

## **ASEAN Plan of Action for Energy Cooperation 1999-2004**

Endorsed by

Senior Officials Meeting on Energy of  
the Seventeenth ASEAN Ministers on Energy Meeting  
1–2 July 1999, Bangkok, Thailand

and

Adopted by

The Seventeenth ASEAN Ministers on Energy Meeting  
3 July 1999, Bangkok, Thailand

Table of Contents

- [EXECUTIVE SUMMARY](#)
- [LIST OF ABBREVIATIONS](#)
- [INTRODUCTION](#)
- [GENERAL OBJECTIVES](#)
- [PROGRAMME AREAS](#)
- [IMPLEMENTING ARRANGEMENTS](#)
- [ASEAN Institutions](#)
- [Cooperation With Dialogue Partners](#)
- [International Development Organisations](#)
- [Private Sector](#)

### **Executive Summary**

This document serves as a blueprint for ASEAN cooperation in the field of energy for the period 1999 to 2004, the first phase of implementation of the ASEAN Vision 2020 as prescribed by the Hanoi Plan of Action of 1998.

This plan covers the energy component of the Hanoi Plan of Action which directs the ASEAN towards the following objectives for 1999–2004: (1) to ensure security and sustainability of energy supply, efficient utilisation of natural energy resource in the region and the rational management of energy demand, with due consideration of the environment; and (2) to institute the policy framework and implementation modalities by 2004 for the early realisation of the Trans-ASEAN energy networks covering the ASEAN Power Grid and the Trans-ASEAN Gas Pipeline Projects as a more focused continuation of the medium-term programme of action (1995–1999).

Six programme areas have been identified as the focus for the plan of action, namely: (1) ASEAN Power Grid; (2) Trans-ASEAN Gas Pipeline; (3) Energy Efficiency and Conservation; (4) New and Renewable Sources of Energy; (5) Coal; and (6) Regional Energy Outlook, Energy Policy and Environmental Analysis. Each programme area is defined with specific objectives, strategies and actions summarised in a matrix for easy reference (Annex 1). Each of the six programme areas is matched with a corresponding subsector organisation of the ASEAN that is committed to principally implement the required actions/projects. The organisations are: (1) the ASEAN Council on Petroleum (ASCOPE), (2) the Heads of ASEAN Power Utilities/Authorities (HAPUA), (3) the Energy Efficiency and Conservation (EE&C-SSN) Subsector Network, (4) the New and Renewable Sources of Energy Subsector

Network (NRSE-SSN) Subsector N, (5) the ASEAN Forum on Coal (AFOC), and (6) the ASEAN Centre for Energy (ACE). The detailed work programme, fund sourcing, budget and other implementing arrangements shall be prepared by these organisations based on the plan of action approved by the ASEAN Senior Officials Meeting on Energy (SOME) and the ASEAN Minister's of Energy Meeting (AMEM) (Annex 2).

ACE is also tasked to facilitate and technically coordinate the work of the other implementing organisations such as in the conduct of project preparation, feasibility studies, sourcing of funds and other services that the member countries, through SOME and the ASEAN Secretariat, may consider necessary. The SOME, jointly with the ASEAN Secretariat through ACE, shall coordinate, manage and monitor the implementation of this plan. The ASEAN Secretariat shall further provide the program coordination and other requirements with the other ASEAN coordinating bodies and the ASEAN dialogue partners.

## LIST OF ABBREVIATIONS

AAECP	ASEAN-Australia Economic Cooperation Programme
ACE	ASEAN Centre for Energy
ADB	Asian Development Bank
AEBF	ASEAN Energy Business Forum
AEEMTRC	ASEAN-EC Energy Management Training and Research Centre
AFOC	ASEAN Forum on Coal
AMEM	ASEAN Ministers on Energy Meeting
APEREC	Asia Pacific Energy Research Centre
APG	ASEAN Power Grid
APSA	ASEAN Petroleum Security Agreement
ASEAN-EC Cogen	ASEAN-European Commission Cogeneration
ASCOPE	ASEAN Council on Petroleum
ASEAN	Association of Southeast Asian Nations
AusAID	Australian Agency for International Development
BCM <sub>Y</sub>	Billion cubic metres per year
CASE	Centre for the Application of Solar Energy
CCOP	Committee for Coordination of Joint Prospecting for Mineral Resources in Asian Offshore Areas
CCT	Clean Coal Technology

