Harnessing potential energy saving in the French industry

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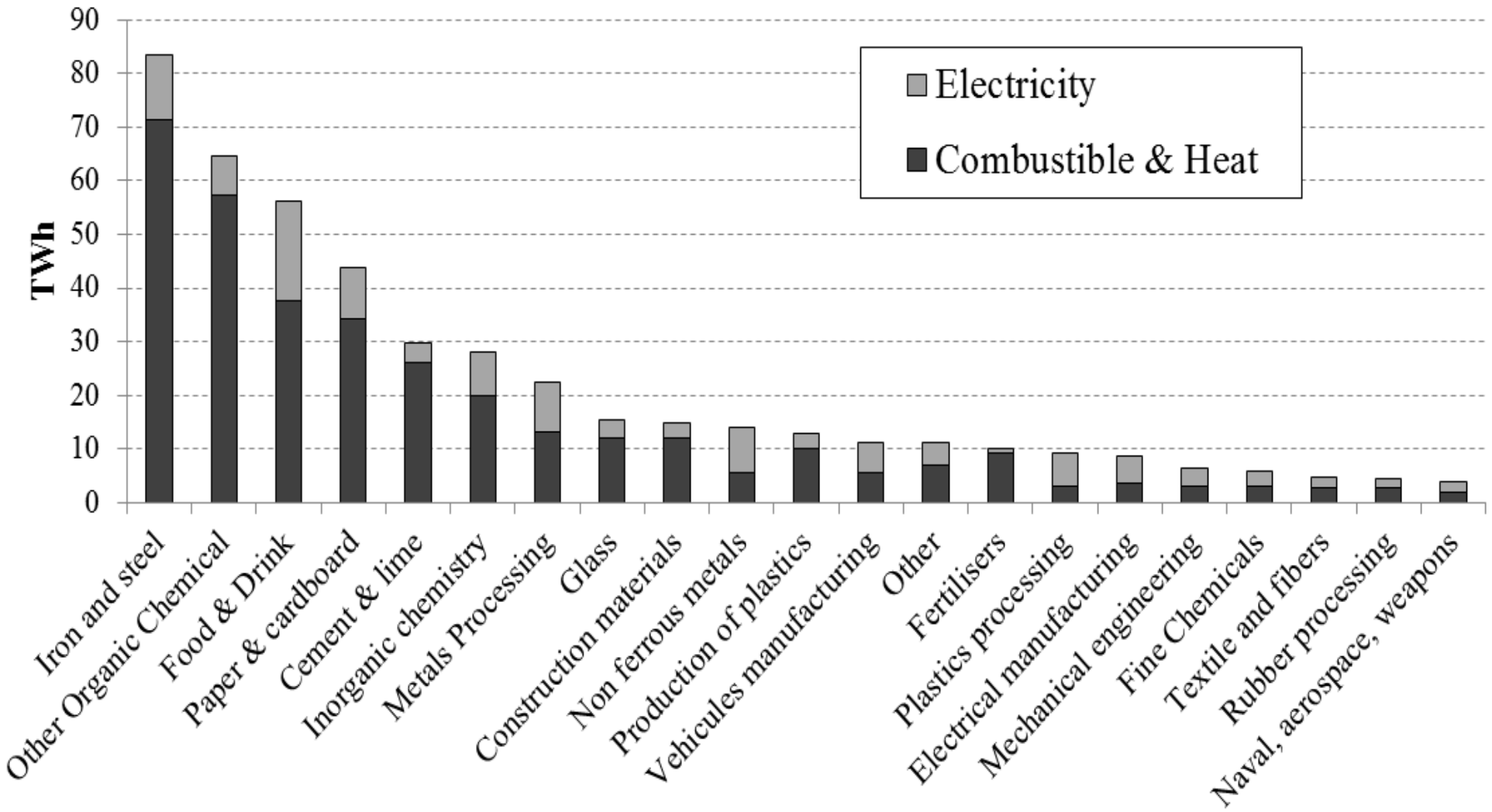
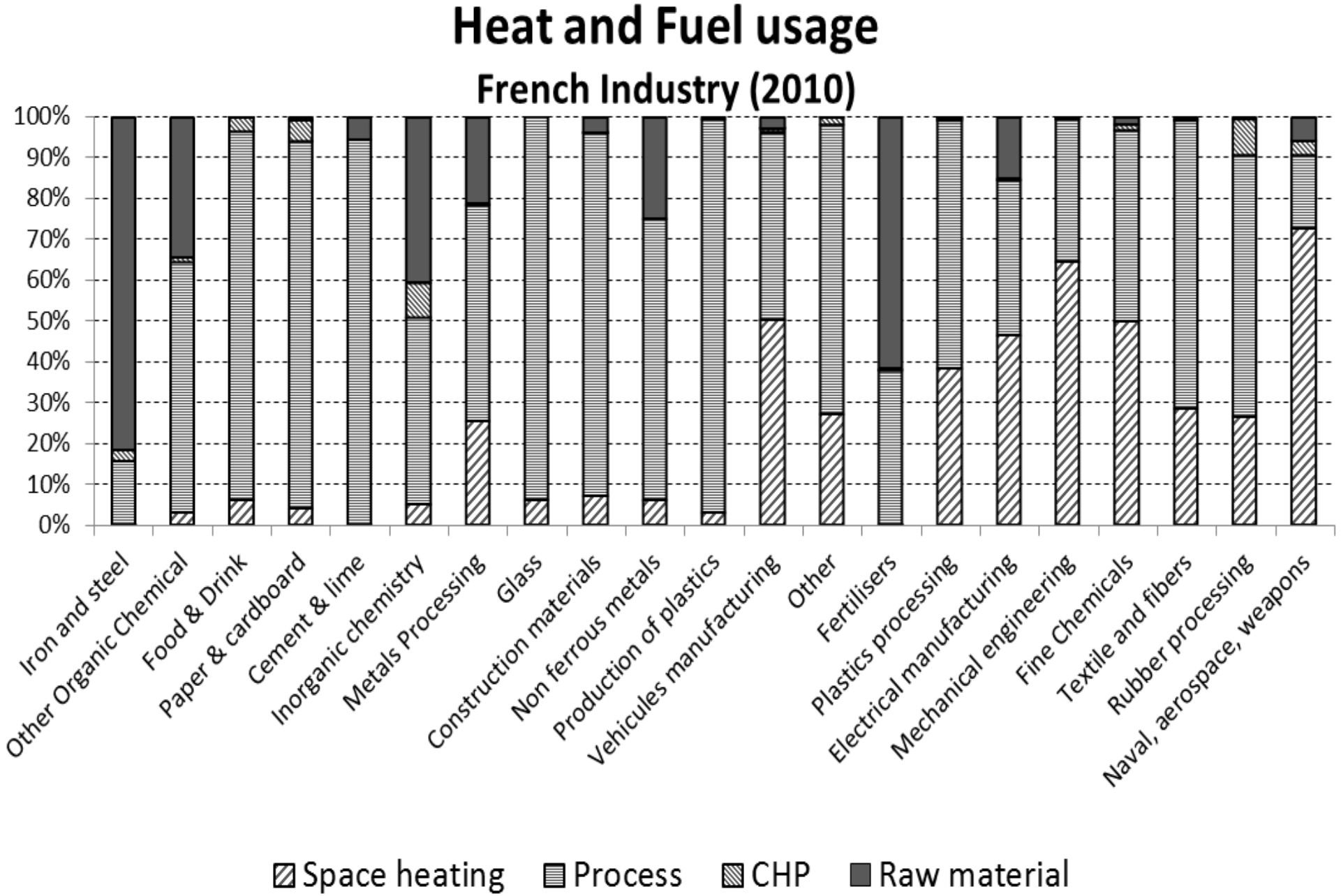
