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QUESTIONNAIRE GOOD PRACTICE SUSTAINABLE BUILDINGS

REGIONAL STRATEGIES AND PROGRAMS: REGIONAL ENERGY PLAN

Supported by INTELLIGENT ENERGY EUROPE

Region / local area considered:	Good practice submitted by
REGIONE FRIULI VENEZIA GIULIA	ARES AGENZIA REGIONALE PER L'EDILIZIA SOSTENIBILE

1) Short description of the action / strategy / project

Regional Energy Plan

The Regional Energy Plan is the primary planning tool to address regional energy policies. It plays a leading role in the socio-economic development of the region, and for this reason it is essential to its junction with the regional economic planning. It identifies the strengths and fixed priority actions in the field of energy that provide valuable guidance for an integrated resource planning in a vision of intersectoral action: energy is an opportunity to take advantage of the growth opportunities of the territory.

2) Background / targets

The main objectives of the Plan are:
a) contribute, even in the medium to long term, to ensure all the necessary energy to households and companies in the region to maintain and improve the rate of economic growth of our region.
b) increase the efficiency of regional energy system by reducing the absorption per unit of service by increasing spread of technological innovation and management, and promoting the reduction of energy consumption and efficient use of energy in the transport, manufacturing, residential and commercial;
c) reduce energy costs for both business users and for those at home.
d) minimize the environmental impact of the production, transmission, distribution and consumption of energy and environmental sustainability and harmonization of all energy infrastructure with the landscape and the territory.
e) promote the development of innovation and experimentation, technological and management for the production, transport, distribution and consumption of energy, supporting the activities of companies and research centers;
f) promote the production of energy from renewable sources also contribute to the national targets under the Kyoto Protocol.

3) Detailed project / program description

Tabella 45: Sintesi scenari domanda-offerta attuale, spontaneo e desiderato.

		Scenario 2003	Scenario spontaneo	Scenario desiderato
		2003	2010	2010
OFFERTA		*kTep*	*kTep*	*kTep*
Biomassa legnosa tot[27]		22,5	24,4	30,9
Biomassa da residui agricoli				30,0
Biomassa da colture lignocellulosiche				20,0
Biodiesel da colture dedicate				34,0
Olio vegetale combustibile				4,8
Bioetanolo da colture dedicate				1,0
Biogas (reflui zootecnici + agroalimentari)				4,3
Settore fotovoltaico		0,1	0,5	3,3
Settore solare termico		0,4	1,2	8,4
Energia idroelettrica[28]		103,2	140,7	142,3
Energia eolica				0,08
Geotermia		1,4	2,1	17,6
Energia dai rifiuti		6,6	6	6
Produzione da fonti rinnovabili	a	134,2	174,9	302,7
Produzione da fonti rinnovabili (escluso calore primario)	a1	132,4	171,6	276,7
Produzione (di energia elettrica) da fonti derivate	b	98,0	0,0	0,0
Importazioni e produzione da centrali termoelettriche	c	4444,0	5679,5	5561,8
Esportazione	d	253,4	636,5	738,5
perdite per la trasformazione di elettricità e perdite di sistema	e	1047,0	1447,2	1498,2
OFFERTA NETTA	a1+b+c-d-e	**3374,0**	**3767,4**	**3601,7**
DOMANDA	t+u+v+w+x+y-z	**3374,0**	**3767,4**	**3601,7**
Residenziale	t	726	823	781
Terziario	u	289	374	345
Industria	v	1450	1517	1450
Agricoltura e pesca	w	37	45	44
Trasporti	x	852	1010	982
Altro	y	20		
uso razionale dell'energia	z			166

The table shows the energy balance and regional spontaneous and desired scenarios are highlighted projected to 2010. As can be seen from the table, the total value of net supply decreases in the desired scenario than spontaneous (from 3767 to 3434 kTep) because the value is determined by supply demand in 2010, which will undergo a desired decrease in function the achievement of energy savings.

