

Energy & CO₂ Efficiency
Some Perspectives from Large Industry

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1. The Global Chemical Industry
2. Our Experiences at Dow and in Europe
3. Common Goals for a Common Future

The Global Chemical Industry

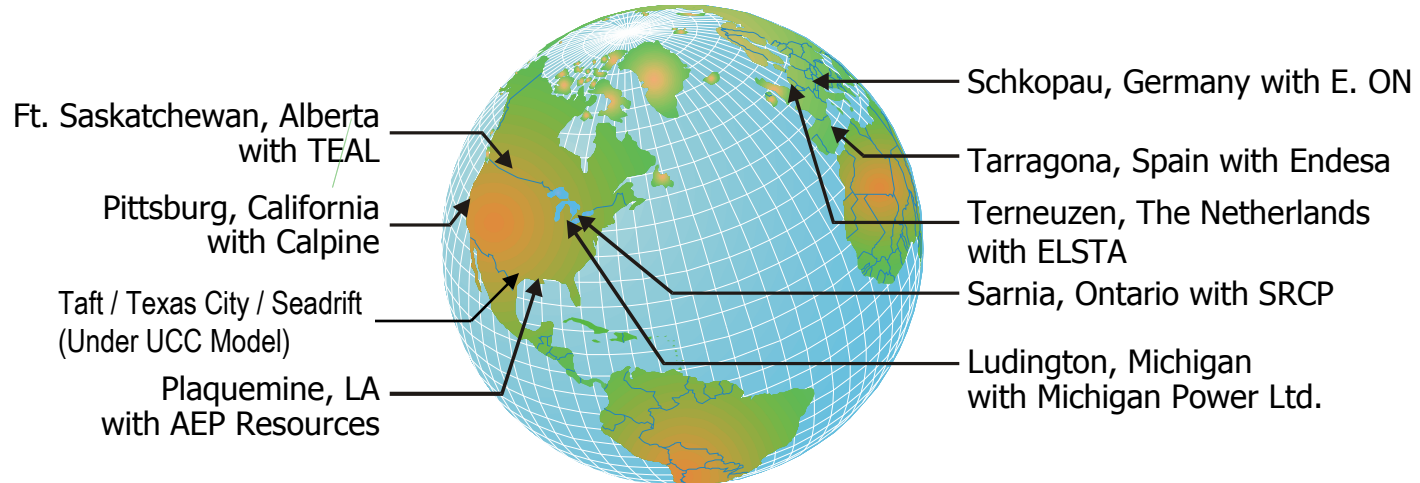


- One of largest global industries: \$2 Trillion
 - » **Largest industrial consumer of energy**
- Biggest industrial GHG emitter (Global basis: direct + indirect)
 - » For industry a few (Energy + GHG intensive) building blocks support thousands of end products
- Dow: Large – Long term – Loud commitment

