Swedish Program for Energy Efficiency in Energy Intensive Industry (PFE)

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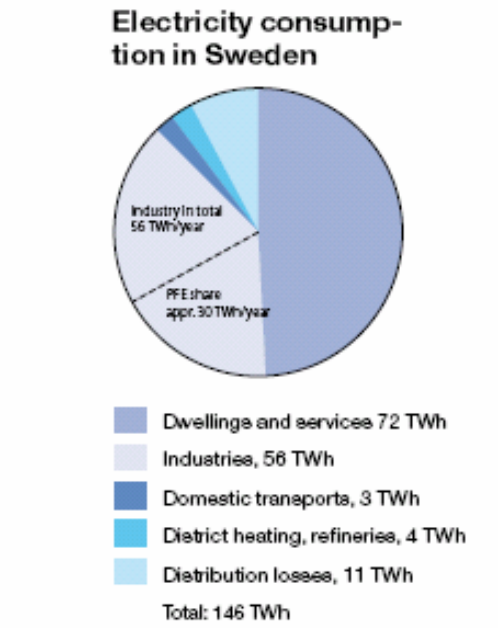
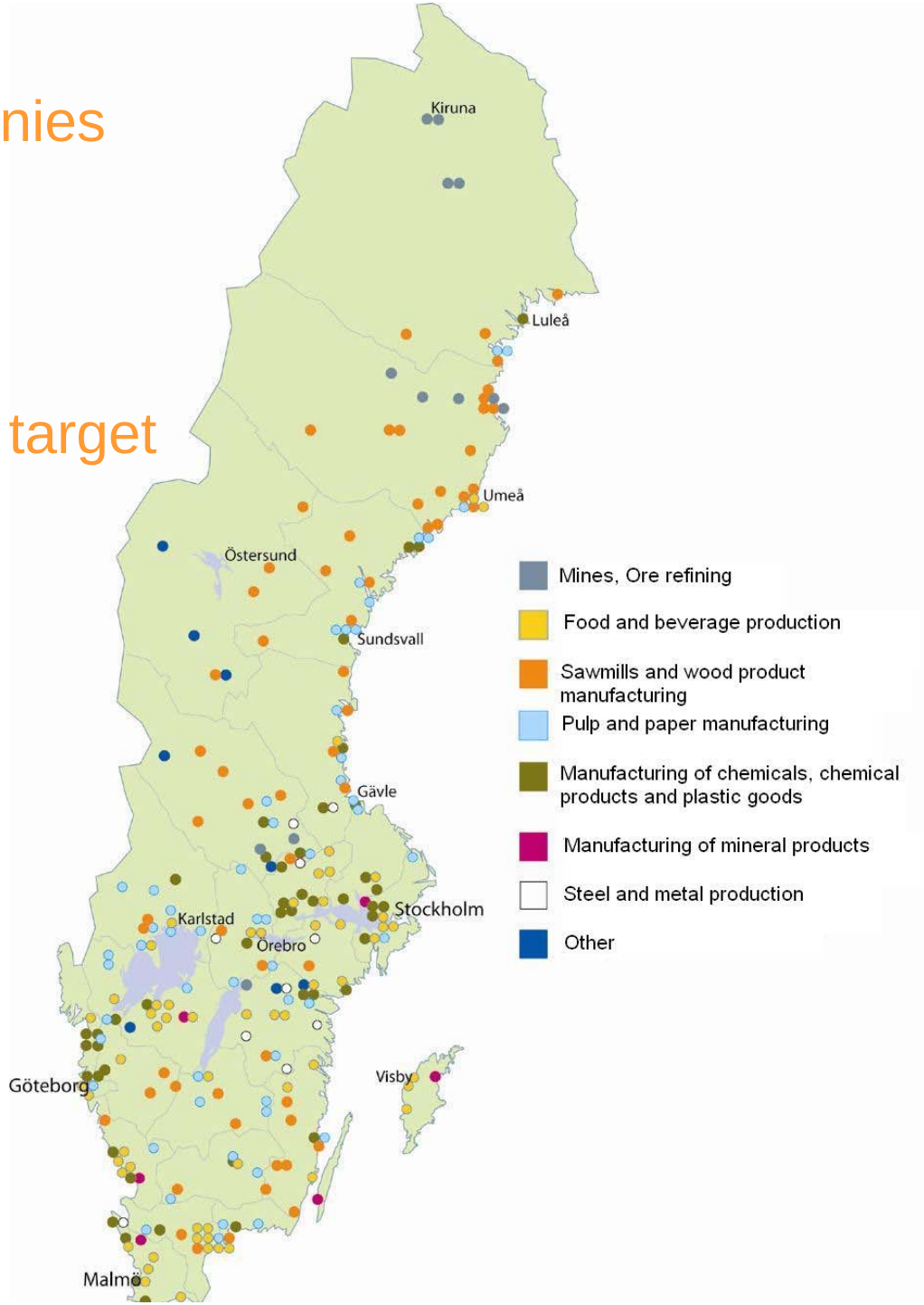
PFE

