



Understanding the Role of the International Energy Agency

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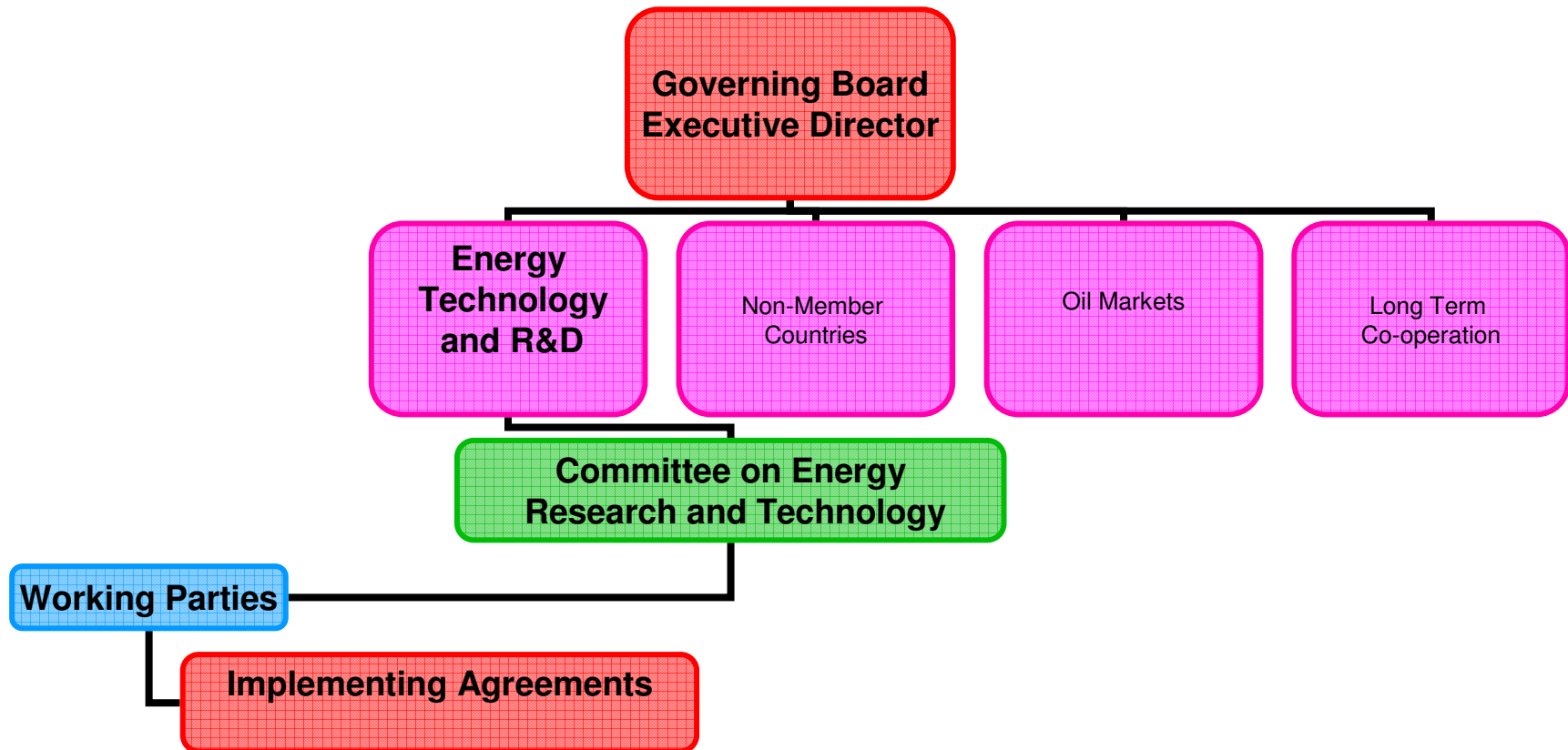
Composition of the IEA

- The IEA is an autonomous body, formed in 1974 within the OECD. It:
- comprises 26 member states
- provides a setting for comparison of energy policies, solution of common problems, identifying good practice, coordination of national and international policies
- carries out a collaborative international energy programme funded by member states (EC takes part)
- works with non-member states, industry and international organisations
- **Member states** — Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Korea, Luxemburg, Netherlands, New Zealand, Norway, Portugal, Spain, Swede, Switzerland, Turkey, United Kingdom, United States

