

# ***CREDIBILITY & COHERENCE***

***ECF – Berlin march 26 2007***

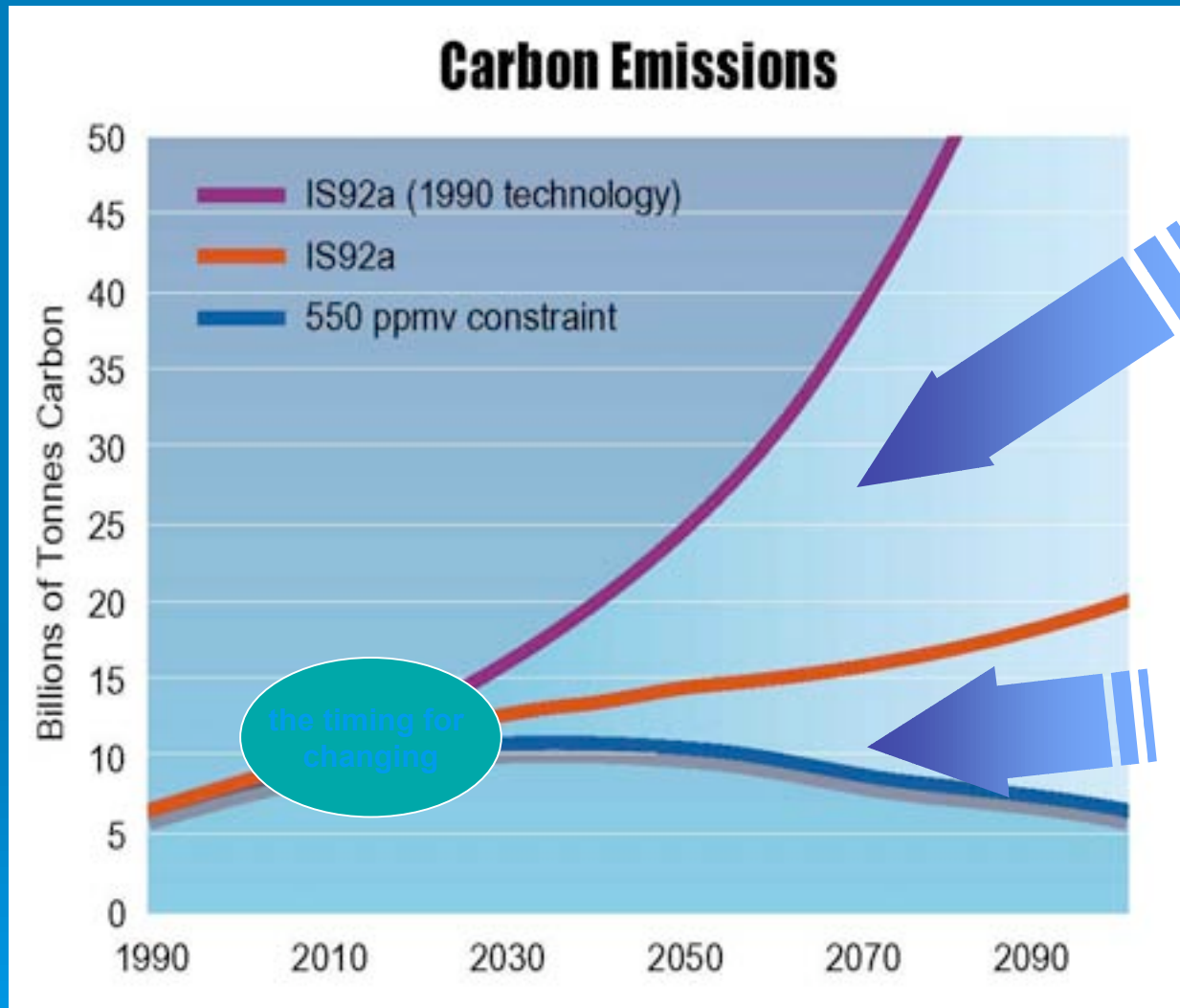
**Corrado Clini**



**Director General Ministry for the  
Environment of Italy**

**Chair of the Global Bioenergy  
Partnership**

# Stabilizing CO<sub>2</sub> Base Case and “Gap” Technologies



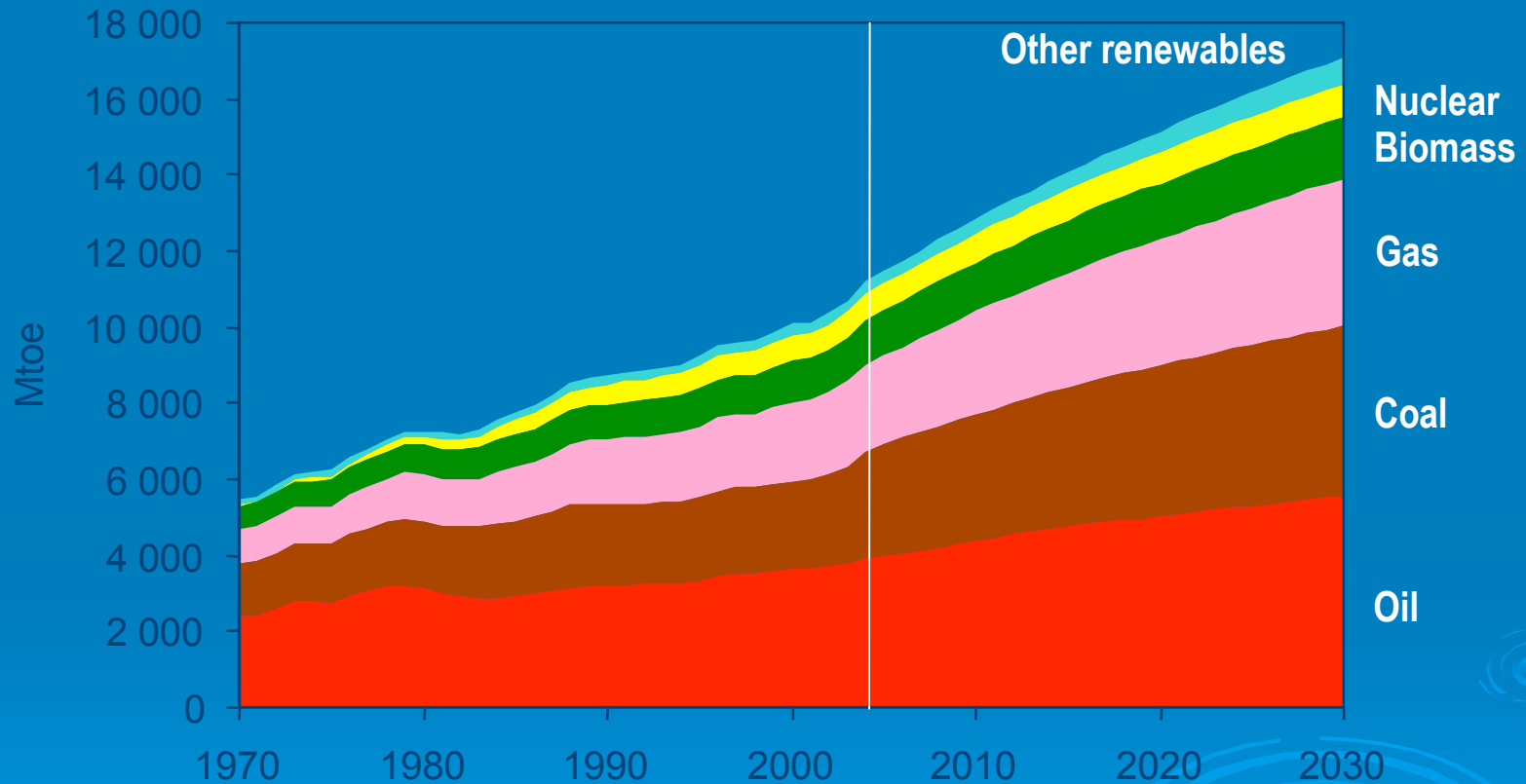