Role & size gives us multiple responsibilities



Ensure Best Technology Options Globally



Substantive Cogeneration Investments

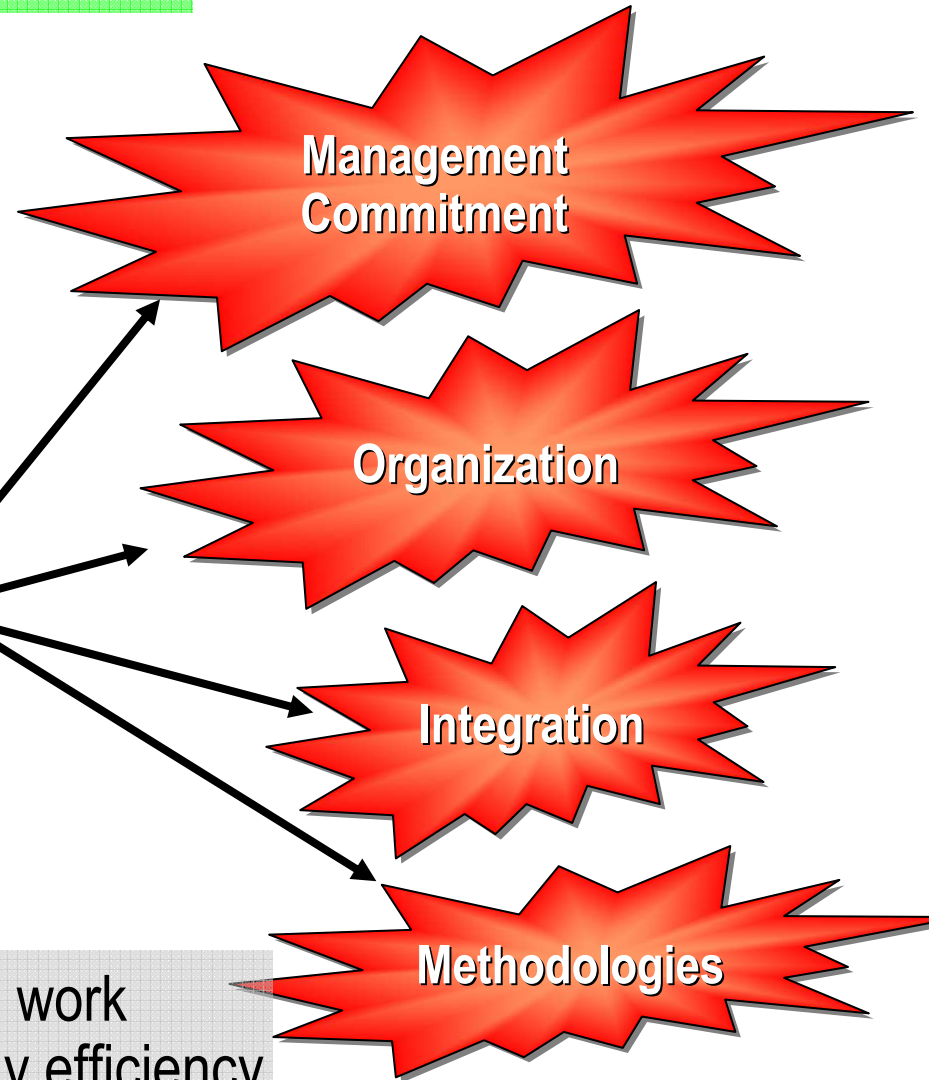
- Highly efficient mode to provide power & heat
 - Dow: first mover – largest user – ready to promote
 - business models adapted to local geographies
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Then add Human Element



Energy Conservation & Implementation Teams

Leverage existing management systems, work processes & improvement tools for energy efficiency

