

Energy Investment Report: Facilitating Energy Investment in the APEC Region

At the 5th APEC Energy Ministers' Meeting in July 2002, Ministers directed the EWG "to explore mechanisms for working more closely with financial institutions to facilitate infrastructure development within the region".¹ This direction was reinforced by APEC Economic Leaders in October 2003 who, in agreeing to accelerate implementation of the APEC Energy Security Initiative through the *APEC Action Plan to Enhance Energy Security*, called on the EWG "to work with the private sector and financial institutions to facilitate greater investments in clean and more efficient energy infrastructure and technologies."

In responding to these directions, the EWG convened three workshops in 2004 that focused on identifying ways to facilitate financing of energy infrastructure, energy efficiency and renewable energy projects, with the EWG Business Network (EBN) supporting the hosting of the energy infrastructure workshop. Representatives from financial institutions, the private sector, NGOs and government agencies from throughout the APEC region joined EBN and EWG Members at these workshops:

- Financing Energy Efficiency Projects, Melbourne, Australia, 23-24 February 2004;
- Financing Energy Infrastructure, Hong Kong, China, 19 March 2004; and
- Financing Renewable Energy Projects, Honolulu, Hawaii, USA, 12-13 May 2004.

At the workshops, participants heard perspectives from financial institutions, business, and government representatives, with participants discussing key issues such as investment needs, barriers and best practice examples for overcoming barriers. In moving towards best practice, the energy efficiency and renewable energy workshops identified a range of recommendations for future EWG activities.

Following the Financing Energy Infrastructure Workshop the EBN developed, with the assistance of workshop participants and EWG Members, best practices for financing energy infrastructure projects. These 'Ten Priorities for Financing Energy Infrastructure Projects within the APEC Region' will form the basis of the EBN's presentation to Energy Ministers at the EMM6 government-private sector dialogue.

Market Needs and Benefits of Investment

By 2020, total gross domestic product in APEC is expected to double and energy demand in the APEC economies is forecast to grow by 60 percent. These projections highlight the need for significant investments in energy infrastructure and an economic and environmental imperative to rationalize energy use through reducing energy demand and energy intensity.

Public funds will not be sufficient to meet these energy requirements. To address these funding needs, private capital must be mobilized and the risks of investment in

¹ Declaration of Fifth Meeting of APEC Energy Ministers, *Fostering Regional Energy Cooperation: Setting a Long Term Vision and Implementing Short Term Actions*, July 2002.

infrastructure development and clean energy technology commercialization reduced. Closing this gap between project development and financing will entail the formation of public-private partnerships to deal with the risks, costs and uncertainties surrounding cleaner, more efficient investments.

Significant reductions in the costs, as well as dramatic improvements in performance and reliability, are making cleaner, more efficient technologies commercially viable for a variety of grid and off-grid applications today. Moreover, the benefits of investment in cleaner and more efficient infrastructure development are manifold, including local economic development, increased energy security, reduced health and environmental impacts, improved trade balances, and increased agricultural production. Development of locally-based renewable energy resources can provide greater energy independence. Energy efficiency improvements can reduce the need for investments in new power generation, increase the competitiveness of industries by reducing production costs, and help governments reduce their operating expenses.

Barriers to Implementation

Despite these benefits, comparatively little financing of these energy projects and technologies is taking place in the APEC region relative to their market potential. Under current market conditions, there are substantial barriers that stand between financing and project development (the project-finance gap).

Risk is a key barrier for energy investment generally, including completion/implementation risk, operating risk, economic and market risk (higher or fixed costs, competitiveness of rate structure), financial risk (inflation, foreign exchange rate and interest rate fluctuations), political/institutional risk (political instability, expropriation), and force majeure.

Efficiency and renewable investments involve risk profiles that are outside traditional financial focus. The lack of recognized financial structures for these projects only compounds the problem. Smaller scale projects often fall below the necessary project size to generate sufficient deal flow to attract investor interest, entailing high capital and transaction costs compared to large-scale conventional energy projects.

WORKSHOP RECOMMENDATIONS

The workshop participants recognized that in order to establish sustained markets for clean, more efficient energy technology and infrastructure, regional financial markets need to be stimulated through innovative products and services and supportive policy and regulatory frameworks put in place.

Government policies and programs can help to reduce the risk profiles of these projects which, in turn, will lower the costs of capital and lower tariffs for project beneficiaries. Strengthening capital markets, especially corporate bond markets, can expand opportunities for companies in developing economies to finance energy projects. By taking steps to assure that policies and regulations are predictable,

markets are transparent and competition is fair, governments can boost the availability of capital for cleaner energy investments.

The recommendations developed by the workshop participants reflect three guiding principles. First, public/private partnerships are needed to design and implement market-based remedies to financing barriers, with funding and support mechanisms locally managed and operated.

Second, the public sector's role should focus on providing effective incentives for private sector investments in clean and more efficient energy projects.

Finally, host country initiatives should take a holistic approach, combining policy drivers, economic incentives and financial intermediation. Investments in clean and more efficient energy infrastructure and technology also should be integrated with developmental work in agriculture, health care, housing and other sectors.

