



# Annual Report of the Community of Practice on

## Energy

2009

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## ABBREVIATIONS

ADB	–	Asian Development Bank
APERC	–	Asia-Pacific Energy Research Centre
BAN	–	Bangladesh
BPMS	–	Budget, Personnel, and Management Systems Department
CCF	–	Climate Change Fund
CEFPF	–	Clean Energy Financing Partnership Facility
CoP	–	Community of Practice
DEfR	–	development effectiveness review
DMC	–	developing member country
EAEN	–	Energy Division, East Asia Department
EARD	–	East Asia Department
EnCom	–	Energy Committee
EnCoP	–	Energy Community of Practice
GACAP II	–	Second Governance and Anticorruption Action Plan
GHG	–	greenhouse gas
IAEA	–	International Atomic Energy Agency
IEA	–	International Energy Agency
IED	–	Independent Evaluation Department
IEEJ	–	The Institute of Energy Economics, Japan
MfDR	–	managing for development results
OAS	–	Office of Administrative Services
OGC	–	Office of the General Counsel
OIST	–	Office of Information Systems and Technology
OREI	–	Office of Regional and Economic Integration
PSIF1	–	Infrastructure Division 1, Private Sector Operations Department
PSIF2	–	Infrastructure Division 2, Private Sector Operations Department
PSOC	–	Operations Coordination Unit, PSOD
PSOD	–	Private Sector Operations Department
RCI	–	regional cooperation and integration
RSDD	–	Regional and Sustainable Development Department
RSDD-KM	–	Knowledge Management Center, RSDD
RSID	–	Sustainable Infrastructure Division, RSDD
RSGP	–	Public Management, Governance, and Participation Division, RSDD
RSOD	–	Office of the Director General, RSDD
SARD	–	South Asia Department
SPD	–	Strategy and Policy Department
TA	–	technical assistance
VIE	–	Viet Nam
WPBF	–	work program and budget framework

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## I. INTRODUCTION

1. Communities of Practice (CoPs)—defined as "groups comprising people who share a passion for something they know how to do and who interact regularly to learn how to do it better"<sup>1</sup>—contribute to knowledge solutions that has been identified as one of the drivers of change in *Strategy 2020*<sup>2</sup>. The CoPs have the potential to generate and share practical knowledge that could enrich ADB's operations. *Enhancing Knowledge Management under Strategy: Proposed Plan of Action (2009-2011)*, which was approved on 31 July 2009, emphasizes the need to strengthen CoPs and leverage them effectively to improve the quality of the ADB's operations.

2. The *Work Program and Budget Framework 2010 – 2012* approved in November 2009 lists six activities to be carried out by the CoPs, namely (i) support operations in project quality control and improvement; (ii) maintain a knowledge database and rosters of external experts; (iii) assess sector and thematic skills and knowledge gaps (iv) help design the staff learning and development program; (v) identify knowledge products for external dissemination, and (vi) initiate and promote knowledge dissemination activities. Further, the *Streamlined Business Processes*<sup>3</sup> and operational manual have now formalized the peer review procedure that sector CoPs need to carry out for all projects.

3. The Energy CoP, which is one of the 14 CoPs<sup>4</sup> hosted by the ADB, was formed in 2005, and since its first meeting<sup>5</sup>, which was attended by seven staff representing various functional areas (technical, economic, finance, environment, procurement), its structure has evolved and its membership has grown. In a meeting on 23 March 2009, the two-level structure of the Energy CoP was formalized, to consist of the following:

- (i) The Energy Committee<sup>6</sup> (EnCom), which is to have a Committee Chair and Co-chair<sup>7</sup>, and a minimum of 12 members nominated by the operational and functional departments and thematic divisions. This group serves as a think tank to provide strategic directions and address issues arising in ADB's energy sector activities.<sup>8</sup> Appendix 1 shows members of the EnCom as of November 2009. The EnCom also guides several (now four) teams, the members of which lead the development and deployment of clean energy technologies and sector reform programs in Asia and the Pacific; and

<sup>1</sup> KM Community of Practice tools (communities-practice.pdf). Available: <http://www.adb.org/media/infocus/2009/communities-practice.asp> or <http://www.adb.org/Documents/Brochures/InFocus/2009/communities-practice.pdf>.

<sup>2</sup> ADB.2008.*Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank 2008-2020*. Manila.

<sup>3</sup> ADB.2010. *Better and Faster Loan Delivery*, Report of the Loan Delivery Working Group. Manila. And ADB. 2010 *Operations Manual D 11*. Manila

<sup>4</sup> The 14 CoPs include agriculture and natural resources, education, energy, environment, financial management, governance, health, information and communication technology NGO and civil society, poverty, resettlement, transport, urban, and water.

