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SOLUTION

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

Deliverable No. 2Ha.5.1, WP No. 2Ha.5

VALIDATION REPORT OF EXISTING PROMOTION MEASURES IN ALL COMMUNITIES

RES integration promotion programme

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1 Summary

The design of energy promotion measures (funding policies) is challenging civil servants and town councillors since the financial possibilities of municipalities are limited and energy policy making is a quite complex process. Furthermore energy is a cross sectional matter and needs to merge several stakeholder opinions and aspects. Therefore, the given deliverable D2Ha.5 intends to provide surveys about promotion measures in each participating community and country in order to recommend measures which may improve the framework for potential private investors and may pinpoint actions helping the consortium as a whole to achieve their targets.

For doing so the objectives of WP D2Ha.5 and the used approaches are summarised in the sections 2 and 3. Surveys about various promotion measures within in section 4.1 and descriptions of particularities in section 4.2 provide an overview of grants spent for renewable and for energy efficiency measures in Cernier, Hartberg, Hvar and Lapua. These surveys are supplemented by communal SWOT analyses in section 4.3 and some conclusions in section 5. The recommendations given in chapter 5 address mainly the informative part of planned actions conducted in WP 1.2 and in WP 4.1 and intend to consider up to certain extend the real needs of the citizens such as comfort and other requested standards requested. The conclusions will be presented to local authorities on one of the next CSG meetings in Cernier, Hartberg, Hvar and Lapua. A better match of particular local and SOLUTION grants is expected as the main outcome of these discussions.

2 Objective of the Work Package

This document includes the “Validation report of existing promotion measures in all communities” (Deliverable 2Ha.5.1) of WP 2Ha.5 “RES integration promotion programme”. WP 2Ha.5 intends to review promotion measures in each participating country in order for improving the framework for potential private investors and for promoting innovative integration aspects of renewables. Deliverable 2Ha.5.1 is due at the end of February 2010, viz:

Table 1: Key facts about deliverable 2Ha.5.1

Del. No	Deliverable title	Partners	Delivery date	Status
2Ha.5.1	Validation report of existing promotion measures in all communities	iC, KW, PLAN, VTT, all communities	4.5	final Draft

WP 2Ha.5 aims at fine-tuning particular local and SOLUTION grants in order to consolidate the public private partnerships in their respective communities. A survey about the actual promotion measures of all participating communities is conducted in order to learn from the actually used initiatives and to improve the framework within the dedicated zones. It includes:

- Mapping local promotion measures in partner communities.
- Performing SWOT analysis focussed on RES technologies used in SOLUTION.
- Extracted recommendations for all participating communities as result of the cross-comparison analyses.

The following information are mainly collated from the community partners and related agencies respective associations.

3 Approach to achieve the deliverable

This validation report provides results from particular SWOT analyses (Strengths, Weakness, Opportunity, and Threat) among the participating communities. The utilised SWOT analysis is a recognised method for assessing the today position of the community Hartberg in relation to Cernier, Hvar and Lapua. The review of strengths and weaknesses highlights the structural and operational factors allowing streamlining the conjunction of citizens’ energy needs and communal political targets of integrating local available energy resources. The opportunities and threats refer to the external environment given by the embracing political frame such as federal versus centralised system and corresponding organisations of supporting schemes.

The following matrices will be used as a viable exercise to learn from each other in order to achieve the objectives given in section 2.

4 Results

4.1 SURVEY ABOUT LOCAL GRANTS

This section conducts a survey about various promotion measures within the participating communities. Table 2 provides an overview of grants spent for renewable energy systems and energy efficiency measures in the four municipalities. Coloured cells highlight the measures which are financially supported. All presented grants are investment funds.

