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A New Energy Frontier



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A
New Energy
Frontier

The Bay of Bengal Region

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Foreword

This volume is of special relevance for a number of very pertinent reasons. Firstly, the nations of South and Southeast Asia are going through rapid economic change, particularly with India having registered very healthy rates of growth over the last five years or so. At the same time the Asian economic crisis of a decade ago has now become history, and the countries of the region are now making rapid progress in every sector of their economies. But one important area, which could influence economic growth and development in either direction is the issue of energy which, given the dependence of the region on oil imports and prevailing high prices of oil, does introduce an element of uncertainty about the future.

The editor is particularly well qualified to write on the subject of energy and related issues in the Bay of Bengal region. While the countries of the region have clear opportunities for mutually beneficial cooperation in the field of energy, the success of any effort in this direction would hinge on diplomatic initiatives and the history of relationships between the countries of the region. There are also compelling domestic factors that would influence cooperation in the future, such as the ability of Myanmar to open up its hydrocarbon sector to foreign investments and trade. Similarly, in the case of Bangladesh, the possibility of export of natural gas to India or even the provision of a transit pipeline to allow gas from Myanmar to be supplied to India became an emotional issue several years ago. Diplomacy has to take political realities into account if progress has to be achieved with regional initiatives in areas such as energy. The BIMSTEC region has been grappling with possibilities of closer cooperation in energy trade in recent years but without notable success. Hence the need for some “out of the box” thinking and action.

The book effectively makes the point that the Bay of Bengal region holds a total population of 1.5 billion people, which in a relatively small area of land contains one quarter of humanity. While hydrocarbons are produced in the countries of this grouping, it is not a major oil and natural gas producing region of the world. However, there is no doubt of significant potential for enhancing production, particularly with larger investments flowing in. There are also opportunities for cooperation in power supply. Integration of electricity grids in the region would have major benefits for all the stakeholders. Essentially, trading in energy of all forms would provide benefits to suppliers as well as importers in the region. There would also be significant benefits in the flow of technology and perhaps establishment of production facilities such as in the case of renewable energy devices, where economies of scale would benefit all the countries of this grouping.

The book by virtue of the innovative approach that it takes clearly establishes a case for some fresh thinking on energy policies within all the nations of the Bay of Bengal region. It brings out the benefits of coordination and cooperation rather than isolated plans and strategies based on narrow national perspectives. To that extent, the book serves an extremely important purpose, which is to open new pathways in the field of energy decision-making, with benefits for this region as a whole. If it succeeds, it would also act as a model, for other regions of the world to emulate.

R. K. Pachauri
Director General, The Energy and Resources Institute (TERI)
New Delhi, India;
*Chairman, Intergovernmental Panel on Climate Change (IPCC)**

* The IPCC, which Dr Rajendra K. Pachauri chairs, shared the Nobel Prize for Peace in 2007.

Message from the Director

I would like to congratulate Ambassador Sudhir T. Devare for his energy and enterprise in organizing the Conference on Energy in the Bay of Bengal on 28–29 September 2006 at the Institute of Southeast Asian Studies, Singapore. I would also like to thank my colleague, Mr Mark Hong, Energy Programme Coordinator, for his ideas and input into the process of assisting to conceptualize the conference and publishing the book.

It is only recently that people have begun to realize the many linkages between the countries surrounding the Bay of Bengal, which are usually perceived as merely the foyer to the vital Straits of Malacca. This dismissive view began to change when major oil discoveries were made onshore as well as offshore along the littoral states. Gradually, energy experts realized that this region could be one of the last great oil and gas provinces left relatively unexplored.

Thus this book serves as a useful eye-opener to the great energy potential of this region, even as oil and gas demand are ever increasing. In addition, the Bay occupies a strategic position squarely across the energy SLOC's connecting the Middle East and African energy producers with the great Asian markets in Southeast Asia and Northeast Asia. China and others have realized the vulnerability of the choke-points along the Malacca Straits and have devised various by-passes, such as pipelines from Myanmar to Yunnan and across northern Malaya.

