Toward a New Climate Network

Transatlantic Solutions for a Low Carbon Economy

Transatlantic Climate Policy Group

HEINRICH BÖLL STIFTUNG
The Green Political Foundation

TOWARD A NEW CLIMATE NETWORK: TRANSATLANTIC SOLUTIONS FOR A LOW CARBON ECONOMY

Transatlantic Climate Policy Group

Edited by the Heinrich Böll Stiftung
Washington, September 2009

Editor: Till Kötter. For questions or comments, contact till@boell.org
Design: Ines Hilde
Print: Todd Allen Printing

For more information on the Transatlantic Climate Policy Group,
please visit our web site: www.boell.de/climate-transatlantic/

Heinrich Böll Stiftung

Washington D.C. Office
1638 R Street, NW
Washington, DC 20009
United States
T +1 202 462 7512 **F** +1 202 462 5230
www.hbfus.org

Berlin Office
Schumannstr. 8
10117 Berlin
Germany
T +30 285 34 0 **F** +30 285 34 109
www.boell.de

Brussels Office
Rue d'Arlon 15
B-1050 Brussels
Belgium
T +32 2 743 41 00 **F** +32 2 743 41 09
www.boell.eu

This program has been made possible by funding from the European Commission.
The European Commission is not responsible for the content of the program.

HEINRICH-BÖLL-STIFTUNG

Toward a New Climate Network

Transatlantic Solutions for a Low Carbon Economy

TABLE OF CONTENTS

Foreword **07**
Arnold Schwarzenegger

Introduction: Enabling Transatlantic Leadership on Global Climate Change **09**
Barbara Assheuer, Marc Berthold, Arne Jungjohann, Roderick Kefferpütz, Till Kötter

Looking Beyond Copenhagen: Sub-National Governments as Transformers of Energy, Climate, and Transatlantic Policies **15**
Dale Medearis

Local Bridges: The Transatlantic Perspective of European Climate and Energy Policy **21**
Maryke van Staden

Tackling Climate Change: The Role of Germany's States **27**
Bärbel Höhn

California's Climate Plan: A Blueprint for International Action **32**
Mary D. Nichols

Toward a New Climate Treaty: Opportunities For Progress Under President Obama **38**
John D. Podesta

Refocusing Europe's Leadership Role in Climate Change: Upcoming Challenges Before and Beyond Copenhagen **44**
Reinhard Bütikofer

The Team behind the Transatlantic Climate Policy Group Team **50**

Acknowledgements **52**

FOREWORD

Protecting our environment is one of my top priorities, and combating climate change requires collaboration with many levels of government. I am proud of the valuable contributions that our state has made to this goal, including our cities and counties that have shown tremendous leadership. California has also worked with other states, Canadian provinces, our federal government, and other nations on this important issue. In partnership, we can make a positive difference in the fight against climate change.

The United States and Europe have always been great friends, and by taking action together, we can enhance our efforts to preserve our environment and boost our economies. Through the exchange of innovative technologies, policies and more, we can lead the way and encourage our mutual growth.

Great progress has been made at all levels of government to tackle climate change. In 2008, I invited other governors to join me in co-hosting the Governors' Global Climate Summit, which aimed to build on the advancements that have been made by states and provinces throughout the world. Then in 2009, California again hosted delegates from around the globe to broaden the cooperative efforts to preserve our environment and pump up commerce. However, there is still work to be done, and it is through teamwork that we can make new progress. Now is the time to move forward together.

Additionally, I applaud the Heinrich Böll Stiftung for this outstanding project. They have long recognized the need for our world community to unite in order to protect our planet and stimulate a sustainable economy.

Sincerely,

Arnold Schwarzenegger
Governor of the State of California

Introduction
Enabling transatlantic leadership on global climate change

"As the *Transatlantic Climate Policy Group* has demonstrated, Europe and the United states have all the necessary assets to realize a new form of leadership. Successful cooperation at all levels of governance relevant to energy and climate policy—the local, the state, and the national levels—exists and could be further developed to constitute the framework conditions necessary for the transition to a low carbon economy."

With the establishment of our Washington, D.C. and Brussels offices in 1998, transatlantic climate dialogue has become a main priority at the Heinrich Böll Stiftung (HBS). Promoting this dialogue has been a key strategic element in the foundation's goal to set up a fair and equitable global climate regime. The dialogue is rooted in the conviction that both Europe and the United States bear historical responsibility as well as the capability to lead the fight against global climate change, and that it is to the interest of both sides of the Atlantic to use their close and effective partnership in moving toward this goal.

The Heinrich Böll Stiftung felt urged to focus on transatlantic climate dialogue in particular when the Bush Administration withdrew from the Kyoto Protocol in early 2001 and questioned both the existence of climate change and its link to human activity. As the U.S. scientific community and non-governmental organizations struggled to continue their domestic climate change work, under increasingly strained inter-governmental relations, the Heinrich Böll Stiftung decided to provide further forums and exchange on responsible climate policies. In that context, the HBS broadened its outreach and developed new partnerships, in particular at the state and local levels that had begun stepping in to fill the gap resulting from the lack of federal leadership.

The Transatlantic Climate Policy Group: A Policy Dialogue Calling for Action in Line with Climate Science

In light of rising European interest in ambitious policy action occurring in the United States at the sub-national level, the Heinrich Böll Stiftung, with the generous support of the European Commission, launched the *Transatlantic Climate Policy Group* (*TCPG*). As a two-year program to enhance transatlantic cooperation on energy and climate policy, the *TCPG* was more differentiated and focused than previous projects as it concentrated on dialogue at three different levels: between U.S. cities and E.U. cities, between U.S. states and E.U. member states, and between the U.S. federal and E.U. policy institutions. In particular by engaging with the local and state levels, the *TCPG* tried to compensate for the lack of federal leadership by identifying common ground and future challenges of a transatlantic energy cooperation. Through this, the HBS aimed to develop a network of experts and policy makers committed to the development of alternative strategies for sustainable energy cooperation, i.e., strategies requesting the U.S. and Europe to lead the world towards responsible energy and climate policy. Thus, the *Transatlantic Climate Policy Group* has not only been a call for policy action in line with climate science, but also a way of increasing Americans' and Europeans' understanding of each other's political systems and policy making. Enhanced knowledge of the respective institutions, stakeholders, and procedures that determine energy and climate policy is estimated to help make room for further international cooperation and to identify ways for successful negotiations towards a post-Kyoto protocol in December 2009 in Copenhagen.

Identifying Common Ground for U.S.-European Cooperation: Briefings, Conferences, and Study Tours in Berlin, Brussels, and Washington, D.C.

In 2008 and throughout the U.S. presidential campaign, research was undertaken to identify possible common ground for U.S. and European partners. To develop ideas and engage with prospective decision-makers, stakeholders from the state and local levels were visited and political advisors on the national level consulted. Through expert meetings, study tours, conferences, and policy briefings the *TCPG* aimed to facilitate an exchange of best policies. Frequent reports, newsletters, and a project website analyzed the election campaign, evolving positions on U.S. energy and climate policy, as well as respective reactions from Europe. With the election of Barack Obama, the instauration of a new administration, and different majorities in the House and the Senate, European experts and policy makers frequently turned to the *TCPG* with requests for up-to-date information on the latest developments. At the same time, policy advisors and decision-makers from the U.S. consulted the *TCPG* to review successful policy tools, such as the implementation of the European Emissions trading scheme, when drafting new legislation on energy and climate policy.

One activity undertaken by the HBS headquarters in Berlin was to organize a 10-day European study tour on local climate and energy policy for U.S. city officials and experts (Berkeley, Boston, Houston, Pittsburgh, New Orleans) in April 2009. *The European Climate City Tour* allowed participants to meet with city representatives in Heidelberg, Freiburg, Barcelona, and Brussels and to discuss local best policies from either side of the Atlantic. In this way, the study tour facilitated a meaningful exchange of new approaches to promoting renewable energies and the transition to low carbon cities. During the Brussels stay, participants were able to meet and discuss with representatives of the European Commission (Directorate-General Energy and Transport) and to share their impressions of the study tour at a roundtable discussion with policy experts from think tanks and NGOs.

Also in Brussels, the European Union Office of the Heinrich Böll Stiftung organized the *Transatlantic Climate Dialogue Series*, which allowed policymakers and analysts from both sides of the Atlantic to share best practices and experiences on climate and energy policies ranging from the local to the federal level. Experts included advisors to President Barack Obama, U.S. and

European climate negotiators, officials from the municipal and state levels, energy specialists, NGO activists, and renowned analysts. One of the high points of this series was a transatlantic reception that took place in Poznan, Poland during the 2008 climate negotiations and which gathered over 100 delegates.

Among the activities organized by the HBS's Washington, D.C. office was the *Transatlantic Climate Policy Visitor Program* in July 2008. In cooperation with the Center for American Progress, this 7-day study tour brought a group of nine leading climate advisors from European parliaments and governments to Washington, D.C. and California, where they gained insight on the latest developments of U.S. energy and climate policy at the federal and state level. The European policy advisors and future leaders met with American policy makers, academics, media representatives, and civil society activists in order to deepen their understanding of U.S. policies and to share their experiences in shaping Europe's groundbreaking climate change legislation. Also, during their stay in Washington, D.C., the European advisors shared their experiences with drafting energy and climate legislation at a public panel discussion at the Center for American Progress.

Toward a Transatlantic Green New Deal: Tackling the Climate and Economic Crises

In early 2009, the emerging financial and economic crisis threatened to push the headway gained on the backburner, seriously testing the political will to make progress on climate change. In Europe, support for the climate and energy package of 2007 seemed to fade away, putting at risk the European objective to reduce greenhouse gas emissions 20% below 1990 levels by 2020. The *Transatlantic Climate Policy Group* was concerned that just as the Obama Administration was taking off and starting the domestic decision-making process, its partner on the European side would dissolve. Yet it quickly became apparent that the economic downturn and the need for a major economic reform would not have to be a stumbling block for climate change policies and that, by contrast, these could be an opportunity to speed up the transition to a climate-friendly economy around the globe. Under the umbrella of a "Green New Deal," economic stimulus packages and economic programs were developed to create synergies between tackling the economic and the climate crises in concert.

To support this ecologically and economically important shift, the *Transatlantic Climate Policy Group* undertook a major study to demonstrate the feasibility of tackling the climate and the economic crisis together. The result was a sound political and economic strategy for a "Transatlantic Green New Deal," released in form of a policy report at the capstone conference "Greening the Economy—Sustainable Economy in Europe and the U.S.," held at the Berlin headquarters of the Heinrich Böll Stiftung in May 2009. This conference proved to be one of the first and leading occasions to take a closer look at the evolving transatlantic and global economic crisis and its impact on the international climate change debate.

From then on, the concept of the "Transatlantic Green New Deal"pervaded all work of the *Transatlantic Climate Policy Group*. The strategy was further elaborated in various policy papers addressing some of the core elements of the concept. One such paper discussed how to transform the struggling automobile industry and how to jumpstart the necessary shift towards low carbon transportation in the United States. ("One Million Plug-In Electric Vehicles by 2015: Top Ten Policies for the U.S. to Get Plug-ins on the Road to Energy Security, Carbon Reductions, and Green Jobs," by Tom Collina and Ron Zucker). Another paper urged to modernize the U.S. transmission grid in order to establish a 21st century electric infrastructure, a smart and super grid which would allow renewable energies to blossom effectively ("Building the 21st Century Transmission Super Grid: Technical and Political Challenges for Large Scale Renewable Electricity Production in the U.S.," by Pat Wood and Rob Church, American Council on Renewable Energy).

Unleashing the Leadership: Multiple Options for Mutual Learning and Cooperation

The Transatlantic Climate Policy Group came into being in the months leading up to the U.S. 2008 presidential elections. This fortuitous timing allowed for the analysis of the policy proposals of then-candidate Barack Obama, for the close monitoring of the developments which then followed with his instauration and with the shift in the congressional majority, and to identify common ground for transatlantic cooperation by evaluating European reactions to the policies suggested in the United States.

While the true impact of the new administration's approach to energy and climate policy cannot be fully evaluated for another few years, there is no doubt that the United States is finally experiencing a renaissance of federal policy which had persistently resisted domestic and international calls for action. The American Recovery and Reinvestment Act passed the Congress in March 2009 with $86.8 billion worth of funding for investments in a greener economy; in May, President Obama announced to raise gas mileage standards and cut greenhouse gas emissions from cars and trucks by 2016; and in June, the House passed the American Clean Energy and Security Act including, for the first time, a draft for an emissions trading system. After eight years of federal inaction, leaving the local and state levels to deal with energy and climate concerns, the federal level has eventually returned to take responsibility.

However, this significant shift in current policy-making from the subnational to the federal level is in fact in keeping with previous developments in U.S. environment policy. These often evolved from the bottom up, with the local and state levels taking the lead and successfully setting the stage for federal action. This situation nevertheless allows for ample cooperation opportunities with Europe, where energy and climate policy has long been embedded in a top-down structure and where the European Commission issues regulations with increasingly strong impacts on its member states. With the Obama Administration's serious commitment to energy and climate policy, the European Union may well soon see itself challenged to notch up its 20%-below-1990 goal to the promised 30%-below-1990 by 2020 were other major developed nations to follow suit.

By seriously seeking to reach a reduction target comparable to 20% below 1990 levels, the U.S. could thus unleash a powerful dynamic of U.S.–European leadership on energy and climate policy, disabling other countries to hide in the back and requiring them to step up their climate policy efforts. As the *Transatlantic Climate Policy Group* has demonstrated, Europe and the United States have all the necessary assets to realize this form of leadership and its global consequences. Successful cooperation at all levels of governance relevant to energy and climate policy—the local, the state, and the national levels—exists and could easily be developed to constitute the framework conditions necessary for a transition towards a low carbon economy.