- Aim is to increase the energy efficiency in energy intensive manufacturing industry
- Background: Adjustment to EU energy tax directive
- Incentive: Tax reduction 0,5 € / MWh => 0 € / MWh
- Commitments to a series of activities to increase energy efficiency
- Voluntary program

Energimyndigheten

- 126 participating companies
- 250 plants
- 30 TWh electricity/year
- 85 % electricity used by target group





Energimyndigheten

PFE: A five year program

Program start

2 years
Report to the
Swedish Energy Agency

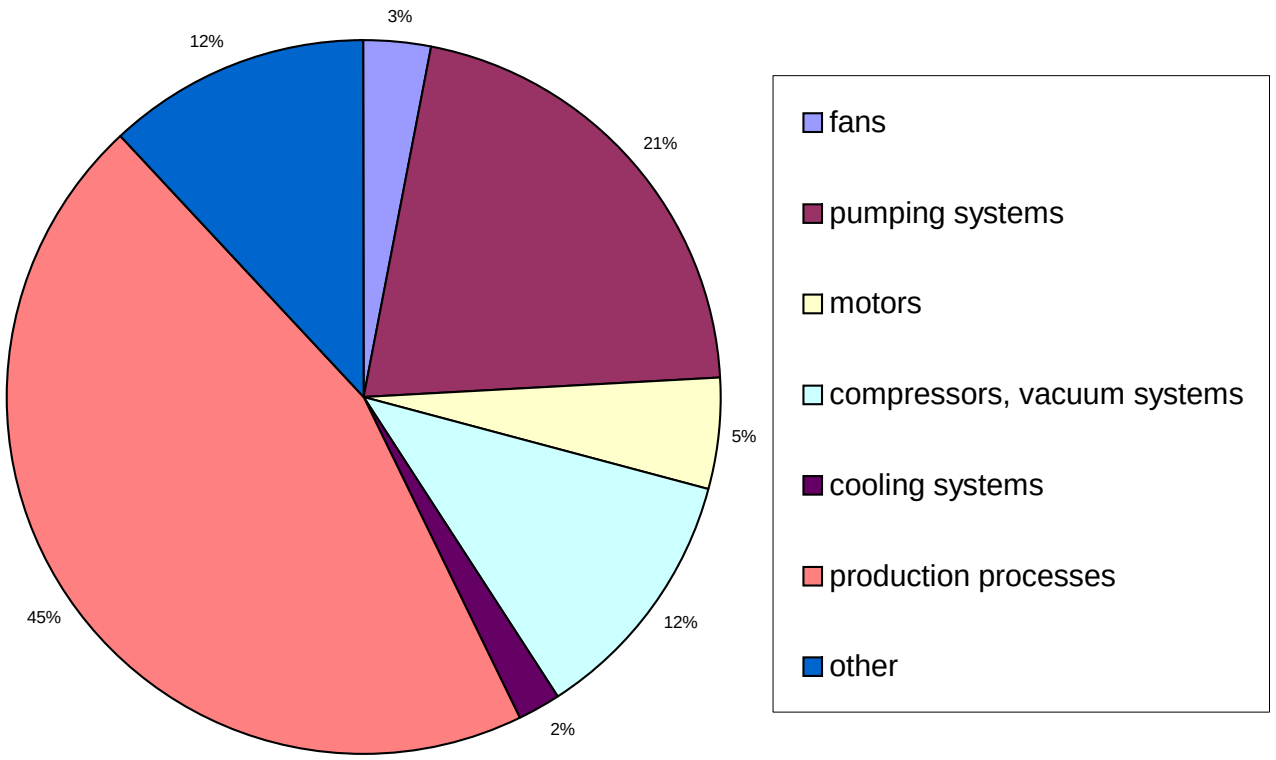
5 years
Final report to the
Swedish Energy Agency

- Implement and certify EMS
- Energy audit and analysis
- Find measures
- Implement routines for procurement & planning