<sup>5</sup> The first Energy CoP meeting was on 13 October 2005.

<sup>6</sup> The EnCom has been in existence since 2005. However, the two-level structure of the Energy CoP was formalized to avoid confusion between the composition of the EnCom and the Energy CoP.

<sup>7</sup> The Committee Chair and Co-chair are selected by the Vice President (Knowledge Management and Sustainable Development).

<sup>8</sup> In addition, the EnCom co-chairs also co-chair the working group of the Clean Energy Financing Partnership Facility (CEFPF) and Climate Change Fund (CCF).

- (ii) The Energy Community (EnCoP), which is open to all ADB staff. As of end December 2009, there were 148 EnCoP members from the various ADB departments and the resident missions (Appendix 2). Knowledge dissemination will be the key activity of the EnCoP.

4. The Energy CoP is facilitated by a full-time Practice Leader (Energy) in the Regional and Sustainable Development Department (RSDD), Office of the Director General (RSOD). The Sustainable Infrastructure Division (RSID) of RSDD serves as the Energy CoP's secretariat.

5. The *Energy Community of Practice Performance Assessment Report* is the first evaluation of the performance of the Energy CoP, in line with the ADB's commitment to continuous self-evaluation to maximize its operational effectiveness. As per the *Revised Guidelines for Sector and Thematic Level Reporting*<sup>9</sup> (Revised Guidelines), this will serve as Section II: *Assessing the Performance of CoPs* of the Sector/Thematic Report that is intended to inform the *Annual Administrative and Capital Budget* exercises. This performance assessment report covers activities carried out by the Energy CoP from January 2008 to November 2009, but, as per the Revised Guideline, will be updated annually<sup>10</sup> henceforth.

6. This report lists Energy CoP's contributions towards good practices and lessons, and highlight the successes, challenges and needed actions to fulfill its intended roles. Part II details its activities from January 2008 to December 2009. Part III contains an assessment of the Energy CoP performance based on the criteria specified in the Revised Guidelines. Part IV describes how the Energy CoP engaged its. Part V identifies the specific contributions of the Energy CoP to knowledge management and good practices. Lastly, Part VI discusses the plans of the Energy CoP, as embodied in the Work Program and Budget Framework (WPBF) submitted to RSDD-KM.

## II. ENERGY COP ACTIVITIES (JANUARY 2008–NOVEMBER 2009)

7. The following paragraphs discuss the key activities and outputs of the Energy CoP during the specified period.

### A. Participation in the Second Review of the 1995 Energy Policy and the Preparation of the 2009 Energy Policy

8. Selected members of the EnCom were part of the Energy Policy Team which reviewed the *1995 Energy Policy*<sup>11</sup> and formulated ADB's *2009 Energy Policy*<sup>12</sup>—an activity spearheaded by the RSDD. The review of the *1995 Energy Policy* started in 2006 and was completed in 2008. The *2009 Energy Policy* is "congruent with Strategy 2020, enabling energy operations to be aligned with ADB's overall strategy emphasizing energy security, facilitating a transition to a low-carbon economy, universal access to energy, and for achieving ADB's vision of a region free of poverty" (footnote 12). It was approved by the ADB Board of Directors on 18 June 2009.

<sup>9</sup> The Revised Guidelines was approved in 9 October 2009.

<sup>10</sup> The Revised Guideline specifies that the report *Section II: Assessing the Performance of CoP* would be due by the end of the third quarter of each year. However, for 2009, as per communication with the RSDD-KM, the report is due by the end 2009.

<sup>11</sup> ADB. 1995. *Bank Policy Initiatives for the Energy Sector*.

<sup>12</sup> ADB. 2009. *2009 Energy Policy*. Manila.

**B. Preparation of the Proposed Level 2 Indicators in the Energy Sector for the ADB Results Framework and Development Effectiveness Review**

9. The working team chair (Director General, South Asia Department [SARD]) on outputs aggregation under the Development Effectiveness Review requested the Energy CoP (i) to provide the clear definition and methodology that should be used ADB-wide for the level 2 indicators identified under energy; and (ii) to suggest indicators for climate change, and its definition and methodology. Accordingly, the EnCom prepared the *Note on the Proposed Level 2 Indicators in the Energy Sector* for the working group. The definitions and methodology for level 2 energy indicators and a new indicator for climate change, i.e., tons of carbon dioxide equivalent avoided per year (t-CO<sub>2</sub>-equiv/yr), were subsequently adopted ADB-wide in the preparation of the *Development Effectiveness Review 2008 Report*.

