

# 附錄一

東亞暨西太平洋地區電力事業協會(AESIEAP)  
技術委員會(TC)第3工作小組

## 研究主題

「不同電業經營模式下之電價結構及設計機制」  
(*Electricity Pricing Structure and Design Mechanism for Various ESI Models*)

2009-2010 年研究計畫(全文)

**ASSOCIATION OF THE ELECTRICITY SUPPLY INDUSTRY OF EAST ASIA AND  
THE WESTERN PACIFIC (AESIEAP)**

**AESIEAP TECHNICAL COMMITTEE (TC)  
WORK GROUP 3: BUSINESS OUTLOOK AND STRATEGY FOR ESI**

**MICRO TOPIC 2: ELECTRICITY PRICING STRUCTURE AND DESIGN  
MECHANISM FOR VARIOUS ESI MODELS**

**TERMS OF REFERENCE (TOR)**

**1. Introduction**

The AESIEAP TC Executive Team Meeting in Kuala Lumpur on 18<sup>th</sup> February 2009 has identified Business Outlook and Strategy for ESI as one of the study macro topics for Work Group (WG) 3. Malaysia has been appointed as the WG 3 project leader to undertake the study with other member countries.

Under this topic of Business Outlook and Strategy for ESI, Work Group 3 at its inaugural meeting in Kuala Lumpur (6<sup>th</sup> October 2009) has agreed to undertake the study on the **Electricity Pricing and Cost Structure and Design Mechanism for Other Various ESI Models**.

**2. Objectives**

The objective of this study is to compile and analyse the information on the various ESI models, pricing and cost structure (as well as tariff design mechanism) of participating member countries. The scope of the study is as follows:

- To identify the differences (benchmark) in the costs of the ESI value chain (i.e. Generation (G), Transmission (T) and Distribution (D) (including Retail)) pricing structure and design mechanism of different ESI structures (e.g. Vertically Integrated Utilities (VIU), the Unbundled Electricity Supply Industries and various other ESI structures). Analysis to also include the cost of primary energy of the other various electric utilities/ESI models.
- To identify best practices and areas of improvement/recommendation on cost and technical efficiency (e.g. T&D losses (both technical and non-technical losses), Distribution SAIDI, Generation Unplanned Outage Rate) in the G, T and D (including Retail) Value Chain.

**3. Deliverables**

The following are the deliverables of the study:

- A database of:
  - Generation, Transmission and Distribution (including Retail) costs and pricing.
  - Pricing structure and tariff design mechanism

- Other related financial and technical data (e.g. subsidy, T&D losses, Generation Unplanned Outage Rate (UOR), Gen. Plant Efficiency, IPP power purchase price, fuel prices, regulated return, actual return, reserve margin etc.)
- A report on:
  - the comparative (benchmarking) analysis of the ESI value chain (i.e. G, T, and D (incl. Retail) pricing and cost structure (including tariff design mechanism and country specific tariff/subsidy policy).
  - the benchmarking to understand the best practices of achieving efficient G, T and D (incl. Retail) costs
  - on the comparative analysis with and without normalisation of subsidy and special features.

#### **4. Methodology**

- Reference persons for information gathering:
  - PLN – Sinthya Roesly/ Fahmi El Amruzi
  - MERALCO – Gilbert T. Orino/ Ronaldo R. Torres
  - TNB – Loo Kok Seng/ Abdul Malik Mohd. Jaafar
  - SP PowerGrid – Chan Hung Kwan
  - Taipower – Huang Shun-I
  - EGAT and MEA – Dr. Suthep Chimklai/ Ms. Nongnak Charoenpolpiriya
- Member countries reference persons will collate information via questionnaires and worksheets to be e-mailed to the Project Leader (TNB)
- Meetings will be held as avenues for discussion. Also, communications via e-mails.
- Study approach:
  - A database (in spreadsheet) of historical and/or current pricing and costing structure (by G, T and D, Retail)
  - Conduct comparative cost analysis with and without normalisation of subsidy and special features.
  - Conduct comparative analysis of pricing structure, tariff design and special features (e.g. subsidy etc.)

#### **5. Confidentiality of Information**

- Each party (i.e. members of this Working Group 3 (WG3) project)) shall at all times use its best endeavours to keep confidential and to procure that its employee and agent shall keep confidential any confidential information which it or they may acquire in relations to this project under the Terms of Reference (TOR) and shall not use or disclose such information except with the consent of that other party(s).
- The obligations of each of the party(s) contained in the earlier paragraph shall continue without limit in point of time but shall cease to apply to any information coming into the public domain.

#### **6. Project Leader and Members**

- Project Leader – Tenaga Nasional Berhad (Malaysia)
- Members – The project is open to all AESIEAP member countries/utilities
- The proceedings from the first meeting will be distributed to all AEISEAP member countries/utilities to seek for more participation. However, information and reports

pertaining to this study will only be made available to the participating member countries/utilities.

## 7. Timeline

- The study commences in September 2009 and will be completed by the end of 2010 (indicative).

## 8. Project Action Plan (to be finalised in WG3 meeting)

	<b>Description</b>	<b>Date</b>	<b>Responsibility</b>
1	Present project proposal to AESIEAP Technical Committee for recommendation	15 <sup>th</sup> Oct 2009	WG3 Project Leader
2	Present the project proposal to AESIEAP Council for approval	16 <sup>th</sup> Oct 2009	WG3 Project Leader
3	Develop draft survey questionnaire/template to be distributed to all	End of October 2009	WG3 Members - to be initiated by the Project Leader
4	Finalise template and survey questionnaire and e-mail to all member countries	End of November 2009	WG 3 Project Leader to distribute to all WG 3 members
5	Submit all inputs required (template and survey questionnaire) to Project Leader	End of January 2010	WG 3 Members to submit inputs required to WG 3 Project Leader
6	Consolidate inputs for comparative analysis	February 2010	WG3 Project Leader
7	Meeting to discuss on the consolidated input and initial draft report	March 2010	WG 3 members.
8	Review and comments on the draft report and analyses for submission to Project Leader	April 2010	WG 3 Members
9	Finalise the report	August 2010	WG 3 Project Leader
10	Meeting to finalise the report	November 2010	Tentative (as required)
11	Submission of Final Report	December 2010	WG 3 Project Leader

## 9. Contact Persons

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