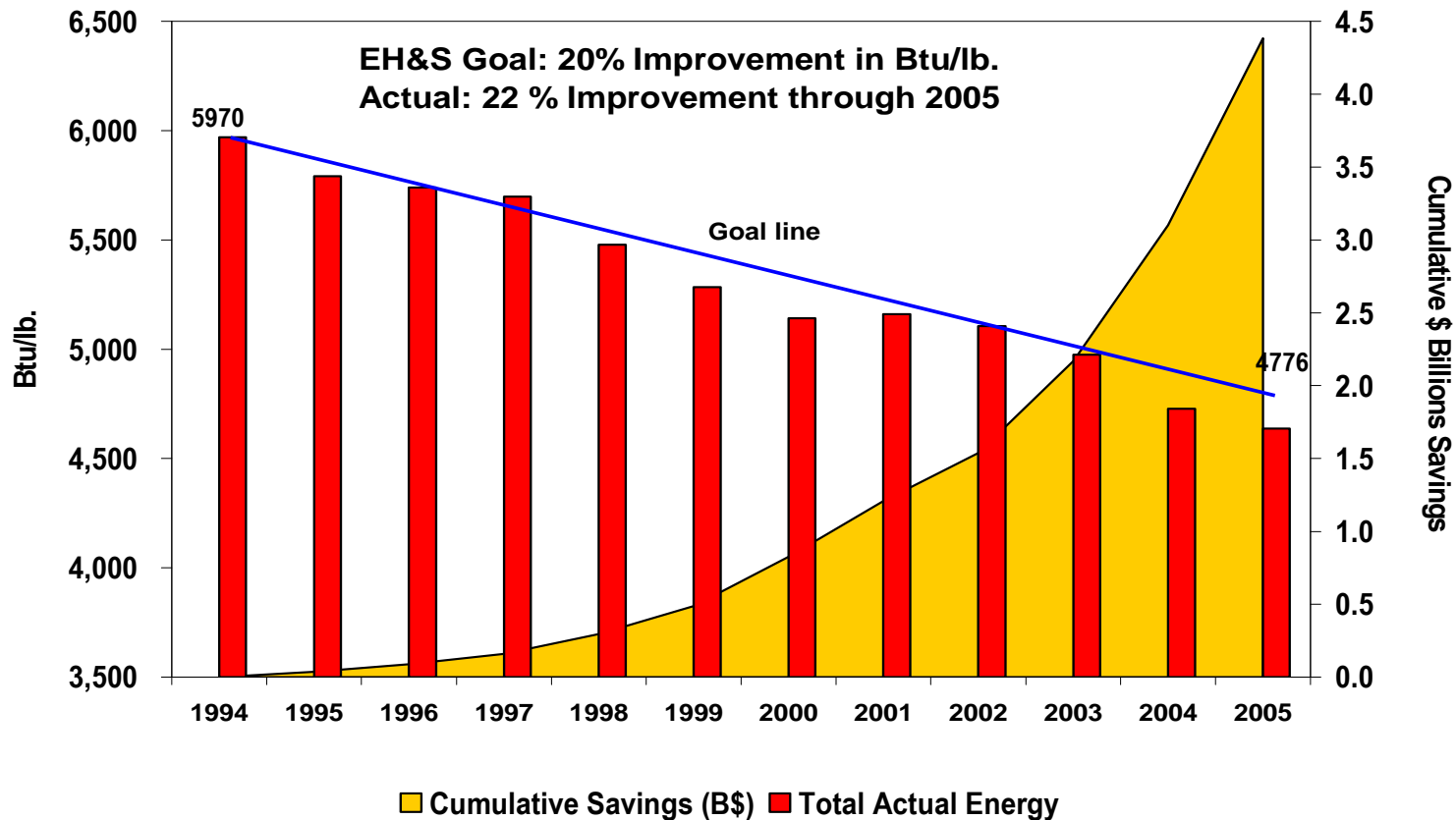


Compete – Cooperate – Communicate Model

Energy Efficiency: Also Positive news for GHGs + \$



Energy Intensity Performance

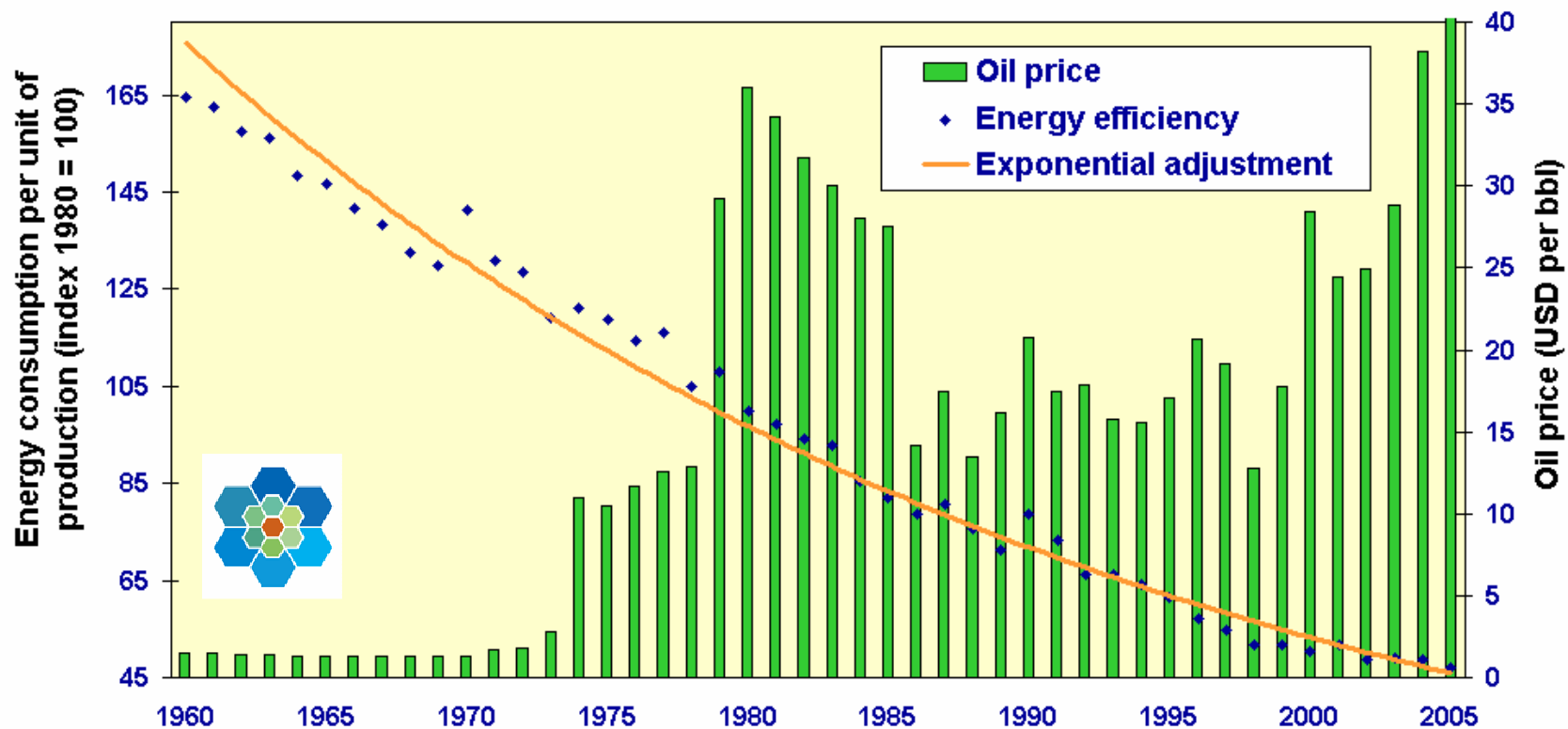


Cumulative Energy Savings = ~900 Trillion Btu's / Cumulative Cost Savings = >\$4 Billion