**C. Preparation of the Definitions and Guidelines—Monitoring Indicators: 2009 Energy Policy and MfDR Level 2**

10. The EnCom also prepared the definitions and guidelines that combine level 2 indicators for the *ADB Results Framework and Effectiveness Review* with indicators to monitor project outcomes under the *2009 Energy Policy*. These definitions and guidelines were endorsed by the EnCom on 20 July 2009.

**D. Preparation of the Guidance Note on Electricity Sector Risk Assessment**

11. In collaboration with the Governance Committee, and the Public Management, Governance, and Participation Division of the RSDD (RSGP), the EnCom drafted the *Guidance Note on Electricity Sector Risk Assessment*, which (i) provides a general understanding of key features of the electricity sector; and (ii) identifies entry points for mapping potential risks to development effectiveness in the electricity sector. This sector guidance note supplements ADB's *Guidelines for Implementing the Second Governance and Anticorruption Action Plan (GACAP II)*.

**E. Review of the Energy Statistics and Outlook for Asia and the Pacific**

12. In September 2009, RSDD requested the EnCom and sector directors to review the draft *Energy Statistics in Asia and the Pacific (1990-2006)* and *Energy Outlook for Asia and the Pacific*, two reports prepared by a team of experts from the Asia Pacific Energy Research Centre (APEREC) of the Institute of Energy Economics, Japan (IEEJ) for the ADB. In a meeting held on 1 September 2009, members of the EnCom provided their comments and insights to the draft reports that proved valuable in its finalization<sup>13</sup>. The *Energy Outlook for Asia and the Pacific* was subsequently released as an ADB publication and was launched on 3 November 2009, along with the *Energy Statistics in Asia and the Pacific (1990-2006)*. The two publications are outputs of *Regional Technical Assistance 6322: Energy Sector Strategy and Development*.

**F. Discussion on the Elaboration of ADB's Support for Supercritical Power Projects vis-à-vis the 2009 Energy Policy**

13. On the suggestion of Private Sector Operations Department (PSOD), the EnCom met on 2 September 2009 to discuss the technical aspects of using cleaner coal-based power generation technologies, and the need and content of an elaboration of the *2009 Energy Policy*.

<sup>13</sup> Some comments were provided to the APERC team earlier than 1 September 2009, through email.

The draft note titled *Supporting Supercritical Power Plants, Elaboration of 2009 Energy Policy* (the Supercritical Note) was developed after discussions.

#### G. Advice on Private Sector Coal Projects

14. The EnCoP was requested by PSOD to review three projects involving coal.

15. The PSOD Infrastructure Division 1 (PSIF1) was considering assistance for *BAN: Phulbari Coal Project* through loan, guarantee, and equity. The proposed project was to supply steam-grade coal to a 2,000 MW mine mouth power station at Phulbari and export metallurgical grade coking coal, which had no domestic value. The EnCom was asked if the Phulbari coal mine could be considered a captive coal mine development vis-a-vis the *1995 Energy Policy*.<sup>14</sup> After considering the proposal, the EnCom expressed a generally positive view about a need for the potential developmental aspects of the project, but opined that it could not be considered in full compliance with the 1995 Energy Policy because of the non-captive use of the coal.<sup>15</sup>

16. The Energy CoP was also requested to consider the technology choices (supercritical and subcritical pulverized coal) for another proposal being considered by the PSOD Infrastructure Division 2 (PSIF2) for *VIE: Mong Duong 2 Power Plant*. In a meeting by the EnCom on 6 March 2009, the proposal was reviewed, and a note entitled *Review of PSIF2 Proposal to Assist Viet Nam: Mong Duong 2 Power Plant* was prepared and forwarded to the Director, PSIF2. Support for lower efficiency subcritical technology was considered inappropriate for Vietnam; PSIF communicated the same to the project sponsors.

17. PSIF2 held extensive discussions with the chairs of the EnCom for establishing justification for a loan for the *PHI: Visayas Base Load Power Development Project*, a 200 MW coal-based project using subcritical fluidized-bed combustion technology. Limitation of grid size in Visayas and the fact that it already has a high share of geothermal capacity (over 70%) were considered sufficient ground for adding new coal-based least-cost capacity to address power shortages in the poor region. During the Board discussion on 11 December 2009, it was generally accepted that the proposal was within the *2009 Energy Policy*.

