

WP 4: THE REGIONAL STATE OF THE ART IN PROVENCE ALPES CÔTE D'AZUR REGION



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Executive Summary

The aim of this deliverable is to analyze the solar sector and the state of the art in Provence Alpes Côte d'Azur region.

This report is based on the collaborative methodology to allow the consortium to analyze the needs, expectations and requirements of all the actors and to provide coherent solutions with all the agents' needs. The overall objective is to facilitate the exchanges of data (indicators) between public and administration bodies, research centers, universities, firms and agents of the civil society

This regional analysis has been designed, taking into account the three main areas of intervention established by the project:

- **SHAAMS Policy Accelerator:** This section deals with policy support actions and schemes, solar energy support strategies at national and regional levels;
- **SHAAMS Enterprise and Research Accelerator:** This section details the different actors from private sector, research and development and the main challenges they are facing;
- **SHAAMS Social Accelerator:** This section is an overview of actions/initiatives toward the civil society to promote the solar energy sector.

1. The SHAAMS POLICY ACCELERATOR in PACA Region

1.1 The regional Solar Policies overview in PACA: preliminary state of the art and needs identification

The Provence Alpes Côte d'Azur region (PACA) is one of the 27 regions of France, made up of:



- The former French province of Provence;
- The former papal territory of Avignon, known as Comtat Venaissin;
- The former Sardinian-Piedmontese county of Nice, whose coastline is known in English as the French Riviera, and in French as the Côte d'Azur;
- The southeastern part of the former French province of Dauphiné, in the French Alps.

Economically, the region is the third most important in France just behind Île-de-France and Rhône-Alpes. Its GDP in 2011 was € 138 002 million and its GDP per capita was € 27 855. (INSEE)

The development of renewable energies, which now account for 10% of the regional consumption (mainly hydropower and wood), is crucial for the region. The region has the potential to produce renewable energy and energy savings to be better valued. According to the Regional Observatory for Energy-ORE, the region suffers from a strong imbalance in energy because it only produces 10% of its consumption (about 1.5 Million MTEP).

However, due to its geographical implantation, this region has the most suitable environment for the development of solar energies. For the photovoltaic production, the annual average solar radiation is measured between 1220 and 1400 hours, the highest rate in France which makes it the French leader in the production of photovoltaic solar energy (366 MW). The largest solar farm established covers 200 hectares with 90 megawatts already installed in Les Mées in Alpes de Haute Provence near Manosque. PACA is ranked the 2nd region for the production of solar thermal energy in France, just behind the Rhône Alpes Region.

The Provence–Alpes–Côte d’Azur Region has adopted the development of renewable energies as one of its fundamental principles of its energy policy (cf. Regional Innovation strategy). Some achievements have been gained:

- The "Sunshine" plan is boosting the market (in conjunction with sizeable grants);
- A significant increase in professional and public events, the awareness of environmental issues, energy savings, renewable energies, and eco-construction;
- A market with exponential growth and a very favorable environment for the development of renewable energies.

1.2 Institutional organization of the solar sector

The Regional Scheme for Climate, Air and Energy-SRCAE defines the orientations and objectives for the regional control of energy demand, the struggle against air pollution, the renewable energy development and the greenhouse gas emission reduction.

This regional scheme has been established by the law No. 2010-788 named "Grenelle 2" that defines the regional orientations and objectives by 2020, 2030 and 2050.

The strong interaction between the issues as climate change, energy and air quality justifies the consistency of objectives and guidelines in this area. It is an essential component of the policy implemented on the regional territory.

Its implementation is under the responsibilities of the PACA Regional Council, the National Agency for Environment and Energy Management-ADEME and the Regional Directorate for Environment, land and housing-DREAL, the decentralized authority of the Ministry of Ecology, Sustainable Development and Energy.

The Territorial Energy Climate Plans-PCET is a planning document created under the "Grenelle 2" law. It aims to assist local authorities to include energy considerations in their public policies. It also aims to limit their contributions to greenhouse gas emissions, and to develop local strategies adapted to climate change. A community of more than 50,000 inhabitants is required to implement a PCET. Thirty-five communities are concerned in the PACA region.

The PACA regional Council, through the initiative « A.G.I.R. for Energies » launched in 2007, encourages energy savings and the use of renewable energy. It thus contributes to the fight against climate change while fostering the emergence of an industrial regional energy production.

With a budget of €70 million, “A.G.I.R. initiative” supports innovative actions in the field of energy efficiency and renewable energy, led by local authorities and businesses.

At national level, Tax Credits for sustainable development have been implemented to promote and facilitate the use of solar systems since several years. The rates of tax credit reach today 13% for the Photovoltaic and 32% for the solar thermal.

In order to create favorable conditions to the development of renewable energies, France has set up legislation on electricity purchase obligation. This stipulates that the electricity produced by renewable energy facilities must be bought by Electricité de France-EDF or the other distributors at prices fixed by the government and higher than the market.

