EUROPEAN RENEWABLE ENERGY COUNCIL

EREC

From 2020 to 2030 to 2050:

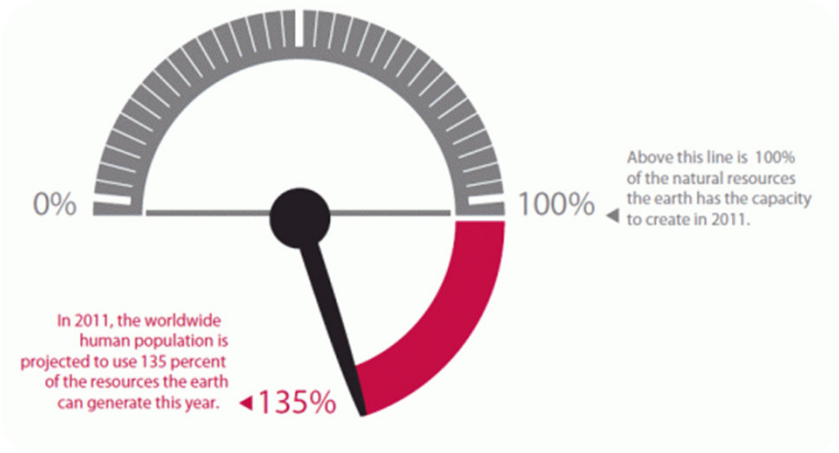
Reversing business-as usual

Josche Muth

Acting Secretary General of EREC

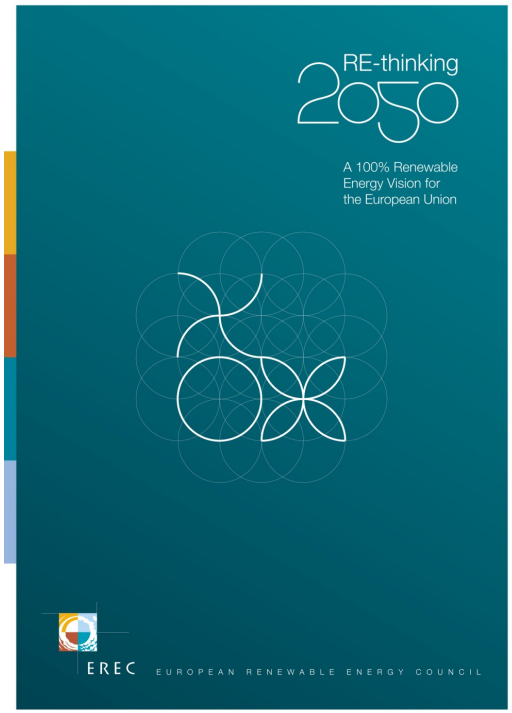
IPM11_30th September 2011

27th September: World Overshoot Day

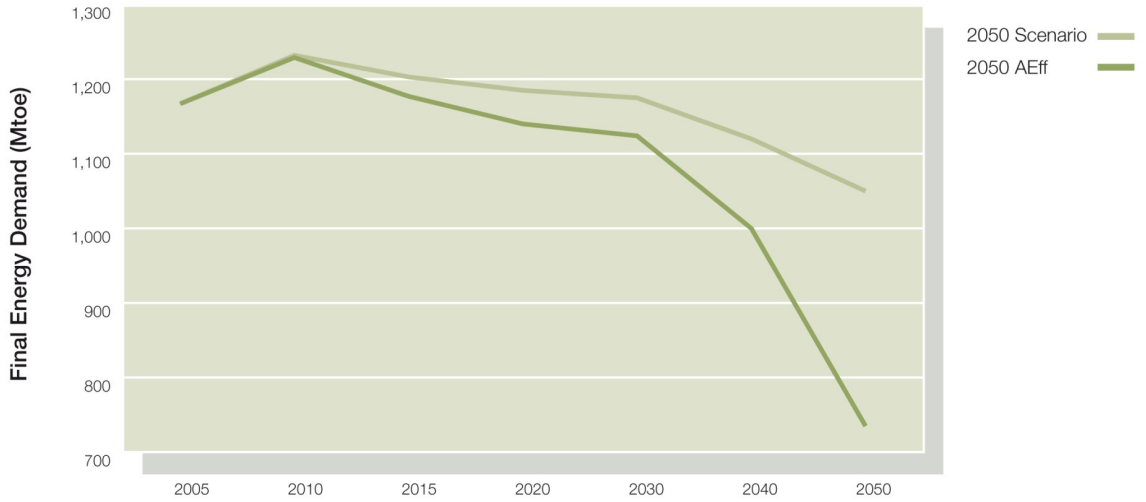


Year	Overshoot Date
1990	7th December
1995	21st November
2000	1st November
