



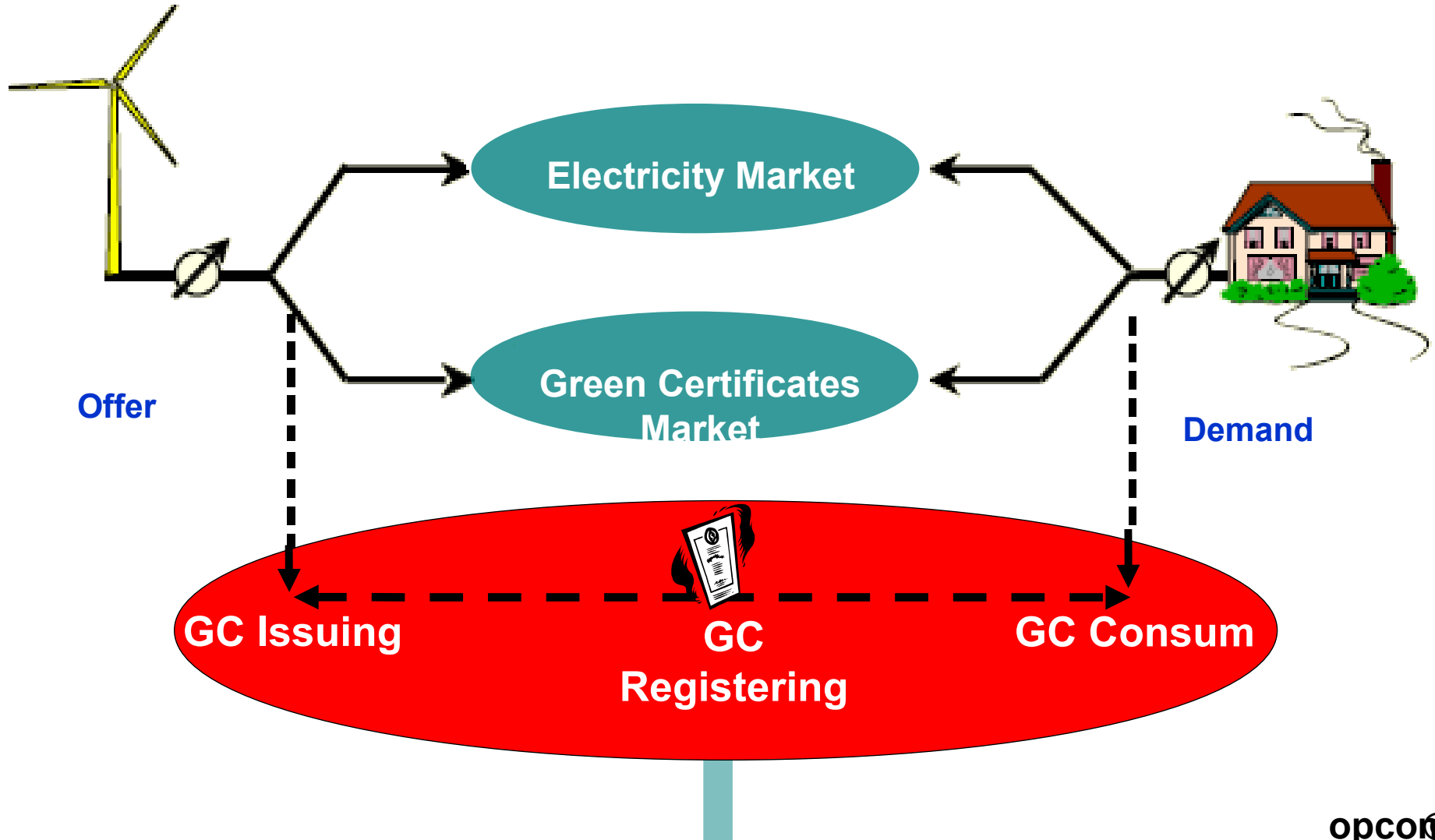
Romanian Green Certificates Market

Romanian Electricity Market Operator

OPCOM



Romanian Green Certificates Market





Romanian Green Certificates Market

System to support E-SRE

- **Fixed quantities – mandatory quota**
- **Variable price – established by market mechanisms**

