

# ASEAN ENERGY COOPERATION

Robert Pritchard  
ResourcesLaw International

For over 40 years, progress in actually implementing energy cooperation amongst ASEAN members, as distinct from discussing its merits, has been isolated and slow. Recently, however, the commitment of ASEAN to open energy markets is acting as a catalyst for comprehensive action.

## Drivers for Change in ASEAN

There are four drivers for this open energy markets commitment: first, there is a growing goodwill amongst the expanded 10-nation ASEAN membership; second, there is a deepening alliance with China, Japan and Korea (“the ASEAN Plus 3 Energy Partnership”); third, there is a shared concern over energy security in the region; and, fourth, there is an increasing recognition of the vital importance of energy sustainability.

Of these four drivers, the concern over energy security appears to be the most powerful. At their 2004 meeting in Manila, Philippines, the ASEAN Plus 3 Energy Ministers acknowledged “the need to re-double our efforts to diversify sources of primary energy supply, in recognition of the expected increase of the region’s dependency on imported oil in the future.”

The present ten members of the Association of South East Asian Nations (ASEAN) are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam. In addition to dialogue taking place with China, Japan and Korea under the “ASEAN Plus 3” banner, there is dialogue with Australia and New Zealand under the headline “ASEAN Plus 3 with 2 Others”.

## The ASEAN Power Grid: The Pioneering Initiative in ASEAN Energy Cooperation

The concept of an ASEAN power grid has been in contemplation since ASEAN was first established. In 1981, ASEAN established a task force known as HAPUA (Heads of ASEAN Power Utilities and Authorities) to cooperate in setting up the ASEAN power grid, although not a great deal happened for a decade.

In the 1990s, the ASEAN power grid initiative began to build momentum. In 1992, the ASEAN Free Trade Area (AFTA) was established and in 1995, ASEAN decided to implement a program of energy cooperation, called the ASEAN Medium Term Program of Action on Energy Cooperation 1995-1999.

In 1997, the ASEAN Summit endorsed a plan to “establish interconnecting arrangements for electricity, natural gas and water within ASEAN through the ASEAN power grid and the Trans-ASEAN gas pipeline”.

## “ASEAN Vision 2020”

In 1998, the ASEAN Summit endorsed “ASEAN Vision 2020”, a plan to achieve an ASEAN economic region by the year 2020. ASEAN Energy Ministers also endorsed a conceptual planning framework for energy cooperation to be incorporated into the ongoing formulation of ASEAN Vision 2020.

## **The ASEAN Five-Year Plans for Energy Cooperation**

At their 1999 meeting, ASEAN Energy Ministers adopted an ASEAN Plan of Action for Energy Cooperation 1999-2004, a five-year plan covering the energy component of ASEAN Vision 2020. It involved, for the first time, the region-wide participation of all ten ASEAN members. One of its aims was, by 2004, to institute the policy framework and implementation modalities for the realisation of a Trans-ASEAN energy network covering both the ASEAN power grid and the Trans-ASEAN gas pipeline projects.

The ASEAN Centre for Energy (ACE) was established in 1999 in Jakarta, Indonesia. The Centre has done much to broaden the level of understanding amongst all ASEAN members of the common problems of developing markets and attracting investment in energy infrastructure. However, ASEAN's organisational resources for implementation of its five-year energy plans still remain quite stretched.

At their 2004 meeting, ASEAN Energy Ministers adopted a second five-year plan, the ASEAN Plan of Action for Energy Cooperation 2004 – 2009. The plan comprises six programme areas.

### **Programme Area 1: The ASEAN Power Grid (APG)**

The objective of this first programme is to facilitate the Implementation of the ASEAN Interconnection Master Plan and to further the establishment of a policy framework for ASEAN electricity networks.

ASEAN nations have abundant indigenous energy resources. There are large potential reserves of fossil energy sources as well as renewable energy which can be harnessed to generate electricity. HAPUA completed the ASEAN Interconnection Master Plan study in March 2003, identifying 14 interconnection projects. Although it is not feasible to fully integrate the power systems of all 10 ASEAN countries, there are 11 interconnection projects that can potentially be implemented up to the year 2020. Further optimisation studies are to be conducted to determine the delivery of cheap sources of energy to load centres within ASEAN and the economic operation and sharing of reserves.

Two interconnections are already operational. These are the Peninsular Malaysia-Singapore interconnection and the Thailand-Peninsular Malaysia Stage 1 and Stage 2 interconnections. The Vietnam-Cambodia interconnection is to be commissioned between 2005-2007 and the Thailand-Cambodia link by 2007. Three other projects are to be commissioned by 2009, and the others between 2009 and 2020.

A permanent HAPUA Secretariat was established in December, 2003 with a three-year rotating location. Indonesia is hosting the Secretariat in 2004-2007.

HAPUA is continuing to conduct feasibility studies on the interconnection projects. As the projects entail huge capital investment, which no single government can undertake on its own, the private sector will be encouraged to undertake the projects.

### **Programme Area 2: The Trans-ASEAN Gas Pipeline (TAGP)**

The objective of this second programme is to facilitate implementation and realisation of the TAGP to ensure greater economic value and security of gas supply.

The ASEAN Council on Petroleum (ASCOPE) is the lead agency for the implementation of the TAGP. ASCOPE formulated a Master Plan for the "Trans-ASEAN Gas Pipeline Infrastructure Project" in October 2000, indicating that there were 175 Tcf of proven and 94 Tcf probable natural gas reserves in the then seven ASCOPE member countries. Indonesia has the highest reserves with 90 Tcf proven and 42 Tcf probable.

