

Workshop

BENCHMARKING AND GUIDELINES FOR STREAMLINED AUTHORISATION PROCESS FOR BIOENERGY INSTALLATIONS

Biomass authorization process in Italy compared to other RES: the view point of power companies

Franco D'AMORE

Director of I-com Energy Area

Stefano DA EMPOLI

President of I-com

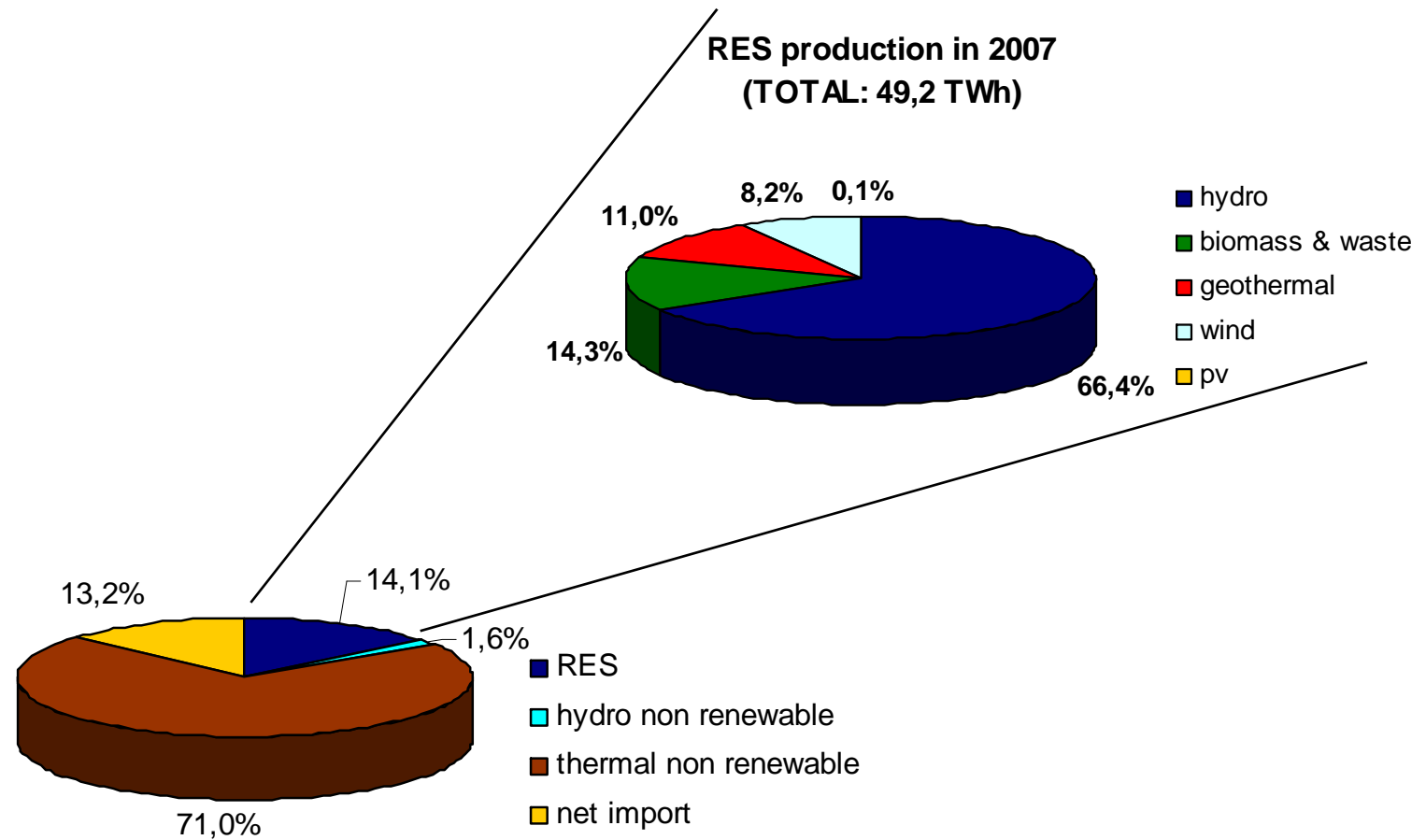
10 June 2008

Centre Albert La Borschette, Bruxelles

Agenda

- The role of renewable energy in the Italian electricity generation.
- Possible scenario in 2020
- The authorisation process of RE power plants
- Open issues