With a history of strong economic ties, Europe and the United States now need to commit to a "Transatlantic Green New Deal" if they are to tackle the economic and the climate crisis at the same time. For this to happen, both have to speed up the mutual learning process by formalizing the various existing forms of political and economic cooperation. For example, by creating common institutions such as a U.S.-European Climate Council, they could facilitate the mainstreaming of energy and climate policy at all levels of governance. Such an institution could rely on experiences and best policies from either side of the Atlantic, establishing a mixed approach toward energy and climate policy: bottom-up where it stimulates active participation of citizens and top-down where urgent action requires firm national efficiency standards. In this way, the United States in particular could rapidly learn from concrete policy measures such as feed-in tariffs, which, in Germany, successfully multiplied renewable energies investments, reaching a total market share of 16% in 2009. Europe in return could take a U.S. lesson on political creativity, pragmatism, and bipartisanship that allowed to win over many from the conservative camp for the new energy and climate policy.

In particular Europe and the United States must join forces to engage their respective laggard regions in a process of economic and environmental reform. In the midwestern and southwestern states of the U.S., as in the Central and Eastern member states of the European Union, there is strong resistance against ambitious structural transformation. These regions fear that curbing carbon emissions and promoting renewable energies will make energy more expensive, threaten jobs, and harm the economy.

Thus only by winning support in the former industrial and farming regions can the U.S. and the European Union achieve the political majorities necessary to pass the kind of national legislations that effectively allow the transformation to low carbon economies. A formal policy network could serve as a forum in which the concerned states and regions could share experiences as they are coping with the challenging structural reforms. Joint conferences and study tours, as implemented by the *TCPG*, could jumpstart such a process of mutual learning and hence effectively establish a network of transatlantic solutions.

Stepping Ahead: Setting the Stage for Continuous Transatlantic Cooperation

This publication not only seeks to summarize the key findings from the two years of extensive dialogue that constituted the *Transatlantic Climate Policy Group*, it also aims to go one step further: It intends to set the stage for deeper and broader engagement on climate and energy policy between Europe and the United States by elaborating on the above-mentioned core issues identified in the course of the program. The publication features articles of six of our program partners—renowned climate and energy experts, political decision-makers, and policy experts, three from either side of the Atlantic. They share their views on the opportunities and shortcomings of transatlantic cooperation and formulate key recommendations for a sound future partnership. The *TCPG* is thus demonstrating once again that such collaboration can take multiple forms and successfully function at various levels, among them the local level, the state level, and the federal level. However, only together do they make up the whole that constitutes a successful strategy for fighting climate change and for reviving our economies in a sustainable way. While all three levels of policy action are important, this publication focuses on the bottom-up approach—from the local to the state, and from the state to the international level—not only to recognize leadership shown at the subnational level in the absence of federal action but also to emphasize the importance of local awareness and active citizen involvement without which any ambitious climate and energy policy is doomed to fail.

Dale Medearis and Maryke van Staden take a close look at local strategies, policies, and networks, further analyzing their successes, shortcomings, and future challenges. Dale Medearis, senior environmental planner at the Northern Virginia Regional Commission describes the situation in the United States. While he acknowledges that U.S. cities have increased their exchange with partners in Europe, he argues that "[T]here is little formal effort to search, understand, and apply innovative energy and climate policies from abroad in the U.S." He therefore urges that more needs to be done to demonstrate the domestic benefits of international cooperation.

Maryke van Staden, coordinator of the European Cities for Climate Protection campaign at ICLEI-Local Governments for Sustainability, discusses the European perspective. She emphasizes that European cities are uniquely positioned to fight climate change if they make active use of their local policy tools. Therefore cities have to move beyond local pilot projects and get to the point of mainstreaming climate and energy action. For this, cities need the active support of citizens, but also of states and federal governments, which have to establish the framework conditions that provide confidence and facilitate local decision-making.

Bärbel Höhn and Mary Nichols discuss climate and energy policy at the state level, describing the states' roles in supporting local climate action and emphasizing their influence on federal climate and energy policy. Bärbel Höhn, Vice-Chair of the Green party group in the German

parliament presents the case of North Rhine-Westphalia in Germany, which, formerly the nation's cradle of industry, is now setting the example for successful transformation towards a low carbon economy. Höhn argues that "[…] if we work together to show that we can not only achieve drastic reductions in greenhouse gas emissions, but also create new prosperity and economic opportunities, sustainable green jobs, and economic growth in the process, other countries will be quick to follow."

Mary Nichols, chairman of the California Air Resources Board, shares experiences from the state of California, a pioneer among U.S. states to have effectively influenced federal environment and energy policy since the 1960s. Nichols underlines that California's approach to energy and climate policy "[…] and many of the specific measures are easily transferable to other states, to the nation as a whole and also into the international sphere." And just recently, California proved itself once again in such state leadership when its continuous advocacy culminated in the adoption of nationwide gas mileage standards as well as national targets for the reduction of greenhouse gases emitted from cars and trucks.

John Podesta and Reinhard Bütikofer discuss the role of the United States and Europe in the realm of international climate negotiations. John Podesta, former chief of staff of President Bill Clinton and president of the Center for American Progress, analyzes the changes in U.S. climate and energy policy which have occurred with the Obama Administration. Podesta sees strong potential for further transatlantic cooperation in order to jointly move forward the international climate negotiations. Among other things, Podesta recommends to develop a common metric for counting emissions reductions: "[A] 'carbon cap equivalent' accounting system to help break the current stalemate and move the globe onto a meaningful emissions reduction trajectory."

Reinhard Bütikofer analyzes the European perspective. Bütikofer, vice chairman of the Group of the Greens/European Free Alliance in the European parliament, argues that the United States and Europe are finally finding common ground on the core points of the climate debate. While he urges both sides to work as hard as possible to seize this new understanding at the COP 15, he also warns Europeans of coming to Copenhagen with too high expectations. As the success of the conference will most likely be extremely limited, Bütikofer advises Europe to refocus its leadership role. "What Europe must understand is that its real leadership ambition should concentrate on being the first to create a low carbon economy. The real breakthrough for climate policy will not come through diplomacy. Rather, the breakthrough will come as countries learn to understand that saving the climate will help save their economies and safeguard their security."

Thanks to the Transatlantic Community: Stay Committed, Keep Growing

The *Transatlantic Climate Policy Group* has only been a first small step toward establishing the kind of U.S.-European leadership needed to reach CO2 reductions in line with climate science and to create a truly sustainable, low carbon global economy. Nonetheless, the transatlantic climate community is growing stronger than ever before. While the Heinrich Böll Stiftung will continue to actively promote this process where it can, we would like to thank those who contributed to the two-year program of the *Transatlantic Climate Policy Group* for engaging with us in this important dialogue.

The team behind the *Transatlantic Climate Policy Group*:[1]
Barbara Assheuer • Marc Berthold • Arne Jungjohann • Roderick Kefferpütz • Till Kötter

1 See TCPG Team on page 50. For more information on the Transatlantic Climate Policy Group, please visit our web site: www.boell.de/climate-transatlantic/

Looking Beyond Copenhagen

Sub-National Governments as Transformers of Energy, Climate, and Transatlantic Policies

DALE MEDEARIS
PH.D., SENIOR ENVIRONMENTAL PLANNER
NORTHERN VIRGINIA REGIONAL COMMISSION

"[P]arallel concerns and the economic ties between U.S. and European cities perpetuate a reciprocal cycle of policy learning among cities and other government and civil society actors who will inevitably transform climate and energy policies on both sides of the Atlantic."

When the nations of the world gather this December in Copenhagen to develop a long-term climate agreement for a post-Kyoto world, it will be impossible to overlook the role of local, regional, and state authorities. This applies in particular to Europe and the United States, and mainly for two reasons. First, in Europe and the U.S., emissions from cars, trucks, and the heating, cooling, and power generation for buildings and homes account for approximately 70% of all greenhouse gas emissions. Moreover, urban energy and environmental policies on both continents are invariably tied to land use, and therefore greatly subjected to the oversight of local and state authorities. Second, the rise of the global economy has inextricably linked sub-national governments, particularly between U.S. and European metropolitan regions. Hamilton and Quinlan (2008) show that business between Europe and the U.S. exceeds $3.75 trillion annually and accounts for over 14 million "on-shored" jobs every year.[1] They add that the overall investment by Europe in China is less than German investment in New Jersey and that total European investment in India is less than half of German investment in individual U.S. states such as Missouri or South Carolina. As a result, parallel concerns and the economic ties between U.S. and European cities perpetuate a reciprocal cycle of policy learning among cities and other government and civil society actors

1 http://transatlantic.sais-jhu.edu/Publications/TE_2009_finaltext.pdf, consulted on 09.14.2009

who will inevitably transform climate and energy policies on both sides of the Atlantic. However, there is little recognition of the dynamic relations between U.S. and European sub-national governments and the important roles they have played—and will play—in the future of transatlantic relations. This paper looks at key challenges and opportunities affecting U.S. and European cities and regions in the context of climate and energy policy.

Evaluation

Rising awareness and leadership by U.S. cities and regions

For nearly a decade, the absence of national leadership in the U.S. on most energy and climate policy initiatives placed the burden of mitigating greenhouse gas emissions on the shoulders of sub-national authorities. In 2006, California was among the first of the states to fill the void by approving the California Global Warming Solutions Act. The law was prompted by in California's requirement for statewide emissions reductions to 1990 levels by 2020—a 10% cut from current levels. States such as New York and New Jersey also introduced legislation targeting greenhouse gas emission reductions by 5%-below-1990-levels by 2010 and 80%-below-2006-levels by 2050. Moreover, as of May 2009, more than 900 mayors have signed the U.S. Mayor's Climate Protection Agreement and committed their cities to meet or exceed the Kyoto Protocol targets (U.S. Conference of Mayors Climate Protection Center).

In addition, there has been a sea change in the views of the American public toward climate change. George Mason University's Center for Climate Change Communication reported in 2009 that over 50% of all Americans are either "alarmed at" or "very concerned" about global warming (Leiserowitz, Maibach, & Roser-Renouf, 2009). This represents a significant departure of U.S. opinion from just a few years ago when climate change rarely registered as a significant concern.

Minimal implementation

Despite the rise in awareness across the United States about the need to respond to the challenges of climate change, there is still a considerable lack of concrete and meaningful action at the local level. Too many cities, regions, and states in the U.S. rely on the development of aspirational goals as progress indicators rather than the development and attainment of mitigation and adaptation targets that are quantifiable and verifiable. Wheeler (2008) assessed the climate and energy plans of 29 U.S. states, including the goals and measures of these plans, and observed that the majority of efforts to reduce emissions were voluntary-based and lacked dedicated resources for the necessary large-scale transformation of the energy and transportation sectors.

Many of Wheeler's observations are played out in the energy and climate challenges of the Commonwealth of Virginia. Virginia's first state-wide energy and climate plans targeted greenhouse gas emission reductions of 30% below the business-as-usual projection of emissions by 2025. It is relevant to note that greenhouse gas emissions in Virginia have risen more than 1% *annually* since 1990. In addition, more than 500,000 people are expected to move to Virginia between 2010 and 2020. Already, approximately 60% of all electricity emanates from coal. At the local level, the struggle to manage growth, energy, and greenhouse gas emissions is equally challenging for many cities in Virginia. For example, with the best of intentions, the counties Fairfax and Arlington created and launched "Cool Counties"—a national initiative designed to cut greenhouse gas emissions 80% by 2050. However, the scope of Cool Counties and related efforts are mostly confined to emissions from government activities or small demonstration projects at the scale of individual buildings or homes as opposed to comprehensive county-wide emissions. At present, Arlington County's current climate strategy addresses less than 10% of all emissions from county operations.

California's recent climate and energy initiatives, specifically SB 375, remain the exception rather than the rule among state and local-level energy and climate policies in the United States California has been among the first states to link climate policies with regional land use and transportation planning. The state has created a range of incentives for metropolitan regions to cut CO2 emissions from mobile sources by calculating emissions under different development and review scenarios. Portland, Oregon, is another exception as one of the few metropolitan regions in the U.S. to actually attain CO2 emission reductions—1% against 1990 levels. The region is legendary for its long-term integrated metropolitan transportation and development planning as well as its focus on renewable energy and energy efficient buildings.

Apart from these cases, initiatives at the state and local level generally lack quantifiable mitigation targets and benchmarks, large scale application of energy efficient building policies, building retrofitting, renewable energies, and transit-oriented development within large-scale geographically defined areas. In the long run, the shortcomings of these initiatives will invariably place more burdens on the shoulders of cities and states in the United States.

Challenges

Community energy planning and European models

By comparison, cities and regions of Europe, particularly pioneering countries such as Germany, Sweden, and Denmark, have spearheaded the development of meaningful climate and energy policies that have brought noticeable results. European cities are particularly skilled at integrating energy efficient building and housing policies, blending compact land-use with transportation, generating and distributing renewable energies, and creating district heating and cooling systems within large "scale projects" that are accompanied by quantitative short- and long-term energy efficiency and greenhouse gas emission reduction targets—commonly referred to as "Community Energy Planning." The results speak for themselves. In cities such as Copenhagen, annual emissions per person are approximately 2.6 metric tons, compared to the Danish national average of over 12 metric tons per person per year. In Mannheim, Germany, a city which derives more than 90% of its energy from coal, emissions are approximately 5 metric tons per person—in part because of its world-class district heating and cooling system and integrated regional rail transportation system.

"[T]he union of economic ties between cities and regions and the emerging networks between U.S. and European practitioners and policymakers can help sustain a more formal transfer of innovative climate and energy policies from Europe to the United States."

Attention to energy efficient buildings and homes plays a critical role in many European city and regional climate policies. In Germany, energy efficiency in this sector is twice that in the U.S.—due in part to EU-level legislation such as the Framework Directive on the "Energy Performance of Buildings" and aggressive national-level legislation such as Germany's Energy Conservation Act and its Renewable Energy laws that set standards for energy efficiency in buildings and created incentives for renewable energy and building retrofits.

Several cities in Germany, such as Freiburg, have fully integrated sustainable climate and energy planning in its overall operations. Freiburg has prioritized scale development, renewable energy, passive housing, cogeneration and transit-oriented development in projects such as the Vaubahn and Rieselfeld. Moreover, the city's focus on sustainable development has not deterred economic growth. Freiburg's demographic and economic growth rate outpaced the rest of Germany over the last 30 years. Freiburg also has among the highest transportation modal splits in Europe—over

60% of all trips are taken by bike, on foot, or with public transportation. By 2005, Freiburg's C02 emissions per capita in the transport sector had fallen by 13.4%, reaching a level that is 89 percent of the German national average—and only 29% of the American average (Buehler & Pucher, 2009).