2005	20th October
2007	26th October
2008	23rd September
2009	25th September
2010	21th August
2011	27th September

Global Footprint Network tracks human demand on nature – from filtering CO_2 to producing the raw materials for food – against nature's capacity to regenerate those resources and absorb the waste.



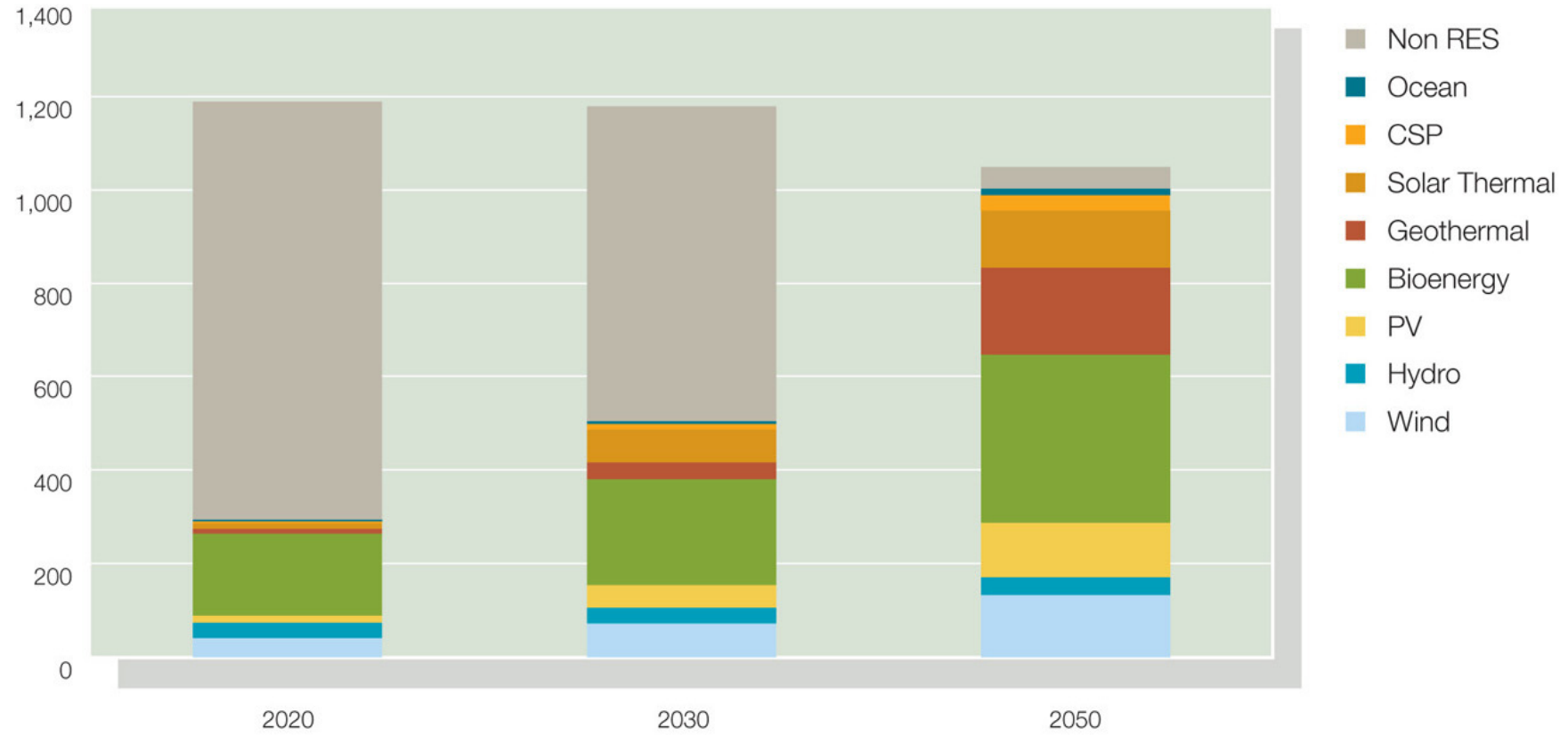
Consumption Assumptions (2005-2050)