This book thus discusses these strategic implications as well as the various national energy potential of the littoral states, the potential for regional cooperation. In doing so, the chapter writers shed light on a little-studied region, and thus add to our store of knowledge and understanding. ISEAS has launched an ISEAS Energy Series of books devoted to building knowledge on Southeast Asian and Asian energy issues. We hope that this book, the third in the series, will help to add to international understanding of a vital resource.

Ambassador K. Kesavapany
Director
Institute of Southeast Asian Studies
16 May 2007

Preface

This book is the outcome of the Conference held at the Institute of Southeast Asian Studies (ISEAS) in Singapore in September 2006 to discuss energy and energy-related issues in the Bay of Bengal region. The region can be described as comprising the countries around and in the proximity of the Bay of Bengal. With a combined population exceeding 1.5 billion, the energy requirements of this region are enormous and are expected to grow exponentially. While the potential for energy resource availability is high, the investments for their exploration or extraction had so far been marginal. Prospects for renewable and sustainable energy also needs to be fully examined. There are other issues as well, such as transportation security, role and responsibility of the private sector including multinationals. The energy scene in the Bay of Bengal region therefore merits extensive study.

Energy is a principal concern and preoccupation today. In fact, most discourses on international relations these days touch upon energy security. While there is competition among many nations to acquire assets of energy, there is also interest to initiate dialogues with energy as the main focus. Pipeline diplomacy has assumed increasing importance. Energy, especially the hydrocarbons, appears to be leading to a sense of interdependence in the world.

Besides discussing the overall energy position in the region and its potential, the book features perspectives on a few countries of the region with regard to energy availability, energy security or energy trading capacity.

While energy-related issues are marked by their universal relevance and importance, it is instructive to see how they apply in the regional or sub-regional context, including in the Bay of Bengal region. The book analyses some of these issues, such as renewable energy, “corporate social responsibility”, or maritime security of energy transportation, both in their basic concept as well as the contextual importance to the region.

I am thankful to all the contributors who spared their time and shared thoughts and suggestions on a relatively unexplored topic. It is hoped that the information and analyses they provided on the subject would be a useful basis

for the study and practical application on the issue of energy in the Bay of Bengal region.

It is a privilege to have the Foreword penned by Dr Rajendra K. Pachauri, Director General, The Energy Research Institute (TERI) in New Delhi, which I acknowledge with deep thanks. In spite of his commitments around the world as the Chairman of the United Nations Intergovernmental Panel on Climate Change (IPCC), he was gracious enough to find the time to share his invaluable insights and advice on the subject. I was delighted that the IPCC was declared the co-winner of the Nobel Peace Prize in 2007.

I am grateful to Ambassador K. Kesavapany, Director of ISEAS, for his keen interest and full support for the conceptualization of the theme, organization of the conference and publication of this volume. Dr Chin Kin Wah, Deputy Director of the Institute was a constant source of encouragement and ideas for which I am deeply appreciative.

It is to my colleague and friend, Ambassador Mark Hong, from ISEAS that I owe much gratitude. Be it in the crystallization of the topic, or for his enthusiastic participation in the conference or for various suggestions on the manuscript, his has been an enormous support at every stage of this publication.

My sincere thanks are also due to Ms Betty Kwan from ISEAS without whose efficient and competent assistance from the time of the conference to completing the manuscript, this book could not have been completed.

Mrs Y.L. Lee, Head of Administration, and Mrs Triena Ong, Managing Editor of the Publications Unit, were supportive and cooperative, as they had been at the time of publication of my earlier book.

I am also thankful to Mr Deepak Nair, Research Associate from ISEAS for the assistance he provided during and after the conference.

I would like to express my sincere appreciation to Dr Vijay Kelkar, a renowned economist and former Finance and Petroleum Secretary, Government of India and currently Chairman, Finance Commission of India for giving valuable comments on this book. Similarly, my deep thanks to Mr Tariq Karim, former Bangladesh Ambassador to the U.S. and presently Harrison Fellow at Maryland University for his encouraging remarks on the subject.