**Minimum and maximum values established by GD
(27 €/certificate – 55 €/certificate)**

To protect the producers

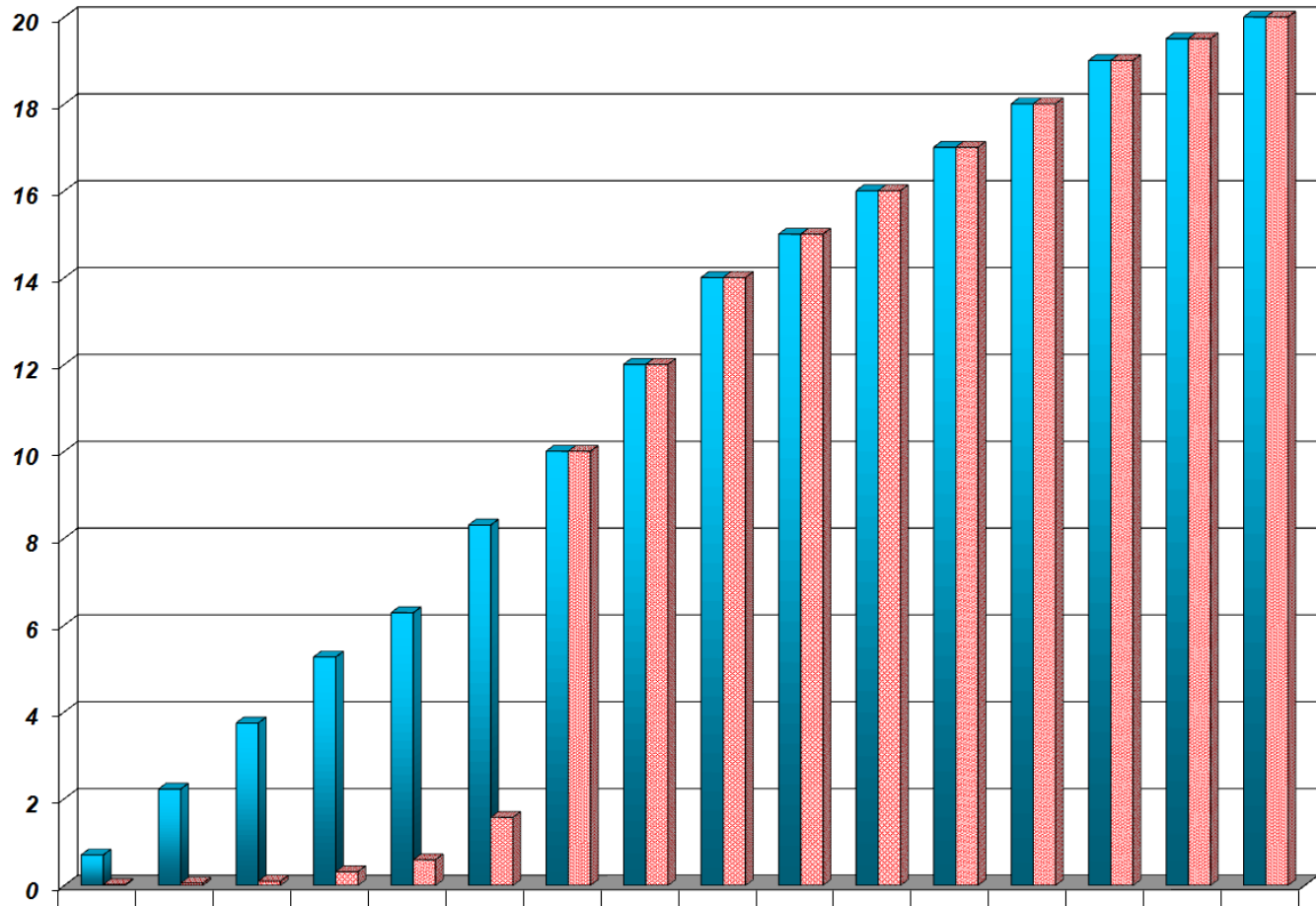
To protect the consumers

Assigned by Government Decision





Romanian Green Certificates Market



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
■ Quota [%]	0,7	2,22	3,74	5,26	6,28	8,3	10	12	14	15	16	17	18	19	19,5	20
■ Quota modified [%]	0,019	0,053	0,098	0,316	0,589	1,567	10	12	14	15	16	17	18	19	19,5	20

Quota for E-RES until 2020



Romanian Green Certificates Market

Comand and control at the central level

Romanian Regulator for Energy ANRE

- Controls the quota fulfillment
- Applies penalties

Transport and System Operator TRANSELECTRICA

- Issues GC
- Collects and redistributes the amount of money from the penalties (until 2007 to the producers and starting with 2008 to the network operators)

E-SRE Producers

Sell CV

Green Certificates Market

Electricity Suppliers

Buy GC

Distribution Operators

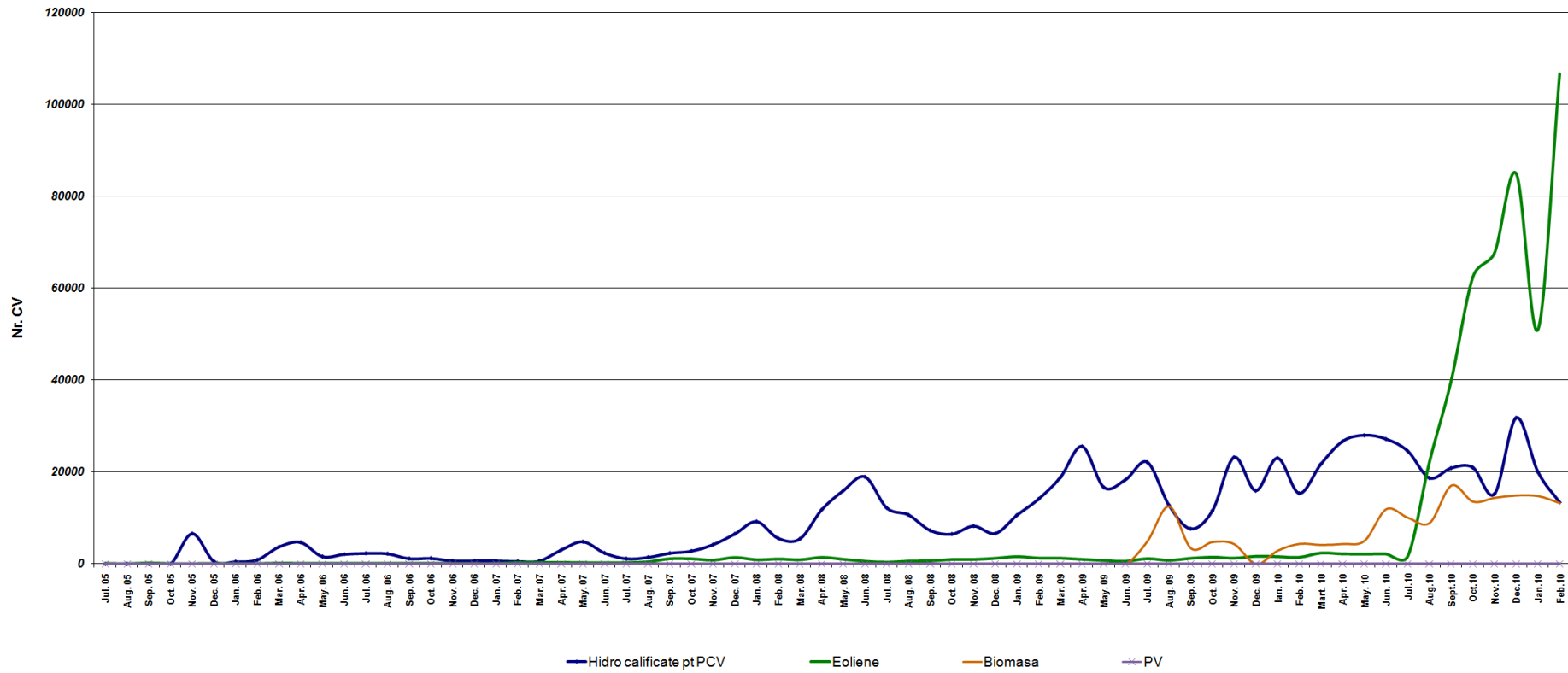
Romanian Market Operator OPCOM

- Trades GC
- Administrates the Green certificates Market
- Administrates the Green Certificates Register

