





Potsdam Institute for Climate Impact Research

Allianz SE Group Communications



Europe will profit from climate protection if it acts now

RECIPE – Report on Energy and Climate Policy in Europe – a European study on the costs of climate protection, has demonstrated for the first time that:

- Early action is the only way to avert dangerous consequences from climate change at manageable costs.
- Europe will profit from a leadership role, even if other countries continue to hesitate
- Distributing the costs of climate protection will not overburden any region of the world; transfers to emerging nations will keep overall costs down
- Climate change can only be contained if measures take effect by 2020

Berlin, 3rd November 2009 – "The key to affordable climate protection is to create binding political conditions to take effect immediately for the coming decade." That's how Ottmar Edenhofer, chief economist of the Potsdam Institute for Climate Impact Research (PIK) and Chairman of the Response Strategies Working Group of the Intergovernmental Panel on Climate Change (IPCC), summarizes the findings of the RECIPE study. "Climate protection is economically manageable and feasible," says Edenhofer. "For Europe, getting an early start on comprehensive climate protection, even unilaterally, will pay for itself through significantly lower costs." The study was conducted by PIK and four other European research institutes and supported by financial services provider Allianz SE and the World Wide Fund For Nature (WWF). The scientists compared three energy economy models and used them as a basis for climate policy recommendations. For Europe, RECIPE is examining four CO₂-intensive sectors of the economy – energy, industry (cement and steel), transportation and agriculture – and formulating paths toward reduced emissions.

If the costs of climate protection¹ are offset against the benefits of economic growth, the difference is about one year of delayed economic growth for Europe by 2050. The level of prosperity that is forecast for 2050 would thus be reached in 2051 when the costs of climate protection are factored in. But this does not yet take into account the costs of damages caused by climate change that would be averted. Unless we act in the coming decade, RECIPE predicts that not only will the costs of reducing global CO₂ levels rise, but the chances of still being able to stop the dangerous consequences of climate change will fall dramatically. After 2020, the window for ambitious climate protection will close entirely.

Incentives for investors

To help guide government leaders at the climate talks in Copenhagen, RECIPE is calculating possible cost distribution models for climate protection in six regions of the world. The findings make it clear that effective climate protection at low costs is achievable only if we act without delay. Concrete paths toward reducing CO_2 in these regions are designed to provide a stable environment in which appropriate incentives will quickly develop – not only for the necessary investments in new technologies but also for research and transfers to emerging countries. A cost-optimal mitigation strategy for the transformation of the energy sector alone requires an increase of investments in low-emission technologies to an annual level of 400 to 1,000 billion by 2030, most of which would have to be provided by the financial markets and industry.

The overwhelming importance of investing in the transformation to a low-carbon economy provided the Allianz-WWF climate partnership with the impetus to support the RECIPE study. "There is no other market that needs and will experience such a sudden and sustainable growth in investments in the next ten years as the market for climate protection and the decarbonization of the economic processes," says Joachim Faber, member of the Allianz SE Board of Management and CEO of Allianz Global Investors. "But the willingness of our customers to invest depends upon reliable conditions. It is now up to governments to provide these conditions. This includes not only reliable paths toward reduction targets but market-based economic elements such as the auctioning of all CO₂ certificates, the establishment of global cap and trade systems, rapid implementation of the EU Directive to promote renewable energies that guarantees investors reliable feed-in tariffs, and stronger subsidies for research into low carbon technologies."

Another reason for Allianz to be closely involved in climate protection is the fact that in global industry, 40% of insured losses are now attributable to climate effects, and this number is rising.

EU leadership role

It is now the role of the EU to take the decisive step in the climate talks in Copenhagen. RECIPE shows that the cost is significantly lower for all countries if they act now and act together. "The EU must once again play a leadership role, in its own interests and in the interest of all. Research, development and industrial policy must be infused with clear priorities and resources focused on climate protection. This includes a binding climate protection plan for the period until 2020 mandating ambitious emission reduction targets for Europe. We also need a long-term strategy based on these targets so that we don't build up

¹ According to RECIPE assumptions, CO_2 emissions without climate protection measures would grow to 2,500 metric gigatons (Gt) by 2050 and result in a global rise in temperature of up to 7°C over pre-industrial levels. The latest scientific findings suggest that to achieve a high probability of limiting the rise in global temperature to 2°C, additional emissions until 2050 must be held below 750 Gt CO_2 . The climate protection scenarios studied by RECIPE show a medium probability of achieving the 2°C target.

