



MARCH 2014

ESMAP PORTFOLIO REVIEW, FY2009-13



Table of Contents

ABBREVIATIONS AND ACRONYMS.....	ii
1 OBJECTIVES AND SCOPE.....	1
2 PORTFOLIO SIZE AND COMPOSITION	2
3 DISBURSEMENTS AND IMPLEMENTATION	5
4 OUTPUTS.....	9
5 OUTCOMES AND KEY RESULTS ACHIEVED, FY2013	15
6 ESMAP MONITORING AND EVALUATION: IMPORTANT DEVELOPMENTS DURING FY2013	28
7 SUMMARY CONCLUSIONS: ESMAP’S FY2013 PORTFOLIO	30
8 ESMAP’S PORTFOLIO BUSINESS PLAN FY2009-13: A RETROSPECTIVE.....	33
ANNEX 1 METHODOLOGY AND DATA SOURCES.....	47
ANNEX 2 GLOSSARY	49
ANNEX 3 CLASSIFICATION OF AAA AND OUTPUT TYPES	51
ANNEX 4 ESMAP RESULTS CHAIN, STRATEGIC BUSINESS PLAN FY2014-16.....	53
ANNEX 5 SUMMARY OF ACTIVITIES WITH OUTCOMES MEASURED, FY2013	54
ANNEX 6 COMPLETED, ONGOING, AND NEW ACTIVITIES, FY2013.....	56
ANNEX 7 WBG LENDING OPERATIONS INFLUENCED BY ESMAP ACTIVITIES, FY2009-13	60
ANNEX 8 ACTIVITIES WITH ACHIEVED OUTCOMES, FY2013.....	63

ABBREVIATIONS AND ACRONYMS

AAA	Analytical Advisory Activities
ABG	Annual Block Grant
AFREA	Africa Renewable Energy Access Program
BE	Bank Executed
CAS/CPS	Country Assistance Strategy/ Country Partnership Strategy
CE	Clean Energy
CFL	Compact Fluorescent Lamp
CSP	Concentrated Solar Power
CTF	Clean Technology Fund
EA	Energy Access
EASP	Energy Assessments and Strategies Program
EE	Energy Efficiency
EECI	Energy Efficient Cities Initiative
EFFECT	Energy Forecasting Framework & Emissions Consensus Tool
ESW	Economic and Sector Work
GGDP	Global Geothermal Development Plan
GEF	Global Environment Facility
GFR	Grant Funding Request
HEAT	Hands-on Energy Adaptation Toolkit
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IFC	International Financial Corporation
KP	Knowledge Products
MACTool	Marginal Abatement Cost Tool
M & E	Monitoring and Evaluation
PCN/PAD	Project Concept Note / Project Appraisal Document
PSF	Proposal Summary Form
RE	Recipient Executed
SBP	Strategic Business Plan
SE4ALL	Sustainable Energy for All
SIDS	Small Islands Developing States
SME	Small Medium Enterprise
TA	Technical Assistance
TRACE	Tool for Rapid Assessment of City Energy
TTL	Task Team Leaders
WBG	World Bank Group

World Bank Regions

AFR	Sub-Saharan Africa
EAP	East Asia and Pacific
ECA	Europe and Central Asia
LCR	Latin American and Caribbean
MNA	Middle East and North Africa
SAR	South Asia

All monetary units (\$) are in United States dollars (US\$ / USD), unless otherwise indicated.

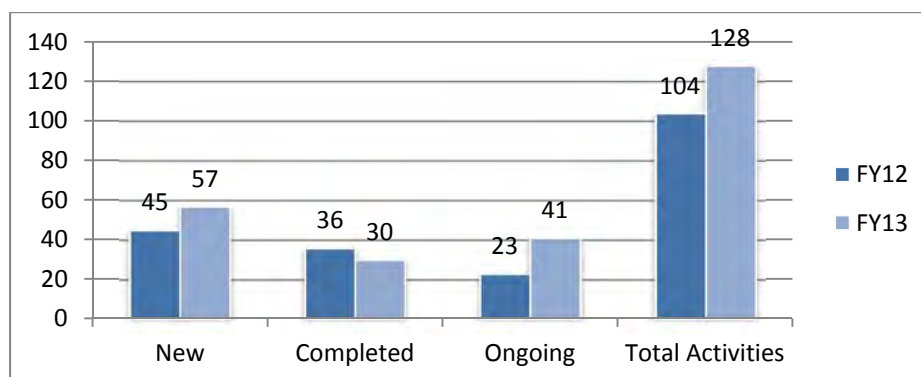
1 | OBJECTIVES AND SCOPE

1. The annual Portfolio Review is part of ESMAP's ongoing effort to implement its results framework and monitoring and evaluation (M&E) system, with a view to assessing the impact of ESMAP's upstream activities on World Bank lending operations, government policies, country capacities, and development community's interventions in the energy sector.
2. **The objectives of this review are the following:**
 - Provide an overview of ESMAP's portfolio at the end of FY2013 (June 30, 2013)
 - Report on outputs, outcomes, and results achieved during FY2013 (July 1, 2012 through June 30, 2013) of completed ESMAP activities in terms of their effectiveness, influence, and value-added in the World Bank Group's (WBG's) dialogue and development strategy with client countries
 - Provide a retrospective review and scorecard of the results achieved under ESMAP's Strategic Business Plan FY2008-13 that recently concluded
 - Report on progress achieved on recommendations highlighted in the last year's portfolio review and specific issues raised by donors, clients, World Bank staff, and other ESMAP stakeholders
3. **This portfolio review uses the methodology and approach of previous portfolio reviews.** In recognition of the "upstream" nature of the vast majority of ESMAP activities, the portfolio review continues to use the World Bank's classification of outcomes and indicators for Analytical Advisory Activities (AAA): (i) development finance informed; (ii) policy/strategy informed; (iii) client capacity increased; (iv) knowledge increased (or deepened); and (v) innovative approaches and solutions generated. A detailed description of the methodology, including data sources and limitations of the portfolio review, can be found in Annex 1.
4. **This report is structured as follows:** (i) Section II provides an overview of ESMAP's portfolio size and composition as of end of FY2013; (ii) Section III provides details on disbursements by region and program; (iii) Section IV provides a scorecard of outputs delivered by ESMAP during FY2013; (iv) Section V summarizes results and outcomes observed during FY2013; (v) Section VI highlights activities with notable FY2013 outcomes under each of the ESMAP programs; (vi) Section VII reports on key developments in ESMAP's M&E system during the last fiscal year; (vii) Section VIII summarizes conclusions and lessons learned during FY2013; and finally (ix) Section IX provides a retrospective review of ESMAP's portfolio under the previous FY2008-13 Strategic Business Plan.

2 | PORTFOLIO SIZE AND COMPOSITION

5. **ESMAP’s portfolio consisted of 128 activities at the end of FY2013.** Of these, 57 were new activities initiated during the fiscal year, 41 were carried over from the previous fiscal year and are under implementation, and 30 were closed and completed in FY2013. This corresponded to a 20% increase in the total number of activities in the ESMAP portfolio compared to FY2012. The variation is mostly due to an increase in projects approved in FY2013 and almost twice the number of projects still under implementation (Figure 2.1). The number of new, completed, and ongoing activities implemented by funding window—Annual Block Grants (ABGs), Africa Renewable energy Access Program (AFREA), Special Programs,¹ Global (own-managed)—is shown in Figure 2.2.² The breakdown of new, completed, and ongoing activities by region is shown in Figure 2.3.

Figure 2.1 | New, Completed, and Ongoing Projects, FY2012 and FY2013



¹ The term **Special Programs** in this report refers to multi-year funds allocated to regional units in addition to ABGs for the following programs: Renewable Energy Resource Mapping, Global Geothermal Development Plan (GGDP), SIDS (Small Island Developing States) DOCK Support Program, City Energy Efficiency Transformation Program (CEETI), and Sustainable Energy for All (SE4ALL). **Global** activities refer exclusively to activities implemented and managed directly by ESMAP and the Energy Anchor.

² Projects under Special Programs have been included under ABGs for this year’s Portfolio Review due to its low disbursement volume (only SIDS DOCL, Results-Based Financing (RBF), and SE4ALL had disbursements) and to be consistent with ESMAP’s 2013 Annual Report financial review.

Figure 2.2 | Number of New, Completed, and Ongoing Projects, by Allocation Window, FY2013

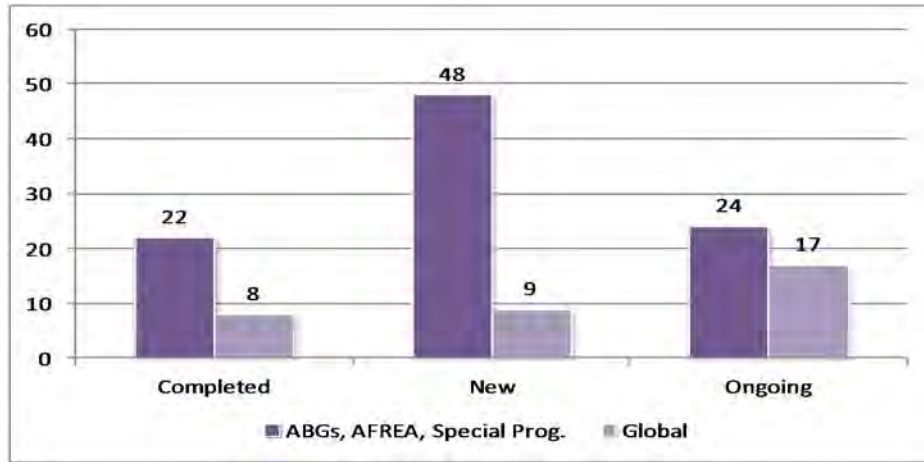
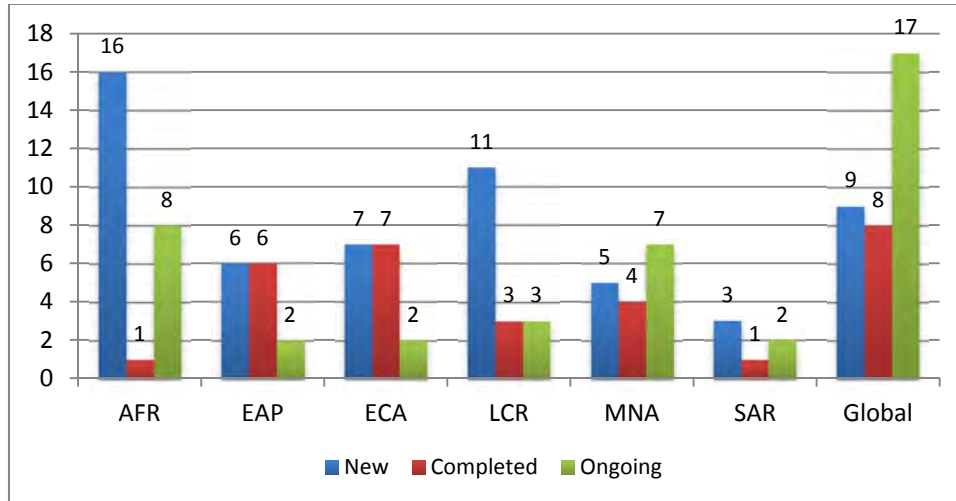


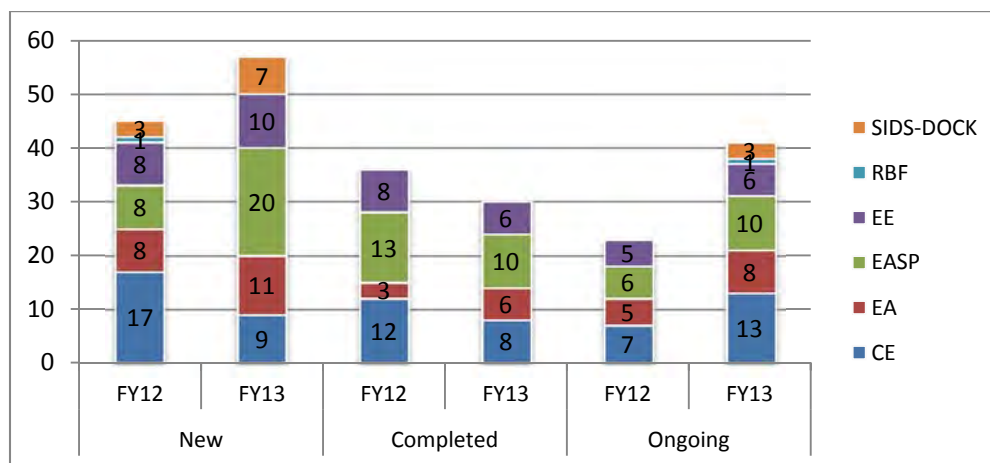
Figure 2.3 | Number of New, Completed, and Ongoing Projects, by Region, FY2013



- The largest portion of new activities approved in FY2013 was under the Energy Assessments and Strategies Program (EASP; Figure 2.4).** Out of new 57 activities initiated in FY2013, 20 were under the EASP, mostly implemented through the regions’ ABGs and concentrated on themes such as energy assessments; regulatory frameworks; energy system planning; energy sector reform strategy; cross-sectoral themes such as water-energy nexus and gas-electricity linkages; institutional strengthening; subsidy reform; and private sector role in energy sector. A total of nine new activities were initiated under the Clean Energy program with emphasis on resource mapping, geothermal development, and other renewable energy; 10 new activities were approved on energy efficiency themes such as urban transport, energy efficiency, and Tool for Rapid Assessment of City Energy (TRACE) deployment; 11 new

activities approved in energy access, mostly focused on the new Sustainable Energy for All (SE4ALL)³ initiative and rural electrification; and 7 under the SIDS DOCK program.