A Focus on the Tax Credit scheme 2013

To finance the installation of solar water heaters, solar heating, wood boilers, heat pumps, photovoltaic sensors or even micro-hydro turbines at home, there are tax credits. This funding scheme developed by the French state is attributed to individuals to facilitate the purchase, in their primary residence, of equipment:

- **Photovoltaic equipment** : 11% within a spending limit set at € 3,200 (VAT included) per kWp of installed capacity;
- **Solar thermal equipment**: 32%.

1.3 The energy/solar strategy in PACA region

This section presents the current key figures of the Photovoltaic and Solar Thermal sectors in the PACA region. It also describes the forecast of these sectors at mid and long terms, according to the Regional Scheme for Climate, Air and Energy-SRCAE

PHOTOVOLTAIC

- Balance of production

In 2010, the annual production of photovoltaic electricity amounted to 135 GWh with an installed capacity of 115 MWp. This production represents about 14% of the photovoltaic production in France.

The location of facilities shows that the Bouches du Rhône, the Alpes-de-Haute-Provence, the Var and the Vaucluse are the main contributors. However, if small plants represent a significant share of these three departments are unlike ground stations that dominate in the Alpes de Haute Provence. This reflects both differences in urbanization and the recent development of large power plants.



PV Solar Farm in Les Mées (Alpes de Haute Provence)

- Potential

According to the study of the production potential of solar electricity in Provence-Alpes-Côte d'Azur led by Axenne for ADEME (2009), the additional potential achievable in the short term (2020), taking into account the environment, the landscape and the architecture issues is estimated at 3600 MW for a producible 4300 GWh/ year. At this potential, there is also a potential feasible in the medium term (2030) estimated at 3700 MW for a producible 4500 GWh/ year additional Less than 0.5% of the potential 2020 and just 0.2% of 2030 potential is exploited in 2009.

SOLAR THERMAL

- Production

In 2010, the annual production of solar thermal totaled 160 GWh over a surface area of collectors installed of more than 320,000 m². This production represents about 13% of solar thermal in France. It is mainly produced by individual plants and is therefore higher in communities with high density housing.



Thermodynamic power plant in Sophia Antipolis (Alpes maritimes)

- Potential

The additional potential achievable in the short term (2020) is estimated at around 2,000,000 m² producible sensors for nearly 1000 GWh / year. At this potential, we can add a feasible potential in the medium term (2030) estimated at around 2.3 million m² for a producible additional of 1200 GWh/ year. In the long term, an additional potential of 3,000,000 m² of sensors for a producible 1500 GWh is planned.

1.4 PACA 2020 and the MED Solar Plan

Since 2007 and the “Grenelle Environnement”, the production of renewable energies is one of the two mainstays in energy matters, the second being the increase in energy efficiency of buildings. Thus, France has set itself an objective of 23% renewable energies in the final energy consumption by 2020. In order to achieve this objective, a set of measures has been adopted:

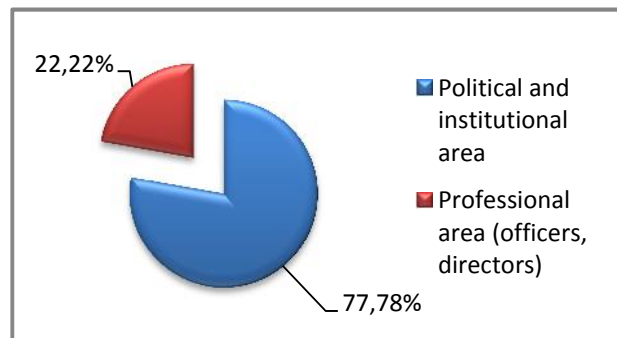
- The establishment of a tax credit for production using renewable energies;
- The obligation to purchase electricity produced from renewable energies, with specific feed in tariffs for each of the sectors (wind, photovoltaic, biomass, etc.);
- The simplification of the administrative procedures for domestic projects;
- The establishment of certification and labels to better identify the main actors and technologies;
- The launch of calls for tenders via the heating fund (“fonds chaleur”) and the demonstrators fund in order to stimulate R&D;
- the definition of quantitative objectives within the framework of Multi-Annual Production Investment Program-PPI;
- The creation of wind development zones in order to ensure the controlled development of wind energy;
- The establishment of legislation with regard to the environment and urban development for land photovoltaic facilities;
- The establishment of regional systems with regard to climate, air and energy: Territorial Energy Climate Plans-PCET.

This national approach is complementary and follows the Mediterranean Solar Plan which is based on two major objectives:

- The additional construction of 20 GW in capacities for production of renewable energy by 2020 in the Mediterranean countries concerned;
- Making significant energy savings in the Mediterranean area by 2020.

1.5 Barriers and facilitators to the strategy implementation: results and analysis of the survey

8 local authorities and governmental agencies from the MED Area and located in the Provence Alpes Côte d'Azur Region have answered the questionnaire. This section presents and underlines the main findings of this survey.



