

Global Initiative on Climate Technology and Energy Security Policy Work Plan

March, 2007

Statement of Work

The twin challenges of mitigating global climate change and maintaining energy security are now recognized by all nations. International negotiations, notably the Gleneagles Dialogue involving the G8 and the major emerging economies, as well as national governments, are seeking to address these challenges. Beyond cap and trade, additional policy action is needed to drive innovation and deployment of low carbon technologies.

A growing number of international experts are involved with a new *Global Initiative on Climate Technology and Energy Security Policy*, which was initiated by Clean Energy Group (CEG)¹ to develop new technology policies to complement cap and trade approaches. These experts have agreed to:

Develop strategies for a new parallel and complementary “climate technology policy approach” to climate stabilization and energy security. The group has agreed to explore and pursue policy and investment strategies at the international, national, and sub-national levels to support radical technology innovation. This work has a short-term goal of introducing these policy ideas on the agenda of the G8 Dialogue and long-term goal of developing a robust set of technology policy initiatives that would address climate stabilization and energy security.

The group has agreed to develop a plan of action to meet the goals that are outlined in this document.

An Initial Focus of Activity

The near-term substantive focus will address three interrelated issues that can contribute to rapid technology innovation at the scale and scope required.

- 1) Technology assessment mechanisms (such as the Montreal Protocol TEAPS) that can inform climate technology and investment decisions.
- 2) Policy approaches to promote the innovation and deployment of a range of lower carbon technologies, including for renewable energy, advances in efficiency technology and cleaner fossil fuels, particularly carbon capture and storage processes.
- 3) A long term and unambiguous zero or low carbon emitting strategic technology goal that promotes the development of mechanisms and policies described in Issues 1 and 2; this goal could be applied to certain industry sectors or by technology.

¹ Clean Energy Group (CEG) is a non-governmental organization based in the US that works on commercialization of clean energy through innovative policy, finance and public education (www.cleanenergygroup.org). CEG also manages the Clean Energy States Alliance (CESA) (www.cleanenergystates.org), which is the only national organization of US state clean energy funders.

These three ideas are described briefly below, which will be explored in depth by separate workgroups.

(1) Technology Assessment and Prioritization

An initial core activity of the Initiative will be focused on exploring the application of a Technology and Economic Assessment Panel (TEAPS) like process, which was used for the Montreal Protocol, for climate change technologies (referred to as Technology Assessment Panels or TAPS here). A Workgroup would help assess whether a TAP-like process could help inform decisions by policy makers, the research community, and technology developers who are faced with allocating scarce resources. Specifically, such a process could help inform decisions about which technologies are likely to have the most significant effect on reducing greenhouse gas emissions.

(2) Parallel Technology Innovation Policy Processes

Public policies can help provide the context that both support the development and adoption of new technologies. During the Montreal and Berlin meetings², participants discussed a broad concept of “parallel regimes” as well as specific policy approaches that might be pursued through such an approach. Some of the policy approaches discussed could drive technology development through additional mechanisms to cap and trade (e.g., carbon taxes, new source performance standards or a zero emission technology treaty). Other policy approaches would more directly support technology developers while other policies would be more relevant to technology adoption through the creation of markets (e.g., government procurement policies). Participants at the Montreal and Berlin meetings also discussed a growing body of research and experience focused on national level technology innovation policies and practices (not duplication of existing networks, feed-in laws or renewable policies, but rather a tight focus on technology transition management strategies noted in background papers prepared for the Berlin meeting). A Workgroup would explore these issues in greater depth.

(3) Strategic Goal of Zero or Low Carbon Emitting Technology Future

Adoption of a clearly unambiguous, long-term goal of no or low carbon emitting technologies could help drive the activities under 1 and 2. To date, long term emissions targets have been the prevalent policy mechanism for the future. A Workgroup will explore whether a zero carbon emitting technology goal could be developed for the long term, which would complement emissions targets. Such a goal would state that countries would agree to not continue to invest in carbon emitting technologies beyond a certain date; the goal would focus exclusively on renewable and zero carbon emitting fossil fuels. Based on the 25 January 2007 conference call, the Workgroup will explore whether this should be a broadly stated goal or more narrowly focused on government investments in energy research and development.

² The Montreal and Berlin meetings were convened by Clean Energy Group with support from the Heinrich Böll Foundation. These meetings led to the creation of the “Global Initiative on Climate Technology and Energy Security Policy.” Additional information is available at: <http://www.cleanenergystates.org/international/index.html>.

This goal need not be part of a single international agreement but it could be used as a sectoral goal by industry sector (e.g., automobile, housing and construction) or technology (e.g., carbon capture and storage or biomass). In that way, an evolving structure of mid- and long-term sectoral or technology goals could require progressively lower emissions for new capital investments over time.

Regardless of its actual content or structure, this strategic goal could help align the stabilization needs for a no carbon future with clearly defined technology pathways. It would more directly state the need for technology solutions; indeed, it would help provide the societal signal that actions in addition to cap and trade are needed, technology based policies that will likely look quite different than cap and trade policies. This would support the findings of the recent Stern Review for the UK Treasury that technology policies are needed to complement measures to price carbon through cap and trade policies.

Such a goal could help shape actions under 1 and 2, operating more as an organizing principle to tie this technology work together (e.g., innovation pathway systems or “strategic niche management” technology strategies are assisted with end goals, as are performance standards or other mechanisms).

A long term zero carbon strategic goal would represent the best estimates of what technology R&D, deployment and related investment are actually needed to achieve stabilization of greenhouse gas emissions. Such an industrial transition strategy would give weight to interim policies that focus more directly on technology innovation and investment requirements. It would help begin shaping the public debate about the need for massive technology innovation that needs to come from new technology and investment policies.

