



**Asia-Pacific
Economic Cooperation**

APEC ENERGY WORKFORCE RESILIENCE WORKSHOP

Summary Report

**Singapore
25 April 2017**

APEC Energy Resilience Task Force

June 2017

APEC Project: EWG 01 2017S

Produced by

Brandon Loh, Assistant Director
Energy Market Authority of Singapore

For
Asia-Pacific Economic Cooperation Secretariat
35 Heng Mui Keng Terrace
Singapore 119616
Tel: (65) 68919 600
Fax: (65) 68919 690
Email: info@apec.org
Website: www.apec.org

© 2017 APEC Secretariat

APEC#217-RE-04.1

Table of Contents

Introduction	4
Background	4
Opening Remarks by Mr Bernard Nee, Deputy Chief Executive, Energy Market Authority, Singapore	5
Session 1: Setting the stage – Human Resource Strategies in the Energy Sector	6
Session 2: The role of APEC in enhancing workforce resilience in the energy sector	9
Appendix	11

APEC Energy Workforce Resilience Workshop

Introduction

Singapore hosted the inaugural APEC Energy Workforce Resilience Workshop on 25 April 2017 as part of the 53rd Meeting of the APEC Energy Working Group (EWG) and Associated Meetings in Singapore. The objective of the Workshop was to enhance the APEC region's capabilities in addressing human resource challenges.

About 100 participants from APEC member economies attended the half-day workshop, which provided a platform for discussion and information sharing on workforce resilience strategies from both the private and public sector. The Workshop identified possible areas for capacity-building and collaboration in the region, for the consideration of the APEC Energy Resilience Task Force (ERTF).

Background

The energy industry is a critical sector for sustaining the growth of any economy. It is imperative that there is an adequate pipeline of relevant talent with requisite capabilities to meet the changing demands of the energy industry. Key concerns include an ageing workforce, attracting and retaining talent, transition towards a low carbon economy and rapid advancement in technology. With volatile oil prices posing a challenge for job stability, career prospects in the energy sector continue to be uncertain.

Companies and government representatives from Hong Kong, China; Japan; the Philippines; Singapore; Thailand; and the United States shared their perspectives on these key issues.

The first session discussed key human resource challenges facing the energy industry as well as strategies to address them. Speakers shared their organisations' on-going efforts to address these challenges as well as their perspectives on how the industry would evolve in the future.

The second session focused on identifying key areas for capacity building in energy workforce resilience in the region, including maintaining diverse skill sets to stay relevant despite the major changes to energy infrastructure planning and development. The key highlights of the discussions are summarised in this report. The workshop agenda and presentations are in the Appendix.

Opening Remarks by Mr Bernard Nee, Deputy Chief Executive, Energy Market Authority, Singapore



Mr Bernard Nee delivering the opening remarks at the inaugural APEC Energy Workforce Resilience Workshop.

Scope to strengthen cooperation on workforce resilience in the energy sector

There has been good progress in the area of energy resilience since the establishment of the Energy Resiliency Task Force at the 2015 APEC Energy Ministers Meeting in Cebu, Philippines. The focus has been on areas such as weather-proofing energy infrastructure, strengthening grid resiliency, reducing reliance on fossil fuels and enhancing cybersecurity. Workforce resilience in the energy sector is a relatively new but critical area that APEC could focus on. It is imperative that the region ensures a pipeline of talent with deep capabilities to meet the evolving needs of the energy sector.

Singapore's experience

The Singapore Government embarked on a power sector manpower landscape study in 2011, which identified two key insights. First, the power sector had an ageing workforce, with a median age of 48 years old – higher than the domestic average of 43 years old. Second, the power sector was also facing difficulties in attracting and retaining young Singaporeans.

