



African Caribbean and Pacific Group of States
Science and Technology Programme

Sustainable non-food bio-oil and biogas supply chains

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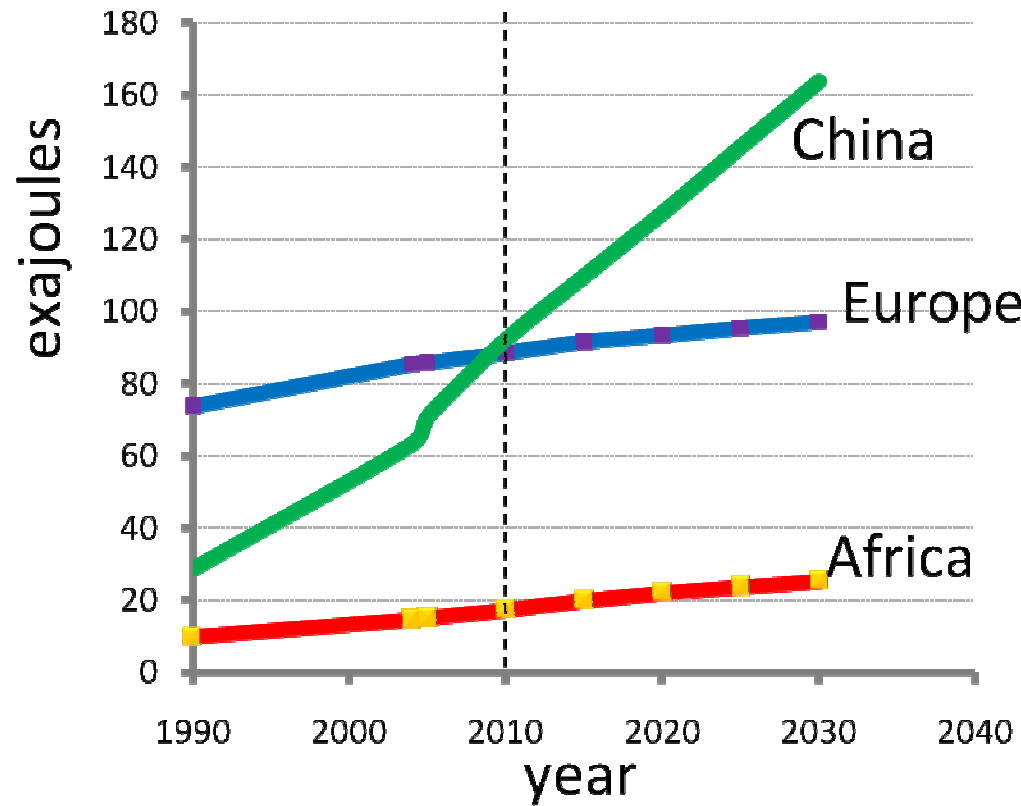
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Global energy-related CO₂ emissions set to rise



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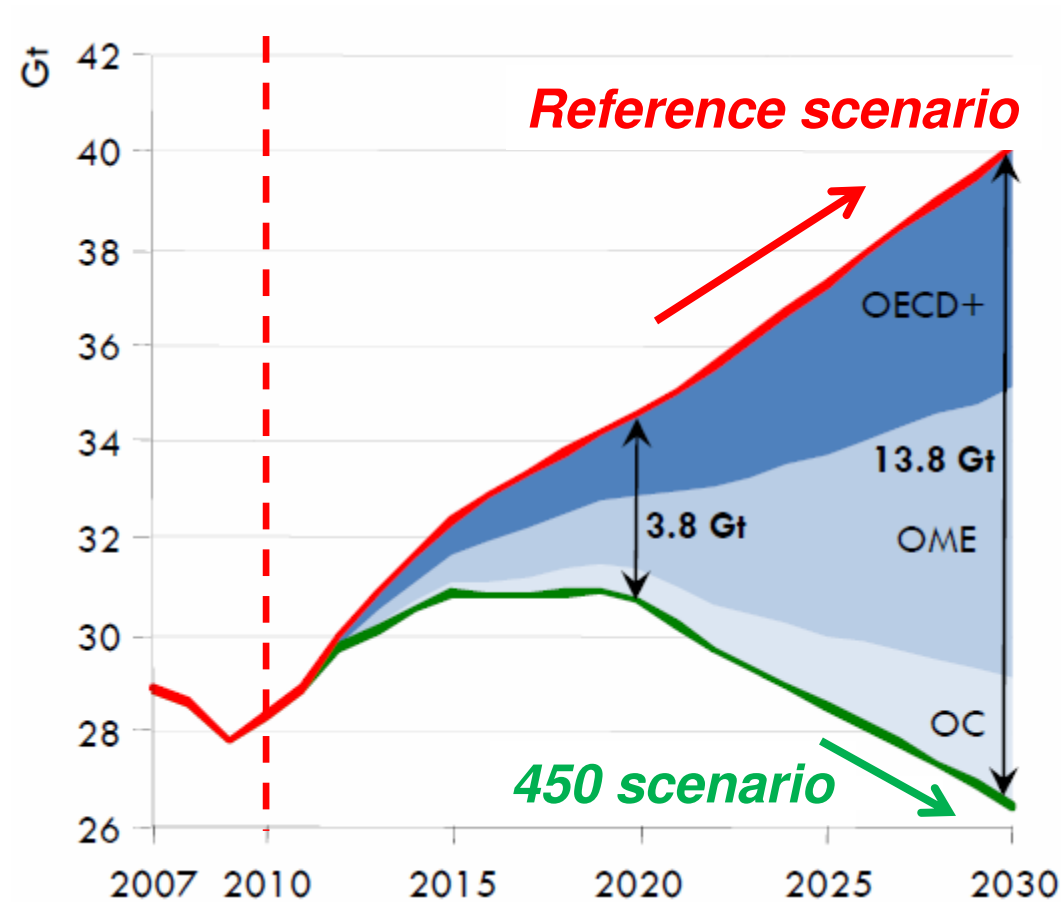


Executive Director of the IEA Nov 2009

If the world continues on the basis of today's energy policies, the climate change impacts will be severe.