Figure 2.4 | Number of New, Completed, and Ongoing Projects, by Program, FY2012 and FY2013



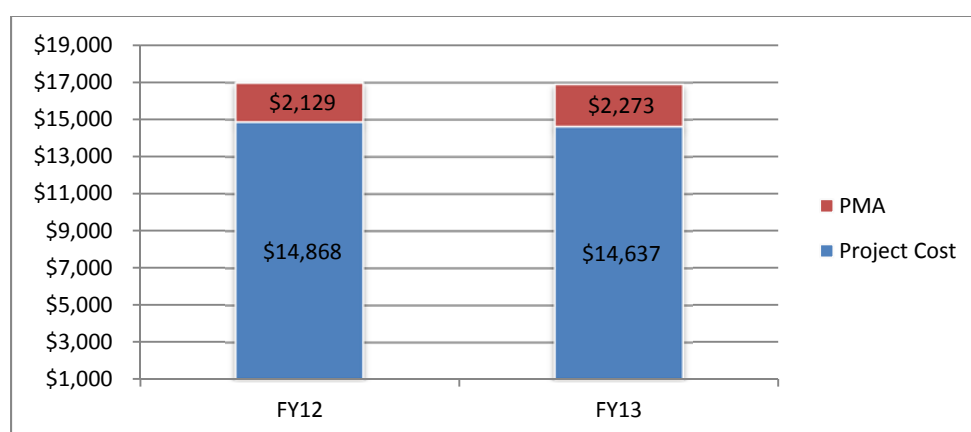
- Out of the 41 ongoing activities carried over from the previous fiscal year and still under implementation at the end of FY2013, 13 corresponded to the Clean Energy portfolio, 7 of which were Global projects implemented by ESMAP (Figure 2.4).** Key Global and ongoing clean energy activities included a comprehensive renewable energy training program developed in collaboration with the Advisory Services of the International Finance Corporation (IFC), ESMAP’s operational support to energy sector low carbon development; activities implemented under the Small Island Developing States (SIDS) program in support of renewable energy; and the Global Geothermal Development Plan (GGDP). The remaining ongoing activities under the portfolio comprised 10 activities under the EASP (including Model for Electricity Technology Assessment or META deployment, regional energy sector assessments, a natural gas master plan in Morocco, and a policy note on social accountability in energy sector in Egypt among others); 8 in energy access (including economics for household energy study, clean cooking initiatives, and defining and measuring energy); 6 on energy efficiency (mostly focused on development of energy efficiency in cities and urban transport); 3 under the SIDS DOCK program; and 1 in Results-Based Financing (RBF).

³ Launched in 2011, SE4ALL brings together a coalition of international organizations, national governments, major private sector enterprises, and civil society to support the achievement of three overarching goals by 2030: 1) universal access to modern energy services; 2) doubling the rate of improvement in energy efficiency; and 3) doubling the share of renewable energy in the global energy mix.

3 | DISBURSEMENTS AND IMPLEMENTATION

8. During FY2013, ESMAP had total disbursements of \$16.9 million as of June 30, 2013. Of this amount, about \$14.6 million (87%) corresponded to projects disbursements, including AFREA, and \$2.27 million (13%) to program management and administration (PMA).⁴ AFREA alone accounted for \$3.8 million (22%), while Global⁵ programs managed directly by ESMAP were responsible for about \$5.4 million (37%) of the total project disbursements. Total disbursements during FY2013 were only 0.4% less than FY2012 (Figure 3.1).

Figure 3.1 | ESMAP Total Disbursements, FY2012 and FY2013 (\$ thousands)



9. Total FY2013 disbursements under ABGs⁶ and Global activities (ESMAP own-managed only) were the same with about \$5.4 million each, while AFREA had disbursements of about \$3.7 million (Table 3.1).

Table 3.1 | ESMAP Disbursements, by Window, FY2013 (\$ thousands)

	TOTAL DISBURSEMENTS
ABGs	\$5,432.73
AFREA	\$3,772.53
ESMAP Global	\$5,431.59
Total	\$14,636.85

Note: ABGs include disbursements made under Special Programs.

⁴ PMA includes expenses under the following categories: Program Management, Trust Fund Administration, Budget and Resource Management, M&E, Communications and Dissemination, ESMAP's Knowledge Exchange Forum, and Consultative Group (CG) and Technical Advisory Group (TAG) expenses.

⁵ Disbursements under Global programs do not include disbursements made by regional units under special programs (Renewable Energy Resource Mapping, GGDP, SIDS DOCK, CEETI, and SE4ALL). It only includes disbursements made by ESMAP under own-managed activities.

⁶ ABG allocations to regions are made based on criteria such as size of IBRD/IDA lending in the energy sector, rate of implementation and disbursement, proactive portfolio management, and timely submission of deliverables.

10. **Africa (excluding disbursements under AFREA) together with by the Europe and Central Asia region (ECA) accounted for almost 50% of total ABG disbursements with \$1.4 million and \$1.2 million, respectively.** The largest portion of disbursements in Africa was under the Energy Access program and reflecting allocations under the SE4ALL initiative and SIDS DOCK program. In the case of ECA, disbursements were mostly in support of activities supporting energy efficiency initiatives and power sector assessments. The region with the lowest disbursements was South Asia with \$346,000 (Table 3.2).

Table 3.2 | ESMAP Disbursements by Program and Region, FY2013 (\$ Thousands)

	AFR		EAP	ECA	LAC	MNA	SAR	ESMAP GP
	ABG	AFREA	ABG	ABG	ABG	ABG	ABG	
Energy Assessment Strategies	271,00		381,08	443,19	110,14	125,70	256,67	686,21
Energy Access	892,77	3.772,53	100,84	-	155,39	-	-	1.337,80
Clean Energy	30,04		150,65	109,71	359,22	584,66	89,34	2.542,18
Energy Efficiency	232,68		74,05	648,14	288,47	128,99	-	865,40
	1.426,49	3.772,53	706,62	1.201,04	913,22	839,35	346,01	5.431,59

Source: ESMAP 2013 Annual Report.

11. The **average disbursement rate**⁷ under ABGs during FY2013 was about 43% and the **average implementation rate**⁸ was about **61%**, which includes total commitments for active projects under implementation. Disbursement and implementation rates were highest in the ECA region with 69% and 92% respectively, followed by the MNA region with disbursement rate of 56% and implementation rate of 65%. The region with lowest disbursement and implementation rates during FY2013 was SAR with 29% and 49% respectively. Disbursement and implementation rates under ABGs were linked to the multiyear nature of the activities initiated in FY2013, specific implementation plans agreed under the approved proposals and not necessarily a result of poor implementation performance.
12. Program wise, EASP had the largest disbursement volume under the ABGs mostly in the ECA, EAP, and AFR. The Clean Energy program had the most disbursements on activities in the MNA and LCR, and the bulk of energy access activities were implemented in the AFR, while ECA and LCR had the largest proportion of disbursements under Energy Efficiency activities (Tables 3.2 and 3.3).

⁷ Disbursement Rate corresponds to the ratio between the grant disbursed amount and the grant allocation amount for an activity under implementation.

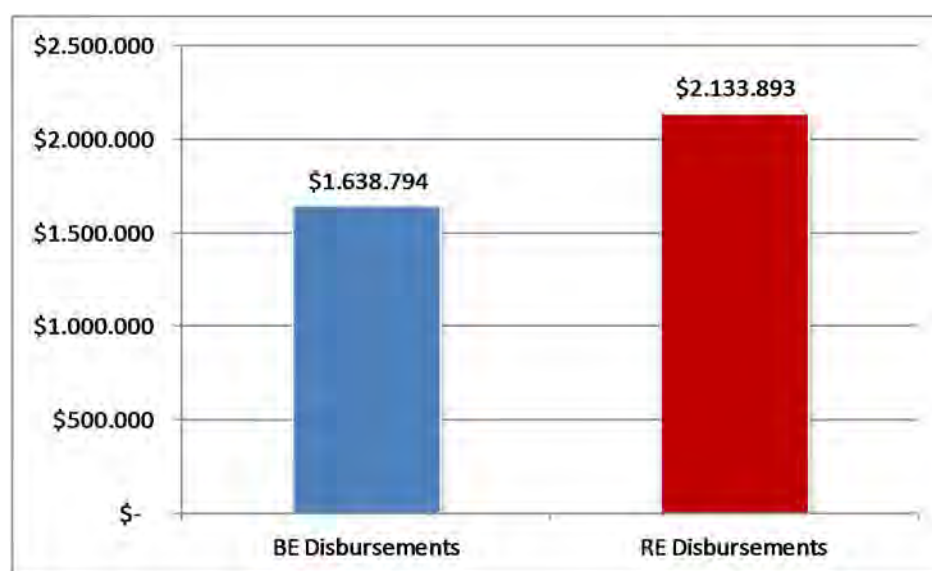
⁸ Implementation Rate corresponds to the ratio between the grant disbursed *plus* grant committed amounts and the grant allocation for an activity under implementation.

Table 3.3 | ESMAP Disbursements, by Program, FY2013 (\$ thousands)

ESMAP PROGRAM	REGIONAL DISBURSEMENTS ⁹	GLOBAL DISBURSEMENTS	TOTAL DISBURSEMENTS
Energy Assessment Strategies Program	\$1,588	\$686	\$2,274
Energy Access (excluding AFREA)	\$1,149	\$1,338	\$2,487
AFREA	\$3,773	N/A	\$3,773
Clean Energy	\$1,323	\$2,542	\$3,865
Energy Efficiency (including EECI)	\$1,372	\$865	\$2,237
Total	\$9,205	\$5,431	\$14,636

13. **Disbursements under Global Programs (ESMAP own-managed activities only) were at the same level as programs implemented through ABGs.** Global activities implemented or “own-managed” by ESMAP reached total disbursements of \$5.43 million during FY2013—exactly the same volume as regional disbursements implemented under the ABGs. The Clean Energy and Energy Access programs accounted for about 70% of total disbursements (Table 3.3).
14. **AFREA Portfolio Implementation Status.** Since inception of the program in December 2008, AFREA has received a total allocation of \$28 million (including investment income). Cumulative disbursements as of end of FY2013 were \$21 million representing a disbursement rate of 75% and an implementation rate of 87%. At the end of FY2013, AFREA’s portfolio comprised of 41 activities (21 Bank-executed and 20 Recipient-executed) with total disbursements of \$3.8 million for FY2013 alone (Figure 3.1).

Figure 3.2 | Total Disbursements under AFREA, FY2013



BE = Bank-executed; RE = Recipient-executed

⁹ Includes regional disbursements under special programs SIDS DOCK and SE4ALL.

Box 3.1 | ESMAP's Annual Block Grants

Annual Block Grants (ABGs) refer to the allocation of funds made every fiscal year by ESMAP to each of the World Bank's Regional Units for the execution of AAAs. ESMAP ABGs are an integral part of regional work programs with allocation managed by the regions' Energy Sector Managers. ABGs are demand driven with no ex-ante thematic allocations.

ESMAP's business model allows for quick review and approval of proposals, as well as flexibility in activity adjustment during the fiscal year due to changing circumstances and client requests, and for reallocation of funds within a region.