Competitive Market Mechanisms

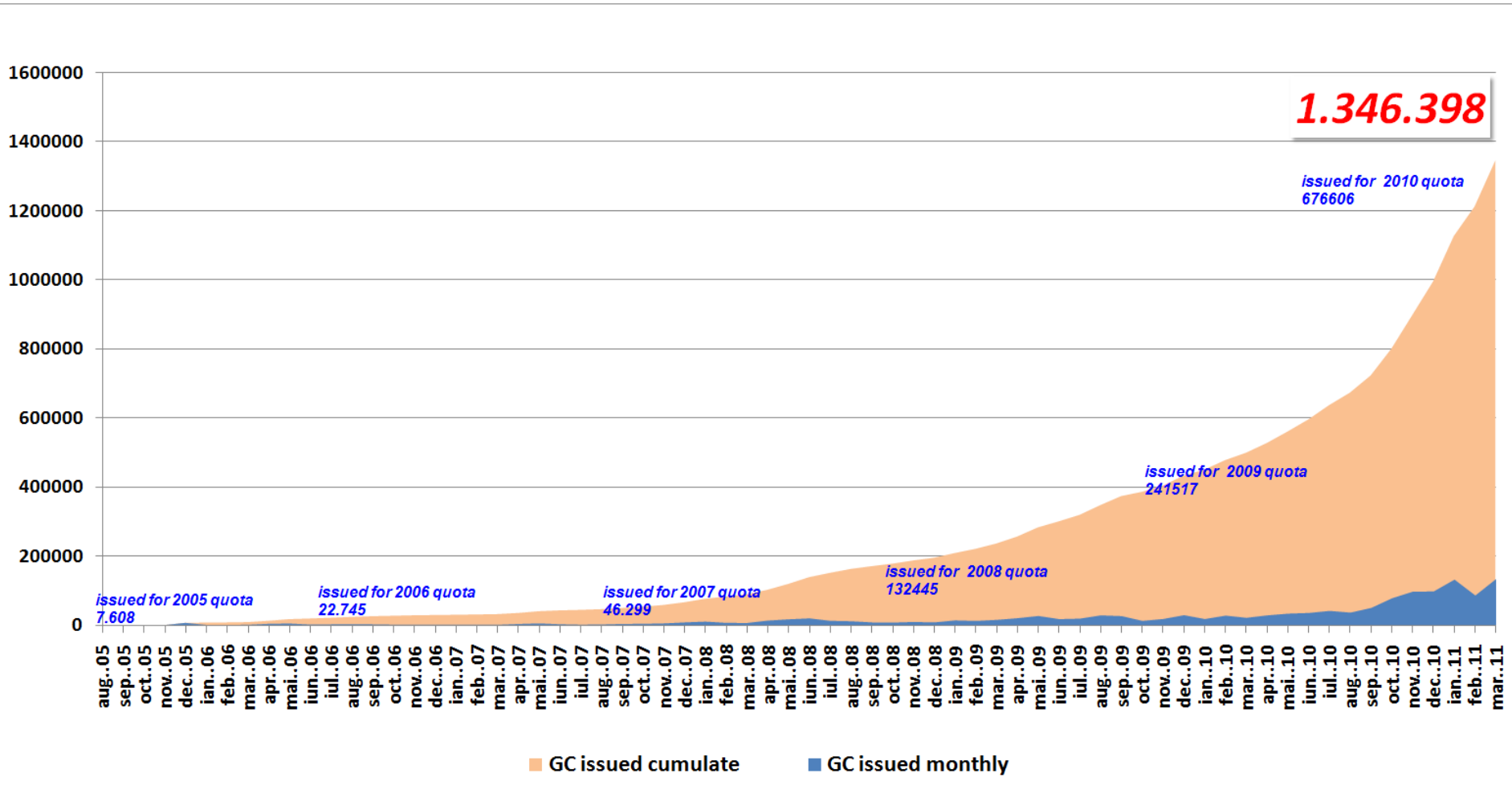


Romanian Green Certificates Market



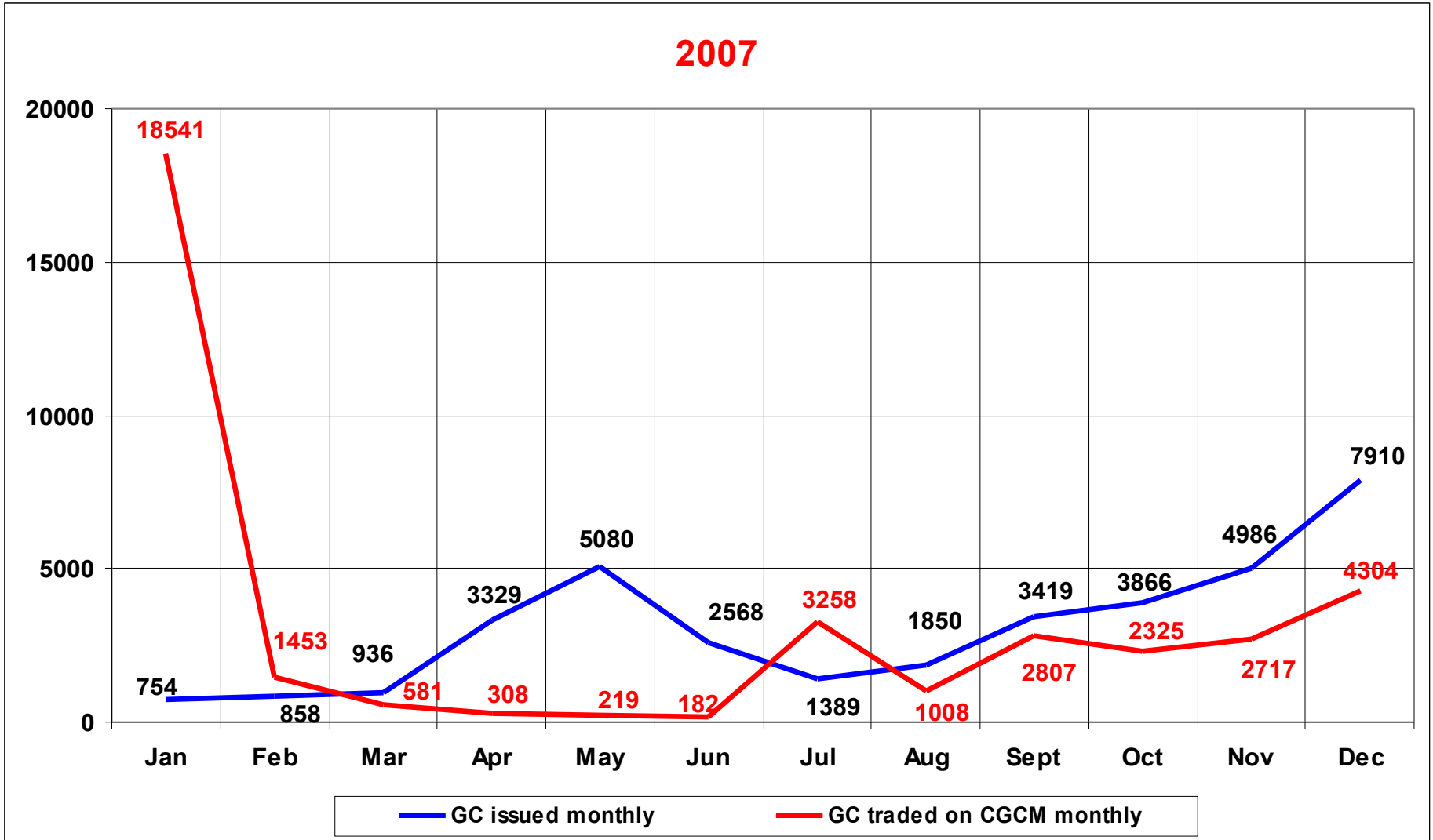


Romanian Green Certificates Market





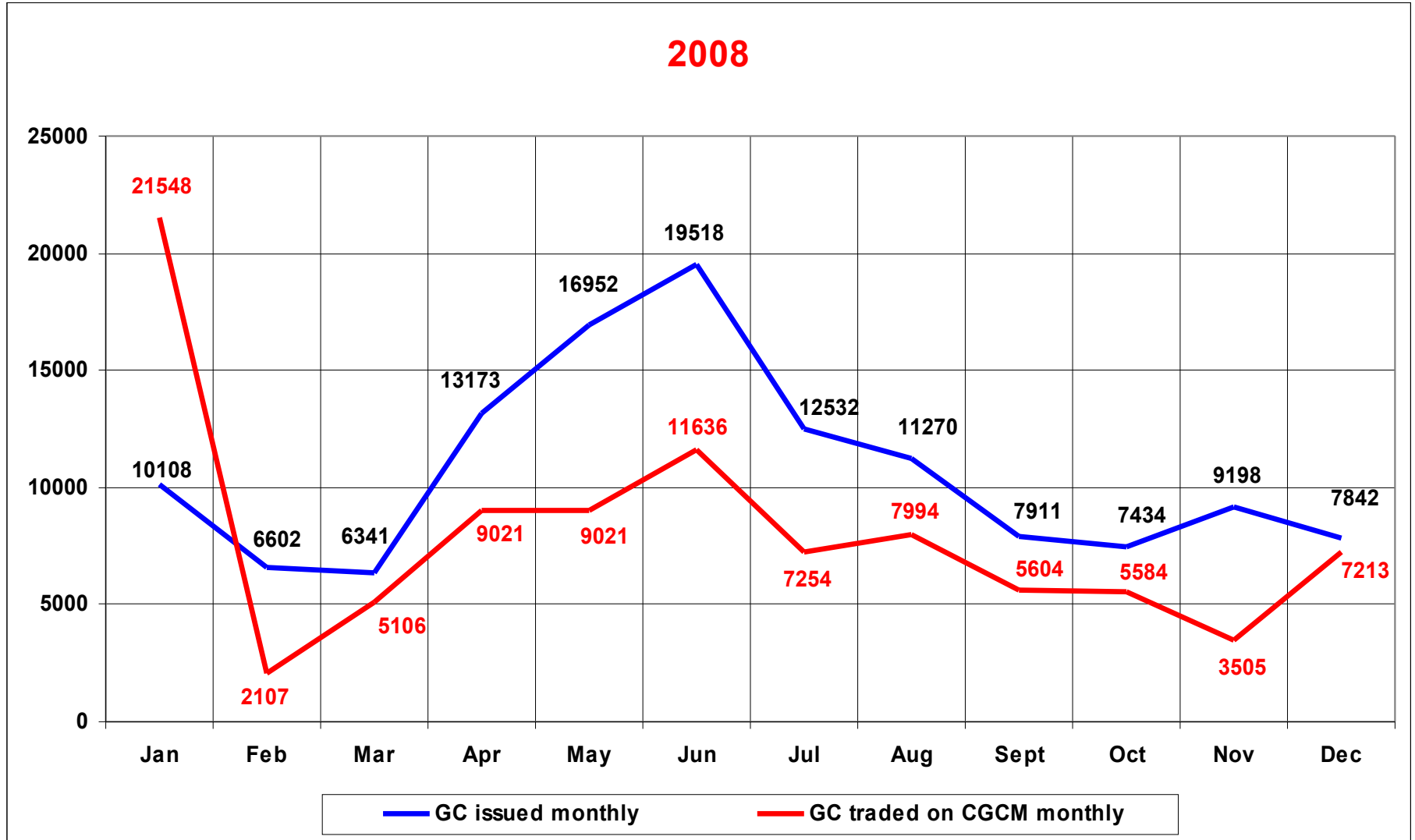
Romanian Green Certificates Market



Number of GC issued by OTS and traded on CGCM in 2007



Romanian Green Certificates Market

