

# aesieapgoldbook 2009

The Association of the Electricity Supply Industry of East Asia and the Western Pacific 2009

A comprehensive reference book for the power industry, covering generation, transmission and distribution throughout the Asia-Pacific region



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# Contents

## aesieapgoldbook 2009

### INTRODUCTION

- 4 AESIEAP Goldbook Editorial & Advertising Team
- 5 Message from Mr Edward Chen, Acting President of AESIEAP
- 6 Message from Mr Jose Oliveira Paulo, Secretary General of AESIEAP
- 7 Foreword from Mr Gerald Doucet, Secretary General, world energy council
- 8 Message from Mr Hans ten Berge, Secretary General, Eurelectric

### SECTION ONE

#### AESIEAP PROFILE

- 9 AESIEAP ProFile
- 58 Office Bearers and Council Members

### SECTION TWO

#### INTERNATIONAL ORGANISATIONS

- 64 International Power-related Organisations

### SECTION THREE

#### REGIONAL OVERVIEW

- 76 Will China be the new renewable superpower?
- 81 Tanti Chases GE With Wind Turning on Cracked Blades

- 83 Will the Sun Rise on BIPV markets beyond Japan?

### SECTION FOUR

#### MEMBER COUNTRY PROFILES

- 87 Australia
- 93 China, People's Republic of
- 99 Chinese Taipei
- 106 French Polynesia
- 111 Hong Kong, SAR
- 118 India
- 124 Indonesia
- 129 Japan
- 135 Korea, Republic of
- 143 Macau, SAR
- 147 Malaysia
- 155 New Zealand
- 163 Papua New Guinea
- 168 Philippines
- 176 Singapore
- 180 Sri Lanka
- 186 Thailand

### SECTION FIVE

#### DIRECTORY OF MAJOR COMPANIES

- 191 Company Directory

### SECTION SIX

- 201 4th AESIEAP CEO Conference

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## aesieapgoldbook 2009

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The **AESIEAP Goldbook** is the official publication of the Association of the Electricity Supply Industry of East Asia and the Western Pacific. The 2009 edition provides in-depth profiles of every member country. The Goldbook also contains articles covering a range of topics and trends that reflect the region's electricity industry, including:

- Feasibility of solar power in Australia;
- The World Bank and its conflicting views on climate change;
- Wind generation equipment manufacturing;
- The rise of solar power in Asia

The Goldbook also contains listings and contact details for the major organisations and companies involved in the Asia-Pacific.

The yearbook is published jointly by the Association of the Electricity Supply Industry of East Asia and the Western Pacific and Charlton Media Group. While every effort has been made to ensure the authenticity of the information, the AESIEAP, the editor or the publishers cannot be held responsible for any incorrect data or the resultant consequences thereof. We would like to express our appreciation to all the AESIEAP members, organisation and companies, without whose cooperation and support, it would not have been possible to compile and publish this book.

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# Message

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**Mr. Edward K. M. Chen**  
*Acting President of AESIEAP*

As the Acting President of AESIEAP, I would like to express my heartfelt gratitude to all members for your devoted and continuous support to AESIEAP in the past many years. I believe, with your dedication and efforts, AESIEAP will grow and continue to have sustainable development and remarkable achievement.

It is my great pleasure to introduce to you the new edition of the AESIEAP Goldbook 2009. It contains a great deal of valuable information and insight about the expertise and technologies adopted in the member organizations. In addition, through the Goldbook, members have shared their experiences and success in business operation.

The electric power industry worldwide is currently facing several vitally important issues, such as high energy prices, security of energy supply, GHG emission reduction and the evolution of electricity technologies, etc. These issues will pose serious uncertainties for the development of the power industry in the future. AESIEAP has committed its efforts to facilitating exchanges and cooperation among member organizations in search for resolutions for such issues. The Goldbook can serve as the first-step platform for members to foster mutual understanding and enhance the exchange of information among members. Meanwhile, I appreciate very much the cooperation extended by the AESIEAP members, which contributed greatly to the successful publication of the AESIEAP Goldbook 2009.

Being the Acting President and the in-coming President of AESIEAP, I cordially invite you to participate in all the coming activities of AESIEAP, especially our CEPSI 2008 in Macau and CEPSI 2010 in October 2010, in Taipei, Taiwan.

Sincerely,

A handwritten signature in black ink, which appears to be 'Edward K. M. Chen' written in a cursive style. To the left of the signature are the Chinese characters '陳卓明'.

**Edward K. M. Chen**  
Acting President of AESIEAP

# Message

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**JOSÉ OLIVEIRA PAULO**  
*Secretary General of AESIEAP*

Welcome to the 2009 edition of the AESIEAP Goldbook. The Goldbook provides a source of information that will be invaluable as the power industry enters a critical period.

