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Article

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Weekly Report

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Weekly Report

Energy and Climate Policy: USA Continues to Trail Behind, Despite Positive Change

In the course of current climate negotiations, the world is watching the United States in particular. Together with China, the U.S. is by far the largest emitter of greenhouse gases. Real progress in protecting the global climate requires substantial action on America's part. The U.S. has the potential to significantly reduce emissions. Per capita energy consumption in the U.S. is still about twice that of Europe. An assessment of current energy and climate policies in America is disillusioning. So far, federal and state measures have had only limited success—both in terms of increasing energy efficiency and in the use of renewable energy. While some regional initiatives are promising—for example, the establishment of renewable portfolio standards, or emissions trading schemes in the Northeast and West of the country—they ultimately lack sufficient ambition and scope. Proposals currently under debate in Congress for a national energy and climate protection law are highly contested, even though they do not set particularly demanding goals for reducing emissions in the medium term. Against this backdrop, the U.S. cannot be expected to catch up anytime soon in the area of climate protection.

In order to limit the rise in average global temperature to two degrees above pre-industrial levels, global emissions must be cut by at least 50% by 2050. To this end, industrialized countries can and must make significantly larger reductions than developing and newly industrialized countries. Europe has set a long-term goal of a 60% to 80% reduction in its latest climate change package. In October 2009, the European Council even set a goal of reducing greenhouse gas emissions by 80% to 95% from their 1990 levels by 2050.¹ Meeting these long-term goals requires swift and effective action at both the national and international levels.

In the U.S., however, climate protection has been a marginal issue for quite some time. America did not ratify the 1997 Kyoto Protocol. The already high level of U.S. greenhouse gas emissions has risen even further since then. America must now make up for lost time in climate protection as well as in the long-term securing of energy supply. As he assumed office, President Obama declared his commitment

¹ Council of the European Union: EU position for the Copenhagen Climate Conference (7–18 December 2009)—Council conclusions. 14790/09. ENV 711, Brussels, 21 October 2009. On the climate policy efforts required of industrialized countries, see also the German Advisory Council on Global Change (WBGU): Solving the climate dilemma: The budget approach. Special Report, Berlin 2009.

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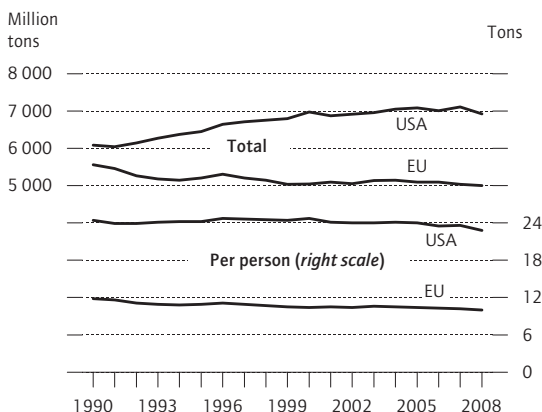
to affect change in the area of energy and climate protection.² The task at hand is to realize such change quickly, and to ensure lasting results.³

Emissions and Energy Consumption Far Too High

America’s greenhouse gas emissions (not including changes in land use and forestry) have risen 14% between 1990 and 2008. Over the same time period, emissions in the EU have decreased by 10% (Figure 1). The majority of American greenhouse gas emissions are energy-related (87% in 2007).⁴ The rise in greenhouse gas emissions can be attributed to several factors.⁵ In contrast to Europe, population growth in the U.S. has played a large role in increasing emissions. A relatively strong increase in U.S. per capita GDP has also contributed to increasing emissions. In the U.S., estimated greenhouse emissions per capita in 2008 were 22.8 tons of CO₂ equivalents—more than twice the level in Europe (10.0 tons). As a result, American climate protection policy is confronted with very high emission levels. The U.S. Energy Information Administration (EIA) predicts a significant drop of about 6% in energy-related CO₂ emissions in 2009. As was the case in 2008, falling emission levels are primarily a consequence of the economic crisis.⁶

Oil, natural gas, and coal are the three key sources of energy in America (Figure 2). In 2008, renewable energy represented 7.4% of total primary energy consumption; of this percentage, hydro power and biomass (including fuels) made by far the greatest contribution.⁷ The share of renewable energy is somewhat higher in Germany at 9.2% (calculated using a comparable method).⁸ Although total primary energy consumption in America increased 17% between 1990 and 2008, consumption per capita re-