	2005	2010	2015	2020	2030	2040	2050
2050 Scenario	1,167	1,232	1,203	1,185	1,175	1,120	1,050
2050 AEff	1,167	1,229	1,177	1,140	1,124	1,000	735

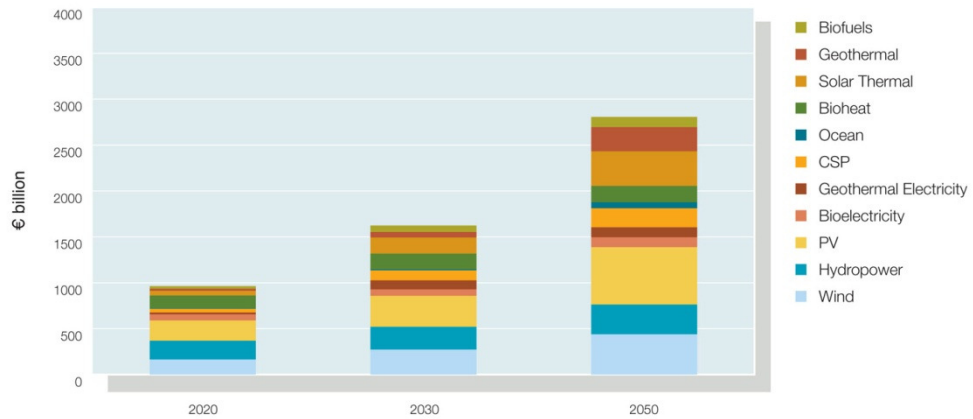
Source: EREC

Contribution of Renewable Energy Technologies to Final Energy Consumption (Mtoe)



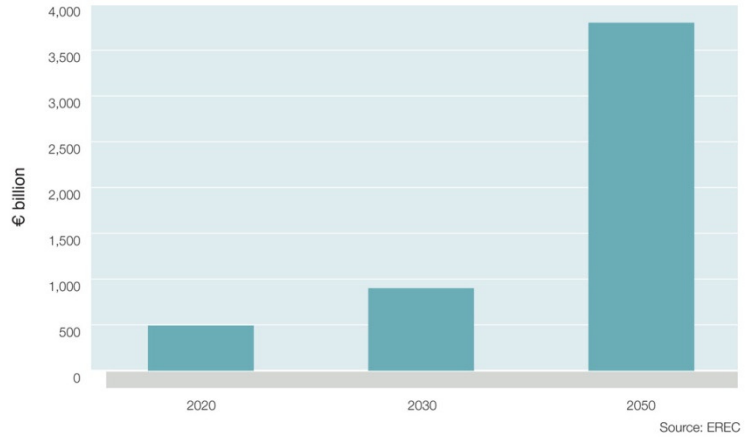
Economic Benefit

Total Cumulative Investments (2020-2030-2050)