Table 2: Survey about local grants in participating communities, 2010

 Solution	Cernier	Hartberg	Hvar	Lapua
Supply side				
Photovoltaic	✓	✓	✓	✓ ¹
Solar thermal systems	✓	✓		✓ ¹
Boiler change (fossil to biomass)	✓	✓		✓ ¹
Heat pump	✓	✓		✓ ¹
Buffer store				✓ ¹
District heating connection fee		✓		✓ ¹
District heating construction or extension	✓		✓	
Demand side				
Insulation of ceiling	✓	✓		✓ ²
Insulation of walls	✓	✓		✓ ²
Insulation of cellar ceiling	✓	✓		✓ ²
Window change	✓	✓		✓ ²
Ecological building materials		✓		
Consultations				
Energy advice service	✓	✓	✓	✓

¹ Concerning only companies and housing organisations making investments, matter of discretion

² Concerning only housing organisations in renovation, matter of discretion

4.2 PARTICULARITIES

4.2.1 In Cernier

Photovoltaic systems are granted with a maximum lump sum of 1300€/kWp (at canton level), and there is also a Cost-covering Remuneration for Feed-in to the electricity grid at federal level.

Solar thermic systems are supported with a lump sum of 1000€ for single family houses and an average of 80€/m² for multi family houses.

For wood automatic boilers (wood chips or pellets) it depends on the size and if it is a new heating device or a replacement:

Up to 70 kW

A new installation is financially supported with a minimum of 2200 Euros (650€ + 70€/kW) and a replacement with 270€ + an average of 40€/kW.

More than 70 kW

If the new system has a smoke filter, it is granted with 6600€ + 36€/MWh/a (up to 1000 MWh/a) or with 36000€ + 6€/MWh/a (from 1000 MWh/a). If the system has no filter, it is granted with about the half.

In case of replacement, the installation is financially supported with 40% of these amounts.

Heat pumps are financially supported only if they replace an electric heating system with a minimum of 1300€ (air-water) or 2000€ (ground-water or water-water).

Construction or extension of district heating systems are granted with 20€/MWh/a.

New passive houses receive a lump sum of 6500€ for single family houses and 30€/m² for multi family houses, retrofitted buildings with passive house standard are granted with an average of 30€/m² (at canton level). There are also grants for the insulation of roofs and walls (25€/m²), ceiling and cellar ceiling (10€/m²) and window change (45€/m²) (at federal level).

The energy service for the canton of Neuchâtel provides some general advice and documentations (flyers, leaflets, website with explanation about energy saving, heating, insulation, refurbishment, etc).

4.2.2 In Hartberg

This section conducts a survey about various promotion measures within the Provence of Styria including the designated CONCERTO zone. There is a wide range of regional grants financially supporting residential and small commercial investors with respect to the integration of renewable energy and of energy efficiency measures. The following brief

descriptions are mainly extracted from deliverables of the IEE Project REPRO, of the Europe Innova (DG ENT) Project CENCE and from respective websites³ and appear to conform to the scope of SOLUTION and in particular of WP2Ha.5. Communal grants are add-ons to the regional/national promotion measures and fill mainly the gap between their financial support and wishful energy political developments within the communities.

4.2.2.1 Housing Renovation Programme of the Government of Styria

The most important Support Programs concerning the use of renewable energy in and energy efficiency improvements of residential buildings is the housing renovation programme of the Province of Styria. In this context it can be distinguished between the small housing renovation programme ("kleine Wohnhaussanierung") and the extensive housing renovation programme ("Umfassende Wohnhaussanierung").

