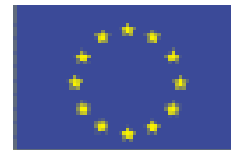

STREP Proposal for FP6-2004-Energy-3 SUSTDEV 1.2.8
**Provide Facility to Gain Energy User As Load
Manager PRO-LOAD**

Sebastian Gölz

Fraunhofer Institute for Solar Energy Systems ISE

Renewable Energies Info Day, 19.10.04 Brussels,



PRO-LOAD Infoday presentation

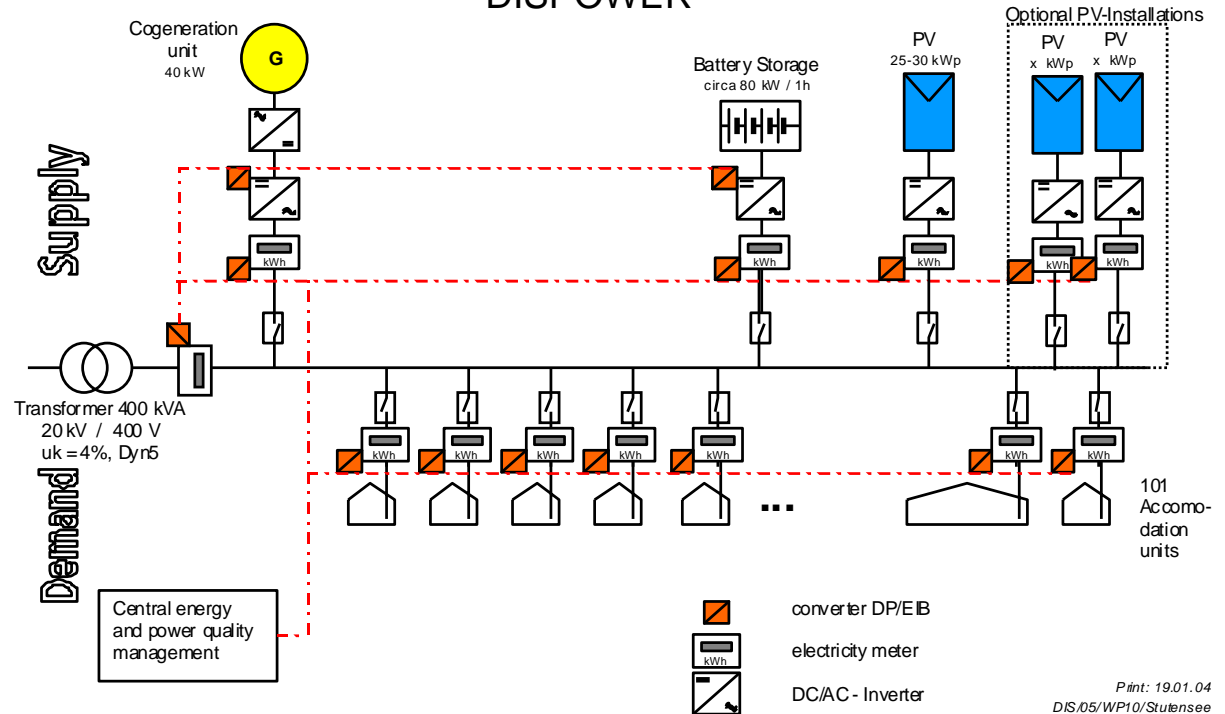
Integration of Renewable Energy into the grid



