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# Energy Issues in the Asia-Pacific Region

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ISEAS SERIES ON ENERGY

# Energy Issues in the Asia-Pacific Region

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# Foreword

How energy needs can be met will be the greatest global challenge in the coming decade.

Up to the point before the financial tsunami lashed upon all our shores, the relentless increase in the demand for energy to feed burgeoning global economic growth had led to a US\$150/barrel oil. The impact of this high oil price alone on food, competition for resources and ultimately on costs of living was cause for significant concern.

Implicit in this was the element of security of food, energy and resources needed for economic growth.

Notwithstanding the current recession, these concerns have not gone away. Before the recession, producers were preparing to increase production to meet demand. Many of these projects were deferred later due to the ensuing fall in demand. Without these investments to increase production capacity, another supply crunch and high oil price may arise when economic recovery begins.

While high oil price is bad for the economy and cost of living, it is perversely good for other reasons. There were many anecdotes of consumers around the world and in Singapore adjusting their purchases and consumption habits to minimise waste and ensure energy is used efficiently.

The world will enter into the Copenhagen round of talks at the end of 2009 to hammer out an agreement to curb climate change. Central to the agreement will be how much reduction in the emission of greenhouse gases such as carbon dioxide each country can offer to make.

The global economy is still fuelled primarily by carbon fuels and this is not likely to change in the foreseeable future unless there is a new technology that can curtail carbon dioxide emissions. The challenge will be how economic

growth can be secured with less fuel to feed it. Much can be done before that point is reached.

Singapore has switched from oil to gas for power generation and this has significantly reduced Singapore's carbon dioxide footprint. The Singapore Government has also been promoting energy efficiency on several fronts. The Building and Construction Authority (BCA) has implemented standards and programmes to steer Singapore towards energy efficient buildings. The Ministry for the Environment and Water Resources (MEWR) and the National Environment Agency (NEA) had for many years been promoting recycling and have more recently focused attention on energy efficiency in consumer habits and choices. The Energy Market Authority (EMA) has started programmes to test-bed and pilot clean and renewable energy technologies such as electric vehicles. The pioneering work by the Land Transport Authority (LTA) to promote public transport and to reduce congestion has helped reduce the amount of carbon dioxide that vehicles emit while stuck idling in traffic jams.

At the individual level the public will need to support these national efforts to reduce our carbon footprints by adjusting our own consumption habits and choices. For this to happen, the public has to understand why such change has become necessary.

The ISEAS Energy series of books comes with a wealth of information covering a wide range of energy topics that will help build public awareness and knowledge of the issues. This book is the second volume in the series. The essays in this book are based on contributions from the very popular ISEAS energy seminars and from various experts.

The Energy Studies Institute (ESI) has been working with ISEAS on several energy projects and seminars. I commend ISEAS for the great work it has done in promoting the energy seminars and in capturing the thoughts in the ISEAS Energy books series.

*Khoo Chin Hean*  
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*Energy Studies Institute*  
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*August 2009*



# Preface

This book is volume two of the ISEAS Energy Perspectives on the Region. It comprises papers based on the seminars delivered by speakers at the ISEAS Energy Forum as well as invited contributions from various experts on energy issues. This book serves to educate the general public on energy issues as well as to raise awareness in Singapore and the wider region about energy issues — both aims of the ISEAS Energy Forum.

The range of topics is wide in scope as well as touching on a number of countries, such as the United States, Japan, China, India, and Southeast Asia. It is also timely as some papers discuss the Spratlys, renewable energy, nuclear energy, and biofuels such as *Jatropha*. They are written by eminent experts who have kindly and graciously agreed to share their knowledge with the public. In an interesting departure, some papers are written by senior executives from the private sector who make their case for biofuels, solar energy, electric vehicles, and nuclear energy.

Energy issues continue to remain important to the world at large, intimately linked as they are to climate change and the environment, as well as to sustainable economic development. The price of oil has now crept inexorably upwards as the world economy slowly stabilizes and resumes growth from the global recession of 2008–09. Without adequate investments in new oil and gas resources, the price of energy in 2010 can be expected to rise in step with the global economic recovery. Thus continuous attention and effort must be paid to issues such as energy efficiency and conservation. Both the United States and Singapore, as well as other countries, have in 2009 launched sustainable development programmes, emphasizing green or clean technology and energy efficiency.

We hope this volume will help to inform readers about topical energy issues that remain high on the international agenda. We thank the paper

writers and the co-editors, Ms Amy Lugg and Mr Mark Hong, for their hard work and careful editing, as well as all those in ISEAS Publishing who have made this volume possible.

*Ambassador K. Kesavapany*  
*Director*  
*Institute of Southeast Asian Studies*  
*June 2009*

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