Aims of the IEA

- Mitigate the effect of oil supply disruptions
- Promote rationale energy policies
- Operate an information system on the international oil market
- Develop alternative energy sources and improve energy efficiency
- Assist the integration of environment and energy policies

Structure/Functions of IEA



IEA Energy Technology Collaboration

- The IEA conducts technology collaboration and R&D through Implementing Agreements
- Member States join and fund Agreements
- Each Member State benefits from a much larger programme and international expertise
- More than 40 Agreements at present
 - Fossil fuel
 - **Renewable energy**
 - End use
 - Fusion power

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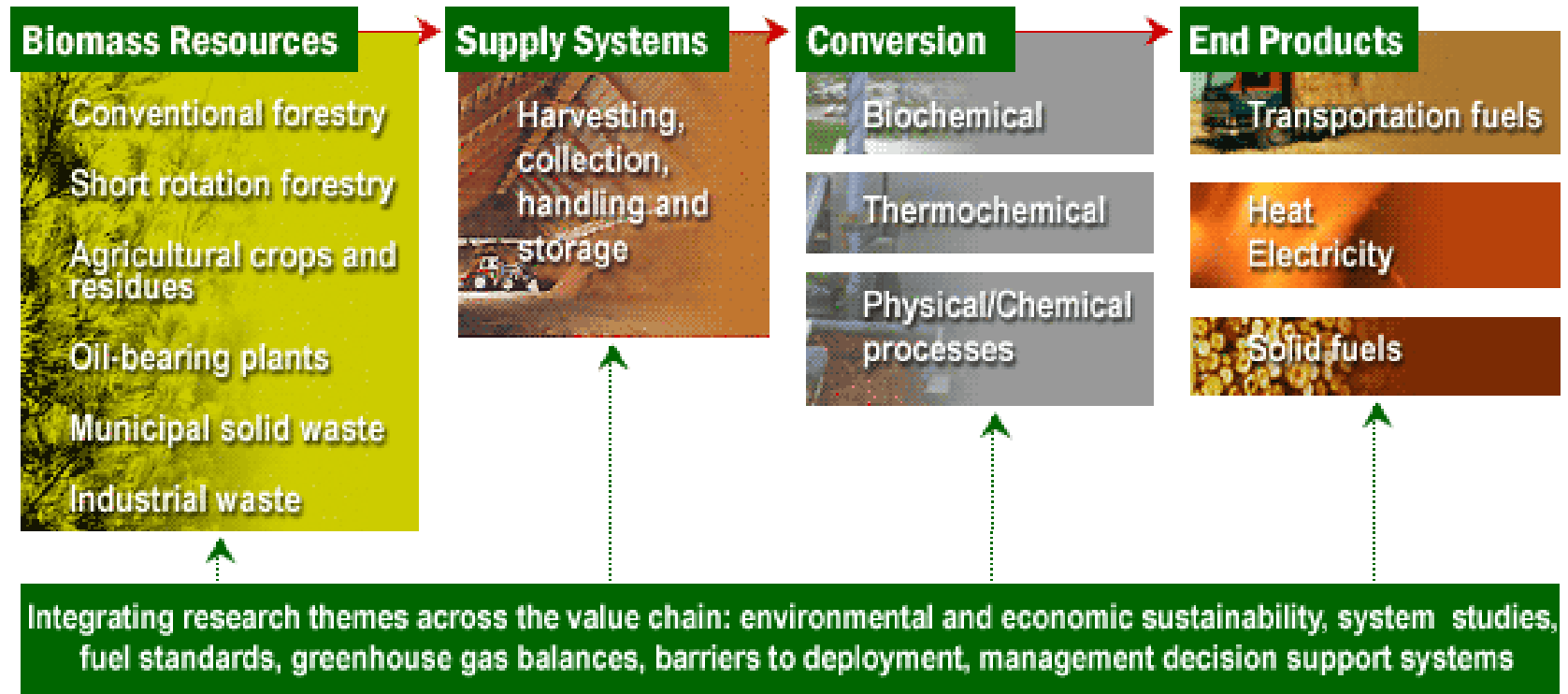
Renewable Energy Agreements

- **Bioenergy**
- Geothermal
- Hydro Power
- Ocean Energy
- Photovoltaics
- Hydrogen
- Solar Heating and Cooling
- Solar Power and Chemical Systems
- Wind

