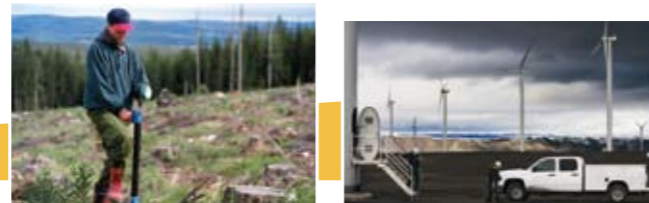


## THE PLEDGE OF THE RENEWABLE ENERGY INDUSTRY FOR COPENHAGEN & BEYOND

- A **global solution** on how to mitigate climate change must be reached at Copenhagen otherwise Climate Change will overwhelm human civilisation.
- A **common but differentiated effort** between industrialised and developing countries is needed. Industrialised countries must commit to at least 40% emissions cuts by 2020, compared to 1990 levels. Developing countries should achieve at least 15-30% deviation from projected greenhouse gas emissions growth by 2020.
- **Ambitious short term targets** are crucial to counteract high-carbon development. An increase in global temperature of even 1.5°C could lead to irreversible impacts and 2°C risks triggering runaway Climate Change. A global plan is needed to ensure that global emissions peak by 2015 and be as close to zero as possible by 2050, compared to 1990 levels.



- **Industrialised countries** must provide adequate and predictable funding to support renewable energy and energy efficiency.
- **Well functioning carbon markets and sectoral agreements:** currently, the cost of Climate Change is carried by society as a whole. Carbon markets can help affect that cost to the actual emitter, giving the necessary signal to move away from polluting practices towards more efficient technologies such as renewable energy and energy efficiency.
- **Renewable energy** should be included in any Climate Change Mitigation strategy as it provides a significant part of GHG reductions.

**“The primary scarcity facing the planet is not of natural resources nor money, but time.”** (International Energy Agency – World Energy Outlook, 2007)

### WHO WE ARE

EREC is the umbrella organisation of the leading European renewable energy industry, trade and research associations active in the sectors of photovoltaic, wind, small hydropower, biomass, biofuels, concentrated solar power, solar thermal and geothermal energy, thus representing the entire renewable energy sector. EREC shares its offices with its member associations in the Renewable Energy House in Brussels, a model showcase for integration of energy efficiency and renewable energy technologies in a historic building. It represents an industry with an annual turnover of €45 billion and more than 450.000 employees.

#### EREC's members:

- AEBIOM (European Biomass Association)
- EBB (European Biodiesel Board)
- eBIO (European Bioethanol Fuel Association)
- EGEC (European Geothermal Energy Council)
- EPIA (European Photovoltaic Industry Association)
- EREF (European Renewable Energies Federation)
- ESHA (European Small Hydropower Association)
- ESTELA (European Solar Thermal Electricity Association)
- ESTIF (European Solar Thermal Industry Federation)
- EUBIA (European Biomass Industry Association)
- EU-OEA (European Ocean Energy Association)
- EUREC Agency (European Association of Renewable Energy Research Centres)
- EWEA (European Wind Energy Association)



European Renewable Energy Council  
For more information on EREC and its members:

[www.erec.org](http://www.erec.org)

