

Three Years of Italian Green Certificates: a First Assessment

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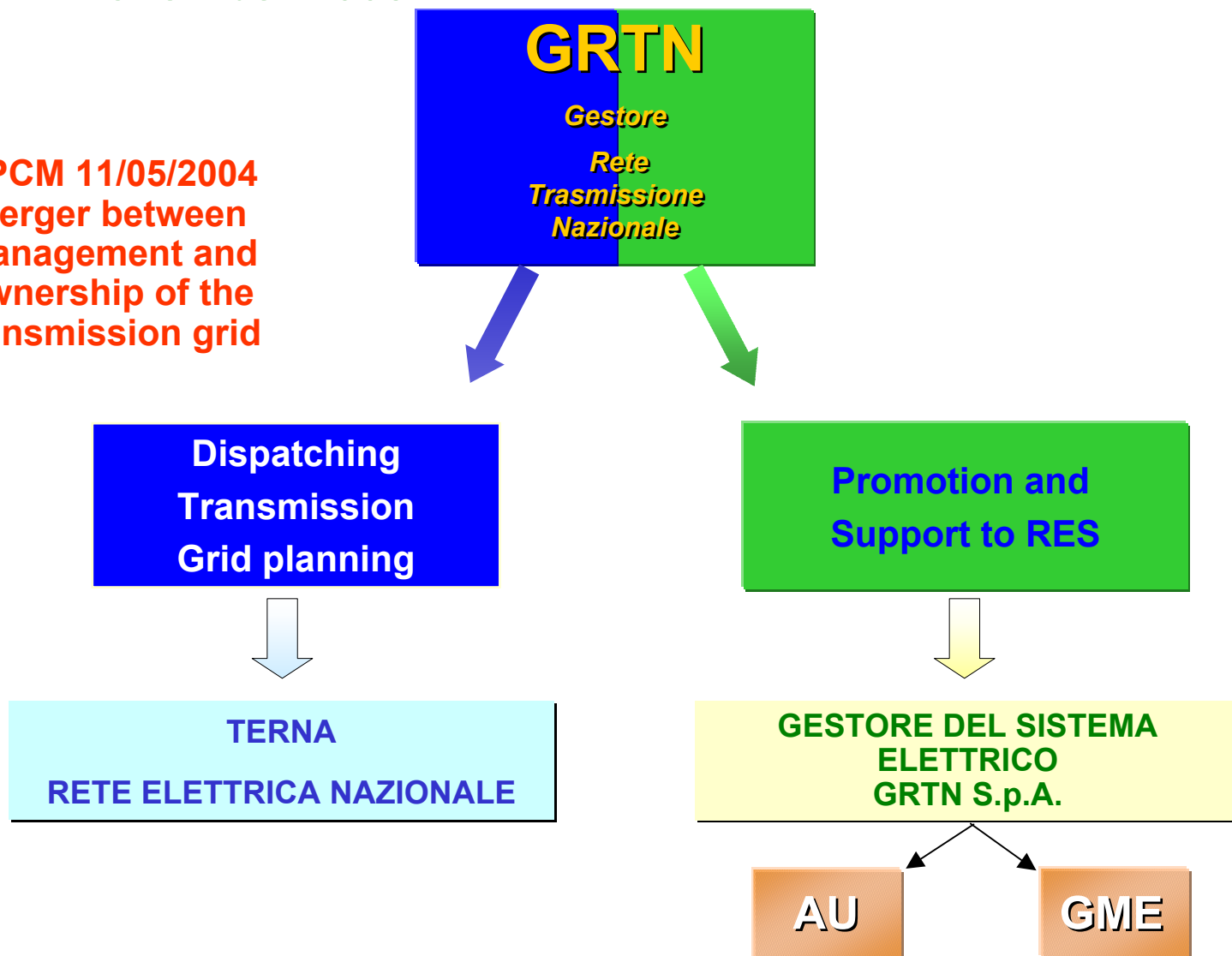
Operations Department

