

25 September 2006

Mr. Rita Nangia
Southeast Asia Department
Asian Development Bank
6 ADB Avenue
Mandaluyong City
1550 Philippines

Dear Ms. Nangia,

Re: Draft Greater Mekong Subregion energy modeling (Regional Technical Assistance 39002)

Thank you for the opportunity to attend the ADB's 31 July 2006 planning workshop on its proposed Regional Technical Assistance 39002. I have been directly occupied with energy efficiency analysis in Thailand, and apologize for the delay in responding to your June 2006 draft document.

RETA 39002 is a modeling study that asserts the need to take an *integrated analysis of energy options* for the region. For instance, the document discusses "a need to enhance the institutional and policy framework to integrate environmental and social costs in energy projects . . ." (page 7).

To assist the ADB/GMS better develop this program and to facilitate less unsustainable development choices for the region, we wish to make the following points.

Clarification of IUCN - The World Conservation Union role

The document (page 3) lists, among a "host of development partners," the support of the World Conservation Union. However, IUCN was merely invited to participate in *one* consultation, on 31 July 2006 in Bangkok. Had ADB consulted with us earlier on terms of reference for RETA 39002, we would have advocated strict adherence to integrated resource planning (IRP) principles:

- (1) Collection of reliable data on electricity end-use demand patterns and technical alternatives for improving energy efficiency and load profiles (treating demand in terms of energy services, rather than kWh)
- (2) Projection of future energy service demand scenarios
- (3) Calculation of costs and electric load impacts of demand-side alternatives

(4) Comparison of demand-side costs with economic costs and social and environmental impacts of conventional and alternative supply options

(5) Design of an integrated supply and demand-side plan that satisfies least cost criteria in terms of economic costs and social and environmental impacts

(6) Implementing the integrated least-cost strategy

(Source: abridged from Swisher et al. 1997)¹

Energy efficiency and integrated resource planning (IRP)

ADB has allocated significant resources for energy efficiency and renewable energy, and the draft inception report provides an enthusiastic commentary (pages 6–7). Yet the discussion on 31 July left us uncertain as to how energy efficiency will be treated by the modeling team.

The draft work plan contains no explicit commitment to conduct integrated demand/supply analysis or IRP. Instead, the modeling you propose focuses on traditional optimization of alternative resources on the supply side. That is to say, demand is exogenously given to the model (page 9), rather than being endogenously calculated given both supply and demand side technologies, as IRP would do.

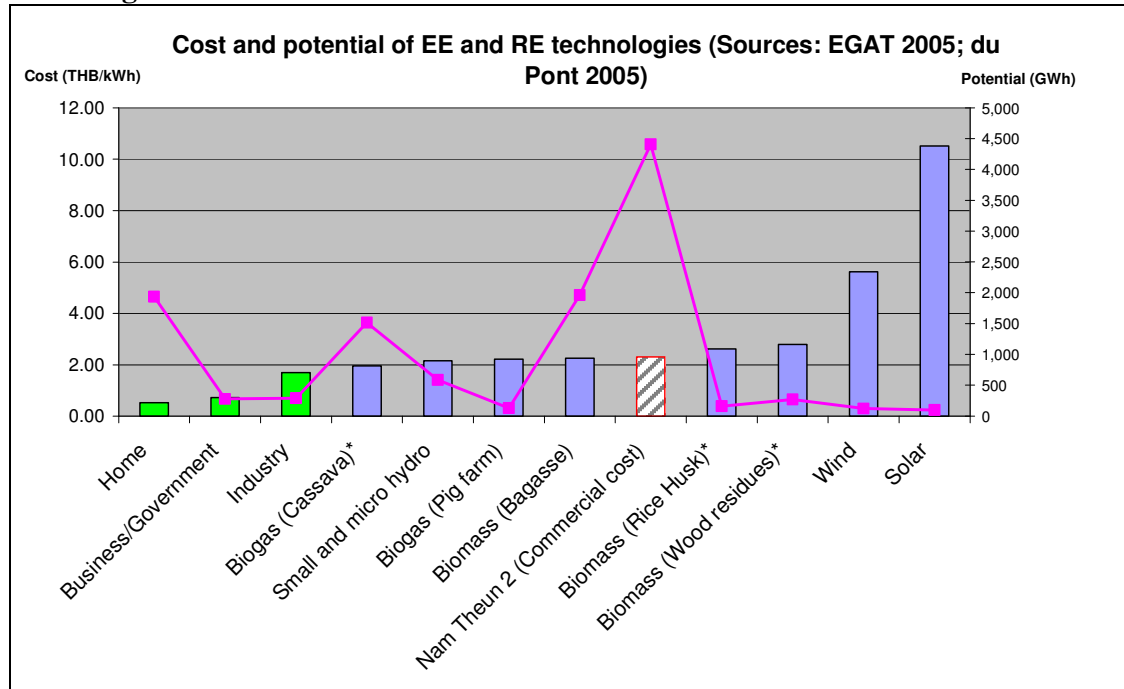
It is usually cheaper (e.g., ≤ 1.5 cents per kilowatt hour, compared to ≥ 5 cents on the supply side; see figure below) to first invest in energy efficiency improvements in the residential, commercial building, and industrial sectors. The most cost-effective investments include voluntary labeling and minimum energy standards. One key reason energy efficiency is cheaper is that it avoids transmission and distribution costs. Energy efficiency also avoids imposing significant externalities on vulnerable stakeholders and ecosystems.