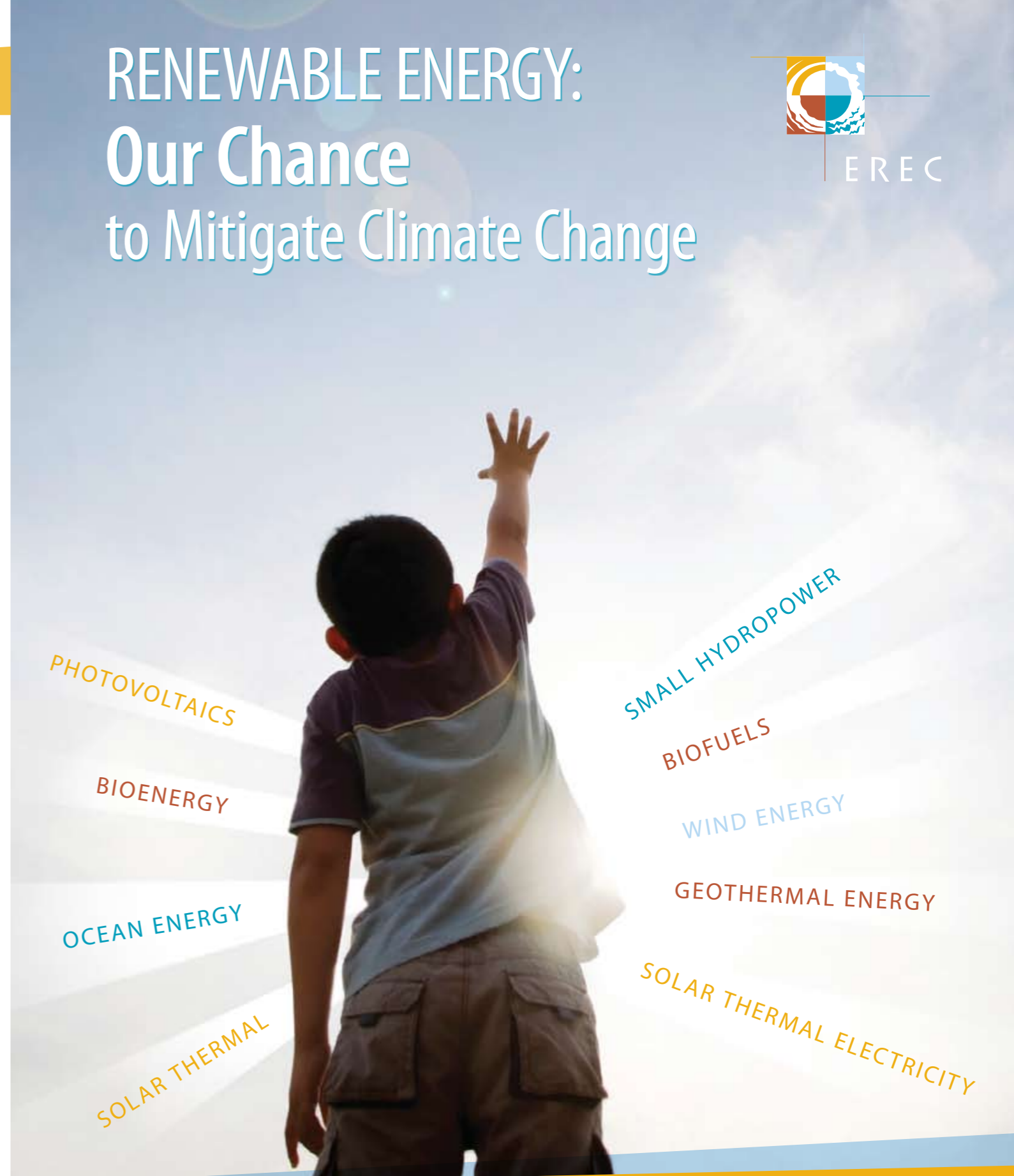
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# RENEWABLE ENERGY: Our Chance to Mitigate Climate Change



DECEMBER 2009



# RENEWABLES BREAK THE CLIMATE LOCK

## CLIMATE BACKGROUND

The 192 nations party to the **UNFCCC (United Nations Framework Convention on Climate Change)** are meeting in December 2009 to decide how to improve the climate regime after the Kyoto Protocol's first commitment period ends in 2012. Two years following the publication of the **Intergovernmental Panel on Climate Change (IPCC) 4<sup>th</sup> Assessment Report**, and as reported by a congress of climate scientists in Copenhagen this March, the climate crisis is deepening: oceans are acidifying and ice caps are melting much quicker than initially anticipated, thermal expansion of water has been underestimated and current emission trends are steadily following the worst of the IPCC scenarios, with dramatic implications.

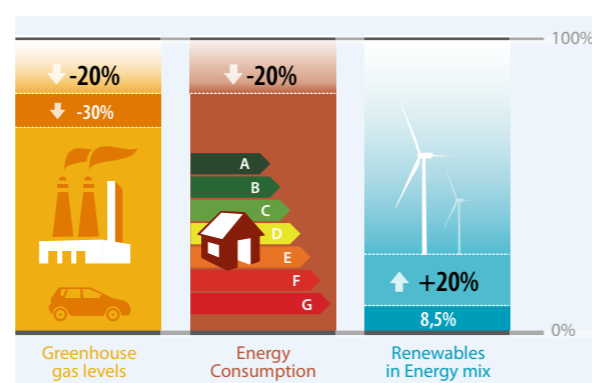
Although the first step to a global emission reduction regime was taken with the **Kyoto Protocol**, the approach has failed to constrain the overall rise of global GHGs. The **Stern Review**<sup>1</sup> estimates that stabilisation of greenhouse gases will cost, on average, around 1% of annual global GDP by 2050, a level that is "significant but manageable", not much compared to inaction – "Delay would be costly and dangerous". "This is significant, but is fully consistent with continued growth and development, in contrast with unabated climate change, which will eventually pose significant threats to growth" (Stern 2008). For the lowest mitigation scenario category assessed in IPCC's 4<sup>th</sup> Assessment Report (CO<sub>2</sub>e concentration: 445 – 490 ppm), emissions would need to peak by 2015, which leaves neither time for CCS nor nuclear.

**Kyoto was a first attempt** and helped renewable energy develop in several countries. However, Kyoto also had major flaws, with weak overall targets and "hot air", a lack of investment security (including in energy research) and a weak compliance mechanism without fines. Other deficiencies of Kyoto include the omission of the shipping and aviation sectors, the continuation of deforestation, and inadequate funding for adaptation. In Copenhagen, it is now time to up the ante and dig into emission cuts through ambitious targets for the next commitment period!