As one option (and others clearly should be discussed), this goal might simply be stated, as a starting point, as follows:

By 2030 (or some other date), the country commits that all new investments in power sector and transportation technologies will have zero carbon emissions or they would fully compensate for those emissions through other means.

One Year Game Plan

A. Short Term Process to Inform the G8 Dialogue and Policy Process

The group will identify a short term process to introduce these technology based options into the G8 Gleneagles Dialogue and associated policy processes with the goal of developing support for more targeted, longer term, technology based strategies, goals and policies. A statement in the G8 process could give attention to these issues and seek to put in place a new international collaborative technology innovation process.

A range of strategies will be explored over the next month for influencing that process in the most effective way possible.

B. Longer Term Work Plan

With CEG and Heinrich Böll Foundation (HBF) support, suggested next steps would include the following:

1. Identify other key experts in each area, especially from other countries.
2. Develop a public paper that could be shared with other key initial partners and potential funders.
3. Develop workgroups focused on key issues identified for action, such as the three areas above. Workgroups further explore these issues and, as appropriate, prepare strategy documents that identify key issues, barriers, feasible and effective strategies, and paths to adoption for each.
4. Discuss a joint publication of papers prepared for the fall, or new papers to outline these approaches in one place.
5. Secure funding options to support this work.
6. Convene a meeting of participants in the fall to discuss implementation of key actions, along with strategies for funding the longer term activities (possibly at a reputable and prestigious place such as The Rockefeller Foundation Bellagio Conference Center in Italy).

Specific Next Steps

Given that the coming year will be focused on building the foundation for this initiative, including funding for future activities which could be encompassed under this process, the following elements are proposed for immediate action.

(1) Convene a Steering Committee

Form a Steering Committee comprised of a manageable number of individuals who would provide on-going strategic advice. The Steering Committee would work to help frame the issues (i.e., how the issue within the scope of the Initiative relate to one another and the broader climate change context), expand the network of people involved in the process, and provide on-going advice about the overall direction of the Initiative. The Steering Committee would meet as appropriate by teleconference and in person. Several participants at the Berlin meeting expressed interest in serving on a Steering Committee:

- Richard Benedick, President, National Council for Science and the Environment
- Marc Berthold, Program Director, Environment & Global Dialogue, Heinrich Boell Foundation (HBF) North America
- Tim Foxon, Research Associate, Cambridge Centre for Climate Change Mitigation Research (4CMR), Cambridge University
- Jörg Haas, Department Head Ecology and Sustainable Development, HBF
- Lewis Milford, President, CEG
- Hermann Ott, Director, Climate Policy Division, Wuppertal Institute

A small number of additional people may be added to this group.

(2) Engage Additional Participants

- Identify additional individuals that may be interested in joining this initiative;
- Send them an invitation with the group's proposed workplan; and
- Obtain their agreement to move forward.

(3) Write Short Public Paper

Drawing from this paper and the 23 December 2006 paper, write a short paper for public distribution that highlights the need for parallel technology approaches alongside Kyoto. The paper would be used as a funding proposal so that additional resources can be brought to bear to support this work.

(4) Establish Working Groups and Initiative Identity

As indicated above, three workgroups will be established to further explore and, if appropriate, develop strategies to advance three ideas: 1) technology assessment and prioritization; 2) parallel technology innovation policy processes; and, 3) long-term technology targets. To support the workgroups and Steering Committee and to give the overall Initiative an institutional identity and working structure, a listserv, website, conference calls, and meeting(s) will be established and scheduled to give this effort a regular, planned structure.

(5) G8 Process

An expedited process will be developed for introducing these ideas into the G8 process.

Participants

Daniel Argyropoulos
Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

Richard Benedick
President, National Council for Science and the Environment

Marc Berthold
Program Director, Environment and Global Dialogue, Heinrich Böll Foundation

Jean Boutet
Senior Policy Advisor, Office of the Minister of the Environment (Canada)

David Driesen
Angela S. Cooney Professor, Syracuse University College of Law

Tim Foxon
Research Associate, 4CMR – Cambridge Centre for Climate Change Mitigation Research,
University of Cambridge

John Geesman
California Energy Commission

Jörg Haas
Department Head Ecology and Sustainable Development, Heinrich Böll Foundation

Andrew Hargadon
UC Davis

René Kemp
United Nations University – MERIT (Maastricht Economic and social Research and training
centre on Innovation and Technology)

R. Andreas Kraemer
Managing Director, ECOLOGIC

Jim Marzilli
House of Representatives of the Commonwealth of Massachusetts

Lewis Milford
President, Clean Energy Group

Hermann E. Ott
Director, Climate Policy Division, Wuppertal Institute

Ian Pickard
Director of the International Climate Change Policy Unit, DEFRA

Dan Sarewitz
Arizona State University

Hoff Stauffer
Managing Director, Wingaersheek Research Group

Martin Schöpe
Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

Ernst-Christoph Stolper
Ministry of the Environment and Conservation, Agriculture and Consumer Protection of the
State of North-Rhine Westphalia

Claude Turmes
Vice Chairman of the GREENS/EFA Group, European Parliament

Peter West
Director of Renewable Energy, Energy Trust of Oregon

To Be Invited

Michael Böhl
Head of Renewable Energies, Dena

Jurgen Friedrich, LL.M
Max Planck Institute for Comparative Public Law and International Law

Ted Parsons
University of Michigan Law School

Steve Rayner
James Martin Professor of Science and Civilization, University of Oxford

Jonathan Sinton
China Programme Manager, International Energy Agency (IEA)