The study led to the development of three key pillars to address this challenge, namely (i) establish an attraction, retention and development framework, (ii) embark on a sector-wide branding exercise, and (iii) adopt a coordinated approach to drive manpower efforts. On this foundation and through extensive consultations with the industry stakeholders, key initiatives were introduced to improve the manpower situation. This included the “Powering Lives” branding campaign to raise the profile of the sector and the establishment of the Energy Industry Scholarship to attract young engineering talents. Singapore had seen positive results with the median age of the workforce reduced from 48 to 40 years old in a span of 5 years.

Session 1: Setting the stage – Human Resource Strategies in the Energy Sector

Panellists:

- Mr Yoshihiko Kimata, Chairman of Osaka Gas Singapore
- Mr Peter Leong, Managing Director, Singapore Institute of Power and Gas
- Mr Preecha Pocatanaawat, Executive Vice President, Corporate Human Resources, PTT Public Company Ltd
- Ms Jennifer Loh Drysdale-Banks, Group Head, Human Resource, Sunseap Group
- Mr Mark Edmunds, Energy & Resources Leader, Southeast Asia, Deloitte

Moderator:

- Ambassador Michael W. Michalak, Senior VP, US-ASEAN Business Council



(from left) Amb Michael W. Michalak, Mr Yoshihiko Kimata, Mr Peter Leong, Mr Preecha Pocatanaawat, Ms Jennifer Loh Drysdale and Mr Mark Edmunds.

Disruptive trends have increased the urgency for the industry to build capabilities and capacity

The speakers identified disruptive trends in the energy sector that increased the urgency for the industry to build capabilities and capacity. The key message was that the industry needed to be flexible and adaptable in order not to be left behind. First, together with the general perception that the energy sector was not seen as a “sexy”

industry”, changing **demographics** such as ageing and decreasing populations would make it increasingly challenging to attract sufficient qualified people to join the industry in the future. Second, **technological advancements and digitalisation** provided both challenges and opportunities for the energy sector. If the workforce was able to adapt to new technologies, there were great opportunities to enhance operational efficiency. On the contrary, if they were less nimble, there was a high likelihood that they would in turn lose out to their more efficient competitors. Third, an increasing global emphasis on **environmental sustainability** meant that companies would need to constantly evolve their operations, business models and even the nature of their workforce. Finally, the growing importance of the **globalisation of employment** caused by the freedom of movement of skilled workforce would again provide both challenges and opportunities to companies. The key would be how they adapt or utilise this trend in shaping their future human resource strategies.

Importance of investment in education and training

The speakers shared on a broad range of strategies on recruiting and retaining manpower. This would include retention benefits and schemes as well as a strengthened recruitment process through digitalisation and usage of data. A key thread was the emphasis of investment in training and education. This involved a wide spectrum of skill sets ranging from keeping up with technological advancements in the industry, adopting new business and cooperative models and enhancing workers’ communication skills given the evolving and expanding nature of their work scope. Studies have also shown that investment in training yields good returns¹.

Government support is crucial for strengthening capabilities

There was agreement among the speakers that government support for the developing resilience in the energy sector workforce was critical. Speakers also shared the different models of partnership between the industry and the private sector, as well as with research and development institutions. This included the possibility of using Private-Public-Partnerships which was growing in popularity globally.

¹ An American Society for Training and Development (ASTD) study showed that companies that invested in learning outperform the market by more than 45 per cent, while companies who did not, under-performed by 22 per cent.

Session 2: The role of APEC in enhancing workforce resilience in the energy sector

Panellists:

- Mr Jesus T. Tamang, Director, Department of Energy, Philippines
- Mr Shinji Ishii, Director, Ministry of Economy, Trade and Industry, Japan
- Dr Alvin Yeo, Director, Industry Development, Energy Market Authority, Singapore
- Ir Harry H C Lai, Assistant Director, Electrical and Mechanical Services Department, Government of the Hong Kong Special Administrative Region
- Ms Elena Thomas-Kerr, Senior Advisor, Department of Energy, United States

Moderator:

- Dr Sanjayan Velautham, Executive Director, ASEAN Centre for Energy



(from left) Dr Sanjayan Velautham, Mr Jesus T. Tamang, Mr Shinji Ishii, Dr Alvin Yeo, Ir Harry H C Lai, and Ms Elena Thomas-Kerr.