EE&C	Energy Efficiency and Conservation
EE&C SSN	Energy Efficiency and Conservation Subsector Network
FAO-RWEDP	Food and Agriculture Organisation – Regional Wood Energy Development Programme
GEF	Global Environmental Fund
GW	Gigawatts
GMS	Greater Mekong Subregion
HAPUA	Heads of ASEAN Power Utilities and Authorities
HSE	Health, Safety and Environment
IEA	International Energy Agency
IUEP	Integrated Urban Energy Planning
MARKAL	Market Allocation Mechanism Model
MRC	Mekong River Commission
NRETs	New and Renewable Energy Technologies
NRSE	New and Renewable Sources of Energy
NRSE SSN	New and Renewable Sources of Energy Subsector Network
PAECE	Programme of Action for Enhancement of Cooperation in Energy
PRESSEA	Promotion of Renewable Energy Systems in Southeast Asia
SOME	Senior Officials Meeting on Energy
TAGP	Trans-ASEAN Gas Pipeline
UN-ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNIDO	United Nations International Development Organisation
USAID	United States Agency for International Development
WB	World Bank
WEC	World Energy Council

## INTRODUCTION

ASEAN Member Countries have engaged in cooperation programmes, in the field of energy, through a series of plans of action in the 1990s, arising from the Fourth and Fifth ASEAN Summits. The ASEAN Medium Term Programme of Action on Energy Cooperation

(1995–1999) was developed following the review of the Programme of Action for Enhancement of Cooperation in Energy (PAECE) endorsed in 1991. This medium term programme, adopted in October 1995, took into consideration a focused approach to ASEAN cooperation in the following areas: Electricity, Oil and Gas, Coal, New and Renewable Sources of Energy, and Energy Efficiency and Conservation, among others, through the established ASEAN coordinating bodies in each of these five cooperation areas, and in further pursuance of the Agreement of ASEAN Energy Cooperation of 1986. The importance of ASEAN energy cooperation was further underscored in the 1995 Bangkok Summit Declaration, which stated “*ASEAN shall ensure greater security and sustainability of energy supply through diversification, development and conservation of resources, the efficient use of energy, and the wider application of environmentally sound technologies*”. This was reinforced in the **ASEAN Vision 2020**, arising from the ASEAN Second Informal Summit in December 1997 in Kuala Lumpur, and calling for cooperation activities to “*establish interconnecting arrangements for electricity, natural gas and water within ASEAN through the ASEAN Power Grid and a Trans-ASEAN Gas Pipeline, and promote cooperation in energy efficiency and conservation, as well as the development of new and renewable energy resources*”. The Hanoi Plan of Action of 1998 provided the direction towards this vision during the period 1999–2004. This direction is regarded as the general objective of the more detailed plan of action in this document.

This document is a product of deliberation by practically all who are concerned with the formulation, financing, implementation and management of international cooperation in energy in the ASEAN. The first version entitled ““Integrated Implementation Programme on ASEAN Energy Cooperation 1999–2004” was prepared by the ASEAN–EC Energy Management, Training and Research Centre (AEEMTRC) in cooperation with the ASEAN Secretariat in mid–1998. That version was circulated for about four months among the senior official’s of energy of the ASEAN member countries until the Expert’s Group Meeting that reviewed the document was held on November 24–25, 1998 in Jakarta, Indonesia. A special Meeting of the Senior Officials Meeting on Energy held on November 26, 1998, affirmed the recommendations of the Expert’s Group, as follows:

1. Change the title of the document to “ASEAN Plan of Action for Energy Cooperation 1999–2004”,
2. Merge the two programme areas: energy and environment, and policy formulation;
3. Energy security and oil should not be treated as a separate programme area;
4. Urge the ASEAN specialised bodies like ASCOPE, HAPUA, AEEMTRC, AFOC and the ASEAN subsector networks under SOME to further study the plan of action and submit to ACE the revised formulation by April 1999; and
5. ACE to finalise the document in time for consideration and adoption during the SOME/17th AMEM in July 1999.