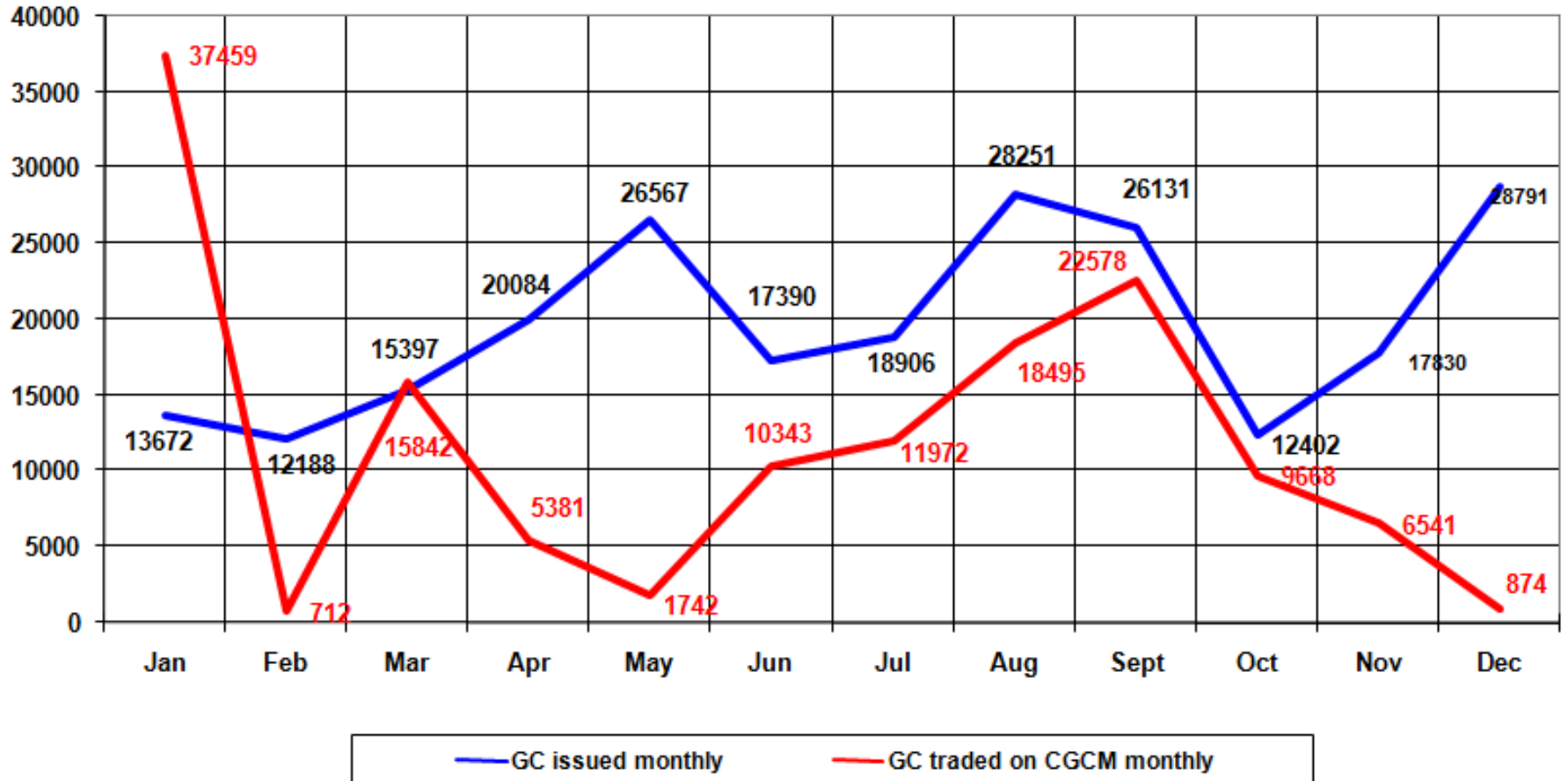


Number of GC issued by OTS and traded on CGCM in 2008



Romanian Green Certificates Market

2009

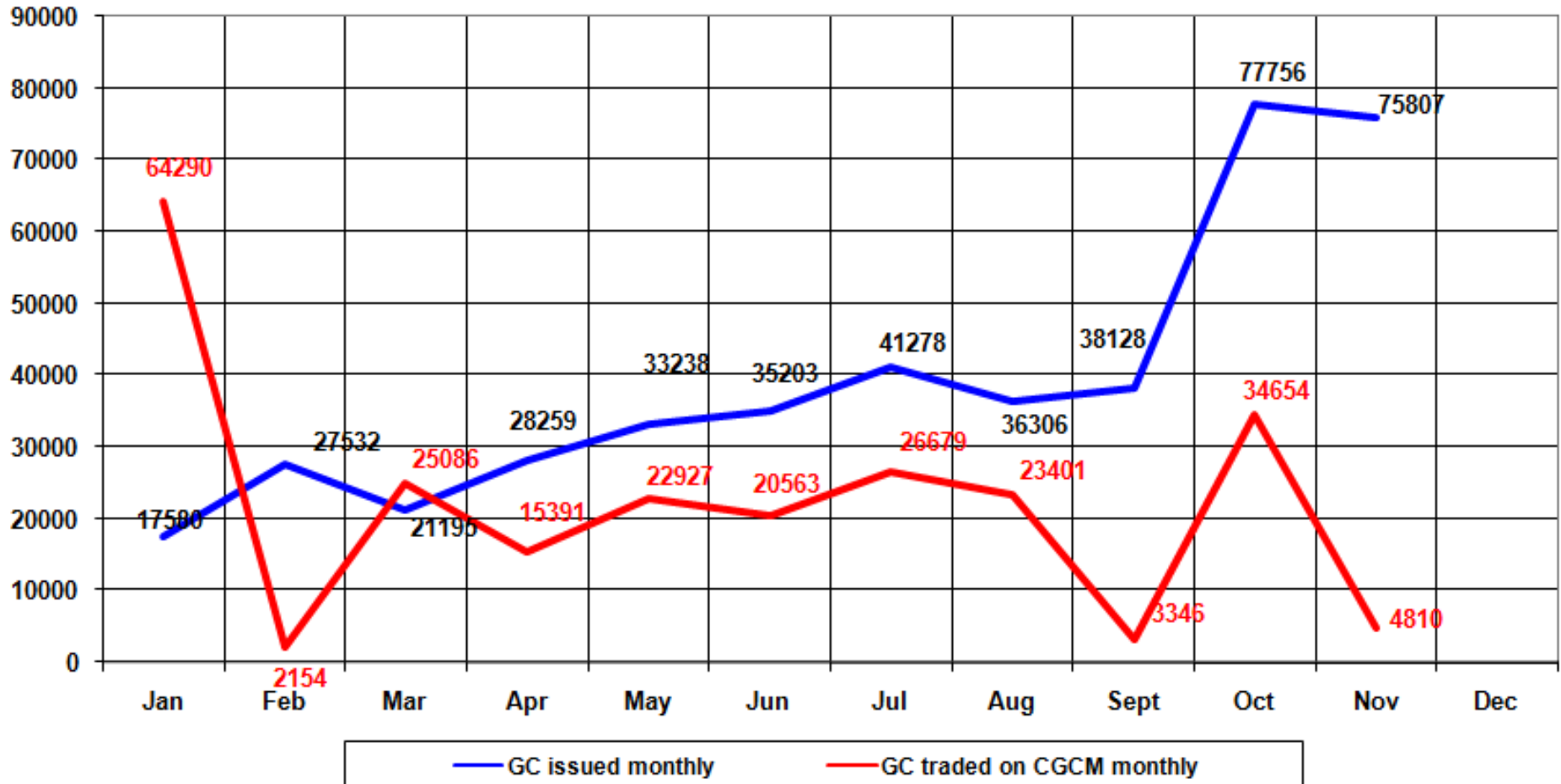


Number of GC issued by OTS and traded on CGCM in 2009



Romanian Green Certificates Market

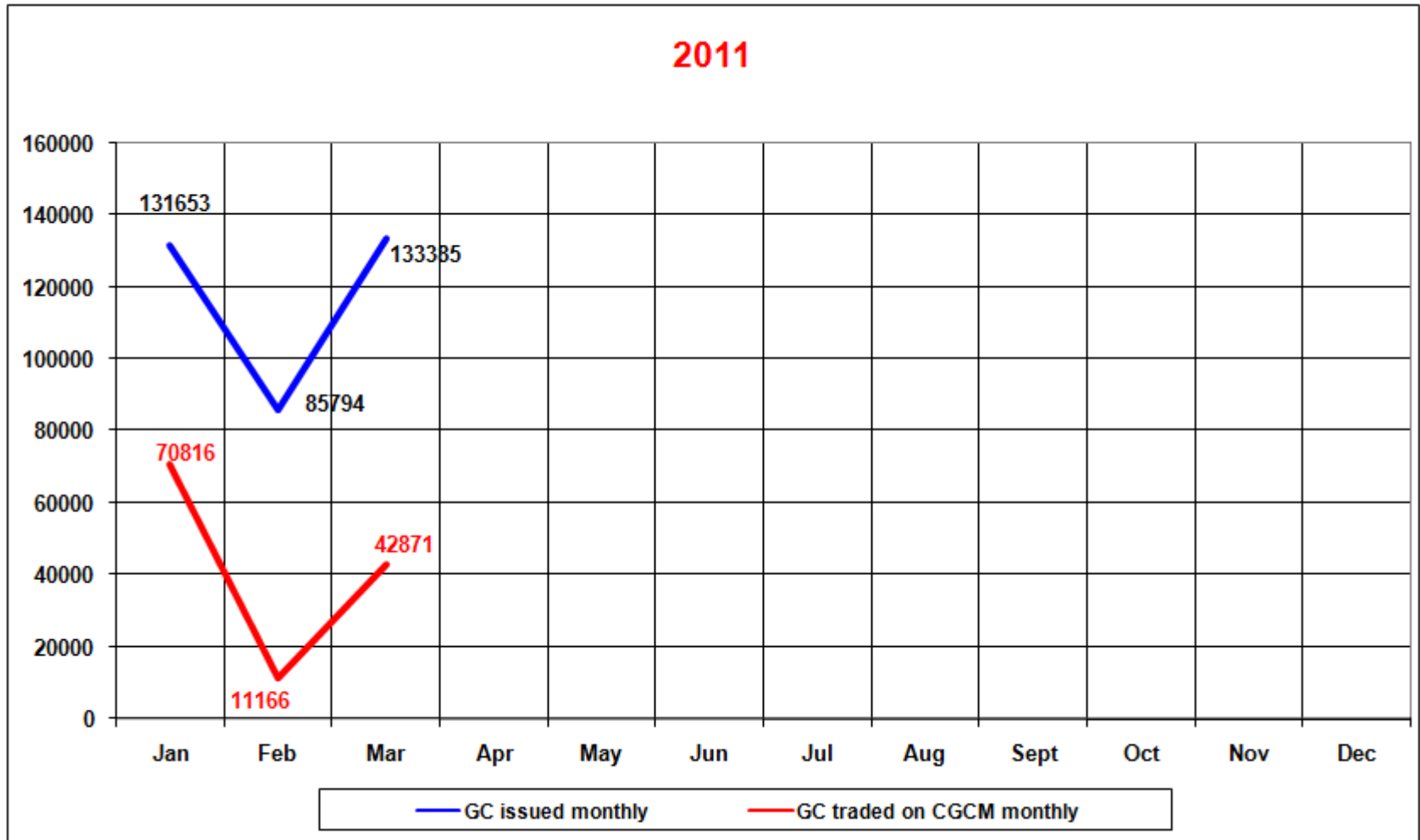
2010