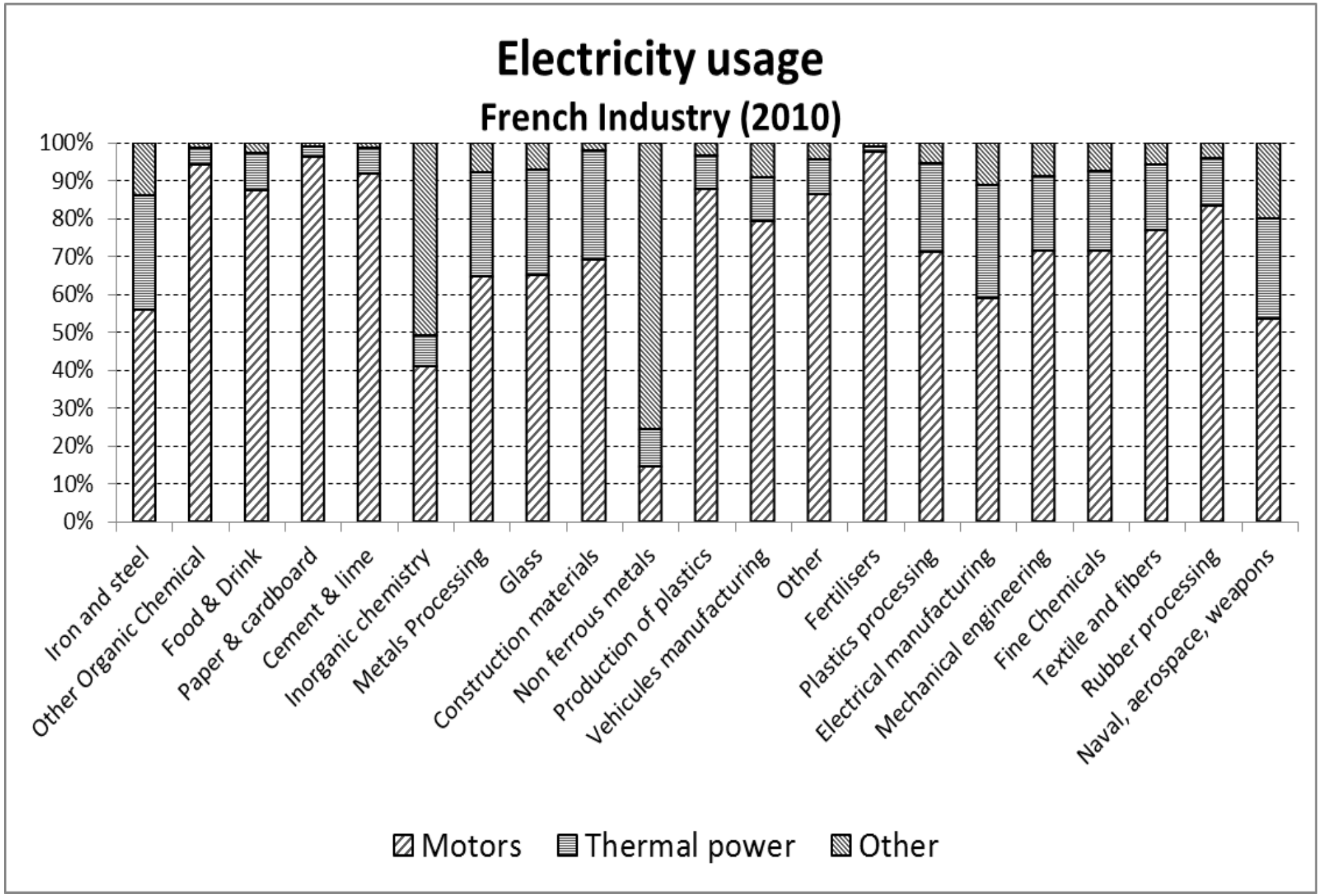
Energy consumption in French industry (2010)




