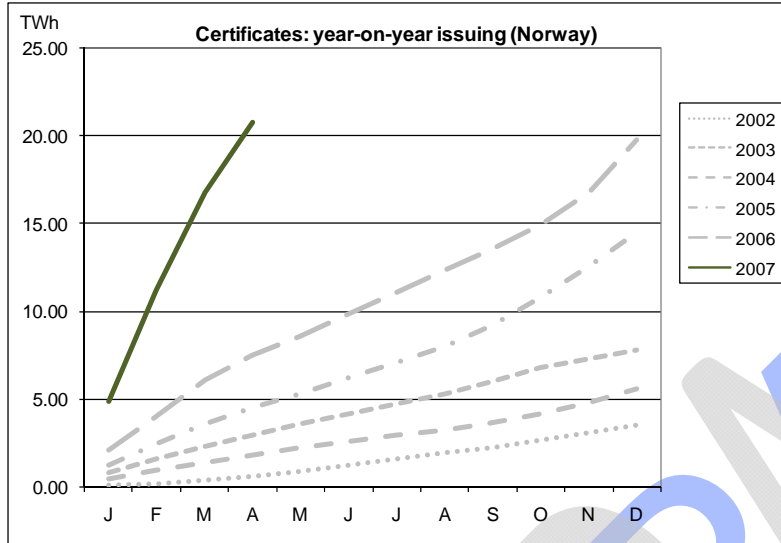
Italy. Issuing is not very different to last year, but redemption is far higher. There have been no international transfers.



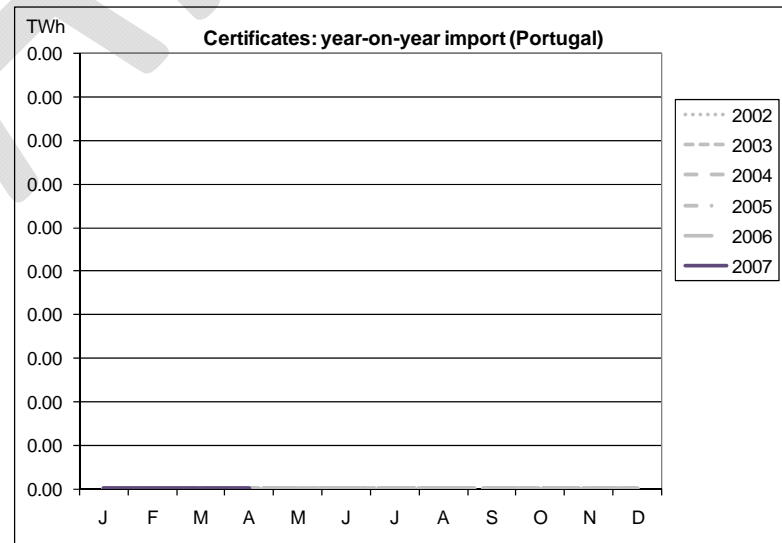
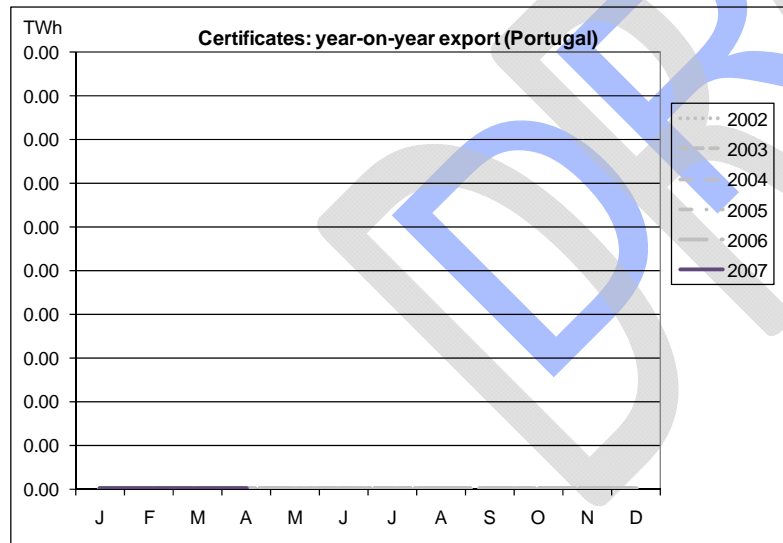