Number of GC issued by OTS and traded on CGCM in 2010



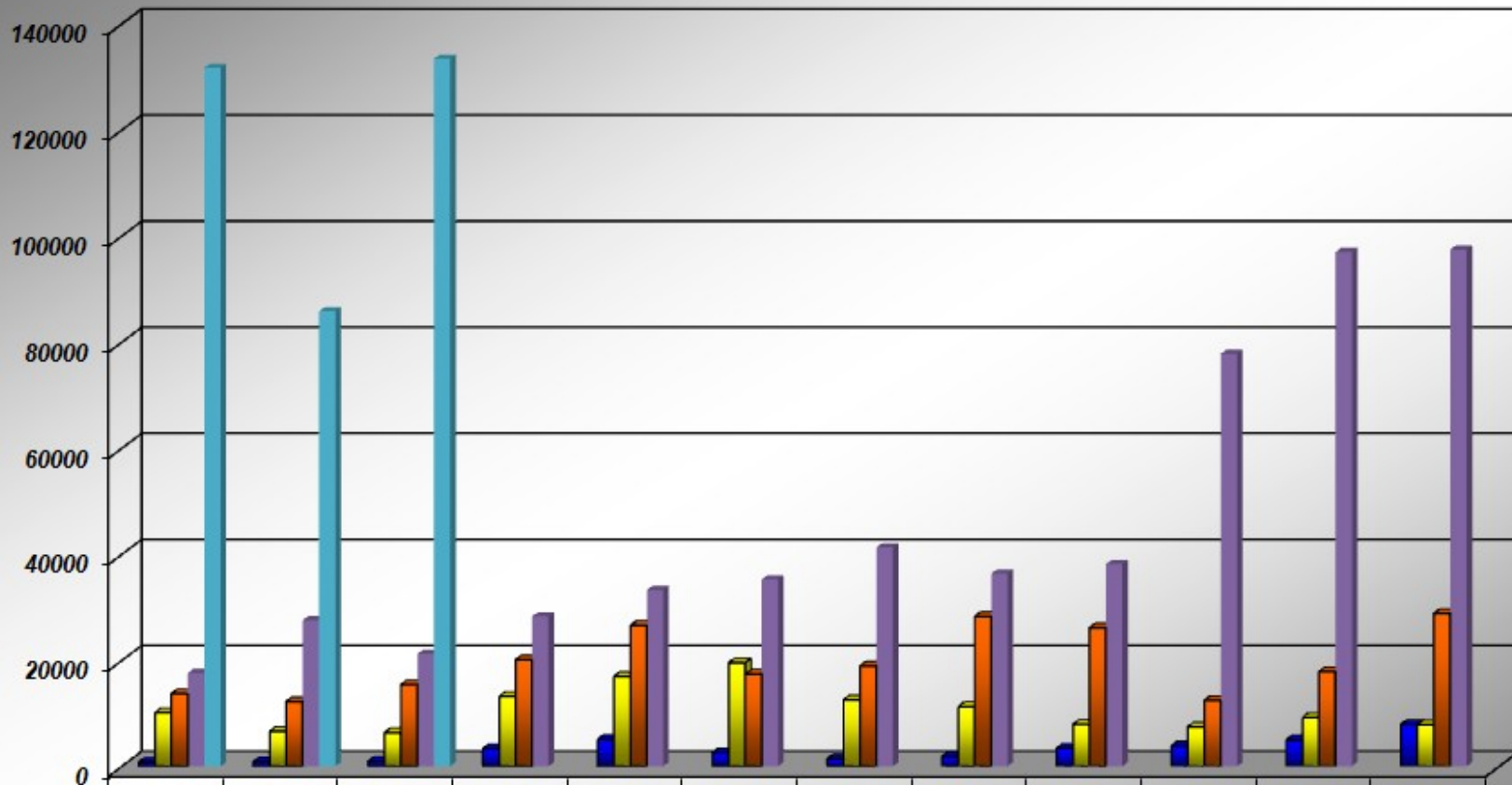
Romanian Green Certificates Market



Number of GC issued by OTS and traded on CGCM in 2011



Romanian Green Certificates Market

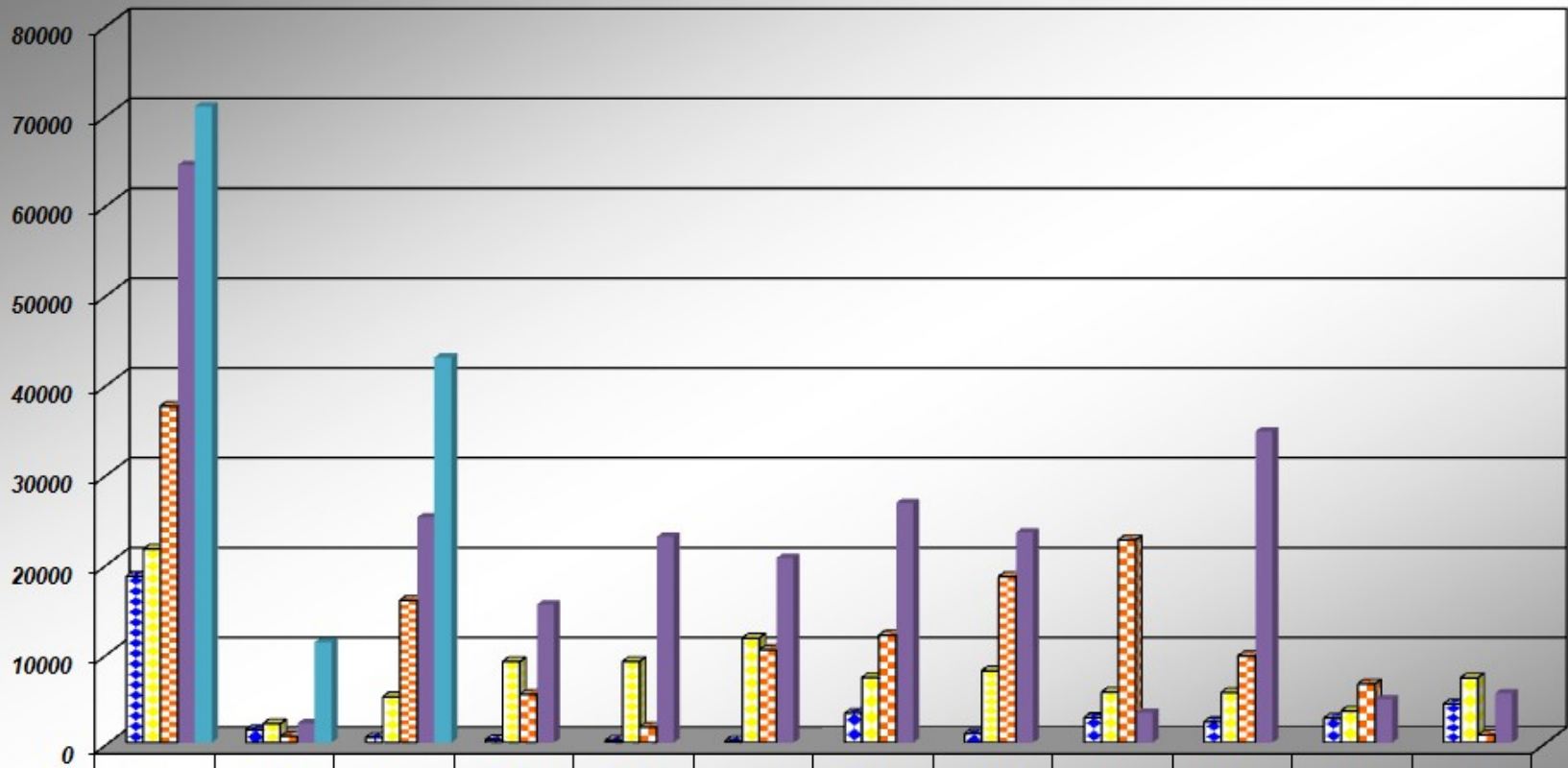


	Jan	Feb	Mart	Apr	Mai	Iun	Iul	Aug	Sep	Oct	Nov	Dec
■ GC issued monthly 2007	754	858	936	3329	5080	2568	1389	1850	3419	3866	4986	7910
■ GC issued monthly 2008	10108	6602	6341	13173	16952	19518	12532	11270	7911	7434	9198	7842
■ GC issued monthly 2009	13672	12188	15397	20084	26567	17390	18906	28251	26131	12402	17830	28791
■ GC issued monthly 2010	17580	27532	21195	28259	33238	35203	41278	36306	38128	77757	96961	97384
■ GC issued monthly 2011	131653	85794	133385									

