



TREN/06/FP7EN/239285/"SOLUTION"

SOLUTION

Sustainable Oriented and Long-lasting Unique Team for energy self sufficient cOmmuNities

Deliverable No. 2Ha.5.2, WP No. 2Ha.5

ANALYSIS REPORT

RES integration promotion programme

Due date of deliverable: 31-01-11

Actual submission date: 28-02-11

Start date of project: 1 November 2009

Duration: 60 Months

Organisation name of lead contractor for this deliverable: FHJK

Revision [v0]



CONCERTO is co-funded by the European Commission

Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)		
Dissemination Level		
PU	Public	✓
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

TABLE OF CONTENTS:

1	SUMMARY.....	3
2	OBJECTIVE OF THE WORK PACKAGE	4
3	APPROACH TO ACHIEVE THE DELIVERABLE.....	4
3.1	Used Methodology	4
3.2	Results	5
3.2.1	Overview about remaining funds	5
3.2.1.1	Feed-in tariff for Green Electricity	5
3.2.1.2	Thermal renovation	6
3.2.1.3	Biomass cogeneration	7
3.2.1.4	Thermal Solar systems.....	7
3.2.2	<i>Results of accompanying interviews.....</i>	<i>8</i>
4	CONCLUSION.....	9

1 Summary

This report presents the proposal of the SOLUTION partners for the future design of promotion measures in order to improve the framework for potential private investors willing to finance innovative large-scaled renewable energy systems and sustainable energy measures in eco-buildings. For meeting these requirements, WP 2Ha.5 performs the following relevant tasks within this report:

- + In addition to the elaborated deliverables (D2Ha.4.1 and D2Ha.5.1) recently launched respectively updated funding schemes are described in chapter 3.1 mainly considering for biomass CHP, solar-thermal systems and for commercial and domestic eco-buildings.
- + Particular recommendations of the conducted analyses are summarised in chapter 3.2 and are disseminated to dedicated community working group sessions and on the next Community Steering Group meetings. Additionally it is foreseen to present the results also to the Energy Commissioner¹ of Styria as particular mediating entity between the regional government and local administrations.

Consultations with regard to administrative elements are performed on a case-by case basis as requirements of the promotion agencies and regional administrations as well as of the local distribution operators are quite different and can't be usually influenced by the SOLUTION team. As they are not part of this deliverable, related information will be provided within the next annual progress report.

Ideally, the foreseen discussions and presentations of the recommendations will underpin efforts of the Austrian SOLUTION team to establish its visible and viable role as facilitator and knowledge-hub for research, innovation and integration of large-scaled renewable energy systems and extended sustainable energy measures within the project zone and abroad. The team intends to act as a sort of connector between the concrete SOLUTION work plan and reliable co-operations with the social actors and regional market players.

¹ Energy commissioner: DI Wolfgang Jilek (<http://www.steiermark-energie.at>)

2 Objective of the Work Package

This document includes the "Analysis report" (Deliverable 2Ha.5.2) of WP 2Ha.5 "RES integration promotion programme". WP 2Ha.5 intends to review promotion measures in order for improving the framework for potential private investors and for promoting innovative integration aspects of renewables. Deliverable 2Ha.5.2 is postponed to the end of February 2011, viz:

Table 1: Key facts about deliverable 2Ha.5.2

Del. No	Deliverable title	Partners	Delivery date	Status
2Ha.5.2	Analysis report	FHJK, iC, KW, PLAN, VTT, all communities	16	fv

The underlying background of new promotion schemes in Styria is the climate protection plan² elaborated in 2010. All in all, 26 action fields towards 2020 and 2030 are recommended covering the following emerging areas: Climate protection of resources, sustainable Energy Supply, Eco-buildings, smart Mobility, energy efficient Agricultural, forestry, waste industry and manufacturing. Compared to 2005 and with regard to the SET-Plan targets of 2020 the climate protection plan aims at:

- Reducing about 16 % of greenhouse gas emissions.
- Increasing the share of renewable energy of about 7,5 PJ.
- Strengthening the competitiveness of Styrian eco-innovation entrepreneurs.

Several initiatives and demonstration actions have been recently launched building upon regional support schemes presented in D2Ha5.1 "Validation report of existing promotion measures in all communities" and on the national solar feed-in-tariffs presented in D2Ha.4.1 "Refined 320 kWp building PV integration concept". This report intends to fill the gap by providing a survey about the remaining co-financing schemes (and recently decided adaptations) of interest for SOLUTION and about identified additional actions in order to fulfil contractually agreed sustainability targets of SOLUTION.

Consultations with regard to administrative elements are performed on a case-by case basis and are not part of this report. The reason lies in the particularity of each demonstration object requested by the promotion agencies and regional administrations as well as by the local distribution operators, which are in most cases external co-operation partners of the SOLUTION team and follow their own administrative rules.

3 Approach to achieve the deliverable

3.1 USED METHODOLOGY

The underlying methodology relies on results of phone interviews with communal servants and recherche of online services by the Styrian government. The following recommendations consider amendments to the previous promotion schemes as it is fixed within the agreement of the recently decided Styrian coalition agreement.