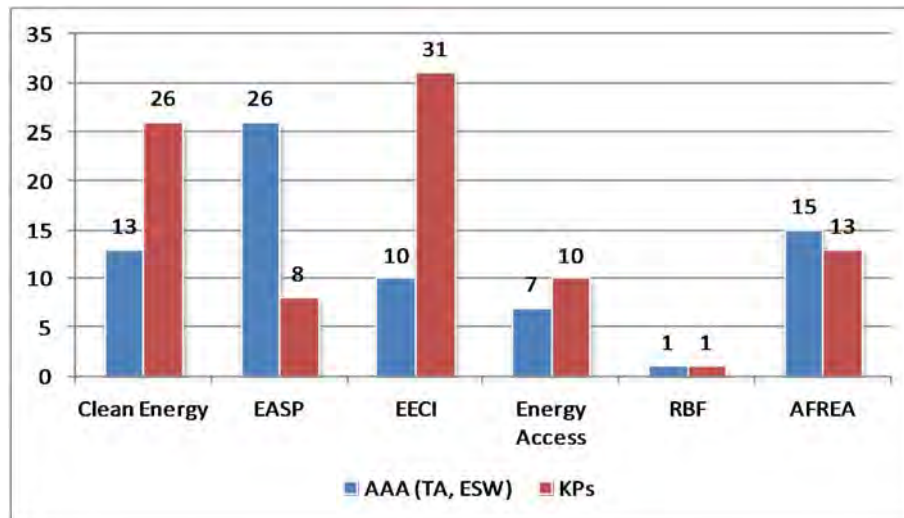
Criteria for budget allocations to regions under ABGs consist of a flat allocation for each region, plus a variable allocation that is determined on the basis of the following factors, weighted equally:

- **Region's energy lending volume**, which considers the total amount approved energy lending for previous fiscal year(s)—in dollar amounts and number of projects. The number used is for the whole region, not just the regional energy unit. For multi-sector projects, only the amount of the energy component is included.
 - **Total disbursement of regions' ESMAP funds** measured by the disbursement ratio of ESMAP allocation to regions during the previous one/two fiscal years.
 - **Total contribution of Bank Budget (BB) to ESMAP activities** using the total disbursement of Bank Budget for ESMAP activities approved during one/two fiscal years.
 - **World Bank lending informed by region's ESMAP activities** measured as proportion of a region's lending (number of projects, not financing amounts) that was informed by ESMAP activities. This indicator includes all lending that occurred during one/two fiscal years in client countries.
 - **Regional ESMAP portfolio performance**, which considers the percentage of completed activities with at least one observed outcome. Data on outcomes is from ESMAP's Portfolio Review.
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4 | OUTPUTS

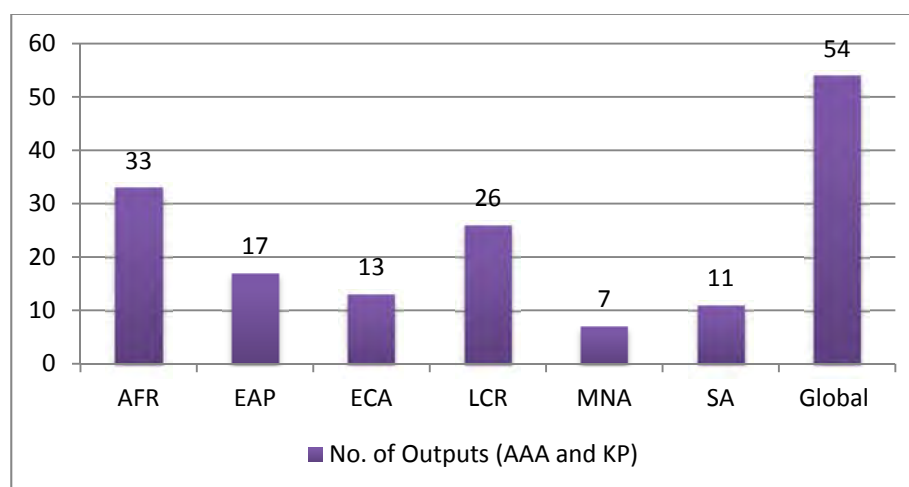
15. **ESMAP delivered a total of 161 outputs to clients during FY2013** (Figure 4.1). Of this total, 72 outputs corresponded to sector or thematic reports, policy notes, advisory/implementation notes, or event proceeding documents delivered under AAA; and 89 outputs to miscellaneous knowledge products (KPs), including toolkits, databases, handbooks, workshops, and knowledge and dissemination events (refer to Annex 3 for description of outputs under AAA and KPs). The largest portion of AAA outputs was delivered under EASP with 26, while the largest portion of KPs were delivered under Energy Efficiency (including EECI) and Clean Energy with 31 and 26, respectively (Figure 4.1). The majority of outputs delivered during FY2013 were Global or non-region specific with 54, while AFR and LCR had the largest portion of country and region-specific outputs with 33 and 26, respectively (Figure 4.2).

Figure 4.1 | ESMAP Outputs, by Type and Program



AAA = Analytical and Advisory Activities; ESW = Economic and Sector Work; KP = Knowledge Product; TA = Technical Assistance

Figure 4.2 | ESMAP Outputs Delivered, by Region



AAA = Analytical and Advisory Activity; KP = Knowledge Product

Peer-Reviewed Research

16. ESMAP started to adopt specific actions during FY2013 to systematize the commissioning of peer-reviewed research. These include:
- **Early identification of potential pieces of research at approval phase.** As part of the approval process of ESMAP activities, ESMAP’s Proposal Summary Forms (PSFs)—the standard templates used for proposing region/country-specific activities under the ABGs—will require Task Team Leaders (TTLs) to state whether output(s) that will be delivered under proposed activities qualify as peer-reviewed research suitable for publication by reputed journals. Furthermore, as part of its annual Portfolio Review exercise, ESMAP will screen recently completed and ongoing activities that could potentially be disseminated through such channels. Assigned ESMAP reviewers will be responsible for following up with TTLs and project teams throughout the preparation and implementation process.
 - **ESMAP financial and editorial support.** For eligible activities commissioned for publication in journals, ESMAP will allocate additional funds and provide support to the TTL/Project team to meet the editorial and formatting requirements established by identified energy journals.
 - **Identification of energy journals suitable for ESMAP research products.** ESMAP has identified 10-15 reputed journals whose content and scope are suitable for research and analysis products commissioned by ESMAP. The profile, policies, industry standards, and peer review process for each journal will also be summarized, tabulated, and disseminated internally and externally (e.g., wiki/Energypedia) to authors/TTLs.
17. During FY2013, ESMAP delivered six peer-reviewed articles or reports published and disseminated either through the World Bank or renowned academic journals, as follows:
- Title:** “Promoting New Links Between Energy and Meteorology”
Author(s): Troccoli, Audinet, Bonelli et al.

Journal/Publisher: Bulletin of the American Meteorology Society (BAMS)

Online ISSN: 1520-0477

Print ISSN: 0003-0007

Frequency: Monthly

Publication Date: Volume 94, Issue No. 4, April 2013

Title: “Global Tracking Framework Report”

Journal/Publisher: Sustainable Energy Department (SEG)/World Bank - International Energy Agency (IEA)

Publication Date: May 2013

Title: “China: West or East Wind, Getting the Incentives Right”

Author(s): Song, Yanqin; Berrah, Noureddine

Journal/Publisher: Policy Research Working Series - World Bank

Report No.: 6486

Publication Date: June 2013

Title: “State of the Global Clean and Improved Cooking Sector”

Journal/Publisher: United Nations Global Alliance/ESMAP

Publication Date: June 2013

Title: “Connection Charges and Electricity Access in Sub-Saharan Africa”

Author(s): Golumbeanu, Raluca; Barnes, Douglas

Journal/Publisher: Policy Research Working Series - World Bank

Report No.: 6511

Publication Date: June 2013

Title: “Who Benefits Most from Rural Electrification? Evidence in India”

Author(s): Khandker, Shahidur R.; Samad, Hussain A.; Ali, Rubaba; Barnes, Douglas F.

Journal/Publisher: Policy Research Working Series - World Bank

Report No.: 6095

Publication Date: June 2012

Box 4.1 | Featured ESMAP Reports and Publications, FY2013



Global Tracking Framework



Planning for a Low Carbon Future: Low Carbon Growth Country Studies Program: Lessons Learned from Seven Country Studies



What Have We Learned about Household Biomass Cooking in Central America



Geothermal Handbook: Planning and Financing Power Generation



Commercial Woodfuel Production: Experience from Three Locally Controlled Wood Production Models



Mitigating Vulnerability to High and Volatile Oil Prices: Power Sector Experience in Latin America and the Caribbean



Integrating Gender Considerations into Energy Operations



Cumulative Environmental Impact Assessment for Hydropower Projects in Turkey



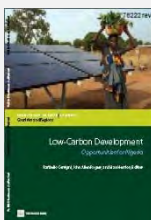
Public Procurement of Energy Efficient Products: Lessons from Around the World



Results-Based Financing in the Energy Sector: An Analytical Guide



Rwanda - Extending Access to Energy: Lessons from a Sector-Wide Approach (SWAp)



Low Carbon Development: Opportunities for Nigeria

Impact Stories

18. In May 2013, ESMAP officially launched the first issue of Impact—a series of short, anecdotal briefing notes highlighting the background, type of support, key outcomes, and impact achieved by ESMAP activities. The following four stories were produced in the last quarter of FY2013; two more have been produced during the first quarter of FY2014.
- **Impact #1 | ESMAP Helps Triple Electrification Rates in Rwanda.** (May 2013). With a chronically low national electrification rate and a dilapidated energy infrastructure, the government of Rwanda faced a steep uphill battle when, in 2008, it committed to triple household electricity access over a mere five-year period. At the time, only 6% of Rwandans—roughly 110,000 households mostly concentrated in and around the capital, Kigali—were connected to the grid. ESMAP laid the groundwork for this rapid extension of grid electricity by helping to develop a national rollout plan using a Sector-Wide Approach (SWAp) for the energy sector. Barely three years later the number of grid-connected households had more than tripled to 357,000—an increase which exceeded the government’s ambitious original five-year target. The impacts of the energy SWAp were immediate and widespread. By September 2012, 16% of Rwandans had access to the grid and the Rwanda Energy Corporation (RECO) was connecting 100,000 new households a year, a four-fold increase over the 2008 connection rate. Click [here](#) to read full story.
 - **Impact #2 | ESMAP Study Highlights Concentrated Solar Power Potential in Morocco.** (May 2013). On a bare desert plateau near Ouarzazate in southern Morocco sits what will soon be one of the largest concentrated solar power (CSP) installations in the world. The development of the 500 MW Ouarzazate I plant is a cornerstone of the Moroccan Solar Plan, an ambitious strategy by which the country aims to generate 2,000 MW of CSP by the year 2020. ESMAP support was mobilized by the World Bank to prepare a report evaluating the opportunities and challenges in developing local solar industries in Morocco and other MNA countries. The report’s subsequent findings were to play a catalytic role in informing the development and preparation of a World Bank loan for the Ouarzazate I plant, which was approved by the World Bank’s Board of Executive Directors in November 2011. The World Bank’s \$297 million in funding for Ouarzazate I—\$200 million through the International Bank for Reconstruction and Development and another \$97 million through the Clean Technology Fund (CTF) in partnership with the African Development Bank—in turn helped leverage a further \$1.4 billion in project financing from a group of seven international lenders. Carried out by Ernst & Young (France) and the Fraunhofer Institute (Germany), the ESMAP-funded “Assessment of the Local Manufacturing Potential for Concentrated Solar Power Projects” evaluated the manufacturing and other value-added impacts CSP could bring to Morocco and other MNA countries. The ESMAP study also assessed the potential for local job creation. Click [here](#) to read full story.
 - **Impact #3 | ESMAP Tool Helps Turkish City Make Economic Growth Sustainable.** (June 2013). The city of Gaziantep in southeastern Turkey is one of the fastest growing urban areas in the world. An important trade link serving as Turkey’s gateway to the Middle East, the city has seen its population increase ten-fold to an estimated 1.35 million over the last 40 years. Gaziantep’s rapid expansion has placed significant pressure on its land and environment. And with a

population anticipated to reach 3 million over the next 20 years, municipal planners face the challenge of ensuring its existing and new infrastructure can sustain the city’s explosive growth. In recent years, the Gaziantep Metropolitan Municipality has taken a number of steps to tackle energy efficiency challenges and, as such, was a natural venue for one of the first global pilots of the Tool for Rapid Assessment of City Energy (TRACE) in 2011. TRACE was developed by ESMAP in 2010 as a means to help city planners target and prioritize energy efficiency interventions. The TRACE deployment in Gaziantep placed the city at the forefront of Turkey’s ambitious “greening” agenda and directly informed the creation of a Sustainable Cities investment program in the World Bank’s \$4.4 billion 2012-2015 Country Partnership Strategy with Turkey. Click [here](#) to read full story.

- **Impact #4 | Electrification Program Helps Boost Incomes in Rural Peru.** (June 2013). In recent years, the Government of Peru has made remarkable strides in extending electricity service into rural areas. A 2007 census found that only 30 percent of rural households had access to electricity—one of the lowest rates in Latin America. Over the next four years, the government more than doubled this number through a multi-faceted national program spearheaded by the Ministry of Energy and Mines (MEM) and designed with help from ESMAP. ESMAP played a key role by financing a total of \$225,000 of technical assistance from 2008-2011 that brought international experience to help design the Productive Uses Program and build the capacity of the MEM project team, the non-governmental organizations (NGOs), and the electricity distribution companies that implemented it. ESMAP’s support enabled the Productive Uses team to adapt lessons from two World Bank-assisted Rural Electrification Projects in Indonesia that pioneered a Business Development Services approach to promoting productive uses in which PLN, the national electricity utility, reached out to small rural businesses through a team of NGOs. Click [here](#) to read full story.