Energy which accounts for two-thirds of today's GHG emissions is at the heart of the problem: and so must form the core of the solution

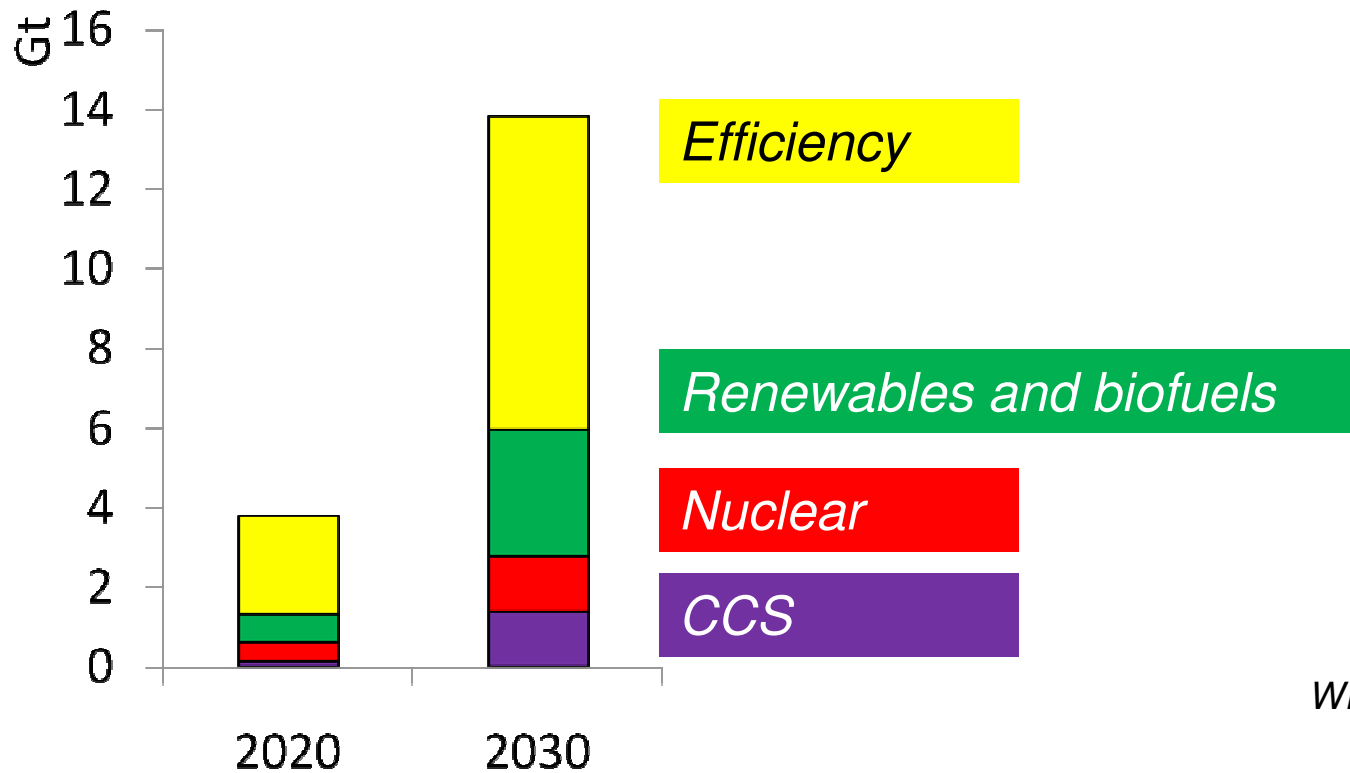
Abatement measures needed for 450 ppm CO₂ eq by 2030