- Apply EMS
- Realize reported measures
- Apply routines
- Effects of routines

Energimyndigheten

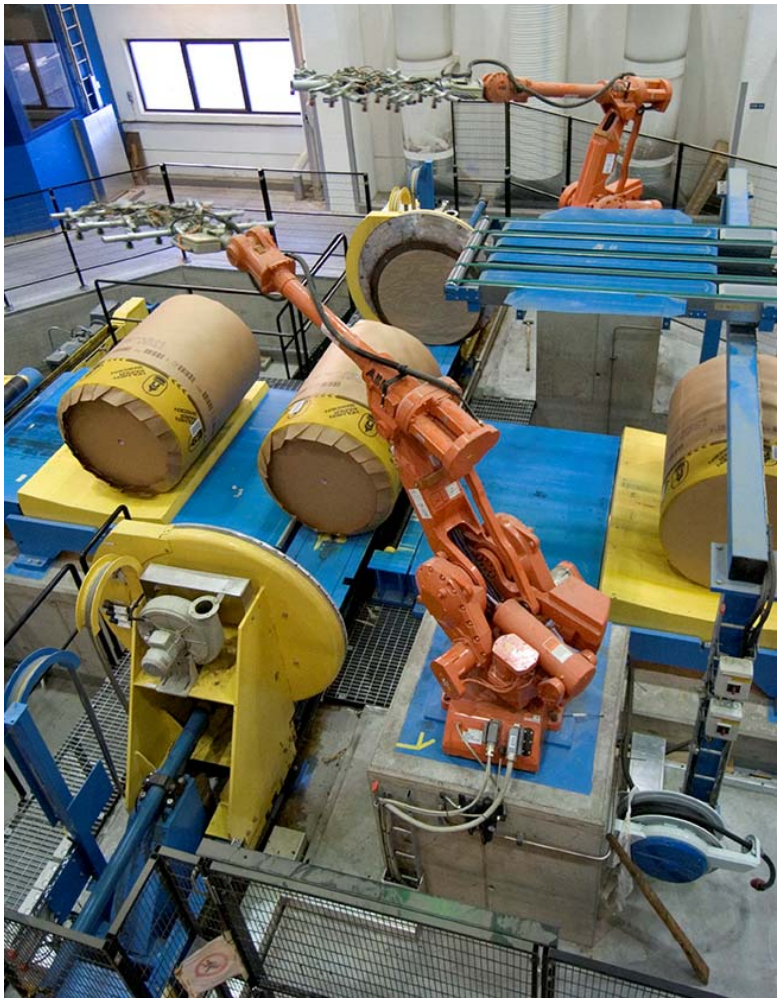
What kind of measures?



Energimyndigheten

Measures

- Processes 367 GWh
  - ✓ Demand control
  - ✓ Optimization
- Motors, pumps, fans 238 GWh
  - ✓ Inverters
  - ✓ Energy efficient equipment
- Air Compressing systems 95 GWh
  - ✓ Leak seeking and sealing
  - ✓ Waste Heat Recovery
- Cooling systems 17 GWh
- Other 95 GWh
  - ✓ Ventilation (waste heat recovery & demand control)
  - ✓ Lighting (energy efficient appliances & demand control)



Energimyndigheten

Results so far…

- 900 measures
- 800 GWh/year

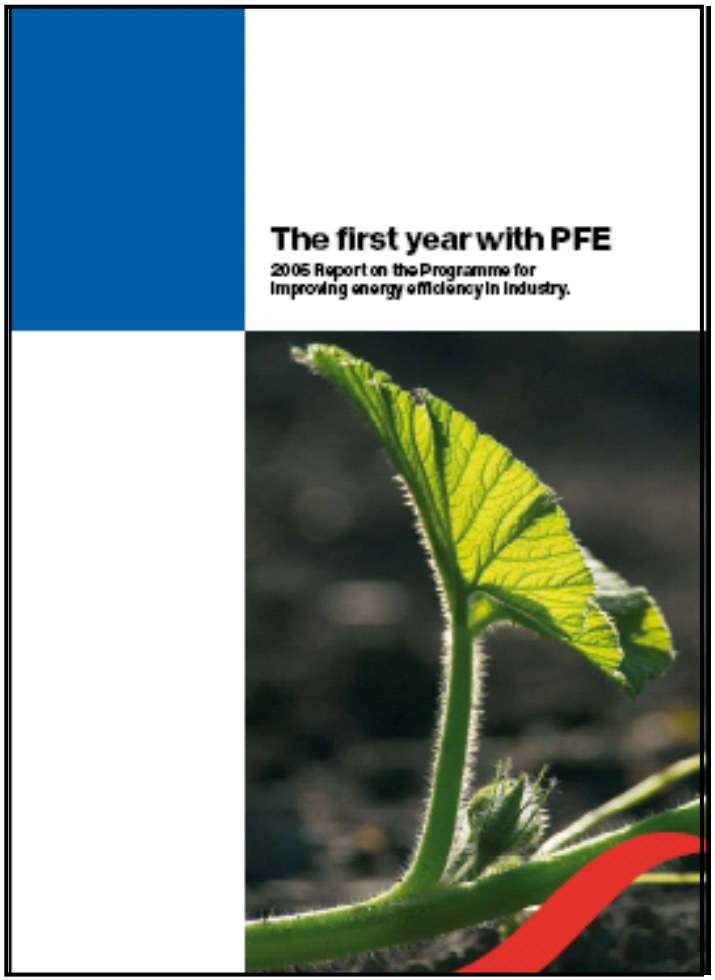
Corresponds to:
- Total use of electricity for 32 000 Swedish villas
- Total Swedish wind power production (900 GWh)

- Investments 700 million SEK (100 million USD)
- Savings 400 million SEK (60 million USD)
- Average pay back time 1,75 years
- Tax reduction 150 million SEK

Energimyndigheten

Thank you for your attention!

Camilla Ottosson



Energimyndigheten