Figure 1
Greenhouse Gas Emissions¹ in the U.S. and Europe
CO₂-equivalents



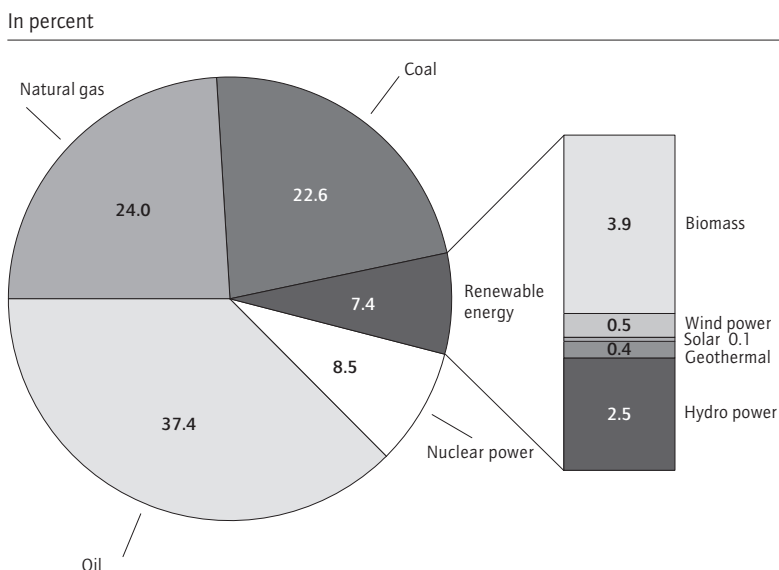
¹ Not including land use, land use change and forestry. 2008 figures are estimates.

Sources: UNFCCC; Ziesing, H.-J. *ibid.*; EIA; Eurostat; calculations by DIW Berlin. **DIW Berlin 2010**

mained roughly unchanged (Figure 3). In relation to GDP, energy consumption dropped by 28%, yet still remains significantly higher than in Europe: in 2008 consumption was about 18% higher than in OECD Europe and about 25% higher than in Germany.⁹ In addition, U.S. primary energy consumption per

⁹ International Energy Agency: *Renewables Information 2009*. Paris 2009.

Figure 2
Primary Energy Consumption¹ in the U.S., 2008
In percent



¹ Using the substitution method.

Sources: EIA; calculations by DIW Berlin.

² See v. Hirschhausen, C., Holz, F., Kemfert, C.: „The Greening of America”—Neue Dynamik zum Amtsantritt von Präsident Obama. DIW Berlin Wochenbericht, No. 3/2009.

³ The authors would like to thank Patrick Kim at Columbia University, New York, for valuable information regarding current developments in U.S. politics.

⁴ United Nations Framework Convention on Climate Change (UNFCCC).

⁵ Ziesing, H.-J.: Differenzierte Entwicklung bei insgesamt weiter steigenden weltweiten CO₂-Emissionen. In: *Energiewirtschaftliche Tagesfragen* 9, 2009, 56–65.

⁶ Energy Information Administration: *Short-Term Energy and Winter Fuels Outlook*. Washington, October 2009.

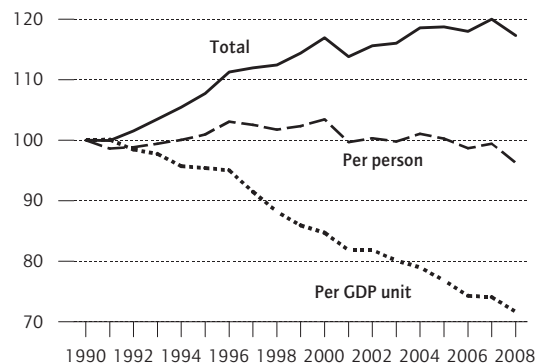
⁷ Energy Information Administration: *Annual Energy Review 2008*. Washington 2009. The EIA uses the substitution method to calculate percentages of hydro power, geothermal power, solar thermal/photovoltaic and wind power in primary energy consumption. In comparison with the efficiency method normally used in Germany, the results show a higher proportion of renewable energy in primary energy consumption.

⁸ This figure is the result of calculations using the substitution method. Using the efficiency method, the result is 7.0 percent. BMU: *Erneuerbare Energien in Zahlen*. Berlin 2009.

Figure 3

Primary Energy Consumption in the U.S.—Total, Per Person and Per Gross Domestic Product (GDP) Unit

Index 1990 = 100



Source: EIA; calculations by DIW Berlin. **DIW Berlin 2010**

capita in 2008 was more than twice that of OECD Europe and nearly twice that of Germany.