Academic Mentions

19. In FY2013, ESMAP started to track and categorize mentions of ESMAP work¹⁰ in academic publications, and professional and specialized energy journals and websites. In total, 161 academic articles referencing ESMAP work was identified—of these, 133 were references or citations made during FY2013 (Table 4.1).

Table 4.1 | Academic Mentions of ESMAP Products, FY2013

ESMAP STRATEGIC PROGRAM PRODUCT	NUMBER OF REFERENCES*
Clean Energy	44
Energy Assessments & Strategies	50
Energy Access	56
Energy Efficiency	11
Total	161

* Based on advanced search with key parameters conducted with Google Scholar.

¹⁰ Reports, energy sector notes, policy notes, and knowledge products.

5 | OUTCOMES AND KEY RESULTS ACHIEVED, FY2013

20. **This section summarizes the results and outcomes measured and observed during FY2013 under ESMAP activities.** As stated previously and considering the focus on annual results and achievements, this and future versions of the portfolio review puts emphasis on outcomes observed and identified only during the last fiscal year—July 1, 2012 to June 30, 2013. However, in light of the recently completed ESMAP Strategic Business Plan FY2008-13, this review also includes a special section at the end with a retrospective overview of all outcomes achieved during the entire business plan period.
21. The portfolio review takes stock of the results and outcomes of projects and activities implemented under ESMAP’s four major strategic programs under the previous strategic business plan, namely: Energy Assessments and Strategies Program (EASP), Energy Access (EA), Energy Efficiency (EE), and Clean Energy (CE).
22. **The Portfolio Review provided evidence that 45 outcomes were achieved during FY2013 through ESMAP projects and activities, as measured against key performance indicators** (see Box 5.1). The majority of the outcomes were observed on activities approved and implemented before FY2013, confirming the time lag between activity completion or output delivery and uptake and application of results (Table 5.1). These 45 outcomes achieved were associated with 32 ESMAP activities; this includes 4 activities with separate outcomes previously achieved and reported, and 2 activities from early FY2009 that had shown no results to date and were classified as activities with “no measurable results” in previous portfolio reviews. Please refer to Annexes 6 and 8 for further details on outcomes achieved by each activity.

Table 5.1 | Outcomes, by Type, FY2013

OUTCOME TYPE	TOTAL
Development Financing Informed	9
Policy/Strategy Informed	18
Client Capacity Increased	9
Knowledge Increased	6
Innovative Approaches & Solutions Generated	3
TOTAL	45

Box 5.1 | WB/ESMAP Outcomes and Indicators

ESMAP has adopted the following outcomes and corresponding indicators developed and implemented by the World Bank under its Analytical Advisory Activities (AAA) and Knowledge Products (KPs).

Development Financing Informed

- Preparation of new operation informed
- Existing operations informed
- Mobilization of non-Bank resources informed
- Government expenditure informed

Policy/Strategy Informed

- Government policy/strategy informed
- Public debate stimulated/initiated
- Contributed to stakeholder involvement
- Development community/partner policy/strategy informed
- Bank country strategy (CAS/CPS) informed/influenced
- Bank sector strategy informed/influenced

Client Capacity Increased

- Design capacity strengthened
- Implementation capacity strengthened
- M&E capacity increased

Knowledge Increased / Deepened

- Facilitated exchange of best practice with clients
- Facilitated exchange of best practice with partners
- Disseminated best practices

Innovative Approaches and Solutions Generated

- New innovative approach fostered
- New innovative approach developed
- Client is able to adopt/harness new technologies, innovative ideas, know-how

23. **Outcomes observed during FY2013 were mostly concentrated in global or multi-country activities while fewer outcomes were observed in MNA and SAR** (Table 5.2). Global activities yielded 19 outcomes out of the total 45 observed; such activities were particularly effective in strengthening capacity, facilitating exchange of best practices and informing policy or strategies for governments, regulatory agencies, ministries, utilities, or other public entities. Some examples include the active

deployment and implementation of ESMAP modeling tools of TRACE (LCR, ECA, and EAP) and META (LCR), the launch of the Smart Grid Technologies Dissemination Platform, which has served as an effective mechanism to disseminate smart grid technology applications; and the ESMAP/AFREA-funded Gender & Energy Program, which helped rural women in Senegal obtain decision-making roles in community forestry programs as part of the World Bank's Sustainable Energy program (PROGEDE).

Table 5.2 | ESMAP Outcomes, by Type and Region, FY2013

REGION	DEVELOPMENT FINANCING INFORMED	NO. OF OUTCOMES					TOTAL
		DEVELOPMENT FINANCING INFORMED	POLICY/STRATEGY INFORMED	CLIENT CAPACITY INCREASED	KNOWLEDGE INCREASED	INNOVATIVE APPROACHES & SOLUTIONS GENERATED	
AFR	0	0	0	0	0	1	1
EAP	\$202 M	3	5	2	0	0	10
ECA	\$320 M	3	2	1	1	0	7
LCR	\$42 M	1	4	1	2	0	8
MNA	\$592 M	2	0	0	0	0	2
SAR	-	0	1	0	0	0	1
Global	N/A	N/A	6	5	3	2	16
Total	\$1,156 M	9	18	9	6	3	45

24. **A significant number of outcomes were observed in Energy Assessments and Strategies Program (EASP) and Clean Energy activities** (Table 5.3). EASP and Clean Energy activities contributed to 33 outcomes or about 72% of the total. A large portion of these outcomes were associated with influencing government policies or strategies (18) and informing World Bank lending operations (9). The Energy Efficiency and Energy Access programs had six outcomes each.

Table 5.3 | ESMAP Outcomes, by Type and ESMAP Program, FY2013

ESMAP PROGRAM	DEVELOPMENT FINANCING INFORMED	No. of Outcomes					TOTAL
		DEVELOPMENT FINANCING INFORMED	POLICY/STRATEGY INFORMED	CLIENT CAPACITY INCREASED	KNOWLEDGE INCREASED	INNOVATIVE APPROACHES & SOLUTIONS GENERATED	
Clean Energy	\$ 77.1 M	3	5	3	1	1	13
EASP	\$ 705 M	3	9	3	4	1	20
Energy Access	-	0	3	1	1	1	6
Energy Efficiency	\$ 374 M	3	1	2	0	0	6
Total	\$ 1,156 M	9	18	9	6	3	45

Overview of Outcomes Achieved, by Type

25. **Development Financing Informed.** Based on lending source from the WBG, four loans were approved in support of IDA countries and five in IBRD countries. The four IDA credits/loans approved targeted the strengthening of the investment climate in the power sector in Georgia; efforts to address climate

change by adopting policies and strengthening institutional capacity in Vietnam; and assessing the commercial viability of geothermal resources in Djibouti. Development objectives of the IBRD operations range from strengthening management capacity of Uruguay’s water utility company; improving the efficiency of energy use in the small and medium enterprise (SME) sector in Turkey; scaling up the deployment of rooftop solar photovoltaic systems in schools and other educational institutions in Beijing Municipality in China; and expanding electricity generation capacity through construction of a 1,300 MW power plant in Egypt. Table 5.4 provides details on the nine World Bank lending operations, including the associated ESMAP activities that helped influence the origination and design of the loans.

Table 5.4 | World Bank Lending Operations Influenced by ESMAP, Approved in FY2013¹¹

WORLD BANK LENDING OPERATION	REGION/COUNTRY	WBG LENDING SOURCE	AMOUNT (\$ IN MILLIONS)	APPROVAL DATE	ASSOCIATED ESMAP ACTIVITY
OSE Response for Climate Change Project	LCR / Uruguay	IBRD	\$42	July 5, 2012	Global - Energy Efficiency for Water and Sanitation Utilities (P124354)
First Competitiveness and Growth Development Policy Operation	ECA / Georgia	IDA	\$60	July 19, 2012	ECA - Regional Energy Sector Note (P122951)
Vietnam Climate Change, Development Policy Loan 2	EAP / Vietnam	IDA	\$70	November 8, 2012 (but included in previous PR)	Vietnam - Energy Sector Low Carbon Development Operational Support (P127168)
Turkey Small & Medium Enterprises Energy Efficiency Project	ECA / Turkey	Global Environment (assoc. IBRD Fund)	\$200	March 27, 2013	Turkey - Facilitating Small and Medium Enterprise Financing for Energy Efficiency (P13058)
Beijing Rooftop Solar Photovoltaic Scale-Up (Sunshine Schools) Project	EAP / China	IBRD	\$120	March 20, 2013	China - Government Facilities Energy Efficiency Project (P123066)
Urban Scale Building Energy Efficiency and Renewable Energy Project	EAP / China	IBRD	\$12	April 26, 2013	China - Low Carbon Cities (P123996)
Geothermal Power Generation Project	MNA / Djibouti	IDA / ESMAP	\$7.1	June 5, 2013 (ESMAP provided \$1.1 million in financing)	Djibouti - Geothermal Power Generation Program (P127143), Global - Geothermal Handbook (P125368)
Helwan South Power Project	MNA / Egypt	IBRD	\$585	June 27, 2013	MNA - Country Energy Sector Credit Constraints Assessment (P116206)
Second Competitiveness and Growth Development Policy Operation	ECA / Georgia	IBRD and IDA (Blend countries)	\$60	June 27, 2013	ECA - Regional Energy Sector Note (P122951)
Total			\$1,15 B		

Note: World Bank approved lending in energy & mining sector totaled \$3.28 billion during FY2013 (Source: World Bank Annual Report 2013).

¹¹ While the majority of World Bank lending operations influenced by ESMAP activities are in the energy sector, some loans or components may be mapped to other sectors such as climate change, urban development, or infrastructure.

26. **Policy/Strategy Informed or Influenced.** ESMAP provided policy advice to client countries on strategically important energy sector issues (Table 5.5). The Portfolio Review provided evidence that ESMAP’s assistance helped client countries make better-informed policy decisions and translate those decisions into strategies and programs that often lead to new legal and regulatory frameworks, adoption of sector strategies and implementation plans, compliance with existing laws, or other policy formulations in the energy sector. During FY2013, there were 17 outcomes in which ESMAP activities influenced energy policies in more than 15 countries. Table 5.5 provides a partial list of key policy-related outcomes achieved during FY2013. (For full list and description of policy outcomes please refer to Annexes 6 and 8.)

Table 5.5 | Key Policy-Related Outcomes Achieved by ESMAP Activities, FY2013

ESMAP ACTIVITY	REGION/COUNTRY	POLICY-RELATED OUTCOME ACHIEVED
RE Investment Climate	India	Generated public debate and significant media attention, with articles highlighting a central point of the report: if the government is to meet its target of expanding renewable installed capacity by 40 GW by 2022, substantial financial and regulatory barriers will have to be addressed. Developed models of regulatory framework for risk and reward allocation and improve operating environment for renewable energy; WB engagement with India scale-up on renewable energy. The models (anchored in real projects) were successfully road tested at a conference held for the private sector.
Strategic Overview on Energy Procurement and Best Practices in Energy Auctions	LCR	Study shed light into ongoing debate of feed-in-tariffs versus competitive auctions for renewables. Study used as reference by some client countries (Brazil, Colombia, Mexico, and Peru) in policy making process and in designing their competitive procurement bids.
Tool for Rapid Assessment of City Energy (TRACE)	Brazil	TRACE implementation in Rio de Janeiro/FIFA World Cup; identified interventions; and helped create EE strategic plans.
Heat Regulation Phase II	China	The TA provided direct feedback to the Ministry of Housing Urban Rural Development (MOHURD) on enhancing the institutional model for district heating. The MOHURD is implementing a GEF-financed Heat Reform and Building Energy Efficiency Project, which includes a TA activity to prepare a Ministerial Order for Heat Regulation. This AAA has served as an input to the development of this Ministerial Order.
Managing the Impact of High and Volatile Oil Prices	LCR	Provided tools for policy makers to manage vulnerability posed to public utilities by high and volatile oil prices. Pursuant to the study, Mexico, Honduras, and the Dominican Republic approached Bank for assistance to address impact of over-dependence on oil.
Regional Energy Sector Review	ECA	The activity helped take stock of the latest technical, legal and regulatory developments in power sectors in the Southern Caucasus and identified potential technical and economic benefits of electricity trade in the region. In particular, the activity informed policy conditions relating to creation of market rules in Azerbaijan, Armenia and Georgia. Additionally, the results of the activity are feeding into an ongoing development policy loan (DPL) series, where the activity has informed the policy conditions relating to creation of market rules.
Developing a Regularity Framework for Maldives Energy Sector	Maldives	The regulatory framework developed through the activity outlined overall regulatory architecture and policy principles for licensing, investment approvals, and compliance monitoring and energy efficiency. The government is currently in the process of translating and converting this work into formal regulations that will be made public and become enforceable.