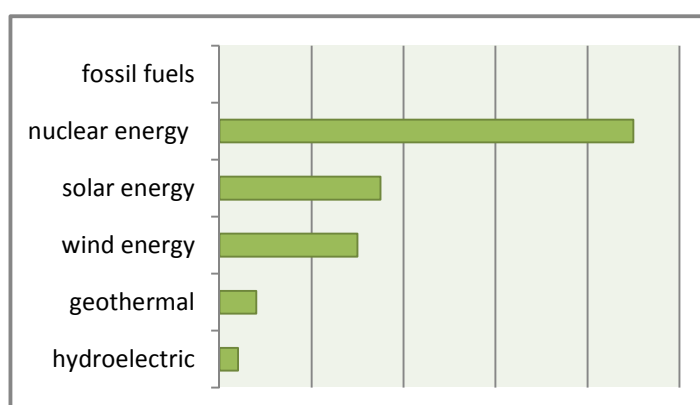
87.50% of the interviewees feel that the information on renewable energy in France is adequately conveyed.

The strategy of the interviewed administration, concerning sustainable energy development targets mainly the citizens and the enterprises of the region and in a minor way the local association (through financial support).

55% of the interviewees have declared that their administration have just started to engaged on the front of sustainable energy, 33% think that it has reached a sufficient level and progresses continuously and 11 % are not engaged in this front.

The strategies of these administrations for sustainable energy are mainly linked/ coordinated with State/provincial government (PACA Council). Economic incentives for the installation of solar systems cover both photovoltaic and solar thermal technologies.

According to the answers gathered, there are rules in the building regulations concerning in energy efficiency, in the use and dissemination of renewable energy sources and in the obligations in building regulations (or in territorial planning) to accelerate the energy saving and/or renewable sources.



The nuclear energy is the source which France focuses more in the next five years (90%). That is due to the fact that France is engaged since decades in the nuclear energy production. We can also

underline the ITER project at regional level: International Thermonuclear Experimental Reactor is a major worldwide scientific project implemented in the PACA Region. 34 countries are associated to finance and manage this project. ITER aims to demonstrate that it is possible to produce commercial energy from fusion. The ITER Organization is staffed by men and women from all over the world who have come together to work on this global collaboration. From 500 in end-2010, staff numbers are expected to reach 1000 during the operational phase of the project. Apart from that, 35% of the interviewees declare that solar energy will be developed in France in the next five years, with at almost the same level the wind energy.

The two main barriers pointed out by the interviewees to promote solar energy in your Administration are the lack of funding for 62.50% of them and the administrative procedures at a lower level (25%).

1.6 SWOT analysis

	HELPFUL (To achieving the objective)	HARMFUL (To achieving the objective)
INTERNAL ORIGIN	<ul style="list-style-type: none"> French leader in the production of photovoltaic solar energy A clear regional strategy A strong support schemes 	<ul style="list-style-type: none"> Lack of funding Economic situation of companies in the solar energy sector
EXTERNAL ORIGIN	<ul style="list-style-type: none"> Highest solar irradiation rate in France Tax Credits for sustainable development 	<ul style="list-style-type: none"> The ITER project Financial support to promote solar energy

The Regional Scheme for Climate, Air and Energy gives a clear strategy and objectives to achieve at regional level. The PACA region has an important potential in solar energy production, the most important in France which constitutes an opportunity for the development of this type of energy. Moreover,

this regional scheme gives a vision at short, mid and long terms (objectives in 2020, 2030, 2050). This scheme covers both energy efficiency and renewable energy production. We can also underline the willingness of the local administration to support the development of renewable energies. However, the main weakness lies on the economic situation of the companies involved in the solar energy market, mainly due to the changes operated in the financial and fiscal support offered by the government that has changed several times. As a consequence, the companies operating in this sector know instability developing their business model. The ITER project could be seen a threat for the development of renewable energies and specifically solar, as it concentrates resources (financial, political...). Finally, the economic crisis is impacting the financial means of the national and local authorities. Indeed, some fiscal support schemes to promote the use of solar energy have been stopped in the past few years.

1.7 Global conclusions

The PACA Region is the French leader in the production of photovoltaic solar energy and the second largest producer of solar thermal energy in France. The local governments have adopted the development of renewable energies as one of the fundamental principles of its energy policy.

The region suffers from a strong imbalance in energy because it produces only 10% of its consumption which constitute a real opportunity for the development of solar energy. A strong strategy, with the Regional Scheme for Climate, Air and Energy, has been implemented to define objectives at short, mid and long terms.

Policy Accelerator – Regional Needs

- Stability of financial support system;
- Increase the number of awareness raising campaign towards different stakeholders;
- Development of the production of renewable energies to offset the imbalance between energy production and consumption;
- Support the emergence of innovative solutions to realize energy savings.