² www.klimaschutz.steiermark.at: „Klimaschutzplan Steiermark“, 2010

3.2 RESULTS

3.2.1 Overview about remaining funds

The relevant funds are divided into two parts: feed-in tariffs for biogene CHPs and new investment funds that will be launched in March 2011.

3.2.1.1 Feed-in tariff for Green Electricity

The OeMAG³ grant is organized as feed-in-tariff model and described in D2Ha.4.1⁴ with focus on PV. Table 2 displays other renewable energy technologies not considered in D2Ha.4.1.

Table 2: Feed-in tariffs for Green Electricity in Austria, Source: E-Control

Feed in tariff for eco electricity plants		Tariff [Cent / kWh]
Raw material independent technologies		Period of time: 13 years
Wind energy		9,70
Landfill gas		6,00
Sewage gas		5,00
Geothermal		7,50
Raw material depending technologies		Period of time: 15 years
Solid Biomass	< 500 kW	14,98
	500 – 1 MW	13,54
	1 – 1,5 MW	13,10
	1,5 – 2 MW	12,97
	2 – 5 MW	12,26
	5 – 10 MW	12,06
	> 10 MW	10,00
Waste with highly biogenic material	SN 17 Tab 2	- 25 %
	SN 17 Tab 1	- 40 %
	SN Tab 1. and 2 ÖKOSTRG	5,00
Co – firing CHP	Solid Biomass	6,12
	SN 17 Tab 2	- 20 %
	SN Tab 1. and 2 ÖKOSTRG	- 30 %
Liquid Biomass		5,80
	Extra charge for CHP	2,00
Biogas from agricultural fabrication	< 250 kW	18,50
	250 – 500 kW	16,50
	> 500 kW	13,00

³ www.oem-ag.at

⁴ D2Ha.4.1: Refined 320 kWp building PV integration concept

	Biogas out of waste	- 20 %
	Extra charge for CHP	2,00
	Extra charge for preparing to natural gas quality	2,00

3.2.1.2 Thermal renovation

The national investment incentive⁵ for thermal renovation will take place from 2011 to 2014. For 2011 100 million euro are guaranteed. The incentive will start at 01-03-11 and is divided into two parts by addressing companies with about 30 million € and households with about 70 million €.

3.2.1.2.1 Thermal renovation in companies

The corresponding funding addresses companies, independent on their sizes. The national co-financing scheme is managed by the Kommunalkredit Public Consulting (KPC). Supported are measures concerning the improvement of the thermal renovation of objects older than ten years. The following measures will be financially supported:

- Insulation of the top floor ceiling or the roof
- Insulation of the external walls
- Insulation of the cellar ceiling
- Renovation or replacement of windows and exterior doors
- Installation of heat recovery systems coupled with ventilation systems
- Installation of innovative shading systems

The agreed level of support refers to the quality of the thermal renovation and the investment costs for the measures. The eligible costs are limited up to 1.70 € per kWh heat energy reductions, of which the funding rate is between 15% and 35%. For applying to the grant energy performance certificates and additional technical descriptions are requested.

3.2.1.2.2 Thermal renovation for residential buildings

The corresponding funding addresses owners / tenants of one or two family houses up to multi-family houses. Promoted are thermal renovation measures of residential buildings older than twenty years. The following measures are funded:

- Insulation of the external walls
- Insulation of the top floor ceiling or the roof
- Renovation or replacement of windows and exterior doors
- Insulation of the cellar ceiling

In addition, partial renovation measures are also co-financed. The agreed level of support can be up to 20% of the investment costs or at least 5000 € for extensive renovation and 3000 € for partial renovation. The latter includes:

- Installation of solar systems
- Installation of wood fired central heating systems
- Installation of heat pumps

A combination with other funding schemes is principally possible.

⁵ <http://www.publicconsulting.at/kpc/de/home/aktuelles/>

3.2.1.3 Biomass cogeneration

Promoted are measures to generate heat energy and power out of solid or liquid biomass. The generated heat and power can be used for self supply or grid feeding. Target groups using other funds such as the agricultural co-financing schemes (Landwirtschaftsförderung) are excluded. The following technical requirements have to be complied with:

- Fuel utilization factor: > 60 %
- 30 % of the generated heat energy (calculated over a year) is to use
- Keeping emission thresholds are required

The funding rate is 10 % of eligible costs. It is possible to receive additional bonus up to 5 % if local biomass is used. Within the power range between 400 and 1000 kW it is possible to receive additional bonus up to 5 % for cleaning the flue gas. In order to use efficiently the heat energy ratio over all seasons funding rates might be reduced accordingly.

3.2.1.4 Thermal Solar systems

The investment funds for solar-thermal systems are divided according to their sizes.