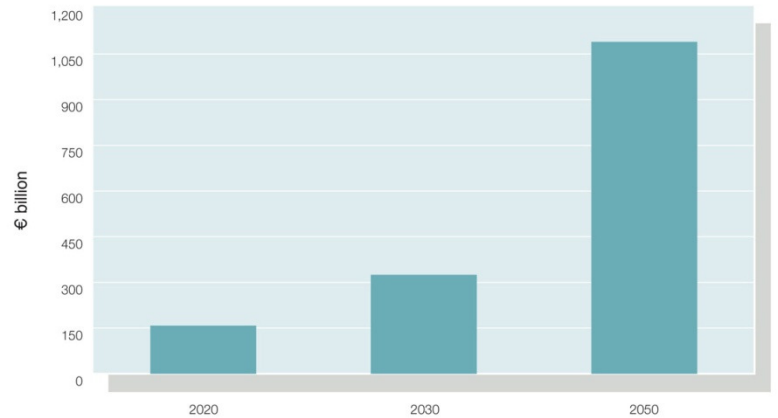
Source: EREC

Carbon Costs Avoided (2020-2030-2050)



Source: EREC

Avoided Fuel Costs from RES Deployment (2020-2030-2050)



Source: EREC

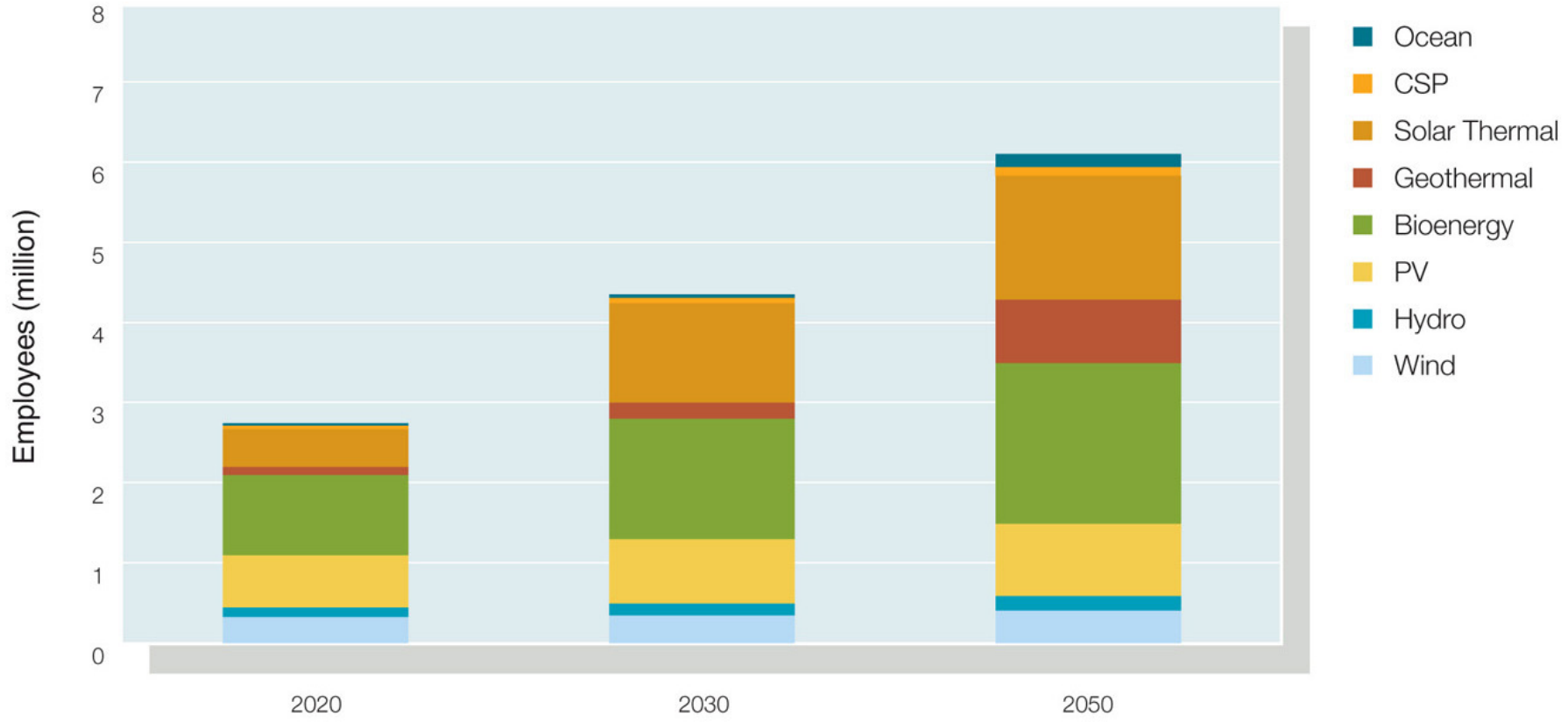
€3,800 billion (CO_2 costs avoided 2050)
+ €1,090 billion (fossil fuels avoided 2050)

