

# ***SOLTEC***

## ***Towards a European qualification for service and maintenance in the solar-energy-sector***

**503219-LLP-1-2009-1-DE-LEONARDO-LMP**

**WP2 - Needs analysis and development of competence profile**

### **Short reports about needs analysis results**

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The interviews are carried out under the Leonardo da Vinci project, *SOLTEC –Towards a European qualification for service and maintenance in the solar-energy-sector*.

**The project aims** at improving the quality of qualification programs in the solar-energy sector with regard to contents, methods and in terms of transparency and recognition between the European countries.

**The aim of the interviews** is to verify the national draft competence profiles by enquiring about the staff and qualification requirements in the photovoltaic field.

**Information regarding the interviews:**

- The number of contacted companies: 20
- The number of companies that responded to our invitation: 8
- Number of interviewed companies: 5
- The period in which the interviews were realized: February- April 2010
- Facilitators of the interviews: Emilia Saulescu and Simona Capatan

**Work methodology:**

- The interviewed persons were contacted by e-mail or phone by the SREP staff;
- Interviews were done personally;
- The interview took place in the form of an open discussion;
- The interviews follow the guiding questionnaire attached to the methodology;
- The interview facilitator sent in advance to the interviews the developed competence profile so that the interview has a starting point;
- After the interview, SREP write a summary report comprising the main results of the interviews.

## 1. Structure of the interviews companies

### 1. SC UBI-THERM Consulting SRL, Iasi

Business Domain: Unconventional Energies; ESCO Type Services

*Personnel: 4, out of which: Qualified workers, technicians- 50% and University Degree- 50%*

### 2. S.C FINEX S.R.L

Business Domain: Research- Design in the domain of using regenerative energies

*Personnell : 5, out of which: Administrative- 20% and University Degree- 80%*

### 3. BISON SOL S.R.L.

Business Domain: Forging, Environmental Protection, Installing pumps for solar panels

*Personnel: 26, out of which: Qualified workers, technicians- 70%, Unqualified workers and qualified at the work place- 15%, Administrative- 5%, University Degree- 10%*

### 4. REMCO TRADE S.R.L. (Renewable Energy Management Company)

Business Domain: Regenerative Energies (commerce, consultancy, research-development)

*Personnel: 3, out of which: Qualified workers, technicians- 33%, Administrative- 33%, University Degree- 33%*

### 5. SC NATURALIGHT SRL

Business Domain: Distribution of Technology for Regenerative Energy

*Personnel: 9, out of which: Unqualified workers- 20%, Qualified workers at the work place- 30%, Qualified workers, technicians- 20%, Administrative- 10% and University Degree- 20%*

## **2. Staff trained in photovoltaic**

The companies generally have 1 or maximum 2 persons that work in the photovoltaic domain, most of them being engineers.

## **3. Demand for specialists in photovoltaic.**

4 of the interviewed companies considered that they need other specialists in the photovoltaic domain, while 1 of the companies considered that it doesn't.

## **4. Number of photovoltaic technicians that work in installation / maintenance**

All 5 interviewed companies have 1 or maximum 2 employees that work in the field of installation / maintenance.

## **5. Means of gaining expertise of photovoltaic professionals.**

The means of gaining expertise of photovoltaic professionals in the 5 interviewed companies are through: additional study, participating in different debates and presentation, internal training and workshops at the workplace, according to documentation sent by a partner firm or individual study. Most people use internal training and additional study.

## **6. Expected employment growth until 2013**

The 5 interviewed companies expect a raise of the number of experts in the sector of photovoltaic systems by the year 2013. Their number varies from 2 to 8, these numbers being significant since we are talking about small companies.

## **7. Recruitment requirements and further training of employees**

All 5 interviewed companies would like that when hiring specialists in the photovoltaic domain, these specialist have vocational training, further training, in-job training (work experience), training courses.

## **8. Vocational training curriculum in the photovoltaic field**

All 5 companies manifested their willingness to send specialists in training courses in the photovoltaic domain and their disappointment in the small number of such courses.

Among the subjects they consider important to be discussed within a vocational training curriculum:

1. Electronics elements, electrical connections, mechanical and electronic assemblies;
2. Means to proportionate a photovoltaic installation, according to the energy discharge of kWh/day;
3. Proportioning of the number of photovoltaic panels, of battery charging regulator, inverter, number of necessary batteries, etc;
4. Types of photovoltaic panels in fabrication and their capability;
5. Report of performance/price of panels and the perspectives of development in this domain;
6. Proportioning and projecting/designing the systems;
7. Installing and setting the systems;
8. Maintenance.

## **9. Basic qualifications, key competences and professional knowledge of professionals working in service and maintenance in the photovoltaic field.**

According to the answers of the interviewees, qualifications they considered necessary for professionals working in service and maintenance in the photovoltaic field are:

- Obtaining the basic qualification as a water and channel installer, electrician;
- Qualification for work of applying coating in construction;

- Knowledge of welding chucks on pipes, insulations, packing sealing, verifying leaks at the water and channel works;
- The capacity to manage junctions at the networks;
- Getting familiar with basic materials for coating;
- Methods of flashing and welding, etc.

For each qualification there are included the key competences and professional knowledge necessary: basic knowledge in the domain of electricity, electronics, electro mechanics, using the solar and wind energy, because these photovoltaic systems work in parallel.

## Conclusions:

- At the interview participated companies of research, designing and distribution. The interviewed companies have between 3-26 persons employed and they have all types of staff members: unqualified workers, qualified workers, workers qualified at the work place, technicians, administrators and University degree.
- The persons who work in the photovoltaic domain do not have specific vocational training in the photovoltaic domain, most of them being engineers or technicians that have studies individually, through internal training and workshops organized at the work place, according to documentation sent by a partner firm.
- The demand on the internal market of photovoltaic systems is quite low, but there is envisaged a rise of it in the next few years, with the help of national programs to stimulate this sector. Thus, each of the interviewed persons mentioned that they have in mind a rise of the company's staff in the photovoltaic system with 2 to 8 persons.
- All 5 interviewed persons wished that when hiring specialists in the photovoltaic domain, these have vocational training, further training, in-job training (work experience), training courses.
- Regarding basic qualifications and professional knowledge of professionals working in service and maintenance in the photovoltaic field, interviewed persons considered that the most necessary qualifications are the basic ones as water and channel installer, electrician, qualifications for applying coatings in constructions, welding chucks on pipes, insulations, packing sealing, verifying water and channel leaks, capacity to realize junctions at the network, being familiar with basic materials for coating, methods of flashing and welding.

- All interviewed persons manifested their availability to participate in vocational courses for training in the photovoltaic domain. Unfortunately, most of them did not possess the necessary knowledge to participate in the realization of the competence profile, due to the lack of this job in the COR code (Job Qualification in Romania). In realizing this feedback, the Institute for Research-Design in the domain of Regenerative Energy was of a real help.