- **GRTN's role in the electricity market**
- **General framework for RES development**
- **Main support schemes working in Italy**
- **The Italian Green Certificates system**

GRTN's role in the electricity market

Since 1° November 2005

DPCM 11/05/2004
Merger between
management and
ownership of the
transmission grid



Main activities

- ✓ **Management of energy produced by CIP 6 plants**
- ✓ **Qualification for RES plant**
- ✓ **Qualification of CHP plants**
- ✓ **Issuing of GC, GO and RECS**
- ✓ **Management of support to PHP**
- ✓ **Membership in AIB (Association of issuing Bodies)**

Management of CIP 6 plants energy

- ✓ **Feed-in tariff** system introduced in 1992 to incentive, for 8 years, renewable and “assimilated energy” (most of it produced from efficient cogeneration power plants)
- ✓ GRTN is responsible for **taking in the electricity from those plants**; paying them at the predefined prices (updated yearly) and **selling them on market** according to the provisions of Ministry of Productive Activities
- ✓ In 2004, GRTN fed into the grid **52,4 TWh**: RES **10,1 TWh**, Assimilated **42,2 TWh**

Qualification for RES plant (IAFR)

- ✓ It is the first step to receive “**certificati verdi**” (Italian Green Certificates)
- ✓ GRTN processes the requests according a **procedure** published on the web site (www.grtn.it)
- ✓ GRTN does the **documental verification** and also on **site checks**

Guarantee of Origin (art. 5, EU dir. 2001/77)

- ✓ GRTN issues the **GO to plants using RES sources**, to favour the cross border exchange of electricity and final use of RES energy
- ✓ Italian GO cover a **yearly based production**

Recognition of cogeneration power plants

- ✓ GRTN **yearly certifies** those plants that fulfil the criteria of efficiency defined by the Energy Regulator (AEEG) with deliberation n.42/02
- ✓ Qualified CHP plants are **exempted from the GC obligation**

RECS

- ✓ **Renewable Energy Certificate System certificates** is a voluntary international title issued for renewable electricity and tradable on the market
- ✓ GRTN is the Italian issuing body