#### H. Informal Board Briefing on Nuclear Energy

18. In 7 August 2009, two external experts—Ian Cronshaw, Head, Energy Diversification Division, International Energy Agency (IEA), and Alan McDonald, Head, Program Coordination Group, Department of Nuclear Energy, International Atomic Energy Agency (IAEA)—and RSDD Senior Advisor and Practice Leader (Energy), Anil Terway—presented at the Informal Board Briefing on nuclear energy. The ADB Board of Directors requested for the briefing during the discussions on the Energy Policy Working Paper in February 2009. In spite of ADB's non-involvement in nuclear power, as reiterated in the *2009 Energy Policy*, there is an imminent need for the staff to have the capacity to effectively respond to concerns that participants may raise regarding future technologies, economics, sustainability, security, verification arrangements, etc. The informal Board Briefing was attended by selected Energy Policy Team members, including EnCom Chair S. Chander (PSOD), EnCom Co-chair Anil Terway (RSOD) and Jong-Inn Kim (RSID), who also led the Energy Policy Team that drafted the *2009 Energy Policy*.

<sup>14</sup> The 1995 Energy Policy allows ADB's direct financing of coal mine development only for captive use by a thermal power plant.

<sup>15</sup> Energy Community of Practice. 2008. *Review of the PSIF Proposal to Assist BAN: Phulbari Coal Project*.



## I. Review of the *Evaluation Knowledge Brief (EKB) on Greenhouse Gas (GHG) Implications of ADB's Energy Sector Operations*

19. The EnCom reviewed the draft of IED's *Evaluation Knowledge Brief-Greenhouse Gas Implications of ADB's Energy Sector Operations*. The final version of the EKB, which was circulated and made publicly available, incorporates the comments made by the EnCom on the report. The report was discussed by the Development Effectiveness Committee with the ADB Board of Directors on 17 November 2009.

## J. Preparation of Work Program and Budget Framework (2010 – 2012)

20. The Work Program and Budget Framework exercise in 2009 required a different approach for Energy CoP as future projects are expected to be different in design and larger in amounts and numbers. This change was consequent to (i) the greater emphasis in *Strategy 2020* on cleaner energy projects for addressing climate change concerns, and (ii) the 200% general capital increase in 2009 and the ensuing increase in lending operations. Accordingly, the Energy CoP co-chairs prepared enlarged draft budget proposals for additional resources to build capacity of, and enable access to relevant information for energy division staff. The Management accepted the proposal to augment resources and as a result the 2010 budget for all CoPs has been increased nearly eight times as compared to earlier years. The main focus of the budget proposal is the establishment and strengthening of teams that staff will join voluntarily – near-zero emission coal, solar, wind, and reforms (more teams may be established in 2010).

## K. Knowledge Sharing

21. "Knowledge" is defined in ADB's context as an input, an output or product ADB delivers, and an institutional asset which ADB draws upon, improving the cost-effectiveness and strategic planning of the organization, and enlarging ADB's international reputation.<sup>16</sup> The *ADB's Communities of Practice 2007 Achievement Report* identifies two main venues for committee knowledge sharing, which are (a) committee meetings and (b) informal learning events (e.g., brown bags seminars, peer reviews and others).

22. In 2009, the Energy CoP organized a number of ILEs which served as venues for the members of the EnCoP and other bank staff to impart what they learned from ADB operations, as well as sharing information on ADB policy directions, and energy technologies<sup>17</sup> that has figured in or could play a part in future ADB projects. Table 1 lists the knowledge sharing activities organized by the Energy CoP.

<sup>16</sup> ADB. 2009. *Work Program and Budget Framework 2010-2012*.

<sup>17</sup> The types of energy technologies whose development the ADB could support are specified in the *2009 Energy Policy* and include energy efficiency improvements and renewable energy projects. The Energy Policy reiterates non-involvement in nuclear energy development, and limits the ADB's financial involvement in the development of coal mines and oil fields, except for the captive use by thermal power plants for the former, and for marginal and already proven oil fields for the latter.