Example from the EU project DISPOWER



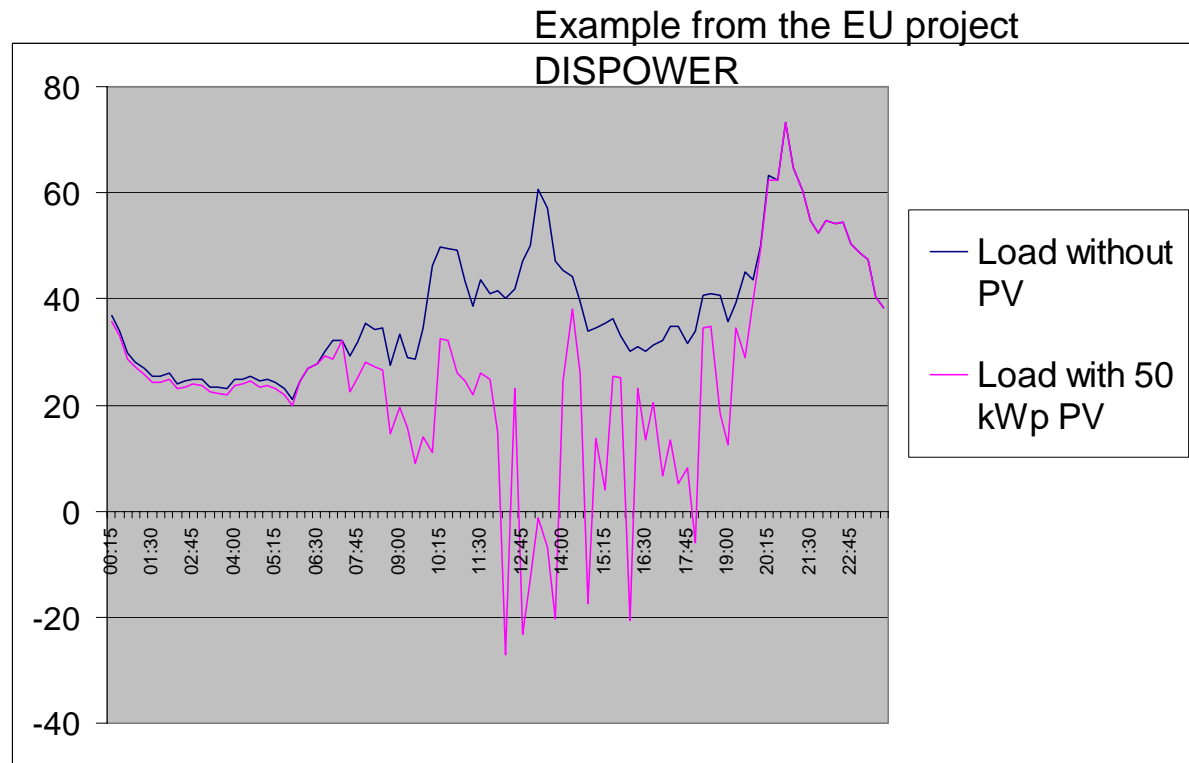
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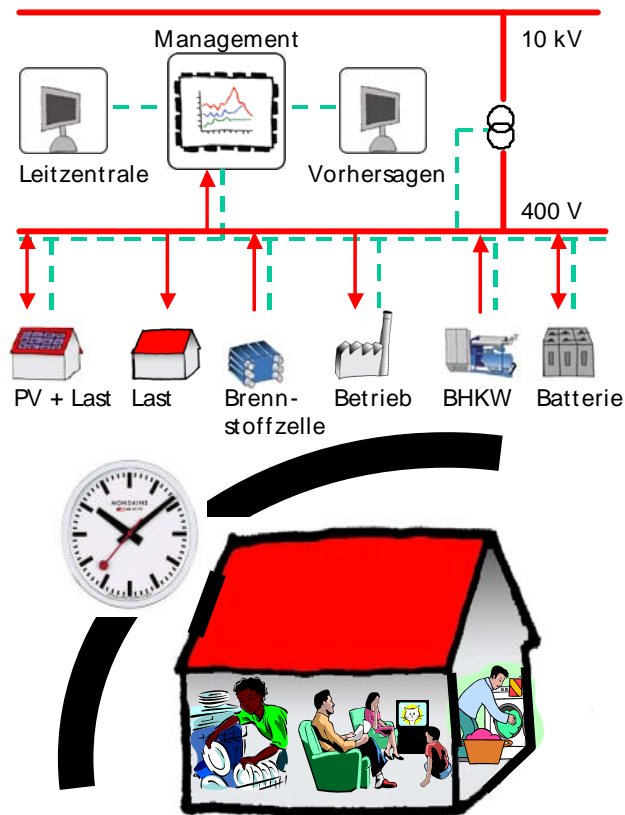
Print: 19.01.04
DIS/05/WP10/Stulensee

Load profiles in LV Grids with integrated Renewables

- Temporarily mismatch between local generation and demand
- Transformation to MV often not profitable and technically inefficient
- How to increase „local generation for local demand“?