- In the framework of the small housing renovation programme realty and apartment owners, co-owners and tenants who carry out maintenances measure at the building stock can, among other things, apply for grants regarding the installation of biomass heating systems, of solar heating systems and regarding measures that improve the thermal efficiency of the building stock. Besides a base funding for general improvement and maintenance measures at the building stock, additional funds are provided for selected ecological and energy savings measures. The subsidy is made up of a government grant to annuity in the amount of 15 % of total investment costs for repaying a loan with a term of at least 10 years. In the case of energy saving measures and installation of renewable heating systems, subsidies are non-repayable. The maximum granted subsidy volume depends on the degree of improvement measures and the number of eco-bonus points, and amounts between € 30,000 and € 50,000.
- If the investment costs of renovation per apartment exceed € 21,802, realty owners (or person authorized for construction) can apply for subsidies in the course of the extensive housing renovation programme. The object of this programme is to support extensive renovation measures at residential buildings with at least three apartments, whose building licence dates back at least 30 years. Besides general renovation work, also measures to improve the thermal efficiency of the building stock are eligible. In addition extra bonus points are given for ecological measures like the installation of biomass heating systems and solar heating systems. Similar to the "small housing renovation programme", the subsidy is made up of a non-repayable government grant to annuity in the amount of 45% of total investment costs for repaying a loan with a term of at least 15 years. The maximum granted subsidy volume depends again on the degree of improvement measures and the number of bonus points, and amounts between € 908 and € 1,126 per m² living space.

³ For Styria: <http://www.eco.at/cms/93/6315/>; for the designated CONCERTO zone: <http://www.hartberg.at/index.php?seitenId=31>, <http://www.hartberg-umgebung.steiermark.at/>, <http://www.kaindorf.at/system/web/gebuehr.aspx?menuonr=220317554&detailonr=220306911>

4.2.2.2 Styrian Environment Fund – Umweltlandesfonds⁴

In the framework of the Styrian Environment Fund the government of Styria supports the installation of biomass heating systems and solar heating systems exclusively in residential buildings or in sport facilities and schools.

Concerning biomass heating systems applicants obtain max. 25% of total investment costs, with an upper limit of € 1,100 in the case of wood log boilers or pellet boilers and € 1,400 in the case of pellet-burning or wood-chips-burning central heating system, respectively. For the installation of a solar thermal system or a photovoltaic plant in residential buildings the basic funding varies between € 300 and € 500 per apartment or house unit. In addition to the basic funding applicants (e.g. house and apartment owners, co-owners and tenants, public utility and municipal institutions, associations, sport facility operators, schools) obtain a grant of € 50 per m² installed collector area. The total maximum subsidy amounts to € 2,000 per house unit (single family house, semidetached house) and € 650 per apartment.

4.2.2.3 Agricultural Funds

The regional government of Styria financially supports investments of farmers and of farmer cooperatives in biomass heating applications intended:

- to increase the share of renewable energy
- to keep added value in the region and
- to support farmers in building up new fields of business.

The funding is limited up to 20% for the application itself and up to 10% for related service rooms. The granted investment costs include boilers and installation, in constructing the buildings, constructing the storage space for the wood chips as well as funding the internal labour of the farmers.

4.2.2.4 Particular co-financing grants in the designated CONCERTO zone

Solar thermal (S-Th) and photovoltaic (PV) systems are financially supported. The financial contributions of PV-Systems vary from 350 Euro/kWp up to 800 Euro/kWp (with a cap of 3kWp). Solar thermal systems receive grants in the range of 60% of the regional grants to 50 Euro/m² (with an upper grant limit of 2000,- €) up to 500 Euro per dwelling. The oil boiler scrapping is financially supported in the city of Hartberg. Applications with wood chips, pellets and other biomass sources are getting grants in order of 60% of the regional contributions to lump sums up to 1050,- € (respective 825,- € for wood logs). The installations of heat pumps are financially supported in a range from 700,- € to 1050,- €. The interconnection to the local district heating system vary from 500,- € to 900,- €.

⁴ data according to the Federal Government of Styria, department of the Energy Commissioner

4.2.3 In Hvar

During the last years Croatia has developed a support scheme for renewable energies and energy efficiency measures. The support scheme is based on:

- Feed in tariffs for electricity production from renewable sources (PV, small hydro power, biomass co-generation, wind). The renewable support scheme is similar to the Austrian one, providing different tariffs for different technologies fixed over a certain number of years. Startup was beginning 2009 with some already implemented wind energy, PV and Cogeneration projects.
- FZOEU - fund for environmental protection and energy efficiency: The facility works based on "Calls for application" with specific focus such as e.g. the last one:
 - LPG & solar applications in public buildings on islands.
 - LPG & solar applications in private buildings on islands.
 - 'Clean technology' fabrication facilities

This grant is covered by max. 60% of the max. amount of investment.