WEO 2009



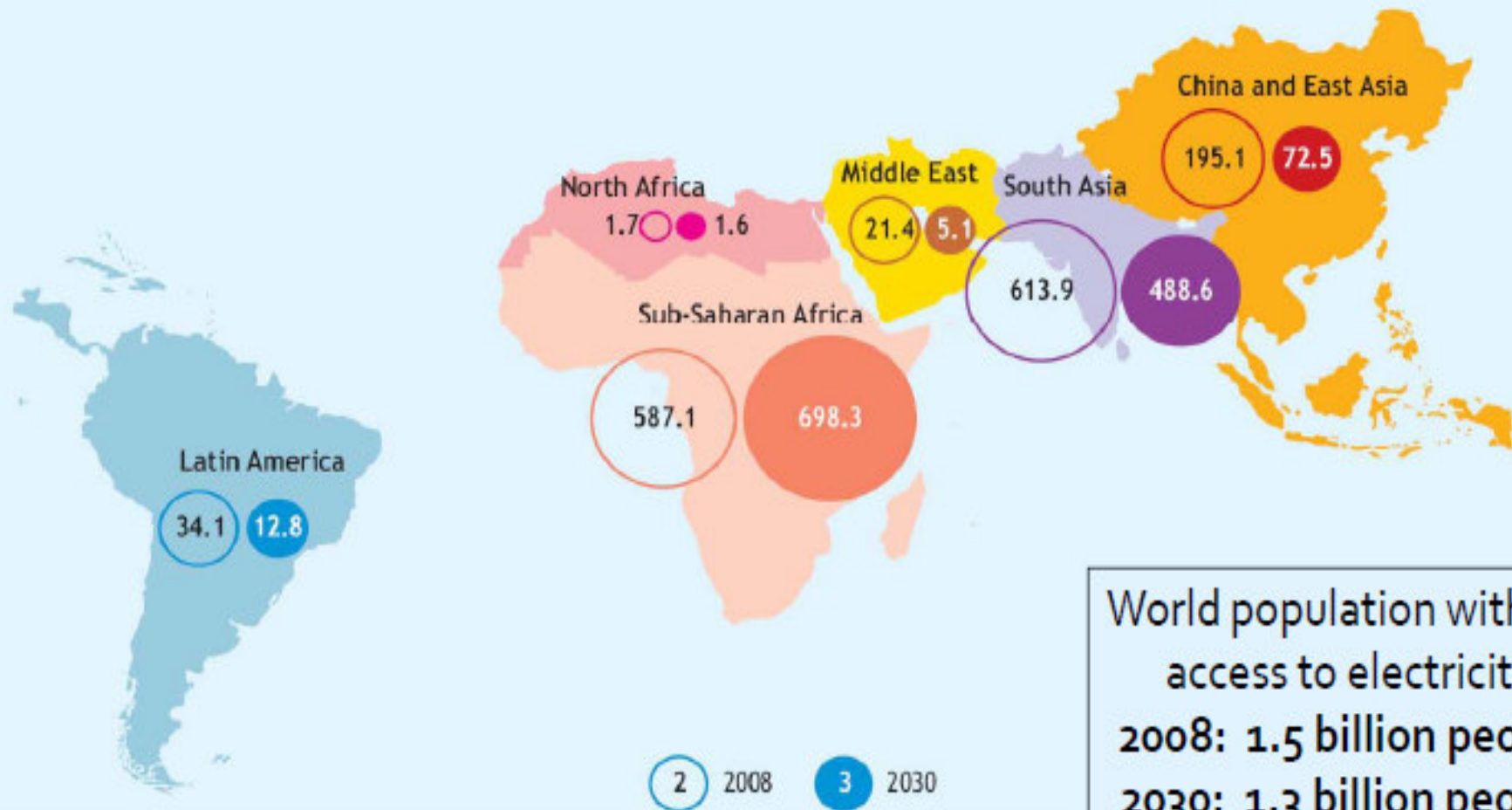
Abatement measures for 450 ppm CO₂ eq by 2030



WEO 2009



Number of people without access to electricity in the Reference Scenario (millions)



World population without access to electricity
 2008: 1.5 billion people
 2030: 1.3 billion people

How will we meet the challenge?

What abatement measures?



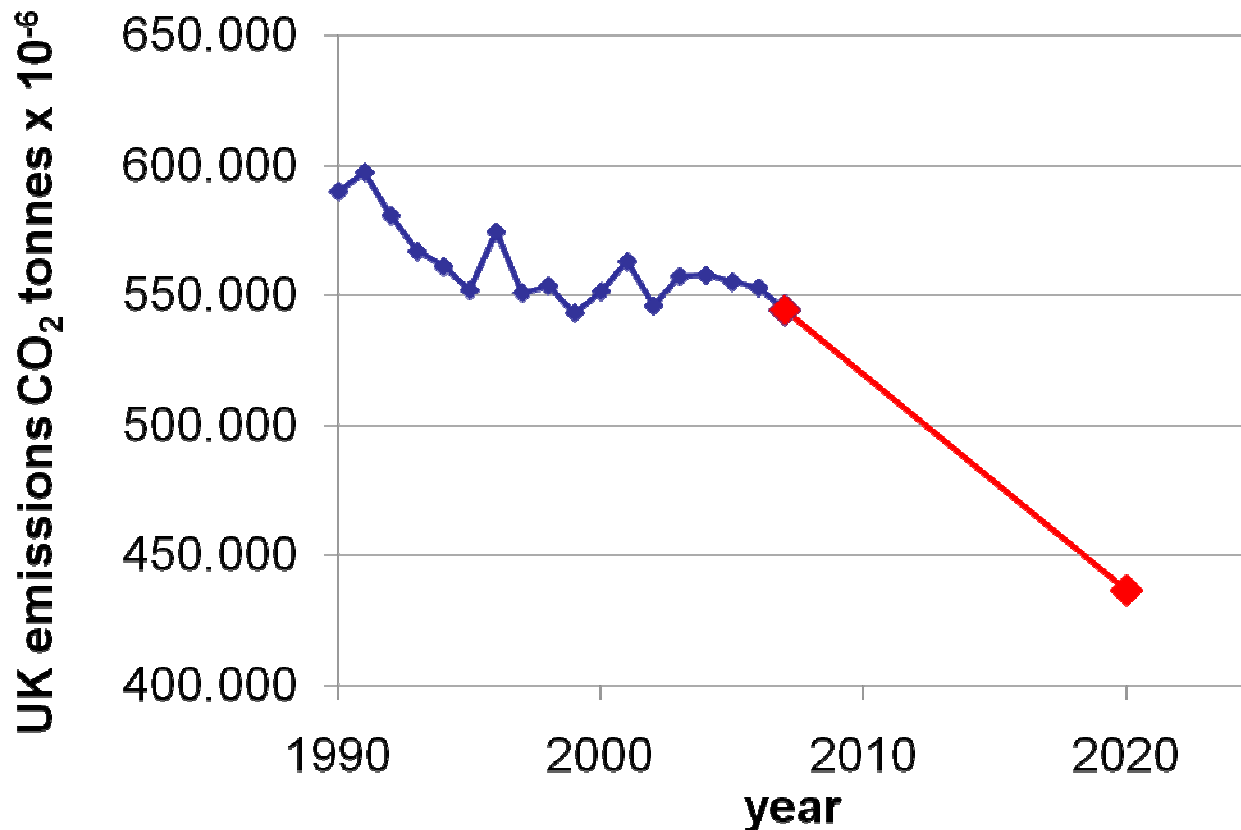
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UK : Low carbon technologies challenge



Climate Change Bill 27 November 2008



What technologies to meet the challenge?