**Table 1: Knowledge Sharing Activities Conducted by the Energy CoP**

Title	Date	Description
1. Power Sector Reform in the Philippines: Lessons Learned from a Success Story	17 December 2009	Yongping Zhai (SEEW) presented the power sector reform in the Philippines, which is unprecedented among DMCs, includes unbundling of the power industry, removal of cross-subsidies, privatization of government-owned assets, and creation of wholesale/retail competitive markets and independent energy regulator.
2. Financing Large-scale Wind Power Development in Asia: A Tale of Two Cities	20 October 2009	Kangbin Zheng (PSOC), Shantanu Chakraborty (PSIF1) and Takeo Koike (PSIF1) presented wind power development in two leading Asian countries. They compared the dynamics in PRC and India, with focus on financing and risk management.
3. Cross-border Bond Financing for Infrastructure Projects in the ASEAN+3 Region – Concept	21 September 2009	Chiemi-Jamie Kaneko (OREI) presented the case study relating to financing a hydropower project in Lao PDR by securitizing Lao Government's royalty fee on electricity trade receivables from Thailand.
4. 2009 Energy Policy	21 September 2009	Anil Terway (RSOD) presented key features of the <i>2009 Energy Policy</i>
5. Carbon Capture and Storage (CCS): A Key Climate Change Mitigation Technology	27 August 2009	The following presentations were made in the brown bag discussion: a. CCS – its relevance to developing Asia and ADB interventions by Ashok Bhargava (EAEN) b. Current international status of CCS demonstration projects by Samon Suwannarat (Intern) c. CCS – legal and regulatory challenges by Kala Mulqueeney (OGC)
6. Seminar on Regional Cooperation on Energy	4-5 February 2009	Speakers from the operations department shared information on subregion's energy trade, existing and proposed energy cooperation projects, progress and impediments, providing staff with a bigger picture of regional cooperation in energy operations. The RSDD and the Energy CoP jointly developed and organized this seminar. The minutes of the seminar was prepared and uploaded in C-Cube. <sup>a</sup>
7. A Model for Renewable Energy Legislation in DMCs	21 January 2009	Vicente S. Perez Jr., former Secretary of Energy of the Philippines, and current CEO of Alternergy, spoke about recent breakthroughs in efforts to enable new legislation for renewable energy in DMCs, citing the Philippine experience.

EAEN = Energy Division, EARD; EARD = East Asia Department; OGC = Office of the General Counsel; OREI = Office of Regional and Economic Integration; PSIF1 = Infrastructure Division 1, PSOD; PSOC = Operations Coordination Unit, PSOD; PSOD = Private Sector Operations Department; RCI = regional cooperation and integration; RSDD = Regional and Sustainable Development Department; RSOD = Office of the Director, RSDD.

<sup>a</sup> C-Cube is an electronic platform that serves as an electronically-based document depository, and allows ADB staff to communicate, coordinate, and collaborate electronically with each other via e-meetings and in chat rooms.

23. The Energy CoP was also involved in a number of external knowledge sharing activities, including:

- Review of the draft *2009 World Energy Outlook* prepared by the IEA;
- Participation in the World Energy Council meeting and the preparation of the wind power roadmap;
- Support to the Asia Clean Energy Forum sessions.

#### L. Energy CoP Management Activities

24. In addition to the activities described above, the EnCom also performed the following tasks:

- (i) Management of the Clean Energy Financing Partnership Facility (CEFPE)/Climate Change Fund (CCF)
- (ii) Nomination of Technical Experts for Energy Sector technical assistance (TA). In a memo dated 2 October 2008 sent to the Director General, SPD, the Energy CoP nominated ten technical experts for inclusion in the roster for the energy sector. According to OM D12 of August 2008, the technical experts were required to assist in the preparation of TAs under the energy sector, to contribute to quality enhancement of selected TA operations.
- (iii) Discussions with the operation departments to discuss strengthening of the ADB's in-house capacity in the energy sector.

### III. PERFORMANCE SCORE AND CRITICAL SUCCESS FACTORS

#### A. Performance Score

25. The role of the CoPs is three-fold<sup>18</sup>: (i) clearly present their views on key issues that ADB should focus on in terms of strategic studies and new business initiatives; (ii) distill and synthesize for wider institutional learning what ADB has learned from its sector/thematic operations, and; (iii) demonstrate how ADB sector/thematic operations have contributed to achieving development effectiveness. The performance of the Energy CoP, based on the activities discussed in the previous section, is assessed against these and the six criteria specified in the Revised Guidelines—namely, relevance and focus; quality and timeliness of knowledge products and services; access to practical knowledge and reach within ADB; utility; likely impact, and; cost effectiveness. Table 2 summarizes the performance of the Energy CoP.

**Table 2: Summary of Energy CoP Performance**

Criteria	Score
Relevance and Focus	⊙
Quality and Timeliness of Knowledge Products and Services	⊙
Access to Practical Knowledge and Reach within Asian Development Bank	⊙
Utility	⊙
Likely Impact	⊙
Cost Effectiveness	⊙

⊙ Green: "On track" (More than 50% of indicators in the group have shown improvements over baselines or previous periods); ⊙ Amber: "Potential regression" (Results are mixed: equal number of indicators improving or beginning to stagnate or regress); ⊙ Red: "Stagnated or regressed" (More than half of the indicators in the group stagnating or regressing over 2 or more previous review periods)