Early engagement through education

Adopting a long-term approach, one key strategy to ensure a constant stream of qualified workers entering the energy sector is to engage the population from young

through the education system. The government would focus on students and start their interest in the energy sector while they are young. This was done through enhancing the school's syllabus, as well as provision of relevant sector-specific scholarships and internship programmes. The benefits of early engagement were multi-fold, such as (i) creating interest in energy sector developments which could aid in changing the public perception of the industry, (ii) creating awareness of the importance on energy conservation, and (iii) encouraging public discussions on domestic energy policies and programmes.

Enhancing diversity of the workforce

Acknowledging that the energy sector was traditionally dominated by men, the speakers noted the challenge of attracting women to enter the energy sector. This was an important aspect with regard to enhancing diversification of the workforce of the future. The speakers shared on the various initiatives to strengthen the industry's outreach to women as well as to profile women in Science, Technology, Engineering and Math careers. The government also had a crucial role to play in encouraging women to enter the energy sector through establishing relevant programmes and introducing enabling policies.

Comprehensive approach in developing attraction, retention and development frameworks

A comprehensive long-term approach was needed to strengthen the resilience of the energy sector workforce. A strong theme mentioned during this session was the importance of frameworks to address the challenges in attracting, retaining and developing the workforce. Support from the respective governments through the introduction of policies as well as legislative reforms was identified as an important pillar. Furthermore, the government could play a coordinating role in engaging key industry stakeholders such as companies and education institutes. This was to ensure that all the relevant parties were sufficiently consulted and the policies and strategies introduced by the government were aligned with the industries' need to bring about greater synergy.

APEC as a platform for collaboration

There was a general consensus that APEC provided a useful platform for economies to share their best practices and experiences. There was also interest in exploring intra-APEC exchange and internship programmes, tapping on current existing programmes within the APEC region.

**AGENDA FOR APEC ENERGY WORKFORCE RESILIENCE WORKSHOP
25 APRIL 2017, SINGAPORE**

Time	Event
0900 – 0915	Opening Remarks by Mr Bernard Nee, Deputy Chief Executive, Energy Market Authority, Singapore
0915 – 1030	<p>Session 1: Setting the stage – Human resource strategies in the energy sector</p> <p><u>Speakers:</u></p> <ol style="list-style-type: none"> 1. Mr Yoshihiko Kimata, Chairman, Osaka Gas Singapore 2. Mr Peter Leong, Principal, Singapore Institute of Power and Gas 3. Mr Preecha Pocatnawat, Executive Vice President, Corporate Human Resources, PTT Public Company Ltd 4. Ms Jennifer Loh Drysdale-Banks, Group Head, Human Resource, Sunseap Group 5. Mr Mark Edmunds, Energy & Resources Leader, Southeast Asia, Deloitte <p><u>Moderator:</u></p> <p>Ambassador Michael W. Michalak, Senior Vice-President, US-ASEAN Business Council</p>
1030 – 1045	Coffee Break
1045 – 1200	<p>Session 2: The role of APEC in enhancing workforce resilience in the energy sector</p> <p><u>Speakers:</u></p> <ol style="list-style-type: none"> 1. Mr Jesus T. Tamang, Director, Department of Energy, Philippines 2. Mr Shinji Ishii, Director, Ministry of Economy, Trade and Industry, Japan

3. **Dr Alvin Yeo, Director, Industry Development, Energy Market Authority, Singapore**
4. **Ir Harry Lai, Assistant Director, Electrical and Mechanical Services Department, Government of the Hong Kong Special Administrative Region**
5. **Ms Elena Thomas-Kerr, Senior Advisor, Department of Energy, United States**

Moderator:

Dr Sanjayan Velautham, Executive Director, ASEAN Centre for Energy