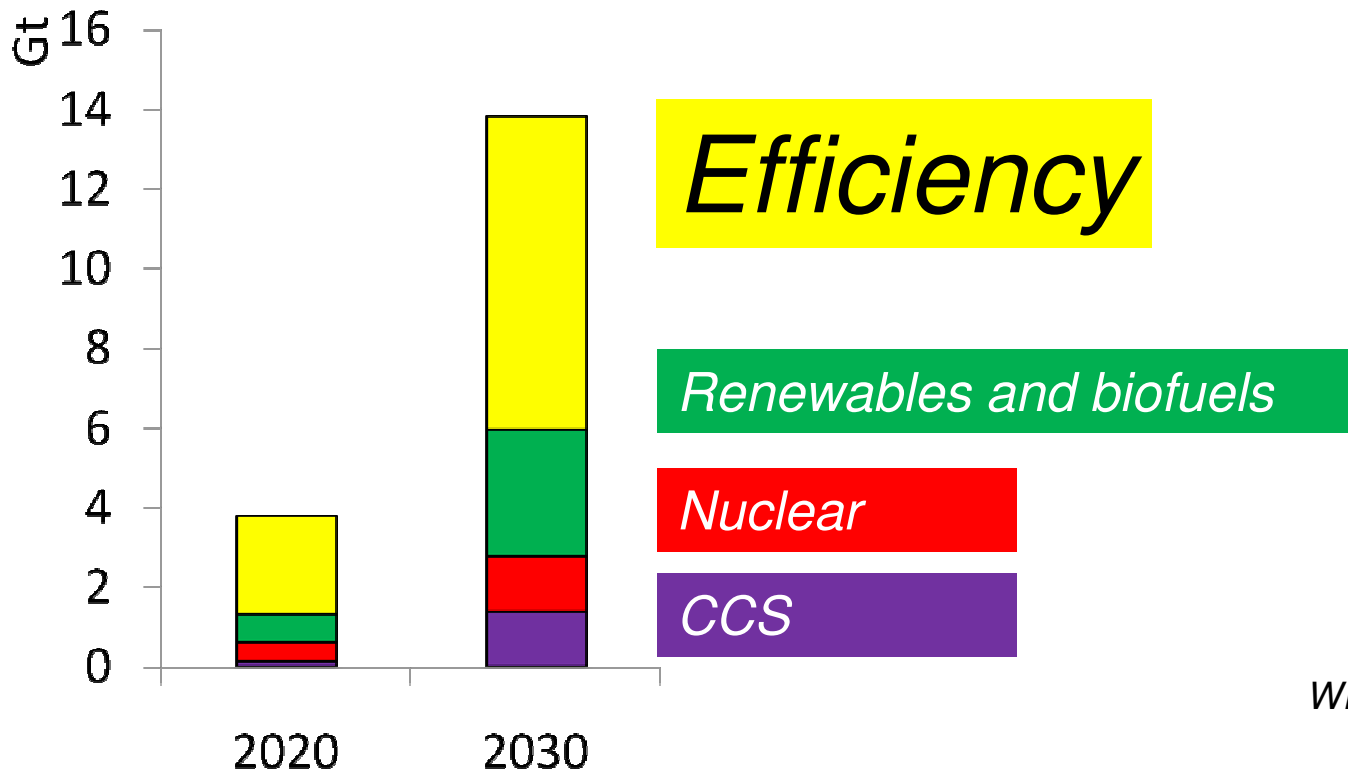
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Abatement measures needed for 450 ppm CO₂ eq by 2030



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Efficiency: Electricity made in power stations is energy-wasteful