€4,090 billion
- €2,800 billion (cumulative investments 2050)

€2,090 billion (Economic Benefit 2050)

Social Benefit

Gross Employment in the Renewable Energy Sector (2020-2030-2050)



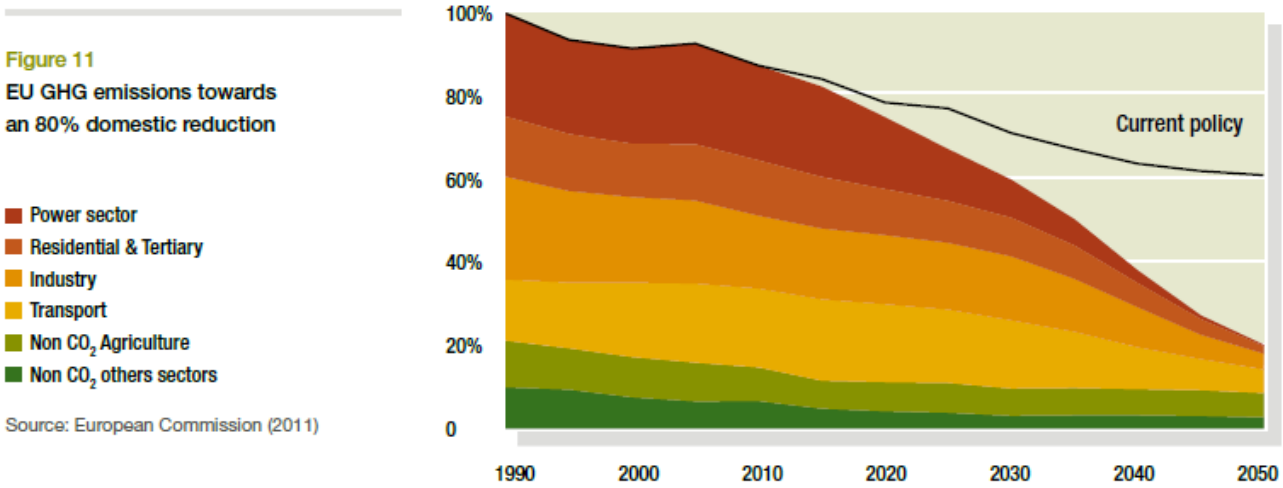
Source: EREC

Enabling Policy Measures

- Supporting the transition towards a 100% renewable energy economy with all EU policy areas
- Effective and full implementation of the RES Directive
- Less is more – an ambitious energy savings Directive
- Moving beyond 20% GHG reduction by 2020
- Binding 45% by 2030 renewable energy target

Current policy leads to -40% GHG

Figure 11
EU GHG emissions towards an 80% domestic reduction



Source: European Commission (2011)

- RES significantly contribute to CO_2 reductions
- EU first mover advantage on RES
- Stable policy frameworks