Overcoming obstacles by learning from Europe

The exchange and application of lessons from European cities to the U.S. does occur, but usually falls far short of its potential (Medearis & Dolowitz, 2009). In the U.S., most international work, especially at the city or state level, suffers from the stigma of irrelevance or even wastefulness. Regardless of the context, international work by cities in the U.S. has suffered from the lack of sustained goal-oriented, problem-focused searches, reviews, and analysis of the lessons from abroad that can be applied into uniquely U.S. contexts. Too frequently, mayors, council members, or their staff travel to Europe or other continents on trips that are often poorly structured, undisciplined, and void of information about the content and performance of the climate and energy policies. These types of trips also lack a prospective analysis about what can be applied in the U.S.—a critical issue given the vast differences between planning, environmental, energy, and climate policies at all levels in Europe and the U.S. Moreover, many exchanges and partnerships between U.S. and European cities lack equivalence. It is all too common to see exchange programs partnering up hazardous waste engineers from Milan with landscape architects from Toronto over discussions about water infrastructure financing. A similar trend is found within the foundation community. Multiple and very successful domestic climate and energy programs are funded by many national-level foundations or philanthropic organizations. However, the vast majority of international work by these same organizations is focused on assistance to developing countries. In other words, there is little formal effort to search, understand, and apply innovative energy and climate policies *from* abroad *into* the United States.

In order for the transfer of energy and climate planning policies from Europe to the U.S. to become mainstream, more needs to be done in the U.S. to demonstrate the domestic benefits of international cooperation. For starters, practitioners and policymakers in the U.S. must make efforts to formalize the search and understanding of energy and climate innovations in Europe. A number of think tanks, academic and commercial networks, are emerging that have started to bridge these gaps. These include the Free University of Berlin's Environmental Policy Research Center, the Heinrich Böll Stiftung's *Transatlantic Climate Policy Group*, the think tank Ecologic, and the German American Dialogue on Renewable Energy (GADORE). These organizations formally search, review, and analyze policy contexts and performance indicators, followed by prospectively analyzing how these innovations can fit in the United States.

Since 1998, the Northern Virginia Regional Commission (NVRC) has offered a rare model for this form of policy harvesting from Europe. Through a long-term exchange of policies, academic, business, and other commercial interests with the regional planning council of Stuttgart (Verband Region Stuttgart), planning in Northern Virginia has been transformed. Real-time signage is now deployed on the Washington Metro system and the region is home to the highest concentration of green rooftops in the United States. Recently, Northern Virginia took the transfer of European climate and energy lessons to a new level. NVRC is working with Loudoun County to develop the first "Community Energy Plan" (CEP) in the Washington, D.C. metropolitan region. With the direct support of energy and climate consultants from Germany and other European countries, the Loudoun County CEP will be among the first 20-year energy and climate frameworks with clear targets and short- to medium-term implementation strategies along with tracking measurements, reporting, and accountability.

Recommendations

Policy transfer priorities

As Northern Virginia and other metropolitan regions in the U.S. work to develop sustainable energy and climate policies, the following policy areas will rank high on any list of policy transfer priorities with Europe:

Energy Efficient Buildings. With the lack, at least for the moment, of national obligatory energy efficiency standards, and the confusion of multiple rating systems for homes and buildings, many cities and towns in the U.S. must rely on voluntary measures to promote energy efficiency in buildings. The EU experience with energy performance labels for buildings can powerfully inform home and building owners about costs and energy performance. Building labels can also be relatively easily applied on a voluntary basis in the U.S., and then incrementally raised and codified. In addition, Europe's support for policies that encourage energy efficiency and renewable energy in buildings have created a comparative advantage for many European companies in the building technologies sector. Firms from Europe already have large market shares in sectors such as foundation insulation systems, insulated triple-glazed windows and frames, motorized integrated exterior awning systems, integrated air-sealing product systems, passive housing standards, and integrated plug-in ducting systems for ventilation systems.

District Heating and Cooling. Many European cities rely on efficient applications of district heating and cooling systems orchestrated by integrated "energy service" companies. These companies deliver a variety of energy services such as electricity, heating, and gas. Garforth (2007) has observed that for several European cities (Copenhagen and Mannheim) the sale of heat via district heating systems has become a more profitable effort than the sale of electricity. Many regions of the U.S., such as the Northeast, require relatively similar demands for the heating of buildings and homes. Large "scale projects" could host district heating (and cooling) systems that are economic and that remove the need for individual boilers or furnaces.

Supplemental Transportation Systems. Transportation remains an Achilles heel of U.S. climate and energy policy. The lack of supplemental transport systems—such as light rail or bus rapid transit to support urban and regional transportation—will preclude any long-term efforts to advance mobility, access, and sustainable climate and energy practices. But signs are on the horizon as light rail in particular is gaining more acceptance. Arlington, Virginia, is planning the development of a four-mile light rail corridor along Columbia Pike and has informed multiple elements of the plan with designs and models from European cities.

Renewable Energies. Currently a national feed-in tariff system similar to countries such as Germany remains beyond the reach of even the most ambitious U.S. policymakers. However, California's Million Solar Roofs initiative and Gainesville, Florida's feed-in tariff systems have proven to be national pilots and were informed by Germany's experiences. Virginia's 2007 Energy Plan indicated that it has the potential to produce over 11,000 megawatts of solar photovoltaic energy and that its coastal areas are some of the most fertile in the U.S. for harvesting wind energy. It has been suggested that direct investment in these sectors could potentially reach $27 billion as well as 62,000 new jobs by 2015 (Virginia Energy Plan 2007). Virginia's first net metering law was passed in 2008 as a result of several brief exchanges between a Virginia state legislator and his counterparts in Germany.

Conclusion

Science is now unequivocal in its assessment that cities and urban regions in the U.S. will face enormous pressures to plan adequately for the environmental, economic, and social changes of the next 50 to 100 years. As U.S. cities and regions work to prepare for the world beyond Copenhagen, drawing from successful precedents in Europe will become a necessity rather than an option. As

this article has tried to point out that there is no shortage of lessons which U.S. cities can take from Europe. Moreover, the union of economic ties between cities and regions and the emerging networks between U.S. and European practitioners and policymakers can help sustain a more formal transfer of innovative climate and energy policies from Europe to the United States.

Dale Medearis
Ph.D., Senior Environmental Planner
Northern Virginia Regional Commission

Biography

Dale Medearis is Senior Environmental Planner for the Northern Virginia Regional Commission. He leads the NVRC's regional climate mitigation and energy programs and manages NVRC's international environmental partnerships through the European Network of Metropolitan Areas and Regions (METREX). Prior to working for NVRC, Medearis spent 20 years at the Office of International Affairs, U.S. Environmental Protection Agency, Washington, D.C., as Program Manager for Western Europe and urban environmental programs. In that capacity, he worked to identify, analyze, and apply best practices urban environmental policies from Europe to the United States. Medearis has taught courses on environmental planning as an adjunct faculty at the University of Redlands and Virginia Tech University. He has a Ph.D. in Environmental Design and Planning from Virginia Tech University, an M.S. in Cartographic and Geographic Science from George Mason University, an MGA in Government from the University of Pennsylvania, and a B.A. in International Relations from the University of Redlands.

References

Buehler, R., & Pucher, J. (2009). Sustainable Transport that Works: "Lessons from Germany." *World Transport Policy and Practice*, vol. 15, no. 1.

Garforth International, et al. (2007). City of Guelph, Community Energy Plan. Retrieved from http://guelph.ca/uploads/ET_Group/admin/Final_CEP_Guelph_070328.pdf

Hamilton, S.H., & Quinlan, J. P. (2008). *The Transatlantic Economy.* Washington, D.C.: Center for Transatlantic Relations.

Leiserowitz, A., Maibach, E., & Roser-Renouf, C. (2009). Climate Change in the American Mind: American's Climate Change Beliefs, Attitudes, Policy Preferences, and Actions. *Yale Project on Climate Change and the George Mason University Center for Climate Change Communication.* Retrieved from http://www.climatechangecommunication.org/images/files/Climate_Change_in_the_American_Mind.pdf

Medearis, D., & Dolowitz, D.P. (2009). Considerations about the Obstacles and Opportunities to Formalizing Cross-national Policy Transfer to the United States: A Case Study about the Transfer of Urban Environmental and Planning Policies from Germany, *Environment and Planning, vol. 10, no. 10.*

United States Conference of Mayors, Climate Protection Center (2009). Retrieved from www.usmayors.org/climateprotection/list.asp

Virginia Department of Mines, Minerals and Energy. (2007). *The Virginia Energy Plan.* Richmond, Virginia. Retrieved from http://www.governor.virginia.gov/TempContent/2007_VA_Energy_Plan-Full_Document.pdf

Wheeler, S. M. (2008). State and Municipal Climate Change Plans. *Journal of American Planning Association,* vol. 74, no. 4 pp. 4.

Local Bridges
The Transatlantic Perspective of European Climate and Energy Policy

MARYKE VAN STADEN
PROJECT COORDINATOR OF THE CLIMATE AND AIR TEAM
ICLEI—LOCAL GOVERNMENTS FOR SUSTAINABILITY, EUROPEAN SECRETARIAT

" Local bridges need local people—leaders and citizens—to "bridge the gap." Yet without enabling framework conditions that empower local climate action in all sectors ... and that set high standards, drive action through effective policy, and provide capacity for action through funding and information, local governments cannot move forward in a comprehensive, coherent manner"

The Climate and Energy package proposed by the European Community (EC) in 2008 is a far-reaching policy strategy aimed at delivering on the European Union (EU) commitment to fight climate change and promote sustainable energy (European Commission, 2008). The package and legislation, adopted in 2009, set ambitious targets to be reached by 2020: cut greenhouse gas (GHG) emissions to 20% below 1990 levels, increase the share of renewable energy (RE) to 20%, and improve energy efficiency (EE) by 20%. The GHG target will rise to 30% if an international agreement is reached committing other developed countries and the more advanced developing nations to comparable emission reductions. To achieve these targets, the 27 EU member states need to engage with many different actors, including communities. With more than 100,000 local governments and a population of just under 500 million (EUROSTAT, 2008), Europe has tremendous potential for change: from transforming the approach to how energy is produced, transmitted, and used, to changing the way in which energy is perceived as a valuable resource. Driven by the climate change challenge as well as the need for a sufficient energy supply and stable energy prices, local governments in Europe, but also in the U.S., are starting to consider the potential for alternatives. There are many cases of success in Germany, Sweden, Spain, the United Kingdom, and the United States, to mention but a few countries, with solid political strategies, improved processes, and tested technologies. However, to achieve widespread engagement, local bridges need to be

built or improved—domestically, cross-border, and across the Atlantic—to inform, motivate, and cross-pollinate for optimal results. Building on the recent experiences of European cities and communities, how can a sound transatlantic partnership strengthen local climate and energy policy?

Evaluation

Developments in Europe: Targets and instruments

The challenge of achieving the transition to a sustainable energy future, protecting the global climate, and improving people's quality of life has become a central concern in Europe. The new EU 2020 targets are commitments and driving forces for change, requiring sound action in urban areas, where the impact of climate change is felt most and where it will continue to manifest as additional motivation for local action.

As European cities and towns contribute the bulk of GHGs, they are the focus of several European directorates, among them DG TREN, the Directorate General for Transport and Energy. Building on experiences of several local government associations (Climate Alliance, Energie-Cités, ICLEI) which work closely with communities across Europe on climate and energy activities, and learning from previous European policy programs (CONCERTO, www.concertoplus.eu; Intelligent Energy Europe (IEE), http://ec.europa.eu/energy/intelligent), it became clear that cities must play a key role in the energy transition process. For this reason, DG TREN and the mentioned city networks in 2008 launched the Covenant of Mayors (www.eumayors.eu). The Convenant's aim is to encourage cities and communities to formally commit to GHG reductions that go beyond the 20% target of the EU. Also, for further support of this objective a new European funding mechanism for local governments was established: the European Local Energy Assistance (ELENA) program. ELENA is operated by the European Investment Bank (EIB) and provides 15 million to finance costs associated with the development of municipal investment projects or initiatives contributing to the overall EU energy targets (ManagEnergy, 2009).

Local climate action examples

The local level provides an ideal starting point to implement policies and actions that address both climate protection and sustainable energy. The transition to sustainable energy—combining energy savings and energy efficiency with the use of renewable energy sources—provides interesting benefits for local governments. Some of these include achieving GHG reductions, improved air quality, more sustainable urban development through improved planning approaches, local economic growth and job creation, as well as enhanced community resilience in a changing environment.

Shaping change: Local policy tools for GHG reductions

Local governments, as the level of government closest to citizens, have extensive powers to direct, shape, and guide change in their communities, and can therefore directly effect change among local businesses and in the community as a whole. The tools at their disposal for this task include an Energy Status Report, which determines the energy needs and sources and identifies local potentials of renewable energies. Another effective tool is the Greenhouse Gas Emissions Inventory, which assesses where major emissions come from. To support the latter, the International Local Government Greenhouse Gas Emissions Analysis Protocol (www.iclei.org/ghgprotocol) guides local governments by outlining relevant boundaries and scopes. Once these assessments have been obtained, the next step is to identify targets for GHG reduction, renewable energy, and energy efficiency. The targets are then linked to a timeframe by when results should be achieved. For example, Stockholm (Sweden) has set the ambitious target of becoming a fossil fuel free city by 2050 and aims to achieve CO2 emissions of 3 metric tons per capita annually. Also, Ancona (Italy) aims to use 100% renewable energies for its corporate energy requirements by 2010 (www.climate-catalogue.org).