## RENEWABLE ENERGY & CLIMATE CHANGE

The **EU Climate & Energy Package**, in the form of 6 legislative texts, adopted by the Council on 6 April 2009 and entered into force, commits the EU to a **20% GHG emission reduction target** (which will be increased to **30%** if a new international agreement is reached), to **20% energy efficiency** as well as, via the Renewable Energy Directive, to a binding **20% target of final energy consumption** in the EU to come from renewable energy sources by 2020. Moreover, each Member State has a target of at least 10% of energy from renewable sources in transport.

### The 20-20-20 EU policy by 2020



## CITIZENS & CLIMATE CHANGE

Europeans **care** about Climate Change & **want** to take action:

A Special Eurobarometer report on **Europeans' attitudes towards climate change** (July 2009), shows that "climate change" now ranks third, with 50% of respondents feeling that it is amongst the most serious problems our world faces.

**"Climate change has moved from being a predominantly physical phenomenon to being a social one"** (Hulme, 2009)

According to the barometre, the extent to which respondents feel informed about certain topics related to climate change has a crucial influence on their perception of "climate change", which shows that a post-Kyoto framework is not simply a follow-up of an existing scheme which is running-out or losing speed, but far more importantly, a means of setting a vision for the future, a means of creating and maintaining a bond between decision-makers and the public at large, creating a field for debate for the encounter of ideas, keeping everybody in the loop and in tune with what matters and affects us all. Copenhagen needs to set out a vision engaging everybody in the fight against climate change. **The widespread use of renewable energy together with energy savings is THE solution to mitigate climate change.**

## RENEWABLES DELIVER

Renewables are ready to deliver given the right framework conditions. In many parts of the world, they have already taken off, increasing the annual **newly installed electricity generating capacity** of renewable energy on a global level in 2008 alone to at least 40 GW (excluding large hydro power), representing \$120 billion in **investment**. For the first time, there was greater investment in new renewable capacity than conventional power.

The **amount of renewable energy installed worldwide** is reliably tracked by the Renewable Energy Policy Network for the 21<sup>st</sup> Century (REN21). The REN21 Global Status Report 2009 shows how the technologies have grown:

<b>Wind</b>	↑ 29% in 2008	↑ 600% since 2004
<b>Solar photovoltaic (PV)</b>	↑ 70% in 2008	↑ 250% since 2004
<b>Small hydro power</b>	↑ 8% in 2008	↑ 75% since 2004

Biomass power generation (and cogeneration) also continued to increase both at large and small scale, new concentrated solar (thermal) power plants (CSP) start operating in 2008 and the number of projects under development or construction increased dramatically, geothermal power capacity increased, existing solar hot water and heating capacity went up by 15% in 2008,

bioethanol fuel production went up 30% in 2008 and 124% since 2004 and biodiesel production increased six fold between 2004 and 2008. Thus, between 2004 and 2008, a 75% increase was observed for renewable power capacity.

Renewable energy deployment does not only mitigate climate change, it makes a country less dependent from energy imports and adds to the competitiveness by adding sustainable jobs.

## RENEWABLE ENERGY & JOBS

**The climate crisis and the financial crisis are not two competing issues** - the solution to the one is in fact, an answer to the other. Investment in energy efficiency and renewable energy helps the economy by increasing employment in the energy sector, reducing energy costs and easing the over-use of precious natural resources.

Thus, renewable energy creates jobs. Greenpeace & EREC call for an Energy [R]evolution! This joint report showed that renewable energy, combined with the smart use of energy, can deliver half of the world's energy needs by 2050. The recently Greenpeace & EREC published report "Working for the Climate: Renewable Energy & The Green Job [R]evolution" found that by 2030, the whole power sector would count about 2 million people more than now (2.7 million more people than in the "business as usual" scenario). Without the Energy [R]evolution, the coal sector would be providing most of the power, but not as much employment.

BUSINESS AS USUAL		ENERGY [R]EVOLUTION	
a largely coal dependent economy	⊕	huge renewable & energy efficiency deployment	⊙
2010	9.1 million	2010	9.3 million
2020	8.5 million	2020	10.5 million
2030	8.6 million	2030	11.3 million
<b>Total loss</b> in energy sector over period	<b>500,000</b>	<b>Total gain</b> in energy sector over period	<b>2 million</b>
JOBS IN RENEWABLES DO NOT BALANCE OUT LOSSES IN COAL SECTOR BY 2030		2.7 MILLION MORE JOBS IN 2030 THAN WITH "BUSINESS AS USUAL"	

The renewable sector would support 6.9 million jobs – about 5.3 million jobs more – under the Energy [R]evolution scenario.

<sup>1</sup> Stern Review: The Economics of Climate Change (2008)  
<sup>2</sup> Official Journal, L 140, Volume 52, 5 June 2009