Two Approaches for Load Management



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- A technical EMS organises operation of existing generators under least cost optimisation (supply security)
=> approved for MV-grids, in development for LV-grids
- End user manage their major loads temporarily flexible (washing machine, dish washer)
=> approved with night tariffs, positive responses in research projects

Current state

- To achieve EU energy targets a proportion of RE systems will be integrated in LV-grids
- “People do not care about electricity”=> Renewable energy can add up local assets and social identity (“our local energy”) to European energy users.
- People are able to adapt their energy consumption - **but not**
 - ☑ under existing tariff structure
 - ☑ uncertainty about generation situation
 - ☑ without “guidance” to suitable behaviour alternatives

Objectives of PRO-LOAD Short term

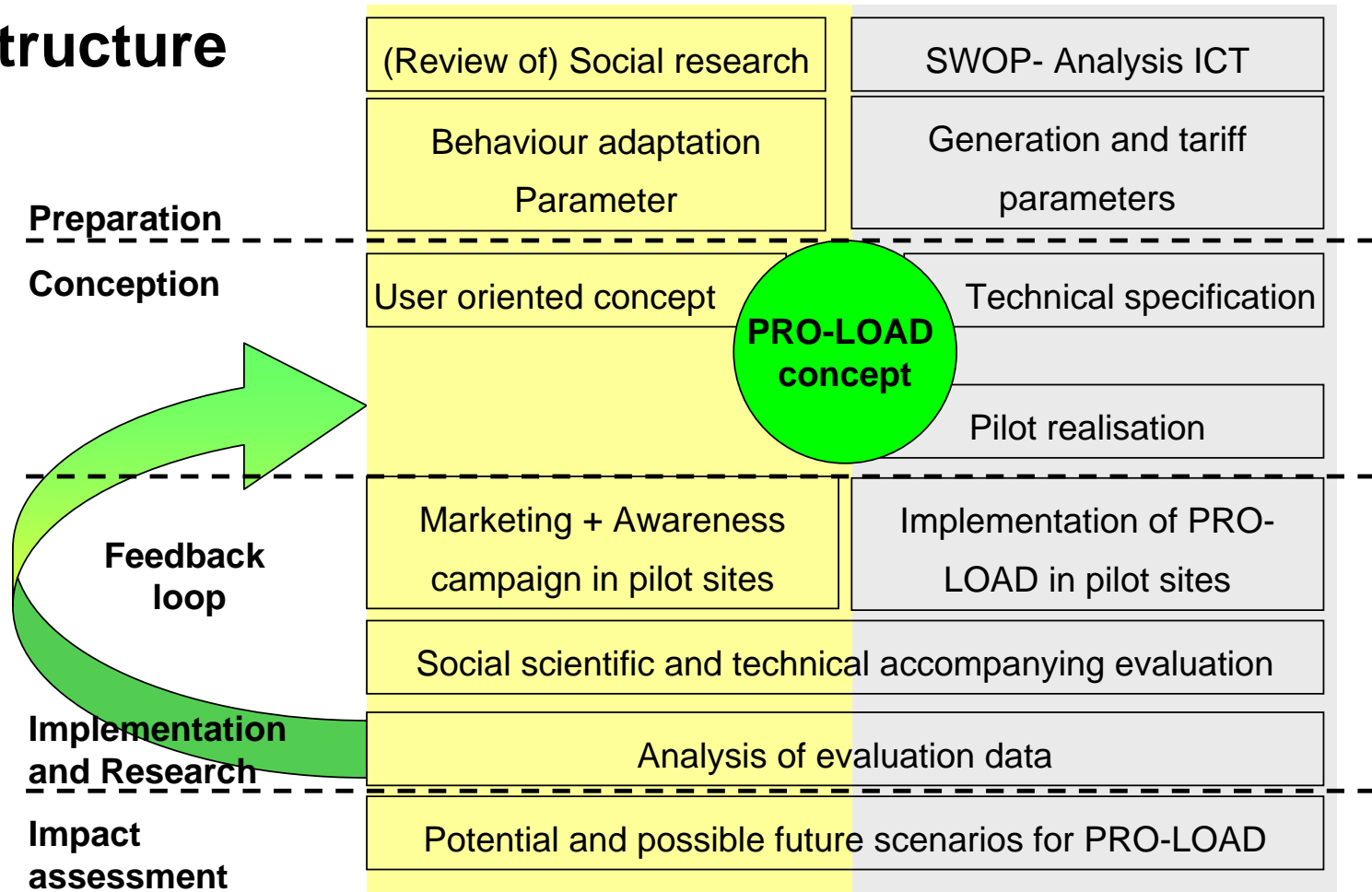
- Develop a concept which attracts end users to adapt energy consumption temporarily => PRO-LOAD
- Realise and implement the technical facilities of PRO-LOAD under high quality low cost criteria
- Evaluate and optimise technical performance
- Evaluate user acceptance and behaviour changes
- Assess the potential of PRO-LOAD in LV-grids and identify future markets (national regulations)
- Patent for PRO-LOAD