To ensure integration of all inputs from the specialised ASEAN bodies and to establish ownership of the various portions of the plan, ACE in collaboration with Singapore’s Public Utilities Board and the ASEAN Secretariat conducted a Planning Workshop on the plan of action on 19–20 April, 1999. Representatives of the member countries and the

subsectoral ASEAN bodies were involved. After further review by the specialized bodies the resulting draft goes to the Chairman and members of SOME one-month prior to the SOME/AMEM meetings.

In essence, this document is a product of several iterations consistent with the intent that the herein plan of action shall serve as a guide for the next six years in the identification, formulation and implementation of specific projects on energy cooperation of the ASEAN. It is understood that after approval of this document by SOME and AMEM, the specialised subsectoral ASEAN bodies shall take their respective responsibilities in the execution of this ASEAN Plan of Action for Energy Cooperation 1999–2004.

## **GENERAL OBJECTIVES**

As provided for in the Hanoi Plan of Action of 1998, the energy sector of ASEAN shall have the following objectives for 1999–2004:

1. Ensure security and sustainability of energy supply, efficient utilisation of natural energy resource in the region and the rational management of energy demand, with due consideration of the environment.
2. Institute the policy framework and implementation modalities by 2004 for the early realisation of the Trans-ASEAN energy networks covering the ASEAN Power Grid and the Trans-ASEAN Gas Pipeline Projects as a more focused continuation of the medium-term programme of action (1995–1999).

## **PROGRAMME AREAS**

Following the above objectives and providing continuity with the 1995–1999 medium-term programme of action on energy, the ASEAN Plan of Action on Energy Cooperation 1999–2004 is focused on six (6) programme areas, as follows:

- [Programme Area No. 1: ASEAN Power Grid](#)
- [Programme Area No. 2: Trans-ASEAN Gas Pipeline](#)
- [Programme Area No. 3: Coal](#)
- [Programme Area No. 4: Energy Efficiency and Conservation](#)
- [Programme Area No. 5: New and Renewable Sources of Energy](#)
- [Programme Area No. 6: Regional Energy Outlook, Energy Policy and Environmental Analysis](#)

As adopted by the Special Meeting of the ASEAN Senior Official's Meeting on Energy on 26 November, 1998 the number of programme areas have been reduced to six (6) from the original eight (8). This was made possible by combining two programme areas into Programme Area No.6: Regional Energy Outlook, Energy Policy and Environmental Analysis as recommended by the Experts Group Meeting on the Integrated Implementation Programme on ASEAN Energy Cooperation (1999–2004), 24–25 November, 1998. The proposed programme area on Energy Security and Oil was removed since the Expert's Group noted that the issue of energy security had been incorporated in all the other programme areas such as the TAGP, APG, NRSE, EE&C and Coal; while the issue on oil sharing had been properly taken care of under the ASEAN Petroleum Security Agreement (APSA) under the aegis of ASCOPE.

## **IMPLEMENTING ARRANGEMENTS**

SOME jointly with the ASEAN Secretariat, through the ASEAN Centre for Energy (ACE) shall coordinate, manage and monitor the implementation of the Plan of Action. In particular, ACE shall provide technical coordination, as well as facilitate the task of the implementing organisations such as in the planning and fund sourcing, among others. The ASEAN Secretariat shall be responsible for programme coordination and other requirements with the other ASEAN coordinating bodies and the ASEAN dialogue partners. The implementing organizations or the energy subsector organisations are:

1. HAPUA – Heads of Power Utilities/Authorities;
2. ASCOPE – ASEAN Council on Petroleum;
3. AFOC – ASEAN Forum on Coal;
4. EE&C–SSN – Energy Efficiency and Conservation Subsector Network
5. NRSE–SSN – New and Renewable Sources of Energy Sub–Sector Network; and
6. ACE – ASEAN Centre for Energy
7. AEBF – ASEAN Energy Business Forum
8. The relationship of the various ASEAN organisations is depicted in Annex 2.

