



News release

Prestigious award for outstanding contribution to climate research

Energy efficiency expert Jochem wins “Bayer Climate Award”

- Bayer foundation awards first international prize for climate research
- Professor Jochem: Commercially profitable 80 percent boost in energy efficiency in the industrialized nations possible within this century
- Bayer Management Board Chairman Wenning: Clear commitment to climate protection and sustainable development
- UNEP Executive Director Steiner: Opportunities to move in a new direction

Leverkusen, March 24, 2009 – The Bayer Science & Education Foundation has chosen energy efficiency expert Professor Eberhard Jochem from the Fraunhofer Institute for Systems and Innovation Research (ISI) in Karlsruhe as the winner of the “Bayer Climate Award.” Professor Jochem is being honored for his pioneering technical and economic contributions to energy efficiency. He has proven that Germany could cut its CO₂ emissions by almost 15 percent by 2020 in a commercially profitable way simply by improving energy efficiency. This would correspond to an absolute reduction of 125 million tons of CO₂ emissions relative to the end of 2007. An even more substantial reduction of 80 percent is possible within this century in the industrialized countries, Jochem says. Bayer AG Management Board Chairman Werner Wenning presented on March 24 the award to the climate researcher at a ceremony held on the premises of Bayer’s representation in Berlin and attended by around 150 guests from academia, politics, industry and society.

The Bayer Climate Award is the first international prize presented in honor of outstanding achievements in fundamental climate research. An independent panel of experts selected Jochem (67) from 11 candidates, who had been nominated by the presidents of European research communities. Jochem is donating the award money of EUR 50,000 to his newly established foundation for climate research. From now on, the Bayer Science & Education

Foundation will be awarding the climate prize every two years as part of Bayer's extensive climate program.

"More than almost any other researcher, Professor Jochem has worked out and proven that improving energy efficiency is the central lever for reducing greenhouse gas emissions in the various areas of our industrialized society," Wenning said at the award ceremony. "His approach is as simple as it is convincing: the efficient use of energy lowers costs while at the same time reducing the emission of greenhouse gases. We set up the Bayer Climate Award to regularly honor outstanding research experts and to recognize the high social relevance of climate sciences as an area of research."

The Bayer Chairman took advantage of the opportunity to emphasize a key point: "Climate change is the biggest overall societal problem we face around the world. I say this particularly in view of the fact that the financial and economic crisis is placing a tremendous burden on us. As industrial companies we have to master this challenge by choosing a course oriented around sustainability." Continued Wenning: "It is all the more important to make a clear commitment to climate protection. After all, climate change endangers the natural basis of all our commercial and social actions. We urgently need effective regulation for significantly lowering greenhouse gases at a global level." Wenning said the United Nations Climate Change Conference scheduled to take place in Copenhagen at the end of this year must focus particularly on achieving a consensus among all major emitters – in other words the United States in particular and emerging countries such as China and India – as regards participation in a corresponding international agreement.

In his speech honoring Professor Jochem, Dr. Wolfgang Plischke – who is the member of the Board of Management of Bayer AG responsible for Innovation, Technology and Environment, as well as being a member of the foundation's Board of Trustees – stressed that the award winner had combined outstanding research with personal dedication in a particularly impressive way. "Professor Jochem never passes up an opportunity to point out what is possible. He is not a lonely admonisher, but rather possesses detailed knowledge of the circumstances in which decisions are made. This is where he contributes his expertise."

Today we have opportunities to move in a new direction so that "eight or nine billion people will be able to comfortably coexist on this planet," said Achim Steiner, Executive Director of the United Nations Environment Programme (UNEP) in a video message.

“Over decades of fundamental and applied research activities – for example in the context of the Intergovernmental Panel on Climate Change – Professor Jochem has sent important signals and demonstrated ways of addressing the challenge of global warming and climate change.” In Steiner’s view, such information is all the more important in view of the current global economic crisis, which is forcing decision-makers to the limits of what is possible in terms of setting new trends with both public policy and corporate approaches. He therefore appealed to the world’s decision-makers to exploit the opportunity to “invest in tomorrow’s economy” through approaches such as increased spending on energy efficiency – be it in transport, buildings or management of the economic infrastructure.