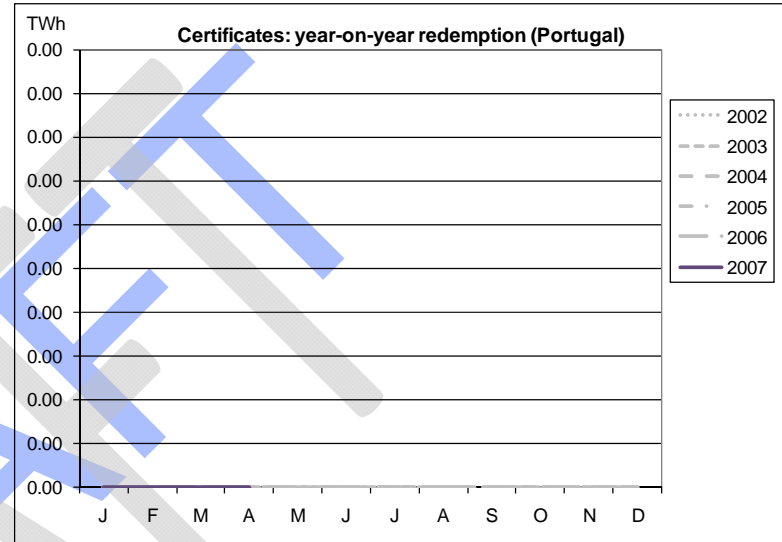
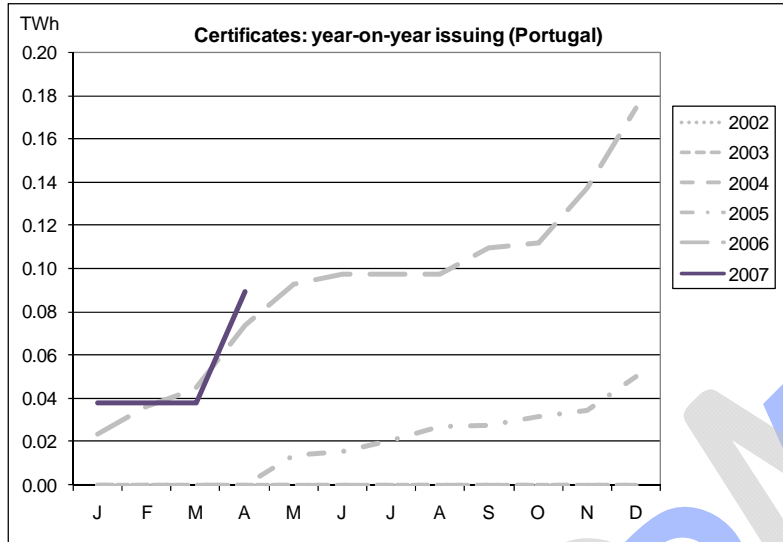
Netherlands redemption continues to grow at around the same rate as 2006, although redemption is a little lower. Exports are considerably larger than in previous years, but imports are about the same.