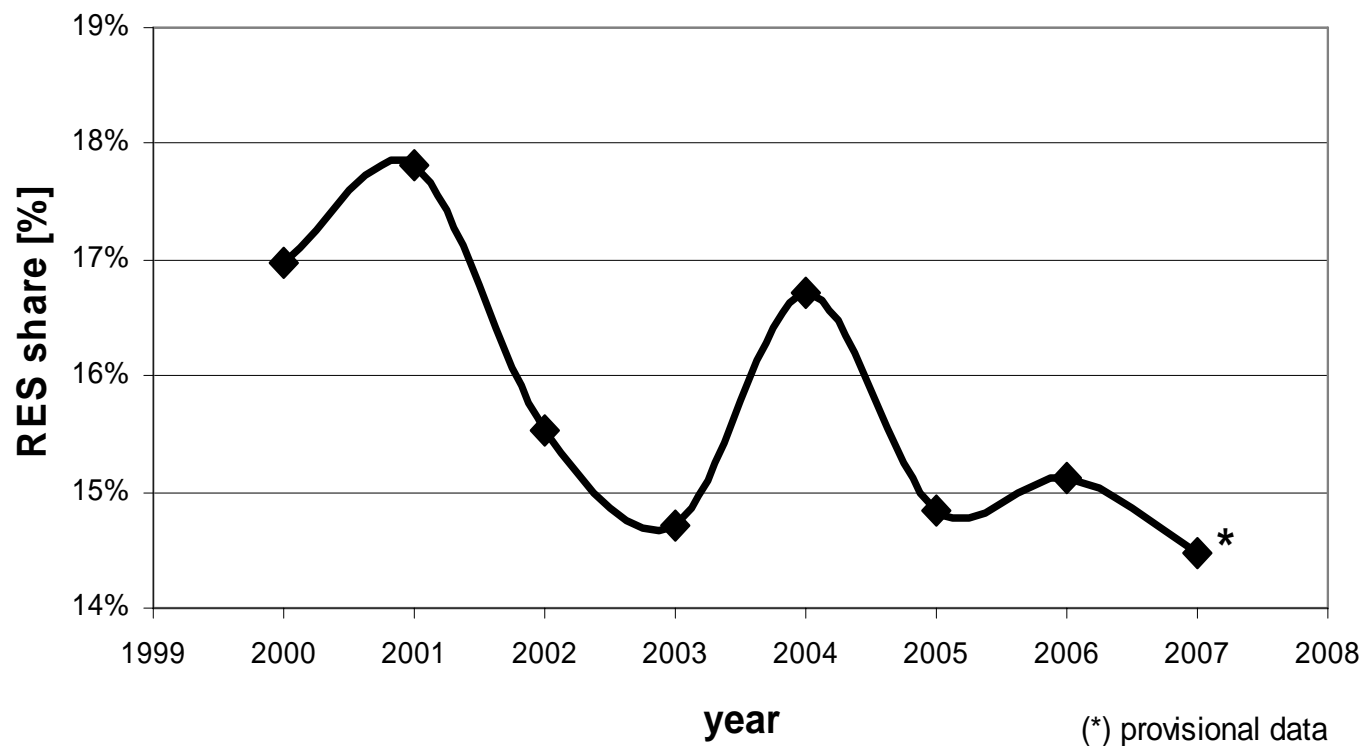
Electricity generation in Italy: the energy mix



total 2007 electricity demand: 347,5 TWh

Source: TERN- preconsumtivo 2007- (2008)