I am grateful to my former colleagues from the Indian Missions in the Bay of Bengal region who were very helpful with their suggestions/assistance with regard to speakers at the conference.

Finally, a word of special thanks for my wife and family for their encouragement and support for my undertaking. It related to a region which all of us have for years found so vibrant and full of energy.

Sudhir T. Devare
Singapore
December 2007

The Contributors

Talmiz Ahmad has been the Indian Ambassador to the United Arab Emirates since August 2007. After obtaining his Master's degree in History, Ahmad joined the Indian diplomatic service in 1974, and served in the countries of the Arabian Peninsula, including Kuwait, Iraq, Yemen and Saudi Arabia. He also served in the Indian diplomatic missions in New York, London and Pretoria. He headed the Gulf/Haj Division in the Ministry of External Affairs between 1998–2000. He was the Indian Ambassador to Saudi Arabia (2000–2003) and Oman (2003–2004). He was Additional Secretary in the Ministry of Petroleum and Natural Gas (2004–2006) and was responsible for handling India's diplomatic effort in the area of energy security. In April 2006, he became the Director-General of India's premier foreign policy think-tank, the Delhi-based Indian Council of World Affairs (ICWA). His book, *Reform in the Arab World*, was published in July 2005. He has also delivered lectures and published articles and papers on resurgent Islam, the situation in West Asia and India's energy security issues.

Debapriya Bhattacharya is Ambassador and Permanent Representative of Bangladesh in Geneva. Prior to this, he was the Executive Director of the Centre for Policy Dialogue (CPD), Bangladesh. He is a macro-economist and public policy analyst. He holds an M.Sc. (Economics) with distinction and Ph.D. (Economics) from the Plekhanov Institute of National Economy, Moscow. He was a Post-doctoral Fellow at the Queen Elizabeth House, University of Oxford. He was a Senior Fulbright Fellow at the Centre for Global Development (CGD), Washington D.C. He was a member of the Macro-economic Policy Advisory Committee, Ministry of Finance; Banking Sector Reform Committee; Advisory Committee of the Securities and Exchange Commission; Panel of Economists, Fifth Five Year Plan (1997–2002), Ministry

of Planning; Member, National Committee on Utilization of Gas Resources, Ministry of Energy and Mineral Resources. Bhattacharya was also a member of the Bangladesh delegation to the WTO Fourth Ministerial Meeting held in Doha (November 2001). Currently he is a member of the Advisory Committee on WTO Affairs, Ministry of Commerce. He is a faculty member of the WTO Trade Policy Course. He is associated with various national, regional, and international professional organizations. He has more than one hundred publications to his credit including chapters in books, monographs, journals, articles and research reports. He is currently the Regional Editor of the *Oxford Development Studies*, member of the Editorial Board, *South Asian Studies*, Colombo and Chairperson of the *EU-LDC Network*, the Netherlands. He is a member of the Board of Trustees of the *South Asia Centre for Policy Studies* (SACEPS).

Christophe Bongars is Founder and Executive Director of SustainAsia. He has twenty-two years of experience in the field of consulting, business development, large-scale industrial, infrastructure and clean technologies project development and management. He has successfully created, developed and managed projects and businesses in diverse countries in Asia, Europe and Africa. Based in Asia since 1995, he was Project Director for Air Liquide group until the end of 2001, developing and managing industrial gas and utility projects. He then joined the Suez — a leading global industrial and services group providing electricity, gas, energy services, water and waste management — as Vice-President Asia Pacific, pioneering innovative business solutions in water and environmental services in Asia, before founding SustainAsia in March 2004. Mr Bongars is Managing Partner at Cleantech Asia Capital Management Ltd, a specialized private equity investment fund in Hong Kong and sits on the advisory board of Cleantech China. He also serves as Vice-Chairman of the Sustainable Development committee of the French Chamber of Commerce and Industry in Hong Kong and chairs the Sustainable Development working group of the Business Environment Council, Hong Kong. He is also a frequent speaker on issues of sustainable development, clean technologies and renewable energy.