CO₂-intensive capital stock and lead climate protection down a dead end road," emphasizes Regine Günther, director of climate and energy policy at WWF Germany.

RECIPE also finds that industrialized nations, in addition to implementing their own reduction measures, must also support developing and emerging nations. "What was positive about the European's council decisions of last week was the call for a legally binding agreement and the increase of the reduction targets for industrialized countries to up to 95% until 2050. For the first time the EU disclosed the sums for the required financial support to developing and emerging countries however failing to provide the expected concrete payment guarantee. This was disappointing. The payments from EU public funds must reach €35 billion annually from 2013 to 2017 to support climate protection and adaptations to climate change," explains Regine Günther.

RECIPE concludes that it is better to avoid further investments in building CO₂-intensive infrastructure such as coal-burning power plants without carbon capture and storage technology (CCS). "What we urgently need in Copenhagen is a binding, effective agreement that diverts the flow of investments early on to keep the costs of CO₂ reduction low," says Günther.

EU action needed in four climate-related economic sectors

Electricity production: The RECIPE authors consider a complete decarbonization of the power sector before 2050 to be essential and doable. This requires that renewable energies and the tried-and-tested carbon capture and storage technology (CCS) be made widely available worldwide. Cost-optimized climate protection requires the complete elimination within the next few years of investments in coal-burning power plants lacking this technology. On a global scale, nuclear energy can only make a comparatively slight contribution to climate protection.

Transportation: Transportation-related emissions continue to rise, so their importance relative to other sources of emissions will increase over time. The availability of climate-friendly alternatives such as electromobility or sustainable biomass cultivation will thus exercise a critical influence on the costs of climate protection. RECIPE calls for increased research and development efforts in this field, since these technologies are still far away from being widely competitive on the market. Recommendations include efficiency standards for all classes of vehicles, the establishment and expansion of electrification, research into alternative fuels and the reduction of transportation through improved logistics and the movement of freight onto rail.

Industry (cement/steel): Increased efficiency is the key option for reducing emissions over the short term for the existing plant infrastructure of the European steel and cement industry, but the potential here is limited. How the next investment cycle is used when the life cycle of the existing plants ends after 2020 is critical for comprehensive decarbonization with a minimization of costs. Processes must be electrified and fundamentally adapted to reduce CO_2 emissions.

Agriculture: The agricultural industry can contribute not only by protecting meadows and marshlands and carefully exploiting the absorption potential of soil and vegetation but by reducing nitrogen emissions from fertilizers and relying less on livestock production (methane emissions).

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Please refer to the interviews at the end of this document (pages 6 - 8).

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About WWF

WWF is one of the world's largest and most respected independent conservation organizations, with almost 5 million supporters and a global network active in over 100 countries. WWF's mission is to stop the degradation of the earth's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

About Potsdam Institute for Climate Impact Research (PIK)

The PIK conducts research into global climate change and issues of sustainable development. Set up in 1992, the Institute is regarded as a pioneer in interdisciplinary research and as one of the world's leading establishments in this field. Scientists, economists and social scientists work together, investigating how the earth is changing as a system, studying the ecological, economic and social consequences of climate change, and assessing which strategies are appropriate for sustainable development.

About Allianz

Allianz SE is member of Transparency International Germany and supports the Principles of the United Nations Global Compact and the OECD Guidelines for Multinationals through its Code of Conduct. Allianz SE is one of the leaders of the insurance sector in the Dow Jones Sustainability Index, listed in FTSE4GOOD and in the Carbon Disclosure Leadership Index (Carbon Disclosure Project, CDP6).

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No duty to update

The company assumes no obligation to update any information contained herein.

Interview with Dr. Joachim Faber

What role will the financial sector play in climate protection?

Enormous investments must be mobilized to reach the ambitious reduction targets for CO_2 emissions. The rebuilding of the energy sector alone would require an additional \$1,000 billion in investments annually in low-emission technologies by 2050, most of which would have to be provided by the financial markets and industry. Investors and financial markets can handle this volume, but only if we have stable political conditions in which CO_2 is given its due.

What preconditions do your customers - the private investors - expect?