Green Certificates issued monthly during 2007 - 2011



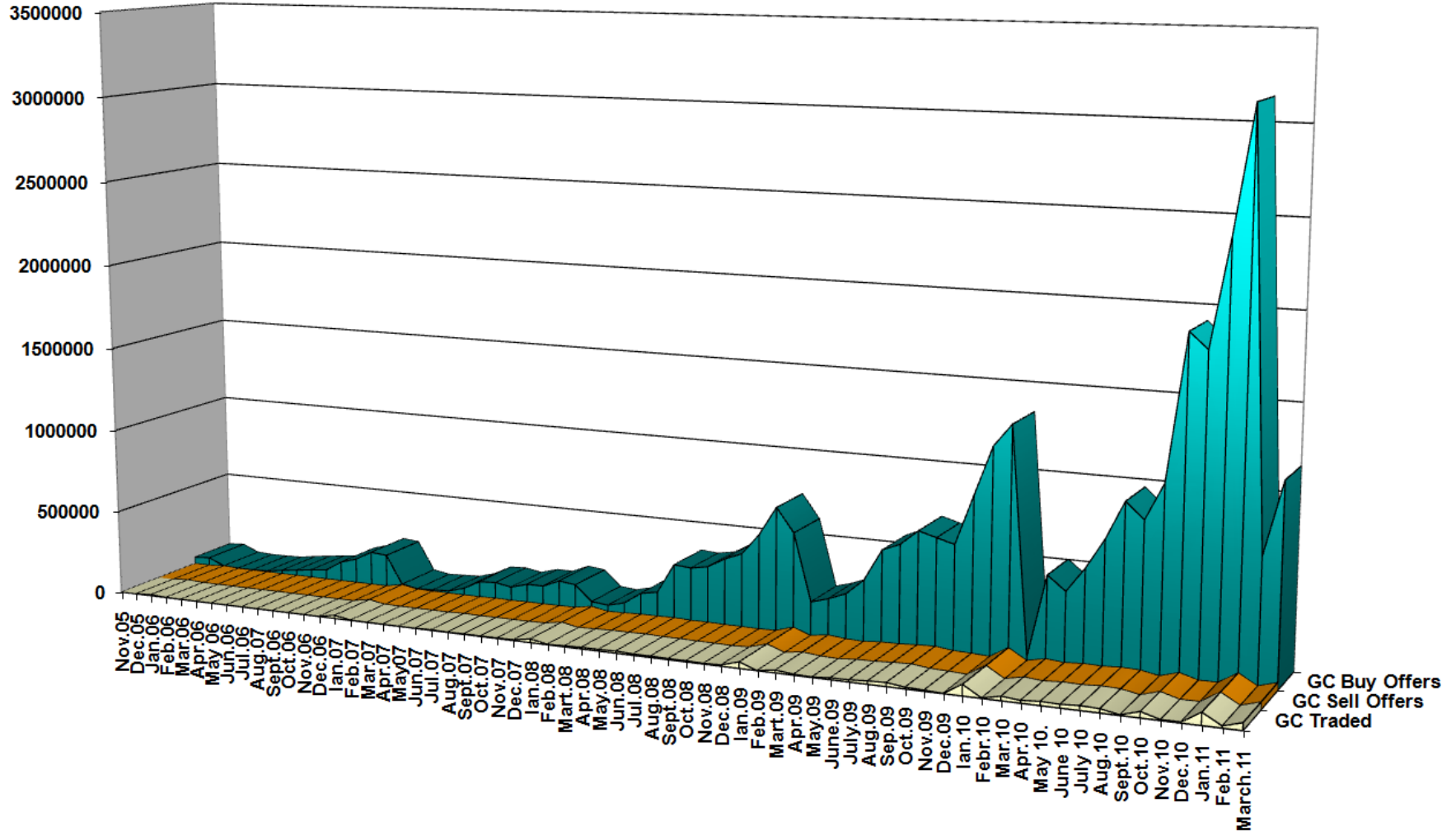
Romanian Green Certificates Market



	Jan	Feb	Mart	Apr	Mai	Iun	Iul	Aug	Sep	Oct	Nov	Dec
GC traded monthly 2007	18541	1453	581	308	219	182	3258	1008	2807	2325	2717	4304
GC traded monthly 2008	21548	2107	5106	9021	9021	11636	7254	7994	5604	5584	3505	7213
GC traded monthly 2009	37459	712	15842	5381	1742	10343	11972	18495	22578	9668	6541	874
GC traded monthly 2010	64290	2154	25086	15391	22927	20563	26679	23401	3346	34654	4810	5486
GC traded monthly 2011	70816	11166	42871									



Romanian Green Certificates Market



The evolution of demand of GC, offer of GC and the number of GC traded on the GCMM



Piața de Certificate Verzi din România

Nr. of Producers registered to GCM	Year 2007	Year 2008	Year 2009	Year 2010
Total	17	23	31	43
from which, by sources:				
- microhydropower plants	6	11	14	17
- wind turbines	11	12	15	22
- biomass			1	3
- photovoltaics			1	1

Nr. of Suppliers registered to GCM	Year 2007	Year 2008	Year 2009	Year 2010
Total	63	64	64	72



Piața de Certificate Verzi din România

Capacity of production MW	Year 2007	Year 2008	Year 2009	Year 2010
Total	46,958	47,31	96,682	467,963
from which, by sources:				
- microhydropower plants	40,303	40,405	74,359	75,723
- wind turbines	6,655	6,905	14,155	368,82
- biomass			8,08	23,332
- photovoltaics			0,088	0,088



