

# WP407 - Load Balancing – Product Status

Gerd Heilscher, Holger Ruf  
Ulm University of Applied Sciences  
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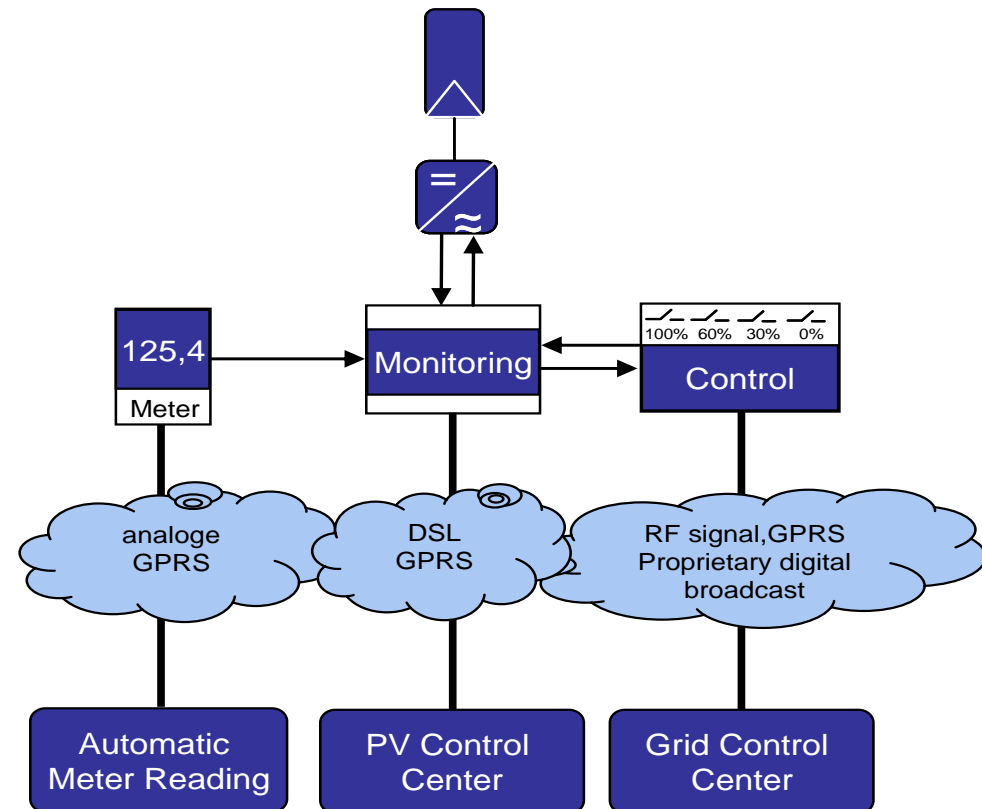
**ENDORSE (Energy DOWnstReam SErvices)**

Providing energy components for GMES



# Market Situation Load Balancing

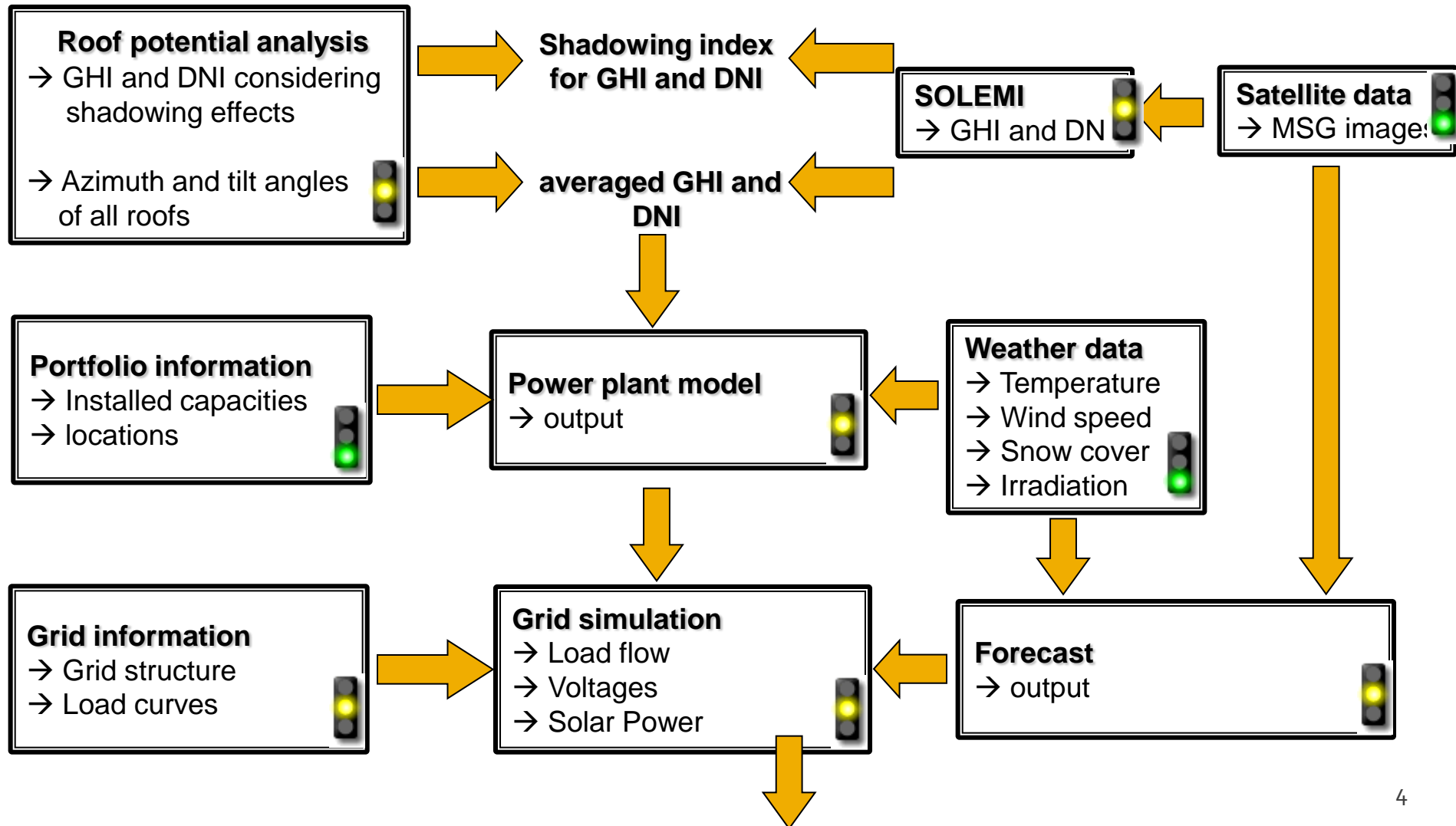
- Feed in Management obligatory for ALL new systems since 01.10.2012
- All systems >100kWp have to be retrofitted
- All systems > 30kWp and installed after 01.01.2009 have to be retrofitted
- No legal regulation on payment during downtime
- Most utilities have no control centre to send feed in management signal.