- HBOR – the Croatian Bank for Development and Reconstruction is supporting feasibility studies and renewable energy development costs with credits which are turned into grants when the projects are realized.
- Different international financing institutions such as UNDP or EIB are supporting renewable energy developments and energy efficiency projects by granting energy audits and feasibility studies and providing financing through Bank Owned Credit lines.

Even there are some support schemes in place the current financial and political situation in the country does not allow for strong activities in the energy efficiency and renewable energy sector. Complicated bureaucracy is also limiting private initiatives of potential foreign investors.

4.2.4 In Lapua

The public grant for energy household sector for the year 2010 is generally defined quit simply:

- *The purpose of the grants is to improve the energy economy of residential buildings. Grants are aimed at reducing both energy consumption and emissions of greenhouse gases.*

and

- *Grants are awarded for conducting independent energy audits, for external repair work to as defined in legislation, for improving the ventilation and heating*

systems, and for implementing renewable energy sources. The grant covers up to 25 % of the approved costs. Grants are awarded by the local authority.

However, the grant system is very spitted and complicated and it varies year by year, e.g. depending on economical situation of the state and on discretion. Some features of the energy grants for single-family houses (detached houses) and for multi-family houses (row houses and apartment houses) in 2010 are described below:

4.2.4.1 Grants for single-family houses

- Deadline of application 9.4.2010.
- This energy-subsidy belongs to the state budget of 2010, and covers a part of applications submitted in 2009 and new applications in the same theme in 2010.
- The total sum is limited (together 50 Mio. €), and probably only a part of application will be granted.
- The maximum amount of the subsidy is 25% of eligible costs.
- Eligible costs include material and equipment costs but not the cost of work.
- Gross incomes of the family should be equal or below:
 - 1230 €/month in one person household
 - 2055 €/month in two persons household
 - 2745 €/month in three persons household
 - 3495 €/month in four persons household
- Grant is a matter of discretion in the community.
- Renovations of the houses of aged peoples (over 65 years) are supported maximum 40 %. Besides incomes, also property of the household is restricting the subsidy.

In the year 2009, the energy subsidies for renovation of detached and semi-detached houses were compensated primarily through taxation by domestic help credit, maximum 3000 €/person or 6000 €/household.

4.2.4.2 Grants for Row houses and Apartment buildings

- Call is open 1.4 – 17.9.2010.
- There is a sum of 37 Mio. € in the State budget for this sub-item.
- Maximum grant is 15 % of the investment costs for new renewable energy sources, e.g. geothermal heat pump, pellet heating system, wind energy, fuel storage, solar heating, etc.
- Grant is about 10 % of the investment costs for energy efficiency purposes, e.g. additional insulation in walls, renovation of ventilation and heat recovery, joining to district heating, etc.

- Discretion will be carried out.