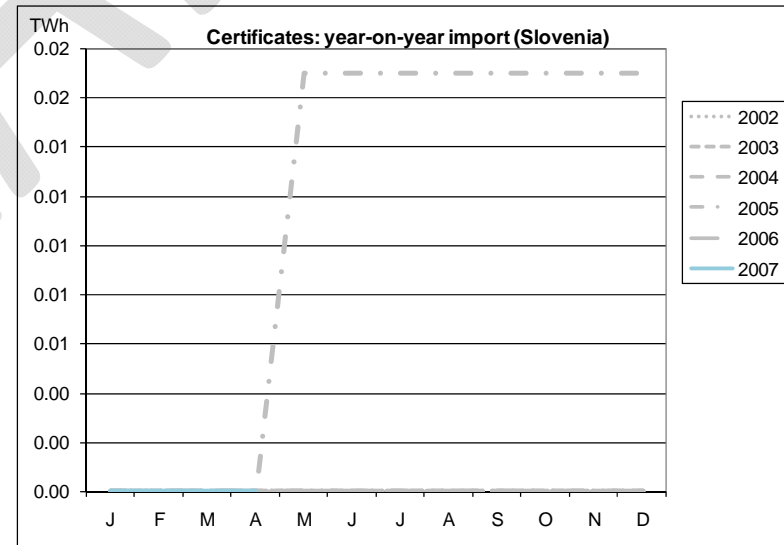
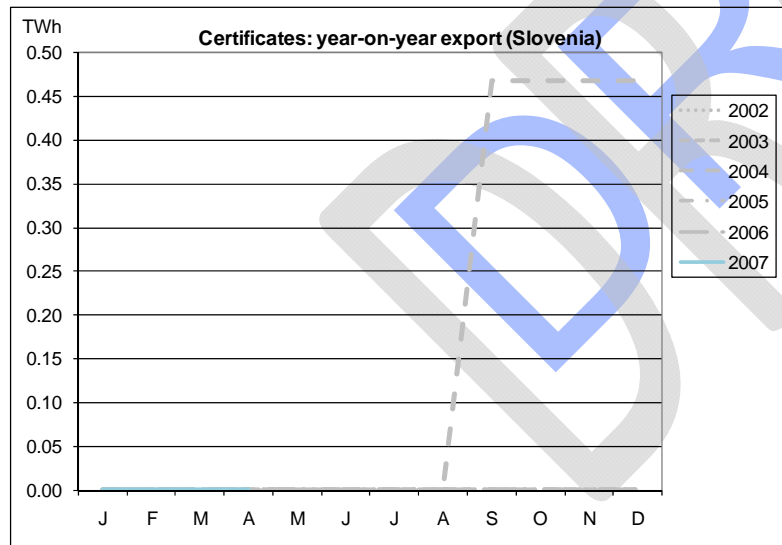
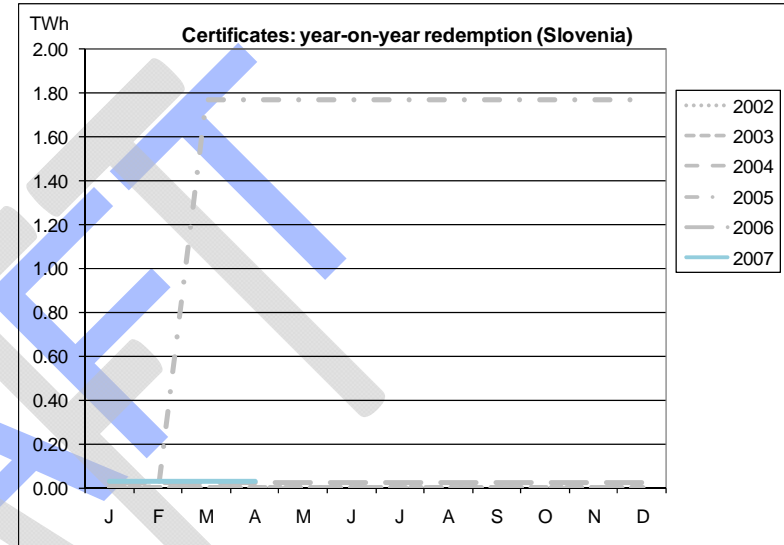
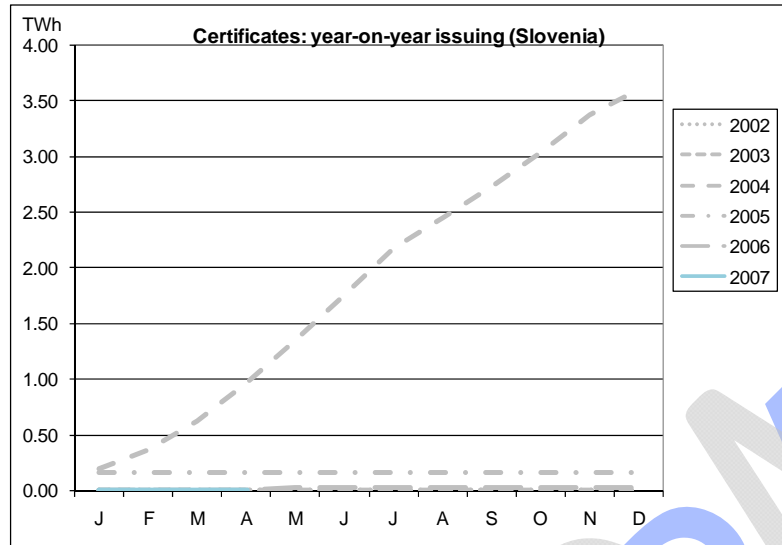
Norway continues to issue, export and redeem certificates at a higher rate than ever before: in particular, the number of