The structure of final energy consumption by sector is significantly different in America than in Europe (Figure 4). At 40%, transport represents a much larger share of energy consumption in America.¹⁰ The reasons for America’s high energy consumption include lifestyle, urban development patterns, and relatively low energy prices (which are mainly the result of lower energy taxation).¹¹ The current financial crisis has reduced America’s primary energy consumption. In comparison with 2008, 2009 levels are expected to be 4% lower and 2010 levels 3% lower.¹²

Gradual Rise in Renewable Energy Use

In 2008, 9% of total net power generation came from renewable sources. Although the absolute level of power generation from renewable energy increased slightly from 1990 to 2008, an even greater rise in power consumption resulted in a drop in renewable energy’s relative share. As before, hydro power played a dominant role, with large fluctuations from year to year. The share contributed by wind

¹⁰ See also Bühler, R., Kunert, U.: Trends und Determinanten des Verkehrsverhaltens in den USA und in Deutschland. DIW Berlin, December 2008.

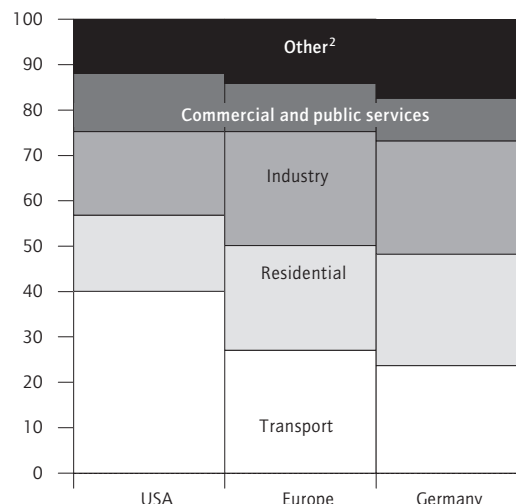
¹¹ See International Energy Administration: Energy Prices and Taxes, Volume 2009, Issue 2, Second Quarter 2009. Paris 2009.

¹² Energy Information Administration: Short-Term Energy and Winter Fuels Outlook. Washington, October 2009.

Figure 4

Final Energy Consumption in the U.S., Europe¹ and Germany by Sector in 2007

In percent



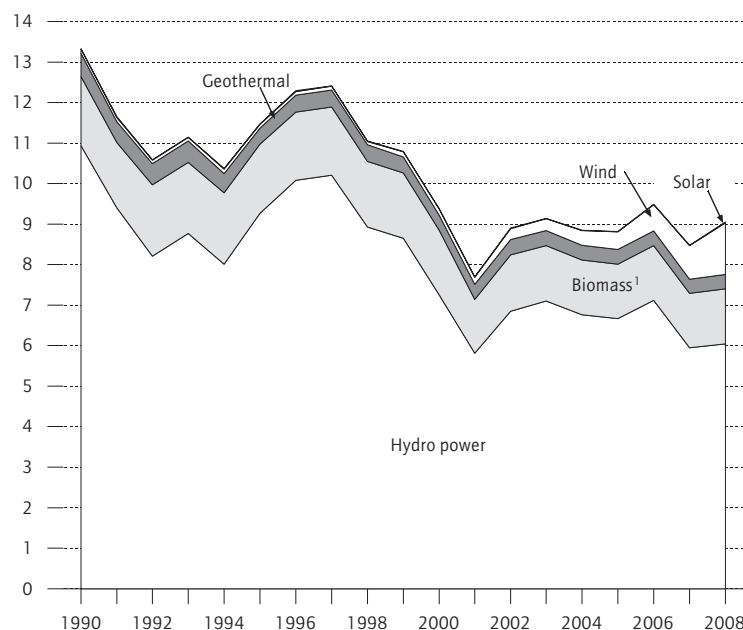
¹ European OECD countries.
² Including agriculture, fishing, non-specific sectors and non-energy use.

Source: International Energy Agency (IEA). **DIW Berlin 2010**

Figure 5

Net Power Generation from Renewable Sources in the U.S.

In percent



¹ Wood, wood-based fuels, organic household waste, landfill gas, sewage sludge and agricultural waste.

Source: EIA; calculations by DIW Berlin.

DIW Berlin 2010

power rose to 1.3% in 2008.¹³ Solar power (i.e. solar thermal and photovoltaic) has so far played only a very minor role. As demonstrated by these figures, current efforts to expand renewable energy in America are confronted by a low initial level of deployment.

Figure 6 illustrates the rapid growth of wind energy in America. In 2008, total generation capacity was around 25 gigawatts—higher than in Germany. Texas has the greatest wind power capacity by far, followed by Iowa and California. In 2008 alone, new installations contributed more than eight gigawatts, the greatest increase worldwide.¹⁴ New installations are expected to add five gigawatts in 2009.¹⁵ In Germany, annual capacity increases peaked in 2002 at 3.2 gigawatts. Yet in contrast with Germany, new wind-turbine construction in America has fluctuated greatly from year to year because government subsidies have repeatedly expired.