Ong Eng Tong holds a B.Sc. Engineering from London, and Diploma in Business Administration from Singapore. He has worked for forty years in the oil industry principally in marketing distribution and trading and logistics. He represented Singapore at the ASEAN Meetings for Energy Ministers from 1985 to 1999. He is a Consultant on Oil Matters to Electrical Power

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P. K. Singh, an Indian national, holds an engineering degree from India and did his MBA in Italy in 1980. He has over thirty years of project management experience in both lump sum turnkey and reimbursable contracts in the fields of fertilizers, refining and gas processing projects in Middle East, Africa, India and Southeast Asia, with wide international travelling. He has interacted with international engineering companies like M.W. Kellogg, Foster Wheeler, John Brown, Parsons (all in the United States), Snamprogetti, Haldor Topsoe, Tecnicas Reunidas, Linde (all in Europe), JGC, Toyo, Chiyoda, Marubeni (all in Japan), Hyundai, Daelim and LG (all in Korea), EIL and PDIL from India and leading international manufacturers. His biggest assignment so far is the current US\$2 billion lump-sum turnkey contract for a grassroots refinery project in Vietnam being executed by a Joint Venture of Technip France (Leader), JGC and Toyo of Japan and Tecnicas Reunidas of Spain, with operating centres spread in Central America, Europe, India, Southeast Asia and East Asia involving over twenty different nationalities. He is employed as Executive Project Director with Technip France and is currently based at Kuala Lumpur in connection with a Vietnam project.

Andrew Symon is Managing Director of Menas Asia in Singapore, a subsidiary of U.K.-based political and strategic risk consultants, Menas Associates. An Australian citizen, he has been living in Asia since 1992 and has been employed as a consultant/researcher for both business planning and public sector/public policy projects, and as a journalist managing and writing for various publications. A focus of his work is the energy, mining/natural

resources and infrastructure sectors as well as analysis of more general political, economic and social issues and conditions in Asia concerning and affecting both business planning and government policy. He was a Visiting Research Fellow at the Institute of Southeast Asian Studies, Singapore from 2004 to 2005. He is completing a book about energy sector development, *Fuelling Southeast Asia's Growth: The Energy Challenge*. He is currently also an associate of the South Australian Centre for Economic Studies, a joint research and consultancy arm of the University of Adelaide and Flinders University in South Australia. In Australia, he has worked in journalism, government at state and federal levels, and in the national parliament in Canberra. He is also a Bahasa Indonesia/Malay speaker.

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Sugiarta Wirasantosa is the Director of Research Centre for Maritime Territory and Non-living Resources, Agency for Marine and Fisheries Research, the Ministry of Marine Affairs and Fisheries. He studied Geological Engineering at the Bandung Institute of Technology and has an M.Sc. in Marine Geology and Geophysics, University of Hawaii in 1983. He obtained his Ph.D. in Oceanography, focusing on Marine Geology and Geophysics from Texas A&M in 1991. He was a Researcher with the Research Centre for Geotechnology, Indonesia Institute of Sciences from 1976 to 2000 and has held various positions with the Ministry of Marine Affairs and Fisheries, Republic Indonesia. Since 1995, he has held important posts such as Chief Scientist of “Doang Borderland” Marine Geology & Geophysics Expedition in the Banda Sea; Guest Lecturer for a presentation at the Institute of Oceanography, National Taiwan University Taipei, ROC; Director of Surveillance of Marine Non-Biological Resources, Ministry of Marine Affairs & Fisheries; Director, Surveillance of Marine Ecosystem, Ministry of Marine Affairs and Fisheries; and Director, Project Management for Preparation of Independent Oil Spill Response Organization.

The Editor

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