As regards the implementation of the ASEAN Power Grid and the Trans–ASEAN Gas Pipeline, the Special Meeting of SOME on November 26, 1998 agreed to establish a mechanism for dialogue, consultation and exchange of information between ASCOPE and HAPUA for the development of integrated ASEAN Energy Grid. In this context, the Meeting tasked HAPUA and ASCOPE to submit the proposed modality for consideration in the SOME/17th AMEM. Subsequently, this issue was discussed during the Planning Workshop on the ASEAN Plan of Action for Energy Cooperation 1999–2004 on April 19–20, 1999. While a proposed modality of actions has been proposed by ASCOPE to HAPUA, the latter postponed further discussions on the issue since the member of HAPUA have not yet given their comments on the said modality. ASCOPE and HAPUA agreed to continue consultations to pursue the issue.

## **ASEAN INSTITUTIONS**

Each programme area of the ASEAN Plan of Action for Energy Cooperation 1999–2004 will be handled respectively by the appropriate energy subsector organisation of ASEAN. ACE shall further facilitate the task of the other ASEAN energy subsector organisations, such as in planning, fund sourcing and technical coordination. The division of tasks and institutional arrangements under this plan of action are clearly defined in following sections:

### **ASEAN Power Grid**

This programme area will be handled by the Heads of ASEAN Power Utilities and Authorities (HAPUA). Towards the realisation of the electricity interconnection projects, several implementation modalities have already been established between and among project partners. The project partners are responsible for the management, coordination, evaluation and implementation of interconnection projects while HAPUA provides

technical guidance. So far, the approach has primarily been on a project by project basis. Later on, as the individual electricity networks are linked to form part of the APG, a comprehensive regional perspective on the institutional responsibilities will be worked out.

### **Trans-ASEAN Gas Pipeline**

The implementation of this project is the direct responsibility of the ASEAN Council on Petroleum (ASCOPE) through the auspices of the ASEAN Energy Ministers. ASCOPE will operationalise in 1999 the Trans-ASEAN Gas Task Force which will eventually implement the TAGP plan of action in collaboration with national focal points and relevant institutions, particularly ACE and the ASEAN Secretariat to coordinate and closely monitor the approved activities of the action plan. The Task Force is responsible for the successful execution and conclusion of some of the actions entrusted to them by ASCOPE. Likewise, the Task Force will be responsible for advising ASCOPE and other relevant project partners including the private sector on collaborative activities and follow-up actions pertaining to specific strategy and action.

### **Coal**

The newly established ASEAN Forum on Coal (AFOC), formerly the ASEAN Coal Subsector Network will implement the action plan on coal. ACE shall provide technical support and continue to participate in the planning and implementation of the plan of action. The participation of the private sector shall be encouraged to suggest projects where the public authorities could help in the facilitation of private investments. Initially, the Forum will be public sector-led until such time that its participants realise the need for it to become a full pledged organisation established through private sector initiatives.

### **Energy Efficiency and Conservation**

The Energy Efficiency and Conservation Subsector Network, in close coordination with ACE, and national focal points of all ASEAN Member Countries will spearhead the implementation of the action plan. The participation of the AEBF and the private sector shall be sustained in order to involve commercial and business entities in the deliberations of possible energy efficiency projects in the region.

### **New and Renewable Sources of Energy**

The New and Renewable Sources of Energy Subsector Network shall lead in the realisation of the action plan. To develop a regional perspective in the development, promotion and commercialisation of renewable energy technologies, close working relationship shall be forged with ACE and the private sector. Likewise, the Network shall tap the AEBF as a coordinative platform, at regional level, that should result to the promotion and participation of the private sector in renewable energy business. Initially, two renewable energy projects of ACE, namely; the Promotion of Renewable Energy Systems in Southeast Asia (PRESSEA) and the ASEAN Joint Minihydro Programme will be implemented with the active participation of the Network.