Coal-fired power station
~ 30-35% efficiency

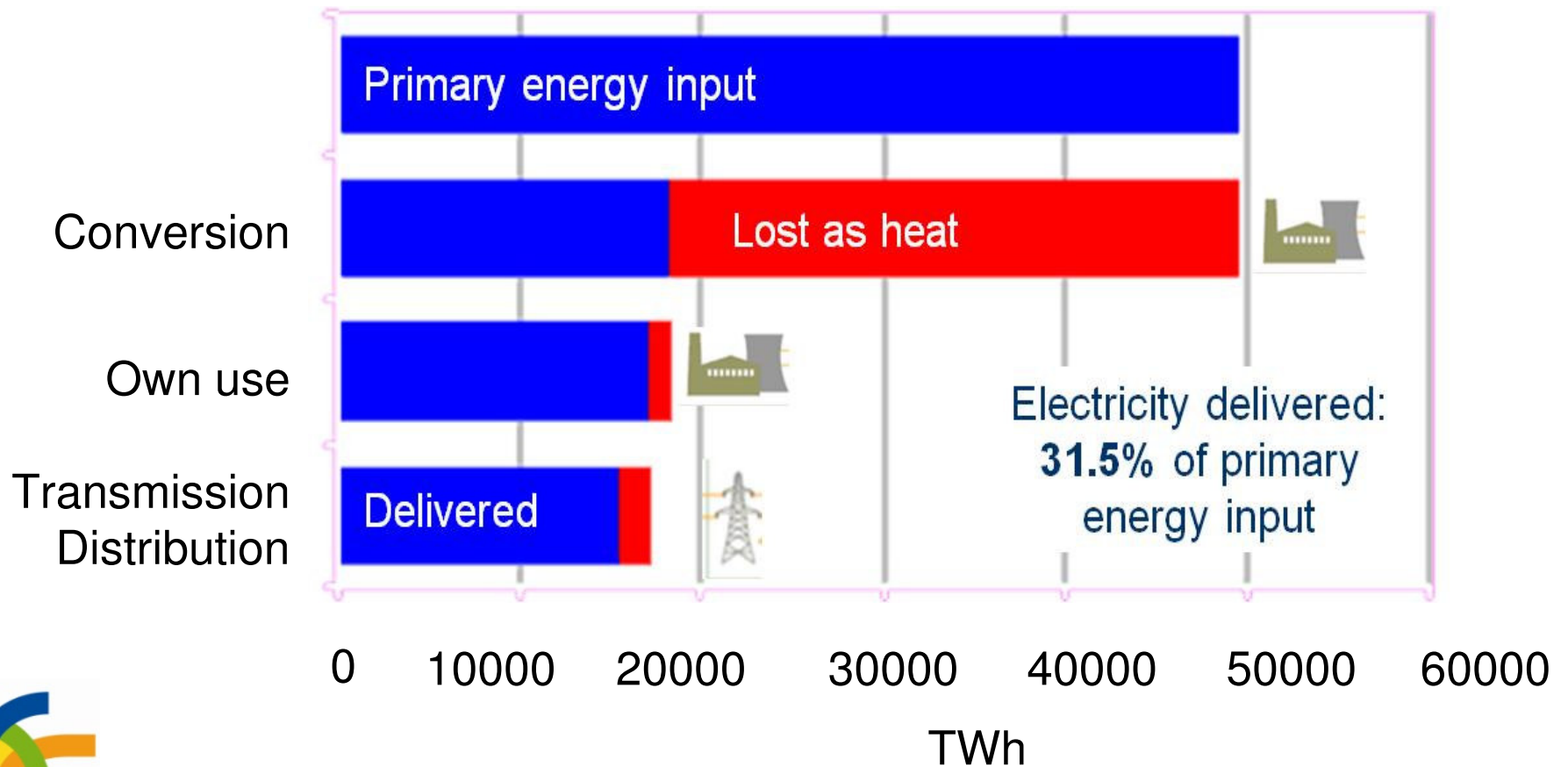


10% losses in transmission

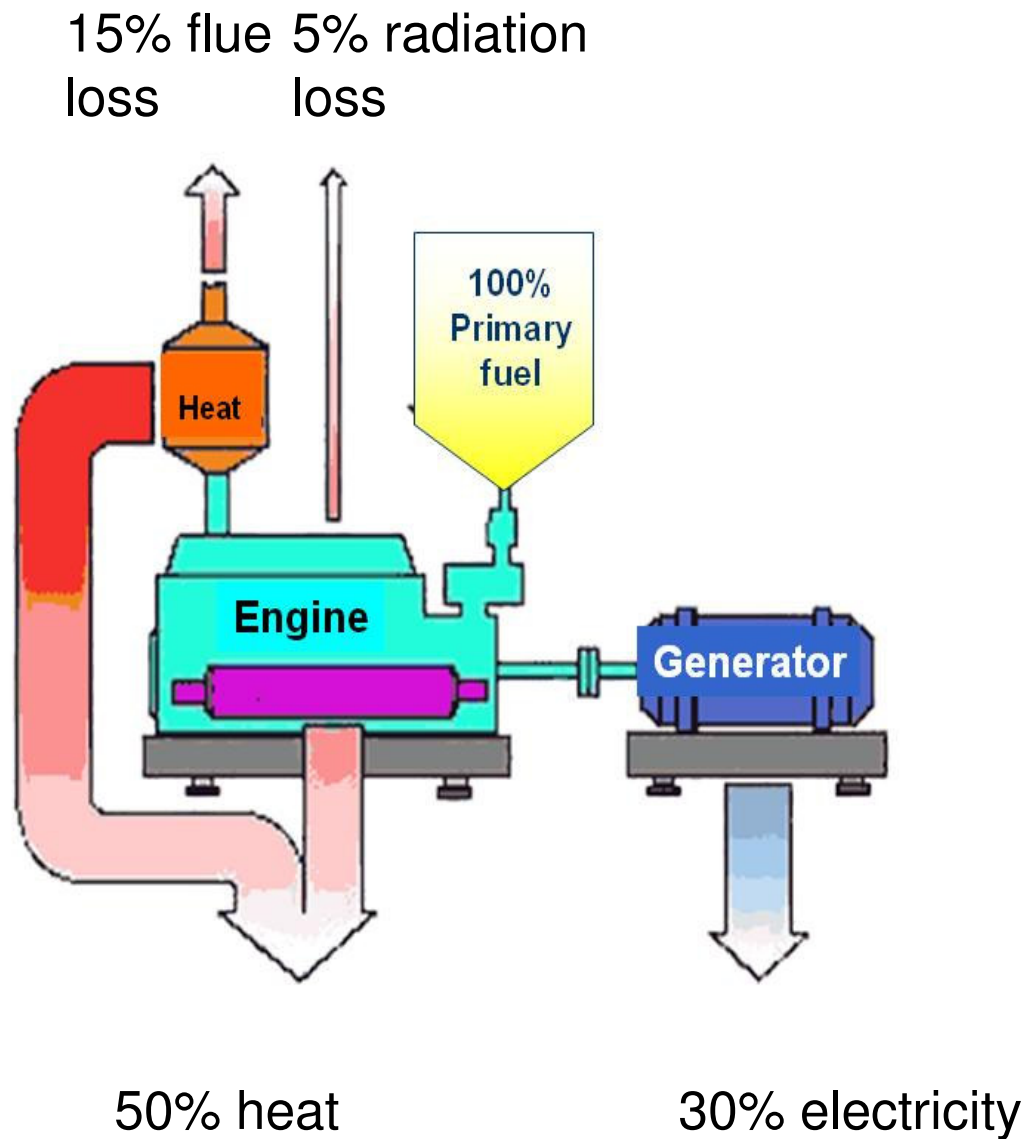


Losses in global energy conversion and power delivery

Source: IEA 2008

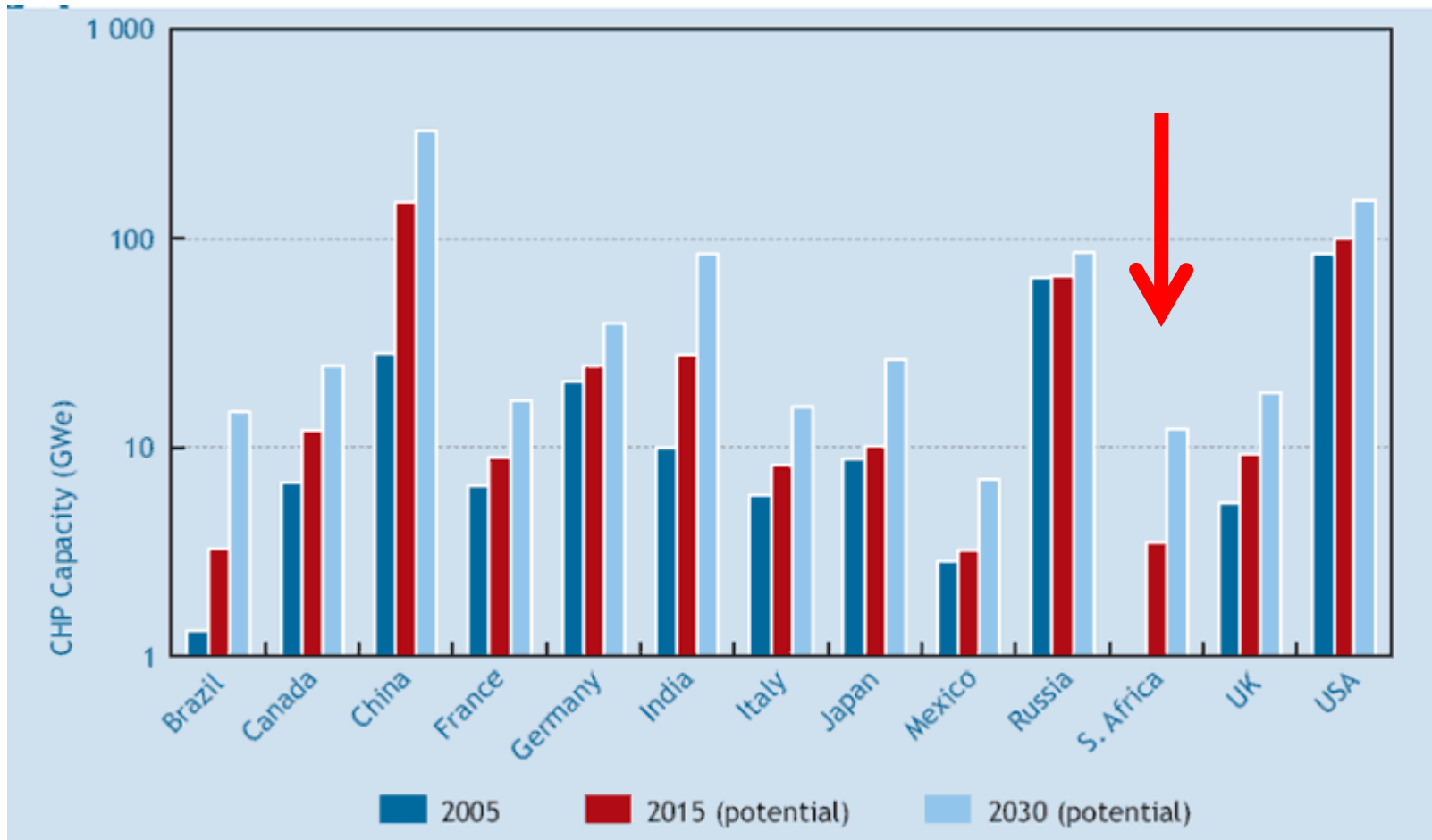


