

A Background Paper on Energy Issues for the 2nd East Asia Summit

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EXECUTIVE SUMMARY

S.1 ENERGY SECURITY

The key issue for the EAS forum is to identify areas where there are likely to be significant economic gains from regional information sharing and policy cooperation. There are two important features of the EAS forum that may inform this process:

- **The EAS forum represents a geographic region** — the EAS forum, since it represents sixteen countries within a geographic region, may provide the potential for joint net benefits from policy cooperation that would not be available within either the smaller south-east Asian region represented by ASEAN or the larger Asia-Pacific region represented by APEC. For example, in the likelihood of a natural disaster that results in extensive damage to energy infrastructure, the EAS forum potentially provides greater scope to offer cross-border assistance in the region. The EAS forum also provides opportunities to facilitate increased integration of energy markets in the region.
- **Membership of India in the EAS forum** — all EAS economies are members of other relevant major international forums, but India's participation is limited to the AP6. India is the third largest economy in the region and energy consumption is expected to increase strongly over the longer term.

In assessing the role of the EAS forum in energy issues, it will be important to avoid the costs associated with unnecessary duplication of effort in participating in several cooperative arrangements, while utilising the opportunities for initiating cooperation between economies in the region. An option may be to utilise established administrative processes, such as those in place in the ASEAN Secretariat, to coordinate activities in the EAS forum in consultation with other relevant international organisations.

The world oil market remains the major energy security risk in the region. Oil is an important energy requirement in all EAS economies and is particularly important for transport where there are limited alternative technologies (or substitution possibilities). The Middle East and Africa — regions where geopolitical risks are relatively high — are likely to become more important sources of world oil production over the medium to longer term, increasing energy security risks over time. Diversification of the fuel mix in transport would enhance regional and world energy security, potentially reduce air pollution from this sector and contribute to conserving world oil resources so they may be utilised over a longer time frame than would otherwise be the case.

Possible strategies for initiating cooperation in the EAS region include extending energy security policy initiatives in other key international forums that would be relevant to a

forum that includes, most notably, India. Specific areas for cooperation on energy security issues in the EAS forum include the following:

- **facilitating regional policy cooperation** — in general, the EAS forum provides increased opportunities for regional information sharing and policy cooperation, including emergency preparedness measures, and identifying and assessing options to increase regional energy security over the longer term;
- **integrating regional energy markets** — continue progress in integrating regional energy markets through electricity and gas network interconnections and facilitating other energy trade linkages;
- **reducing impediments to investment in energy markets** — identify and assess options to reduce, or remove, impediments to investment in energy supply projects including exploration for energy resources, production, processing, distribution, transport and storage facilities, and provide regulatory structures to encourage the development and deployment of clean energy technologies (including the reduction or removal of energy subsidies);
- **stable, transparent and effective policy setting** — reduce the risks in both public and private investment projects by ensuring there is a stable, transparent and effective policy setting;
- **physical protection of energy infrastructure and the related work force** — reduce the risks in both public and private investment projects by ensuring there is adequate physical protection of energy infrastructure and the related work force from damage associated with, for example, civil unrest;
- **research and development** — the EAS forum provides scope to increase regional linkages to conduct relevant and timely research into new technology options; from an energy security perspective, an important aspect of research and development is to investigate low cost low emission transport technology options for China and India that will also be relevant to other economies in the EAS region;
- **technology adoption** — reduce, or remove, impediments to the adoption of new technologies in the energy sector, particularly transport.

In addition, the EAS forum has a potentially useful role in facilitating joint activities in research and development, and associated technology adoption, that allows EAS economies — notably, China, India, Indonesia and Australia — to utilise coal resources while addressing negative health and environmental impacts. More broadly, given the important intraregional linkages in coal and gas trade, there are strong interests in cooperation among EAS members in these areas.

S.2 NEW AND RENEWABLE ENERGY

Accelerating the commercialisation and diffusion of renewable energy technologies in the EAS region can be facilitated through cooperation between governments, industry and research organisations. Areas of possible cooperation include information sharing through continued engagement in APEC, ASEAN, G20 and the Asia-Pacific Partnership on Clean Development and Climate (AP6) in areas of renewable energy, engagement with multilateral organisations such as the Asian Development Bank and World Bank, and engagement with the International Organisation for Standardisation in the areas of renewable energy product development, installation and maintenance.

Specific strategies to initiate cooperation in the area of new renewable energy technology development and diffusion include:

- **Resource mapping** — Identify areas of potential for new renewable energy in the EAS region by establishing a database containing reliable regional data on the

renewable energy resource base. The provision of comprehensive renewable energy resource data is important in helping the region identify the potential for renewable energy, and will help in identifying areas of complementary interests between individual EAS member economies.