2. The SHAAMS ENTERPRISE RESEARCH ACCELERATOR in PACA region

2.1 The R&D for energy and the solar market in the PACA region

Energy conservation, preservation of nature and water resources, sustainable urban development and efficient waste management are among the main concerns of the national institutes, local organizations and businesses operating on the Côte d'Azur.

With hundreds of experts employed by institutions ranging from start-ups to international corporations and major private and public research labs, the Côte d'Azur enjoys tremendous R&D potential in a variety of fields, from renewable energies, to optimization of national resources like biomass and solar energy. Major companies, like EDF R&D, Veolia Energy, Schneider Electric, EDM and IMRA Europe, have chosen the region, often to develop their R&D teams. Many of these companies are driving new innovative research in areas related to sustainable development. Several SMEs are contributing to the growth of innovative activities related to sustainable development.

The regional universities and the public research laboratories (CNRS, CEA, CSTB) are mainly financed by the State and local authorities

The French Environment and Energy Management Agency – ADEME is responsible for the guidance and the facilitation of research in its areas of intervention (renewable energy, air, noise, energy efficiency, soil, waste). It provides financial support for research, development, demonstration and experimentation.

More recently, in the context of the "investissements d'avenir", ADEME was asked to manage several programs or activities within its areas of expertise including a program entitled "Demonstrators and technological platforms renewable and low-carbon energy and green chemistry." This program consists of two actions:

- "Demonstrators renewable energy and green chemistry" for an amount of EUR 1 350 million;

- "Sorting and recycling of waste, pollution, eco products" for an amount of EUR 250 million.

2.2 The R&D and the market strategies

The R&D activities are also supported by the Regional Council through a regional cluster policy. PRIDES stands for Regional Poles of innovation and interdependent economic development. The PRIDES initiative has been developed in 2005 by the Regional council to bring together companies from the same sector and to encourage them to cooperate. The PRIDES represent most of the sectors and competences of economic actors from the region. A specific PRIDES has been labeled in the PACA region covering the new energies sector named Capenergies which gathers a network essentially made of companies:

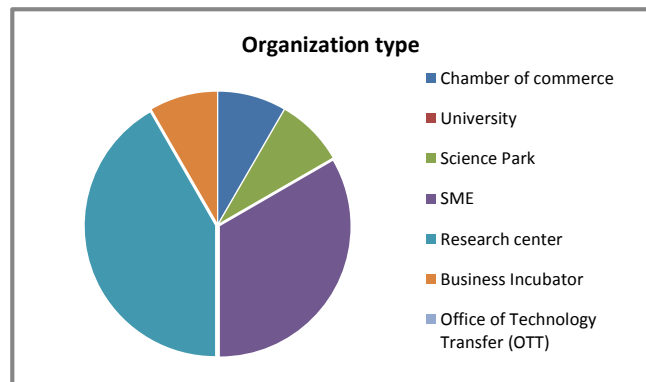
- 300 Companies
- 20 Research centers
- 20 Training centers
- 20 financial institutions
- 50 Institutional partners

It focuses on nine areas; energy management, solar energy, wind energy, hydraulics-geothermal energy-marine energy, biomass-bioenergy, nuclear fusion, nuclear fission, hydrogen, and linking and integration of energy systems. Since its creation, Capenergies has implemented 33 R&D projects dealing with solar sector. It aims to bring together stakeholders in the sector to make the area a center of expertise and innovation in clean energy.

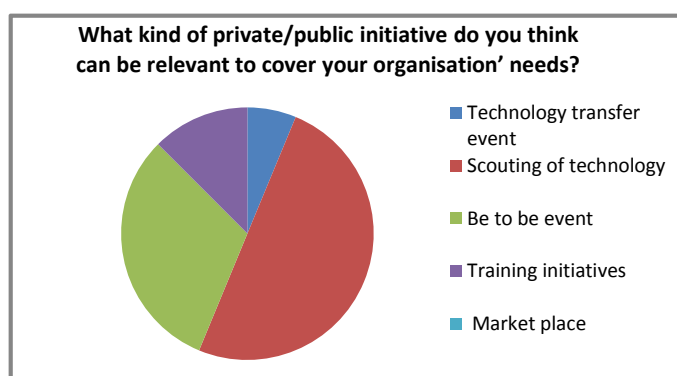
2.3 Economic, market and financial barriers and facilitators to the strategy implementation: Questionnaire Results and analysis

12 questionnaires have been filled in by various type actors as SMEs, Research laboratories, incubator located in the PACA region. These actors are directly involved in the solar energy sector. You will find below the most significant results of the survey:

According to the answers gathered, most of these actors have a good knowledge on policy measures supporting solar energies and are mostly interest by subjects such as “R&D in solar energy” and “Trading solar energy systems”. The promotion of solar energy is seen as less important but we can point out that it is still a strategic subject for the interviewed actors.