Cogeneration - CHP



- Simultaneous generation of heat & power
- Ideal where both heat & power needed

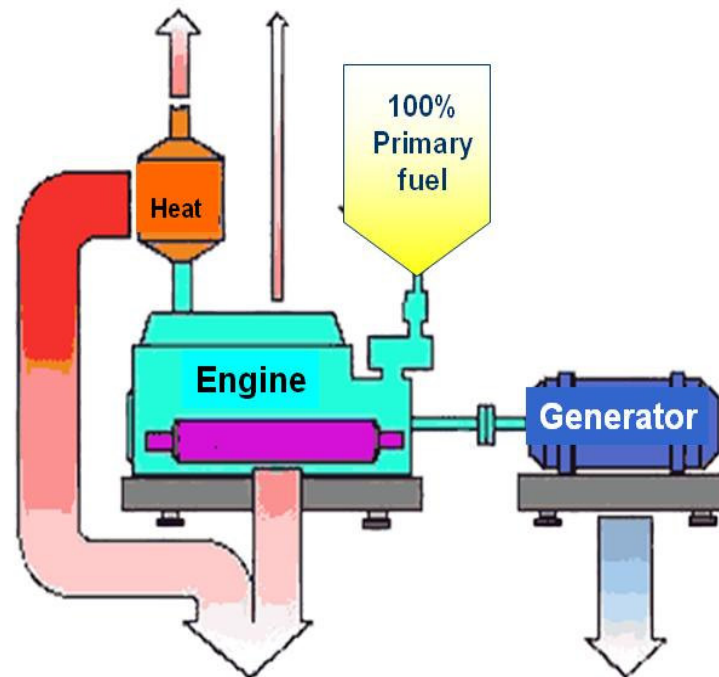
CHP potential



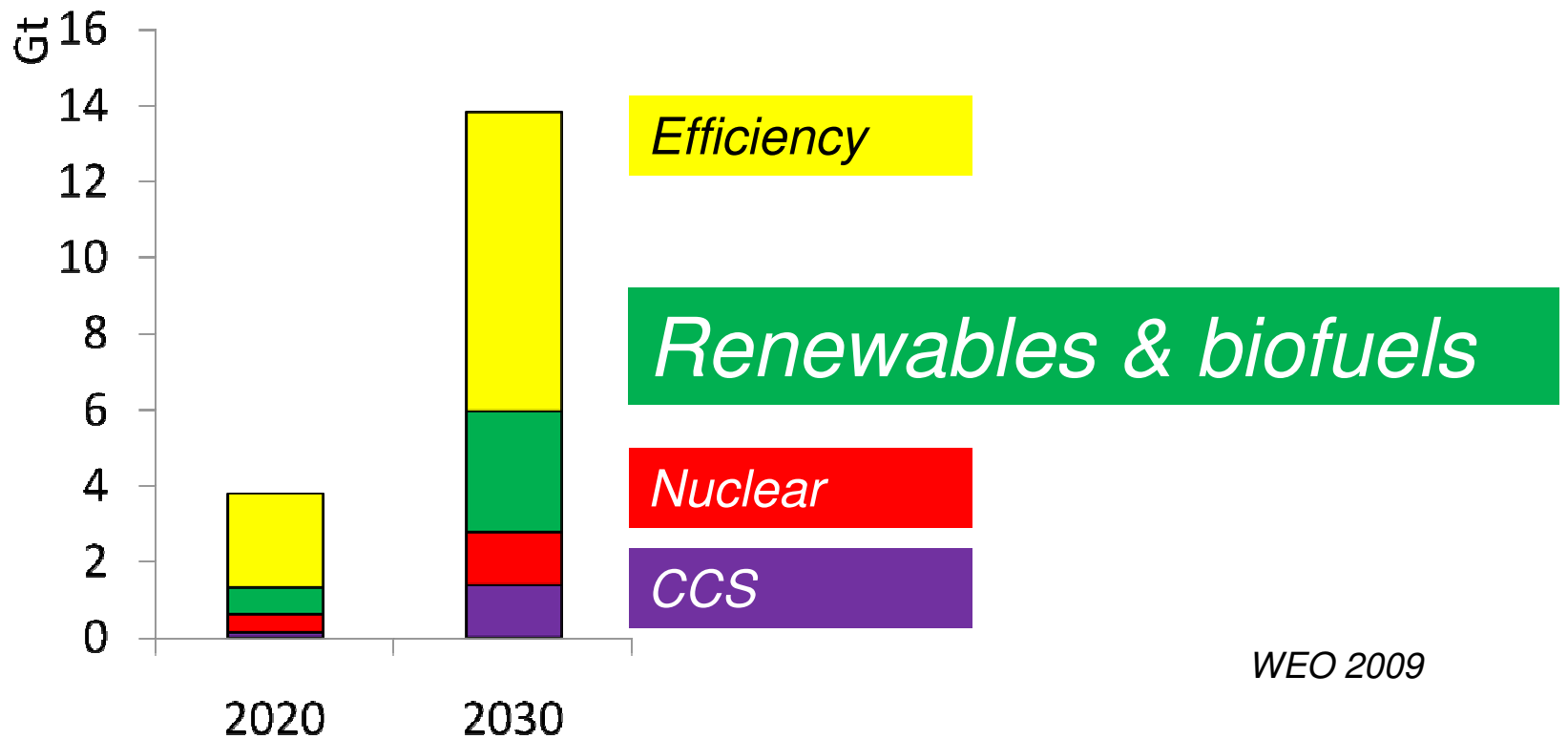
Source: IEA, *CHP: Evaluating the Benefits of Greater Global Investment (2008)*.