Low Carbon Cities	China	The ESMAP activity fed directly into the China - Urban Scale Building Energy Efficiency and Renewable Energy Project (Board approved April 2013) by providing strategic orientation on low carbon city development in a number of different institutions (i.e., through training of National Development and Reform Commission officials etc.). The study helped develop policy dialogue in low carbon development and has become the “go to” reference publication on low carbon development in China.
Energy Forecasting Framework and Emissions Consensus Tool (EFFECT)	Nigeria	The Energy commission of Nigeria created an EFFECT modeling group within Energy Planning and Analysis Department to investigate generation options for a 30-year horizon.
Technical Assistance for Energy Planning	Peru	Government used output as the key support document to regroup internal organization of the Ministry of Mines to include planning functions in a more explicit and clear institutional arrangement (Supreme Decree No. 030-2012-MEM).
Philippines Rural Electricity Cooperatives: Reform and Restructuring	Philippines	Based on this TA, the National Grid Management Commission approved an addendum to the national grid code that for the first time established connection requirements and performance standards for variable renewable energy sources being integrated into the national grid.
Gender and Energy	Tanzania, Mali	The activity directly assisted the government of Mali in establishing a gender desk center in the Household Energy and Rural Electrification Agency (AMADER) to better mainstream gender in its operations. (Decision No.196/MEE-AMADER-DG-DAF). In Tanzania, the Rural Energy Agency (REA) created a new gender focal point and a technical and capacity building unit within its rural energy agency to advance work on gender within the agency.

27. **Client Capacity Increased.** Capacity increase was mostly visible on ESMAP activities that have developed tools, models, or targeted training to build or enhance client capacity to implement policies, programs, and strengthen institutions in the energy sector. As part of TRACE’s deployment phase in FY2013, ESMAP has provided training and implementation capacity to government officials to help them assess energy efficiency performance in more than 25 cities. Also notable was the comprehensive renewable energy training program—designed and delivered in partnership with IFC—targeted to increase capacity and expertise of WBG staff, increasing their effectiveness when engaging on renewable energy related analytical work, TA, and investment operations. This, it is expected, would translate into higher quality advice to clients, contributing to better informed government policies and better structured public and private investment operations. These resources have been disseminated in various fora and will be the basis for developing a sector-wide training on gender and energy under ESMAP’s new FY2014-16 Business Plan.
28. **Knowledge Increased or Deepened.** Several ESMAP activities were effective in disseminating knowledge and facilitating exchange of best practices with clients and partners. There were six instances that demonstrated an effective dissemination and exchange of knowledge with World Bank staff client countries and partners; including the efforts conducted under the **Electricity Transmission Planning** project, which has increased capacity and knowledge of World Bank staff and client countries (including Philippines, Mozambique, South Africa, and Morocco) regarding the barriers impeding the development of transmission systems for renewable energy scale up. Key lessons from the report have already been shared with clients upon their request for knowledge regarding the development of transmission infrastructures. Another example is the **Regional Sector Note for the ECA Region**, which facilitated knowledge of best practices of regulatory framework to increase power trade in ECA region. In

particular, there has been substantial knowledge exchange with counterparts and donors, sharing the experience from other regions during their transition to an increase in power trade and power sector reform (e.g., South-Eastern Europe and Turkey Energy Sector Reforms).

29. **Innovative Approaches and Solutions Generated.** Three instances provided evidence of cutting-edge solutions developed by ESMAP that have been used not only by governments but also by a wide array of stakeholders, including the private sector and NGOs to help respond to energy sector challenges of client countries. These include (i) a lighting test methodology originally developed for the Lighting Africa, supported under AFREA, which has become the world standard for clean off-grid lighting products, following its incorporation into an International Electrotechnical Commission (IEC) technical specification in April 2013; (ii) the development of META, the modeling tool for electricity technology assessment to conduct comparative assessments of the economic cost of thermal and renewable electricity generation options; and (iii) development of a screening tool of potential climate stressors for the energy sector that helps identify current and potential climate risks and energy sector vulnerabilities, as well as potential adaptation options. The approach has been applied in several countries and presented through a standardized dashboard.

NOTABLE OUTCOMES, BY ESMAP PROGRAM (FY2013)

Energy Assessments and Strategies Program (EASP)

30. **The Model for Electricity Technology Assessment (META).** META developed by ESMAP is helping energy policymakers to carry out comparative assessments of the economic costs of power storage, thermal, and renewable electricity generation options. Since being rolled out in June 2012 to the WBG and selected partners and clients, META has been already field tested by almost a dozen teams in academia, government, and the private sector. META has been used by several Bank teams in their work. For instance, META was used to determine the cost of electricity generation in the study on [Impact of High Oil Prices in the Latin America and Caribbean Region](#). It was used by external advisors to support government ministries in Haiti and Jamaica to calculate levelized costs to be used in national climate and energy planning. And META will be incorporated in academic courses offered by the KTH Royal Institute of Technology (Sweden), Wharton Business School (United States), and the India Institute of Science (Bangalore, India).
31. **Development of a comprehensive regulatory framework for the Maldives.** The regulatory framework developed through the ESMAP TA outlined the overall regulatory architecture and policy principles for key regulatory elements, such as licensing, investment approvals, compliance monitoring, and energy efficiency, which would guide the government in instituting the appropriate regulations for the energy sector. The government is currently in the process of translating and converting this work into formal regulations that will be made public and become enforceable effective. The TA also supported the Maldives Energy Authority to develop its' ability to effectively exercise its regulatory mandate. By strengthening the regulatory regime, the country will be able to achieve better efficiencies in sector operations, create an interface between service providers and the consumers, and facilitate investment in new sustainable sources of energy. This was viewed as a priority by both the Government and the

Bank in light of the forthcoming private sector-led renewable energy scale-up which will require Maldives Energy Authority to act as an efficient and reliable regulator.

32. **Technical assistance for energy sector planning in Peru.** The ESMAP-supported activity assisted the Ministry of Mines and Energy (MME) in evaluating, designing, and implementing a planning unit for the energy sector within the ministry. As a result, a new law (Supreme Decree No. 030-2012-MME) was issued by the government laying out the institutional arrangements and the internal organization of the MME. The activity also helped increase technical capacity and knowledge on energy planning models using other countries, such as Brazil and Colombia, and helped to adapt specific aspects of these models to the Peruvian context.
33. **Philippines renewable energy policy dialogue and analytical support.** This activity concluded successfully with the approval of an addendum to the Philippines Grid Code (PGC) by the National Grid Commission. The reform established connection requirements, performance standards, and clear operating protocols for variable renewable energy sources—like solar and wind—being integrated into the national grid.
34. **WB lending operations influenced in Egypt and Georgia.** The following EASP activities provided advice on clients' energy sector thus enabling the mobilization of World Bank loans.
 - In June 2013, the **Helwan South Power Project** was approved for Egypt. The loan was identified based on the assessment carried out by ESMAP (Country Energy Sector Credit Constraints Assessments) to estimate the short- to medium-term impact of the emerging credit constraints ("the credit crisis") on the on-going and future capital investment plans and programs in the power sector. This project was flagged by the Egyptian government as requiring priority financing from the World Bank.
 - Also in June 2013, the **Second Competitiveness and Growth Development Policy Operation** was approved for Georgia. This is the second lending operation approved for Georgia based on ESMAP's Regional Energy Sector Note, which highlighted the need to establish clear transit tariff rules, strengthen the framework for capacity allocation and congestion management, and develop clear market rules to facilitate power trade.

Energy Efficiency¹²

35. **Continued expansion of global deployment of the Tool for Rapid Assessment of City Energy (TRACE).** TRACE, the innovative city energy diagnostic tool developed by ESMAP to help cities quickly assess their energy efficiency performance, achieved important milestones during FY2013. By the end of FY2013, implementation capacity in applying the modeling tool increased in 25 cities in 17 client countries, and more than 70 people were trained to use TRACE. The TRACE tool has been very well received by city officials, helping them understand clearly how they compare to their peer cities, assess energy performance, prioritize under-performing sectors, and identify actions to be taken to lower their energy bills and save money. Recent achievements of the TRACE tool in selected client countries include:

¹² The term "energy efficiency" throughout this report refers to activities implemented both under ESMAP's own-managed Energy Efficiency Cities Initiative (EECI) and energy efficiency activities implemented by WB regions under the ABGs.

- **Indonesia.** The World Bank used TRACE to conduct city-level case studies. Findings from the case studies are being used to create Energy and Emissions Sustainability Plan (EESP) Guidelines to be distributed throughout the entire East Asia and the Pacific region.
- **Macedonia.** TRACE has fed into the broader Green Growth Agenda, and is helping inform Bank-financed Municipal Infrastructure Investment Project.
- **Georgia.** TRACE results are contributing to the development of the Georgia's Municipal Development Fund, where a third generation of the fund will consider using a sustainable cities investment framework.
- **Brazil.** TRACE, implemented in Rio de Janeiro and Belo Horizonte, helped create Energy Efficiency Strategic Plans for both cities. The World Bank is currently working on a \$500 million energy efficiency investment program for the two cities.

36. **A Primer on Energy Efficiency for Municipal Water and Wastewater Utilities mobilizes World Bank financing for Uruguay.** This primer discusses the energy use and efficiency of network-based water supply and wastewater treatment in urban areas. It focuses on the supply side of the municipal water cycle, including the extraction, treatment, and distribution of water, and collection and treatment of wastewater—activities that are directly managed by water and wastewater utilities (WWUs). The primer offers a simple operational framework to help strategic decision-making on how to best invest resources over the range of options, supplemented with guidance on successful models to implement such strategies. Notably, the activity informed the preparation of the OSE Response to Climate Change Project (P118064, \$42 M, IBRD Loan) for Uruguay, which, among other things, supports the development and implementation of a comprehensive energy management program for Uruguay's national water and wastewater utility. The activity has also led to a recently launched regional program for Latin America on energy efficiency of water supply and wastewater treatment.
37. **Increasing capacity and informing financing for Turkey's banking sector.** A screening tool and an energy calculator were developed for three partner banks (Halk, Vakif and Ziraat Banks) as well as relevant government entities (Ministry of Energy and Natural Resources, SME Agency (KOSGEB), Treasury) to help them carry out bank portfolio market assessments, in order to determine key subsectors and technical product lines for replicable energy efficiency investments and conduct quick assessments of financial viability of the energy efficiency retrofits. These outputs helped inform the design of the Turkey SME Energy Efficiency Project—a \$200 million loan to three financial institutions (FIs) in the country. In the long term, it is expected that the tool will also help banks reduce their transaction costs for smaller projects. KOSGEB and MENR are also planning to disseminate the tool to other banks, energy service companies (ESCOs), SMEs and others to help promote energy efficiency within the industrial sector.
38. **Implement cost-effective energy efficient programs in China.** ESMAP's Government Facilities Energy Efficiency Project in China conducted policy research on existing and planned energy laws, policies, regulations, directives, codes, and/or standards to determine key aspects needed for a supportive framework for government facilities to meet goals on rational use of energy and comply with regulatory requirements. The activity helped review policies and initiatives, and provided international experience and initial recommendations to improve the energy efficiency of existing public buildings belonging to

central, provincial, and municipal government agencies, including office buildings, schools, universities, and hospitals. The ESMAP AAA yielded direct operational support for school and hospital energy conservation components for the Beijing municipality in the Beijing Rooftop Solar Photovoltaic Scale-Up (Sunshine Schools) Project, a \$120 million World Bank loan approved in March 2013.

Energy Access

39. **Continued support Lighting Africa.** Lighting Africa has expanded to reach almost 7 million people in Sub-Saharan Africa with cleaner, quality certified off-grid lighting products. Also, a lighting test methodology originally developed for the Lighting Africa program has become the world standard for clean off-grid lighting products, following its incorporation into an International Electrotechnical Commission technical specification in April 2013.
40. **Central America Improved Cookstoves Framework.** This study included a comprehensive review of the experience and lessons learned in promoting clean biomass cooking solutions and provided the basis for the ongoing design of an improved/clean cookstoves initiative in Central America. One of the major recommendations made by the study was to create an enabling environment and designate a national and regional institution to champion the clean cooking agenda. As a follow-up, the Sistema de la Integración Centroamericana (SICA)¹³ will take the lead in creating a regional clean cooking program for Central America with initial support from the World Bank. The project has led to a \$1million project under ESMAP's SE4ALL program to scale up access to clean cooking solutions in Honduras, Nicaragua, and Guatemala. The study has also helped bring together public and private sector stakeholders, and initiate public debates on what a regional program should entail going forward.
41. **Gender and Energy Development Strategies Program.** This activity has served as an umbrella program to capture, finalize, and disseminate the work that ESMAP has supported under its 2008-13 Strategic Business Plan. The briefing note, online tools, video, and workshops completed in FY2013 capture the lessons learned to inform practitioners and future programs. In addition to building capacity and deepening knowledge, ESMAP has helped inform development financing in Mali and Senegal by working with country teams and governments on gender assessments and gender actions plans, and informing energy and institutional policies in Tanzania. The combination of operational support and knowledge exchange has created a foundation of experience on gender for the energy practice. This global program helped catalyze regional initiatives such as the Africa Gender and Energy Program (under AFREA) and helped develop a network of gender focal points across the World Bank regional energy units to integrate gender across energy programs. As this program came to a close, ESMAP has developed a stand-alone program focused on Social Inclusion and Energy, with an initial focus on gender. This new program will ensure that gender is now integrated across ESMAP's ABGs and own-managed work, carry out research and knowledge work in new topics across the energy sector, and continue to share the lessons already learned under the first phase of ESMAP's work on gender at the global and regional level.