Photovoltaic support scheme

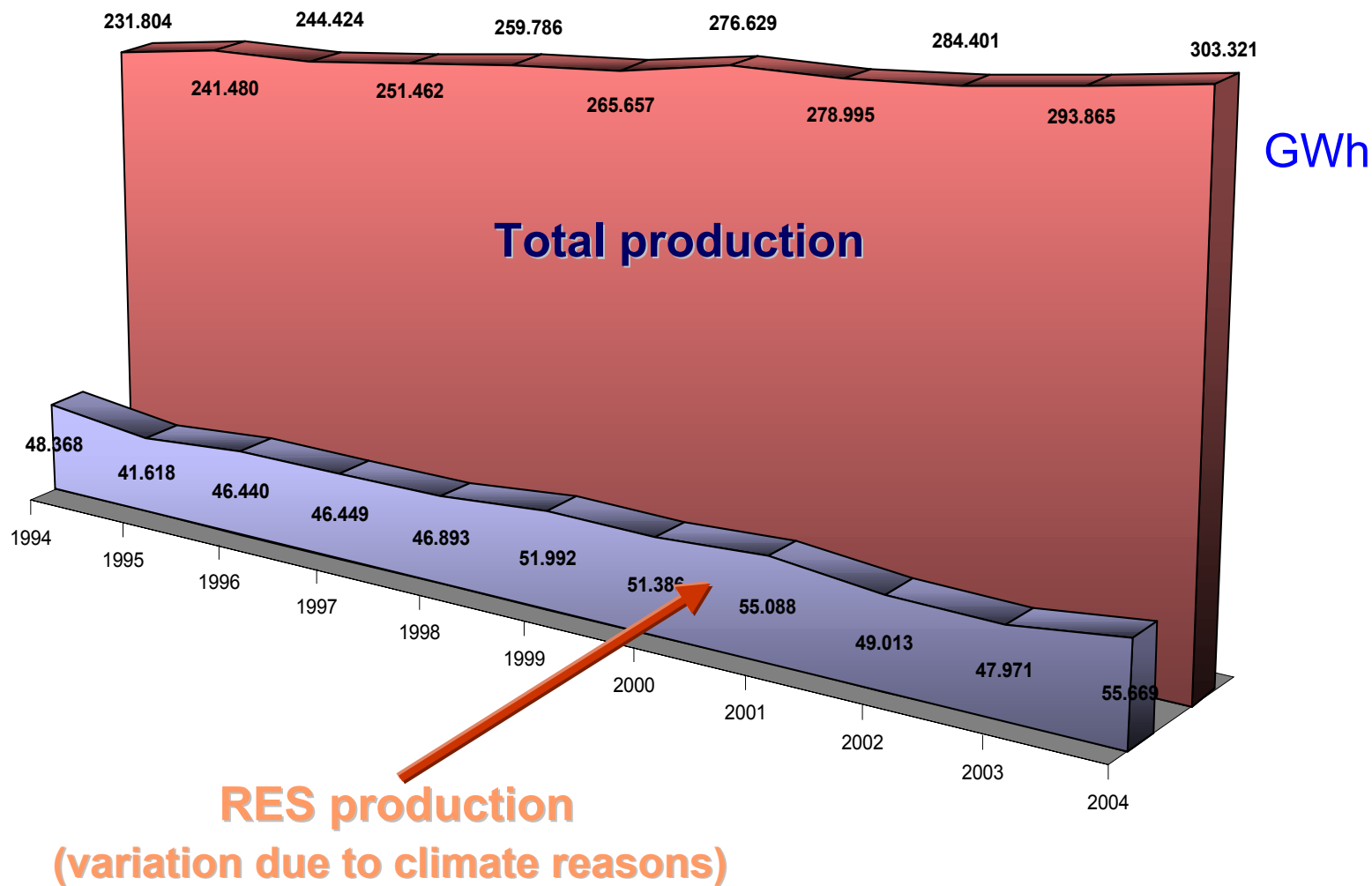
- ✓ **Feed-in tariff** system for PV plants approved past July
- ✓ GRTN **assesses the requests** of incentive and **allocates the tariffs**

International commitment

- ✓ GRTN is member of **AIB (Association of Issuing Bodies)** and has a sit on the Board of the Association
- ✓ Scope of AIB is favour the international exchange of certificates issued to power plants in accordance with European legislation (at the moment RECS, GO and disclosure)