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Objectives of PRO-LOAD Medium to long term

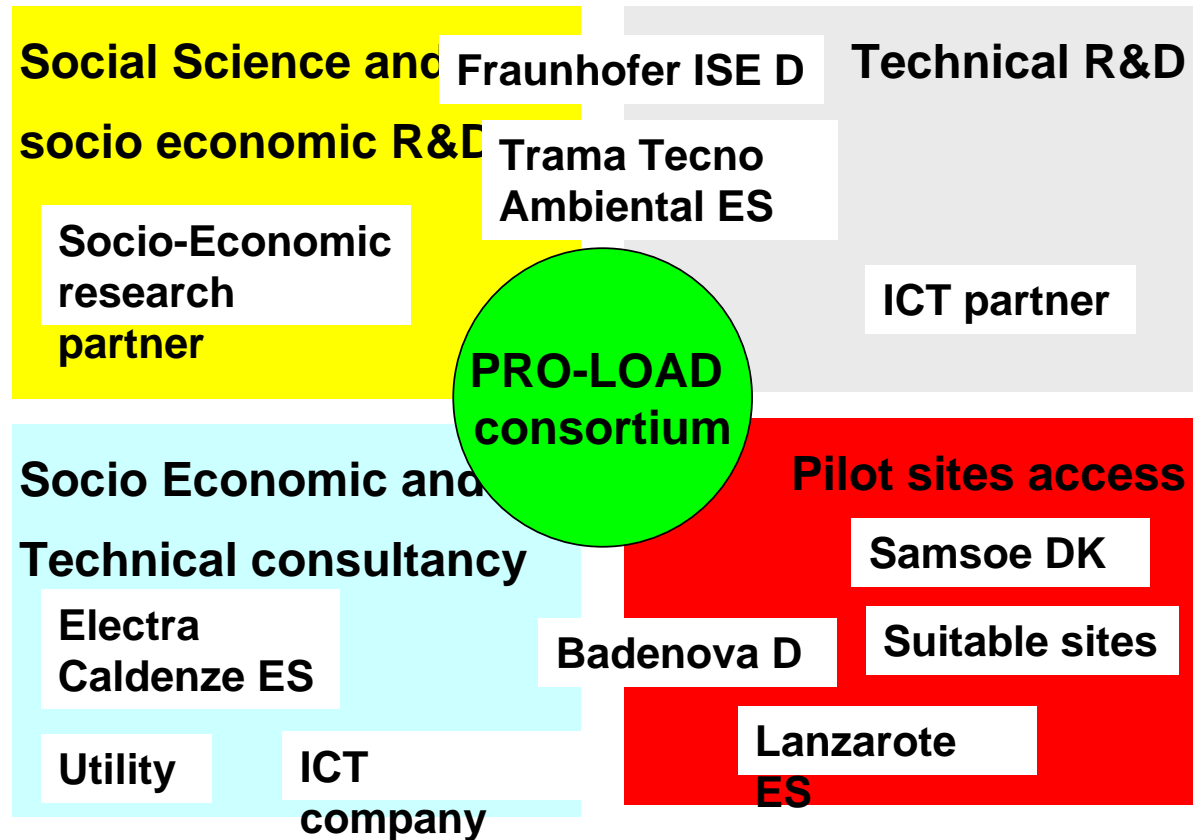
- Low-cost facility to handle increasing issues of load management in LV-grids (with RE penetration)
- Create „energy consciousness“ through practical participation and incentives for end users
- provide an additional / alternative instrument to existing EMS technologies for utilities
- Contribute to a European sustainable energy strategy

Project structure



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Partners profile



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Discussion

- Which role have legal frameworks in European energy markets to take in this proposal?
- In line with targets of the targets of Socioeconomic tools and concepts?
- Any suggestions for consortium?

**For further discussion please contact me:
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