3.2.1.4.1 Solar-thermal systems between 100 and 2000 m² collector array

The following purposes are considered:

- Solar process heat energy for manufacturing
- Solar feeding of heat energy supply
- Solar heat energy supply for commercial companies (Solar ratio > 20 %)
- Solar cooling

Table 4 provides a survey about potential investment funds. Only differences between additional investment costs in comparison with costs of conventional fossil energy plants can be funded. Planning costs can be funded up to 10 % of the mentioned differences.

Table 4: Investment funds thermal solar systems between 100 and 2000 m², Source: Kommunalkredit Public Consulting KPC

	Components / Services	Funding rate
Thermal Solar System	Solar System, assembling, buffer storage, measurement and planning costs.	40 % basis funding / 5 % Bonus for SMEs / 5 % Bonus for eco-innovation
Solar cooling System	Sorption technologies	40 % basis funding / 20 % Bonus for small sized companies - 10 % Bonus for medium sized companies / 10 % Bonus for eco-innovation

3.2.1.4.2 Solar-thermal systems < 100 m² collector surface

The following purposes are considered:

- Solar-thermal systems for domestic hot water

- Solar systems for space heating
- Pipe work, thermal storage system and distribution grids

Table 5 provides a survey about potential investment funds. The investment incentive is limited by 30 % of the environmental investment costs.

Table 5: Investment incentives thermal solar systems < 100 m², Source: Kommunalkredit Public Consulting KPC

Thermal Solar systems	Funding rates
Standard solar collector	100 €/m ²
Vacuum solar collector	150 €/m ²
Fixed rate for Energy consultations	300 €

3.2.2 Results of accompanying interviews

Co-financing incentives have been investigated in the frame of two previous deliverables and the given one. Thereafter, actual national and regional promotion schemes seem not sufficient enough for achieving the SET-Plan targets. Hence, interviews have been conducted on actions that may support areas, which are not sufficiently tackled. On basis of inquired servants of the regional Government the following recommendations have been elaborated, which summarise some received inputs and provide interaction potentials with SOLUTION work packages indicated in squared brackets:

Extended advertisement [Synergies with activities planned in WP4.1]:

- More extended advertisements on the regional website (such as www.lev.at, which is already realised).
- Organisation of additional events concerning eco-building and/or renewable energy financial support schemes.

Awareness campaigns [Synergies with activities planned in WP3.1]:

- Roadshows, regulars' tables and informal meetings with people interested in sustainable energy solutions. People can gather information from experts and discuss with owners of applications about their experiences. Installation companies can talk to interested people in an informal way respectively will be trained by the SOLUTION team.
- Study tours to existing applications in order to talk to system operators about their experiences.

Consultation campaign [Synergies with activities planned in WP4.1]:

- Nomination of assigned contact persons for renewables and energy savings in the communities.
- Advertising the recently launched energy consultation initiative of the Styrian government (to be notified also on our SOLUTION website and suitable local events).

Demonstration plants owned by the municipality [Synergies with activities in WP2Ha.1 to Ha.4]:

- Disseminating communal success stories (like e.g. the refurbished "Pflichtschule Kaendorf" (BEST H-RB22), the new glasshouse "Baumschule Loidl" (H-RB22) or the BIPV of Fachschule St. Martin).

- Promotion of non-polluting vehicles.

Additional criteria for public building tenders [Synergies with activities in WP2Ha.1 & Ha.2]:

- Promotion of solar thermal and BIPV applications within public building tenders.

Citizen's participation [Synergies with activities planned in WP4.1]:

- Extended promotion of citizens' participation models.

Involvement of local companies [Synergies with activities planned in WP3.1]:

- Advertising companies certified for solar applications to be notified also on our SOLUTION website.
- Inviting companies to informal meetings organised by or in cooperation with the SOLUTION project team.

4 Conclusion

In this study, funding schemes mainly for biomass CHP, solar-thermal systems and for commercial and domestic eco-buildings are mentioned. Each programme has different criteria for eligibility and different payment modalities, which does not facilitate the access to funding. Extended consultations are envisaged as important part of local advertisements of WP4.1 together with initiatives recently launched by the Styrian Government.

Particular recommendations of the conducted analyses are summarised in chapter 3.2 and are disseminated to dedicated community working group sessions and on the next Community Steering Group meetings. For streamlining and promoting local available funds of renewables detailed discussions between the Austrian SOLUTION team and the local authorities of the eight participating communities will be organised on basis of the elaborated deliverables (D2Ha.4.1, D2Ha.5.1 and the given one). Additionally it is foreseen to present the results also to the Energy Commissioner⁶ of Styria as particular mediating entity between the regional government and local administrations.

Ideally, these discussions and presentations support the Austrian SOLUTION team to establish its visible and viable role as facilitator and knowledge-hub for research, innovation and integration of large-scaled renewable energy systems and extended sustainable energy measures within the project zone and abroad. The team intends to enable reliable co-operations between the social actors and regional market players by serving as an active and valuable network for the Styrian energy communities willing to follow the concrete SOLUTION work plan towards sustainability.

⁶ Energy commissioner: DI Wolfgang Jilek (<http://www.steiermark-energie.at>)