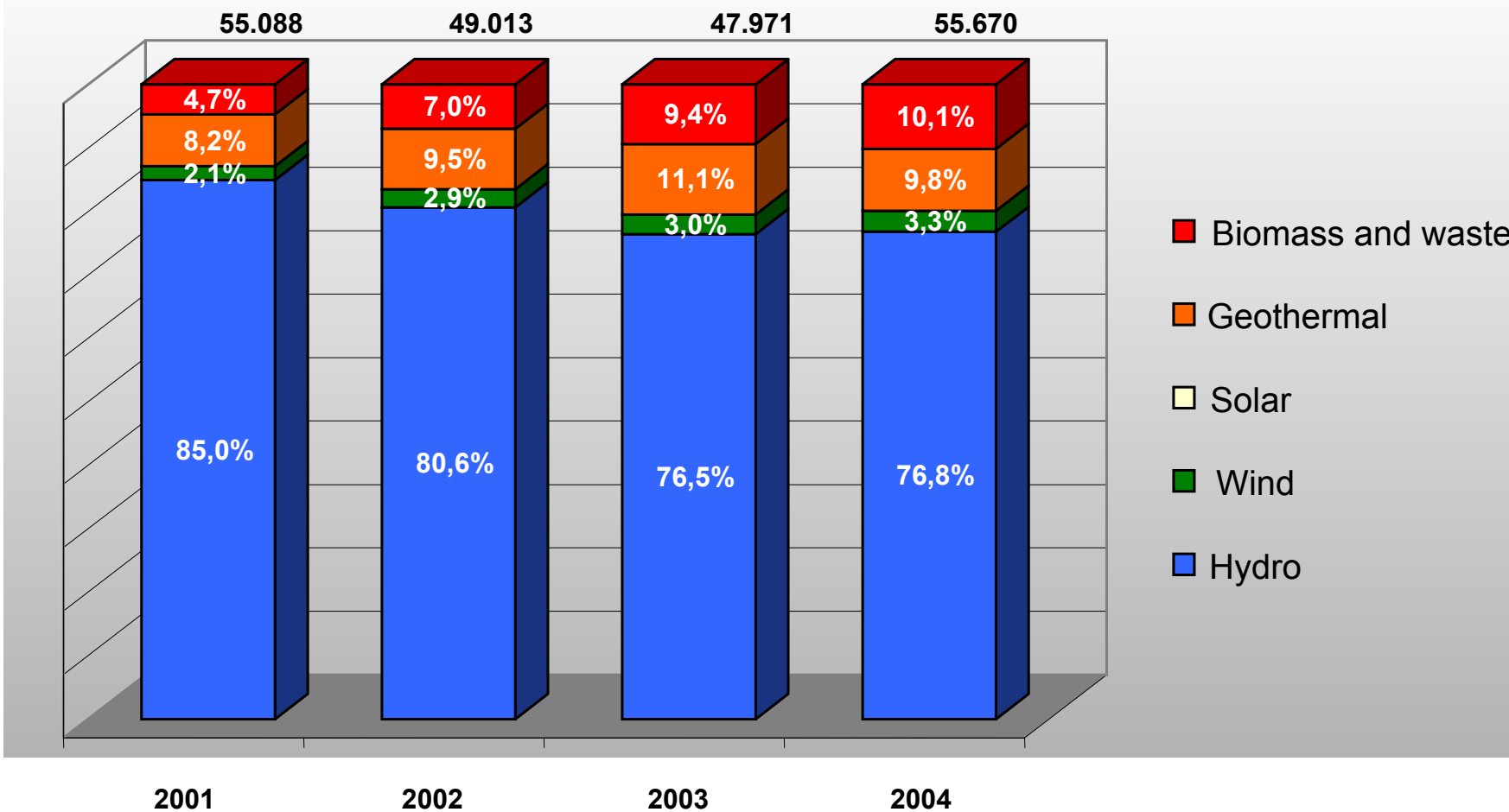
Outlook of the Italian electricity market

Historical path of the total electricity production and RES (1994 –2004)



Italian gross RES production

GWh



Feed-in tariff

- ✓ Specific price paid to the producers for several years
- ✓ Advantage: investment security

Green certificates

- ✓ Obligated RES energy production/consumption according to a fixed quota of the total production/consumption
- ✓ Possible compliance through the redemption of green certificates
- ✓ Disadvantage: high risk for investor

Tendering procedure

- ✓ RES-E is supplied on a contract basis at the prices define by a tendering procedure
- ✓ Disadvantage: risk of not being followed by a real implementation

Tax incentive

- ✓ Instrument used together with other tools

Main legislative framework

- ✓ **Legislative Decree n. 79/99**, implementing the EU directive 96/92/CE
- ✓ **Ministry of Industry decree 11.11.99**, defining the operational rules for the green certificates mechanism
- ✓ **Ministry of Productive Activities decree 18.03.02**, supplementing the decree 11.11.99
- ✓ **Ministry of Productive Activities decree 14.03.04**, implementing the rules for the green certificates **Legislative Decree 387/03**, implementing EU directive 2001/77/CE
- ✓ **Law 239/04**, restructuring the Italian energy sector
- ✓ **Ministry of Productive Activities decree 24.10.05**, repelling decree 11.11.99 and decree 18.03.02 updating the guideline for issuing green certificates
- ✓ **Ministry of Productive Activities decree 24.10.05**, managing the issuing of certificates to new categories of power stations