But CHP needs fuel



Abatement measures for 450 ppm CO₂ eq by 2030



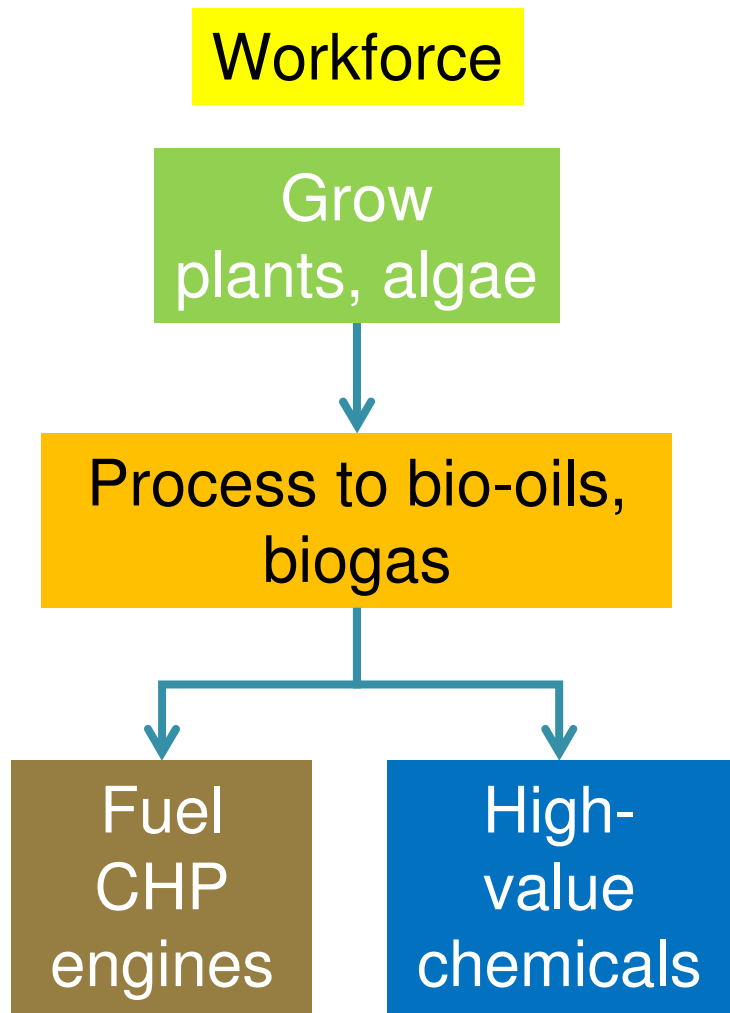
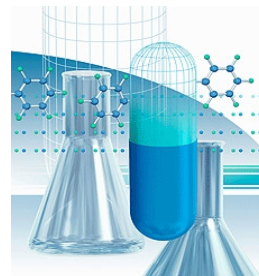
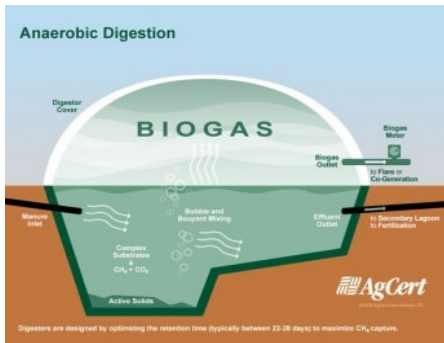
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Renewable biofuels