certificates issued has soared way over previous years. Imports are negligible.



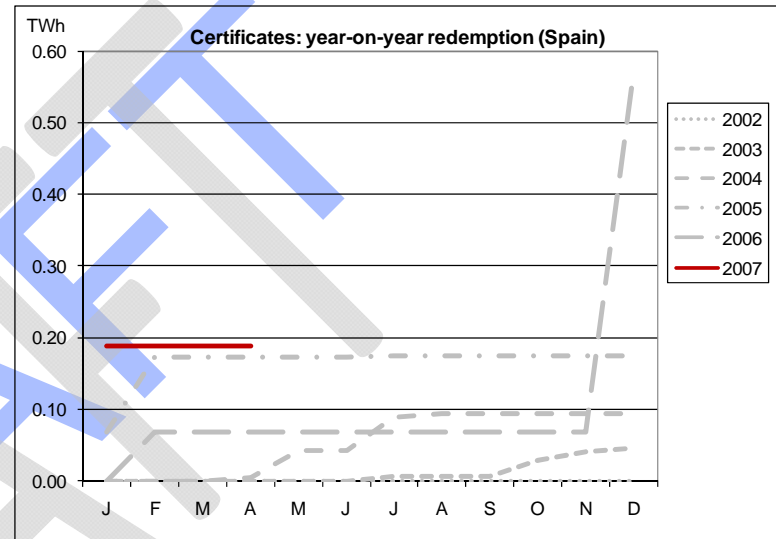
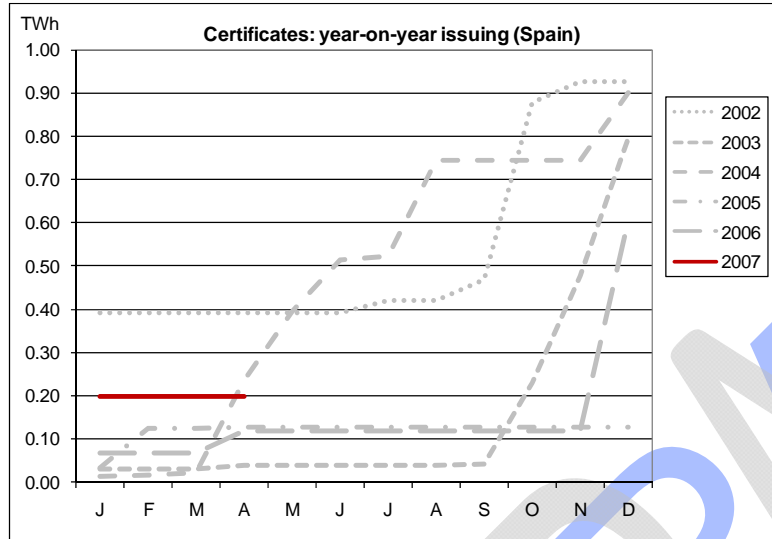
Portugal continues to issue larger numbers of certificates than in previous years, but has yet to transfer or redeem any.