¹³ Sistema de la Integración Centroamericana (SICA) or the Central American Integration System is the economic and political organization of Central American states since February 1, 1993.

Clean Energy

42. **Global Geothermal Development Plan / Djibouti Geothermal Project.** ESMAP launched the Global Geothermal Development Plan (GGDP) in collaboration with bilateral and multilateral development agencies and banks and client countries in March 2013. The GGDP aims to identify and facilitate financing for a number of geothermal resource validation projects and develop a pipeline of around \$500 million in investment-ready projects that can tap into concessional funding from diverse sources—bilateral donors, multi-lateral development banks, and international climate finance. FY2013 was focused on initiating efforts to mobilize additional concessional resources, and ESMAP prepared a proposal with other multilateral development banks, to the CTF for a dedicated window to provide support to private sector investment in geothermal resource risk mitigation. Through the GGDP, ESMAP provided \$1.1 M in support of the Djibouti Geothermal Power Generation Project, approved by the Board in June 5, 2013. The project is aimed at assessing the commercial viability of the geothermal resource in Fiale Caldera within the Lake Assal region in Djibouti.
43. **Renewable Energy Training.** ESMAP completed a comprehensive training series on renewable energy technologies, financing, and policies designed to help World Bank teams and their clients apply the latest knowledge about renewable energy to policy development and investment support. The Renewable Energy Training was successfully delivered from March through December 2012 with more than 250 participants. Training contents for each session were developed and delivered by leading experts—both internal and external to the Bank—and reviewed by the program’s Advisory Committee. Participants benefited from selected background documents, thematic presentations and case studies, as well as from the discussions happening during the training sessions. Speakers comprised the main technology providers for each technology, developers, independent engineers, project rating agencies, professional associations, and leading experts at reputed universities and the World Bank Group. A follow up survey conducted by ESMAP confirmed the level of knowledge of participants has been increased by the training and the materials have been used in Bank projects (35% in non-lending activities, 22% in lending activities and 2-3% in corporate activities and energy anchor activities).
44. **Smart Grid Technologies Dissemination Platform.** The launch of the Smart Grid Technologies Dissemination Platform has served as an effective mechanism to disseminate to World Bank energy teams smart grid technology applications, and a key instrument to collect information and to quickly respond to operational staff and Bank clients to inquiries in relation to smart grid development, including (i) definitions of smart grids in different countries and external sources of information; (ii) smart grid roadmaps; (iii) roadmapping methodologies, including cost benefit analysis and interoperability issues; (iv) specific experience on technology application in the transmission, distribution, and end-user segments; (v) policies, plans, and regulatory and legal aspects related to smart grids; and (vi) World Bank’s smart grids and grid modernization experiences. The platform has been widely disseminated in multiple knowledge events to Bank staff and clients. In particular, the activity helped the Philippines understand the international experience with regard to managing variability in grid operations to enable the update of the grid code—a key implementation gap in the Philippines renewable energy market implementation program. The Bank team was able to bring expertise from within and outside the Bank, leveraging information that has been gathered by the Smart

Grid Technology Dissemination Platform. The Philippine grid code was approved by the regulator in February 2013.

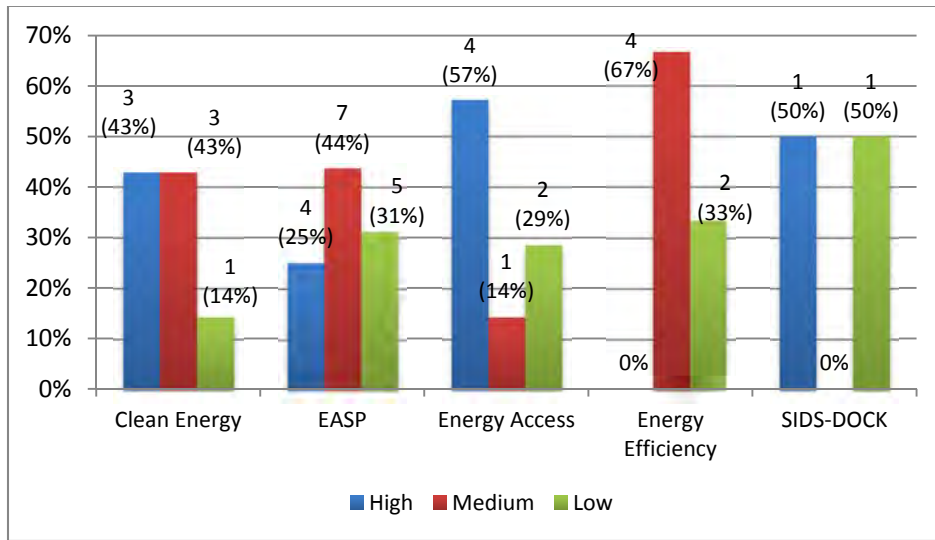
45. **China Low Carbon Cities.** The ESMAP activity fed directly into the China - Urban Scale Building Energy Efficiency and Renewable Energy Project (approved by Board on April 2013) by providing strategic orientation on low carbon city development in a number of different institutions (i.e., through training of National Development and Reform Commission officials etc.). The objective of the loan is to improve selected national and city-level policies for the promotion of low carbon, adaptive, and livable urban forms; an increase in energy efficiency in public and commercial buildings; and the scale-up of commercially viable rooftop solar photovoltaic (PV) deployment. The AAA provides global lessons on implementing distributed renewable energy generation, and has become the "go-to" reference publication on [Low Carbon City Development in China](#).

Mainstreaming and Tracking Gender in ESMAP's Portfolio

46. As ESMAP ramped up its support on gender mainstreaming, a dedicated section on gender was included in the FY2012 Portfolio Review. In FY2013, ESMAP began to systematically screen ABGs and ESMAP-owned work for gender considerations. Activities are ranked "High, Medium, and Low" for potential gender-related impacts during ESMAP's review of Project Summary Forms (PSFs).¹⁴ As the monitoring process was being established, 38 activities were captured in the first year of screening, with 12 marked High (31%), 15 marked Medium (39%), and 11 marked Low (29%). Figure 5.1 details the gender considerations within program themes and demonstrates that the majority of projects are showing high or medium potential for gender considerations. As ESMAP continues to mainstream gender across its portfolio, teams can refer the high/medium potential projects to understand what concrete measures were taken to transition the gender potential into gender action within their projects.
47. FY2013 marks the completion of ESMAP's Gender and Energy Development Strategies program—an activity carried out under the Energy Access Pillar. Closing out this activity involved gathering various lessons learned to inform the development of ESMAP's new FY2014-16 Business Plan. Given the need to mainstream gender across the breadth of ESMAP's full work program and ABG cycle, a new program on Gender and Social Inclusion in the Energy Sector was developed as part of ESMAP's new business plan. This program is designed as a cross-cutting theme, rather than housed under the Energy Access program, so that gender integration covers the energy sector in a holistic manner. The primary objective of the program is to establish a core body of evidence to demonstrate that promoting improved gender equality in energy projects improves development outcomes, and promote state-of-the-art approaches for how to improve gender equality in energy projects.

¹⁴ ESMAP reviewers, together with gender/social experts, as needed, reviewed Project Summary Forms and use the following criteria to rate the projects: **HIGH** – social/gender aspects are highly relevant and should be incorporated in the activity scope at the PCN stage; **MEDIUM** – there is some scope to consider social/gender aspects and the Project Concept Note should address the relevance of gender/social aspects; **LOW** – minimal opportunity to incorporate specific social/gender aspects.

Figure 5.1 | Potential Gender-Related Impact across ESMAP Activities, by Program



6 | ESMAP MONITORING AND EVALUATION: IMPORTANT DEVELOPMENTS DURING FY2013

48. ESMAP has made significant progress on its monitoring and evaluation (M&E) system since it was first implemented in FY2011. Since then, ESMAP has established a consistent and systematic approach to tracking development and delivery of outputs, measure outcomes using appropriate indicators, and conducting ex-post assessments of all ESMAP-supported activities. In FY2013, ESMAP made important strides as part of its ongoing efforts to improve and strengthen its results framework. These included:
- **Logframe and results chain.** As part of the preparation of its strategic business plan for FY2014-16, ESMAP developed a logframe and results chain in alignment with its three-year work program. The logframe and results chain identify the strategic elements (inputs, activities, outputs, outcomes, and impacts) and their causal relationships, indicators, targets, and assumptions that may influence the implementation of the ESMAP program during FY2014-16. They also clearly articulate the linkage between ESMAP’s expected results and high-level, global indicators for poverty alleviation, economic development, and climate mitigation. Please refer to Annex 4 for the ESMAP Results Chain developed for the Strategic Business Plan FY2014-16.
 - **Enhanced preparation of Grant Funding Requests (GFRs)¹⁵ and tracking project data.** One of the most important changes introduced by the M&E system in late 2011 was improving the quality of GFRs to properly identify, not only the outputs and activities funded under the grants, but also the expected outcomes to be achieved with clear baseline and target values. As a result, tracking progress toward intended outputs and outcomes under each activity has helped to measure results of recently completed activities.
 - **Development and dissemination of Impact stories.** ESMAP launched its “Impact” series in the fourth quarter of FY2013. Impact are short, anecdotal briefing notes, highlighting the background, type of support, key outcomes, and impact achieved by ESMAP activities. As of November 2013, six stories have been produced and disseminated by ESMAP.
 - **Project Database.** ESMAP also developed a comprehensive database of activities and information from ESMAP’s M&E system. The database was posted online on ESMAP’s web site and includes details of the hundreds of ESMAP-supported activities around the world undertaken during the Strategic Business Plan FY2008-13. The database allows users to search ESMAP activities through a map interface, by keyword, or by category.
 - **Activity tracking of gender & social components.** ESMAP has taken specific actions to further integrate and mainstream the gender and social dimension to its M&E system. These steps include: (i) requirement to incorporate a “gender flag” for all analytical work to assess whether projects have conducted any gender assessments, actions, or M&E, consistent with the Bank’s recent integration of a “gender flag” in all its analytical work and lending projects; and (ii) Proposal Summary Forms for ABGs now incorporate the gender dimension for all activities. The

¹⁵ GFRs are mandatory internal World Bank documents required to process and approve grants supported under Trust Funds provided by donors. They articulate the description, outputs, outcomes, and funding requirements of every activity financed by ESMAP.

level of gender implications (High/Medium/Low) is then added to the ESMAP M&E portal for every activity. ESMAP reviewers are also taking gender into account during the review and implementation stage. FY2013 was the first year of systematically screening across ABGs and ESMAP-owned activities. During future portfolio reviews, completed activities marked “high and medium” should be analyzed to note any gender informed actions, lessons, or results.

- **Tracking of citations and academic mentions.** In FY2013, ESMAP established a mechanism to track academic mentions, citations, and knowledge products. As previously mentioned, 133 academic articles referencing ESMAP were identified for FY2013 alone.

