solarcombi+

Solar Combi+
WP2: Market Analysis

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Identification of most promising markets and promotion of standardised system configurations for the market entry of small scale combined solar heating & cooling applications
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Intelligent Energy Europe

Outline

- WP2: Current status
- WP2: SWOT Analysis
- WP2: Potential market share and definition of goals

WP2: Current Status – Phase 2

- Preparation of Deliverables D2.6 and D2.7

  – D2.6: SWOT Analysis for SolarCombi+
  Strengths, Weaknesses, Opportunities, Threats

  – D2.7: Report on market share of small scale SolarCombi+
  Proposals

WP2: SWOT Analysis

- Preparation based upon:

1. Market analysis conducted until now
   - Questionnaires to institutional partners on solar air conditioning
   - Questionnaires to industrial partners (manufacturers – retailers)
   - Questionnaires to retailers concerning consumer attitudes
   - Economic Comparison with competing technologies
   - Economic viability and SolarCombi+ prospects for market penetration

WP2: SWOT Analysis

- Preparation based upon:

2. New information collected or to be collected
   - Existing / planned financial incentives for solar thermal systems, other heating or cooling systems or other RES applications
   - Legislation on solar thermal systems, other heating and cooling systems and other RES applications
   - National energy tariffs (electricity, natural gas, oil)
   - Relation of electricity mix with CO_2 emissions [g/kWh]
   - volume of sales/installations for small scaled chillers manufactured/sold by industrial partners and their applications (e.g. office building / single family house, country, city, purpose, etc)

WP2: SWOT Analysis

- Preparation based upon:
  3. Outcomes of Deliverable 4.1
     - Heating – Cooling load factor
     - Collector area range
     - Storage capacity
     - Installation
     - Building integration
     - Primary Energy Saving
     - Solar Fraction
     - Electrical COP
     - Cost of PE Saved
     - Total kWh from SC+
     - SC+ system capacity
     - Chiller capacity
     - Boiler capacity
     - Auxiliary Energy
     - Auxiliary Energy for heating
     - Auxiliary Energy for DHW
     - CO2 emissions saving

Attention: specific relative data (added value of SC+) should be provided (either related with type of building or region)

WP2: SWOT Analysis

Strengths	Weaknesses
•Technical issues •Cost-related parameters •Marketing aspects	•Technical issues •Cost-related parameters •Marketing aspects
Opportunities	**Threats**
•Technical issues •Cost-related parameters •Financial incentives •Market related parameters •Legislation	•Technical issues •Cost-related parameters •lack of and/or Financial incentives for competing tech. •Market related parameters

WP2: SWOT Analysis

- Strengths
  - Technical issues
    - Compatibility with existing heating/cooling & distribution systems
    - Extension of the use (DHW) of existing ST systems
    - High electrical COP (higher than competition)
    - Tailor-made systems achieving better performance
  - Cost-related parameters
    - Relatively low operating cost (in off-gas mode – e.g. cooling)
    - Low maintenance cost
    - Relatively good Cost of PE saved (for specific region/use combination)
  - Marketing aspects
    - For user / operator: 1 product→3 needs
    - Positive environmental profile (reduction of CO_2 emissions, saving of primary energy…)
    - State of art equipment/system

INPUT / COMMENTS FROM INDUSTRIAL PARTNERS

WP2: SWOT Analysis

- Weaknesses
  - Technical issues
    - Storage required
    - Large unoccupied area required
    - Use of auxiliary
    - Not efficient for specific region/building combination
    - Not yet standardized systems
  - Cost-related parameters
    - High capital cost
    - Non-negligible operating cost
    - Today's uncertain market in terms of manufacturing cost (no economies of scale)
    - Relatively high installation cost
    - Transportation cost
    - Maintenance cost (especially concerning replacement of parts)
  - Marketing aspects
    - Limited (not long-termed reliable) operating experience
    - Lack of local retailers
    - Limited market applications (small-scale systems)
    - Aesthetics
    - Lack of user friendly interface and automated features
    - Non well trained technical personnel (installers)

INPUT / COMMENTS FROM INDUSTRIAL PARTNERS

WP2: SWOT Analysis

- Opportunities
  - Technical issues
    - High potential for further increase of SC+ system's efficiency (R&D ongoing and still at a development stage)
    - Ideal for locations with good solar irradiation and high fuel prices (and energy autonomous-isolated premises)
    - No significant future improvement of fossil-fuel technologies foreseen (efficiency)
    - Future building integration (until now systems are added after the building is built)
    - Development of standard design systems
    - Standardization
  - Financial incentives
    - Available (ongoing) financial incentives per country
    - Prospects for financial incentives
    - Proposal for green tax package
  - Market related parameters
    - Already operating systems: good example
    - Opening of jobs – businesses – companies, Exports
    - Promotion of sustainability
  - Legislation
    - EU (or national) – Legislation (particularly public sector) for the employment of RES
    - Recast of the EPBD
    - Building codes with mandatory use of residential RES systems

WP2: SWOT Analysis

- Threats
  - Technical issues
    - Higher efficiencies of competing technologies
    - Competing technologies' capability of covering peak demand
    - Already installed conventional systems in existing buildings (non-worthy replacement)
  - Cost-related parameters
    - Decrease in fuel prices
  - Financial incentives
    - Available financial incentives for competing technologies
    - Lack of incentives in certain countries
    - Analogous tax regime with conventional equipment
  - Market related parameters
    - Lack of awareness for the wider public
    - End user's behaviour relates with system's performance
    - Limited retailers' network
    - Insufficiently trained installers

WP2: Examination of potential market share and definition of goals

- 1st Proposal: SWOT Matrix (relation with D4.1 results)

	Strengths S1, S2, …	Weaknesses W1, W2, …
Opportunities O1, O2, …	**S-O Strategy**: Use Strength **S1** to take advantage of Opportunity **O1**	**W-O Strategy**: Overcome weakness **W1** by taking advantage of Opportunity **O2**
Threats T1, T2, …	**S-T Strategy**: Use Strength **S2** to avoid Threat **T1**	**W-T Strategy**: Minimize Weakness **W2** and avoid Threat **T2**

WP2: Examination of potential market share and definition of goals

EXAMPLE:	**S1**: Low operating cost (in off-gas mode) **S2**: Compatibility with conventional systems	**W1**: Transportation/ Maintenance cost **W2**: High Capital Cost
O1: Increase in fuel prices **O2**: Opening of jobs / businesses	**S1-O1 Strategy:** Promote solar over fossil-fueled technologies	**W1-O2 Strategy**: Market opening to reduce maintenance / diminish transportation cost
T1: Competition's capability of covering peak demand **T2**: Non-worthy replacement of existing systems	**S2-T1 Strategy**: If desired, use conventional systems in combination with SC+ to cover peak demand	**W2-T2 Strategy**: Target new buildings / installations, along with the provision of standardized systems

WP2: Phase 2 related with D2.7

- Other Proposals?
  1. …input from industrial partners
  2. …input from D2.3 (not available consumer's data from all countries) & D2.4
  3.
  4.

- Input still missing:
  - Legislation / Financial incentives from Austria, Spain
  - Volume of sales / applications from SorTech, Fagor

Time frame: D4.1 results ?, if not before end of June then D2.7 goes for September