According to figures released by the U.S. wind power industry, the sector has developed at break-neck speed in recent years. Wind power represented over 40% of all new U.S. power generation capacity added in 2008. Among manufacturers of wind turbines, General Electric produces by far the most new installations in America, followed by Vestas, Siemens, Suzlon, and Gamesa. The percentage of wind-turbine components manufactured in America increased from less than 30% in 2005 to about 50% in 2008. In 2008 alone, ten new production plants were opened, 17 plants were expanded, and the construction of 30 new plants announced in the U.S.. The number of workers in the American wind power sector increased from about 50,000 in 2007 to 85,000 in 2008.

U.S. Energy and Climate Policy: A History of Diverse Initiatives, But Limited Success

Existing American energy and climate protection policy is shaped by a wide range of goals, actors, and measures at both the federal and state levels.¹⁶ Often the goal of protecting the climate has taken a back seat to considerations regarding the national or

¹³ In Germany, renewable energy represented 15.1% of gross power consumption in 2008, while wind energy had the largest proportion at 6.6%.

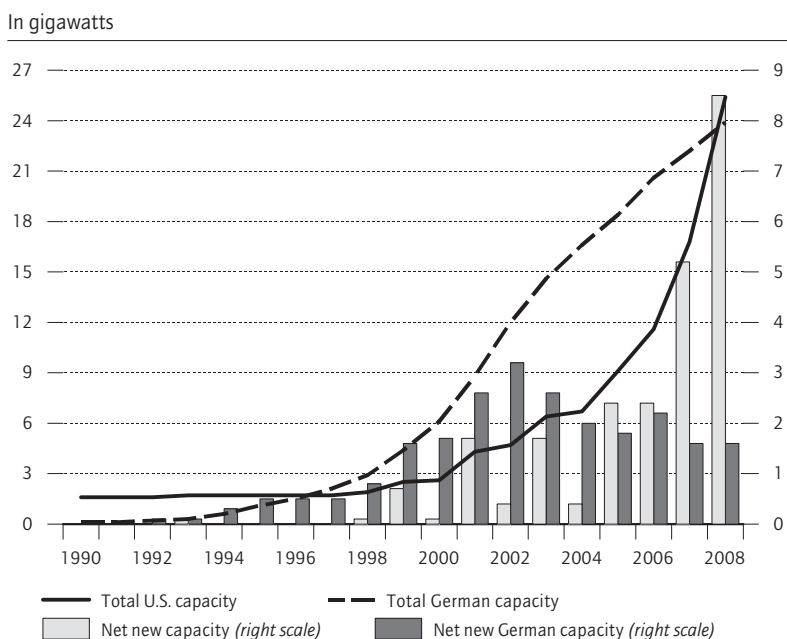
¹⁴ The figure shows net new installations, calculated from the difference between annual capacities.

¹⁵ American Wind Energy Association: Annual Wind Industry Report 2008. Washington 2009.

¹⁶ On American energy and climate protection policy, see Wörlen, C. et al.: USA—Energie- und Klimapolitik. Akteure und Trends im August 2009. Heinrich-Böll-Stiftung. Berlin, Boston, 15 September 2009. Campbell, D.: U.S. Climate & Energy Policy: An Overview. DIHK/BDI, Washington, August 2008.

Figure 6

Wind Turbines in the U.S. and Germany—Total Capacity and Net New Capacity



Source: American Wind Energy Association; calculations by DIW Berlin.

DIW Berlin 2010

regional security of energy supply and the creation of sustainable jobs.¹⁷

At the national level, a range of measures implemented by the Department of Energy (DOE) and the Environmental Protection Agency (EPA) have been in place for some time. These measures are primarily aimed at increasing energy efficiency by means of government subsidies and standards. Production tax credits (PTC) have been used to promote power generation from renewable sources since 1992. Although several interruptions to the granting of these tax credits have been experienced, they have been revived in the recent economic stimulus package. Funds for research and development of clean energy are also an important factor, and are expected to increase significantly in the future (to US\$ 150 billion over 10 years). The spectrum of technologies in development ranges from biofuels and hybrid cars to more advanced nuclear power plants and carbon capture and storage (CCS). In 2007, a U.S. Supreme Court decision granted the EPA the right under the Clean Air Act (CAA) to regulate not just emissions of traditional pollutants but also CO₂ and other greenhouse gases. This decision could have a decisive impact on future developments.

¹⁷ See also Richert, J.: Klimawandel und Sicherheit in der amerikanischen Politik. Working paper FG 8. SWP Berlin, March 2009.

