

BOOK REVIEW

America's Climate Problem: The Way Forward

Robert Repetto

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In this book Repetto argues that the immediate implementation of market mechanisms is the only viable way that the United States can reduce its greenhouse gas (GHG) emissions to contribute to a worldwide and essential reduction of GHG emissions of between 50 and 70% below current levels. America¹ must take decisions to achieve this goal, as many other countries have indicated they will not take action to reduce their GHG emissions unless they see evidence that the United States is serious.

To achieve this goal the case advanced is that a price must be put on carbon. Voluntary measures will not meet the required goal. Changes need to be made to local, state and national policies, especially where previously they directly or indirectly supported ventures that increased GHG emissions. Numerous specific examples are given, often citing the names of government representatives and the anti-climate change bills they supported, as well as their implied connections with industries that are significant GHG emitters. In general, a cap and trade system to reduce GHG emissions is proffered. Specifically, Repetto believes that 'the best way to bring about this price on emissions is through an "up-stream" cap and trade system that limits sales of fossil fuels in the US, whether from domestic production or imports' (p. 56). This approach limits sales at their source. He argues that, despite what others say, the facts clearly indicate such an approach will motivate businesses and consumers to change their practices. Chapter 3 outlines the advantages of this approach, the mechanics of its implementation and how it can be extended (e.g., to all GHG emissions, or to carbon sequestration), as well as how the revenue from the sale of permits could be used (e.g., to compensate low-income earners). The flaws in a limited version of his approach (e.g., it is only applied, say, to electricity generation companies and not to transportation, or permits are free rather than being auctioned) are discussed, as well as various alternatives that may or may not include a price on carbon. These alternatives include the difficulties of carbon tax alternatives that differ from his own scheme, such as Australia's interim per ton of carbon dioxide (or equivalent) price. In concluding this section Repetto comments: 'The argument that a carbon tax would harm the economy is complete nonsense' (p. 62).

To reach the above conclusion, Repetto discusses the economic impacts of the energy transition he advocates. He postulates (in chapter 4) that the impacts depend upon whether an 'evolutionary view of the economy' (where it evolves through technological innovation) is taken or one where 'all future technologies, capabilities, resource availabilities and prices are assumed to be known in advance' (pp. 85–87). The latter has been used in all economic models that predict the economic consequences of a reduction in GHG emissions, an 'heroic assumption' according to Repetto and hence such scenarios must be viewed 'with caution' (pp. 88–89). After a discussion of a range of economic scenarios and why their predictions differ so widely, he concludes: 'All reputable

economic analyses agree ... that GHG emissions can be drastically reduced through a transition to clean and efficient energy without significantly lowering living standards or sacrificing future economic gains' (p. 91).

Repetto argues his scheme would readily link in with international carbon markets, while some other alternatives would not. Some positive initiatives in other countries are mentioned, with a case study of China's actions in reducing GHG emissions. The package he advances is dependent upon cooperation between the United States and other countries. Chapter 5 describes how the United States and other developed countries need to negotiate 'win-win' arrangements with developing countries, such as recognising they must increase their energy output, while also assisting them to finance a reduction in their GHG emissions. Specific examples are provided, including a comprehensive outline of the range of available 'win-win' policies and measures India has planned to implement, and others that could be considered, and that these are initiatives where developed countries could assist. In summary, this chapter outlines the need for international cooperation as GHG emissions cannot be stabilised unilaterally; of interest is that international offset programs are described and their weaknesses identified, as well as how they can be strengthened.

The author is an economist and currently a Senior Fellow at the United Nations Foundation, working with its climate and energy program; he was formerly a Professor of Economics and Sustainable Development at Yale University. Consequently, most chapters focus on how various governmental (local, state and national) climate change policies, primarily those relating energy systems (e.g., production and distribution) and energy consumption, would impact on the American economy. Although virtually all the data and examples relate to the American context, many comparisons can be made between the market mechanisms that Repetto proposes and the recently implemented Australian Government plan (2012), *Securing a Clean Energy Future*, as well as various opposition parties' policies on climate change (e.g., *The Coalition's Direct Action Plan, 2012*). Australia is rarely mentioned in this book except that it is 'moving to install a cap and trade system' (p. 61), and for having 'set a price on carbon dioxide emission' (p. 149); it must be borne in mind that this book was written in 2010.

Leading into the above economic and political discussion, the science supporting the onset of worldwide climate change, caused by anthropogenic GHG emissions, and its likely dire consequences is outlined, with special reference to the American scene. Frank comments are made about security risks, and Repetto challenges readers with a scenario about how climate change in Pakistan could impact on the United States; America's dependency on imported oil is also a key factor. To further support his case for a transformation of the energy generation and transportation systems he describes historical American precedents, where major changes were forecast to lead to economic disaster but did not eventuate.

An essential element in Repetto's transition is vast improvements in energy efficiency, referred to as 'low-hanging fruit', and which could reduce growth in American power use by about 30% in the next 20 years (p. 38) — numerous examples are detailed. The potential for the United States to draw upon sources of energy other than coal are strongly advocated; for example, it is pointed out that solar energy generated from an area the size of an Arizonian county could supply all of America's energy (p. 34; for an Australian analogy see Catchpole, 2012). However, Repetto does include ('new generation') nuclear power plants (p. 43) in 'the mix' and that, more than likely, coal-fired electricity with sequestration (carbon-capture) and integrated coal and gas systems will have a transitional and possibly ongoing role. He acknowledges that carbon-capture is still somewhat problematic, but does identify storage locations. Despite including these non-renewable energy sources Repetto later acknowledges that if they are limited or

not feasible, then his predicted transition costs will increase (p. 91). His scenarios do incorporate technological advances, and on the evidence provided, these, in general, seem reasonable. To be fair, though, it should be reiterated that Repetto believes the ‘transition can be achieved with technologies already in use or in sight, never mind the innovations sure to come’ (p. 39), and to support this view he cites countries doing far better than the United States.

Having argued his case, Repetto then outlines the ‘formidable (political) obstacles’ that need to be overcome for an ‘up-stream’ cap and trade system to be enacted at the governmental level; he adds: ‘at the root of it all is money’ (p. 149). Numerous examples of these ‘obstacles’ and their negative consequences are mentioned (see below), and the reader is left wondering whether anything can be done. Evidence of some progress is outlined in the history and current context of the 2009 *American Clean Energy and Security Act* that was passed, in a very ‘watered-down’ version, in the House of Representatives, but ‘obstacles in the Senate to passing a comparable bill are far greater’ (p. 158). American voters, Repetto says, are frustrated at the continual political deadlocks. It is argued that there ‘must be strong public demand for action’ (p. 160), but that this was not present in the United States at the time of writing (2010) and several reasons are advanced (e.g., misconceptions held by the public, the misleading role of the media, opponents — without factual justification — labelling carbon pricing as ‘job-killers’ [p. 165]). A way forward, Repetto believes, is for the American government to ‘use its “bully pulpit” courageously’ to say that climate change is ‘the greatest environmental challenge in American history’ (p. 166) and that this will lead to the public demanding action. In the meantime it is argued that the government should immediately use its regulatory powers to, for example, enforce what already exists in, say, the *Clean Air Act*. Parts of chapter 6 are compelling reading despite some of the regulatory detail, and it concludes with questions the public should be asking of its politicians.

Before succinctly summarising his case, Repetto’s penultimate chapter considers adaptations to climate change, rather than only focusing on mitigation. This is important as there are influential voices that have argued America will be able to adapt, and even benefit from, climate change. Adaptation has a role, but the prospects for it being successful are pessimistic, especially as many examples show that historically America (and humanity in general) has been reactive, not proactive, in responding to predicted disasters. Various reasons for this reactivity are advanced. A case study of neglected action on hurricane risks in the New York City (NYC) region further exemplifies the barriers to proactive change, although very recently recommendations for action in NYC have been made. It is pointed out that for the United States to mainly take the adaptation pathway ignores America’s major contribution to the cause of climate change, and that less wealthy countries will be unable to take such adaptation measures.

Throughout the book questions are asked that keep the reader’s interest; examples include: ‘China has been shutting down and replacing its least efficient power plants. Why can’t we?’ (p. 39); ‘Why should energy companies freely use the atmosphere as a dump for their exhausts?’ (p. 76); and ‘Is there no connection between the sources of funds in a politician’s war chest and the positions he or she takes on legislation?’ (p. 151). These questions often lead to blunt disclosures, with specific US senators named as well as their sources of contributions (e.g., from energy utilities) and how they voted on particular parliamentary bills (e.g., see pp. 151-152). Repetto also is provocative in his statements about other issues. An example is when discussing where nuclear wastes could be located he opines why ‘Yucca Mountain is the mother of all NIMBYs’ (p. 44); another is his discussion of excessive protectionist policies for ‘sunset industries’ at the expense of ‘sunrise’ industries (p.109). Some of the data, tables and graphs are most

illuminating and raise challenging issues; for example, American states that have the highest percent of coal-generated electricity have electricity retail prices less than half of other states (p. 77) and, in 2009, of 2,780 registered lobbyists to elected officials, 12% represented environmental and alternative energy groups while the remainder represented industrial interests (p. 153).

The literature supporting climate change science is very recent and would be familiar to many AJEE readers. However, this would not be the case with the numerous references to academic and professional literature, as well as governmental documentation, underpinning the economic and 'energy' logic of the arguments advanced. However, most of the economic and 'energy' logic, data and scenarios are readily understandable, but a few required a careful re-read and further insight to comprehend (e.g., existing historical regulatory and tariff policies that apply to the coal industry).

Repetto's book provides a very detailed case for the position he advocates, with examples provided on a macro and micro scale and across local, regional, state and national sectors. In this review only a minimal sampling has been provided. The similarities with the current Australian political scene are obvious. This book is of general interest to sustainability educators interested in the politics and economics of climate change (provided they did not mind reading about the American scene). Undergraduate or graduate students completing projects or research in this area would find the book of value.

Endnote

¹ In this review America/American refers to the USA.

References

- Australian Government. (2012) *Securing a clean energy future*. Retrieved July 21, 2012 from <http://www.cleanenergyfuture.gov.au/clean-energy-future/securing-a-clean-energy-future/>
- Catchpole, K. (2012, July). *Solar electricity — Getting better all the time*. Paper presented at the Conference of the Australian Science Teachers' Association, Canberra, Australia.
- The Liberal Party of Australia (2012). *Coalition's Direct Action Plan*. Retrieved July 21, 2012 from <http://www.liberal.org.au/issues/Environment.aspx>

Reviewer's Biography

Keith Skamp is an Adjunct Professor in the School of Education at Southern Cross University. He has been a lecturer in undergraduate and graduate units in science education, environmental education and research methodology for many years and has led and been involved in numerous professional and curriculum development initiatives in these areas at state, national and international levels. Keith's research and consultancy in science and environmental education has resulted in several book chapters and numerous refereed journal publications as well as reports to state and federal governments; currently his research focuses on students' responses to global warming. Keith has held visiting scholar and professorial positions at Columbia, Durham, Liverpool, Leeds, British Columbia, Lethbridge, and Flinders universities and received distinguished awards for university teaching and service to professional science education associations.