How the GC mechanism works

- ✓ Producers and importers must feed in the electric grid an amount of renewable source energy, equal to the quota of non renewable energy produced or imported every year before
- ✓ Renewable source energy (RES) production is certified by the Green Certificate (GC). Every GC has a size of 50 MWh, and is valid for the relevant reference year and for the two year after
- ✓ Producers and importers can fulfil the obligation by means of green certificates issued in favour of own renewable energy production or of other operators
- ✓ RES generation (qualified by GRTN) receives green certificates for the first 8 working years, if from:

New plants

Built, rebuilt, powered and restarted from 1 April 1999

Existing plants

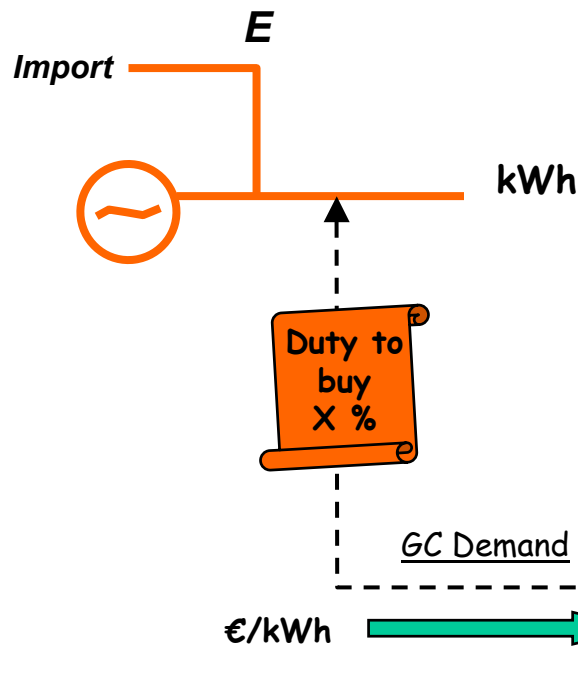
Only “increase” of energy from bio-mass and wastes

GRTN

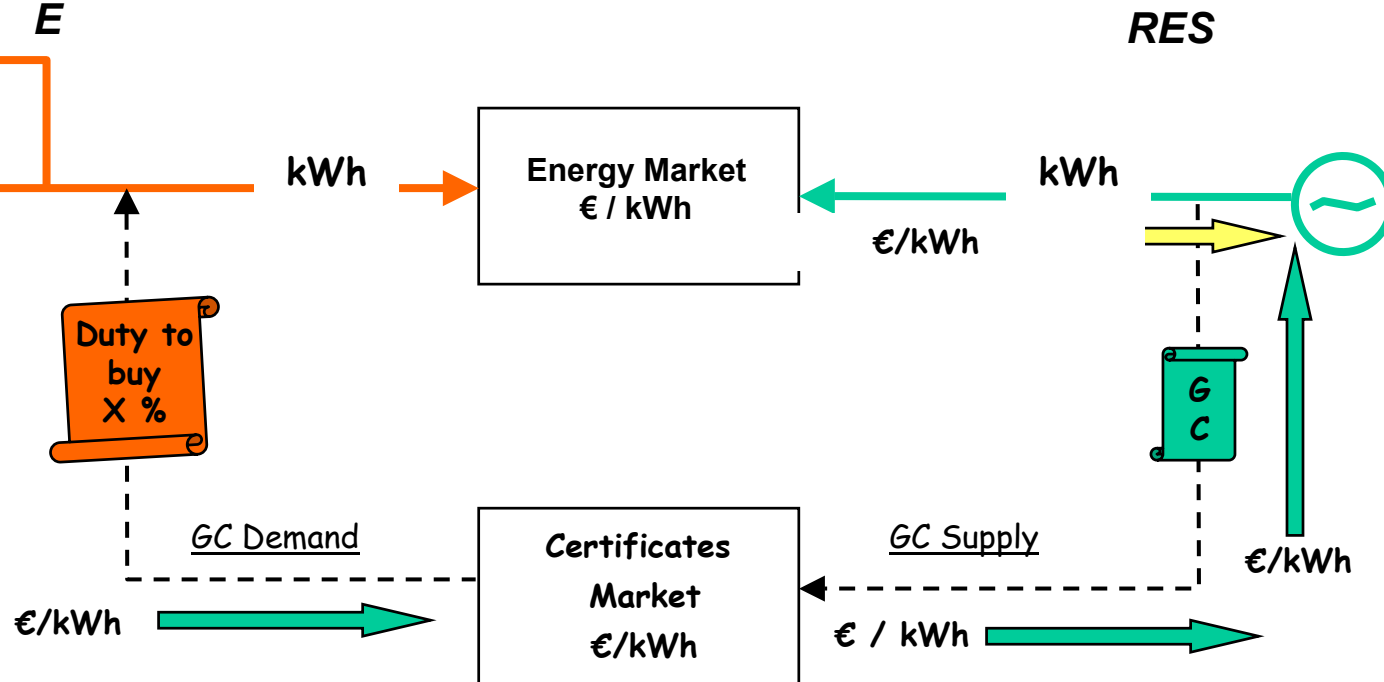
- ✓ Qualifies RES plants
- ✓ Issues GCs
- ✓ Manages transactions purchasing/selling GCs (bilateral contracts)
- ✓ Organizes the platform for transactions of GCs (GME)
- ✓ Holds a transactions register
- ✓ Checks the fulfilment of the obligation
- ✓ Calculates reference price of GCs
- ✓ Issues a yearly statistic bulletin