Many states have developed their own climate protection programs. Diverse specific measures include emission standards for cars, efficiency standards for appliances or buildings, a consumer label and surcharges for green energy, as well as public funding for clean energy.¹⁸ These measures have not been very effective thus far. The implementation of regional renewable energy quotas and emissions trading schemes could have a larger impact.

Renewable Energy Quotas

Increasingly, states have been promoting the use of renewable energy using renewable portfolio standards (RPS). These require power companies to provide a certain proportion or a certain volume of electricity from renewable energy sources.¹⁹ Currently, RPS regulations apply in 29 states and in the District of Columbia; five additional states have established indicative targets for renewable expansion.²⁰ Trade in renewable energy certificates (REC) provides a flexible market instrument for complying with RPS. In many cases long-term supply contracts for green power have been signed. Typical target percentages for green power are 15% for 2015, 20% for 2020 and 25% for 2025. These figures are significantly lower than the target set in Europe (21% for 2010).²¹ There is substantial variation among RPS systems with a view to quota levels, time frames, geographical limits, penalties for non-compliance, and technologies included. In some states, special quotas or rules apply for solar power. As a result, REC prices and incentives for investment can vary widely from state to state.

Regional Emissions Trading Schemes

Cap-and-trade initiatives have also been proposed in recent years in various regions of the U.S.. The Regional Greenhouse Gas Initiative (RGGI) brought emissions trading for power generation to ten Northeastern states in 2009. The goal is to achieve a 10% reduction in CO₂ emissions by 2018.²² Emission allowances are primarily auctioned off

by the participating states and the proceeds are used to promote energy efficiency, renewable energy, and other clean energy technologies. In the five auctions held so far, the highest bid (US\$ 3.51 per short ton of CO₂) was only a fifth of the current price on the European market—around 14 euros per metric ton of CO₂. Power plant operators can also use compensation measures (offsets) that reduce greenhouse gases in other sectors in order to meet their obligations.

The Western Climate Initiative (WCI) is a collaboration of seven states (including California) and four Canadian provinces to establish a more comprehensive emissions trading scheme.²³ The launch of the scheme is planned for 2012. A second phase starting in 2015 will expand to include additional emitters (transport, residential, commercial and industrial fuels). The minimum auction level is set to start at 10% and reach 25% by 2020. Together with other government initiatives (such as RPS, efficiency standards, governmental subsidies), it is hoped that the WCI trading scheme will reduce emissions 15% by 2020 (in comparison to 2005 levels).

The Midwestern Greenhouse Gas Reduction Accord, agreed on in 2007, will represent an even larger emissions trading scheme.²⁴ This initiative, which is still in the planning phase, is made up of seven states thus far.

It is expected that in the future such regional schemes will be expanded to include neighboring states that are now only partly participating as observers. The effectiveness of these schemes is of course dependent on the reduction targets they set. As things stand, these targets are not yet ambitious enough to yield a significant reduction in U.S. greenhouse gas emissions by 2020 in comparison with 1990 levels.

Economic Stimulus Package Gives Strong Impetus

The American Recovery and Reinvestment Act (H.R. 1, ARRA) of February 2009 designates a total of US\$ 65 billion to the energy sector, including US\$ 22 billion in tax breaks.²⁵ A majority of these funds (US\$ 16.8 billion) are dedicated to promoting energy efficiency and renewable energy. Specifically,

¹⁸ See Knigge, M., Bausch, C.: Climate Change Policies at the U.S. Sub-national Level—Evidence and Implications. Ecologic Discussion Paper, Berlin, January 2006.

¹⁹ Besides these, there are also isolated initiatives for remuneration schemes based on the German model. These have played only a minor role in America up to now, for example in the Experimental Advanced Renewable Program (EARP) for solar power started in 2009 in Michigan.

²⁰ Database of State Incentives for Renewable & Efficiency, www.dsire-usa.org. On RPS see also Cory, K.S., Swezey, B.G.: Renewable Portfolio Standards in the States: Balancing Goals and Implementation Strategies. National Renewable Energy Laboratory, December 2007; Holt, E., Wiser, R.: The Treatment of Renewable Energy Certificates, Emissions Allowances, and Green Power Programs in State Renewables Portfolio Standards. Berkeley, April 2007.

²¹ See Diekmann, J.: Renewable Energy in Europe: Strong Political Will Required for Ambitious Goals. DIW Weekly Report No. 36/2009.

²² The Regional Greenhouse Gas Initiative, Inc. (RGGI), www.rggi.org.

²³ Western Climate Initiative (WCI), www.westernclimateinitiative.org.