Using the mandate: Educate, implement, and regulate locally

While the roles of local governments differ from country to country, most include public services such as education, police protection, and healthcare, in addition to the management of local administration. Here, much more can be done to get staff and citizens involved. The city of Vienna, for example, integrated climate concerns into its green public procurement policies through the program Ökokauf Wien (Eco Buy Vienna, www.oekokaufwien.at). Launched 10 years ago, the program led to the restructuring of purchasing and procurement processes in the city administration. Ecological criteria were then applied to nearly all services and products, including food, construction, paper, and vehicle fleets. Between 2004 and 2007 alone, the program can be credited with having achieved a CO2 reduction of 103,000 metric tons. Financial savings made by installing water savings devices in schools and kindergartens are 1.5 million per year (ICLEI, 2009a). This illustrates that the financial benefits are vast, ideally allowing money saved to be reinvested into other sustainable energy measures.

Using its mandate to address local issues, local government can develop, implement and monitor policies and regulations that address citizens, local businesses, and industry. These can be effectively applied to the local building, transport, energy, waste, and water sectors. One example of policy-driven change from a climate protection perspective is Freiburg im Breisgau (Germany), which switched to the cogeneration for electricity and heating. With large and small combined power and heating plants that run on fuels such as wood chips or methane captured from landfills, the city has achieved an emissions reduction of 50% (ICLEI, 2009b).

Community leadership: Engaging citizens to act

However, community leadership and motivational and informational initiatives are also needed. Providing advice and ideas usually triggers change, in particularly with regard to energy use. Running educational pilot projects for demonstration purposes can help reinforce the message. For example, Malmö (Sweden), well on its way to becoming a solar city, applies an approach that directly addresses and involves citizens. Its broad-based efforts cover traffic, energy, and city planning as well as consumption, education, and lifestyle. When thinking about how to get citizens to change their lifestyle, the municipality searched for ways to effectively communicate the messages it wanted to get across. As part of the IEE-supported project SECURE (Sustainable Energy Communities in Urban Areas in Europe) (www.secureproject.org), Malmö developed "The Climate Smart Campaign" to educate inhabitants on energy use and its impact on climate change. The campaign included innovative approaches such as commercials which suggested ways to save energy in a humorous way.

Challenges

The mainstreaming of local climate and sustainable energy action—meaning that it becomes the daily norm—is the next step. For this, all communities are called on to engage in a coherent and sustained manner. In fact, it constitutes the global challenge of the next decade. There are many exemplary communities across Europe that are active in climate and energy and that develop their own individualized approaches. However, these being the exception of the rule, there is vast potential for action considering that there are more than 100,000 local governments in the EU-27 and many more in other European countries. Considering the urgent need for action, the available knowledge, and the benefits to be gained, one question comes to mind: Why are communities not changing en masse?

Promoting confidence: Sharing information to ease decision-making

It seems that there is still a lack of confidence in new approaches—be it technologies, systems, or processes—and a lack of knowledge about why there is a need to change and how this can be achieved. However, local climate action is certainly not a new concept. Many of its approaches,

measures, and technologies are tested and proven. But what is new is the idea of mainstreaming local climate action. By and large, local governments do not recognize this as a mandatory task. Leaders generally prioritize according to local issues and the available budget, a procedure which often leaves little flexibility for the inclusion of additional objectives such as reducing emissions. Therefore, what is needed is the awareness that saving energy generates multiple advantages. Saving energy not only contributes to climate protection but also cuts costs. In turn, this allows available funds to be allocated to other needs, such as investments in renewable energy facilities that generate new jobs and have economic value. The local generation of renewable energy and its efficient use (www.local-renewables.org) need to be considered when developing innovative concepts such as smart grids (www.smartgrids.eu), all the while testing and demonstrating their

"[A]t the heart of this lies the need to change the way in which energy is perceived and to reconsider what quality of life means in modern societies. Achieving this remains the biggest challenge of all."

feasibility and improving them as needed. Along with growing awareness of the economic, social, and security benefits resulting from climate protection measures, we can expect a greater demand for accountability for actions from a life-cycle perspective. This is why there is a strong need to share information on available policy options for facilitating decision-making and promoting confidence in existing technologies and approaches.

Funding support: Enable framework conditions to effectively position local governments

Funding includes many ad hoc activities, such as renewable energy or energy efficiency projects funded by external agencies. These projects are useful as a starting point, but tend to stop once the funding stops. Therefore, a long-term approach is needed in which climate protection and the transition to sustainable energy are firmly anchored in the local agenda, thereby ensuring the continuation of efforts even if there is a change in local political leadership. Funding—whether through low cost loans or grants—as provided by the EC, EIB, and some national governments, is essential to enable local governments to act. Municipal budgets and staff capacity, both in terms of numbers of staff and expertise, are often limited. This is why the European and national governments must enable framework conditions that will position local governments to act effectively over the long term, thus allowing them to deal with the impacts of climate change.

One good example of enabling framework conditions are electricity feed-in laws, which can be used at different levels from national to local. In Germany, for example, the German Renewable Energy Act (Erneuerbare-Energien-Gesetz, EEG) is the central instrument for promoting power production from renewable energy sources (RES-E). Its value lies in guaranteed priority connection to the grid, fixed and cost oriented remuneration (differentiated by technology, plant capacity, and other characteristics), and a comparably long contract period of 20 years for most technologies. Feed-in laws thereby provide investors with a high level of security in terms of planning and recouping associated costs (van Staden & Musco, 2009).

Framework conditions must also address the building and transport sector. Improved policies that promote energy efficiency and a switch to clean energy sources must include high building standards that mandate the use of much more efficient technologies and materials over a specific timeframe. With such policies underway or in place, designers and manufacturers will know that change is inevitable and will design and manufacture accordingly. Modal shifts in transportation are also needed. Widening public transportation options, including their interconnection with non-motorized forms of mobility, will get more citizens to change to sustainable mobility solutions. At present, the development of such frameworks is still too slow, especially considering the severe climate challenge we face and the untapped potential for action.

Recommendations

Global movement and opportunities for transatlantic cooperation

The world is expecting global leaders gathering in Copenhagen in December 2009 to agree on a strong post-2012 climate agreement to follow the Kyoto Protocol. Local governments are calling for an inclusive agreement and an enabling framework that will also empower them to act and respond to the local impacts of climate change. These two demands are not mutually exclusive and are addressed in the Local Government Climate Roadmap (www.iclei.org/climate-roadmap), an ICLEI project, in partnership with the largest international local government associations and their networks. The Roadmap presents the strong case of local governments around the globe, calling for recognition of their important role and for inclusion in a post-2012 agreement. Exemplary cases, from Europe and the U.S. in particular, can help make a strong case in this regard. Cooperation and exchange across borders between local governments of all types and sizes has helped and is needed to shape the development of the Roadmap and action beyond the decision to be taken in December. The European version of the Roadmap is addressed through the project LG Action (www.lg-action.eu), which invites local governments to feed items and viewpoints into the European and international energy and climate debate. Their American counterparts can contribute their input through the global process while also making use of the City Climate Catalogue (www.climate-catalogue.org), a key tool in this process. The Catalogue compiles community climate change mitigation targets and achievements from around the globe, with a large number of entries expected from the U.S. and Europe. The results will be used to provide national governments and the United Nations with a strong basis for negotiations at the COP15 conference, showing that communities in many countries are committed to addressing climate change.

The need to reconsider: What does quality of life mean for modern societies?

Observing peer-to-peer exchanges and cooperation between local governments in different countries has shown that, despite different framework conditions, the essential role of local governments can be almost universally applied to addressing local climate action. At the heart of this lies the need to change the way in which energy is perceived and to reconsider what quality of life means in modern societies. Achieving this remains the biggest challenge of all. As seen from the CCP Campaign in Europe and the U.S., there is tremendous potential for learning from each other's experiences and motivating one another. The exchange of good practices and ideas inspires people and remains a crucial element to support the work of local leaders and staff.

Conclusion

With or without an international climate agreement, cities and towns comprise the levels of government most directly impacted by climate change. Now is therefore a good time to strengthen the links between communities and to provide exchange opportunities that allow us to move forward with global climate protection and to build capacity for local climate action. Local bridges need local people—leaders and citizens—to "bridge the gap." Yet without enabling framework conditions that empower local climate action in all sectors (buildings and energy, transport, waste, water) and that set high standards, drive action through effective policy, and provide capacity for action through funding and information, local governments cannot move forward in a comprehensive, coherent manner. Enabling framework conditions are thus a prerequisite for change, as is the sharing of best policies and the identification of their potential for replication. To establish these prerequisites, many more in-depth exchanges are needed, including in the transatlantic dialogue, in order to empower the local governments.

Maryke van Staden
Project Coordinator of the Climate and Air Team at the European Secretariat of ICLEI—Local Governments for Sustainability

Biography

Maryke van Staden is the Project Coordinator of the Climate and Air Team at the European Secretariat of ICLEI—Local Governments for Sustainability. In this position van Staden manages the European Cities for Climate Protection (CCP) Campaign, which addresses greenhouse gas emissions reduction, improving air quality, and adapting to climate change at community level. She is also Chair of the Adaptation Working Group in the European CCP Campaign. Prior to working for ICLEI, van Staden worked for five years with the International Solar Energy Society (ISES) and for 10 years with the South African government addressing policy issues. She holds a B.A. Honores in International Politics from the University of Pretoria, South Africa.

References

European Commission. (2008). "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. 20 20 by 2020—Europe's climate change opportunity." COM(2008) 30 final. Retrieved from: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0030:FIN:EN:PDF

EUROSTAT. (2008). "Population and Social Conditions." EUROSTAT Statistics in Focus 98/2008. Retrieved from: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-QA-09-031/EN/KS-QA-09-031-EN.PDF

ICLEI—Local Governments for Sustainability (ICLEI), European Secretariat. (2009a). "EcoProcura 2009 conference." Retrieved from: www.iclei.org/ecoprocura2009

ICLEI—Local Governments for Sustainability (ICLEI). (2009b). "Long-term strategies for climate protection in Green City Freiburg." Case study 94.

ManagEnergy Annual Conference 2009. (2009). Retrieved from: www.managenergy.net/indexes/I617.htm

Van Staden, M. and F. Musco. (2009). Local Governments and Climate Change. Springer. ISBN: 978-1-4020-9530-6

Tackling Climate Change
The Role of Germany's States

BÄRBEL HÖHN
MEMBER OF PARLIAMENT AND VICE-CHAIR OF
THE GREEN PARTY IN THE GERMAN BUNDESTAG

"In the fight against climate change, Germany's Länder have a vital role to play. They must build on the progress made in reducing greenhouse gas emissions and be ready to face new challenges and opportunities in the areas of energy policy, efficiency, and transportation. Transatlantic cooperation at the state level can help identify the best policies to do so and build strong partnerships for the huge endeavor that lies before us."

Combating man-made climate change is an overarching challenge that requires political action at all political levels—at the federal level, at the state level (i.e., Germany's 16 states aka *Länder*), and at the local government level. The role of the *Länder* in meeting this challenge is determined by the constitutional distribution of powers between the federal level and the states as well as by Germany's integration in the European Union. The EU has formulated some of the most important policies with regard to climate change, notably the European Emissions Trading Scheme and the outlines of Europe's Common Agricultural Policy. The federal level, for its part, has steered Germany's energy policy—ranging from the country's very successful legislation promoting renewable energy sources to the landmark decision to phase out nuclear power, not to mention the controversial policy to allow the construction of new coal-fired power plants without carbon capture and sequestration.

Given this division of responsibilities, what is the remaining role of Germany's states in combating climate change? For one thing, the *Länder* are invested with the power to legislate on a number of matters that are relevant to this challenge, such as construction and housing, roads and public transport, forestry and agriculture, regional planning, and waste management. Moreover, German state administrations are responsible for executing and implementing the federal laws and policies,

giving them some say and leeway in the process. Last but not least, state governments can influence the public debate that calls for more ambitious climate goals and policies, they can create economic incentives for green technologies and environmentally friendly practices, and they can set an example through sustainable procurement policies.

Evaluation

Energy policy at the state level: North Rhine-Westphalia

By 2008, Germany had already reduced its greenhouse gas emissions by 23% below 1990 levels, making it one of the first countries to fulfill its obligations under the Kyoto Protocol. Climate policies at the state level deserve part of the credit for this success story.

One example is the remarkable expansion of renewable sources of energy in Germany: The share of renewable energy sources relative to all electricity produced grew from 6.6% in 2000 to 14.8% in 2008 through wind power, biomass power, and solar power, which increased 4-, 5-, and 50-fold respectively. The main factor for this boom was the federal Renewable Energy Sources Act of 2000 that established a system of feed-in tariffs guaranteeing investors a profitable fixed price for the electricity they generated from renewable sources. However, this federal law was predated and, after 2000, supplemented by various local and state programs.

In 1987, North Rhine-Westphalia, launched the REN program to promote the development, demonstration, and application of efficient and renewable energy technologies. Since then, the program has funded more than 50,000 projects and triggered investments of more than 3 billion

"If we work together to show that we can not only achieve sharp reductions in greenhouse gas emissions but also create new prosperity and economic opportunities, sustainable growth, and green jobs in the process, other countries will be quick to follow."

euros, in particular with regard to solar power, biomass, and combined-heat-and-power generation. Annual emissions of two million metric tons of carbon dioxide have been reduced or avoided this way. In addition, a program to improve the efficiency of the thermal use of wood was launched in 1998. More than 1,700 advanced wood-fired heating systems were funded on the basis of this program up to 2005. Aside from renewable energy sources, the state government also promoted highly efficient combined cycle gas turbine power plants as a more climate-friendly alternative to North Rhine-Westphalia's traditional reliance on hard coal and lignite.

With the aim to improve energy efficiency and encourage energy savings, North Rhine-Westphalia created a State Energy Agency in 1990 to provide energy-related advice to companies and municipalities. Special programs were launched to help small and medium enterprises identify and realize profitable investments in energy efficiency and conservation. More than 1,000 companies participated and carbon emissions reductions in the order of 400,000 metric tons were achieved. At the same time, state-funded energy counselors and consumer centers provided energy saving advice to private households. As well, North Rhine-Westphalia's school curricula placed greater emphasis on climate protection and sustainability as topics, with energy-saving competitions between schools encouraging students to find ways to make their school more energy efficient.