Tabella M: Fonti rinnovabili e risparmio energetico: simulazione degli impatti economici e ambientali che sarebbero indotti dall'attuazione della differenza fra scenario desiderato e spontaneo al 2010 con determinati finanziamenti pubblici

	Unità di misura	Risparmio energetico (165,7-28=)	Fonti rinnovabili (127,9-15,5=)	TOTALI
Differenza scenario desiderato e spontaneo del PER al 2010	ktep	**137,6**	**112,5**	**250,1**
valore aggiunto addizionale per la regione Friuli Venezia Giulia al 2010	Milioni €	316	61	**377**
minori costi privati per energia	Milioni €/ anno	70,5	5,7	**76,2**
occupazione generata in regione, dipendente e indipendente:				
occupazione primo anno	n	6318	1195	**7513**
occupazione stabile	n	187	245	**432**
benefici ambientali: minori emissioni CO_2, locali e gas:				
minori emissioni CO_2	Tonn/anno	373.041	289.378	**659.419**
minori emissioni locali	Tonn/anno	2095	1631	**3726**
minori emissioni inquinanti: SO_2	Tonn/anno	798	178	**976**
Nox	Tonn/anno	783	332	**1115**
PST	Tonn/anno	100	149	**249**
CO	Tonn/anno	331	828	**1159**
COV	Tonn/anno	83	144	**227**
Indici di impatto unitario al 2010:				
valore aggiunto	(Milioni €/ktep)	2,3	0,5	-
occupazione:	(N/ktep)	47,3	12,8	-
di cui stabile	(N/ktep)	1,4	2,2	-
CO_2 evitata	(kg/tep)	2,7	2,6	-
emissioni locali evitate	(kg/tep)	15,2	14,5	-

The estimation of the effects related to economic and environmental impacts that would be obtained if carried out remedial energy values, related to energy conservation and renewable energy, given by the difference between the energy values of the desired scenario and the scenario naturally, thanks to government incentives hypothesized (128 million euro), is shown in Table M.

Structure/organization that is implementing the strategy:
Region Friuli Venezia Giulia

What is currently the geographical level of implementation of the strategy?

- Regional level

Since when has the strategy/building project/instrument been implemented? Until when will it be running?
The Plan was approved in 2003 and had to be updated in 2010.

4) Funding / financing / costs

7.1 COSTI E INCENTIVAZIONI PER REALIZZARE LO SCENARIO DESIDERATO

Tabella 47: Investimenti necessari nel libero mercato per attuare la differenza fra scenario desiderato e spontaneo.

tipologie di intervento	differenza tra scenario desiderato e spontaneo (1)	costi specifici medi (2)	investimenti necessari per attuare la differenza (3)
	(kTep)	(Milioni € /kTep)	(Milioni €)
FONTI RINNOVABILI			
Biomassa legnosa	6,5	2,4	15,6
Biomassa da residui agricoli	30,0	1,5	45,0
Biomassa da colture lignocellulosiche	20,0	0,9	18,0
Biodiesel da colture dedicate	34,0	0,46	15,6
Olio vegetale combustibile	4,8	0,9	4,3
Bioetanolo da colture dedicate	1,0	71	71,0
Biogas (reflui zoot. + agroalim.)	4,3	16	68,5
Settore fotovoltaico	2,7	14,5	39,7
Settore solare termico	7,2	15	107,6
Energia idroelettrica	1,6	2	3,1
Energia eolica	0,1	15	1,2
Geotermia	15,5	7,7	119,4
Energia dai rifiuti	0,0	8,9	0,0
TOTALE	**127,9**		**508,9**
RISPARMIO ENERGETICO			
Residenziale	41,95	0,97	40,8
Terziario e p.a.	28,55	0,60	17,2
Industria	66,5	0,14	9,0
Agricoltura	0,7	0,45	0,3
Trasporti	28,0	10,0	**280**
TOTALE	**165,7**		**347,4**
INNOVAZIONE E RICERCA			
Totali complessivi	**293,6**		**856,3**

To achieve the desired values of the scenario, or in other words to make up the difference between the desired scenario and scenario spontaneous, the market should then implement interventions that engage € 856 million.
Excluding herein investments in transport and geothermal energy, and then assuming that private investment for the desired scenario for saving and renewable are up to 457 million euro, are assumed to be necessary in the first case, to act as a driving force that initiates and leads to private investment of 457 million euro, public investment incentive (derived from regional, state, community) a total of at least 28%, and thus amounted to a total of € 128 million on renewables and energy efficiency.

5) Main results

Has not yet been made an assessment of the impact of this Energy Plan and this is one of the weak points of the strategy.

6) Analysis – lessons learnt and success factors

The weak point of this energy plan is that its duration was fixed until 2010 and at the end of had to be made an analysis of the achievements.
This has not been done and this represents a problem because the region is not currently equipped with an energy plan.

7) Time frame

2003-2010

8) Contact project owner

Organisation: Regione Friuli Venezia Giulia Servizio energia
Name contact person: Pietro Giust
Address: TRIESTE - Via Giulia 75/1
Phone: 040 3774445
Email: s.energia@regione.fvg.it
Web site: