Energy Studies Review Vol. 11, No. 2, 2003 pp 233-235

The Carbon Conundrum: Global Warming and Energy Policy in the Third Millennium

by R. C. Kelly

CountryWatch Publications, Houston, 2002; 255 pages; ISBN 1590973011

Many different models and ideas have been presented, studied and even implemented as policy on the issue of climate change. Many models have presented one extreme or the other in providing a method with which to go forward. *The Carbon Conundrum; Global Warming and Energy Policy in the Third Millennium* is an interesting book that presents alternative scenarios for dealing with climate change and carbon emissions. This book attempts to find a middle ground in the policy debate and analyses the issue on a much longer time frame than is usually done.

The book contains six chapters and an introduction. The introduction and chapters one and two provide background into the issue of climate change. Scientific, economic, political and policy background is provided. Chapters three and four outline and analyze a modified version of the Dynamic Integrated Climate and Economics Model. In addition, three potential scenarios are analyzed as potential methods with which to handle Climate Change. Chapters five and six provide conclusions from the model and analysis of future avenues that may be taken in the area of climate change and energy policy.

The introduction provides a description of the author's assumptions, the main one being that while there is debate as to the validity of the science of climate change, the sceptics represent a minority and this book assumes that the science is correct. This gives a basis for presenting a look at providing options for dealing with climate change, rather than debating the existence of a problem (a topic that is left to others to debate).

The book starts out at a very basic level giving all readers the ability to understand the fundamentals of the issue. A good description of the issue and its history is provided and includes a layman's version of the physics and chemistry. This description is done very well. The level of detail is such that it is not overwhelming to someone with very little scientific background, yet detailed enough to give a fairly thorough understanding of the process of the "greenhouse effect."

The next chapter gives a historical background of the issue of climate change. The political, economic and scientific studies, treaties and protocols, including the Rio Treaty and Kyoto Protocol are described. This section is also well done. The reader should arrive at a good understanding of international views and positions on the issues. The reader is then able to understand the context of the climate change debate.

The author then moves on to explain the new scenario that he is proposing. This is at a very high level and not necessarily accessible to the average person. It seems to be aimed more at the scientist or policy maker than to the general public. This is a weakness of the book. It is difficult to tell who the intended audience is. If it is for the general public, often the book is too difficult to understand, or, if it is for the "expert," then there are many sections that would be much too basic.

The new proposal of a potential policy basis is based on the Dynamic Integrated Model of Climate and the Economy, a model out of Norway. This book aims to take the previous analysis, update it and bring it into the current debate (in 2002). The model presented describes and evaluates three different scenarios for climate change policy; the Business as Usual Scenario, the Kyoto Protocol Scenario and the Optimum Carbon Path Scenario. The book promotes the latter of the three, as a hybrid of the first two, as the best option. A convincing argument is made.

Chapter four describes all the variables used in the model. While this information is useful it is not necessary to understand the conclusions and therefore might have been better left to an appendix. The model is very comprehensive, including nearly every possible economic and scientific variable that could impact the process. Chapter five analyzes the model under the three different scenarios. The analysis is comprehensive and useful in understanding the different options and the potential impact of each.

The remaining chapters provide an analysis of the conclusions from the study as well as potential energy alternatives. While these chapters are interesting and provide some useful reference information, they seem quite disconnected from the rest of the book. It is hard to tell how they fit into the model described.

The Appendices provide a useful reference. They are the Rio Treaty and the Kyoto Protocol. For anyone interested in knowing where the issue of climate change has come from and how it has arrived in its current debate this book provides excellent background and reference points.

One further weakness of the book is the problem of outdated information. Currently this book is proposing the OCP (hybrid) scenario. This provides an ideological idea of how to approach the issue of climate change. This has the potential to be very useful for those countries that have not committed to emissions targets under the Kyoto Protocol, such as the United States. For countries that have signed the Kyoto Protocol it is likely too late for such an ideological shift at this stage of the game.

Overall this book provides for some very interesting and informative reading. Much of it is well put together and will provide an excellent reference for the reader. I would recommend parts of it for those looking for basic information and other parts for those looking for very detailed information. For anyone looking for alternative methods to approach climate change this book is a good one to look at.

Danielle Moffat,
Alberta Department of Energy
Edmonton, Canada