²⁴ Midwestern Regional GHG Reduction Accord (MRGHGRA), www.midwesternaccord.org.

²⁵ The American economic stimulus package is worth a total of US\$ 787 billion, including US\$ 288 billion in tax breaks. Most of the program consists in non-investment expenditures. Details about the allocation of funds can be found at www.recovery.org. See also Espey, R.: Umsetzung des US-Konjunkturprogramms läuft auf Hochtouren. Germany Trade & Invest, September 2009, www.gtai.de.

the funds are for weatherization, energy conservation programs, the manufacturing of advanced batteries, as well as the research, development, and promotion of new technologies. Six billion dollars in loan guarantees have also been provided for innovative energy technologies. An additional US\$ 4.5 billion are dedicated to developing more reliable smart power grids. The bill also makes special provisions for improving the energy efficiency of public buildings and vehicles. In the near term, these funds will support the process of restructuring America's energy supply.

Extending the production tax credit (PTC) until the end of 2012 will give power generation from renewable energy sources a strong boost.²⁶ The PTC provides a ten-year, inflation-adjusted subsidy of 2.1 ¢/kWh for companies that generate power using wind, solar, geothermal, and certain biomass technologies, and 1.1 ¢/kWh for those using other renewable energy technologies. The PTC effectively reduces corporate taxes. Alternatively, companies can claim a 30% investment tax credit (ITC) or cash allowance on eligible expenses for new facilities. Beginning in 2010, this should give at least a temporary boost, particularly to the wind power sector.²⁷

The Difficult Road to a National Climate Change Law

In recent years, there have been several attempts in the U.S. Congress to pass a comprehensive climate change bill that includes binding emissions caps. Among these was the Lieberman-Warner America's Climate Security Act, which was introduced in the Senate in 2007 but—like other bills—failed to find a majority.²⁸ In June of 2009 the House of Representatives passed the American Clean Energy and Security Act (ACESA), sponsored by Henry Waxman and Edward Markey, in a narrow majority vote. The bill seeks to establish national emissions caps, a greenhouse gas emissions trading system and a quota system for renewable energy. It also foresees offsets for the achievement of emission reductions in other areas.²⁹ In response to the bill's passage

²⁶ The PTC program was originally intended to expire at the end of 2008. Because of the financial crisis, however, the program was expanded to cover other subsidized technologies and extended until the end of 2009 by the Bush administration with the Emergency Economic Stabilization Act of 2008 (H.R. 1424) on 3 October 2008. See Gutzat, M.: *Neue Dynamik für erneuerbare Energien in den USA*. Germany Trade and Invest, 10 October 2008.

²⁷ The EIA has estimated that stimulus spending will result in more than twice as much electricity produced from wind power in 2012 than would be the case without stimulus. Energy Information Administration: *An Updated Annual Energy Outlook 2009*. Washington, April 2009.

²⁸ See Kopp, R., Pizer, B.: *Five Recent Senate Bills Propose Mandatory Greenhouse Gas Caps: Side-by-Side Comparison and Analysis*. Washington 2007.

²⁹ The Waxman-Markey bill: energycommerce.house.gov/Press_111/

Table

U.S. Greenhouse Gas Emissions in 2005 and 2008, and Targets According to Kerry-Boxer Compared to Reference Years 2005 and 1990

Change in percent

		Compared to reference year	
		2005	1990
Actual value	2005	0	16
Estimate	2008	-2	14
	2012	-3	13
Targets according to Kerry-Boxer	2020	-20	-7
	2030	-42	-32
	2050	-83	-80

Sources: UNFCCC; Ziesing, H.-J. *ibid.*; Kerry-Boxer 2009; calculations by DIW Berlin. **DIW Berlin 2010**

in the House, Senator Jeff Bingaman introduced a bill for an American Clean Energy Leadership Act (ACELA) in the Senate. ACELA places an emphasis on promoting clean energy without establishing emissions targets or an emissions trading system.³⁰

Currently, another bill, the Clean Energy Jobs and American Power Act, introduced by John Kerry and Barbara Boxer, is being debated in the Senate. This proposal builds on the ACESA, but includes no concrete targets or specific instruments for renewable energy or for increasing energy efficiency (Box). As a result, at the current stage it is hard to predict how strong legal incentives for investing in renewable energy technologies will be. Instead, the proposal strongly promotes the use of nuclear power and allows significant opportunities for the use of domestic and international offsets (e.g. measures that reduce methane emissions).³¹ While the ACESA includes detailed figures for the allocation of emissions allowances to various industry sectors, the Kerry-Boxer bill contains no exact allocation figures.