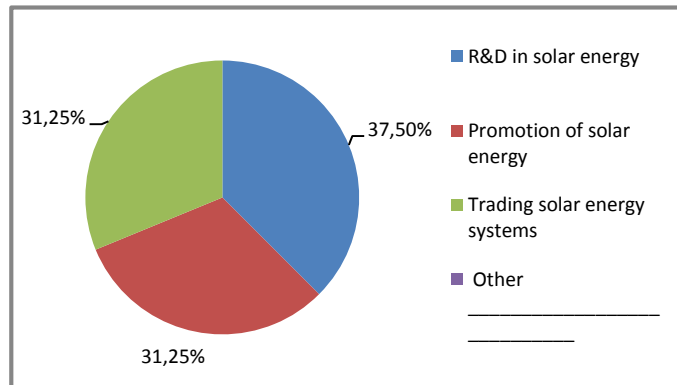
Focusing on the companies interviewed, they have all linkages with research laboratories and have benefited from public grants supporting this activity. We can underline here the PRIDES policy, launched in 2005 that have created networks of actors with a sectoral approach to benefit from public support. The main public actors that have linkages with private ones are: ADEME, CEA INES, and the academics with Ecole des MINES, ARMINES, CEP (Center for Energy and Process). Most of the interviewed organizations (93%) are supported by national or EU institutions on solar energy subject.



The initiatives that most interest the organizations are “Scouting of technology” and to participate in “BtoB events”. The main difficulty underlined in implementing solar energy system in their organization is the lack of financing.

More than 91% of the interviewed organizations have office/person actively involved in facilitating technical, entrepreneurial and financial support which is explained by the fact that most of these organizations have a public support at EU and/or national levels.

The common source of funding mentioned by the different organizations is the Capital (100%). We can notice that this capital is combined with public support scheme for 80% of them and also by grants. 93% of them have implemented or been part of a solar energy subsidized/grant program. We can underline the importance of the public support schemes for the solar sector in the PACA region and the good knowledge of the private sectors of these existing mechanisms as they are an integral part of their sources of funding. The types of solar energy subjects where the interviewees have an interest are R&D, Promotion and trading solar energy systems at more or less the same levels.



2.4 SWOT Analysis

	HELPFUL (To achieving the objective)	HARMFUL (To achieving the objective)
INTERNAL ORIGIN	<ul style="list-style-type: none"> • Organization through cluster organizations (CAPENERGIES Cluster) • A regional observatory for the energies • National/ International Research Labs public/private • A support mechanism well known by the private sector 	<ul style="list-style-type: none"> • Lack of funding for the companies • The solar sector is artificially supported by the administration to encourage the use of solar energy
EXTERNAL ORIGIN	<ul style="list-style-type: none"> • Research Tax credit mechanism • Only 10% of the energy consumption is produced in the region (high potential for the solar energy production) 	<ul style="list-style-type: none"> • The legislation supporting the solar sector is changing which causes difficulties and instability to the companies (i.e. rate of tax exemption/ level of price to buy electricity by EDF)

The PACA region, through the implementation of a cluster Policy (PRIDES) has developed the ability of the actors (Large companies/ SME's/ Research labs) to work together with a strong networking approach. This explains why the different actors have a strong knowledge about the different financial mechanisms available to finance part of their activity.

Moreover, the presence on the territory of high level laboratories such as the "Ecole des mines de Paris", CNRS, CEA strongly contributes to the company creation in the solar sector. The governmental agency ADEME provides information through different annual guides, regular information on support schemes (Communication through Internet and workshops organized).

The main opportunity of the solar energy sector lies on the potential of energy production in the PACA Region. Some useful tools are provided to the entrepreneurs through the Regional Observatory for Energies which help them to develop their business.

Nevertheless and despite the existing mechanisms to support the private sector, the lack of funding is the main difficulty that encounters the entrepreneurs from

the sector. There were indeed many changes and modifications with the legislation supporting the sector which causes real difficulty to entrepreneurs as most of them have their business model based on these schemes.

2.5 Global conclusions

The regional cluster Policy (PRIDES CAPENERGIES) has developed the ability for the actors to work together with a strong networking approach. The local authorities finance R&D projects which have boosted the innovation of the regional actors. The region shelters high level research institutes as the “Ecole des mines de Paris”, the CEA and the CNRS which contribute strongly to the company creation in the solar sector and of the governmental agency ADEME for the quality of the information provided through different annual guides, sectoral surveys and regular information on support schemes.

Enterprise and Research accelerator – Regional Needs

- Improve access to finance especially for startups
- Facilitate the cooperation with investor organizations such as Business Angels associations and venture capitals;
- Improve the visibility of regional support system and develop dedicated services toward the solar sector's actors.

