



## **3C (Combat Climate Change) – A Business Leaders' Initiative**

### ***Technology Push: Recommendations for Policy Makers***

*3C consists of leaders from more than 50 companies from around the world, committed to the integration of climate issues into global markets and the establishment of a new global climate change agreement coming into force in 2013. To support this process, 3C develops recommendations for policy makers on the climate issues most relevant to business. The following recommendations concern the need to push the development and deployment of important technologies that have not yet been commercialised.*

Combating climate change will require the commercialisation of low-emission technologies in numerous sectors of the economy. Delivering the necessary 'technology push' in time to meet the climate challenge will require a concerted effort from policy makers and industry. It is important to understand that technological innovation does not happen by itself: policies must create a framework that encourages development, deployment, and consumer choice.

The purpose of this memo is to shed light on important challenges from a business perspective, and to identify recommendations for addressing them via policy frameworks and an ongoing partnership between the public and private sectors. Successful frameworks to push tomorrow's climate solutions will:

- Recognise the promising technologies that are known today, and provide appropriate support for commercialisation
- Provide a general framework and guidance, allowing customers to choose winning technologies
- Engage the business community as a partner in research, development & deployment

### **Challenge 1: Supporting promising technologies**

Contrary to widely held assumptions, the technologies needed to solve the climate crisis are largely known today. The challenge is commercialisation – matching the pull of consumer demand with a push down the learning curve of development, demonstration and deployment at costs that the market can bear. The strength and precision of this 'technology push' will be a determining factor in how soon today's economy can be remade, and at what cost.

#### ***Recommendation***

A new global climate framework should recognize the promising technologies known today, and stimulate and coordinate commercialise efforts. Technologies and support needs include:

- Efficient generation including Combined Heat and Power; matched by bigger and smarter grid capacity for transmission. These technologies are understood, but their immediate deployment requires permitting, infrastructure, and financing partnerships.
- Carbon capture and storage. This technology is essential to decarbonizing both power production and heavy industry, and requires a major acceleration of public support on all facets of the value chain to get demonstrations off the ground now.



- Next generation power and fuels; matched by technologies for energy storage. Public financing for R&D in these areas should take a portfolio approach, with options including solar photovoltaic, 2<sup>nd</sup> generation biofuels, 4<sup>th</sup> generation nuclear, and a range of emerging energy storage technologies. As these technologies leave the lab financial support should migrate to legal and infrastructural support for deployment.

## **Challenge 2: Creating an appropriate policy support framework**

While recognition of important technologies is important, policy support must avoid ‘technology picking’ and allow winners and losers to be determined in the marketplace. Nonetheless there are important characteristics of a support framework that will help the market to do its job and deliver low-carbon solutions.

### ***Recommendation:***

Public support should provide a general framework and ongoing guidance for technology developers and consumers. A successful framework will include:

- Clear and predictable guidelines, such as well-articulated, technology-neutral policy objectives for various sectors of the economy.
- Continuous benchmarking of technologies that allow market players to see how various technologies under development perform on policy objectives
- Reliable legal frameworks -- guidance as to what will be acceptable when, and where
- Incentives and liability protection for research, development, and demonstration, helping to overcome first-over disadvantage for private investors.
- Technology-neutral user stimulus to prime the market and then phase out

## **Challenge 3: Integrating the efforts of business**

Private investment and business will be expected to build and market physical technologies, but business has more to offer the technology push.

### ***Recommendation:***

Policy makers should engage business as a partner in research, development and deployment of low-carbon solutions. Business, particularly via neutral platforms, can:

- Define, in collaboration with the research community, technological options and impacts. The national and global ‘Abatement Maps’ serve as an example.
- Describe the path to commercialization for various technologies, helping public benchmarking become more robust.
- Build platforms that encourage public understanding and acceptance of technologies, such as business networks and communication campaigns
- Help improve regulatory frameworks over time via policy recommendations, especially on shared platforms.