Acknowledging the contribution of sustainable forest management to combating climate change, North-Rhine Westphalia became the first state in Germany to have all public forests undergo sustainability certification by the independent Forest Stewardship Council. The state also promoted low carbon agricultural policies, organic farming, regional marketing, and sustainably produced biofuels.

With regard to regional planning, new policies were enacted to curb urban sprawl, e.g., through increased state subsidies for homebuilders in inner-city areas and reduced incentives for construction

activity outside the city limits. North Rhine-Westphalia also promoted dozens of energy-optimized "solar settlements," the construction of "passive houses" that need no heating, and even "surplus energy houses" that produce more energy than their inhabitants consume. Investing heavily in the expansion of local and regional bus and train services, the state also supported programs to provide low-cost commuter or student passes to employees and students.

In the field of waste management, North Rhine-Westphalia markedly reduced methane emissions thanks to the discontinuation of dumping untreated municipal waste and the capturing of remaining landfill gas. This example inspired federal action, leading to a nationwide ban on the landfilling of untreated waste in 2005.

This brief summary shows how state action can make a difference when it comes to fighting climate change. Federal programs have often been built on the basis of existing state initiatives. And, Germany's success in meeting its Kyoto targets ahead of time would not have been possible without the efforts of states such as North Rhine-Westphalia.

Challenges

Continuous green revolution: Transforming energy production and consumption

Given that roughly 40% of the Germany's greenhouse gas emissions stem from the electricity sector, continuing the country's green energy revolution will remain the single most important climate action in Germany. This is especially true for coal-rich North-Rhine Westphalia, where fossil power plants account for almost two-thirds of all greenhouse gas emissions. The challenge is two-fold:

First, we will have to continue the rapid growth of renewable energy sources, tripling their share of total electricity production to more than 40% by the year 2020. In this respect, the system of feed-in tariffs established by the federal Renewable Energy Sources Act already offers sufficient incentives to spur further massive investment in wind, solar, geothermal, and biomass power. However, a large-scale expansion of Germany's power grid will be required, in particular to transport new wind power from the northern shore to urban centers in southern and western Germany. This is where the *Länder* will have an important role to play by speeding up the planning and approval process for the new grids, building public support, and mediating local conflicts.

Secondly, energy companies must be prevented from setting in stone a high carbon energy future by building the more than 20 new coal-fired power plants currently in planning. At present, federal law leaves the states no scope to ban new coal-fired power plants outright or to deny approval for them based on greenhouse gas emissions. This outdated legislation must be revised to give climate change considerations more weight in the approval process. In addition, a federal moratorium for new coal-fired power plants should be enacted, at least as long as carbon capture and storage technologies are not available, tested, and proven safe for society and the environment. In the meantime, state governments should use all the tools at their disposal to educate the public about the climate change threat posed by new coal-fired power plants and to discourage their construction. This struggle will be crucial for the credibility and attainability of Germany's climate goals.

Increasing energy efficiency and reducing energy consumption are two other important challenges of climate policy. Here, the biggest potential for energy-saving measures lies in buildings. In Germany, roughly 75% of the energy demand of private homes is used for heating, and about 60% of that energy could be saved if existing buildings were improved to meet the energy efficiency standards prescribed by federal law for new buildings. Factors such as construction style, insulation, windows, lighting, and technical installations offer a great potential to save energy and money as well as to reduce greenhouse gas emissions. That is why both the states and the federal government are already investing considerable sums in programs to encourage the weatherization of buildings. But despite these efforts, the pace of progress is still much too slow. At the current speed, it would take up to 160 years until all existing buildings are weatherized. Therefore, additional efforts will

be necessary, through increased financial support, better information for homeowners and tenants, and an improved legal framework for energy contracting services. Also, special programs must be strengthened for low-income households, i.e., those who are most in need of energy cost relief but least able to invest in energy-saving measures.

"By learning from each other, working together, and joining a common cause we can move the international fight against climate change forward, and hopefully reach the breakthrough that the world so desperately needs in Copenhagen. "

In the traffic sector, providing affordable high-quality public transport will remain at the top of the states' climate policy agenda. This will require investments in the modernization and expansion of regional railway tracks, new fuel-efficient trains and busses, and improved services. Fuel economy standards for cars are set at the European level, with a standard of approximately 53 mpg fully entering into effect in 2015. What state governments can do is to lead by example, for instance, by buying more efficient and electric cars for their own carpools. They should also continue to promote the production and use of sustainable biofuels, provided that producers adhere to strict environmental and social standards.

A new challenge of increasing urgency is the creation of the infrastructure needed for electric cars, one or two million of which are projected to be on German roads by 2020. Powered by renewable energy sources, those cars can play an increasing role in bringing down traffic-related carbon emissions. States can contribute to this beneficial development by establishing pilot regions for electric mobility and investing in the necessary network of charging spots and battery exchange stations.

Recommendations

U.S.–European leadership: Demonstrating the transition to a low carbon economy

Climate change is a global challenge and a problem that can only be solved through global action. Climate science informs us that there is precious little time to act. According to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, global greenhouse gas emissions must reach their peak no later than between 2015 and 2020 and then be brought down dramatically in the years thereafter. That scientific assessment does not leave much room for trial and error. More than ever, it is urgent for us to learn from each other's experiences, to share our knowledge, and to identify best practices that can be adapted by other countries around the world.

That is why North Rhine-Westphalia was one of the founding members of nrg4SD (Network of Regional Governments for Sustainable Development) launched in 2002 at the World Summit on Sustainable Development in Johannesburg. North Rhine-Westphalia also gave its full support to Germany's participation in the new International Renewable Energy Agency (IRENA), in addition to welcoming the establishment of IRENA's new Center of Technology and Innovation in Bonn. As the former capital of Germany and seat of the secretariat of the United Nations Framework Convention on Climate Change, this North Rhine-Westphalian city has already become an international center for climate protection and clean energy, hosting important international conferences dedicated to those issues on a regular basis.

Climate policy cooperation between Germany and the United States in particular is assured to be mutually beneficial. Germans can learn a lot from the efforts of states such as California to stabilize power consumption and to promote efficient and zero emissions cars at the state level. U.S. states may also be interested to learn more about the success of German policies to create green jobs and generate renewable energy sources. In Europe and the United States, at the federal and state levels alike, valuable experiences are made with the implementation of green recovery plans

that promise to create new markets and opportunities for companies and workers on both sides of the Atlantic. Moreover, the lessons learned from the early stages of the European Emission Trading Scheme are sure to provide useful insights for the design of an American cap-and-trade system as well as for regional greenhouse gas initiatives

However, transatlantic cooperation on climate change must amount to more than a frank exchange of ideas, policies, and experiences. It must also serve to build a common commitment to act, a common purpose without which the crucial climate change negotiations in Copenhagen in December 2009 will not be successful. The world is looking to Europe and the United States for leadership on the issue of climate change. As major greenhouse gas emitters with high per-capita emissions, Germany and the United States have a special responsibility to act. And as prosperous industrialized nations that are global leaders in science, entrepreneurship, and innovation, our nations are uniquely suited to demonstrate that the transition to a low carbon economy is possible. If we work together to show that we can not only achieve sharp reductions in greenhouse gas emissions but also create new prosperity and economic opportunities, sustainable growth, and green jobs in the process, other countries will be quick to follow.

Conclusion

In the fight against climate change, Germany's *Länder* have a vital role to play. They must build on the progress made in reducing greenhouse gas emissions and be ready to face new challenges and opportunities in the areas of energy policy, efficiency, and transportation. Transatlantic cooperation at the state level can help identify the best policies to do so and build strong partnerships for the huge endeavor that lies before us. By learning from each other, working together, and joining a common cause we can move the international fight against climate change forward, and hopefully reach the breakthrough that the world so desperately needs in Copenhagen.

Bärbel Höhn
Member of Parliament and
Vice-Chair of the Green Party in the German Bundestag

Biography

Bärbel Höhn is Member of Parliament and Vice-Chair of the Green Party in the German Bundestag. In the regional government of North Rhine-Westphalia, Germany's biggest state, she was Minister of Environmental Protection, Agriculture and Consumer Protection from 2000 to 2005 and Minister of the Environment, Agriculture and Regional Planning from 1995 to 2000. In 1990, she entered the provincial legislature of North Rhine-Westphalia. Since 1985, Höhn is a member of the Green Party and served in several positions at the local and state level. She studied mathematics and economics at the University of Kiel and worked prior to her political career as a researcher at the University of Duisburg. Höhn lives with her family in the Ruhr region and has two children and two grandchildren.

California's Climate Plan
A Blueprint for International Action

MARY NICHOLS
CHAIRMAN OF THE CALIFORNIA AIR RESOURCES BOARD

"California has worked with partners to forge a new path in the international realm for states, provinces, and regions [...] to play an increasingly important role as innovators, drivers, and implementers of climate policies."

On May 19, 2009 America took a historic step when President Obama stepped up to the podium in the Rose Garden at the White House and announced that "for the first time in history, we have set in motion a national policy aimed at both increasing gas mileage and decreasing greenhouse gas pollution for all new trucks and cars sold in the United States of America." The U.S. national standards, which require a reduction in greenhouse gas (GHG) emissions of 30% from passenger vehicles by 2016, reflected regulations that California had passed in 2005. President Obama acknowledged the role the Golden State had played in shaping national policy. "California," he declared, "has led the way on this as they have in so many other efforts to protect our environment."[1]

California's leadership is born of nearly 50 years of developing and implementing policies and strategies aimed at creating a healthier environment while growing a healthy economy. Throughout the 1960s and 70s, California pioneered environmental policy to clean up smog and other air pollution from vehicle and industrial facilities, policies that were eventually adopted nationally. As a result of cost-effective efficiency standards for appliances and buildings, and by decoupling utility

1 http://www.whitehouse.gov/the_press_office/Remarks-by-the-President-on-national-fuel-efficiency-standards/

profits from sales so that utilities would have a financial incentive to invest in energy efficiency, California has kept per capita electricity consumption flat for nearly 30 years while that of the rest of the country has increased by 70%. California's energy productivity is also 68% higher than that of the rest of the country.[2] Now as the United States, and the world, move forward to tackle the challenge of climate change, California continues to play a significant leadership role in developing and implementing the policies and strategies to cost-effectively and efficiently reduce greenhouse gas emissions.

The confluence of these defining conditions is expressed in California's comprehensive and innovative Climate Change Scoping Plan that incorporates both market mechanisms and other regulatory measures. The approach itself and many of the specific measures are easily transferable to other states, to the nation as a whole, as well as into the international sphere.

Evaluation

A comprehensive plan

To appreciate what California has to offer, it is necessary to first understand the plan it developed under the pioneering legislation signed by Governor Schwarzenegger in 2006. Known as the Global Warming Solutions Act of 2006 (or "AB 32", its legislative name), the law requires the California Air Resources Board (ARB), working with other relevant California state agencies, to develop a comprehensive "scoping plan" to serve as the roadmap for the achievement of its goals: the reduction of greenhouse gas emissions to 1990 levels by 2020.[3] That plan, the product of scores of public meetings and thousands of public comments, was adopted by the Air Resources Board in December 2008. To develop the scoping plan, California agencies worked closely with the public, non-governmental organizations, the business sector, academia, and local governments to find solutions which would effectively and cost-efficiently reduce GHGs across the state economy. California drew upon experience from its long history of cleaning up the air with well-crafted performance standards that had made California's vehicles and industry the cleanest in the nation and cleared the skies of its infamous smog. California also looked to successfully implemented cap-and-trade programs, such as the USEPA Acid Rain Program in the northeastern United States, the emerging Regional Greenhouse Gas Initiative (RGGI), and the European Emissions Trading System, and established a Market Advisory Committee to provide recommendations on the design of such a program.[4] The conclusion of this investigation was that traditional programs and regulations could work in a complementary fashion within and beside a cap-and-trade program, providing a new paradigm for a comprehensive economy-wide program to reduce GHGs.

The result is an innovative approach to sector-wide GHG emission reductions. The cap-and-trade program establishes an enforceable limit on overall emissions, a declining cap that ensures continued reductions, and provides a price signal for current and future investment. The program is complemented with sector-specific measures such as mandated use of renewable sources for electricity generation and low carbon fuels for transportation. These sector-specific regulations are designed to achieve GHG reductions and provide the incentives for efficiency and clean energy where a price signal alone from cap-and-trade may not be sufficient to overcome market failures. In order to provide a snapshot of California's policy approach, we will highlight three measures that California is adopting for the transportation sector, which currently accounts for 40% of California's greenhouse gas emissions.

2 Measured as the ratio of energy consumed (inputs) to GDP (economic output), growth in energy productivity equates to more dollars of GDP generated per unit of energy consumed. (page 21, http://www.next10.org/pdf/GII/Next10_GII_2009.pdf)

3 http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm

4 http://www.energy.ca.gov/2007publications/ARB-1000-2007-007/ARB-1000-2007-007.PDF

California's Clean Car law

The first is California's Clean Car law. Passed in 2002, it contains regulations passed by the board in 2005 and has now become the basis for the national standards announced by President Obama in May of this year. By 2016 automakers will achieve a 30% reduction in GHGs largely through evolutionary improvements in conventional technology, many of which are already incorporated in cars sold in the U.S. and Europe today. To achieve the 2020 goals of reducing GHG emissions to 1990 levels, automakers will need to sell an increasing quantity of advanced vehicles, including advanced hybrids, plug-in hybrids, and fuel cell and battery-electric vehicles. The scoping plan also identifies measures to reduce GHGs from the transportation sector by addressing emissions associated with goods movement, including medium and heavy duty trucks and port operations.

LCFS: A performance standard for fuels

California's Clean Car Law works hand in hand with the nation's first Low Carbon Fuel Standard (LCFS). The LCFS requires all fuel providers who sell in the state to reduce the average life-cycle carbon intensity[5] of their fuel supply by 10% by 2020. Fuel providers can meet the standard by 1) reducing the carbon intensity of their current fuel supplies, 2) increasing the quantity of low carbon fuels in their product mix, and/or 3) buying credits from other sellers of low carbon fuels. Based on scenarios conducted by ARB, we expect that the standard will be met initially by blending increasing quantities of low carbon liquid biofuels and then, as plug-in and hydrogen vehicles become available, by an increasing quantity of electricity and hydrogen within the vehicle fleet as a whole.