3. The SHAAMS SOCIAL ACCELERATOR in PACA Region

3.1 The public awareness in the PACA region

The PACA regional Council has implemented educational programs for environmental and sustainable development toward the civil society. In this field, the PACA region has three objectives:

- Promote the uptake of sustainable development issues through education, awareness and information of all public, residents and users of the region;
- Encourage changes of behavior at all ages and in all aspects of personal and professional life;
- Promote the development of individual and collective practices adapted to territorial specificities.

3.2. The Partnerships and initiatives in the solar sector

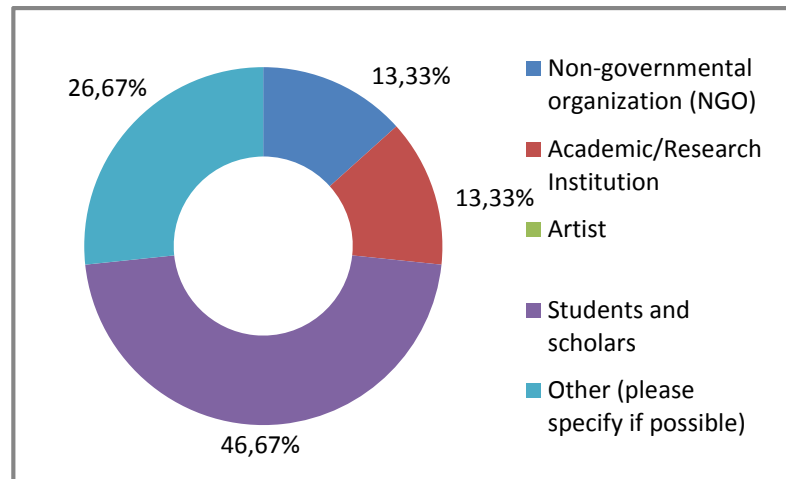
Many partners in the region have decided to work together to carry out a comprehensive and collective development of information, training and education for all, at all ages of life, through the creation in 2004 of a regional “Platform for Environmental Education and Sustainable Development” that is supported administratively by the GRAINE PACA association. It gathers actors in environmental education and sustainable development, from the four spheres: Services and public institutions of the State, Local Government, Civil Society and Business. The platform allows the civil society to:

- Be informed and learn about the different policies at local, regional, national and international, on topics, debates;
- Be heard and to offer experiences, express their needs, to supply a collective reflection;
- Be in contact and meet others to share.

The Academic actors such as universities (UNICE) and Business Schools (SKEMA) have also implemented specific courses and degrees dedicated to sustainable development economy.

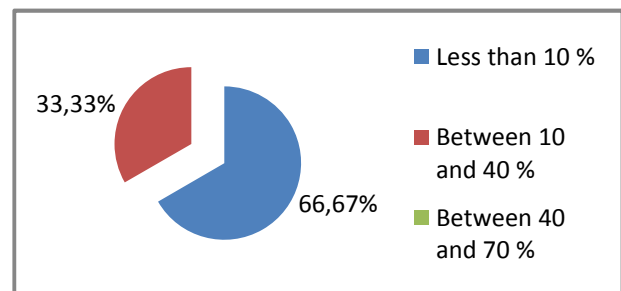
3.3. The main barriers and facilitators to the public participation and the public awareness about solar energy: Questionnaire Analysis

This survey aims at understanding the society/consumer knowledge and perception of solar energy and their expectations about future initiatives. 15 people have answered to the questionnaire.

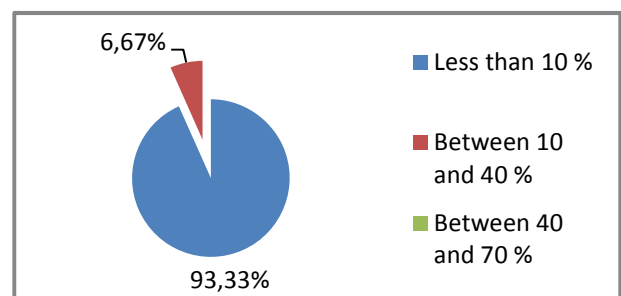


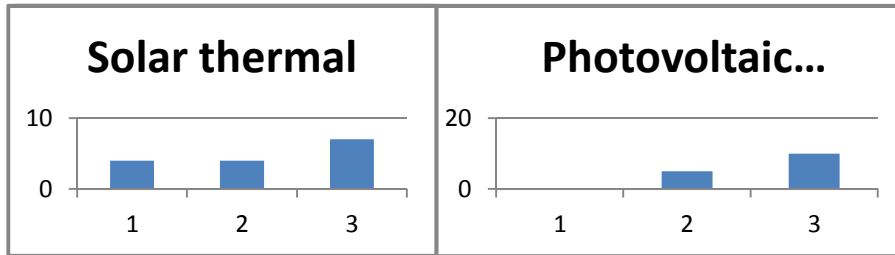
46.67 % are students, 13% are NGO representatives, 13% Academic/ research Institution and 26 % (others) are citizens.

The perception towards the actual percentage of renewable energy of the total energy production is less than 10% and 33% between 10 and 40%.