Since 1990 overall emission of Kyoto GHG < 20% / exceeds Kyoto targets

Competition in our “global market” drives Efficiency.
Government policies should not distort this.

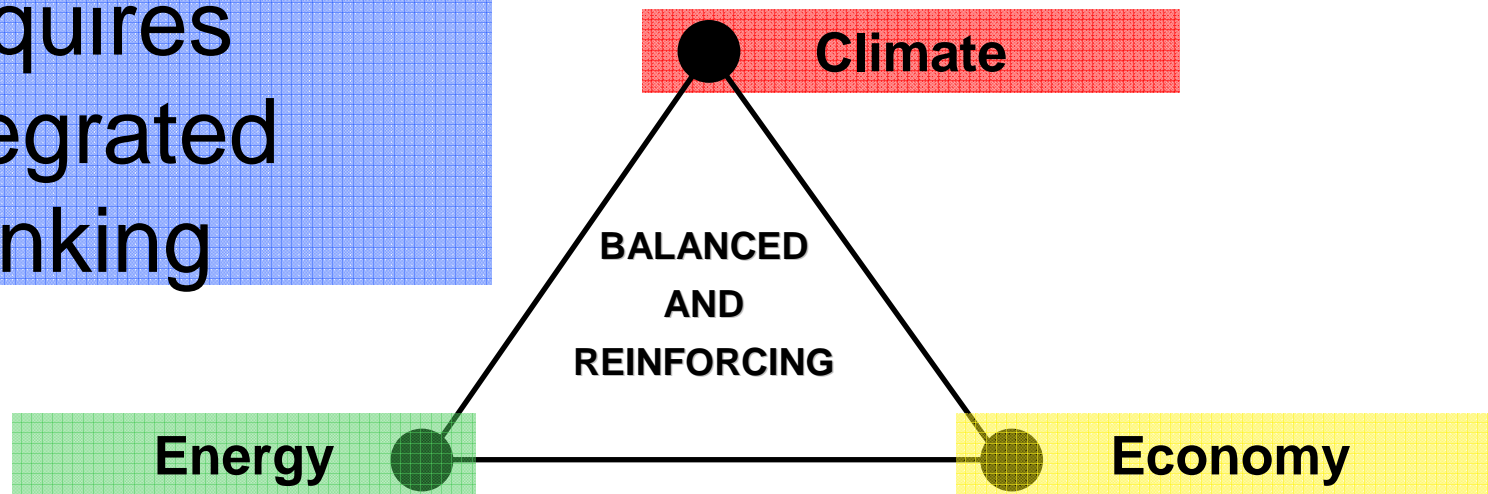


Energy efficiency in the EU chemical industry: 1960-2005



Sources: Eurostat, National Chemical Federations (NCF), IEA, UN & Cefic-ITC Analysis, INSEE

