

Part IV

Policy Responses for Mitigation

The first half of this Review has considered the evidence on the economic impacts of climate change itself, and the economics of stabilising greenhouses in the atmosphere. Parts IV, V and VI now look at the policy response.

The first essential element of climate change policy is carbon pricing. Greenhouse gases are, in economic terms, an externality: those who produce greenhouse gas do not face the full consequences of the costs of their actions themselves. Putting an appropriate price on carbon, through taxes, trading or regulation, means that people pay the full social cost of their actions. This will lead individuals and businesses to switch away from high-carbon goods and services, and to invest in low-carbon alternatives.

But the presence of a range of other market failures and barriers mean that carbon pricing alone is not sufficient. Technology policy, the second element of a climate change strategy, is vital to bring forward the range of low-carbon and high-efficiency technologies that will be needed to make deep emissions cuts. Research and development, demonstration, and market support policies can all help to drive innovation, and motivate a response by the private sector.

Policies to remove the barriers to behavioural change are a third critical element. Opportunities for cost-effective mitigation options are not always taken up, because of a lack of information, the complexity of the choices available, or the upfront cost. Policies on regulation, information and financing are therefore important. And a shared understanding of the nature of climate change and its consequences should be fostered through evidence, education, persuasion and discussion.

The credibility of policies is key; this will need to be built over time. In the transitional period, it is important for governments to consider how to avoid the risks that long-lived investments may be made in high-carbon infrastructure.

Part IV is structured as follows:

- **Chapter 14** looks at the principles of carbon pricing policies, focusing particularly on the difference between taxation and trading approaches.
- **Chapter 15** considers the practical application of carbon pricing, including the importance of credibility and good policy design, and the applicability of policies to different sectors.
- **Chapter 16** discusses the motivation for, and design of, technology policies.
- **Chapter 17** looks at policies aimed at removing barriers to action, particularly in relation to the take-up of opportunities for energy efficiency, and at how policies can help to change preferences and behaviour.