Duty and Green Certificates

Conventional Thermal Energy



Renewable Energy Source



The obligation, for producers and importers of energy, to feed in the electric system a “quota” of energy from RES:

- is equal to 2,7% (for 2005)
- has to be applied to the energy produced/imported exceeding the threshold of 100 GWh

Green Certificates are:

- ➔ Issued in favour of RES generators after RES qualification
- ➔ Issued in favour of GRTN for the CIP6 plants put into operation after the 1st of April 1999

Green Certificates can be **sold or purchased** in two different ways:

- ✓ through **bilateral contracts**
- ✓ through **GME trading platform**

Bilateral Contracts

- GCs can be exchanged through bilateral contracts, between the owners of GCs and obliged producers and importers
- Transactions are carried out by GRTN, after receiving two compatible selling/buying requests from the seller and the buyer
- Selling/buying requests are entered in a protected area of GRTN web site

GME trading platform

- GME has arranged the GCs trading platform, according to L. Decree 11/11/1999
- National and foreigner producers, traders are admitted as purchasers or sellers; GRTN just as a seller
- Market participants can accede to GCs trading platform through GME web-site, where to enter their own purchase and sale proposal
- Proposals give rise to lists set according to price priority (decreasing for purchase proposals and increasing for sale proposals)
- Transactions occur through non-stop

Reference price

GRTN is obliged to sell its Green Certificates at a reference price calculated as the difference between:

- Average cost of CIP6 energy purchased by GRTN, produced by renewable sources plants with incentive, and
- Average revenue of CIP6 energy sold by GRTN

Price for 2005



108,92 €/MWh
(VAT excluded)

Reference price (1)

Year	Price in €/MWh	Var. previous year
2002	84,18	—
2003	82,40	-2,1%
2004	97,39	18,2%
2005	108,92	11,8%

The increase of the last two year is due in part to the inflation rate and the growth of the fossil fuel cost, in part to the mix of RES CIP 6 plants (even more biomass)