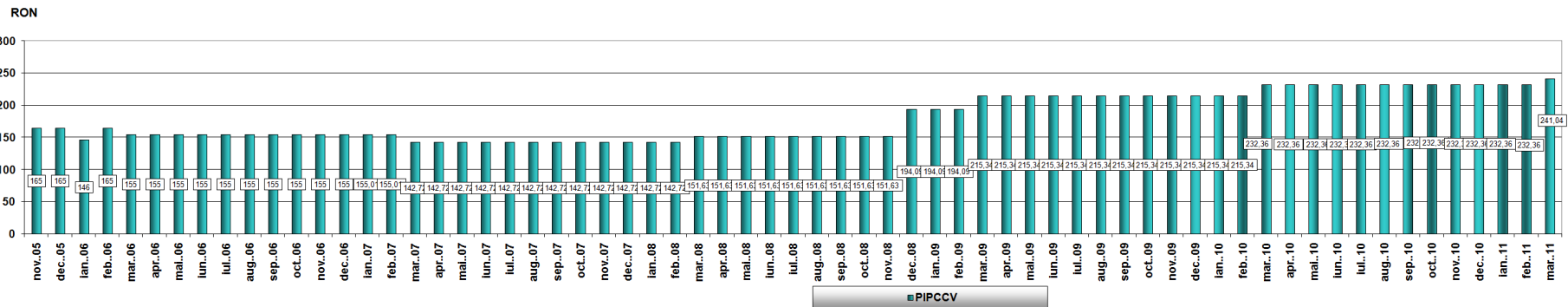
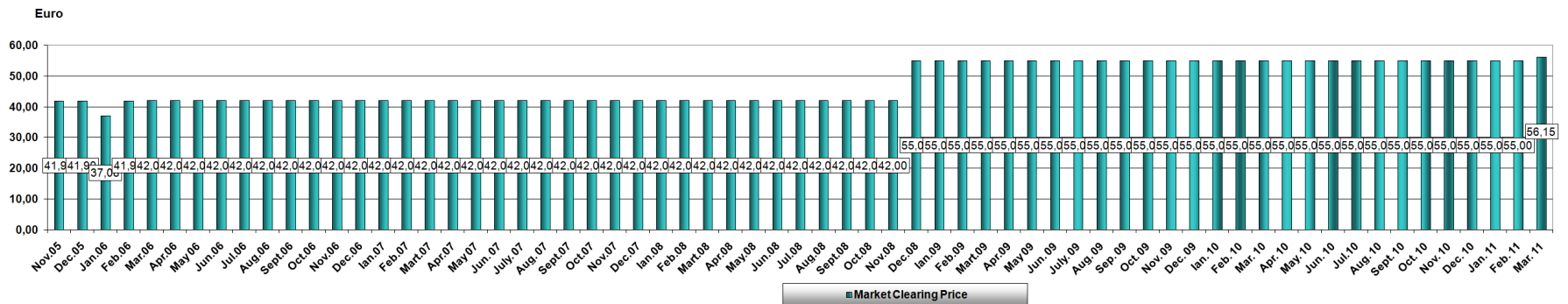
Piața de Certificate Verzi din România

Number of GC traded	Year 2007	Year 2008	Year 2009	Year 2010
Total	38939	111948	207398	345611
from which:				
- on bilateral contracts producers-suppliers		14904	56389	74514
- on the Centralized Green certificates Market	37703	95593	141607	238398
- on bilateral contracts suppliers-suppliers	1236	1451	9402	32699



Romanian Green Certificates Market

- Click to edit the



Outline



Comparison between the provision of the legislation in force and the Law 220/2008 republished for E-SRE promotion

HG 443 / 2003, HG 958 / 2005

Law 220/2008 republished

Value of CV :

- min. **24 €/CV**
- max. **42 €/CV**
- The exchange rate established by National Romanian Bank for the last working day of the month of December of the previous year.

- min. **27 €/CV**
- max. **55 €/CV**
- The average exchange rate of the month of December of the previous year, calculated by Romanian National Bank and indexed yearly by ANRE according to the average index of inflation registered in the month of December of the previous year, calculated at the level of EU-27, communicated officially by EUROSTAT.



Comparison between the provision of the legislation in force and the Law 220/2008 republished for E-SRE promotion

GD 443 / 2003, GD 958 / 2005

Law 220/2008 republished

Issuing of GC:

- **1 GC** is issued for **1 MWh E-RES** delivered into the network from installations qualified to participate in the system.

- **3 GC** for **1 MWh E-RES** delivered into the network from hydro power plants **●10 MW** new
- **2 GC** for **1 MWh E-RES** delivered into the network from hydro power plants **●10 MW** refurbished.
- **1 GC** for **2 MWh E-RES** produced in hydropower plants **●10 MW** and that are not refurbished and are not new
- **2 GC** for **1 MWh E-SRE** for wind power plants until 2017 and **1 GC** for **1 MWh** starting with 2018
- **3 GC** for **1 MWh E-RES** delivered into the network from biomass, bioliquid, gas from wastes fermentation, geothermal
- **6 GC** for **1 MWh E-RES** delivered into the network from photovoltaic installations.



Comparison between the provision of the legislation in force and the Law 220/2008 republished for E-SRE promotion

GD 443 / 2003, GD 958 / 2005

Law 220/2008 republished

Penalty :

- **63 €/GC** in 2005-2007
- **84 €/GC** starting from 2008

The penalty Fund is used yearly, by TSO, to buy GC offered on the GC market in the previous year and unsold and the residual amount of money is redistributed to the E-RES producers proportional with the number of GC offered on the market in the previous year

- **110 €/GC**

The amount resulting form the penalties is collected by the transmission system and the revenue will be transferred to the Environment Fund to finance power generation from renewable sources by individuals who invest in energy capacity installed up to 100 kW



Comparison between the provision of the legislation in force and the Law 220/2008 republished for E-SRE promotion

GD 443 / 2003, GD 958 / 2005

Law 220/2008 republished

Mandatory Quota :

- **2008** **5,26%**
- **2009** **6,78%**
- **2010-2012** **8,3%**
- **after 2012** will be established
quotas at least at
the level of the
quota of 2012, in
conformity with the
evolution of
European Union
legislation
concerning E-RES
promotion.

- **2010** **8,3%**
- **2011** **10,0%**
- **2012** **12,0%**
- **2013** **14,0%**
- **2014** **15,0%**
- **2015** **16,0%**
- **2016** **17,0%**
- **2017** **18,0%**
- **2018** **19,0%**
- **2019** **19,5%**
- **2020** **20,0%**

The quota for 2021-2030 will be established by the Ministry and will be at least the quota of 2020.



Comparison between the provision of the legislation in force and the Law 220/2008 republished for E-SRE promotion

GD 443 / 2003, GD 958 / 2005

Law 220/2008 republished

The time period for granting GC :

- are not clearly specified

- **15 years** for E-RES produced in new installations,
- **7 years** for E-RES produced in installations from import, which were used out of Romania, but not older than 10 years and according with the environmental standards
- **10 years** for E-RES produced in hydro installations until 10 MW refurbished
- **3 years** for E-RES produced in hydro installations until 10 MW non refurbished
- The Promotion System applied to the producers qualified by ANRE is in force after the energy is produced and the GC are received if commissioning and refurbishment are made by the end of 2016



Conclusions

- Romanian market for Green Certificates is still in the process of formation
- The producers which are also suppliers of electricity hinder the market fluidity because they keep the Green Certificates received for the own quota fulfillment
- 18 suppliers were penalized for a total of 752 Green Certificates missing from the quota of 2005, 21 suppliers were penalized for a number of 902 GC missing from the quota of 2006, 25 suppliers were penalized for a number of 6362 GC missing from the quota of 2007, 23 suppliers for 15116 GC missing from the quota of 2008 and 20 suppliers for 12662 GC missing from quota of 2009
- The amount of money from the penalties was redistributed to :
 - 3 producers which have activated on the market in 2005
 - 6 producers which have activated on the market in 2006
 - 19 producers which have activated on the market in 2007
 - and in 2008, the penalties were redistributed to 8 network operators for the reinforcement of the network.