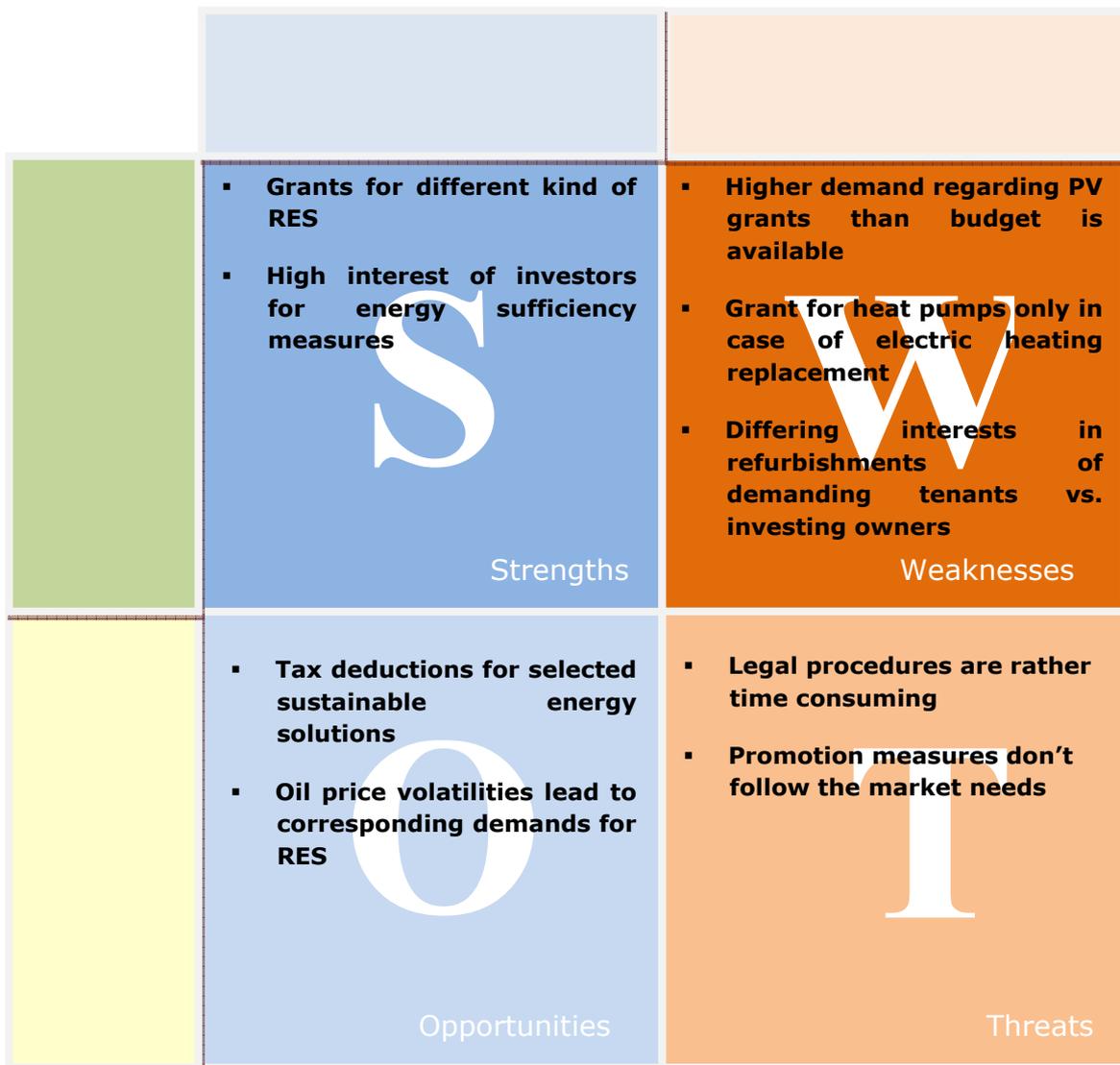
4.2.4.3 Grants for enterprises

In the case of enterprises, there is a governmental support system of 20 % about RES investments in new building and refurbishment but it does not include the energy efficiency investments only the investments based on energy production by renewables. It is very probable that a feed-in tariff for wind energy and biogas electricity comes into power during the year 2010. The legislative proposal has been under preparation in the government and results are waited before the summer.

4.3 SWOT ANALYSIS

For meeting the improvement of the framework for potential private investors and for promoting innovative integration aspects of renewables a strengths, weaknesses, opportunities and threats (SWOT) analysis has been conducted and is summarised in the following.

4.3.1 In Cernier



Strengths

1. The local/regional authorities provide financial supports for various kinds of RES.
2. Scientific studies in the canton of Neuchâtel have identified the high interest of public and private investors for energy sufficiency measures.

Weaknesses

1. The financial support for PV is rather limited. Therefore, the demand is much higher than the foreseen budget.
2. Grants for heat pump can only be received in case of electric heating replacements.
3. Most flats and dwellings are used by tenants. The ownership of buildings leads to differing interests in refurbishments of demanding tenants on one side and investing owners on the other side.