(1) Prices not including VAT

Results 2002-2004

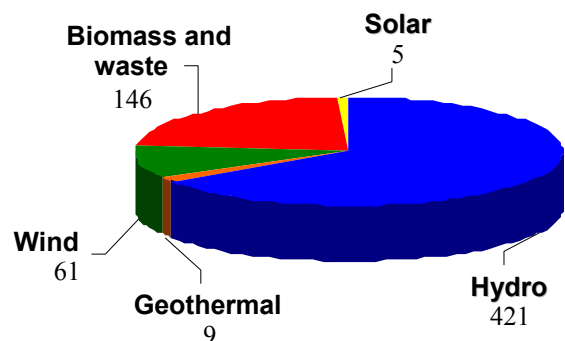
Obligation and covering

Conventional energy produced or imported			Renewable energy to be feed into the grid			
Year	Electricity (1) TWh	Quota Obligation	Year	Obligation TWh	Private GC TWh	GRTN CV TWh
2001	161,62	2% →	2002	3,23	0,89	2,34
2002	173,53	2% →	2003	3,47	1,49	1,98
2003	194,71	2% →	2004	3,89	2,89	1,00
Estimate for 2005						
2004	213,4	2,35% →	2005	5,0	4,3	0,7

- 1) Energy value net of cogeneration, auxiliary services, production/import of RES, allowance (100 GWh per market operator) and after the application of the foreseen rounding off

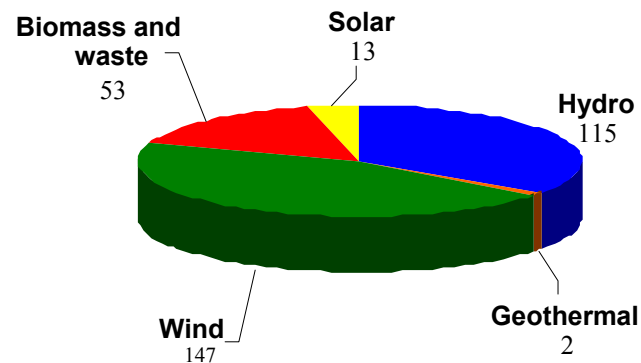
Outcomes of the IAFR procedure (30.06.05)

In operation



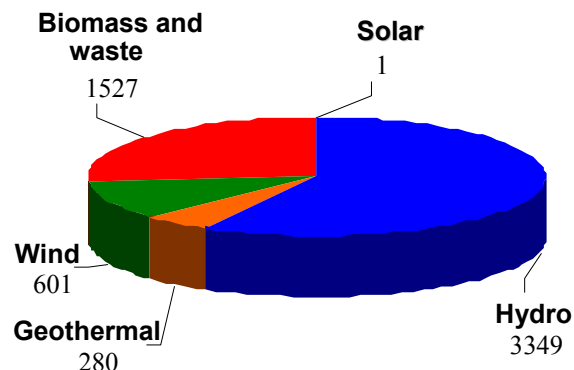
Total 642

In Project



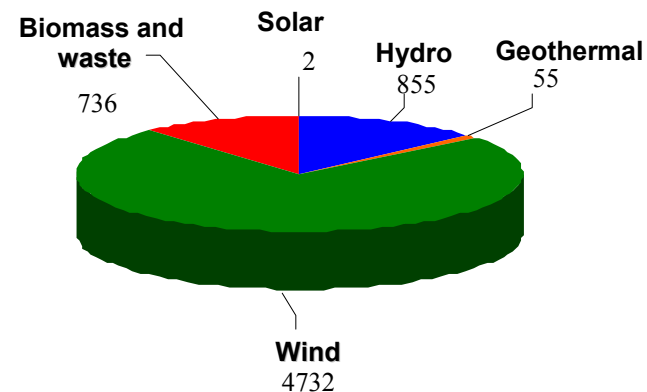
Total 330

number



Totale 5 758 MW

capacity



Total 6.381 MW

A comparason, what the result?

Feed-in CIP6/92

- **Guaranteed assignment to GRTN at defined prices on the basis of special contract**
- **Different support in relationship to the technology and sources**
- **Component of prices yearly updated**
- **Cost supported by final customer through a special tariff component (A3)**
- **RES and “assimilated” energies are financed**

Green Certificates

- **Support is given indirectly through the value of the green certificate. The producer can sell them on the market, separately from the energy**
- **Same value for the green certificates independently from technology and source**
- **Price of the green certificates bound by a “ceiling”**
- **Cost supported directly by producer and importer and indirectly shifted on the price of energy**
- **Only renewable are supported....**

Thank you for the attention!!

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