In a comment on 31 July 2006, the consultant Dr. Schrattenholzer said that one main component of his TOR was to compare supply expansion plans with and without regional interconnection. This is an important issue, but less critical than identifying the region's commercially achievable energy efficiency improvements and renewable energy (in terms of energy and avoided peak power) and creating a supply curve that ranks EE and renewable energy programs by magnitude and cost. Such a dataset could then inform any project pipeline for electricity provision investments.

In general, new capacity should be considered as one option in an IRP process, where all regional options are explored and deliberated upon in a transparent manner. These options include large and small hydropower, fossil, biomass, combined heat and power generation, energy efficiency, and demand-side management.

¹ Swisher, J. N., G. d. M. Jannuzzi, et al. (1997). *Tools and Methods for Integrated Resource Planning*. Riso, Denmark, United Nations Environment Program. Collaborating Centre on Energy and Environment. Riso National Laboratory.

Cost (before externalities) and potential of energy efficiency and renewable energy technologies in Thailand



Notes: Potential = pink series. Commercial costs in Thai baht (THB). EGAT 2005 = Engineering estimate, Demand-Side Management Office; du Pont 2005 = Peter du Pont. *Nam Theun 2 Hydropower Project. Impact of Energy Conservation, DSM and Renewable Energy Generation on EGAT's Power Development Plan (PDP)*. Danish Energy Management. 24 March 2005. Prepared for the World Bank.

The social and environmental costs of these options should be identified and brought into the economic analysis, including (for hydropower dams) the cost of decommissioning.

Recommended revisions

We suggest that ADB amend the scope of work – or fund additional assistance – to incorporate the other necessary components of an adequate energy strategy:

(1) Planning framework

- Use IRP methodology
- Identify institutional and policy barriers towards implementing IRP

(2) Inputs and results dissemination and capacity building ~ regional academic and civil society linkages

- Transparent analysis and communication of uncertainty, guided by rights and risks principles for stakeholder identification and involvement

- Transparent communication of all parameter estimates and results for peer review
- Implementation of model in non-proprietary software (or for MESSAGE: training and licensing of third party organizations such as regional universities)
- Dissemination and public capacity building via seminars and multi-stakeholder dialogue conducted in regional languages

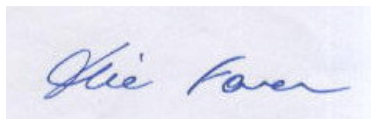
(3) *GMS institutional linkages*

- Explicit consultation with the GMS Core Environment Program's proposed rapid Strategic Environmental Assessment on the Energy Sector. As you may know, the CEP proposes to conduct a rapid SEA of the GMS Energy Sector. That project will commence in early 2007, and the RETA 39002 modeling output should be available by then. We have urged the CEP's energy SEA to explore in more detail ecological and social implications of scenarios developed in RETA 39002, and explore alternative scenarios.

In closing, RETA 39002 is an important but necessarily incomplete step towards a more comprehensive and meaningful strategy. The modeling results *might* catalyze much-needed dialogue between state, private sector, and civil society actors interested in cleaner, more efficient, and less disruptive energy futures. However, that will depend on high-quality dissemination, on stronger linkages with regional academic institutions, and of course on more inclusive public consultation than the event on 31 July 2006.

Thank you again for the opportunity to comment and participate in shaping RETA 39002. We wish to see RETA 39002 succeed according to the procedural revisions suggested above. I look forward to further discussion with you before the second workshop.

Yours sincerely,



Tira Foran
Senior Programme Officer
Asia Water Programme
IUCN - The World Conservation Union

Cc Mr. Pavit Ramachandran
Dr. Leo Schrattenholzer
Dr. Peter du Pont
Mr. John Dore