For 93% of the interviewees, the actual percentage of solar energy of the total energy production is less than 10%.

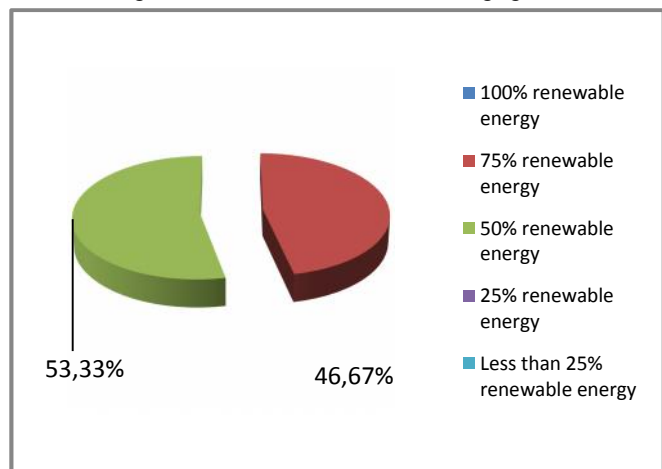




The 3 graphs below show that the interviewees think that the Passive heat, the

Photovoltaic and the solar energies are of key importance.

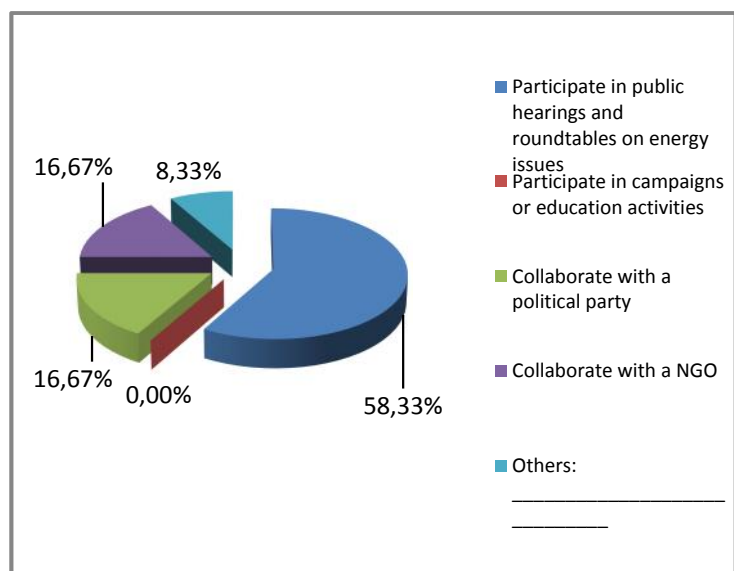
The energy mixes that the interviewees would you like to see in twenty years are for 53% of them are 50% renewable energy and 46% think that the energy mix should represent 75% of renewable energy. That clearly demonstrates that the civil society is seeing, in the use and development of renewable energies, a clear opportunity in a next future.



The three main barriers which hamper a further development of renewable energy solutions and that have been underlined by the interviewees are:

- Lack of information of civil society
- Lack of political will of decision makers
- Lack of willingness of business sector

All the interviewees declare that the production of renewable energy is in general less expensive than the production of energy based on fossil or nuclear sources. They feel that Climate Change is not taken seriously into consideration when decision makers decide about the best energy solutions.



For 58% of the interviewees, the participation in public hearings and roundtable on energy issues is seen as the most useful and appropriate way for them to influence the discussion and decision making process regarding the future energy policy. 75 % of the interviewees have heard of Earth Hour initiative.

3.4 SWOT Analysis

	HELPFUL (To achieving the objective)	HARMFUL (To achieving the objective)
INTERNAL ORIGIN	<ul style="list-style-type: none"> - Solar energy perception - Platform on Sustainable development - Educational program 	<ul style="list-style-type: none"> - Lack of information
EXTERNAL ORIGIN	<ul style="list-style-type: none"> - Open to participate to workshops/ Debates/ Events - The theme interests most of the citizens - Solar energy is seen as a serious alternative 	<ul style="list-style-type: none"> - Lack of political will of decision makers

We can underline as a regional strength, the Platform for Environmental Education and Sustainable Development, a useful tool to promote the use of renewable energies by the civil society. The perception of the development of new sources of energy is also well perceived by the civil society. They are aware of its importance and consider it as a credible opportunity in a next future. In parallel, they feel that climate change is not taken seriously into consideration when decision makers decide about the best energy solutions which we can consider as an important threat. The civil society expresses its will to participate in actions related to the promotion of renewable energies and to influence the decision taken by the local government through their participation in workshops and debates.

3.5 Global conclusions

Many partners in the region have decided to carry out a comprehensive and collective development of information, training and education for all, at all ages of life, through the Platform for Environmental Education and Sustainable Development. This contributes to disseminate information and/or behaviors to be adopted by the civil society. Many associations are focusing on the general topic of sustainable energy. We can point out that we have not identified a specific association that is only dedicated to solar energy challenges. Following the questionnaire analysis, the civil society seems to have a real interest in the topic with the willingness to learn more about it; about behavior they should have.

