

Energy and bioenergy in Sweden

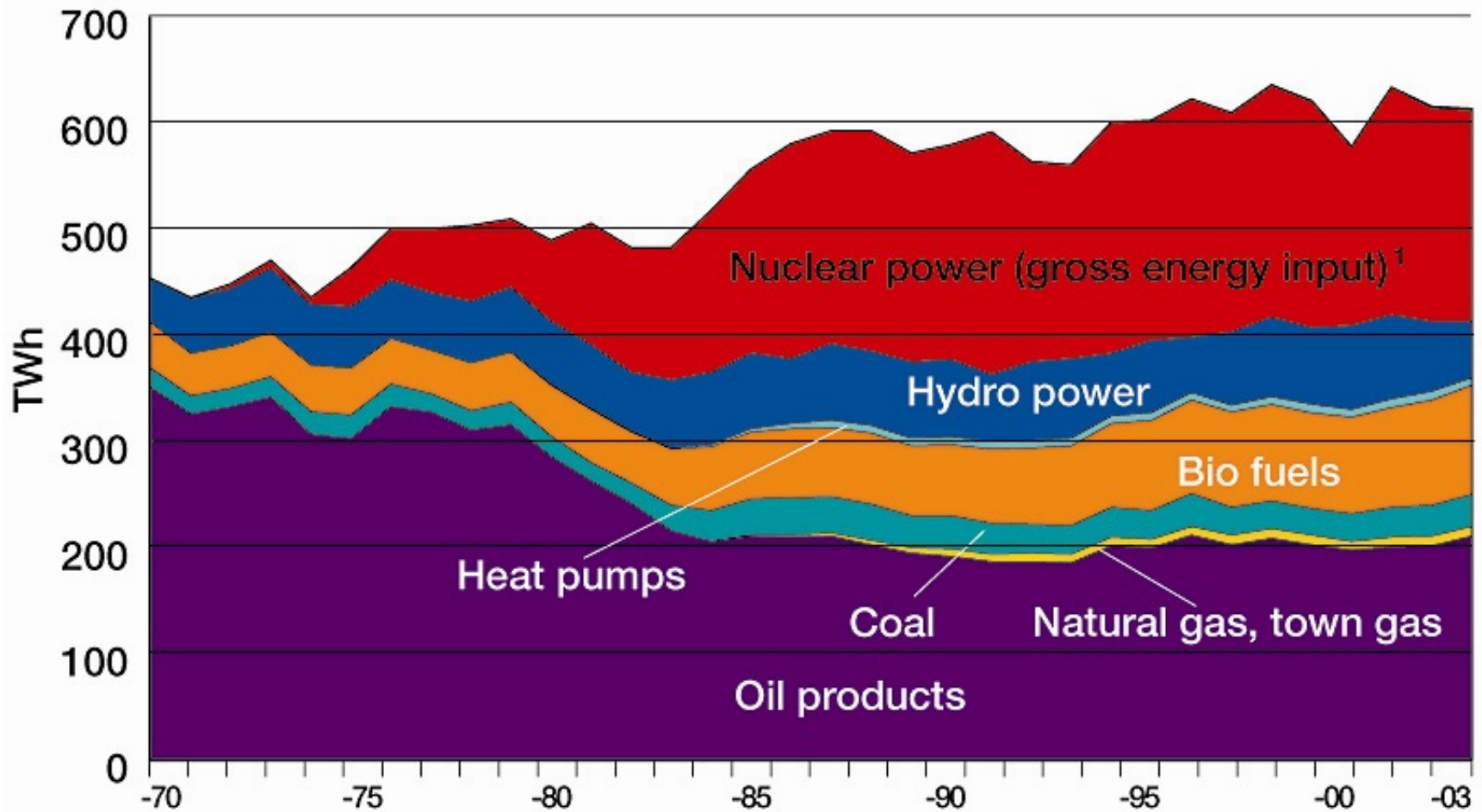
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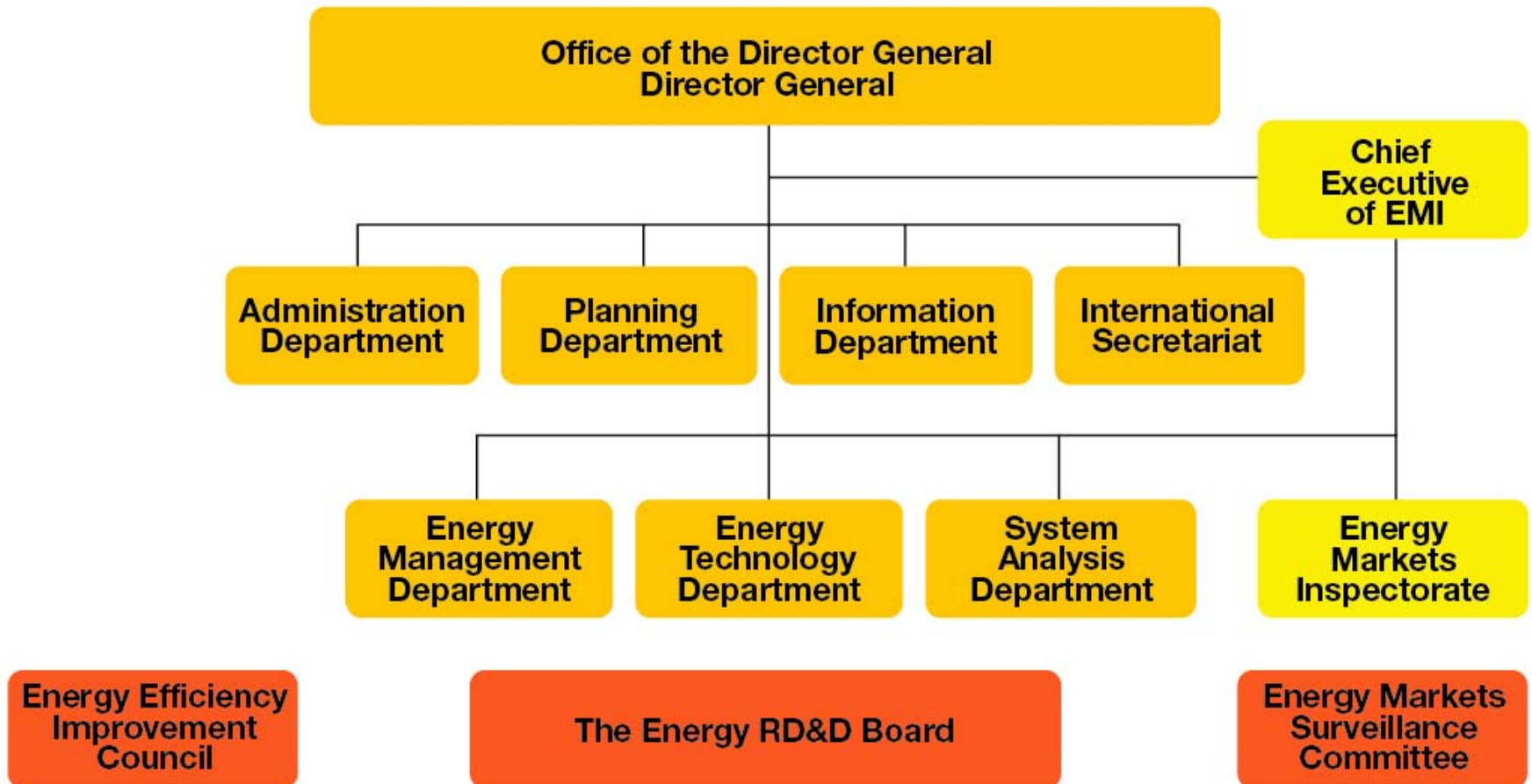
Swedish Energy Agency