Asia has a crucial role to play in tackling the global challenges facing our industry. For example, reducing emissions from China and India in particular are central to meeting any global climate change targets.

China has begun the process of reducing emissions by closing old, inefficient power plants. It has also set ambitious targets to increase its use of renewables and nuclear. India, meanwhile, is facing a serious shortfall in generation and energy resources. With its heavy dependence on coal, the country is also looking to increase its use of nuclear and renewables. Further, with a GDP growing at about 8% per annum it will need to increase its installed generating capacity by 10 times over the next ten years. This will call for tremendous levels of investment, which will present challenges. At the recent Heads of ASEAN Utilities/ Authorities (HAPUA) Council meeting, members noted that over-regulation not only causes problems for utilities but also for potential independent investors. In addition to calling on governments to act on tariffs, HAPUA called for greater support for renewables and for increased efficiency across the sector. But despite the challenges, which include a degree of political risk that exists in some countries, the fundamental need for power in the region means Asia will continue to be an attractive market.

Our goal at AESIEAP is to foster cooperation between our members and share the experience gained by the individual countries. We hope that the Goldbook will be a central instrument in sharing this experience across the region.

Sincerely,

A handwritten signature in black ink that reads "José Oliveira Paulo". The signature is written in a cursive, flowing style.

**JOSÉ OLIVEIRA PAULO**  
Secretary General of AESIEAP

# Message

## aesieapgoldbook 2009



**GERALD DOUCET**  
*Secretary General*  
*World Energy Council*

On behalf of the World Energy Council, I am delighted to write this foreword for the 2009 edition of the AESIEAP Goldbook. WEC and AESIEAP have had a long association, during which we have capitalised on the parallels between our two organisations – our mutual interest in finding solutions for critical energy problems, our desire to bring together different players in the energy sector to exchange information and expertise; our studies and research to facilitate a better understanding of energy issues and the factors that influence them on the national, regional and global levels; and our programmes, workshops, forums and conferences – like the World Energy Congress and CEPSI. In addition to working together when the opportunity arises, WEC and AESIEAP have many members in common, and this helps build and strengthen the bridges between our two organisations. Although AESIEAP is focused on a specific region, while WEC is a global organisation with members in nearly 100 countries and, although AESIEAP focuses on the electricity supply industry, while WEC is multi-energy, covering coal, oil, natural gas, nuclear, hydro, and renewables, the outstanding work that AESIEAP carries out in Southeast Asia and the Western Pacific enhances WEC's work in the region and we believe WEC's global studies and technical work as well as our work to promote the sustainable supply and use of energy for all people, also benefit AESIEAP. AESIEAP's annual Goldbook is a key information resource used not only by energy companies, organisations and individuals within Southeast Asia and the Western Pacific, but by key energy players worldwide. Its insights into topical and emerging energy issues, such as the Asian power market, biofuels, nuclear power, generation, transmission and distribution, tariffs and market trends, along with its informative, in-depth country profiles, make it an essential tool across the entire spectrum of the energy industry.

Sincerely,

A handwritten signature in black ink, appearing to read 'G. Doucet', written over a light blue horizontal line.

**GERALD DOUCET**  
Secretary General  
World Energy Council

# Message

## aesieapgoldbook 2009



**Mr. Hans ten Berge**

*Secretary General EURELECTRIC*

In the name of EURELECTRIC, the association which represents the electricity industry at pan-European level plus its affiliates on several other continents, I would like to congratulate the Association of the Electricity Supply Industry of East Asia and the Western Pacific (AESIEAP) on the publication of this thirteenth edition of the AESIEAP Goldbook.

The electricity industry is today facing a number of linked challenges. While energy markets in many parts of the world have been undergoing a liberalisation process, bringing electricity companies into competition with each other, our industry is no less aware that it has a basic mission to provide a secure power supply to industry and citizens, but now with the added requirement of working towards a low carbon mix that will help to combat harmful climate change. Faced with this formidable triple challenge, it is more than ever vital for the electricity industry to maintain vehicles for effective cooperation on the many horizontal issues that are of importance to electricity companies in their relations with businesses, citizens and their representatives in government and local authority. It is this kind of industry cooperation that helps to ensure our voice is heard by legislators and public authorities, so that we can contribute to policy initiatives and play a full role in helping to ensure sustainable economic development among nations and regions through the vital provision of a high quality electricity supply at competitive prices under sustainable conditions. Just as in Europe EURELECTRIC plays its part in providing a forum for policy analysis and a platform for dialogue with the national and EU policymakers, AESIEAP provides a forum and a network linking electricity companies in the East Asian and Western Pacific region. The AESIEAP Goldbook, a source of information for the power industry, its suppliers and stakeholders, constitutes a useful tool for maintaining contacts across the continents and we welcome its publication.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Hans ten Berge'.

**Hans ten Berge**

Secretary General EURELECTRIC