



Sustainable Painting Technology in Europe

potentials
and
necessary actions

Energy consumption of painting process

Automotive serial production

- **Monthly energy consumption**

Energy	Total	Painting Process
Electricity	10 GWh	40%
Heat	6 GWh	40%
Compressed Air	< 1 GWh	50%
Gas	16 GWh	50%
Cooling	<< 1 GWh	80%
Total	33 GWh	48% => 16 GWh

80% of water usage is for painting process

**Potential for energy-efficient technology
and new process technologies**

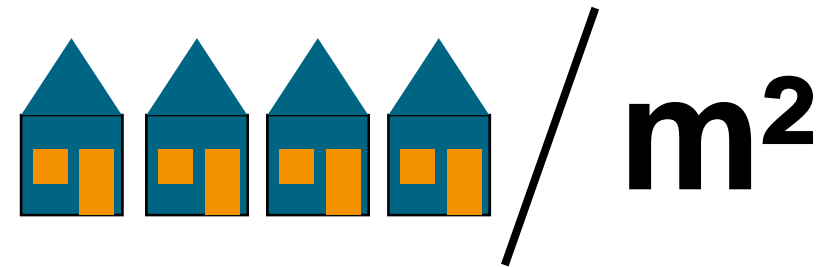
**... Energy cost account for less than 10%
of the total cost in the painting process**

Energy consumption of painting process

Small installations

- **Yearly consumption of heat energy in paint-spraybooth**

- **50.000 kWh / sqm**



- **avg. spray booth (20m²)**

$$80 \times \text{house icon} \Rightarrow 1 \text{ GWh}$$

- **app. 30.000 spray booths in Europe**

$$\Rightarrow 30.000 \text{ GWh}$$

Hybrid Surface Treatment

Painting & Plasma Surface Treatment

- Alternative technology for decorative plating
 - Avoids heavy metals !
 - Saves energy ?
 - Meets product quality in some cases



Necessary fields of activity

chemical free waste
water treatment

Energy recovery from
paint loaded exhaust air

optimize filter
technologies

save
resources

Effective treatment of
recirculation air

Develop competent
models to compare
impact
of competing technologies

Develop and
improve
alternative
technologies

Optimize powder
coating quality

reduce
(hazardous)
waste