The Kerry-Boxer proposal foresees a 20% drop in greenhouse gas emissions by 2020 compared to 2005 levels.³² This represents a 7% reduction compared to 1990 levels (Table). In contrast, the EU has already committed itself to a 20% reduc-

20090701/hr2454_house.pdf.

³⁰ In June 2009, ACELA won a majority in the Senate Energy and Natural Resources Committee. The bill: energy.senate.gov/public/_files/END09B90_xml.pdf.

³¹ See Kemfert, C., Schill, W.-P.: *Methane: A Neglected Greenhouse Gas*. DIW Weekly Report, Berlin, No. 32/2009.

³² This is the same target as in the Waxman-Markey proposal. For the emissions trading sector, however, the proposal foresees only a 17% reduction by 2012 compared to 2005 levels.

Key Points of the Proposed "Clean Energy Jobs and American Power Act" (Kerry-Boxer Bill)¹

Future Energy Supply

In the area of coal power generation, US\$10 billion will be invested over ten years for research and development of CO₂ capture and storage technology. A federal program will encourage investment in natural gas power plants and provide financial incentives for reducing leaks from natural gas pipelines. Nuclear power operators will receive loan guarantees and insurance against regulatory risks. Renewable energy and energy efficiency will be promoted through infrastructure investments, research grants, new transmission lines, and efficiency standards for buildings and vehicles.

Competitiveness of the American Economy

Alongside funds for research and development, money will be provided for training qualified workers in clean technology sectors. Consumers and particularly affected industries (energy-intensive industries and sectors heavily exposed to international trade) will receive rebates and subsidies.

Environmental Protection

A range of measures are included for nature conservation and adaptation to climate change. Key elements are the introduction of binding emissions reduction targets and an emissions trading scheme.

Total emissions of the greenhouse gases carbon dioxide, methane, nitrous oxide, and fluorinated gases will be reduced 20% by 2020 from 2005 levels. These reductions will apply to both the overall economy and the emissions trading sector.

The *cap-and-trade system* will be obligatory for stationary sources with annual emissions of 25,000 tons of CO₂ equivalents or more. This will apply to around 7,500 facilities that together account for nearly three-quarters of emissions. Agriculture and some other areas are completely exempted.

Starting dates: The system applies to power producers and refineries starting in 2012, to industrial sources in 2014, and natural gas providers in 2016.

The bill leaves vague many details of the *distribution of emission allowances*. The main goals are to protect affected emitters and consumers from increases in prices,

support a range of industries in the transition to a clean economy, and promote energy efficiency as well as the use of renewable energy. Comparable to subsidies, emissions allowances will be distributed to a range of economic actors including the coal industry, nuclear power plant operators, and producers of power from renewable energy.

Twenty-five percent of the annual emissions allowances will be sold in quarterly *auctions*. The bill sets a minimum auction price of US\$ 10 in 2012 (in 2005 dollars). The minimum price will increase annually at the rate of inflation plus 5% thereafter.

A *stability reserve* of emissions allowances will be put aside and auctioned off to stabilize the market in case the market price exceeds US\$ 28 (in 2005 dollars) in 2012. The minimum price for reserve auctions will increase at the rate of inflation plus 5% annually, and starting in 2018 plus 7% annually.

The bill allows unlimited *banking*, meaning saving of emissions allowances for future use. *Borrowing*, meaning using emissions allowances from future periods in the current one, is allowed with certain restrictions and incurring additional charges.

Offsets are the bill's main mechanism for ensuring flexibility and cost containment. The bill allows offsets of up to two billion tons of CO₂ equivalents. In principle, three quarters of these offsets have to come from domestic projects and one quarter from international projects. However, the amount of international offsets may be adjusted. Potential offsets cover all greenhouse gases, for example the reduction of methane emissions from landfills and coal mines. An offset integrity advisory board will determine the integrity of offsets from an environmental and social point of view.

National Security

The bill aims to move America closer to energy independence. In addition, threats to national security caused by climate change will be countered by emissions reductions and adaptation measures.

¹ The bill was introduced in the Senate on 30 September 2009 by John Kerry and Barbara Boxer: kerry.senate.gov/cleanenergyjobsandamericanpower/pdf/bill.pdf. A summary can be found at kerry.senate.gov/cleanenergyjobsandamericanpower/pdf/Summary.pdf.

tion and aims for reducing emissions by 30% from 1990 levels, depending on the results of international negotiations. The medium-term emissions reduction targets currently under discussion in the U.S. are thus hardly ambitious, particularly considering that existing high energy consumption and emissions levels offer many opportunities for large and inexpensive reductions. The short-term reduction target envisaged by the Kerry-Boxer proposal of 3% by 2012 in comparison to 2005 levels is also rather small. Emissions already fell by more than two percent by 2008, meaning the emissions target for 2012 is already close to being met.³³