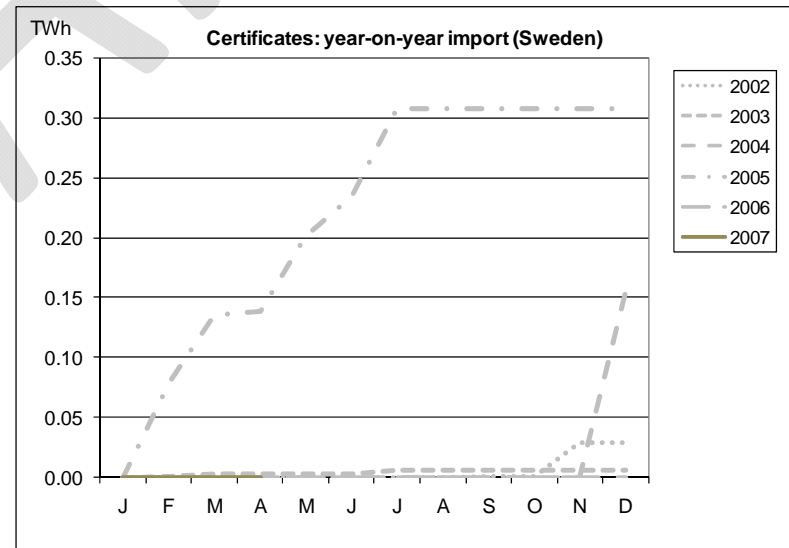
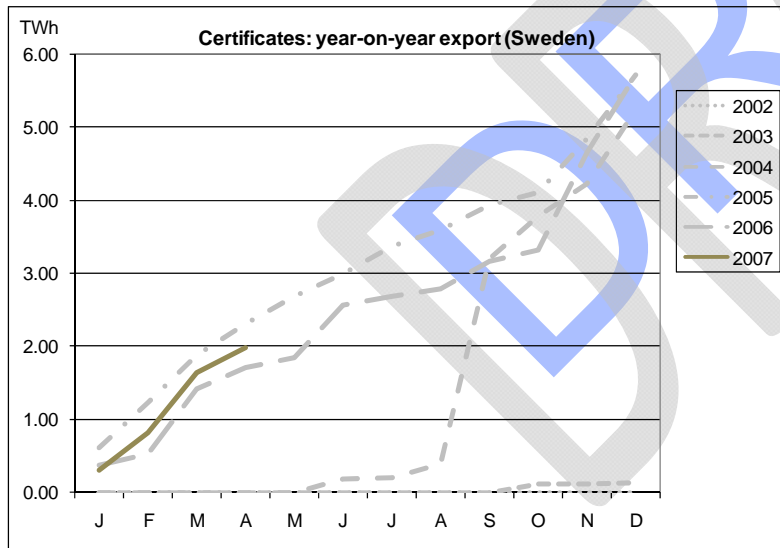
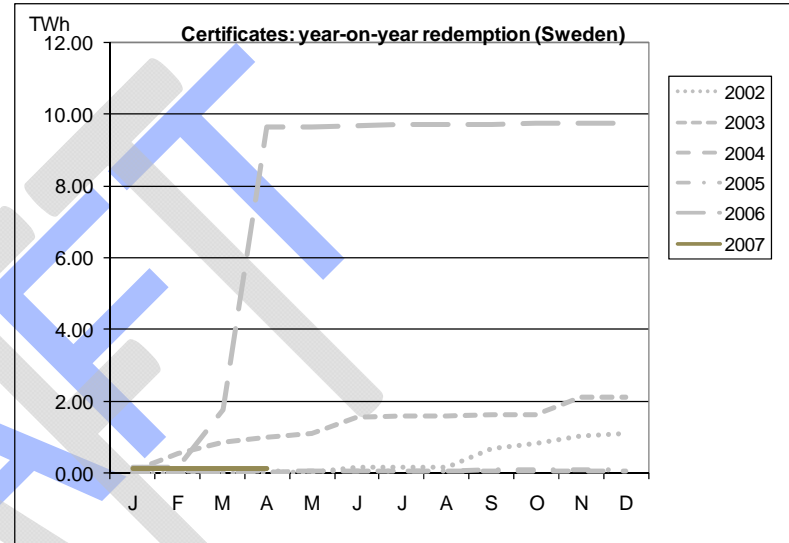
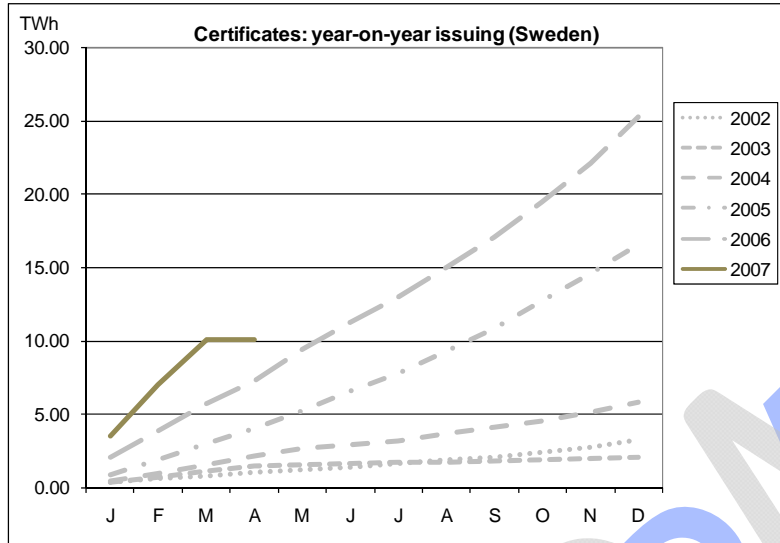
Slovenia has redeemed a small number of certificates, but has otherwise been inactive for the past year.