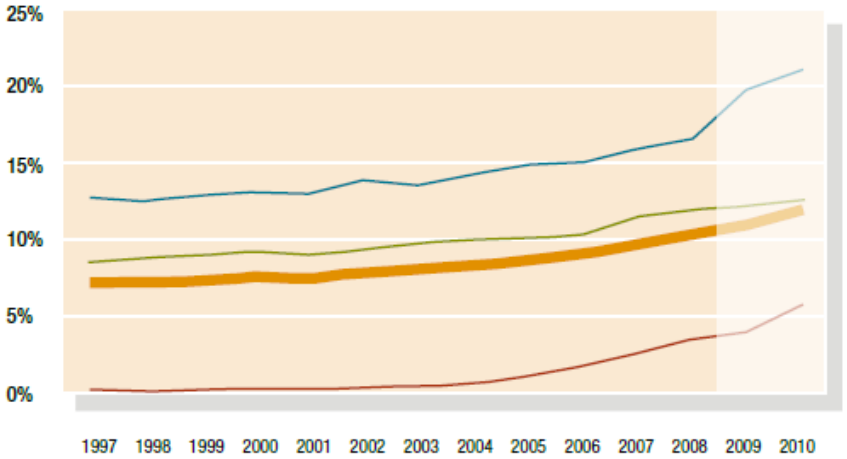


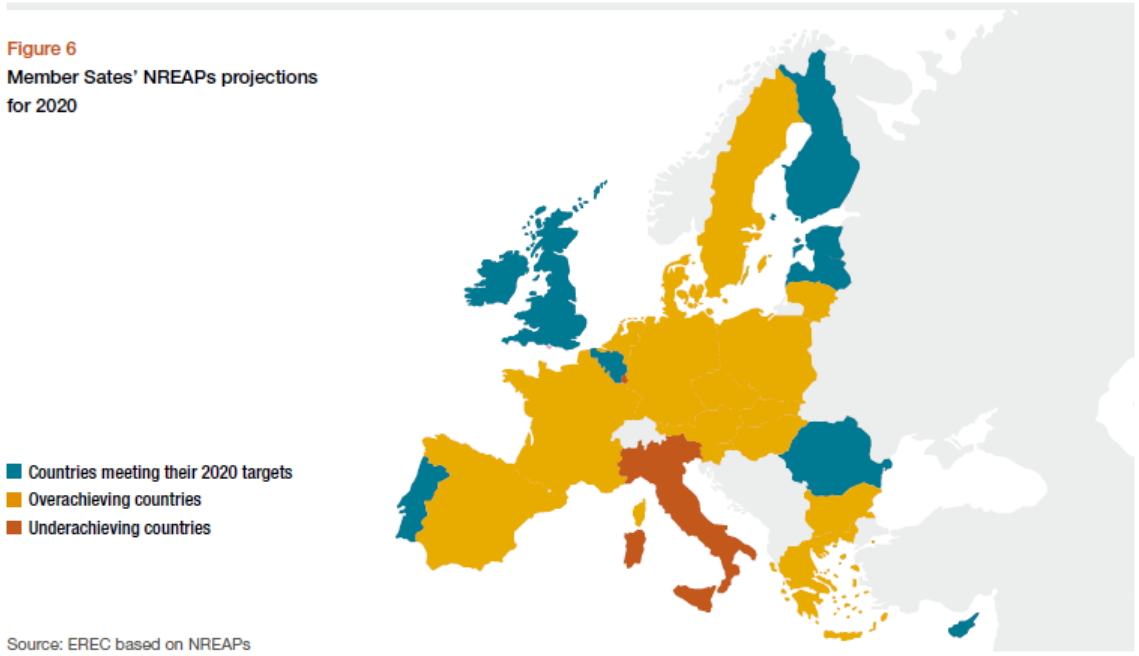
Figure 4
Renewable Energy Share in Final Energy Consumption 1997-2010 (%)

Source: 1997-2008 Eurostat;
2009 preliminary data; 2010 EU targets

Decarbonising the Energy Supply (2010)
880 Mt of energy related CO_2 emissions avoided
-22% of energy related CO_2 emissions

Investing in Renewable Energy
Financial transactions/investments were €55 billion (2008) and €62 billion (2009)