Bioenergy Implementing Agreement

- Aim – accelerate use of environmentally sound, sustainable and cost-effective bioenergy
- 21 countries plus EC participate
- Managed by Executive Committee
- Historically over 41 tasks undertaken

Coverage of Agreement



Recent Bioenergy IA Tasks

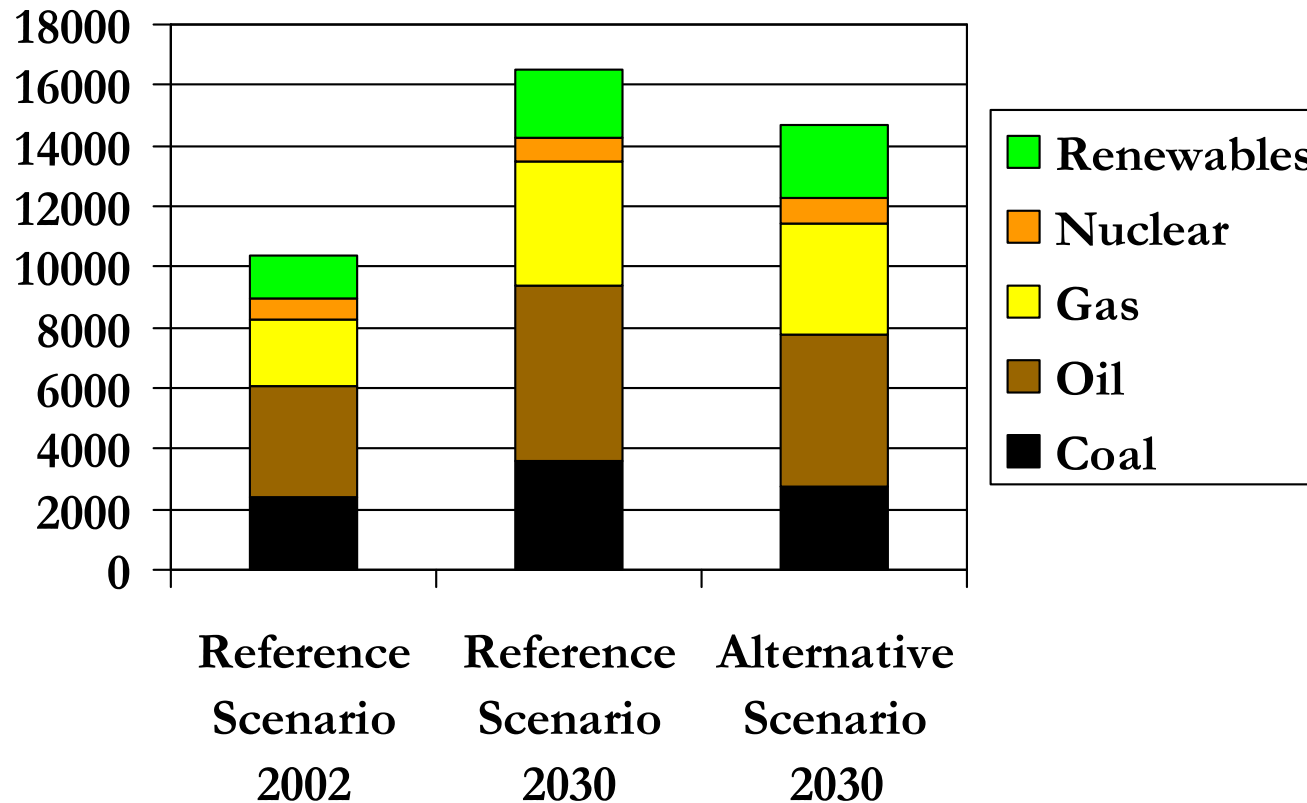
- Socio- Economic Drivers
- Short Rotation Coppice
- Energy from Sustainable Forestry
- Combustion and Co-firing
- Thermal Gasification
- Pyrolysis
- Energy Recovery form MSW
- Energy from Biogas and Landfill gas
- Greenhouse Gas Balances
- Liquid Biofuels
- Sustainable International Trade: Securing Supply
- Systems Analysis

Policy Analysis and Scenario Projections

- The IEA also undertakes policy analysis and provides projections of scenarios against which the impact of policies can be assessed
- The 2004 World Energy Outlook analysis provided reference and an 'alternative' enhanced action scenario to 2030
- The 2005 World Energy Outlook is expected to provide a range of 'accelerated technology' and 'technology plus' scenarios illustrating the types and levels of action required to move towards stabilisation of Carbon emissions.