<sup>18</sup> Guidelines for Sector and Thematic Level Reporting

26. **Relevance and focus.** The review of the Energy CoP activities indicates that it has supported ADB's long term strategy as evidenced by the following:

- The *2009 Energy Policy*, the development of which the EnCom played a part, provides policy directions for the ADB's energy operations aligned with *Strategy 2020*;
- The preparation of the *Note on the Proposed Level 2 Indicators in the Energy Sector*, and combined *Definition and Guidelines–Monitoring Indicators: 2009 Energy Policy and MfDR Level 2* contributes in the tracking of ADB's progress toward the bank's goal, as embodied in *Strategy 2020*;
- The preparation of the note titled *Supporting Supercritical Power Plants, Elaboration of 2009 Energy Policy* explains how selective support may be extended for coal-based power projects when cleaner technologies (including lower carbon dioxide emission) are adopted.
- The *Guidance Note on Electricity Sector Risk Assessment* assists ADB energy operations in improving governance aspects and thereby achieving development effectiveness in the electricity sector.

27. **Quality and timeliness of knowledge products and services.** For the period under review (January 2008 to November 2009), the Energy CoP produced several knowledge products and services (para 26), assisted in finalization and approval the *2009 Energy Policy*, and provided advisory assistance to the RSDD in the production of an ADB publication, namely the *Energy Outlook for Asia and the Pacific*. These knowledge products and services has been mainly in response to requests by the operation departments.

28. **Access to practical knowledge and reach within ADB.** Knowledge is disseminated to the EnCoP members primarily through knowledge sharing activities and through memos and guidelines drafted after deliberations and discussions on specific topics. However, the participation in the knowledge sharing events conducted in 2009 has been limited to staff in the ADB Headquarters. In general about 35 – 40 staff have attended these events while the EnCoP membership is 148; it appears that more value has to be offered in these knowledge sharing events so staff would interrupt their busy schedules to participate.

29. **Utility.** The following demonstrates the usefulness of the Energy CoP's outputs:

- EnCom's contribution during drafting and pre-Board discussions helped smooth approval of the 2009 Energy Policy.
- The *Notes of the Proposed Level 2 Indicators in the Energy Sector* prepared by the Energy CoP was adopted in the preparation of the *Development Effectiveness Review 2008 Report*. It provided a uniform definition of the level 2 indicators that operation departments use to monitor and evaluate energy projects.
- The memos prepared after the EnCom deliberations on the private sector coal projects served as inputs to PSOD's decisions and subsequent actions on the BAN: Phulbari Coal Project and the VIE: Mong Duong 2 Power Plant.

30. **Likely impact.** The following demonstrates the impacts of the outputs produced solely by the Energy CoP or in which the Energy CoP has some inputs:

- The *Notes of the Proposed Level 2 Indicators in the Energy Sector* improved the manner assessment of development effectiveness in the energy sector;

- The *Guidance Note on Electricity Sector Risk Assessment* will enhance the knowledge about governance for staff working in the energy sector.

31. **Cost effectiveness.** The Energy CoP has provided significant inputs to resolve major operational concerns, as well as meaningful advice to both to the Board and Management on the energy sector, maximizing available in-house expertise and limited resources. In 2009, the only expense incurred was for the participation of the Co-Chair to the World Energy Council Roundtable Discussion.

#### B. Critical Success Factors

32. The Energy CoP has evolved to become an important resource to which the various departments turn to for advice to resolve issues in the energy sector work. The policy directions embodied in *Strategy 2020* and the *2009 Energy Policy* serve as the Energy CoP' "compass" in the myriad of information pertaining to energy.

33. The Energy CoP vision for 2010 and beyond is "innovate, replicate, and scale up clean energy investments in Asia and the Pacific." In order to fulfill this, the Energy CoP has lined up the activities, including:

- Over a period of 2 years, develop in-house expertise in clean energy technologies;
- Build capacity to offer comprehensive policy and investment solutions to smaller DMCs in the energy sector; and
- Support a larger, cleaner, and robust pipeline of energy projects.

34. The Energy CoP mostly uses a combination<sup>19</sup> of mode to create knowledge, facilitated through EnCom meetings, informal learning events, memos, information database, and email exchanges.

#### IV. KNOWLEDGE IN PRACTICE

35. The Energy CoP meetings and knowledge sharing fora provided occasions for the Energy CoP members to reflect on practices and share their knowledge—both tacit and explicit.<sup>20</sup> The meetings' agenda included topics that needed resolution (e.g., level 2 indicators coal projects, energy outlook) and required the members to draw on their past experiences (tacit knowledge) to come up with viable solutions and alternatives. Knowledge sharing forum, on the

<sup>19</sup> ADB. *Knowledge Solutions: Notions of Knowledge Management*. The four modes through which an organization creates knowledge are socialization, externalization, combination, and internalization. Specifically, combination "involves combining explicit knowledge through meetings and conversations or using information systems (e.g., email).