“I am delighted with this award. For me, it is recognition of the work I have done so far,” said Professor Jochem. “At the same time, the Bayer Climate Award spurs me on even more to continue participating in research into how greenhouse gas emissions can be effectively reduced in an economically sensible way.”

Jochem is regarded as one of the leading international experts in the field of energy efficiency. He was one of the first research scientists to systematically investigate the potential for raising energy efficiency in industrialized countries by improving energy conversion and energy utilization processes. A particular role in this will be played by material sciences, physical and chemical processes, biotechnology and electronics. In the chemical industry, for example, membrane processes can replace thermal separation processes, resulting in an efficiency gain of over 80 percent. One particularly relevant field is buildings: Jochem’s calculations show that passive houses require only a tenth of the energy consumed by the average building in Germany today. In another example, elevators today can be equipped with special transmissions for feeding braking energy back into the grid.

“Professor Jochem’s scientific analysis has had a major influence on the development and verification of climate policies at the national and international level,” remarked Professor Ernst-Ludwig Winnacker, Secretary General of the European Research Council and Chairman of the Board of Trustees of the Bayer foundation, commenting on the jury’s decision. “Apart from his specific findings, Jochem is particularly noted for his ability to integrate technical, scientific and economic aspects into his studies.”

Jochem has also established that with energy-intensive materials, material efficiency can be significantly increased through recycling, new material properties or substitution, for example. When used in combination with innovative management forms such as the leasing of plant and machinery, this can lower the primary energy required by industry by 0.5 percent a year.

Professor Jochem was born in Essen, Germany, and is presently working as a Senior Executive at the Fraunhofer Institute for Systems and Innovation Research (ISI) in Karlsruhe. From 1999 until his retirement in 2007, he was Professor for Economics and Energy Economics and the founding director of the Center for Energy Policy and Economics (CEPE) at the ETH Zurich, where he continues to conduct research. Previous stations of his scientific career included lecturing activities at the Universities of Kassel and Karlsruhe, and positions as research fellow at DECHEMA in Frankfurt and Harvard University in Boston and as a part-time lecturer in the technology department of Oskar von Miller Polytechnic in Munich, now the University of Applied Sciences. Jochem received his doctorate at the Faculty for Mechanical Engineering at Munich Technical University with a thesis on the sublimation of two-component systems. He studied process engineering and economics at Aachen Technical University, Munich Technical University and Ludwig Maximilian University, also in Munich.

Professor Jochem has already received many scientific and political awards. He was and still is active on several committees. Since 1993, he has been on the Scientific Advisory Committee of the Wuppertal Institute. He was for several years a member of the Sustainability Council of the Federal German government, and a member of the Advisory Committee on Energy Perspectives of the Swiss Federal Agency for Energy. He served on the Intergovernmental Panel on Climate Change (IPCC) and he also was a member of the Committee of Inquiry "Sustainable Energy Supply under the Conditions of Globalization and Liberalization" of the German Bundestag.

Alongside the Otto Bayer Award for chemistry and biochemistry and the Hansen Family Award for biology and medical research, the new "Bayer Climate Award" becomes the third science prize regularly awarded by the Bayer Science & Education Foundation for outstanding research achievements. This climate prize in the interdisciplinary field of climate research is focused on the fields of energy and environment sciences, agricultural sciences, biotechnology and microbiology, material sciences, process technology, polar, marine and coastal research, geochemistry, geophysics, atmospheric research and

meteorology. Apart from honoring pioneering climate researchers, the award aims to promote scientific and social debate on how to tackle climate change.

Note to editors:

*Photos of the award ceremony are available from the internet at approx. 14:00p.m. CET:
www.press.bayer.com*

For social media users an interactive information kit including a video podcast and an audio podcast is available at: www.socialmedia.climate.bayer.com

More information on the Bayer Climate Program is available at: www.climate.bayer.com

*For information on the Bayer Science & Education Foundation, visit:
www.bayer-foundations.com*

The Fraunhofer Institute for Systems and Innovation Research can be found on the Internet at www.isi.fraunhofer.de

Contact:

Dirk Frenzel, phone: +49 (0)214 30-29908

E-mail: dirk.frenzel.df@bayer-ag.de

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