Within these general guidelines the following recommendations are advanced for the consideration and approval of the APEC Energy Ministers. The current institutions and facilities of the EWG are well-positioned to assist in implementing these recommendations.

Financing Energy Infrastructure, Energy Efficiency and Renewable Energy Projects

That the EWG:

1. Invite multilateral financial institutions (eg Asian Development Bank, World Bank) to join the EWG Business Network
2. Encourage, through direct consultations and via the EWG Business Network and Expert Groups, multilateral financial institutions and bilateral credit programs to develop and deploy financial products to facilitate private investment in energy infrastructure, energy efficiency, and renewable energy projects.

Financing Energy Efficiency Projects

That the EWG:

3. Produce and disseminate a series of Case Studies to illustrate how APEC economies have sought to facilitate energy efficiency financing (eg, through the identification of policy drivers, barriers, financial programs and intermediation). Case Studies should identify best practices and lessons learnt to inform policy and program formulation within APEC economies.
4. Support APEC economy efforts to promote awareness raising of energy efficiency and demand-side energy management within the APEC region through mechanisms such as the EWG Expert Groups, APERC, the EWG Business Network and the EWG Pledge and Review Program.

5. Continue, through the Expert Group on Energy Efficiency and Conservation, efforts to harmonise standards, labelling and testing for products including, where appropriate, to work with the APEC Sub-Committee on Standards and Conformance and other relevant regional organisations (eg Pacific Area Standards Congress, Asia-Pacific Laboratory Accreditation Cooperation).
6. Support the development of an international 'Energy Efficiency Financing Protocol' for application within the APEC region. Protocol may include standard procedures and documentation, and training on non-asset based financing for financiers, ESCOs and project hosts.
7. Assist APEC economy efforts to establish and support financial intermediaries and special purpose vehicles to help engage financial institutions and channel private investment into energy efficiency projects through techniques such as local debt mobilisation, project aggregation, packaging, non-asset based financing, and streamlining and standardising investment processing and documentation. This could be achieved through mechanisms such as Implementation Facilitation Assistance Teams.
8. Encourage the accreditation and promotion of Energy Service Companies (ESCOs) operating within the APEC region through organisations such as the Pacific Accreditation Cooperation.

Financing Renewable Energy Projects

That the EWG:

Adoption of Supportive Policy Frameworks

9. Support policy and regulatory frameworks that stimulate renewable energy investment and market development and promote "best practices," including incentives structured for sustainability, pricing practices that reflect economic and environmental costs, net metering and policies tailored to different stages of technology development and deployment.
10. Encourage, through consultation with the Expert Group on New and Renewable Energy Technology (EGNRET) and APERC, the adoption of more comprehensive methods of assessing costs of energy projects (e.g., analysis of end-user life-cycle costs, including the valuation of environmental impacts, as opposed to dollars per kilowatt cost) as a basis for developing energy policies and incentives.
11. Standardize terms of reference for new and renewable energy projects; through the EGNRET, continue to work with APEC economies to harmonize technical standards for renewable energy equipment and products.

Development of Financial Mechanisms:

12. Invite representatives of multilateral financial institutions (e.g., Asian Development Bank, International Finance Corporation, Inter-American Development Bank, World Bank) to work closely with the EGNRET to facilitate investment in project

development through services such as independent analysis and evaluation, risk mitigation, debt provision to cover payback periods and credit guarantees.

13. Through direct consultations and via the EGNRET, encourage multilateral financial institutions and bilateral credit programs to increase renewable energy lending by:
 - Standardizing procedures and documentation for project assessment and review;
 - Integrating renewable energy lending with agricultural, health, housing and other sector lending;
 - Incorporating environmental and social factors into the design of financial programs;
 - Developing and expanding credit enhancement facilities through export credit agencies (e.g., renewable energy licensing companies, guarantee facilities);
 - Designing risk sharing and mitigation instruments to reduce capital and transaction costs.

Capacity Building and Information-Sharing:

14. Expand the APEC-Collaborative Project Integrator (CPI) and the EWG website to provide information and guidance on best practices and lessons learned, financial programs and intermediation, and policies and incentives within APEC economies. In particular, promote the development of an interactive facility to assist on project identification and assessment, financing sources and partners based on the collaborative activities of the EWG's "21st Century Renewable Energy Development Initiative."
15. Use the capabilities of the EGNRET, the APEC-CPI and the EWG website to develop a market facilitation network that will build public-private partnerships between key NGOs, financial representatives, government agencies, and entrepreneurs in order to link private capital to project development.
16. Using such mechanisms as Implementation Facilitation Assistance Teams (IFAT) and the Expert Groups, promote the development of pre-feasibility and risk mitigation facilities that provide training and assistance to:
 - Local financial institutions to increase lending in local currency and to establish consumer/microcredit facilities; and
 - Local entrepreneurs, including on early stage business planning, market assessment and pre-investment support.
17. Use the capabilities of the EGNRET, EBN, APEC-CPI and the EWG website to increase awareness of and support outreach activities on the costs, benefits and applications of renewable energy systems.