Investors need a market where it is possible to calculate the investment opportunities and risks – potential profits and losses. We need market conditions for the CO_2 factor, ideally at the global level to ensure fair competition. The key tool here is a cap and trade system with full auctioning of all CO_2 certificates. Fixed feed-in tariffs for renewable energies are another driver for investments.

What contribution can Allianz make?

We can work together with partners such as WWF or PIK and through studies such as RECIPE to provide better orientation for policymakers, the public and investors. We can also act where conditions are created – as we are doing, for example, through our investments in wind and solar energy in markets such as Germany and Italy, where fixed feed-in tariffs provide incentives. We would like to expand these investments even further if the right market conditions are created. As an insurance company, we accompany new technologies and, by making sure all risks are insured, guarantee such technologies will quickly gain a foothold in the market.

Joachim Faber, member of the Allianz SE Board of Management and CEO of Allianz Global Investors

Allianz



Interview with Prof. Dr. Ottmar Edenhofer

What will climate protection cost Europe?

The implementation of ambitious climate protection targets will require a massive restructuring of the energy system. We won't achieve these goals for free. But the RECIPE findings show that, given the right political conditions, the accumulated costs over the next 40 years will amount to less than one year of delayed economic growth. These costs are small compared to the potential damage to our climate. But what's absolutely critical here is that we act quickly: The sooner we undertake climate protection, the lower the costs. What the findings clearly demonstrate is that it definitely makes sense for Europe to move forward with climate protection, even if the other nations are slow in getting on board. The added value of early adoption of a low-carbon path of development and avoiding bad investments in carbon-intensive technology greatly exceeds the additional costs of such a response.

What do the study's findings mean for the political process?

The costs of climate protection depend to a significant degree on how it is implemented politically. Technological innovation is of central importance in making climate protection affordable. It's critical, therefore, that investments in clean technologies are economically attractive over the long term. This requires that policymakers create stable long-term conditions for investors, especially with regard to the future CO₂ price. It's also important to actively promote development of low-carbon technologies.

What do you hope to see emerge from the climate talks in Copenhagen?

In July, the world's largest economies agreed in L'Aquila to limit global warming to 2°C compared to pre-industrial levels. Now it's time to follow words with actions. To reach this goal, three things need to come out of Copenhagen: First, politicians must agree on what the level of atmospheric carbon should be at the end of the century. Next, they must define an equitable formula for distributing these costs to all nations. Finally, we need a global cap and trade system that ensures an affordable path toward our objectives. Given the current trend of negotiations, however, there is a fear that negotiators will get bogged down in minor details instead of tackling these key issues.

Ottmar Edenhofer, chief economist of the Potsdam Institute for Climate Impact Research (PIK) and Chairman of the Response Strategies Working Group of the Intergovernmental Panel on Climate Change (IPCC)



for a living planet

Interview with Regine Günther

What role must the EU and Germany play in Copenhagen?

Europe must demonstrate that it is willing to act first in moving toward an ambitious climate pact in Copenhagen. RECIPE shows that Europe would profit economically from playing this type of leadership role. WWF believes that for a credible positioning, it is important to have ambitious emission reduction targets embedded in a long-term strategy that seeks to reduce emissions some 95% by 2050. Our planning must reflect these targets so that the necessary investments in long-term capital stock will not prove ruinous over the medium term.

What does this mean for emerging and industrialized nations?

Besides implementing our own reduction targets, industrialized nations are called upon to support developing and emerging countries in financing their climate protection measures (prevention, adaptation, forest protection). These are the very countries where we need to facilitate a different path toward development – development with less greenhouse gas. It will be hard for global climate protection to succeed if Europe does not go along with this.

What needs to improve with regard to implementation in Europe?

The establishment of a cap and trade system is undoubtedly an important milestone, but it's not nearly enough. The reduction targets are too low overall, and the model of giving emission rights to nearly all industries for free is too weak. These issues must be urgently addressed. One key finding of the study is the need for an immediate freeze of building new conventional coal-burning power plants (those without carbon capture and storage). The current cap and trade system does not ensure this. Other tools should therefore be established, such as the implementation of CO_2 thresholds for new coal-burning power plants. Moreover, there is still much work to be done to tap into the enormous potential of energy efficiency.

Regine Günther, director of climate and energy policy at WWF Germany