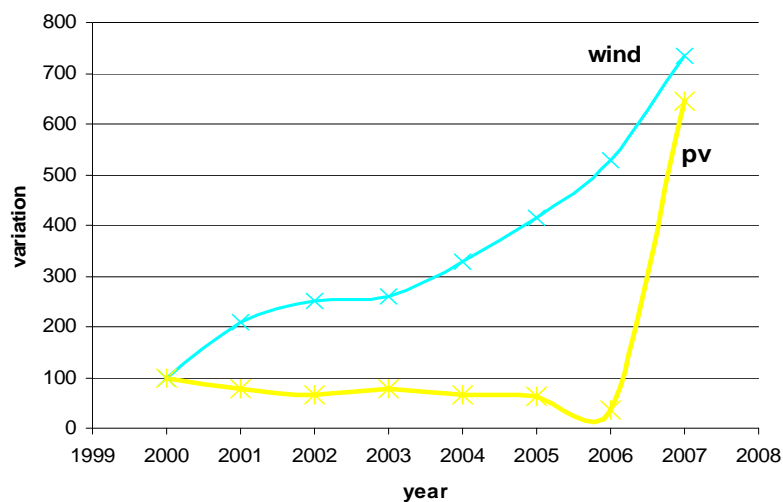
RES contribution to electricity final demand



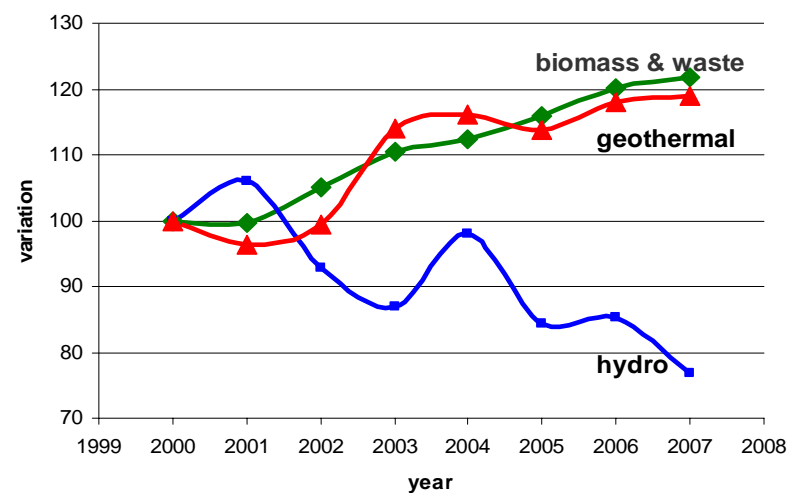
Source: TERNA

The dynamics of different RES

production variation
(year 2000 = 100)



production variation
(year 2000 = 100)



Fonte: TERNA

RES in 2020

IT => 17% of final energy consumption

COM (2008) 19 del 23/01/08

estimated RES max. potential

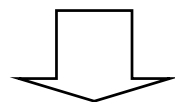
Primary energy [Mtep]	2005	2020	Increment
Electricity	4.29	8.96	109%
Heating & Cooling	2.12	11.40	438%
Biofuels	0.3	0.61	103%
Total (Mtep)	6.71	20.97	213%

RES in 2020: electricity production potential

production [TWh]	2005	2020	Δ [%]
hydro	36,00	43,15	20%
wind	2,35	22,60	862%
solar	0,04	13,20	32900%
geothermal	5,32	9,73	83%
biomass	6,16	14,50	135%
Sea wave	0,00	1,00	-
<i>Totale</i>	<i>49,87</i>	<i>104,18</i>	<i>109%</i>

RES in 2020: plant installation

	capacity 2020 [GW]	capacity 2006 [GW]	Δ 2020-2006 [GW]	<average capacity 2006> [MW]	Plants to be installed in 2020
hydro	20,2	17,4	2,8	3,3 ^(a)	848
wind	12,0	1,9	10,1	11,3	894
pv	9,5	0	9,5	5,3 $\times 10^{-3}$ ^(b)	1.792 $\times 10^3$
Geother.	1,3	0,7	0,6	22,9	26
Biom.	2,4	1,6	1,2	4,1	293



~ 60 wind (~ 11 MW power)

~ 120 $\times 10^3$ pv (~ 5 kW power)

~ 20 biomass (~ 4 MW power)

Plants/year for 15 years

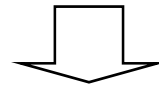
RES authorisation process (1/3)

Regions are the key authorities for the authorisation process of renewable energy power plants

For plants < 1 MW \Rightarrow Comune (D.I.A.)