# Product Definition

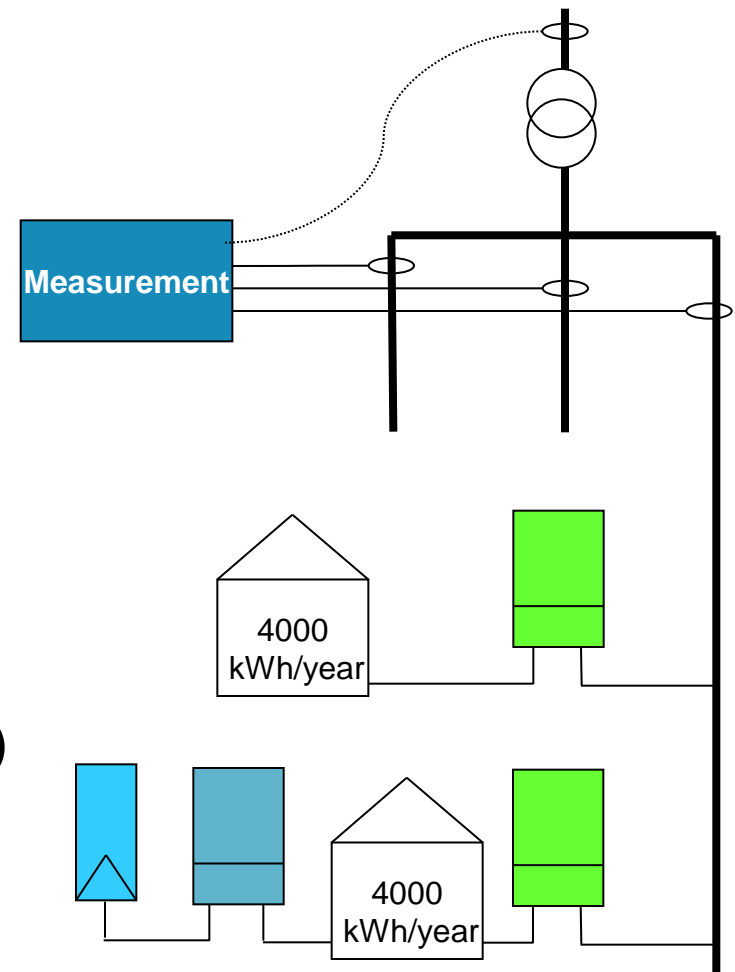
- *Solar radiation information for grid planning and grid operation.*
- *Analysis on the influence of solar power in local grids has been done so far only with artificial grid models. Within ENDORSE, the detected useful areas for solar systems in the test region will be connected to the local electricity network model and the influence of the solar power will be evaluated at a quarter-hourly time step. The evaluation on the realistic local level and the use of quarter-hourly solar radiation values on the local level has not been done so far. Within ENDORSE the detailed expectation of the users and the tools and standards in the grid management will be analysed and the lessons learned will be adapted to the design of this service.*

# Product Status



# Validation Approach

- Product validation at test area
- Validation parameter
  - Load flow at transformer
  - Voltage inside grid layout
- Input parameters
  - Solar potential of roofs
  - Grid layout
  - Load (yearly total, quarter hourly)
  - PV input (yearly total, 15 Min)
  - Solar radiation information



# Use of Core Products/Services

- Today  
Ground  
Measurement

- Future

MSG SEVIRI  
METOP  
MODIS

Cloud  
Characteristic

New/Better  
Service

Grid  
Operation  
Issues