Supply logistics



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ACP

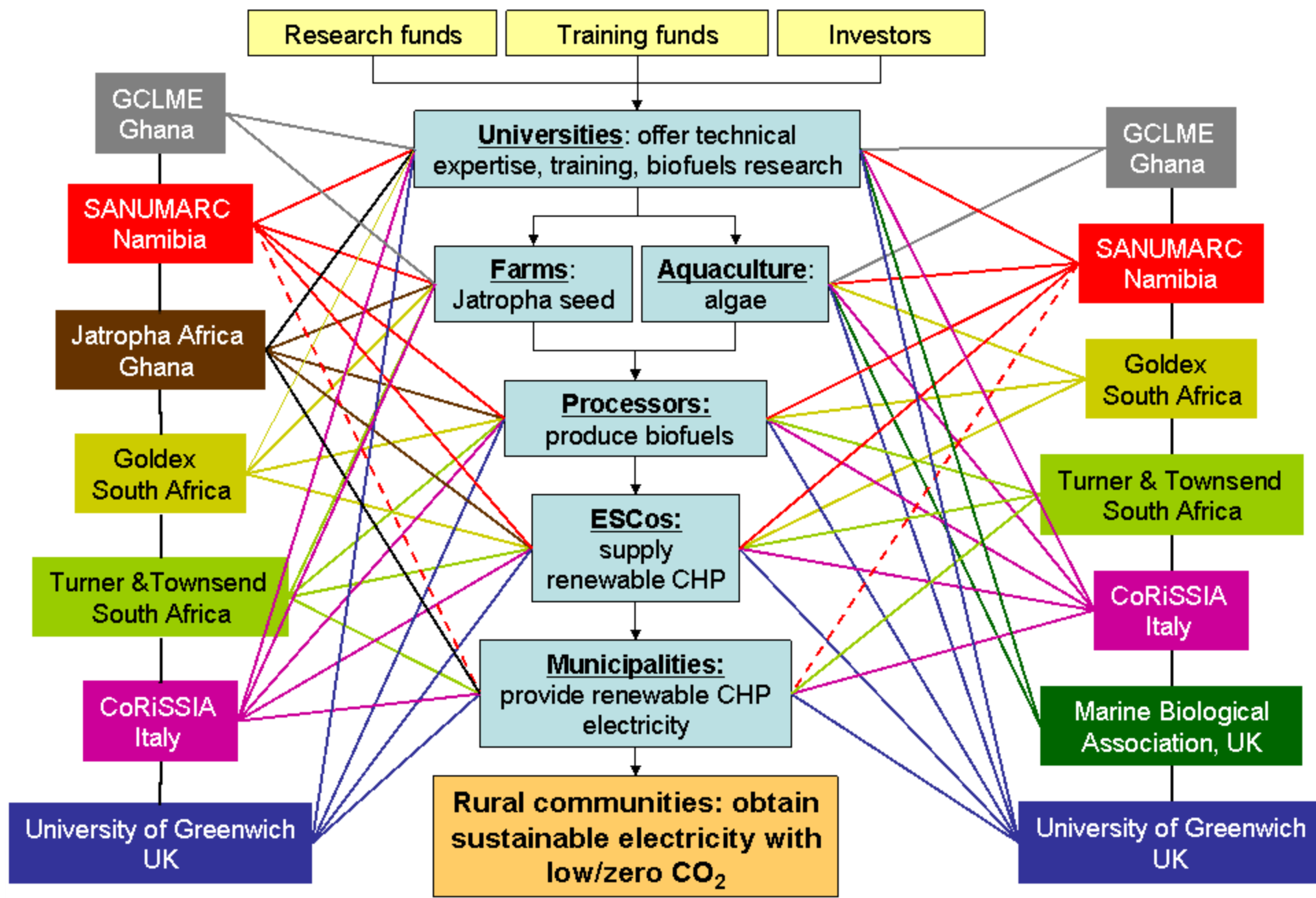
- *'EC's Strategy for Sustainable Development'*
- Build, enhance scientific & technological capacity for R&D & innovation
- Enable activities /policies critical to sustainable development



This ACP Project

- 36 months
- South Africa, Namibia, Ghana, UK, Italy
- Regional, local authorities, municipalities
 - sewage, water,
 - energy procurement





Jatropha Partners

Stakeholders

Microalgae Partners

This workshop

- Understand contexts
- Develop connections
- Attract investment
- Build capacity
- Create sustainable non-food supply chains
- Africa