In addition to the GHG benefits, the LCFS takes a firm step to break our economy's dependence on petroleum. By establishing a flexible performance standard, the LCFS provides an incentive to industry to invest in the low carbon fuels they estimate to be most successful. Coupled with other policies supporting advanced vehicle technologies, the standard sends a clear signal that there will be a durable and increasing demand for low carbon fuels. As a result, makers and distributors of electric, flex-fuel, hydrogen, and other alternative cars and fuels will no longer have to worry that volatile oil prices will pull the economic rug out from under their investments, dooming us to a continued and even greater dependency on oil. The LCFS was designed in such a way that it can be easily transferred to other state and national jurisdictions. In fact, it is already being considered for adoption by twelve other U.S. states and two Canadian provinces. California is also working with policymakers in Europe who are implementing the European Fuel Quality Directive, a law with similar requirements for reduced life-cycle GHGs.

A smart vision for growth with SB 375

Even with cleaner cars and fuels, the prospect of continued growth in vehicle travel threatens to erode most of the gains that we can achieve through technology alone. Therefore California is also pursuing strategies that enhance mobility and reduce the need for travel through better transportation and land use planning. For more than half a century, California has evolved similarly to the rest of the country, with housing built far from jobs and services, inquiring a growing dependence on vehicle travel and its concomitant pollution, congestion, and petroleum consumption. To address this challenge all the while preserving personal choice, California's policymakers realized that they had to realign the incentives of the current system, which effectively encourages "sprawl," to one that encourages well-designed communities that place housing, jobs, services, and recreation nearby and that offers transportation choices including transit, biking, and walking so that people can choose to drive less.

5 The life cycle for biofuels, for example, requires that we take full account of all emissions associated with land use change, cultivation, harvesting, conversion, and transport.

Changing the sprawl paradigm was precisely the goal of SB 375, a new law signed into effect by Governor Schwarzenegger in 2008 that directs ARB to set regional GHG targets for metropolitan planning organizations (MPOs) and that implements a coordinated approach to transportation and land use planning as well as incentives for local developers. An ARB-appointed committee of experts is currently working on a report, due later this year, that will provide guidance on setting regional targets, including policies and strategies that could be implemented at the regional and local level to meet the targets.

SB 375 not only promises a new way of doing business for regional and local planning agencies, it will also result in greater mobility options and more livable, walkable towns and cities. Using regional greenhouse gas targets and strategies has applications outside of California, including in other states and in nations where the expansion of vehicle travel and sprawl now go hand-in-hand.

Challenges

Expanding benefits with regional and federal collaboration

The Clean Cars Law, LCFS, and SB 375 are all examples of how California is approaching the challenge of climate change. In addition to action at home, California is collaborating with our counterparts in other states, at the federal level, and internationally. California's collaboration with other U.S. states and international partners includes its participation in the Western Climate Initiative (WCI), a distinctive approach to regional coordination. The WCI is a collaboration of seven U.S. States and four Canadian provinces which have committed to identify, evaluate, and implement policies to tackle climate change at the regional level.[6] The WCI partners are pursuing an economy-wide cap-and-trade program to reduce GHG pollution, spur growth in new green technologies, help build a strong clean-energy economy, and reduce dependence on foreign oil. This

"[A]s the United States, and the world, move forward to tackle the challenge of climate change, California continues to play a significant leadership role in developing and implementing the policies and strategies to cost-effectively and efficiently reduce greenhouse gas emissions."

regional multi-sector cap-and-trade program is an important component of WCI's comprehensive regional effort to reduce GHG emissions by 15% below 2005 levels by 2020. It is the most comprehensive GHG-reduction strategy within the United States to date. When fully implemented in 2015, it will cover nearly 90% of greenhouse gas emissions in WCI partner states and provinces, including those from electrical power corporations, industry, transportation, and residential and commercial fuel use.

Founded on the extensive study of existing programs, economic analyses, and stakeholder consultations, the WCI cap-and-trade program is designed to lower the cost of achieving emission reductions and mitigate the economic impact on consumers and businesses. It will also spur growth in new green technologies, help build a strong clean-energy economy, and enhance North American energy security. This program is designed to stand alone, provide a model for, be integrated into, or be implemented in conjunction with programs that might ultimately emerge from the federal governments of the United States and Canada.

Action at the U.S. federal level is picking up and California is directly engaged with the U.S. Congress to provide input into the legislative process. The climate legislation recently passed by the

6 Other U.S. states, Canadian provinces, and Mexican states and tribes that are interested in collaborating to combat climate change at a regional level are participating in the WCI as observers.

U.S. House of Representatives—the American Clean Energy and Security Act of 2009—largely mirrors California's approach of market mechanisms such as cap-and-trade combined with other complementary regulatory measures.[7] Under this law, California and other states would be able to continue to develop and implement policies and programs that achieve further emissions reductions within their states.

Recommendations

International activity and opportunities

California's involvement in the international arena extends to its charter membership in the International Carbon Action Partnership (ICAP), an organization comprised of public authorities and governments that have established or are actively pursuing carbon markets through mandatory cap-and-trade systems. ICAP provides a forum to share experiences and knowledge and will enhance the design of other schemes by sharing lessons-learned and working together to design future trading programs.

California has worked with partners to forge a new path in the international realm for states, provinces, and regions (i.e., sub-national governments) to play an increasingly important role as innovators, drivers, and implementers of climate policies. Starting in 2006 with an agreement between California and the United Kingdom, and progressing through other arrangements with states in China, Indonesia, Brazil, and Australia, California has developed and refined a specific role for these sub-national governments. This role particularly concerns areas that are uniquely suited for state and regional government implementation, such as energy efficiency, renewable energy, sustainable mobility, sustainable land use, low carbon technology deployment, and a range of mitigation policies including reduced emissions from deforestation.

In recognition of the fact that many of the most effective mitigation and adaptation policies will occur at the sub-national and local levels, California, with the cooperation of UNDP, The Climate Group, and other sub-national governments, have developed language regarding the recognition of the role of sub-national entities that is now part of the negotiating text to be discussed at the UNFCC Conference of Parties (COP) in Copenhagen in December 2009.

In November 2008, Governor Schwarzenegger convened leaders from more than 50 states, provinces, and countries for the Governors Global Climate Summit[8] to develop cooperative partnerships and promote collaborative actions needed to combat climate change. This forum provided the opportunity for states and provinces to partner to reduce emissions, grow their green economies, and influence the position their national governments take in the next global agreement on climate change. The summit resulted in a declaration committing the sub-national leaders to work together on policies to combat climate change as well as a memorandum of understanding between U.S., Indonesian, and Brazilian states to reduce emissions from deforestation. This year California will again host the summit, to be held in Los Angeles in late September and early October, where we will continue to expand on our network of sub-national collaboration to stimulate economic growth, reduce our dependence on fossil fuels, create green jobs, promote clean energy solutions, and reduce GHG pollution.

7 http://energycommerce.house.gov/index.php?option=com_content&view=article&id=1697:house-passes-historic-waxman-markey-clean-energy-bill&catid=155:statements&Itemid=55

8 http://site.governorsglobalclimatesummit.org/

Conclusion

California, based on past experience and lessons from other states and countries, is pursuing a range of policies and programs to reduce greenhouse gas emissions in ways that are cost-effective and that transform our economy toward greater efficiency and cleaner energy technologies. To gain the full benefit of these policies, California will constantly look for ways to learn from and share these policies with other partners around the world. Our ability to solve the challenge of climate change will require that we all work together, collectively and collaboratively. In that effort, California looks forward to being a strong partner with Europe.

Mary D. Nichols
Chairman of the California Air Resources Board

Biography

Mary D. Nichols is Chairman of the California Air Resources Board. Appointed to this position by Governor Arnold Schwarzenegger in July 2007, she returns to the Air Board after having served 30 years as its Chairman under governor Jerry brown from 1978 to 1983. Nichols has devoted her entire career in public and private, not-for-profit service advocating for and developing sound policy to protect the environment and public health. In addition to her work at the Air Board, she has held a number of positions, including: Assistant Administrator for the U.S. Environmental Protection Agency's Air and Radiation program under the Clinton Administration, Secretary for California's Resources Agency from 1999 to 2003, and Director of the University of California, Los Angeles Institute of the Environment. Nichols holds a Juris Doctorate degree from Yale Law School and a Bachelor of Arts degree from Cornell University.

Toward a New Climate Treaty
Opportunities for Progress Under President Obama

JOHN D. PODESTA
PRESIDENT AND CEO, CENTER FOR AMERICAN PROGRESS

"Progressive accomplishments over the past six months are partially due to the foundation the President laid while on the campaign trail. As the economy deteriorated, then-candidate Obama argued that economic growth and environmental sustainability, rather than being at odds, were largely complementary—something which both the European left and right have acknowledged for years."

With the scientific community increasingly certain of the inevitability of climate change, European politicians across the ideological spectrum have reached broad consensus that the European Union must take action to avoid climate catastrophe. Progressive and conservative parties alike agree that climate change demands a bold response, hold similar views on the broad forms that action must take, and support vigorous participation in international negotiations. This consensus has allowed Europe to institute the world's largest greenhouse gas emissions trading scheme and make significant strides in clean energy technology and infrastructure.

But in the United States, deep divides exist between left and right regarding whether and how the federal government should address climate change. After eight years of a Republican administration that did not meaningfully participate in the international process or take steps to reduce CO2 emissions domestically, the landslide election of progressives to the presidency and Congress last November signaled the start of a new energy era in American politics. With President Obama in the White House, strong climate policy advocates empowered in Congress, and an American public freshly engaged and eager for progress, the United States will be a constructive force in global efforts to achieve a best-case climate scenario.

Evaluation

A new direction for U.S. climate and energy policy

Only days after the keys to Washington changed hands, the Administration and Congressional Democrats acted on a range of new energy initiatives that, along with health care, education, and tax reform, comprised the four pillars of President Obama's campaign agenda. Their most recent achievement is the House of Representatives' American Clean Energy and Security Act (ACES), which places a hard cap on carbon emissions for the first time in U.S. history. The bill's passage is a historic milestone and an important element of a broader, multi-pronged approach that characterizes President Obama's presidential priorities.

Toward a green economy: Executive and legislative action

Progressive accomplishments over the past six months are partially due to the foundation the President laid while on the campaign trail. As the economy deteriorated, then-candidate Obama argued that economic growth and environmental sustainability, rather than being at odds, were largely complementary—something which both the European left and right have acknowledged for years. President Obama's promise to transition to a low carbon economy as a means to drive job creation resonated with an American public unused to viewing these two issues in this way.

After six months in office, the President has already begun to make good on his promise. The first indication of his commitment to climate change was the appointment of highly respected scientists and legislators who strongly support reducing emissions, including Nobel Prize-winning physicist Stephen Chu as Secretary of Energy; Harvard professor John Holdren as Presidential Science Advisor; former EPA head Carol Browner as Assistant to the President for Energy and Climate Change; and longtime environmental public servant Lisa Jackson as Administrator of the EPA. Soon after his inauguration, the President issued executive directives that included strict new efficiency rules for appliances, a reversal of prohibitions on the consideration of CO2 emissions when approving new power plants, and the cancellation of drilling leases on protected land. In March, he brought together environmental groups and automobile executives to support improved fuel efficiency standards. And in April, the EPA took a step unthinkable only months before by classifying CO2 as a threat to public health, which confers legal authority to the Administration to regulate emissions without congressional approval.

The President also adheres to the belief that transitioning to a clean-energy economy is critical to America's economic future. The American Recovery and Reinvestment Act, which, at $787 billion, is the largest stimulus package in U.S. history, includes over $70 billion in funding and $20 billion for loan guarantees and tax incentives for clean energy projects. President Obama's budget extends these commitments by investing $150 billion over ten years in clean energy programs.

However, the capstone of progressive efforts thus far is the American Clean Energy and Security Act, which passed the House of Representatives on June 26. The bill creates a cap-and-trade system that would reduce U.S. emissions by 2050 equal to EU targets and drive innovation, investment, and job creation in the clean energy sector. ACES also sets a national standard requiring 20% of electricity to come from renewable sources and mandates energy efficiency improvements for new coal-fired power plants, homes, office buildings, and appliances. The bill creates a Clean Energy Deployment Administration, i.e., a "Green Bank," to provide steady, affordable financing to clean energy projects that have historically had difficulty securing support.

Future commitment to developing countries: Funding for climate adaptation and technology transfer

Another important advantage of the bill is its commitment to preventing deforestation, which accounts for one-fifth of global emissions annually. The failure to capitalize on the emissions reduction opportunities which forest preservation offers was a tragic failure of the Kyoto Protocol. ACES, by contrast, makes a significant effort to take advantage of this critical source of CO2 reduction. The bill devotes $4 billion a year to deforestation prevention through 2025, with funding at slightly lower levels from 2026 through 2050. In total, ACES sets aside over $100 billion to forest preservation over the lifetime of the legislation. The bill also creates a joint EPA/UN program to ensure that funds are utilized appropriately.

ACES also permits private firms covered by the cap-and-trade program to purchase international offsets. Estimates suggest international offsets could provide as much as $15 billion to international projects annually. In addition, ACES commits steady funding through 2050 of up to $9 billion annually to developing countries for climate change adaptation and clean technology transfer.

Challenges

The role of governments and societies

New scientific evidence indicates that the international community must double its efforts if catastrophic climate change is to be avoided. A May 2009 Massachusetts Institute of Technology study found that the consequences of continuing the current global emissions trajectory are twice as severe as climate models suggested only six years ago, and further, that without urgent action, global temperatures will rise from 3 to 7 degrees Celsius. The study's only positive finding was that immediate policy action could keep temperature increases from exceeding 2 degrees Celsius, a target considered necessary to prevent dangerous climate change.

