



Task 66: Solar Energy Buildings

Integrated solar energy supply concepts for climate-neutral buildings and communities for the "City of the Future"

Subtask A: Boundary Conditions, KPIs, Definitions and Dissemination First Results

Prof. Frank Späte, OTH Amberg-Weiden, Germany

Deliverables



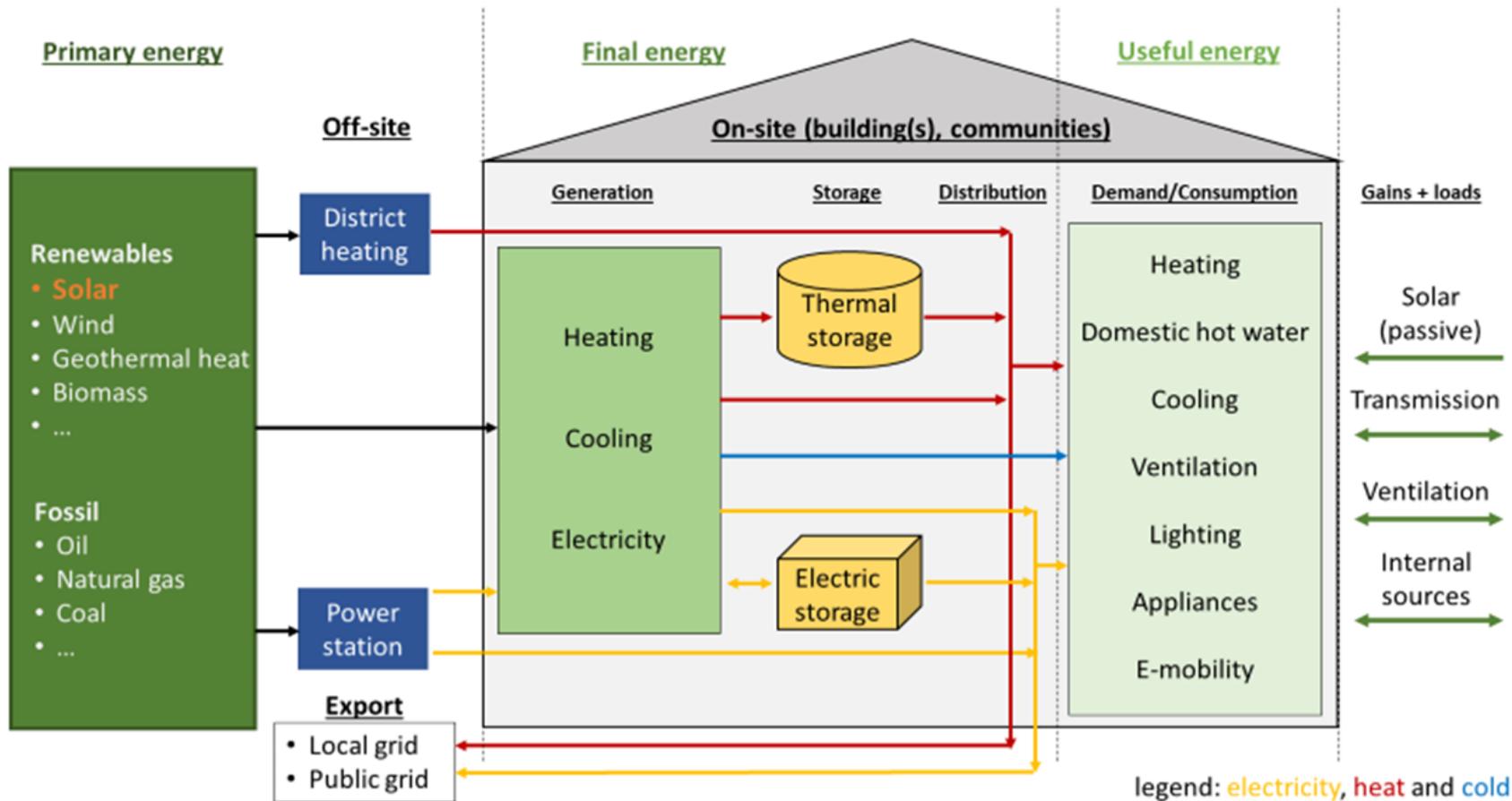
D1: List of KPIs (Key Performance Indicators) and Criteria

D2: Definition of Reference Buildings / Cases

D3: Industry Workshops

D4: Solar Energy Building promotion guidelines for investors, building owners and politicians

Energy Flow Diagram



Example: total solar fraction



Designation	Definition / calculation for the case shown in column 'Diagram' (example)	Diagram
<p>total solar fraction [%] = LCF – Load Cover Factor</p>	$f_{sol} = \frac{E_{PV,tot} - E_{PV,grid} + Q_{ST,tot} - Q_{ST,grid}}{E_{PV,tot} - E_{PV,grid} + E_{grid} + Q_{ST,tot} - Q_{ST,grid} + Q_{DH} + Q_h - Q_{h,el}}$ <p>Fraction of self-generated and self-used PV electricity and solarthermal useful heat referred to the total energy used for household and technical purposes in the form of heat and electricity.</p> <p>Energy supplied by solar part (PV or ST) of a system divided by the total system load (electrical and thermal).</p>	<p>The diagram illustrates the energy flow from primary energy sources through final energy conversion and distribution to useful energy consumption. It shows the interaction between off-site energy sources (renewables and fossil fuels), on-site generation and storage, and the final demand/consumption of heating, cooling, and electricity. Energy flows are color-coded: red for heat, blue for cold, and yellow for electricity. Losses are shown as green arrows on the right side.</p>

A first Draft of the „KPI-list“ is now available

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SOLAR HEATING & COOLING PROGRAMME
INTERNATIONAL ENERGY AGENCY



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Frank Späte, OTH-AW, Germany

Email: frank.spaete@oth-aw.de