Opportunities

1. Tax deductions can be claimed by investors for sun collectors and heat pumps, as well as for the district heating (DH) connection fees.
2. Oil price volatilities lead to corresponding demands towards the integration of RES.

Threats

1. Legal procedures are rather time consuming. Neighbours and in some cases NGO can make a legal opposition against a project and sometimes the procedure goes in appeal up to the federal court, which may last 2-3-years.
2. There is no political willingness to increase the grants in accordance with the corresponding demands of disposed investors e.g. for PV applications.

4.3.2 In Hartberg

SWOT analysis has been conducted for meeting Hartbergs' particular requirements:

- of preparing access to finance by implementing local energy innovation grants in accordance with SOLUTION performance criteria summarised in the CDS sheet as well as '
- integrating innovative SMEs, technology providers of Hartberg in an efficient way.

The following SWOT survey is predominantly based on analyses done by the Styrian Eco-Energy Network NOEST, which unites regional grants for eco-energy research and campaigns, networking and technology transfer activities as a one-stop-shop and which conducted it in the frame of Europe Innova Project CENCE.

	<p>S</p> <ul style="list-style-type: none"> ▪ Co-ordinated actions for RTD / technology transfer. ▪ High use of project results. ▪ Focus on local demand and market in renewable energy. ▪ Successful products on the national market. ▪ Good networking culture. <p>Strengths</p>	<p>W</p> <ul style="list-style-type: none"> ▪ Stop and Go policy in terms of grants for renewables. ▪ High competitions among entrepreneurs. ▪ Few European market preparation / development. ▪ Few connections to private finance i.e. venture capital. <p>Weaknesses</p>	
	<p>O</p> <ul style="list-style-type: none"> ▪ Legal framework in favour of renewable energies. ▪ Styrian Energy Master Plan schedules to gain the use of RES to 33% by 2015. ▪ High level of RTD research / innovative capability in RES. <p>Opportunities</p>	<p>T</p> <ul style="list-style-type: none"> ▪ Strong dependency on public funds. ▪ Funding schemes remain discontinuously. ▪ Access to private capital remain limited. <p>Threats</p>	

Strengths

Due to the above mentioned items of strength the advantages of RES can be emphasised such as:

1. Complementarities with other energy sources, both traditional and among renewables.
2. Flexibility in terms of implementations and decentralised integrations.
3. Energy production without greenhouse gas emissions.

Weaknesses

1. The available support schemes do not have the expected sustainable impact on the market as there is a lack of reconciliations among the communal, regional and national institutions as well as no security regarding pay back time periods for willing investors.
2. Due to frequent amendments of federal incentives the local promotion schemes need to be adapted accordingly as well.

Opportunities

1. The opportunity is to co-ordinate and to promote initiatives as well as to make available existing know-how and expertise of the region.
2. Co-ordinated actions may allow the acquisition of new business areas and customers as well as more efficient dealings with necessary investments.

Threats

1. The main threat with respect to local and regional RES promotion programmes is that these schemes remain discontinuously and of modest effectiveness.
2. The stimulation of the market will be moderate and not in line with the predicted target quotas.