Achieving a best-case climate scenario requires humanity to meet two broad challenges. The first calls on governments to take top-down action, for example, by acting in good faith at international forums, especially at the upcoming UN summit in Copenhagen, and to reach agreements, set targets, and initiate departures from their baseline emissions trajectories. Along with Congress's current activity, President Obama's commitment to curbing climate change will rejuvenate this effort after America's long absence. But all parties—developing and developed countries alike—must keep the consequences of failure close at hand and reach consensus.

The other challenge concerns bottom-up action. Researchers, entrepreneurs, and businesses around the world must develop and deploy new clean energy technologies that will drive the day-to-day transition from high-carbon to low-carbon ways of life. Many governments, now including the U.S., are aggressively supporting clean energy technology innovation through a variety of policy measures. Pricing carbon, mandating increased efficiency for products and buildings, or implementing renewable electricity standards, in addition to preferential tax policies, affordable government-provided financing, or other like policies, is the surest way to signal steady support for clean energy development and commercialization. Governments must pursue policies that help redirect market energy to alter the way societies produce and use energy.

Recommendations

Enhancing U.S.-European cooperation

Economic and political similarities between the United States and the European Union create substantial opportunities for cooperation. Following are four opportunities the U.S. and the EU can pursue jointly to move international negotiations forward.

Developing a common metric for counting emissions reductions

Some parties criticize the U.S. mid-term emission targets under the economy-wide cap-and-trade program proposed in the American Clean Energy and Security Act, arguing that U.S. 2020 targets should be more aggressive. But it would be unfortunate if such concerns complicate international climate negotiations, because the current method of calculating emissions reductions is not only short-sighted; it is also flawed. A fairer, more comprehensive mechanism to count emissions reductions could help resolve this impasse and bring us one step closer to an agreement in Copenhagen. The Center for American Progress has developed a "carbon cap equivalent" accounting system to help break the current stalemate and move the globe onto a meaningful emissions reduction trajectory.

Carbon cap equivalents, as debated by the Australian government, would account for a country's entire emissions reduction portfolio and not just for sources covered by an economy-wide cap-and-trade program. Reductions attributable to renewable energy standards or avoided deforestation,

"Some parties criticize the U.S. mid-term emission targets under the economy-wide cap-and-trade program proposed in the American Clean Energy and Security Act, arguing that U.S. 2020 targets should be more aggressive. But it would be unfortunate ifsuch concerns were to complicate international climate negotiations, because the current method of calculating emissions reductions is not only short-sighted, it is also flawed."

for example, would be included in overall measures of each country's mitigation actions. Counting such efforts in a rigorous and quantifiable way would provide a better picture of all parties' activities beyond economy-wide targets, help account for countries' unique political constraints, and unlock the flexibility necessary to accelerate the negotiating process in advance of Copenhagen.

ACES provides a good example of how this approach could work. Under its cap-and-trade provision, emissions reductions will not meet the EU's current target of 20% below 1990 levels by 2020. For that reason, it would also fail to trigger the deeper cuts the EU has offered if the U.S. agrees to more aggressive targets. But additional provisions of the bill bring total reductions up significantly, namely, from 17% below 2005 levels to 17% below 1990 levels—close to the target that would trigger 30% reductions in the EU.

Given the bill's appropriate long-term emissions cuts and the imperative to act as quickly as feasible to avoid the worst effects of climate change, the EU should do all it can to reduce its own emissions at these deeper levels. In addition, EU recognition of a broader accounting methodology for assessing national emissions reduction commitments would expand the political realm in which countries can act on climate, help the international community move past current disagreements over U.S. midterm targets, and demonstrate a more unified U.S. and EU position to other major carbon emitters, especially developing countries.

Integrating EU ETS with U.S. regional carbon trading schemes

The European carbon market is currently expanding both in volume and in scope. After an initial period of calibration, the European Union achieved emissions reductions of 3% in 2008, with analysts crediting about half of that decrease to the EU ETS and the other half to economic recession.

While a national carbon market in the U.S. is still some years away, trading among the European Union and the three U.S. regional cap-and-trade initiatives could be pursued before a national system is enacted. The Northeast Regional Greenhouse Gas Initiative (RGGI) began trading in 2008; the Western Climate Initiative will commence full trading in 2012. A Midwestern Initiative is in an earlier stage of development, but would likely begin operations prior to a national program.

At present, these regional initiatives incorporate varying levels of planned international integration. All could be augmented through steps to increase confidence in international trading via federal assistance in forging trading agreements.

Integration of "minilateral" initiatives

Given the fact that only a small number of countries are responsible for over 80% of total global greenhouse gas emissions, the inclusion of "minilateral" initiatives between major emitters should be a key goal of climate negotiations. This is especially important for engaging both China and Russia, whose cooperation is critical to lowering global emissions trajectories.

China, which recently surpassed the U.S. as the world's largest CO2 emitter, agreed to consider binding emissions reductions contingent on technology assistance from developed countries as part of the 2007 Bali Action Plan. The EU and the U.S. are proposing a range of options for technology cooperation, from state-to-state programs to public-private partnerships. The EU and the U.S. should coordinate these efforts among sector-specific initiatives, such as joint carbon capture and sequestration projects. Although China has already experienced significant assistance through the UNFCCC Clean Development Mechanism, further programs should seek to position China as a responsible peer rather than a repository for carbon offsets.

The U.S. and EU should also continue to make climate change a new strategic priority in advance of the UN Copenhagen summit. Secretary of State Hillary Clinton's first trip abroad was to China, where climate change led the agenda. Most recently, China and the U.S. signed a memorandum of understanding (MOU) at the conclusion of the Strategic and Economic Dialogue held in July; this will generate additional opportunities for discussion and cooperation. These attempts to make progress with China should be seen as complementary rather than antagonistic to the framework convention process, and should involve Europe as well. In-principle agreements with China and other major emitters in advance of Copenhagen may secure a more positive result than could otherwise be achieved.

Russia's cooperation is also critical to the development of a new climate treaty. The U.S. has already reoriented its bilateral relations with Russia around climate change by creating a working group on energy efficiency under the auspices of the July 2009 Presidential Commission on U.S.-Russia cooperation. The German government is also developing a joint energy efficiency initiative with Russia. Broadening these efforts to focus on Russia's potential for achieving emissions reductions through improving energy efficiency could encourage Russia's constructive engagement in climate negotiations at the UN summit this December.

Reconciliation of trade implications of climate policies

The controversial idea of imposing trade tariffs on countries that are unwilling to regulate carbon emissions has experienced a surge of popularity in recent months. Nobel-prize winning economists Paul Krugman and Joseph Stiglitz have both noted the policy implications for "border adjustment taxes" that incorporate the cost of pollution of goods imported from countries reluctant to impose a price on carbon domestically. In 2006, then Prime Minister of France Dominique de Villepin proposed an EU carbon tax on imports. Border tax adjustments have also become attractive to American policymakers who fear a potential loss of competitiveness among industries subject to carbon pricing (although President Obama has publicly dismissed the idea). ACES stipulates border taxes on goods imported from countries that do not regulate emissions after 2020.

There is reason for caution regarding the use of tariffs as primary instruments of climate policy. Trade has lifted millions of people around the world out of poverty, and climate-based trade restrictions could trigger a trade war with developing countries. Basic implementation would also pose a challenge given the complexities of measuring countries' carbon footprint. But the imperative to move the world away from its current emissions trajectory means it may make sense to keep some trade tools on the table. The WTO, for example, suggests border adjustment taxes may be viewed in the same way as a value-added tax, i.e., as a method of reducing economic distortions as some countries implement pricing policies on carbon emissions.

Neither the EU nor the U.S. have reached consensus on the economic and political implications of border adjustment taxes. A joint workshop between the EU and U.S. could help reconcile

competing opinions on their inclusion in national climate strategies. Such a workshop could clarify the economic and political implications of border tariffs and provide the opportunity to develop a more unified position in advance of Copenhagen.

Conclusion

If catastrophic climate change is to be avoided, it will require nothing less than an Olympian feat of international cooperation over the coming years. However, with this challenge, the international community is also given an enormous opportunity—that of reviving the global economy, improving the lives of millions of people, and saving fragile ecosystems from climate-related disasters. Therefore, transatlantic partnership should be at the forefront of international cooperation, ready to turn bold, innovative ideas into action and reevaluate old assumptions about what is possible.

John D. Podesta
President and CEO
Center for American Progress

Biography

John D. Podesta is President and CEO of the Center for American Progress. Under his leadership, the Center has become a notable leader in the development of and advocacy for progressive policy. Prior to founding the Center in 2003, Podesta served as White House Chief of Staff to President William J. Clinton. Most recently, Podesta served as Co-chair of President Obama's transition, where he coordinated the priorities of the incoming administration's agenda, oversaw the development of its policies, and spearheaded its appointments of major cabinet secretaries and political appointees. Additionally, Podesta has held numerous positions on Capitol Hill, including Counselor to Democratic Leader Senator Thomas A. Daschle (1995-1996); Chief Counsel for the Senate Agriculture Committee (1987-1988); and Chief Minority Counsel for the Senate Judiciary Subcommittees on Patents, Copyrights, and Trademarks; Security and Terrorism; and Regulatory Reform (1981-1987). A Chicago native, Podesta is a graduate of Knox College and the Georgetown University Law Center, where he is currently a Visiting Professor of law. He is also the author of the *Power of Progress: How America's Progressives Can (Once Again) Save Our economy, Our climate and Our country*.

Refocusing Europe's Leadership Role in Climate Change

Upcoming Challenges Before and Beyond Copenhagen

REINHARD BÜTIKOFER
MEMBER OF THE EUROPEAN PARLIAMENT AND
VICE CHAIRMAN OF THE GROUP OF THE GREENS/EUROPEAN FREE ALLIANCE

"What Europe must understand is that its real leadership ambition should concentrate on being the first to create a low carbon economy. The real breakthrough for climate policy will not come through diplomacy. Rather, the breakthrough will come as countries learn to understand that saving the climate will help save their economies and safeguard their security."

For a good number of years, climate diplomacy has been one of the European Union's strongest suits in international relations. While the former U.S. administration was in a state of denial concerning the science behind climate change, in addition to being intransigent in its stance, it was the EU that at least kept the climate negotiation process alive within the framework of the UNFCCC. Meanwhile the developing world, most notably the threshold economies, played the waiting game, demanding that the industrialized countries be the first to get serious about combating climate change.

The EU overcame the uncompromising stubborn efforts of the Bush Administration and other deniers of global warming to shipwreck the Kyoto Protocol. It also played an extremely important role in drafting the Bali Roadmap by outlining a strategy for developing a post-Kyoto agenda. The EU managed to set itself an emissions reduction goal that was more ambitious than anybody else's as well as broadly in line with the targets set by climate scientists: a reduction of 20% below the base year 1990 by 2020, and even by 30% if other countries were to take similar actions.

Evaluation

New script in Copenhagen

At least in comparison, the EU can be called without any irony "the good guys." EU leaders, and here a little irony is merited, have not wasted many opportunities to let the world know how much it owes Europe. Most gratifying have been all the numerous occasions in the climate discourse where we Europeans measured so favorably against our dear American friends, those from across the Atlantic who "just didn't get it."

However, the EU does not own the UN Framework Convention on Climate Change (UNFCCC). At Copenhagen in December of this year, the script will be a lot different from what it used to be. The most important difference will be the role of the United States.

The EU will find itself blessed and confronted with an American partner who, in general philosophical discussions, will very much sing from the same climate change song book.

The U.S. and Europe are finally finding common ground on climate change. They agree on the severity of the climate threat, the urgency of solutions, the necessity of action by all major emitters, the responsibility of developed nations to take the lead, the responsibility of developed nations to assist developing nations, and the importance of negotiating new global climate agreements. Thus, the name of the game is no longer "the good, the bad and the ugly"; rather, it is a community of well-intentioned partners.

One consequence of this is that the leadership in international efforts to combat and control climate change will not again fall to the EU by default. The U.S. is actively striving for a leadership role. President Obama has pledged internationally to lead the world toward a new climate treaty. Other participants are also going to have a more substantial role this year, most notably China. On the one hand, the Chinese government has not yet fully embraced a leadership position, heeding a caution issued by former statesman Deng Xiaoping to take on leadership in this regard. However, de facto China has assumed a dominating position by sheer virtue of: its economic impact; its growing weight as a CO2 emitter; and the strategic decision of the Obama Administration to treat China as the world's number two power. China is not alone among the developing countries to play an active role. However, it seems fair to expect China to be the most influential among them.

Is European leadership on Climate diminishing?

With other countries getting more involved, the capacity for EU climate leadership is diminishing. The relative economic weight of the EU is shrinking and the internal cohesion and strength of the EU is also far from what it should be. The EU Commission under President Jose Manuel Barroso is weak as it gives in too often to European national governments that are less ambitious on climate policy. Among European national leaders, it was German Chancellor Angela Merkel who put climate on top of the agenda during the German presidency of both the EU and the G8 in 2007. However, since 2008 Chancellor Merkel has been as reluctant a climate reformer as many others out there. When push came to shove on specific policy decisions necessary to implement the mitigation goals agreed on by the EU, Merkel was anything but a driving force. In fact, she was often a stumbling stone. Moreover, so far no other European leader has stepped up to take her position in the batting line-up. European national leaders thus seem to have become somewhat wary of their former climate ambitions. So it came as no surprise when the European Council decisions on the climate policy package in December 2008 were reluctant, half-bred, if not embarrassingly ambiguous. The recent European Parliament elections were a great success for the strongly pro-climate change policy European Greens; yet at the same time, conservative parties also gained considerably more influence. It thus remains to be seen to what degree the European Parliament will be a positive factor in the political equation.

Challenges

There are three major problems in store for the EU at the Copenhagen conference, and it is astonishing to observe how little these have been discussed in public so far.