<sup>20</sup> ADB. *Knowledge Solutions: Notions of Knowledge Management* defines and describes tacit knowledge as follows: "nonverbalized, intuitive, and unarticulated knowledge that people carry in their heads. It is hard to formalize and communicate because it is rooted in skills, experiences, insight, intuition, and judgment, but it can be shared in discussion, storytelling, and personal interactions. It has a technical dimension, which encompasses skills and capabilities referred to as know-how. It has a cognitive dimension, which consists of beliefs, ideals, values, schemata, or mental models." Explicit knowledge, on the other hand is defined as "codified knowledge that can be expressed in writing, drawings, or computer programs, for example, and transmitted in various forms. Tacit knowledge and explicit knowledge are mutually complementary forms of meaning."

other hand, presented a venue for storytelling<sup>21</sup>, where Energy CoP members were able to share with their peers their experiences in energy sector operations.

36. Of special mention is the Seminar on Regional Cooperation in Energy where staff from the various operations departments were able to interactively share their experiences and concerns with their colleagues.

## V. CONTRIBUTIONS TO KNOWLEDGE MANAGEMENT AND GOOD PRACTICES

37. A good practice is defined as something that has been tried and shown to work in some way—whether fully or in part but with at least some evidence of effectiveness—and that may have implications for practice at any level elsewhere.<sup>22</sup> The knowledge sharing forum has been the primary tool to spread good practice among the ADB staff. In two knowledge sharing events (Financing Large-scale Wind Power Development in Asia: A Tale of Two Cities, and; Cross-border Bond Financing for Infrastructure Projects in ASEAN+3 Region-Concept) and in the seminar on Regional Cooperation on Energy, staff from operations departments shared with their peers experiential knowledge relating to innovative energy projects.

38. Also, the *Guidance Note on Electricity Sector Risk Assessment* presented another opportunity for the Energy CoP in spreading good practice.

## VI. PLANS AND RECOMMENDATIONS FOR ENERGY COP AND ACTIVITIES

39. The EnCom prepared a plan to enhance the role of the Energy CoP in 2010-2012, as embodied in the *Work Program and Budget Framework (WPBF) 2010-2012* submitted to the RSD-DM. The activities identified in the Energy CoP WPBF are the following:

- a. **Project Quality:** This will involve peer reviews, as necessary, as early as the project identification stage.
- b. **Formation of in-house teams:** The challenge of identifying opportunities for clean energy lending projects and making them more affordable to the DMCs requires in-house strengths in new technologies that may not have been fully commercialized in target countries. To address this need, the Energy CoP will form teams which will be open to interested staff who volunteer to join or lead the teams. Over a period of 2 years, the volunteers will be allocated necessary resources to develop in-house expertise in the following clean energy technologies:
  - (i) Wind: grid-connected and micro-sized off-grid, onshore and offshore;
  - (ii) Solar: photo-voltaic, solar thermal, water and space heating;
  - (iii) Biomass: biofuels, agro- and forest-residues, waste-to-energy (methane from waste dumps), digesters, combustion;
  - (iv) Energy efficiency: buildings, lighting (compact fluorescent lamps, light emitting diodes), drives, fans and pumps, transmission lines and transformers, standby power, energy storage systems (batteries and double-layered capacitors), air conditioning and space heating;

<sup>21</sup> ADB. *Knowledge Solutions: Storytelling* defines storytelling as “the vivid description of ideas, beliefs, personal experiences, and life-lessons through stories or narratives that evoke powerful emotions and insights.” <http://www.adb.org/Documents/Information/Knowledge-Solutions/Knowledge-Solutions-1-38.pdf>

<sup>22</sup> ADB. *Knowledge Solutions: Identifying and Sharing Good Practices*.