Energy supply



Swedish Energy Agency

THE BOARD



Sweden's national R&D programme

- Main objective: Transform the energy system to comply with environmental and security objectives
- Duration of the overall energy R&D programme: 2005-2011
- Total annual budget: 95 million Euro
- Swedish Energy Agency is the programme owner and programme manager
- Diverse set of instruments, normal duration 2-5 years. “Traditional” programmes have been rather narrowly defined, small and many

R&D priorities

- **Energy system analyses**
 - Policy instruments
 - Energy market
- **Buildings**
 - Rational use of energy
 - Interaction technology, information, IT and behaviour
- **Energy intensive industry**
 - Rational use of energy
- **Transport**
 - 2nd generation biofuels
 - Hybrid vehicles and engine adaptation to biofuels
- **Power**
 - Transmission & distribution
 - Wind
 - Hydro
- **Fuel based systems**
 - Biomass production and upgrading
 - Electricity conversion efficiency

General principles in the R&D strategy

- R&D does not bring new technologies to the market – Policy instruments do:
 - Policy instruments should stimulate competition and market driven R&D
 - Public R&D should be coordinated with industry's response to policy instruments
- Focused efforts and specialisation are needed
- R&D objectives need to cover both technology and knowledge
- R&D efficiency requires national efforts to be defined in an international context

News & Trends in Sweden

- Bioenergy has been placed on top political agenda
- Breaking the oil dependency has top priority (replacing an electricity focus)
- Biogas has very strong support in the ministry of environment
- Political focus on agricultural production systems
- Sweden continues to have a very ambitious national R&D programme – but will focus the efforts on fewer topics
- Bioenergy fuel R&D reduced budget; strengthened or continuous support to the three “gigants” (black liquor gasification, fermentation of lignocellulosic feedstock, production of transport fuels from pressurised gasification)