4.3.3 In Hvar

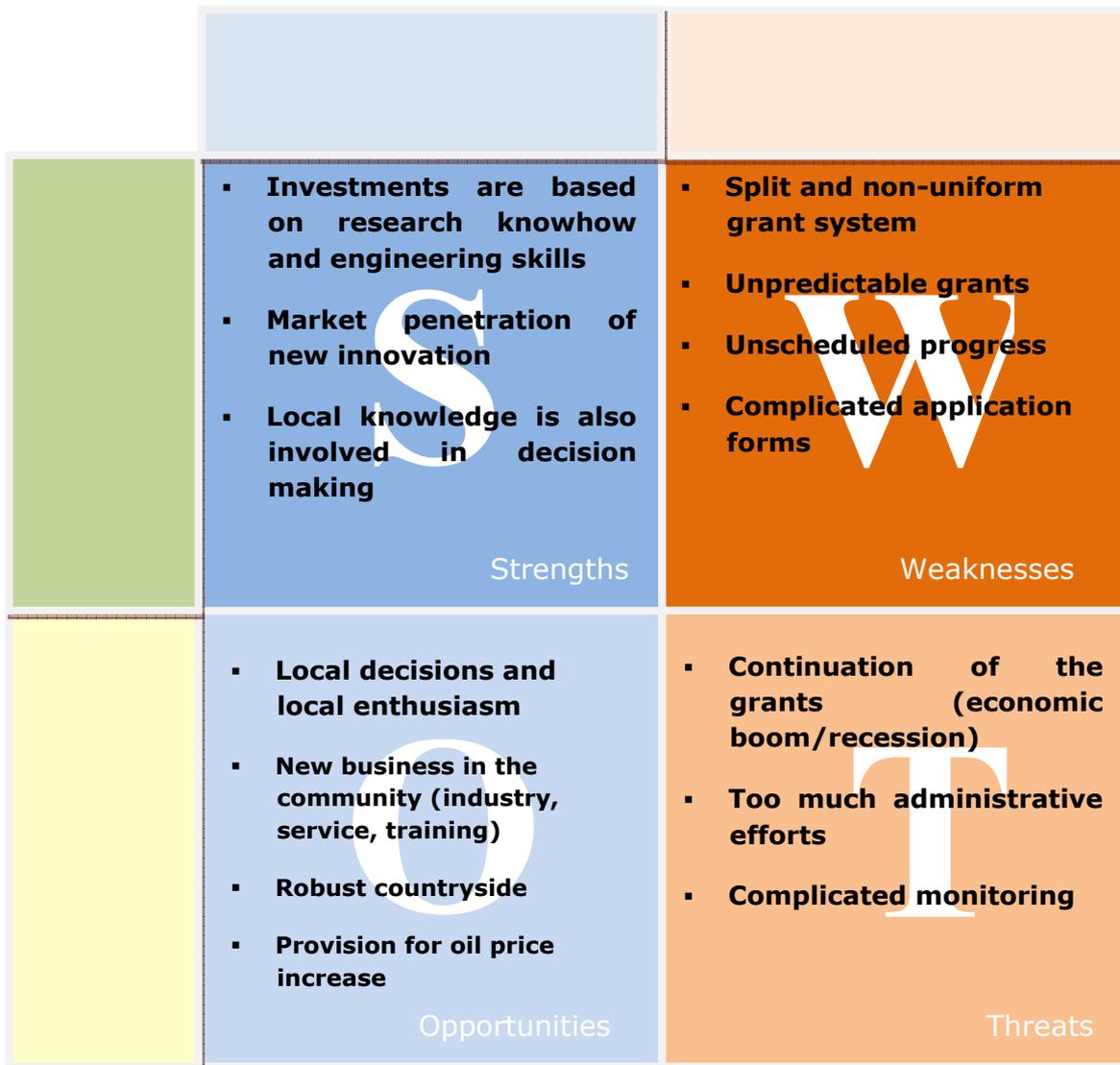
The established support scheme in Croatia is similar to that in Austria. The main difference is connected to the limited financial resources caused by the financial crises and political changes. However, by having already established financial support schemes and by having already closed the gaps in the Croatian legislation a fast development can be expected in the renewable energy and energy efficiency sectors as soon as the financial stability is achieved.

In addition further developments are given through a strong move of international financing institutions in this sector and specifically in the regions (Western Balkan and Croatia). Upcoming structural funds from European Commission, the EBRD renewable energy and energy efficiency financing facility for Western Balkans and the EIB Renewable Energy and Energy Efficiency Credit Line will cause a strong awareness rising in this region and will support private investment in this specific sector. Training programmes for local banks to manage this type of projects will accelerate this sustainable development.

Strength and weaknesses are similar to the ones in Hartberg.