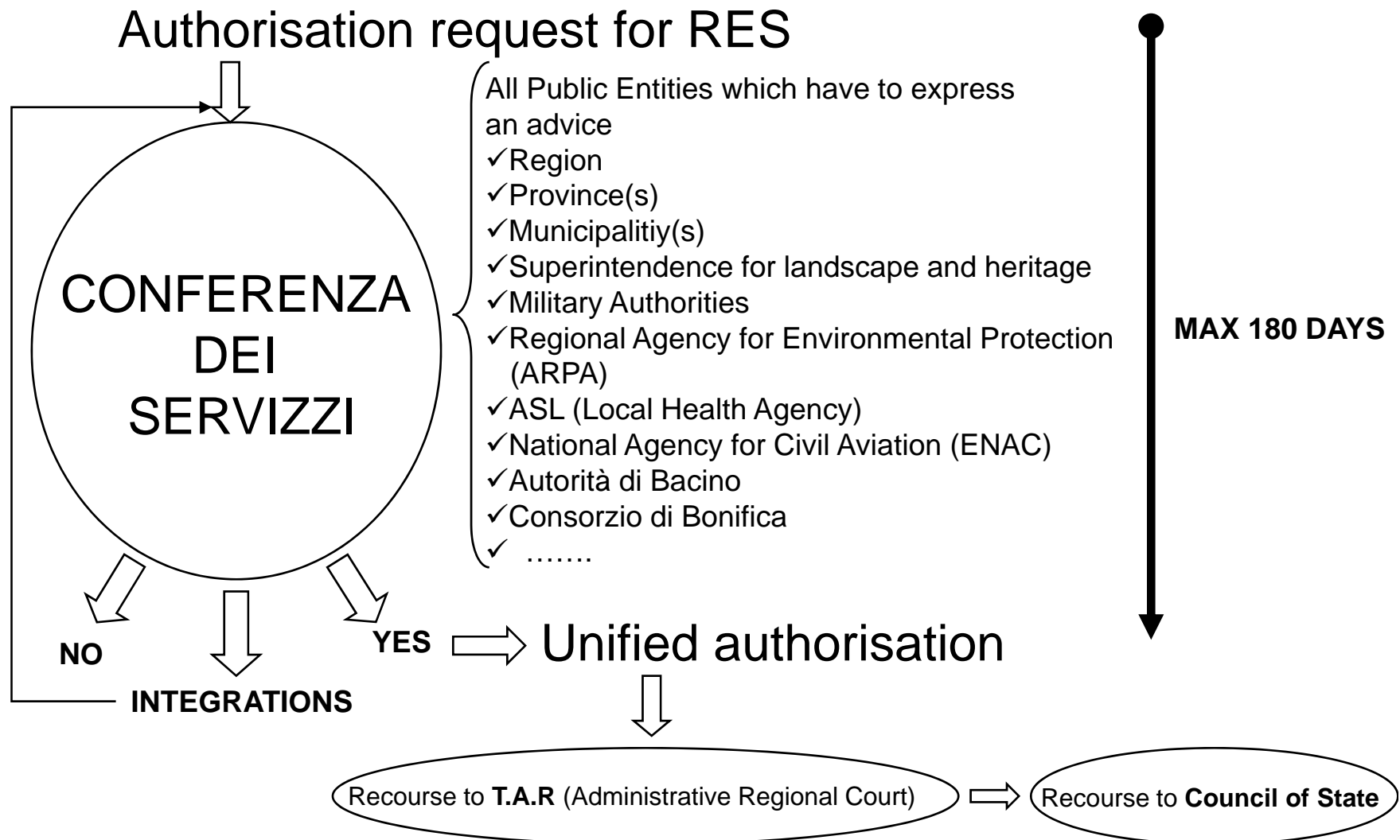
For plants < 20 MW \Rightarrow Regione/Provincia (A.A.I)

For plants > 20 MW \Rightarrow Regione (V.I.A.)