7 | SUMMARY CONCLUSIONS: ESMAP'S FY2013 PORTFOLIO

49. **ESMAP continues to play a strong and active role in influencing the direction and improving the quality of the World Bank Group's strategy in the energy sector.** More than 70% of the total outcomes observed during FY2013 fell under the categories of "Development Financing Informed" and "Policy Strategy Informed." During FY2013, ESMAP contributed to the identification and preparation of 9 new World Bank lending operations in the energy sector for a total of \$1.15 billion and outcomes related to policies and strategies being informed were observed in more than 10 client countries.
50. **Outcomes were observed on two activities that closed in 2011 and had reported no results in previous Portfolio Reviews.**
- The **Energy Access for the Urban Poor**. The activity informed the design of investment programs in Ghana to be funded by Millennium Challenge Corporation (MCC), a US foreign aid agency. The ESMAP-supported study provided information on the status of energy access for selected urban slums, which was used by MCC to determine whether future investment programs (known as compacts) should include subprojects for improved electricity access in peri-urban areas. MCC met with ESMAP Energy Access team to learn more about the study methodology and further commissioned consultant services to collect additional information on other slums.
 - The study delivered under ESMAP's **Strategic Overview on Energy Procurement and Best Practices in Energy Auction** assessed the benefits, challenges, and pitfalls related to the implementation of different types of energy auctions in Latin America, including issues pertaining to: (i) auction design, (ii) auction process, and (iii) choice of auction over other procurement and contracting mechanisms. The **activity stimulated public debate**, garnered substantial interest from client countries, and shed light into the ongoing debate of feed-in-tariffs versus competitive auctions for renewables. Key issues such as the importance of competitive bids to reduce prices, making energy more affordable, increasing transparency in the process, and expanding renewables were put back on the table. Several client countries (Brazil, Colombia, Mexico, Peru) have used the report as a reference in their policy-making process and in designing their competitive procurement bids. It helped countries in the policy decision feed-in-tariffs versus auctions. The report was also referenced in the article "Fostering Wind Power through Auctions: the Brazilian Experience" from *Energy Forum*, a journal of the International Association of Energy Economics during second quarter 2012.
51. **Low disbursement rates under some programs and regions (SAR, AFR, LCR) were linked to several factors** such as the multiyear nature of the activities initiated in FY2013 and specific implementation plans agreed under the approved proposals, and not necessarily an indication of poor implementation performance. In some cases, project-specific issues were identified such as delays in hiring and engagement of consultants, unrealistic target dates for key milestones, and delays in delivery of outputs.

52. **There has been an increase in cross-sectoral activities under ESMAP’s ABGs.** At the close of FY2013, there were seven cross-cutting sector projects approved, in part due to ESMAP’s incentive to the regions to implement cross-sectoral activities: four in LCR, and one each for the AFR, ECA, MNA, and SAR. Of these, four activities supported energy and water initiatives, and three energy and transport initiatives (Table 7.1).

Table 7.1 | Annual Block Grant Activities with Cross-cutting Sectors, FY2013

Project #	Activity Title	Country/Region	Cross-Cutting Sector
P127163	Development of a Manual to Procure New Energy Efficient Water/Sewage Pumping, Street-Lighting, and Public Building Services	MNA	Energy/Water/Sanitation
P133217	Strategic Analysis of Water Resources Development Options in the Upper Amu Darya Basin	Central Asia/ECA	Energy/Water
P144262	Green Transport and Energy Efficiency Initiatives	LCR	Energy/Transport
P144262	Mexico and Brazil: Building Digital Infrastructure to Support User Tools and Planning for Energy Efficient Urban Transport	Mexico/Brazil/LCR	Energy/Transport
P110092	Greater Managua Water and Sanitation (Prasma)	Nicaragua/LCR	Energy/Water/Sanitation
P143968	Low Water Growth and Water Efficiency in South Asia	SAR	Energy/Water
P144262	Achieving Energy Efficient Urban Transport in Cities in Latin America	LCR	Energy/Transport

53. **There is strong representation of renewable energy in ESMAP’s portfolio,** especially under the recently launched Renewable Energy Resource Mapping initiative and the Global Geothermal Development Plan. In FY2013, ESMAP launched the Renewable Energy Resource Mapping initiative, a \$11.6 million program that will identify locations of high potential for solar, wind, biomass, and small hydropower at a national scale, with nine countries participating in the initial stage. ESMAP also launched the \$5 million Global Geothermal Development Plan (GGDP) to catalyze a major scale-up of geothermal energy in developing countries.
54. **ESMAP’s key research published and available via peer-reviewed literature.** While ESMAP has taken steps to adopt a system for producing research, ESMAP still needs to incorporate a more dynamic and systematic approach to identifying activities that may have potential for peer-reviewed research at early identification stages. A more proactive engagement with partners, academic institutions, and energy journals is recommended.
55. **Mainstreaming gender in ESMAP’s program.** ESMAP's key achievement on mainstreaming gender in FY2013 was documenting the lessons learned and capturing them into useful resources for energy and social practitioners. The briefing note, online tools, and country-level experience under the AFREA Gender and Energy program have become foundational knowledge for ESMAP to better engage with energy and social colleagues and partners across the WBG. For example, the shift from a supply driven topic of building awareness on gender and trying to encouraging energy teams to integrate gender

considerations into programs, has begun to shift to a demand-driven topics with regional teams approaching ESMAP for guidance, review, and know-how on mainstreaming gender.

56. **Dissemination of ESMAP knowledge products.** It has been acknowledged that ESMAP's broad and extensive collection of knowledge products have not been disseminated to their full potential to stakeholders. For that purpose, ESMAP is taking specific immediate and long-term actions to improve dissemination and name recognition. Among these: (i) distribution of ESMAP's key publications or brochures on missions, workshops, conferences, and other events; (ii) adopting dissemination protocols at concept note, decision meeting and publication stages of ESMAP outputs; (iii) translation into languages other than English for priority reports to target key audiences; and, (iv) development of dynamic online "knowledge bases" and wikis.

8 | ESMAP'S PORTFOLIO BUSINESS PLAN FY2009-13: A RETROSPECTIVE

57. **This section provides a retrospective overview of ESMAP's portfolio under the previous Strategic Business Plan covering the last five fiscal years (FY2009-13).** This section provides details on portfolio value allocations and disbursements by thematic area and region, share of ESMAP assistance to client countries by lending category, and yearly contributions of ESMAP donors by fiscal year. A summary scorecard with all the outcomes achieved and observed under ESMAP activities implemented is also presented. The section concludes with a summary of ESMAP's key achievements and conclusions of important strategic and management value as ESMAP transitions to a new business period.

FUNDING AND DONOR CONTRIBUTIONS, FY2009-13

58. **Support and contributions from donors have enabled ESMAP to have value-added in key energy programs and increased efficiency in the implementation of the strategic business program.** Sustained support from donors have enabled ESMAP to scale-up funding to key programs such as the Renewable Energy Resource Mapping, SE4ALL Technical Assistance, SIDS DOCK, and the Global Geothermal Development Plan. Also important was the establishment of a single Multi-Donor Trust Fund (MDTF) for ESMAP endorsed by the donors in 2011, which has increased efficiency and greater flexibility to carry out ESMAP's mission and program objectives. It has also allowed a more programmatic evaluation of outputs and results, and systematic consistency in reporting to donors and World Bank management.
59. **Donors have also played a pivotal role in shaping ESMAP's strategic agenda by championing important initiatives that have strengthened ESMAP's impact and relevance.** Key examples include efforts to establish a M&E system to better measure ESMAP's impact or relevance, systematize the commissioning of peer-reviewed research, further integrate and mainstream the gender and social dimension into the ESMAP programs, and increased outreach to other organizations and partners.
60. **Total aggregate contributions from donors to ESMAP from FY2009 through FY2013 were \$121 million.** Table 8.1 and Figures 8.1 and 8.2 show actual receipts from individual donors and total contributions by fiscal year for FY2009-13.

Table 8.1 | ESMAP Funding and Contributions, by Donor, FY2009-13* (\$ thousand)

COUNTRY	FY2009	FY2010	FY2011	FY2012	FY2013	TOTAL CONTRIBUTIONS
Australia	-	453	1,067	3,030	-	4,550
Austria	588	424	2,680	-	-	3,692
Canada	396	100	-	-	-	496
Denmark	1,762	1,849	3,913	9,111	8,737	25,372
Finland	-	741	-	-	787	1,527
France	885	-	-	844	-	1,729
Germany	4,801	2,185	1,993	3,350	1,338	13,667
Iceland	300	200	-	300	300	1,100
Japan	-	-	-	-	-	-
Lithuania	-	-	27	-	33	60
Netherlands	23,890	-	11,286	2,900	5,800	43,876
Norway	750	750	839	853	3,750	6,941
Sweden	-	-	-	2,311	782	3,093
United Kingdom	4,615	1,961	-	-	6,420	12,996
World Bank	280	437	272	645	310	1,944
Total	38,267	9,100	22,077	23,343	28,256	121,043

*Includes allocations for CEIF MDTF, AFREA, Low Carbon Studies, and SIDS DOCK MDTF.

Figure 8.1 | Percentage Share of Total Contributions, by Donor, FY2009-13

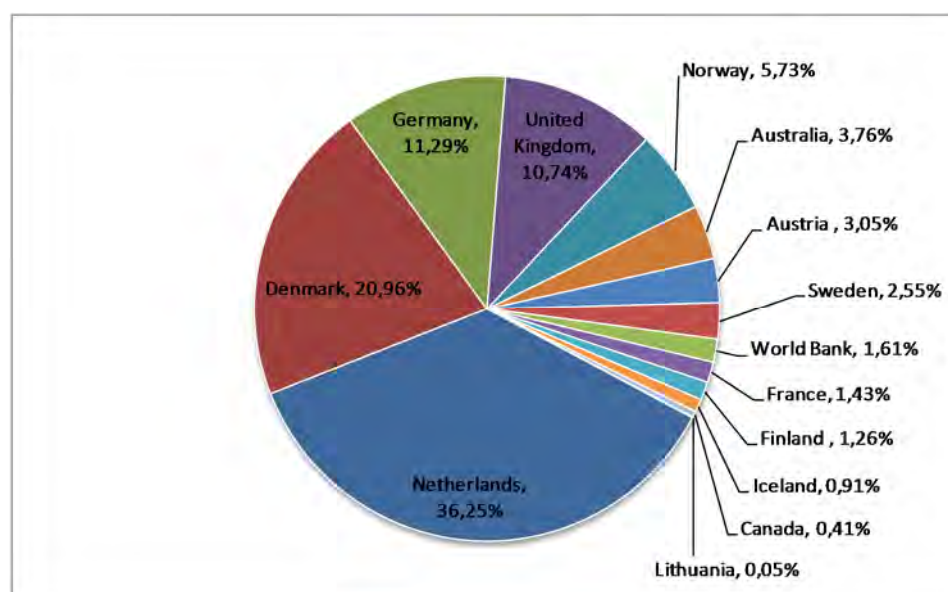
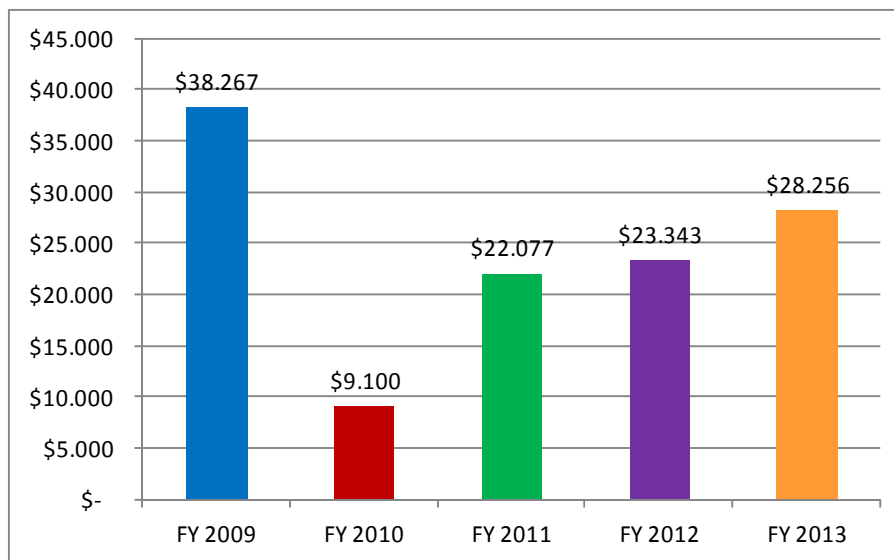


Figure 8.2 | Total Donor Contributions, by Fiscal Year, FY2009-13 (\$ thousand)

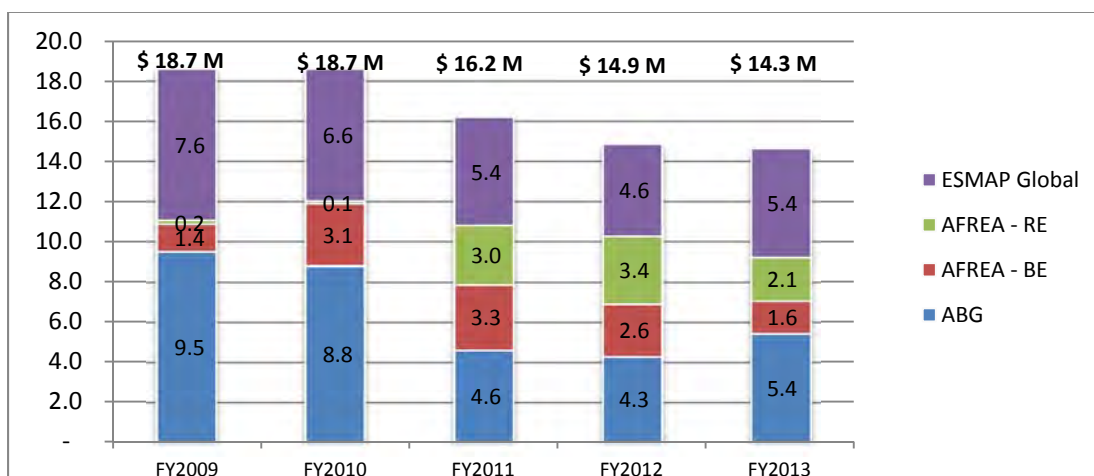


Project Disbursements

61. ESMAP total disbursements in FY2009-13 were \$82.8 million, of which \$32.6 million were under ABGs; \$29.6 million were under ESMAP Global activities; and \$20.8 million corresponded to disbursements under AFREA.
62. **ESMAP project disbursements averaged \$16.6 million per year** over the FY2009-13 period (Figure 8.3). This represents about a 58% increase compared with average annual disbursements of \$10.5 million during the previous FY2006-08 business plan period. This is mainly due to the disbursements under the AFREA,¹⁶ which began implementation in FY2009 and to relatively large one-off grants allocated to the World Bank’s environment unit for climate change activities and regional units for low carbon studies in FY2009-10. Although total ESMAP disbursements during FY2013 were slightly lower than 2012, netting out AFREA disbursements shows that there were approximately \$11 million in disbursements under ABGs and ESMAP Global projects compared to \$9 million during FY2012. This reflects an increase in demand from client countries for activities implemented by regional units under the ABG window and additional ESMAP allocations to special programs (SIDS, Renewable Energy Resource Mapping, GGDP, SE4ALL). Given allocations in FY2013 (and the new business plan’s targets), these disbursement figures are expected to continue to rise in FY2014-16.