Energy Supply Growth (Mtoe)

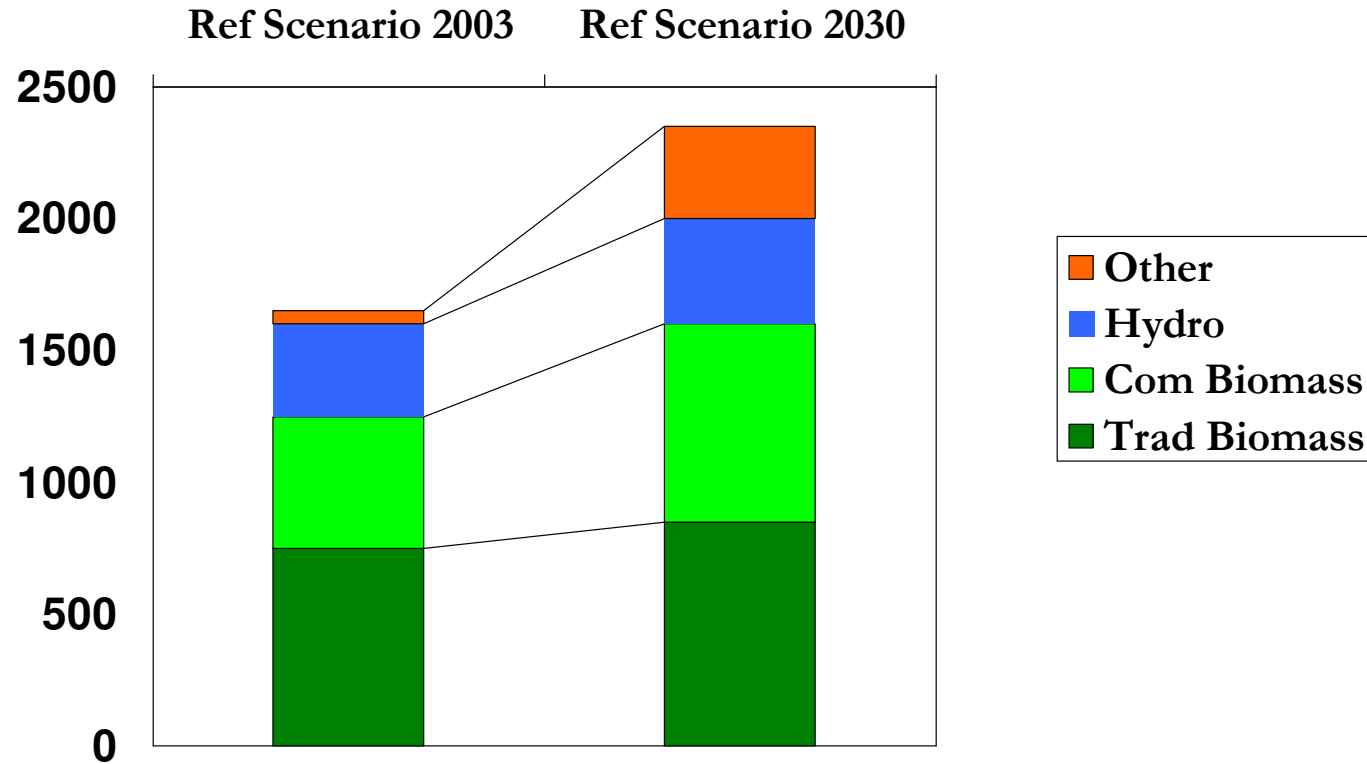
IEA World Energy Outlook 2004



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Renewable Energy Growth (Mtoe)

IEA World Energy Outlook Reference Scenario



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Conclusions

- The IEA, in line with other analysis, projects that in the absence of new policies, energy use and CO₂ emissions will more than double by 2050, with increasing use of fossil fuels, increased prices, and reduced security of supply
- Curbing the growth in demand for energy, switching to low carbon sources and carbon sequestration to reduce emissions by substantially enhanced policies could offer a pathway to eventually stabilise emissions

Conclusions 2

- Even in baseline reference scenarios use of renewables increases substantially, particularly bioenergy, which offers a major challenge to policy makers and the biomass community
- In alternative, accelerated technology and technology plus, scenarios the challenges are even more formidable
- International collaboration through programmes such as those of the IEA will become even more essential if those challenges are to be met.