4.3.4 In Lapua

SWOT analysis concerns an average situation in communities in Finland. The final decision of the grants are made in communities related to the building renovation and renewable energy sources in buildings, and at state level related to the investments of renewable energy sources for enterprises.



Strengths

- 1) National grant programme is based on research knowledge and innovative technology, e.g. regarding bioenergy and wind energy.
- 2) Subsidy programme enables accelerated market penetration for innovative solutions.
- 3) Community decision making strengthens utilisation of local resources and business activities.

Weaknesses

- 1) Subsidy programmes are made on a year-by-year basis in the State budget.
- 2) Predictability of the supports is poor which results in the need for more information and potential frustration of energy end-users.
- 3) Spitted and non-uniform practice in applications cause much additional work.
- 4) Uncertainty covers the amount of grant and non-acceptance depending on volume of the national support and grant applications.
- 5) Unscheduled and unbalanced demand for equipments and services in the business.

Opportunities

- 1) Local enthusiasm for RES and energy efficiency grows rapidly in the communities.
- 2) Household and enterprises are not waiting for increase of oil price and the investments are made in advance.
- 3) Grant support employment policy is in the viewpoint of the state and communities.
- 4) Subsidy programme enables accelerated market penetration reducing the costs for innovative solutions.
- 5) Independent energy audit service has more and more business opportunities.

Threats

- 1) Subsidies are depending on the economical situation in the State and can be decreased by growing economy.
- 2) Needs for administrative resources increase causing costs in the community.

5 Conclusion

Successful implementation of sustainable energy solutions depends on very specific local natural, institutional, economic, cultural and social conditions and contextual factors. Communal promotion programs in the areas of energy efficiency measures and renewable energy installations are highly depending on strong stakeholder involvements, dissemination, and training activities. Among these the level of public awareness of new technologies – such as availability, technology development, advantages, potential and incentives – are proved to be a crucial point in increasing success of demonstration projects.

With respect to this background of success factors and aggregated political frames (such as clear federal structures in AT and CH versus more centralised systems in HU and SF) the designs of energy promotion measures (funding policies) are quite different in Cernier, Hartberg, Hvar and Lapua. It is concluded that the effective and necessary cooperation between the public and private sector is more likely in regions with a high level of autonomy and in turn in countries with a federal or federal like systems. Nevertheless, the following recommendations can be extracted for all participating communities from the cross-comparison analysis of chapter 4:

To extend the advertisements:

- More extended advertisement on the corresponding communal homepages and on the local pages of the project website.
- Organisation of local events in the frame of the CSG meetings in order to highlight local / regional / national financial support schemes to willing private investors.
- Disseminating continuously already accomplished communal success stories.

To raise awareness:

- Bringing citizens interested in sustainable energy solutions to regional energy fore. People can gather information from experts and beneficiaries about their experiences.
- Organisations of local energy consultations in order to provide individual surveys about opportunities and benefits those are inherent in sustainable energy solutions and related rough costs.
- Study tours to existing applications and show houses in order to talk to system operators and building users about their experiences.

To advance as precursor:

- Promotion of ambitious refurbishments and of renewable applications in all public tenders.
- Advertising local companies certified for sustainable energy solutions on the corresponding communal homepages and on the local pages of the project website.
- Inviting companies to informal meetings organised by or in cooperation with the SOLUTION project team.

The design of energy promotion measures (funding policies) is challenging civil servants and town councillors since the financial possibilities of municipalities are limited and energy policy making is a quite complex process. Furthermore energy is a cross sectional matter and needs to merge several stakeholder opinions and aspects. The recommendations given above address mainly the informative part of planned actions conducted in WP 1.2 and in WP 4.1 and intend to consider up to certain extend the real needs of the citizens such as comfort and other requested standards requested. The conclusions will be presented to local authorities one of the next CSG meetings in Cernier, Hartberg, Hvar and Lapua. A better match of particular local and SOLUTION grants is expected as the main outcome of these discussions.