- **Increase skill base** — Augment the skill base for developing renewable energy technologies in individual EAS economies through exchange of information on technology development. This could be achieved through dialogues and consultation workshops, training courses, study tours and exchange of visits of technical experts on renewable energy, and utilising the internet to establish research networks to diffuse information on renewable energy.
- **Protect intellectual property rights** — Improve the regulatory frameworks for the protection of intellectual property rights to enhance the development of renewable technology and technology transfer through cooperation.
- **Partnering in demonstration projects** — Consider partnerships between EAS economies in funding demonstration projects in areas of new renewable energy technology of mutual interest. Demonstration projects are a significant step toward the commercialisation of new technologies, and sharing the risks over a group of economies lowers the cost of undertaking these projects.
- **Standardise** — Establish an institution that reviews standards applying to renewable energy technology in the region including product development and operation and maintenance, and that engages with the International Organization for Standardization and local standards boards. A common set of standards in product development and operation and maintenance across the region would help renewable energy technology developers commercialise their product.
- **Enhance trade in manufactured components** — Many new renewable energy technologies incorporate advanced manufactured components. Establishing and maintaining liberalised trade regimes between EAS economies for these components will enhance the prospects for a regional development of renewable energy technology components and parts.
- **Better utilise the Clean Development Mechanism** — Establish an institution within the EAS region that facilitates the uptake of Clean Development Mechanism (CDM) opportunities under the Kyoto agreement through sharing of experiences between countries that have successfully implemented CDM projects. In addition, capacity building in this context can be fostered by establishing information networks between eligible sponsors, and EAS developing countries.
- **Foster competitive markets** — Reducing consumer energy subsidies will create a “level playing field” for the introduction of new energy technologies.
- **Enhance renewable energy grid connectivity** — As electricity grids become more regionalised through interconnection points, there is scope for cooperation in establishing a standardised set of arrangements for the integration of electricity from new renewable energy generators into the grid.

S.3 ENERGY EFFICIENCY AND CONSERVATION

Specific strategies to initiate cooperation in the area of Energy Efficiency and Conservation (EE&C) include:

- **Statement of importance of EE&C** — a statement from the EAS forum that acknowledges the importance of EE&C and establishes an EE&C policy goal for members.
- **Promote Standards and labels** — Standards and labels are widely acknowledged as an effective means to improve energy efficiency. A number of frameworks/initiatives already exist within the region which can be leveraged to facilitate cooperation among EAS economies and encourage world's best design and practice. These include:
 - Energy Standards Information System (ESIS)
 - Renewable Energy and Energy Efficiency Partnership (REEEP): and
 - AP6 Power Generation and Transmission Task Force.
- **Harmonise standards** — Harmonising standards across EAS members promotes opportunities for scale economies to be achieved in the manufacture and trade in appliances. Leveraging existing initiatives across the EAS region will be important to minimising the costs associated with this activity.
- **Evaluating progress and performance** — Accurate and detailed data on energy use is essential to measuring the effectiveness of policy measures. Measuring progress (toward policy targets) and the cost of measures is also critical to evaluating performance. A number of energy data initiatives exist which cover parts of the EAS region (ASEAN, APEC, IEA) and cover both primary data collection and energy indicators analysis.
 - Commission a collaborative study to examine how and why particular EE&C programmes succeed and disseminate the results widely to all EAS members;
 - Encourage EAS members to fully participate in existing energy data and analysis activities occurring within the region, including in ASEAN, APEC and the IEA; and
 - Find a means to engage India in these cooperative energy data initiatives.
- **Promote conservation, waste and recycling** — Establish a cooperative initiative to directly (and separately) encourage energy conservation, waste and recycling.
- **Facilitate technology development and transfer.**
 - Leverage existing frameworks (such as within ASEAN and APEC EWG forums) to deepen cooperation and collaboration between member economies in areas of technology research, development and demonstration.
 - Identify and implement a small number of flagship projects which can be completed in a timely manner to establish a record of success for the EAS and provide a platform for future progress.
- **Information exchange on EE&C policy and practice** — EE&C policy and practice is a rapidly evolving area. Practitioners will benefit from access to the experience and expertise of others.
 - Host an international conference in the EAS region on regional aspects of EE&C policy and practice. The conference should be a collaboration of relevant national or international agencies in the region.
 - Promote professional exchanges. The exchange of information between experts could be encouraged through short term placements, study-tours or visits.

- Additional opportunities exist to exchange information among members by leveraging existing networks established under the auspices of the APEC EWG, including the EWG Expert Group on Energy Efficiency and Conservation.