



May 2010

## Mission statement: “The Great Transformation”

The world stands at a critical crossroads. Down one road lies business as usual—unstable economies fueled by high-carbon technologies continually putting some of our most vulnerable communities in greater danger. Down the other lies a clean energy future in which climate stability, energy security, and economic prosperity together lead to a Great Transformation in human society around the globe.

Countries across our planet are beginning to move onto the second path, but we still have a long way to go. The Copenhagen UN climate conference did not achieve a binding agreement on greenhouse gas reduction targets, and the need for bold measures against global warming remains our greatest challenge. Greenhouse gas emissions continue to rise, propelling our planet toward disastrous climate change. At the same time, the world is still struggling with the aftermath of a profound financial and economic crisis, adding economic insecurity to climate instability. This crisis hit the most vulnerable parts of society with force in the developed world and particularly in the developing world.

### Overcoming the fossil legacy...

The traditional fossil-fuel-driven economic development strategies long practiced by developed countries around the world—and more recently embraced by many rapidly developing nations eager to boost their own prosperity—has our globe on the brink of disaster. Sticking to this path, and bringing our planet’s least developing countries onto it, is simply not sustainable.

Instead, we must move to an ecological remodelling of industrial society as soon as possible—by midcentury at the latest. To limit human-caused global warming to 2 °C over preindustrial age levels—which itself stretches the limits of climate safety—we must cut global emissions by half by 2050. To achieve this goal, industrialized countries such as the United States and members of the European Union have to cut their emissions by at least 80 percent by 2050—and possibly more. By that time, the global economy must become super energy efficient and powered predominantly by renewable sources. This wholesale transformation of global capitalism will not only stabilize the planet, but it will also provide tremendous opportunities for innovative enterprises, job creation, and new “green” lifestyles.



## ...heading toward a postcarbon age

The advanced industrialized countries must pioneer this Great Transformation without neglecting emerging and poor countries that missed out on the high-carbon economic development of the past and are now coming into their own industrial revolutions. These countries need to have a fair share in future economic development, but that development must be as sustainable as possible—especially for the largest rapidly industrializing economies.

As democratic, high-skilled societies endowed with top-notch scientific and industrial resources, the United States and Germany should be front-runners in the new clean energy future. Our countries' approaches to climate change differ, but we each have enormous economic and societal potential to lead the charge toward economic transformation. This historic task should become the core of a new transatlantic agenda.

This task raises several questions for Americans, Germans, and the broader European community. How do we manage this great transformation toward a postcarbon age in the short time remaining before we trigger the tipping points of a potential climate catastrophe? More immediately, how can we level the global playing field by elevating environmental standards and reducing the carbon intensity of traded goods while maintaining competitive in global markets? We suggest a threefold approach:

- **Smart policies** to create and regulate markets
- **Smart technologies** to foster renewable and efficient energy solutions
- **New alliances** to come together and accelerate the “great transition” toward a sustainable economy

Let's consider each in turn.

### Smart policies

Smart policies must foster innovation and motivate businesses and consumers to speed the transition. Our governments must move away from incentives for fossil-fuel-based industries that still dominate most national regulatory frameworks. And we should make it more attractive to invest in renewable energies and energy efficiency by enacting and improving such policies as feed-in tariffs and renewable energy standards rather than subsidizing the construction of new coal-fired power plants or continuing to operate old ones. Most critically, governments that are putting a price on carbon must continue to perfect their systems while those that aren't must do so as soon as possible. We must continue to shift energy and fuel markets away from carbon-intensive investments and toward more sustainable energy solutions.

Open markets, fair competition, and the elimination of monopolistic dominance by fossil-fuel energy providers are key factors in the development of efficient new technologies. A policy mix of energy efficiency standards and economic incentives is optimal to spur environmental innovations in areas such as buildings, electrical appliances, vehicles, and transportation systems.

## Smart technologies

A fundamental shift toward a postcarbon age will only be possible with the help of new smart technologies and infrastructure. For Europe, a power production infrastructure that is entirely based on renewable energies by 2050 is no longer a utopian vision—it is a concrete project. In the United States, some states are further along in identifying such goals, but as a nation we are only beginning this conversation on the federal level.

But in both the United States and Europe, all economic sectors will have to change their mode of production. Three sectors in particular will be called upon to be as innovative as possible in creating new efficiencies and switching to cleaner energy sources: the power sector, on both the supply and demand side; the construction sector, in both new and existing buildings; and the transportation sector, including aircrafts and freight vehicles.

New technologies, of course, must face market risks. Only through a transparent and open evaluation of the pros and cons of inventions such as carbon capture-and-storage technologies and advanced biofuels will the public learn to trust and embrace long-term solutions for sustainable economic development.

At the same time, new technologies can only work with the right infrastructure in place. Both low-carbon energy and sustainable transportation systems have system needs that cannot be met with current infrastructure. A renewable energy system works only with smart grids, super grids, and sufficient energy storage capacity. A sustainable transportation system demands attractive mass transit options, including a comprehensive railway system and a stable renewable energy supply for electric cars.

As highly industrialized economies, the United States and the European Union should take the lead and charge ahead with new low-carbon and resource-efficient innovations. But both industrialized countries and rapidly industrializing countries should unleash their engines of innovation to drive down costs and provide the technologies that will help the world's least developed countries leapfrog carbon-intensive industrial policies and pave their way to sustainable growth.

Taking these actions will help curb global warming and provide a foundation for sustainable competitiveness in the postcarbon age.

## New alliances

Climate change is not an area for energy and environmental specialists alone to engage in international negotiations. Combining climate goals with the critical goals of energy security and long-term economic prosperity will help foster new alliances, becoming the basis for common global action. In particular, it is critical to reach out to those nations around the globe that are dependent on coal or other carbon-intensive industries. A transformation toward a postcarbon society will work only with the collaboration of these countries, too.

Traditional industries such as the steel sector need to recognize their share in producing clean energy. Farmers should be enabled to harvest the wind and the sun by investing in renewable energy. Faith groups can help promote sustainable development as a cause for

individuals to embrace by identifying it as part of the moral imperative to preserve creation. Only if we manage to build these kinds of new alliances for renewable energy and low-carbon technologies will we win democratic majorities in support of a transition to a postcarbon age.

## **A new transatlantic agenda**

At present, more than 120 countries have committed themselves to the global goal of limiting humanly caused temperature rise at 2 °C through their submissions to the Copenhagen Accord. A global, legally binding agreement on reducing greenhouse gases and providing funds for mitigation and adaption in developing countries is pivotal in order to achieve this goal. Open markets based on smart regulatory frameworks, however, can be a driving force on both sides of the Atlantic in meeting these goals. The past belonged to those who successfully drove their economic growth using fossil fuels. The future will be shaped by those countries, societies, and economies that manage to create national wealth using clean and efficient energy and fuel sources.

Europe and the United States can lead the charge toward this Great Transformation. We possess advanced scientific and industrial capabilities, share the same political values, and are similarly committed to open and dynamic markets. If we join forces and enter into a new era of transatlantic cooperation, we will make a difference—and maybe even change the world.