Common
Future Goal
Requires
Integrated
Thinking



Despite the years of progress, Dow publicly committed to more

- will further reduce global energy intensity by 25% from 2005-2015
- will reduce GHG emissions intensity by 2.5 % per year thru 2015

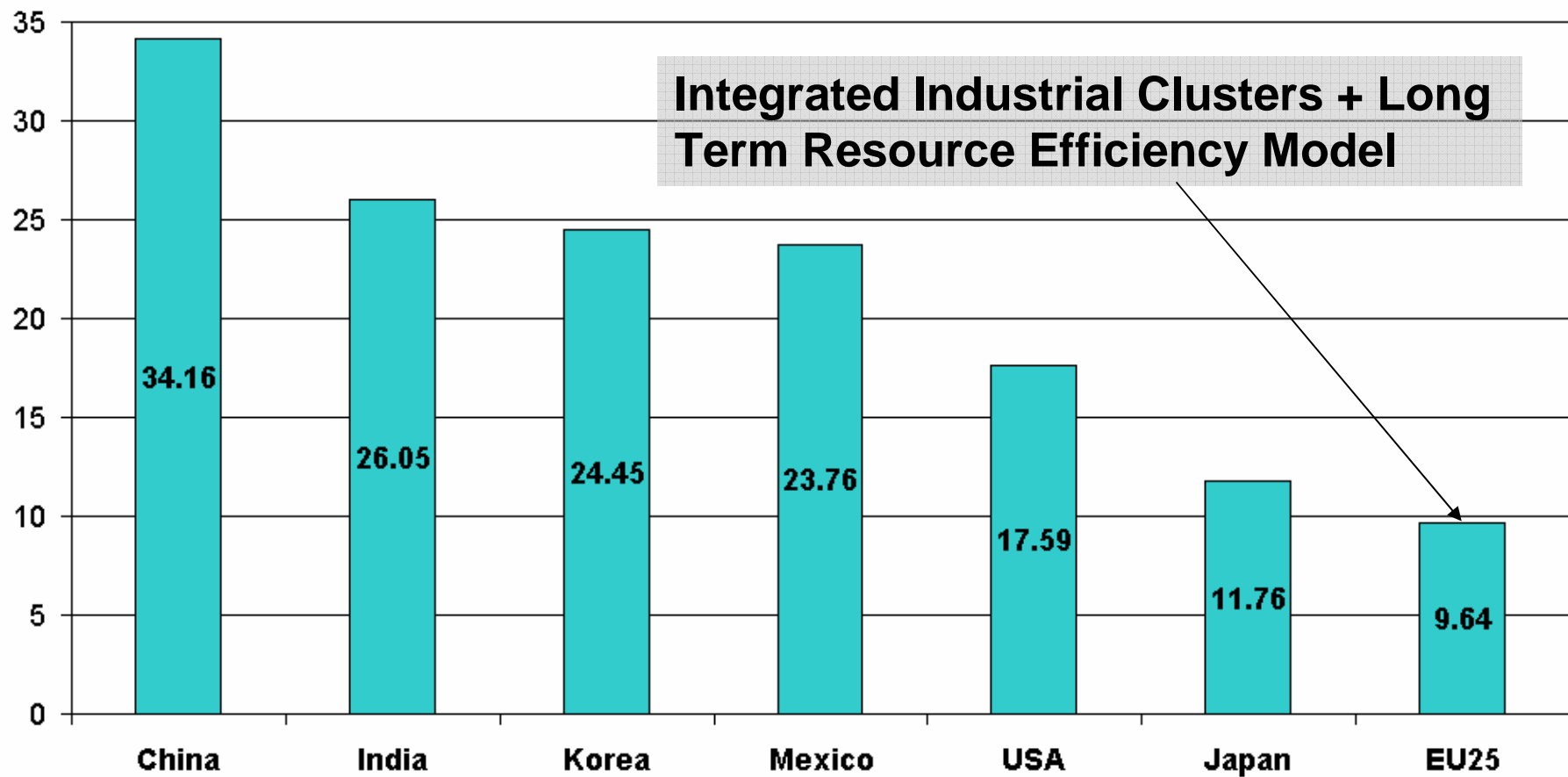
Publicly calling for effective CO2 legislation in USA (USCAP), EU (HLG) & Globally (UN)