Figure 6
Member Sates' NREAPs projections for 2020



Source: EREC based on NREAPs

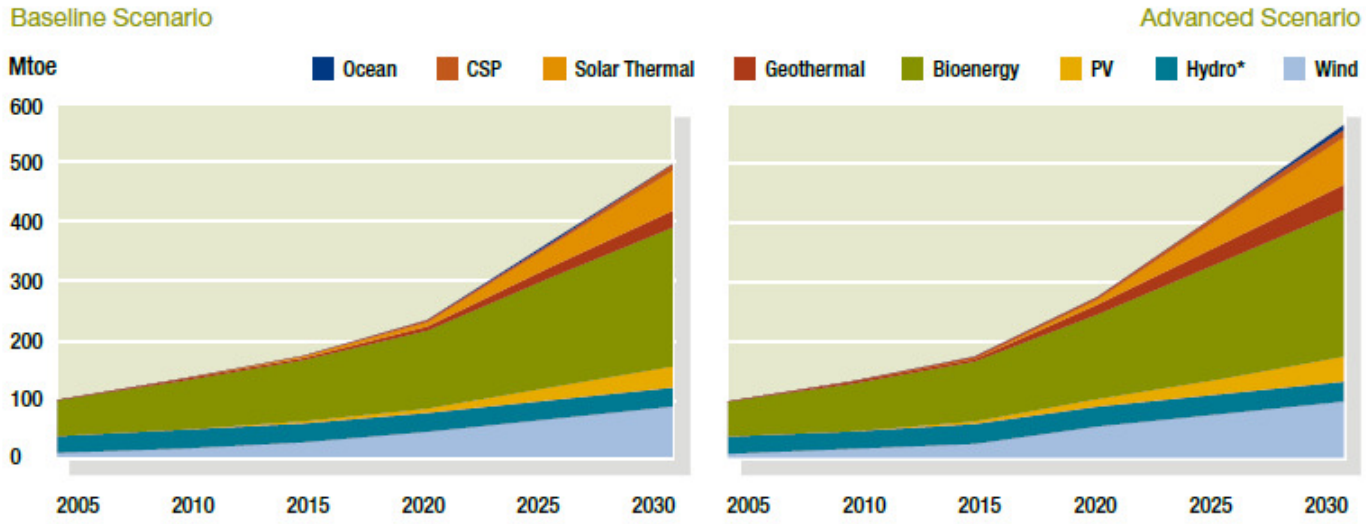
20.7% RES in 2020

34.3% RES-E in 2020
21% RES-H in 2020
10% RES-T in 2020

Decarbonising the Energy Supply (2020)
1,690 Mt of energy related CO_2 emissions avoided
-40% of energy related CO_2 emissions

Investing in Renewable Energy
Investment needs are estimated at €60 to €70 billion annually (2010-2020)

Development of different renewable energy technologies until 2030 (Mtoe)



Decarbonising the Energy Supply (2030)

3,750-4,328 Mt of energy related CO_2 emissions avoided

➡ -93-100% of energy related CO_2 emissions

Investing in Renewable Energy

Additional cumulative investments are estimated at €660 billion in 2030

➡ €66 billion additional average annual investments

Commissioners Statements on 2030

Hedegaard on 2nd May 2011 (Guardian):

"*We should be discussing a renewable energy target for 2030. We need to have ambitious targets. It would be one way to send a long-term price signal for renewable energy – that renewable energy is not just going to stop growing after 2020.*"

Barroso on 16th June 2011 (IPCC Special Report):

"But 2020 is already around the corner and we need to think of intermediate steps up to 2050. (…) We need to provide businesses with a long-term stable policy framework to support their investment decisions. Businesses are already taking their strategic decisions for the next decades. We have to avoid locking in carbon intensive investments."

Oettinger on 16th June 2011 (IPCC Special Report):