### **Regional Energy Outlook, Energy Policy and Environmental Analysis**

ACE will spearhead the implementation of the action plan with the active involvement of ASEAN national focal points. Such involvement should result in the promotion of regional

outlook researches and conduct of policy and environmental studies. One project that will address this concern is the ASEAN–Australia Energy Cooperation Programme (AAECP): Phase 3 on “Energy Policy and Systems Analysis Project” to be hosted by ACE. The project will establish regional and national project committees to coordinate project activities particularly in institutionalizing the use of MARKAL planning software.

## **COOPERATION WITH DIALOGUE PARTNERS**

ASEAN welcomes cooperation with Dialogue Partners for the implementation of this energy action plan. This document shall be used as guide in identifying the areas of cooperation.

At present the most important dialogue partners of the ASEAN in the energy sector is the EU. This follows 10 years of EU’s strong presence through the ASEAN–EC Energy Management Training and Research Centre (AEEMTRC). Most of the programmes pursued by this institution are being continued by ACE, AEEMTRC’s successor organization. On–going projects are: 1. Joint ASEAN Minihydro Programme; 2. Promotion of Renewable Energy Systems in Southeast Asia; and 3. ASEAN–EU Advisory Panel on Energy.

In the pipeline are: 1. ASEAN Power Interconnection Programme/Masterplan Study; 2. Clean Coal Technology for Rural Electrification; 3. East Asian Growth Area Village Electrification Programme; and 4. 1999–2000 ACE Programme for Unspent AEEMTRC Fund.

With Switzerland, a non–EU country, a cooperation project is on–going in the form of technical assistance for the development and application of financing instruments for the Joint ASEAN Minihydro programme.

With Australia an ASEAN Dialogue Partner, the project entitled AAECP Phase 3: Energy Policy and Systems Analysis Project started in March 1999 under the ASEAN–Australia Cooperation Programme.

To fully implement the strategies and actions required in this plan, efforts are being made to encourage energy cooperation with more dialogue partners. Project proposals are now being prepared for submission to the USA, Norway and Japan after preliminary discussions with relevant authorities in those countries.

## **INTERNATIONAL DEVELOPMENT ORGANISATIONS**

The specialized bodies of the ASEAN in the energy sector are encouraged to develop and promote collaborative activities with international development organisations for the implementation of their respective concerns.

Established linkages with international energy organisations such as APERC, IEA, WEC and CASE should be continued and enhanced, if necessary, particularly to ensure that the programme of the ASEAN energy sector is at pace with those of neighboring regions and the world. This goes for various UN organisations with activities in energy involving ASEAN such as ESCAP, MRC, CCOP, UNEP, UNIDO, and FAO. The development financing institutions, such as WB, ADB and the national development banks are indispensable since they are the principal sources of funding for most of the projects implementing the plan. Linkages should also be nurtured with agencies specialized in the promotion /



implementation of international agreements affecting energy such as GEF, the IAEA, UNCLOS, and others.

## **PRIVATE SECTOR**

Participation of the private sector within and outside ASEAN is crucial in the sourcing of the vast technological and financial requirement of the action plan. This is partly addressed by the structural arrangement of ASEAN energy subsector organisations where private entities are accommodated in their membership and management. The AFOC and AEBF are well ahead in this direction. The NRSE and EE&C Subsector Networks are likely to catch up soon.

On the part of the private sector from outside ASEAN, involvement in the implementation of this action plan can be achieved by participation in the events of the AEBF or the investment and business forums organised by the subsector organisations. For the private sector in the EU, involvement in the ASEAN–EU Advisory Panel on Energy is the most effective way in getting involved with activities generated by this action plan. For those in other dialogue partners or countries, the existing business councils, such as the ASEAN–Australia Forum and the ASEAN–Japan Forum, can be important venues in gaining access to the investment and technological needs of the plan. To facilitate access of the private sector to any activity in relation to the implementation of this plan, the ASEAN Secretariat and the recently established ASEAN Centre for Energy (ACE) is so situated that proper linkages with any of the specialised organisations implementing specific portions of the plan can be established with ease.