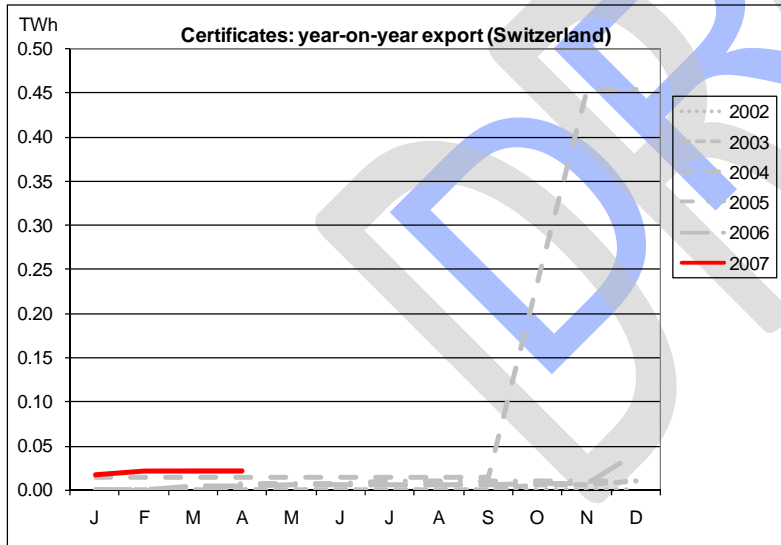
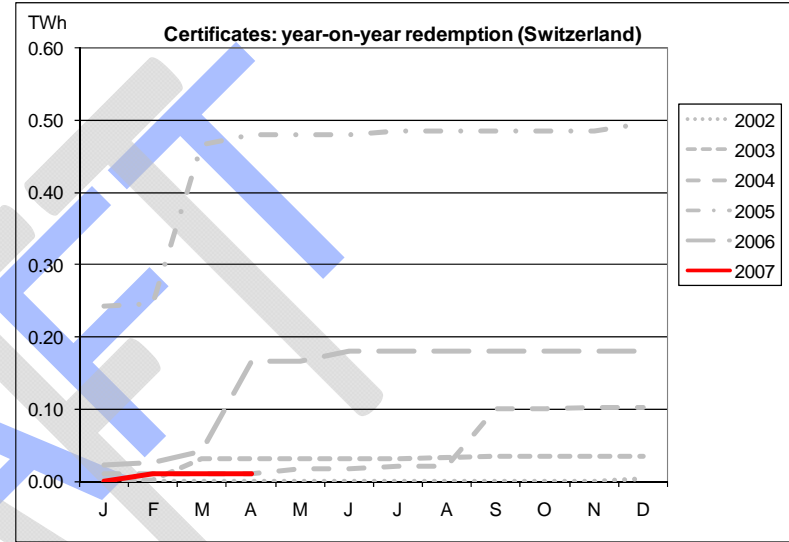
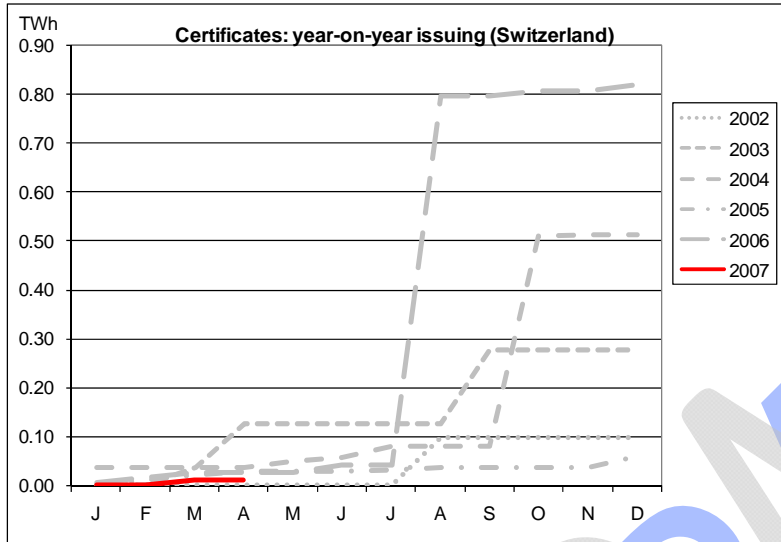
Spain was quiet until the later part of 2006, when issuing and redemption recommenced, leading to higher redemption than at any time in the past – although there has been no activity since January 2007. International transfer now awaits development and approval of the revised Spanish Domain Scheme (note that Spanish activity was suspended on 16 June 2006 in the absence of a PRO-compliant Domain Protocol).