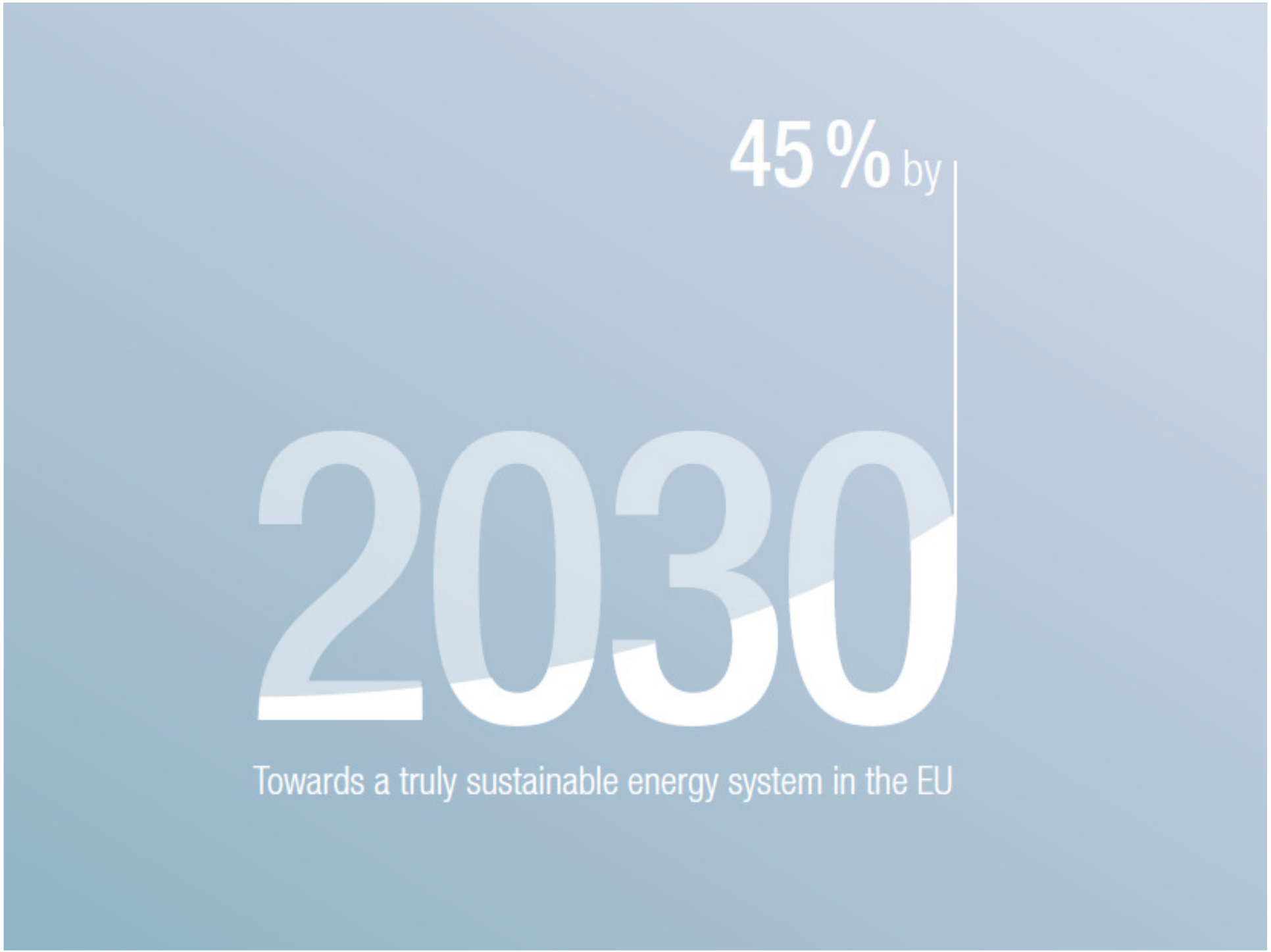
"*We must start to consider a 2030 renewables target. The EU renewable energy industry has already called for a 45 % 2030 target.*"

Commission: Work in Progress

- Ad-hoc Advisory Group
  - The role of the Ad Hoc Advisory Group is to discuss different scenarios and policy challenges and provide advice for the preparation of the Energy Roadmap.
- Impact Assessment (IA)
  - Objective of achieving 85% reduction of energy related CO_2 emissions by 2050 (following the overall 80% GHG reduction target)
  - Uses PRIMES modelling

2050 Impact Assessment

	Options
1	Business-as-usual (Reference scenario)
1bis	Current Policy Initiatives (CPI)
2	High Energy Efficiency
3	Diversified supply
4	High RES
5	Delayed CCS
6	Low nuclear


45 % by
2030
Towards a truly sustainable energy system in the EU

EUROPEAN RENEWABLE ENERGY COUNCIL

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RE-thinking 2050

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Be part of a sustainble energy future – support 100% renewable energy!