## Assumed Advances In

- *Fossil Fuels*
- *Energy intensity*
- *Nuclear*
- *Renewables*
- *Biofuels*

## New technologies

- *Carbon Capture and Sequestration*
- *Hydrogen*
- *“New Nuclear”*
- *“New Renewables”*

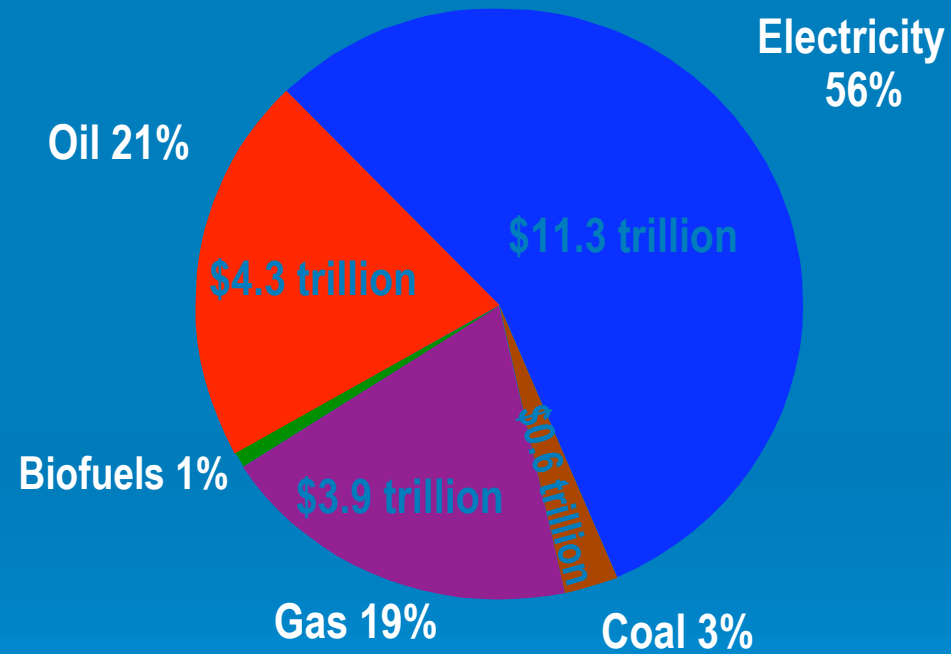
***THE CONFLICT BETWEEN STABILIZING CO2  
AND THE WORLD PRIMARY ENERGY DEMAND  
WEO 2006 - The Reference Scenario***