The civil society seems to be interested to be involved in participative activities (workshops) dealing on energies to have a positive impact on the decision making process of the local authorities.

Social accelerator – Regional Needs

- Increase the number awareness raising events/ actions involving citizens;
- Facilitate debates and exchanges for citizens to influence decision making processes.

4. SHAAMS common indicators for the sectors analysis

Indicators	Category		Exists by end of 2011	Exists by end of 2012	Exists by end of 2013	Exists by end of 2014	Exists by end of the project	Notes
Region of reference: PROVENCE ALPES COTE D'AZUR								
1 - N° of solar systems in the region	Solar thermal power (No)		469 (24 305 square meters)	487 (28 076 square meters)	-	-	-	
	Solar thermal application (in hot water, space heating, drying, solar cooling)				-	-	-	
	Solar PV systems (No)		25 308	26697				
	Installed power per capita		0.08 kW	0.1 kW				
2 -Total investments in solar energy in your region	Grant schemes to support private investments							
	No of solar systems in public buildings							
	Money invested on raising awareness (training, communication)							
	Which technology does the state support?	<ul style="list-style-type: none"> - Individual Solar Water Heater - Collective solar water heater - Combined Solar System 						
3 - Total solar energy production in your region	Total energy generated from the solar energy		384.8 MW	Data not yet available				

5. Existing relevant practices policy accelerator

SHAAMS POLICY ACCELERATOR	Description of the practice n° 1
Name of the project	"Sustainable development & Environment Chart of the CASA" (Communauté d'Agglomération de Sophia Antipolis)
Deliverable(s) or output(s) that constitute the core good practice(s) of the project	
Project rationale	Commitment of 24 cities to respect a chart dealing with environment and sustainable development
Project essentials	<p>10 topics are covered by this chart:</p> <ul style="list-style-type: none"> - Education for environment - Risks management - Improving transport and development of clean vehicles - Improving waste collection and treatment - Development of building quality - Protection and promotion of the coast - Implementation of innovating projects - Supporting the agricultural sector - Exemplarity of CASA
Contact persons/institutions	<p>Communauté d'Agglomération de Sophia Antipolis http://www.casa-infos.fr/ Laurent CARRIE Director L.carrie@agglo-casa.fr</p>

5.1 Existing relevant practices Research

SHAAMS Enterprise Research and Accelerator	Description of the practice n° 1
Name of the project	The "Atlas of solar radiation in the PACA region"
Deliverable(s) or output(s) that constitute the core good practice(s) of the project	
Project rationale	Distributed free internet, this atlas aims to serve as a reference for regional assessment of the potential channels of photovoltaic (PV), thermal and thermodynamic solar radiation.
Project essentials	Different public and private actors in the field can use this atlas to identify implantation sites of production systems by solar energy.
Good practice features	Regular updates of the tool
Contact persons/institutions	http://www.atlas-solaire.fr/

5.2 Existing relevant practices social accelerator

SHAAMS Social Accelerator	Description of practice n° 1
Name of the project Deliverable(s) or output(s) that constitute the core good practice(s) of the project	WEB Portal on Sustainable development
Project rationale	This web portal has been created by the University of Nice to best meet the visibility of actions and projects in SD undertaken within the university and to highlight the initiatives of each citizen on this approach.
Project essentials	<p>The objectives are:</p> <ul style="list-style-type: none"> • Build together a resource center dedicated to the academic world and its partners; • Inform on the activities of research directly related to sustainable development; • Propose concrete actions that will bring out a common awareness of the need to transform the university in accordance with the principles of sustainable development; • Introduce to current students the actions implemented by their university in this field; • Bring together in a single space the various initiatives that already exist.
Contact persons/institutions	http://redd.unice.fr/ University of Nice

5.3 List of acronyms and abbreviations

A.G.I.R: Regional Global Innovative Action

ADEME: National Agency for Environment and Energy Management

CEA: French Alternative Energies and Atomic Energy Commission

CNRS: National Center for Scientific Research

CSTB: Scientific and Technical Center for Building

DREAL: Regional Directorate for Environment, land and housing

EDD Platform: Platform for Environmental Education and Sustainable Development

EDF: Electricité de France

GWh: Gigawatt Hour

ITER: International Thermonuclear Experimental Reactor

KTEP: Kilo Ton Equivalent Petrol

MW: Megawatt

MWp: megawatt-peak

ORE: Regional Observatory for Energy

PACA: Provence Alpes Côte d'Azur

PCET: Territorial Energy Climate Plans

PPI: Multi-Annual Production Investment Program

PRIDES: Regional Joint Innovation & Economic Development Cluster

SRCAE: Regional Scheme for Climate, Air and Energy