Companies or Countries yet to start have yet more to gain

EU experience: Growth + GHG reductions + \$ revenues is feasible



Energy consumption per sales in the chemical industry in selected countries

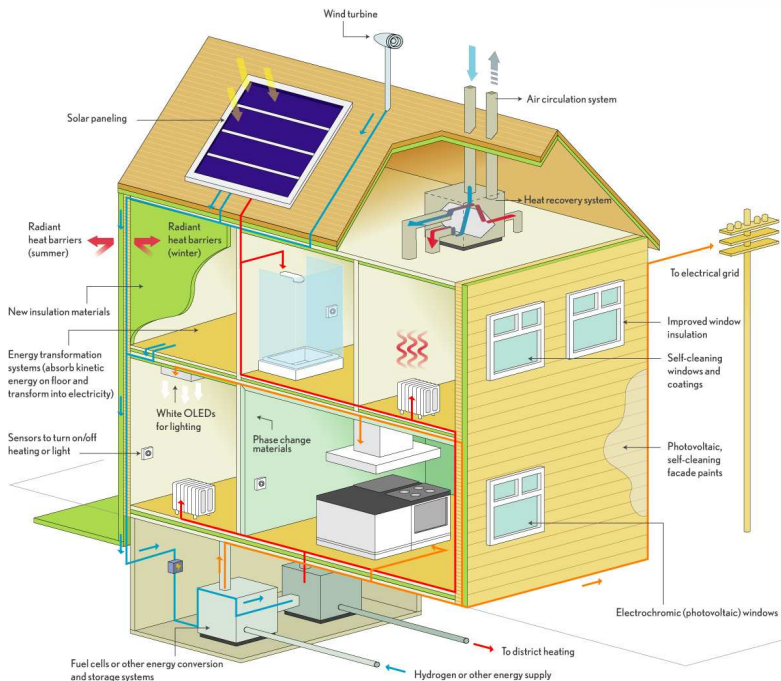


Source: IEA (2007) "Tracking industrial energy efficiency and CO2 emissions", Eurostat and Cefic

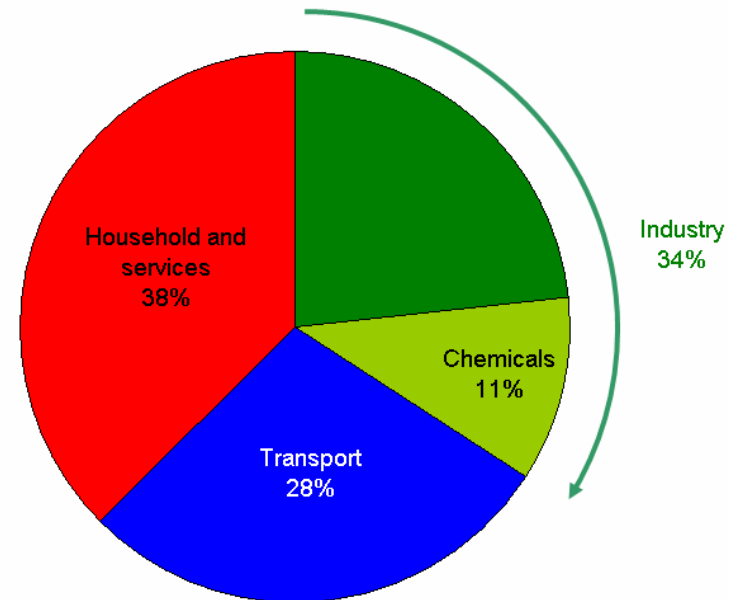
Also integrate fact we save more energy than we use / largest reduction potentials = most important customers



Energy consumption in the different economic sectors (fuel and feedstock)



Source: Eurostat



SUMMARY

(if net global improvements are our goal)

1. Company & Industry proves decades of Energy Efficiency yields Environmental + Financial benefits
 - Site integrations show Intelligent Cooperation does not preclude Intense Competition
2. Increasingly linked world demands better integrated thinking:
 - Starts with global level playing field so more efficient produce more (= net global efficiency)
 - Global GHG Sectoral approaches (being developed with governments for Climate Change) should be expanded to include long term resource efficiency commitments