- (v) Near-zero emission coal: integrated gasification and combined cycle, carbon dioxide capture and storage, supercritical and ultra-supercritical, coal-to-liquid, methane from mines, high capacity and parameter fluidized bed boilers;
  - (vi) Distributed power generation: a combination of technologies suitable for off-grid remote and isolated systems.
  - (vii) Sector reforms: policies to encourage private sector participation, unbundling, privatization, regulation, governance, tariffs, subsidies for social protection,
- c. **Creation and maintenance of knowledge database, publications, reports:** The Energy CoP will work with Office of Information Systems and Technology (OIST) to create a knowledge database (MyADB Energy portal) with technical reports and papers, news clippings, project results, blog, etc. that operations staff can readily access from anywhere. The Energy CoP will also work with OAS-Library to harvest knowledge on specific technology-related subjects when staff seek such inputs (help desk approach). The EnCom secretariat will be responsible for its management (deleting unused content and uploading contents and links).
- d. **Secondment of external experts, or fixed-term (2 years) appointment:** Considering the rapid pace of technology development, particularly those needed to reduce carbon emissions, the in-house teams will need support during the initial 2 years. The Energy CoP proposes to engage fixed-term staff on seconded who will guide the teams to knowledge sources, help staff in identifying and analyzing new opportunities, build internal capacity for reviewing new technology proposals and technology assessments. The terms of reference for such secondees will be prepared keeping in view the urgent needs of the operations departments and Energy CoP co-chairs will be involved in selection.
- e. **Skills assessment and identification of gaps:** The Energy CoP will work with the Budget, Personnel, and Management Systems (BPMS) Department to capture staff skills-related information and use it for learning and development. This activity will mostly be coordinated by the co-chairs of the EnCom.
- f. **Design of learning and development programs and identifying external resources to conduct them:** The focus is going to be on learning-by-doing, which is the appropriate approach for a relatively new area of operations, i.e., clean energy.
- g. **Annual plans for preparing knowledge solutions/products that are lead by staff, peer reviewed by external experts and supported with printing and other administrative budget (e.g., travel, publications, analytical models, research assistants):** The EnCom will initiate one study annually that will be of high relevance to operations. The study will be led by staff and carried out by a team. Considering the work load pressure, the study team will engage about two person-months of international and four person-months of domestic consultant effort.

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**ENERGY COMMITTEE MEMBERS,  
As of 17 November 2009**

<b>Position</b>	<b>Name</b>	<b>Department</b>	
Chair	S. Chander	OIST	
Co-chair	Anil Terway	RSDD	
Members	Anthony Maxwell	PARD	
	Ashok Bhargava	EARD	
	Jiang Yi	ERD	
	Tomoyuki Kimura	BPMS	
	Yongping Zhai	SERD	
	Kurumi Fukaya	PSOD	
	Priyantha Wijayatunga	SARD	
	Karen Decker	OCO	
	Jim Liston	CWRD	
	Jong-Inn Kim	RSDD	
	Jun Tian	RSDD	
	Masami Tsuji	RSDD	
	Chong Chi Nai	COSO	
	Sandra Nicoll	RSDD	
	Alternates	Don Purka	PSOD
		Herath Gunatilake	SARD
Cleo Kawawaki		CWRD	
Kangbin Zheng		EARD	
Naoki Sakai		SARD	
Anthony Jude		SERD	
	Paritha Tritasavit	OCO	
<b><i>Solar Team</i></b>			
Focal Point	Naoki Sakai	SARD	
Members	Ashok Bhargava	EARD	
	Don Purka	PSOD	
	Paul Hattle	SERD	
	Lauren Sorkin	RSDD	
	Toshimasa Dojima	OCO	
<b><i>Clean Coal Team</i></b>			
Focal Point	Ashok Bhargava	EARD	
Member	Kala Mulqueeny	OGC	
<b><i>Wind Energy Team</i></b>			
Focal Point	Kangbin Zheng	PSOD	
Member	Shantanu Chakraborty	PSOD	
<b><i>Energy Sector Reform Team</i></b>			
Focal Point	Yongping Zhai	SERD	
Members	Jun Tian	RSDD	
	Jiang Yi	ERD	
	Pradeep Perera	IED	
	Genalyn Uy	PSOD	
	Kala Mulqueeny	OGC	
	Cleo Kawawaki	CWRD	

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As of 31 December 2009**

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24.	Joseph Thomas Carmody (RSDD)	71.	Vallabha Karbar (INRM)
25.	Shantanu Chakraborty (PSOD)	72.	Rehan Kausar (IRM)
26.	S. Chander (OIST)	73.	Robert Kesterton (PaRD)
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41.	Mats Elerud (PSOD)	88.	Sunil Mitra (CWRD)
42.	Francis Emmanuel (CWRD)	89.	Keiju Mitsuhashi (CWRD)
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44.	Peter Fedon (EARD)	91.	Christopher Morris (SERD)
45.	Yue-Lang Feng (EARD)	92.	Kala Mulqueeny (OGC)
46.	Scott Ferguson (EARD)	93.	Ramit Nagpal (OGC)
47.	Jennifer Francis (BPMS)	94.	Sandra Nicoll (RSDD)

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114. Shotaro Sasaki (SARD)
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