***Global demand grows by more than half over the next quarter of a century,  
with coal use rising most in absolute terms,  
driving the increasing of CO2 emissions by 60%***

# *WEO 2006 - Reference Scenario: Cumulative Investment, 2005-2030*

**\$20.2 trillion (in \$2005)**



## *Meeting the gap*

To be effective in approaching CO<sub>2</sub> stabilization, the long term global strategy and measures should be designed and should start immediately.

The challenge is to combine the short term measures to meet Kyoto targets with the long term strategy to develop radical changes in the global energy system

Considering the lifetime of power plants and industrial process (20 to 40 years) the introduction of rules in the global energy market, starting from now and based on a long time scale, should be considered

*for the application in the global energy market of*

- **progressive more stringent “carbon intensity standard” for the energy technologies;**
- **progressive “carbon price” to be applied to fuels and technologies.**

*and for the recognition of*

- **carbon credits, corresponding to future (post 2012) emissions reduction from the use of new technologies, in the 2008-2012 commitment period both from domestic actions and from projects in Clean Development Mechanism and Joint Implementation Kyoto Mechanisms**

## ***THE EU RESPONSE***

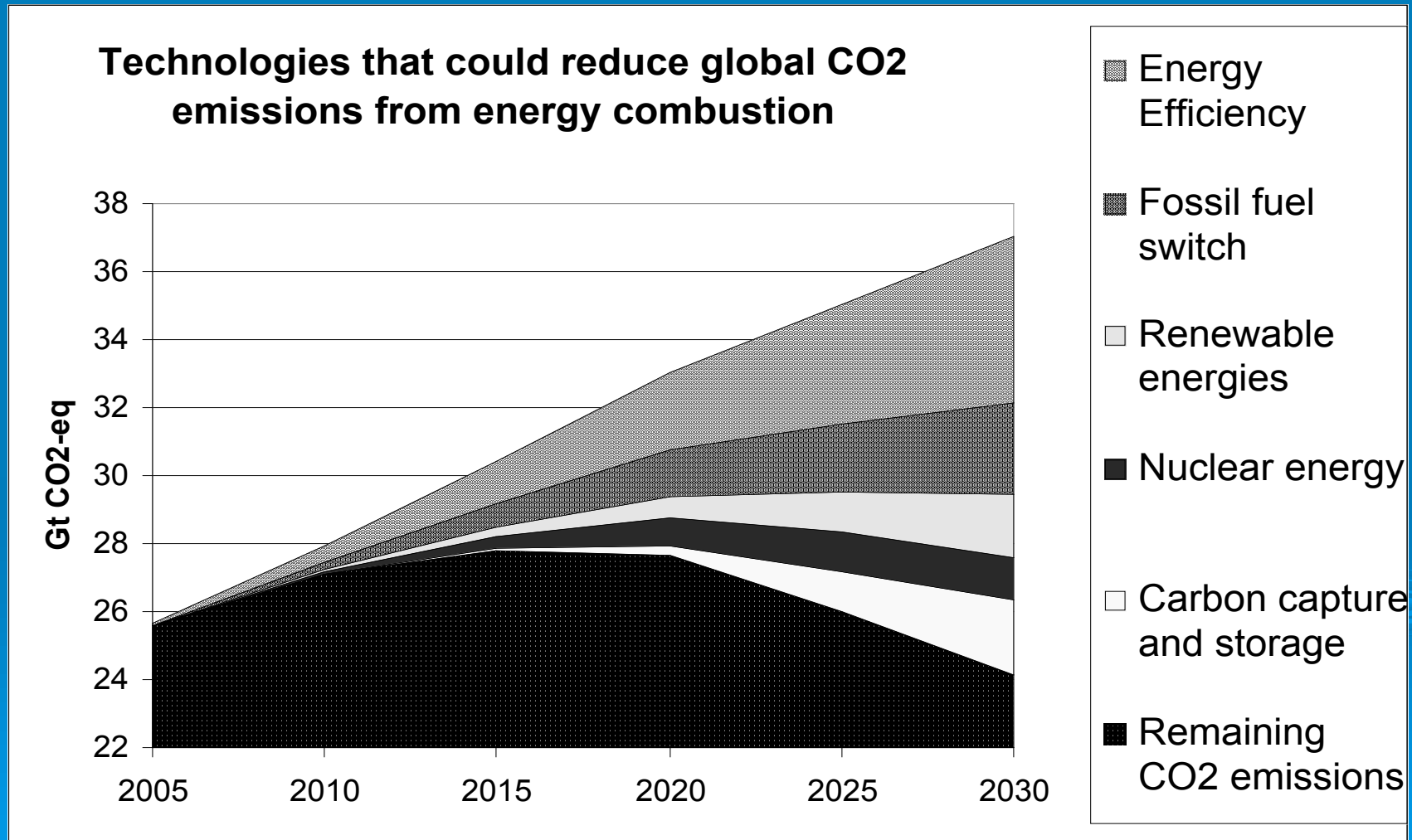
### ***The way ahead for 2020 and beyond***