Ambition to meet climate targets

The U.S. will not only be unwilling to agree to a climate target in line with climate science, it quite practically could not reach such targets even if it wanted to. According to the International Panel on Climate Change (IPCC), industrialized countries should reduce their overall greenhouse gas emissions by 25-40% below 1990 levels by 2020, eleven years from now. As a matter of fact, CO2 emissions in the U.S. have increased by almost 20% since 1990. The most demanding climate abatement plan that has been earnestly pursued in the U.S., the Waxman-Markey Bill, would amount to a reduction of less than 5% compared to 1990 levels. Many U.S. experts consider this bill to be the high water mark and predict that the Senate will propose less ambitious targets. Let us also note that President Obama has pledged to reduce U.S. emissions by 14% below 2005 levels by 2020; this would merely return U.S. emissions to 1990 levels by 2020.

Is Europe prepared to accept such a scenario? The idea that international pressure could bring U.S. decision makers to accept an international treaty demanding more than the U.S. Congress is willing to legislate seems absurd. Not only Republicans would block that, but also many Democrats from states fearing to suffer from such policies. Ten Democratic senators from Ohio, Wisconsin,

"Copenhagen is not Armageddon. The more progress we make there, the better. But, we must realize that, in any event, we will have to keep working and fighting for a very long time down the road."

Michigan, Minnesota, West Virginia, Pennsylvania, and Indiana—the "brown dogs"—have made it clear how sensitive this is for the Democrats, particularly since several of these states are swing states. However, the idea that a global climate change deal would work without the United States is equally absurd.

The truth is that it is impossible for the U.S. to make up for all the sins of a former administration within eleven years. Therefore, it would not get us very far to insist on scientific targets without taking that reality into account. Of course, the EU should lobby for as much as possible and, in order to do that, officials of various European governments should meet U.S. congressmen and senators every single day before Copenhagen.

And yes, it would be silly for the EU to walk away from negotiations if the U.S. comes with a target considered insufficiently ambitious. On the other hand, the EU cannot simply accept a weak proposal either. That would sideline science as the basis for discussion, politically undermine European domestic efforts, and give other industrialized countries such as Japan, Canada, or Australia an all too easy cover for their reluctance to move forward. Moreover, it would undercut any credibility the industrialized countries still have with the developing world. Thus, it would be a recipe for failure.

The EU should be frank and: Call a low figure a low figure; emphasize that the IPCC numbers are not an imperative target zone but scientific advice; hold on to the plus 2 degree Celsius target; say that the contribution of the U.S. (and others) must increase; demand a steeper midterm reduction curve because of the slow beginning; and ask for a quid pro quo. If the Obama government wants the EU to accept a lower-than-IPCC emissions reduction by 2020 in the U.S., it should be willing to offer more on the other issues that will be on the table in Copenhagen.

Climate financing

The second great challenge at the Copenhagen conference will be climate financing. A failure to deliver a solid solution would risk losing the support of the developing countries, including the giants China and India. Financing mitigation and adaptation efforts in developing countries is certainly the most important issue from the perspective of these countries. Industrialized countries must finance the incremental cost for developing nations of both adapting to climate change and abating their growth in emissions as well as help them in introducing advanced green technologies. Industrialized countries must agree to share with developing nations the management and control of new financial resources mobilized for climate action in the developing world. On these counts, the EU has so far been less than forthcoming, while the U.S. has dodged the issue.

Europeans must make up their minds whether they really want to partner with the developing world. The Copenhagen conference should leverage the U.S. to compensate their slow progress on domestic mitigation by helping developing nations speed up their efforts.

How significant is the financial volume under discussion? According to a European estimate $150–200 billion a year are needed for emissions mitigation and adaptation in developing countries. The United States has so far withheld its cost estimate. Neither the U.S. nor Europe has specified what share of this global total each would be willing to provide. China and other countries have proposed a binding international obligation for industrialized countries to provide 0.5–1% of their GDP to developing nations for emissions mitigation and climate adaptation. This would add up to $200–400 billion globally from donor nations, and amount to $70 and $140 billion annually for Europe and the United States respectively. Just to put these numbers in perspective, the total U.S. development assistance was roughly $33 billion in 2007.

If Europe and the United States were to make a serious offer to substantially increase financial assistance to developing nations, it would have to be in the order of at least $40-50 billion annually each. Auctioning revenues from cap-and-trade systems could well provide the means to cover this. Will Europe find enough resolve to make that a priority in its pre-Copenhagen negotiations with the U.S. about a common transatlantic approach? Will the EU find enough political will to present such an offer in the face of growing inner-European nationalism and protectionism?

New classifications of countries

Of course, the EU and the U.S. must also try to find common ground with regard to emissions reductions, an effort that will have to come mainly from major emitters among developing countries on the basis of common but differentiated responsibility. However, it would not be wise to confront the developing world with an EU-U.S. axis here.

Clearly, the Kyoto Protocol's simplistic classification of "developed" or "developing" countries will not meet the demands of a new treaty. In this regard, interesting proposals have been made by researchers from developing countries. The economist Hu Angang for instance, a professor at the Chinese Academy of Sciences and at Tsinghua University and director of the Centre for China Study, has advocated taking the Human Development Index (HDI) as an objective basis for this discussion.[1] He distinguishes four groups of countries: High HDI (above 0.8), Medium-high HDI (0.65-0.8), Medium-low HDI (0.5-0.65), and Low HDI (below 0.5).

The High HDI group would contain 70 countries, with a total population of 1.6 billion. These nations, which include the United States and Germany, would make major, non-conditional emissions cuts as specified by the UN. As countries grow wealthier over time, this group will expand.

1 Hu Angang: A new approach at Copenhagen. April 2009. http://www.chinadialogue.net/article/show/single/en/2892

The Medium-high HDI group (to which China now belongs) has a population of 2.44 billion, 37.41% of the world total. These nations are second-tier emissions reducers for whom conditional targets would be set according to the gap between the nation's HDI figure and the 0.8 threshold; the smaller the distance, the greater the obligation. The Medium-low and Low groups would not be obliged to reduce emissions, while voluntary reductions would be encouraged where possible. Hu Angang expects China, based on its economic development, to move up to the High HDI group by 2010 and with that become a non-conditional emissions reducer.

It is hard to imagine the Chinese government agreeing to such an ambitious graduation mechanism in Copenhagen. Hu Angang is a lonely voice in China. His motivation for putting forth such an ambitious proposal can only be explained when considering his argument that climate change policy is in China's own interest:

> It would be petty of us to discuss how best to haggle with the foreigners at Copenhagen. We should start with the question of China's own interests. […] I wrote that ecological security and environmental protection were two of our five core national interests. And this is not because of pressure from the United States and western nations. Unfortunately, many do not realize that addressing these issues is in China's own interests, and those of all humanity—they are the shared core interests of China and the rest of the world. If our leaders can realize this, they will agree to make emissions cuts rather than continuing to refuse.[2]

EU realism will have to take into account the national interests as perceived by leaders in China and other threshold economies who are less clear-sighted than Hu Angang. A confrontational approach with protectionist overtones and sweeping border adjustments would serve no one. This is not to say that border adjustments measures in line with WTO rules should be ruled out altogether

"[I]t would be silly for the EU to walk away from negotiations if the U.S. comes with a target considered insufficiently ambitious. On the other hand, the EU cannot simply accept a weak proposal either."

and forever. The New York Times columnist Paul Krugman has recently made the argument in favor of such measures, as have others. But in the Copenhagen context it will be imperative to create trust, something that has been lacking so far. It will be up to the industrialized world to move the ball. This is the main message which every European should try to get across in Washington D.C. between now and Copenhagen.

Recommendations

Europe needs to refocus its leadership role

What Europe must understand is that its real leadership ambition should concentrate on being the first to create a low carbon economy. The real breakthrough for climate policy will not come through diplomacy. Rather, the breakthrough will come as countries learn to understand that saving the climate will help save their economies and safeguard their security. The decisive struggle over the success or failure of climate policy will take place in the fields of economy and national security. To put it in one sentence: It's a green economy, stupid, that we need to protect our wealth and our security. If Europe can lead on this front, it will have provided the greatest service to the globe, and it will be good for us and our children too.

2 Interview with Hu Angang. August 6, 2009. http://www.chinadialogue.net/article/show/single/en/3208

Copenhagen will most probably be an extremely limited success at best. The outcome may well only provide the architecture for international climate policy without committing any country to specific reduction figures, much less the to the 25-40% reduction range for industrialized countries. A later conference may have to continue with the effort to come up with an international climate regime. It is important, however, to avoid a breakdown of climate diplomacy in order to save options for the future. To reach this minimum goal, we need both ambition and realism concerning the emissions reduction targets as well as the financing issue. As our societies learn, our negotiators will find it easier to find sensible diplomatic agreements. Copenhagen is not Armageddon. The more progress we make there, the better. But, we must realize that, in any event, we will have to keep working and fighting for a very long time down the road.

Reinhard Bütikofer
Member of the European Parliament and
Vice Chairman of the Group of the Greens/European Free Alliance

Biography

Reinhard Bütikofer is a Member of the European Parliament and Vice Chairman of the Group of the Greens/European Free Alliance. He works on issues of climate change, energy and economic policy, European foreign and security policy and transatlantic relations. From 2002 until November 2008, he was Co-chairman of Germany's Alliance 90/The Greens. Prior to this, he was the party's National Executive Director. Mr. Bütikofer also served for many years as member of the board of directors of the Heinrich Böll Stiftung and was involved in the European Green Party for ten years. Mr. Bütikofer is a board member of the Berlin Aspen Institute, an advisory board member of the American Jewish Committee's Ramer Center in Berlin, a member of the German-Chinese Dialogue Forum, and a member of the European Green Foundation. He studied philosophy, history, and ancient history at Heidelberg University and has three daughters.

THE TEAM BEHIND
THE TRANSATLANTIC CLIMATE POLICY GROUP

Berlin Office

Barbara Assheuer

Barbara Assheuer is Project Coordinator at the Department for Foreign and Security Policy at the headquarters of the Heinrich Böll Stiftung in Berlin, Germany.She has been with the foundation for more than ten years now, first at the Department for Europe and Transatlantic Relations and since 2006 at the Department for Foreign and Security Policy. She has a university degree in foreign economics, communications, and foreign languages.

Marc Berthold

Marc Berthold is Head of the Department for Foreign and Security at the Heinrich Böll Stiftung in Berlin. From April 2007 to July 2008, he was scientific advisor on climate policies for Renate Künast, chairwoman of The Greens in the German Bundestag. From August 2001 to March 2007, Marc was Program Director for Environment and Global Dialogue in the Heinrich Böll Stiftung's Washington office. He holds a Master of Arts in Political Science from the University of Cologne.

Brussels Office

Roderick Kefferpütz

Roderick Kefferpütz is responsible for Energy Security, Climate Change, and Russian Affairs at the European Union Office of the Heinrich Böll Foundation. Prior to that he worked as a consultant for the Moscow office. Roderick holds a degree in International Relations and a Master of Philosophy with Distinction in Russian and Eastern European Studies from the University of Oxford.

Washington Office

Arne Jungjohann

Arne Jungjohann is Program Director for Environment and Global Dialogue at the Washington office of the Heinrich Böll Stiftung. In the last years he has been working on policies on energy, climate, and the environment toward a low carbon economy. Previously he advised the parliamentary group of the Green Party in the German Bundestag. He holds a Master of Arts in Political Science from the Free University of Berlin.

Till Kötter

Till Kötter is Project Manager for the Washington activities of the Transatlantic Climate Policy Group. As part of his graduate studies, Till worked with the German Marshall Fund of the United States in Paris, the German Mission to the United Nations in New York, and the Friedrich Ebert Foundation in Shanghai. Till holds a Master of Arts in International Affairs from Sciences Po, Paris, France.

ACKNOWLEDGMENTS

We wish to express our thanks to Americans and Europeans alike, to policymakers at the local, state and federal levels, and to policy experts and climate activists on both sides of the Atlantic who have given their kind support, expertise, and commitment to this program over the last two years.

In particular we would like to thank the following:

Adelphi Research • American Council on Renewable Energy (ACORE) • Renewable Energy Agency, Germany • Alliance 90/The Greens Germany • Better Place • The Brookings Institution • California Air Resources Board • California Environmental Protection Agency • CDS International • Center for American Progress • Center for Clean Air Policy • Clinton Foundation • Danish Ministry of Foreign Affairs • Ecologic Institute • Energy and Environment Study Institute (EESI) • Energie Cités • EnerNOC • Environmental Defense Fund • European Commission • Eurocities • EU Convenant of Mayors • E3G • Foley Hoag, LLP • Foreign Service Institute of the U.S. Department of State • German Marshall Fund of the United States • German Ministry for Environment • German Ministry of Foreign Affairs • Greenwire Newsservice • The Green Roundtable-Nexus Center Boston • Heinz Endowment • ICLEI-Local Governments for Sustainability • ICV-Green Catalan Initiative • IFEU Institute Heidelberg • Institute for European Environmental Policy • InWent-Internationale Weiterbildung und Entwicklung gGmbh • Institute for Local Self Reliance • Meister Consultants Group Boston • NASA • Nicholas Institute for Environmental Policy • Northern Virginia Regional Commission • Öko Institut • Pew Center on Global Climate Change • Polish Ministry of Foreign Affairs • Portuguese Climate Change Commission • The Nature Conservancy • The Rocky Mountain Institute • Solar Energy Industry Association • U.S. House Select Committee on Energy Independence and Global Warming • U.S. Senate Committee on Environment and Public Works • U.S. Conference of Mayors • U.S. Department of Energy • U.S. Environmental Protection Agency • University of Michigan • University of Texas • Union of Concerned Scientists • World Watch Institute • World Resources Institute • World Future Council • World Wildlife Fund • 2020 Vision

City of Austin • City of Barcelona • City of Berkeley • City of Berlin • City of Brussels • City of Boston • City of Bremen • City of Copenhagen • City of Chicago • City of El Prat • City of Freiburg • City of Hamburg • City of Heidelberg • City of Houston • City of Malmö • City of Paris • City of Warsaw

Embassy of the Czech Republic in the United States • Embassy of Denmark in the United States • Embassy of Germany in the United States • Embassy of Sweden in the United States

Heinrich-Böll-Stiftung
The Green Political Foundation

Berlin
www.boell.de

Brussels
www.boell.eu

Washington
www.hbfus.org