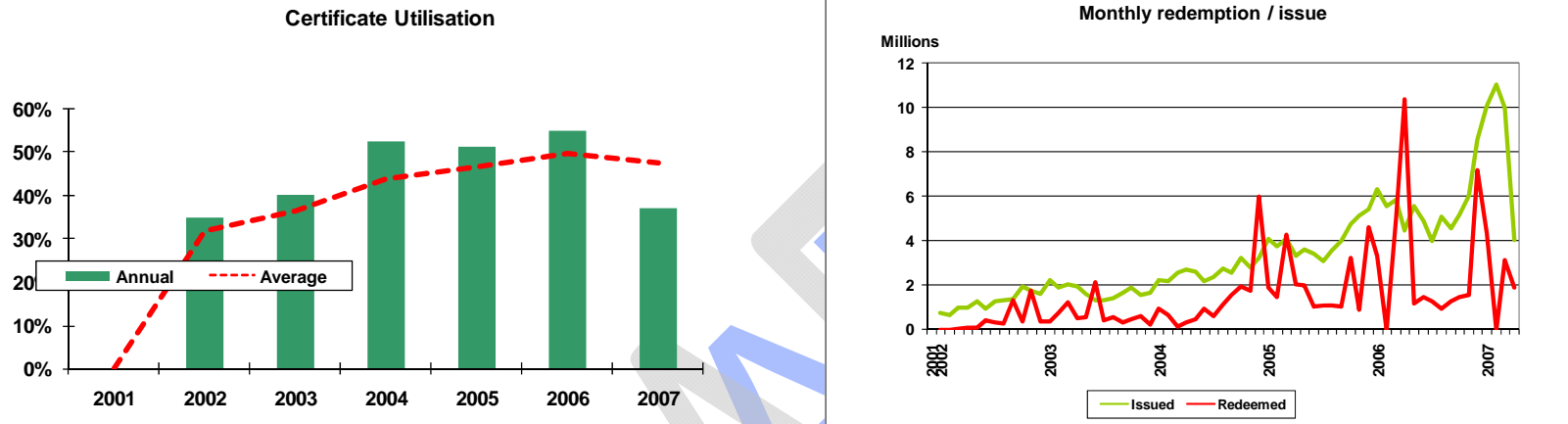
Sweden continues to issue more certificates than ever before, exporting about the same amount as in previous years.



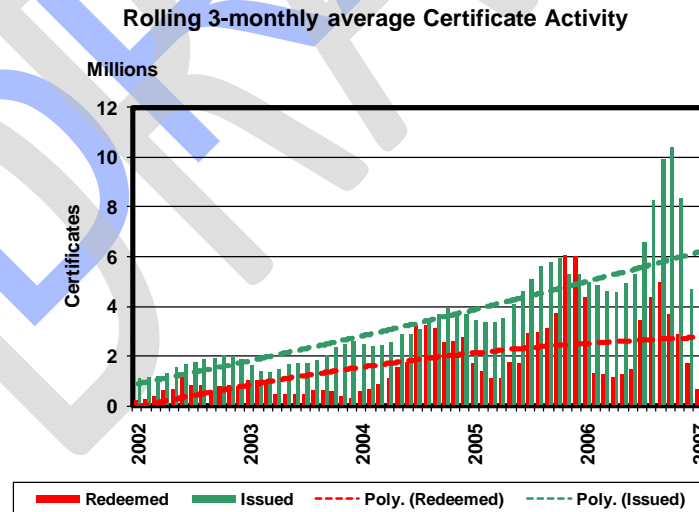
Switzerland has been relatively quiet this year.



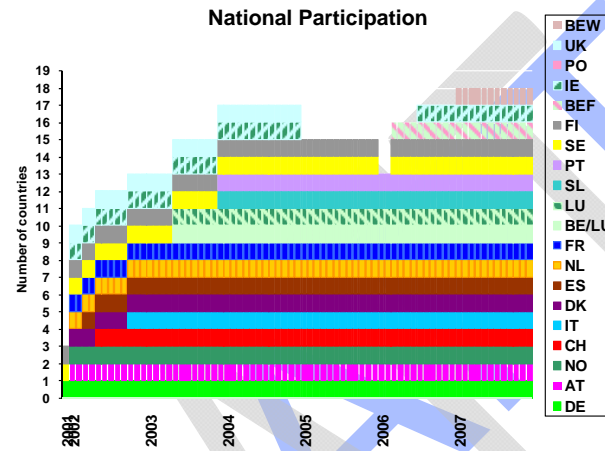
Realisation of value: The proportion of certificates that are redeemed has dropped to 48% overall, and only 37% this year – however, this normally increases during the course of each year.



Rolling three-month averages show that the market continues to grow at a relatively steady, cyclical rate.



Membership continues to grow, with 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% growth per annum.