Heat and Fuel usage
French Industry (2010)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Iron and steel
Other Organic Chemical
Food & Drink
Paper & cardboard
Cement & lime
Inorganic chemistry
Metals Processing
Glass
Construction materials
Non ferrous metals
Production of plastics
Vehicules manufacturing
Other
Fertilisers
Plastics processing
Electrical manufacturing
Mechanical engineering
Fine Chemicals
Textile and fibers
Rubber processing
Naval, aerospace, weapons
Space heating
Process
CHP
Raw material


Electricity usage
French Industry (2010)
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60%
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Iron and steel
Other Organic Chemical
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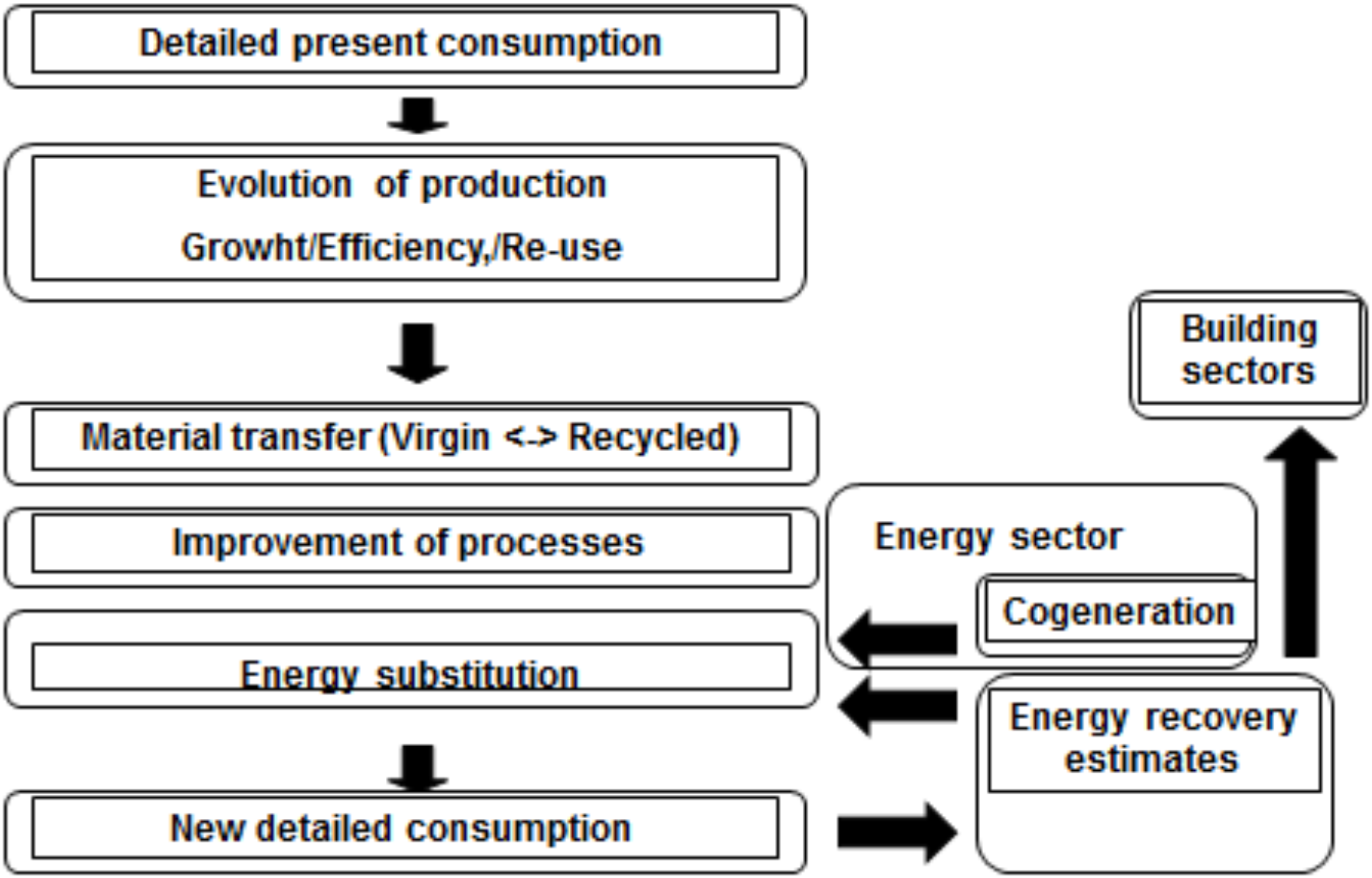
Plastics processing
Electrical manufacturing
Mechanical engineering
Fine Chemicals
Textile and fibers
Rubber processing
Naval, aerospace, weapons
Motors
Thermal power
Other

From detailed usage to potential savings



Example 1: Efficiency improvements

- The *CEREN 2010 study* estimates economic potentials (ROI<3years) at 25% of cross-sectoral uses of electricity
- Early switching to IE4 motor standards (2020)
- Other uses such as power transformers, lighting…
- In the medium term, radical technology change (Hisarma/steel, vapour compression/ paper, Novacement/cement…)

Example : Recycling and reuse

(source BREF/IPPC, E&E)

Materials	Present rate of recycling	Energy ratio of recycling	2020	Long term
Aluminium	30%	12	50%	86%
Steel	49%	5	60%	90%
Paper-Cardboard	60%	2	75%	80%
Plastics thermo-mechanical*	6%	1.3	15%	30%

*Does not include chemical recovery

Result (CO2): -32% in 2020, -78% potential

Million tons of CO2	2008	2020		Long term	
Efficiency potential	90,6	74	-18%	47.7	-47%
+ recovery of plastics'		72.7	-20%	44	-52%
+ heat recovery'		72.2	-20%	42.1	-54%
+ RE substitution		62.1	-32%	19.7	-72%

E&E Consultant 2012

Use of this work

- Estimates were published by the « de Perthuis Commission » as a strong argument in favour of a new target of -30% in GhG emissions for France (1990-2020)
- Methodology was used for the industry estimates of a citizen's scenario called « Négawatt » used widely as a reference in policy debates
- Potentials and policy conclusions are to be used for a National Energy debate started this week

Thank you

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