**“The following concrete actions will ensure a competitive, more sustainable and secure energy system and a significant reduction of GHG emissions in the EU by 2020:**

- ❖ Improve the EU energy efficiency by 20 % by 2020,***
- ❖ Increase the share of renewable energy from less than 7% to 20 % by 2020,***
- ❖ Increase the share of biofuels to 10%,***
- ❖ Adopt an environmentally safe carbon capture and storage (CCS) policy, including the construction of twelve large-scale demonstration plants in Europe by 2015.”***

# ***THE EU RESPONSE***

## ***The way ahead for 2020 and beyond***



Source: JRC-IPTS, POLES

# ***THE EU RESPONSE***

## ***The way ahead for 2020 and beyond***

### ***WAITING FOR EU POLICIES AND MEASURES TO IMPLEMENT THE SPRING COUNCIL CONCLUSIONS***

- ❖ european energy efficiency standards, including cars,
- ❖ phasing out subsidies to support coal and fossil fuels,
- ❖ reducing agriculture subsidies switching to low carbon technologies,
- ❖ investments and subsidies for the development of new energy technologies,
- ❖ application of an effective carbon price through a common energy taxation, beyond the ETS
- ❖ european bioenergy policy, based on *life cycle analysis, labelling and “certification of origin” of biofuels*





## Global Bioenergy Partnership

1. Create a global high level policy dialogue on bioenergy, supporting national and regional bioenergy policy making and market development, and facilitating international cooperation;
2. Favour more efficient and sustainable uses of biomass and develop project activities in the bioenergy field;
3. Foster the exchange of information, knowledge skills and technologies by identifying and promoting potential areas of bilateral and multilateral collaboration;
4. Facilitate bioenergy integration into energy markets by tackling specific barriers in the supply chain;
5. Act as a cross cutting initiative, working in synergy with other relevant activities, avoiding duplications.

# ***ARE BIOFUELS A SUSTAINABLE OPTION?***

## ***THE PALM OIL CASE IN INDONESIA***

*According to a recent research of “Wetlands International” and “Delft Hydraulics”, the expanding production of palm oil in Indonesia to meet the increasing demand of biofuels in Europe was created by draining and burning the peat land, as well by razing huge tracts of the Southeast Asian rain forest in combination with overuse of chemical fertilizers.*

*Peat is an organic carbon storage sponge. Peat land is 90 per cent water. Draining and burning the peat land releases about 2 billion tons of carbon/year, equivalent to 8% of annual global emissions from the use of fossil fuels.*

*This driven Indonesia the third-leading emitter of green house gases after USA and China.*

*In the case of palm oil from Indonesia the production of biofuels can produce more harmful emissions than the fossil fuels they replace.*

# ***ARE BIOFUELS A SUSTAINABLE OPTION?***

## **Food versus Fuel**

*The increasing demand for agricultural land for energy crops production would provide opportunities for sustained increase in agricultural commodity prices. This may result in significant resource transfer to rural areas in developing countries, bringing opportunities for improvements in the standards of living.*

*In the short term, however, higher commodities prices may negatively affect access to food for poor people in developing countries, especially net-food importing developing countries.*

*The increasing use of land for energy crops production is raising concerns about land availability for all needed purposes, such as food, feed, energy, grazing and conservation.*

*On the other hand, some argue that there is room for land availability expansion at the global level which would allow accommodating competing demands for land use.*