AUTORIZZAZIONE UNICA (unified authorization)

RES authorisation process (2/3)



RES authorisation process (3/3)

1) The RES plants have to be coherent with territorial planning instruments



PTR (Piano territoriale regionale)	Regione	PRG (Piano regolatore generale), fino all'entrata in vigore del PSC e del POC	Comune
PTPR (Piano territoriale paesistico regionale, <i>ove non sostituito dal PTCP</i>)	Regione	PSC (Piano strutturale comunale)	Comune
PRTURA (Piano regionale di tutela, uso e risanamento delle acque)	Regione	POC (Piano operativo comunale)	Comune
PTCP (Piano territoriale di coordinamento provinciale)	Provincia	Piano di zonizzazione acustica	Comune
Piano di risanamento sull'inquinamento atmosferico (per zone specifiche individuate dalla Provincia)	Provincia Comune	PTP (Piano territoriale del parco)	Ente Parco
PIAE (Piano infraregionale delle attività estrattive)	Provincia (sentiti i Comuni)	Piano di bacino	Autorità di bacino
		PAE (Piano comunale delle attività estrattive)	Comune (sentita la Commissione tecnica infraregionale)
		Piano energetico regionale	Regione
		

2) Legal definition of biomass and waste is ambiguous

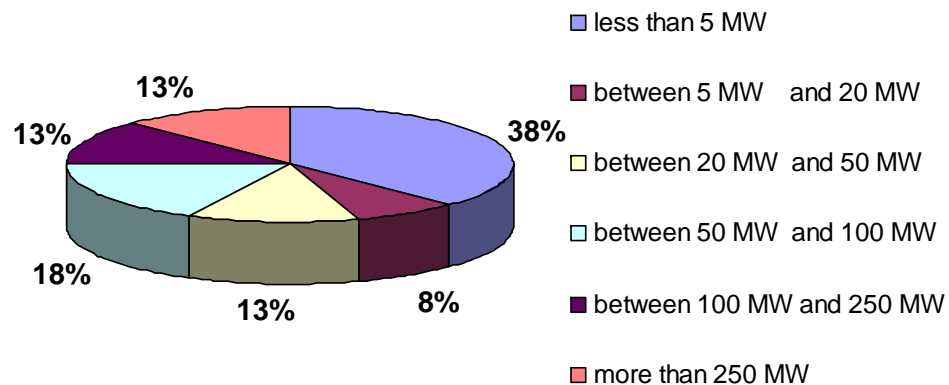
The authorisation process from the view point of power companies

Participant to the survey

- ✓ 100 companies involved
- ✓ 48 companies responded
- ✓ 40 questionnaires are usable