Like preceding climate bills, the Kerry-Boxer proposal has a far-ranging scope. After years of inaction, now the federal government is seeking to thoroughly regulate nearly every aspect of energy and climate policy. In doing so, climate protection is not the only goal. National energy security, consumer protection, industrial policy, and nature conservation all play an important role. This could lead to conflicts of objectives.³⁴

Several Senate committees are currently debating the Kerry-Boxer bill. Many revisions can be expected to follow. Presently, it is uncertain whether the bill will win a majority in the Senate and what specific revisions will be included. Given the narrow party margins in the Senate, it must be expected that many concessions to various interest groups will be made. There is also a possibility that the government will respond to congressional inaction by prompting the EPA to implement CO₂ regulations. In this scenario, lengthy legal battles over EPA authority would be likely to follow.

America Must Take on More Responsibility in International Negotiations

The climate summit in Copenhagen in December 2009 is a starting point for defining well in advance essential features of a successor to the Kyoto Protocol, which expires in 2012. The main issues include mid-term reduction targets in industrialized countries, the contributions to be made by developing countries, their financial support, and the design of an institutional framework. However, the initial negotiation positions are unsettled.

³³ Because of the financial crisis, it can be assumed that emissions will not rise in 2009 and 2010 even without any further climate protection measures.

³⁴ See the summary of the bill: <http://kerry.senate.gov/cleanenergy-jobsandamericanpower/pdf/Summary.pdf>. The introduction to the proposal mentions new, green jobs, the promotion of energy independence, reducing global warming and the transition to a cleaner economy.

According to the Kyoto Protocol (which America has not ratified), the U.S. was supposed to reduce its emissions from 2008 to 2012 by 7% compared to 1990 levels; instead, by 2008 emissions had actually risen 14%. In the meantime, the U.S. sat on the sidelines of the debate over international climate policy. Only recently has America returned to the negotiating table, and has even made efforts to take a leading role. The significance of America's role in the negotiations depends on the credibility of its efforts to reduce emissions domestically, its openness to binding reduction targets, and the financial contributions it is willing to make. On the other hand, it is essential from an U.S. point of view that developing countries also make verifiable efforts to protect the climate in the future.

Clearly, America's policy would be much more credible if it could quickly pass an ambitious national climate change law. Although there is some support on the Republican side, a law could not be passed before the start of the Copenhagen negotiations.³⁵ Regardless of the details of national climate protection measures finally agreed on, it would be a major advantage if the U.S. government set medium-term targets for emissions reductions. It will require courage and considerable political skill to ensure that the final results of international negotiations can actually be ratified.

Global climate protection requires a decisive American commitment. Therefore, it is essential that the U.S. takes on more responsibility in the future.

Conclusion

The U.S. still has an extremely high level of greenhouse gas emissions. Primary energy consumption per person in America is more than twice as high as in Europe. America has recently achieved some successes in improving energy efficiency and promoting renewable energy. For example, in 2008 a record level of more than eight gigawatts of new wind power installations was achieved. America's economic stimulus package will encourage further investment. However, in 2008 the percentage of energy from renewable sources was still quite low, amounting to just 7% of primary energy consumption and 9% of electricity generation.

³⁵ The American senators John Kerry (Massachusetts, Democrat) and Lindsey Graham (South Carolina, Republican) published an editorial in the New York Times on 11 October 2009 titled „Yes We Can (Pass Climate Change Legislation)“. The article made an active call for passing a climate change bill in the Senate.

After years of inaction, a new direction in American energy and climate policy is starting to take shape. Especially at the state level, recent years have seen a wide range of measures aimed at promoting clean energy technologies and reducing—although only moderately—greenhouse gas emissions. At the national level, the Kerry-Boxer bill introduced in September 2009 provides a comprehensive proposal for reforming American energy and climate policy. It includes greenhouse gas emissions caps and a large-scale emissions trading scheme. The short and medium-term emissions targets are still not ambitious enough, especially since they can be met by using offsets to a large extent. The bill contains a range of initiatives in the areas of energy efficiency, industrial policy, consumer protection, and environmental protection. In contrast to a bill passed by the House of Representatives in June of 2009, it lacks concrete goals and specific instruments for promoting renewable energy.

Currently, it is not clear when and in what form a comprehensive climate change bill can be passed. In any event, it should be noted that the U.S. makes progress in terms of clean energy and climate protection, and in the future it will significantly reduce its emissions. Yet it is absolutely essential for global climate protection that America plays a major role in the negotiations for an international agreement. For the moment, however, America is still far from being a global leader in climate policy.

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