The Master Plan highlighted that, without significant commercial gas discoveries in the near future, Thailand, Singapore and the Philippines would experience shortfalls. The region would increasingly be dependent on Indonesia for gas or would need to import supplies from outside the region.

A Memorandum of Understanding (MOU) on the TAGP was signed by the ASEAN Energy Ministers in July 2002. Under the MOU, member countries can initiate individual and/or joint studies, either on a bilateral or multilateral basis, to support and encourage the production, utilisation, distribution, marketing and sales of natural gas among member countries.

A new entity, the ASCOPE Gas Centre (AGC), is being established in Kuala Lumpur. In the near to medium term, the AGC will address harmonisation and standardisation of technical specifications and gas quality. Commercial issues identified in the MOU are to be pursued in consultation with the ASEAN Gas Consultative Council.

The AGC will also undertake joint techno-economic studies for the implementation of the TAGP and other gas-related projects. The AGC will develop a knowledge-management system for exchange of information on the natural gas industry and will develop an exchange programme to promote research. One of the studies to be conducted will concern marine-compressed natural gas (MCNG) as an alternative mode of transport for island demand centres.

### **Programme Area 3: Coal Utilisation**

The objective of this third programme is to cooperate and promote sustainable development and the utilisation of coal. The strategies to be implemented over the next five years are:

(a) Strengthening the Institutional and Policy Framework

The ASEAN Forum on Coal (AFOC) is to undertake an inventory of existing policies, institutional arrangements and regulations on coal in each member country.

(b) Promotion of Clean Coal Technology (CCT)

Coal suffers from the negative perception that it is not a "clean" fuel. It is common to ASEAN countries that strong opposition is met when coal-fired generating facilities are being constructed due to perceived pollution effects. Government and private developers are to work jointly for public acceptance of CCT.

(c) Promotion of Private Sector Investment

To promote private sector investment, AFOC will organise coal business forums at which the private sector will be presented with business opportunities. AFOC is also to conduct feasibility studies and make these available to prospective investors.

(d) Promotion of Intra-ASEAN Coal Trade

With the assistance of ACE, AFOC will establish a directory of coal specifications, producers and consumers in the ASEAN to be uploaded on the AFOC website. It will also organise a network of coal laboratories in ASEAN to improve standards of coal analysis. AFOC will conduct studies on existing and future coal flow in the region.

(e) Environmental Assessment of Coal Projects

AFOC will assist in the conduct of environmental impact assessment of coal projects. This assistance will be extended in particular to small-scale coal project entrepreneurs.

**Programme Area 4: Energy Efficiency and Conservation**

The objective of this fourth programme is to strengthen cooperation in energy efficiency and conservation through institutional capacity-building and increasing private sector involvement. Strategies will include:

(a) Information Sharing and Networking

This strategy is mainly a continuation and expansion of past information sharing and networking among ASEAN members and stakeholders.

(b) ASEAN Energy Standards and Labeling

This strategy is focussed on standard labels to promote awareness of energy-efficient products.

(c) Expansion of Private Sector Involvement

It is recognised that private sector involvement is critical to the successful implementation of plans and programmes for the sector. Enhanced dialogue and exchanges are to be undertaken on energy policy, through establishments of networks, fora, conferences and seminars with the private sector.

(d) Capacity Building

This is a new strategy being considered for the medium term.

(e) Promotion of Energy Services Company (ESCO) Business

Among the key actions to be implemented under this strategy are the development of measurement and verification protocols, the development of standard forms of contract; development of project management and institutional guidelines; development of energy saving potential indices (benchmarking); and E-commerce development for energy services.

(f) Promotion of Energy Efficiency in the Transport Sector

Actions envisaged include the sharing of information on energy efficiency policy and measures for the transport sector and related research.

### **Programme Area 5: Renewable Energy Utilisation**

The objective of this fifth programme is to promote the use of renewable energy and its technologies. Actions will include:

- developing a policy and institutional framework for renewable energy development
- promoting the development and contribution of renewable energy in energy supply
- strengthening information networking
- promoting intra-ASEAN cooperation on ASEAN-made products and services
- promoting the utilisation of biomass-based cogeneration technology and
- promoting biofuels.

### **Programme Area 6: Regional Energy Policy and Planning**

The objective of this sixth programme is to enhance national and regional energy policy analysis and planning towards sustainable development. Strategies are to include:

- (a) Establishing an Energy Policy and Supply Security Information Sharing Network

Continuous updating will be required of the ASEAN Energy Database as well as member countries' energy policies and plans.

- (b) Capacity Building In Energy Policy Planning, Supply Security Assessment and Database Development

Regular training, joint studies and technical exchanges in energy policy analysis, database maintenance and supply security assessment will be conducted. These will be carried out through technical exchange programs.

- (c) Incorporation of Environmental And Sustainable Development Concerns In Regional Policy Formulation
- (d) Analysis and Preparation of a Regional Energy Policy and Outlook
- (e) Strengthening of Collaboration/Cooperation among National and Regional Institutions in Energy Policy and Planning
- (f) Addressing Energy Issues Pertaining to ASEAN Dialogue Partners/Other Relationships
- (g) Studies on Evolving Regional Energy Policy Reforms and Issues
- (h) Monitoring and Evaluation on the Progress of the ASEAN Plan of Action for Energy Cooperation 2004-2009

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