The type of companies

Total installed capacity



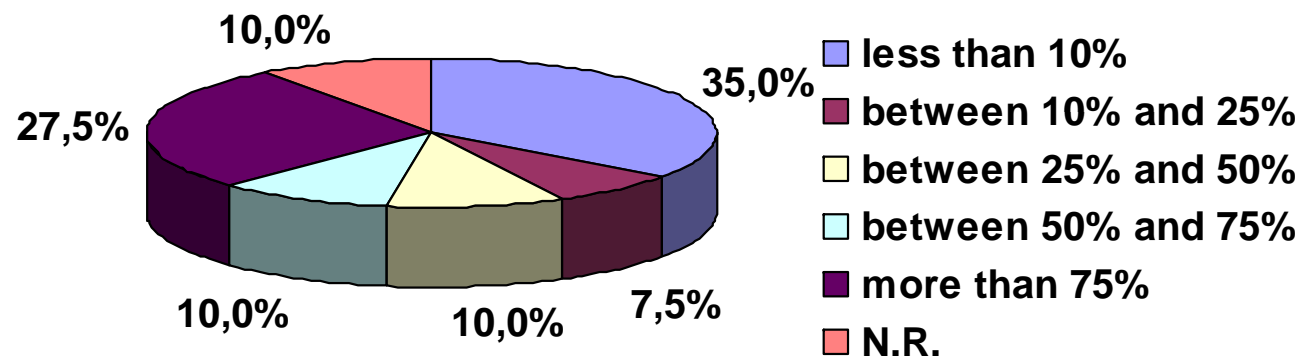
Average energy mix

biomass	11%
geothermal	0%
wind	32%
pv	16%
thermoelectric	22%
other	16%

Required and obtained authorisations

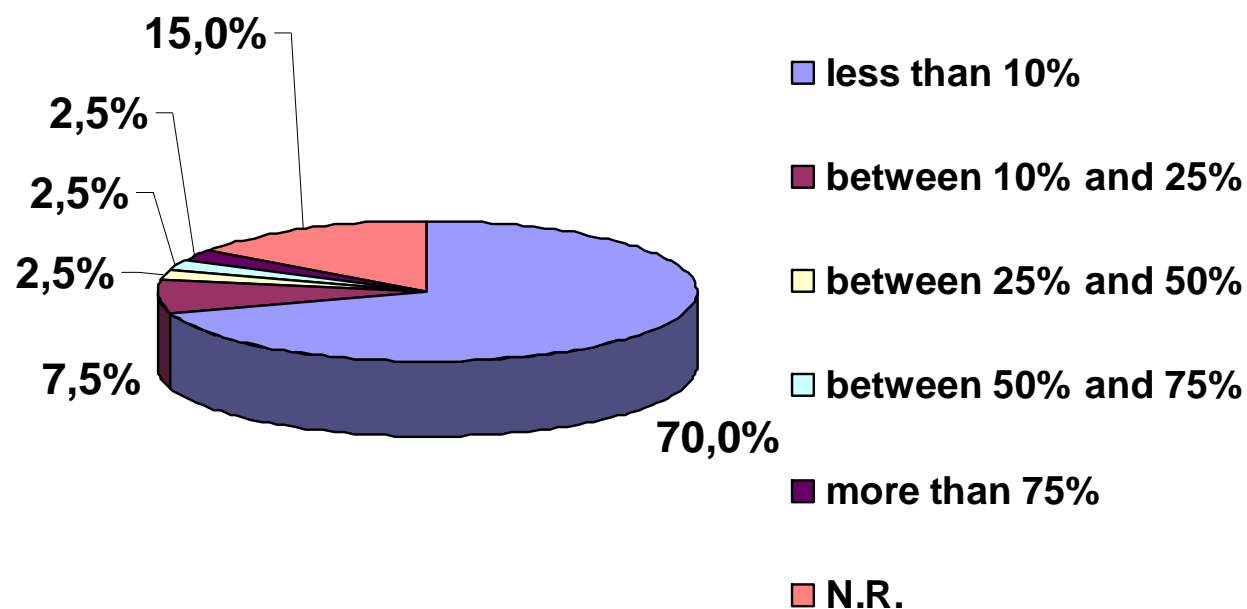
Average number of required authorizations per company: ~19 in the last 5 years

% of authorisation obtained



Authorisation withdrawn

% of issued authorisation then withdrawn



Complexity of the process

Average ranking (1=very simple; 6=very complex)

TECHNOLOGY	RANK	COMPLEXITY
wind	5,3	very high
biomass	4,8	high
geothermal	4,5	high
pv	3,4	medium

The length of process

Average duration
of authorisation process

TECHNOLOGY	YEARS
wind	2,5
biomass	2,0
geothermal	1,4
pv	0,5

Time lag between authorisation request
and operation of the plant

TECHNOLOGY	YEARS
wind	3,9
biomass	3,4
geothermal	1,9
pv	1,1

Regional ranking

Best Regions

REGION	Normalized score
PUGLIA	1,00
LOMBARDIA	0,92
CAMPANIA	0,83

Worst Regions

REGION	Normalized score
SARDEGNA	1,00
BASILICATA	0,80
SICILIA	0,80

Length of administrative litigation

Very preliminary results (40 cases) show an
AVERAGE length FOR ADMINISTRATIVE
LITIGATION of approximately **1 YEAR**.

Open issues

- 1) Authorisation process is complex and slow;
- 2) There is a lack of “regional burden sharing” for national energy and environmental target;
- 3) Local development planning is too complex;
- 4) Biomass authorisation is complicated by the difficult legal definition of what “biomasses” are;
- 5) A more efficient authorisation process is a key pre-condition for a successful implementation of 2020 RES target