¹⁶ AFREA was initiated in FY2009 to increase the flow of assistance to Africa for renewable energy and access.

Figure 8.3 | ESMAP Annual Disbursements, FY2009-FY2013 (\$ million)



Note: RE: Recipient Executed; BE: Bank Executed

ESMAP Regional Disbursements

63. **AFR received the largest amount of ESMAP assistance, accounting for one-third of all ESMAP disbursements during FY2009-13** (Figures 8.4 and 8.5). This mainly reflects disbursements under AFREA program that constituted four-fifths of ESMAP’s assistance to the Africa region.
64. **Each of the other regional units disbursed between 2% and 15% of the total FY2009-13 disbursements** (Figures 8.4 and 8.5). Regional units other than AFR together accounted for slightly over one-third of all ESMAP disbursements during the previous Business Plan. The variation in the proportion of disbursements of regions other than AFR was mainly due to their differing rates of utilization of ESMAP allocations as previously stated on paragraph 45, including the multiyear nature of the activities, specific implementation plans agreed under the approved proposals, and project-specific issues.
65. **For activities implemented by the regions, Energy Access activities accounted for the largest proportion of ESMAP assistance followed by Clean Energy activities during FY2009 thru FY2013** (Figure 8.6). Energy Access activities constituted two-fifths of the total disbursements (reflecting the large share of AFREA disbursements) during FY2009-13 while Clean Energy activities received about one-third of the assistance despite a decline in FY2011 following the completion of the low carbon studies (Figure 8.7). The proportion of disbursements attributable to EASP declined during FY2012 and FY2013 while Energy Efficiency activities have shown a steady increase during the same years.

Figure 8.4 | ESMAP Disbursements, by Region (Percent)

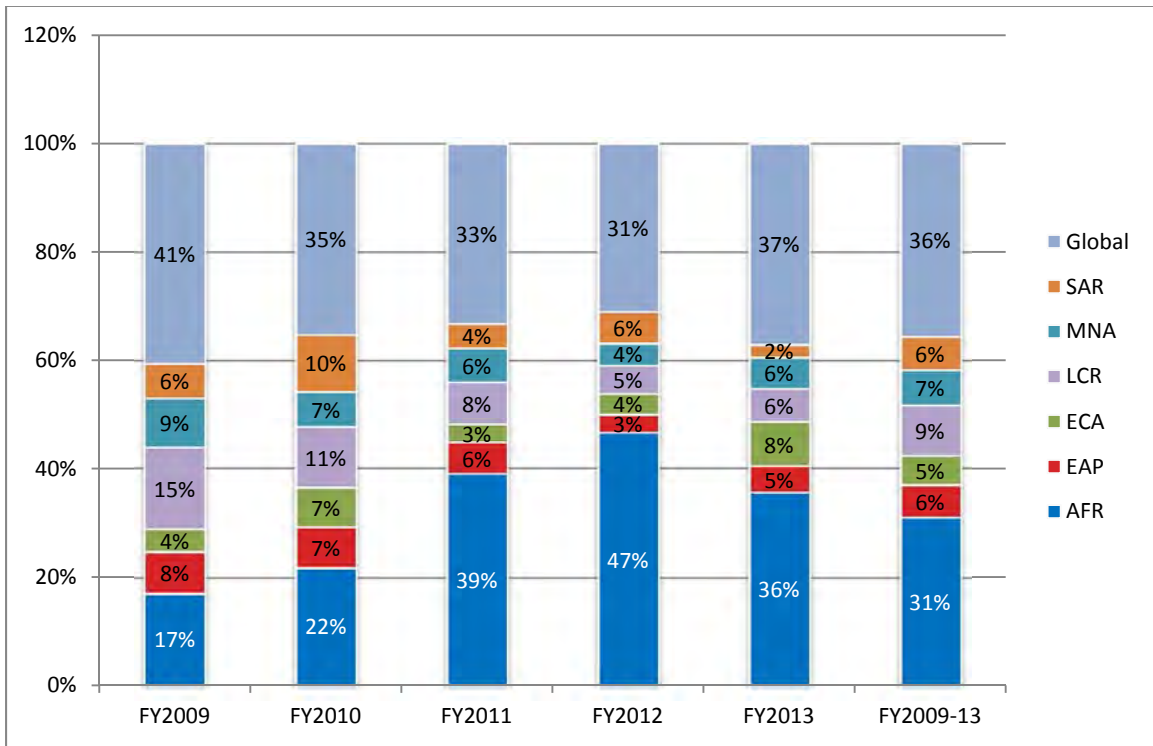
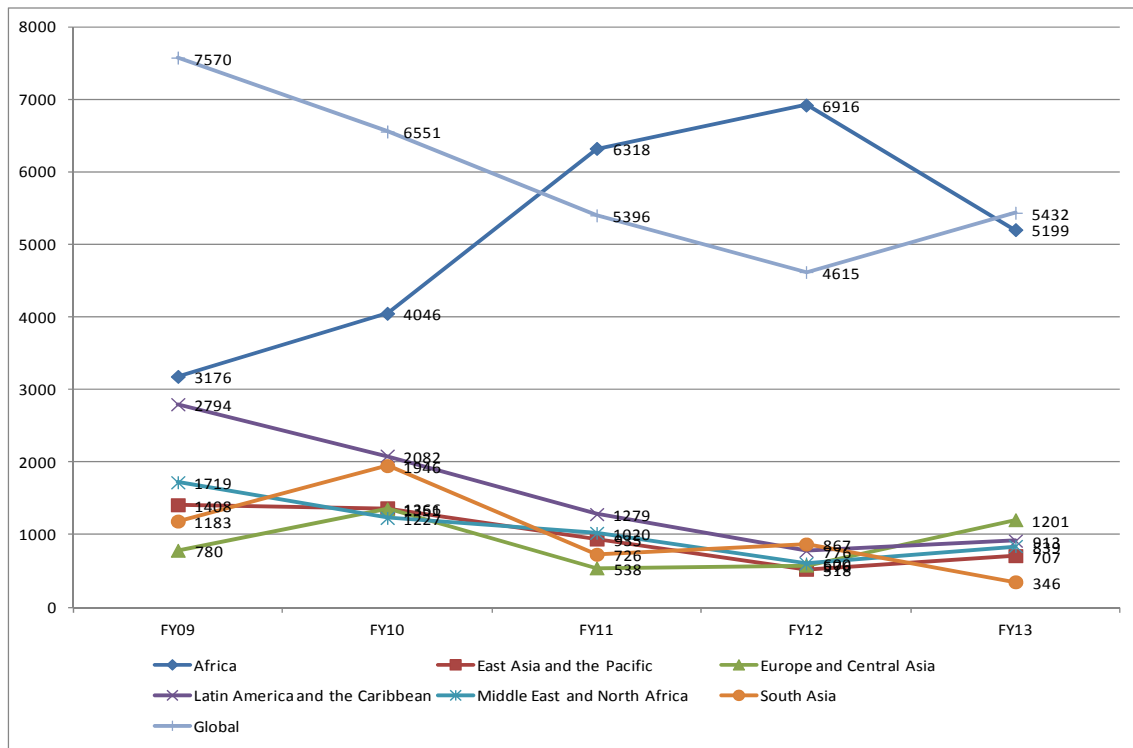


Figure 8.5 | ESMAP Disbursements, by Region, FY2009-13 (\$ thousand and percent)



Note: AFR includes AFREA disbursements.

Figure 8.6 | Regional Disbursement, by Program, FY2009-13 (\$ thousand)

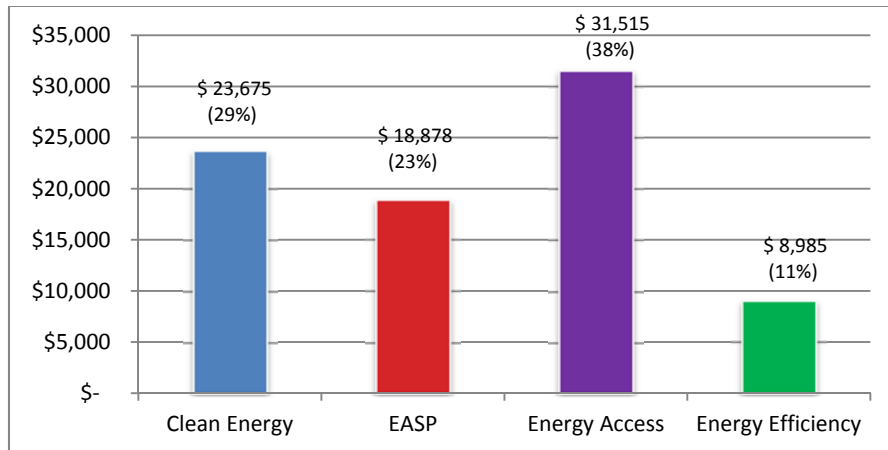
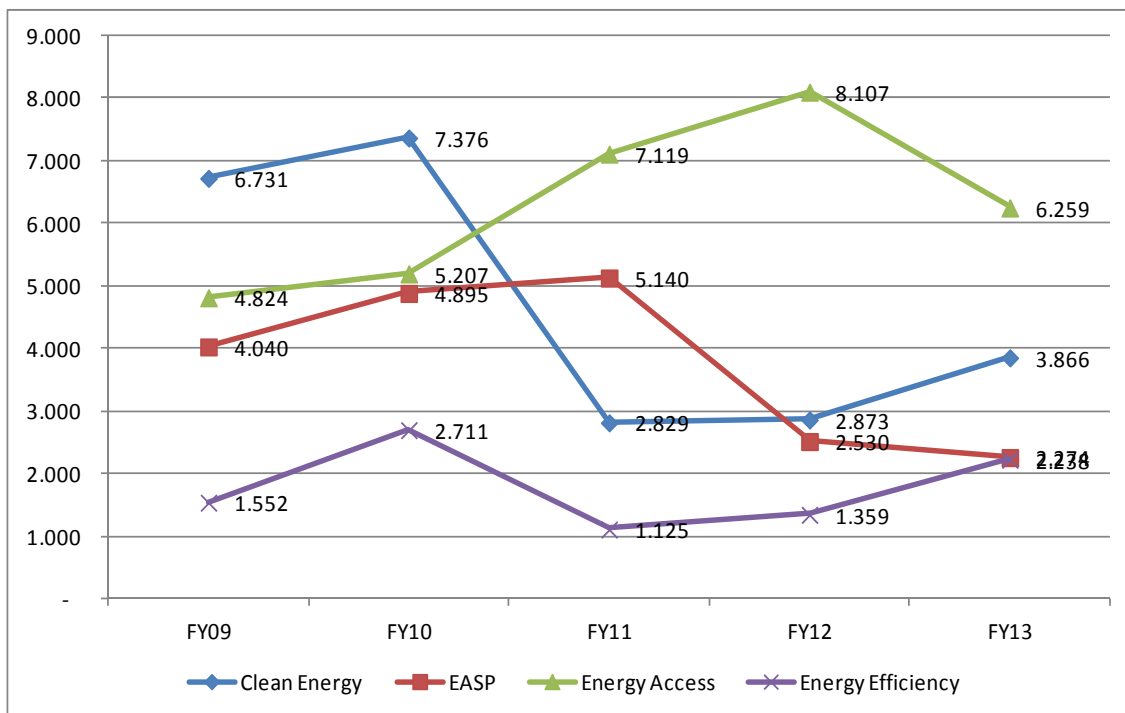


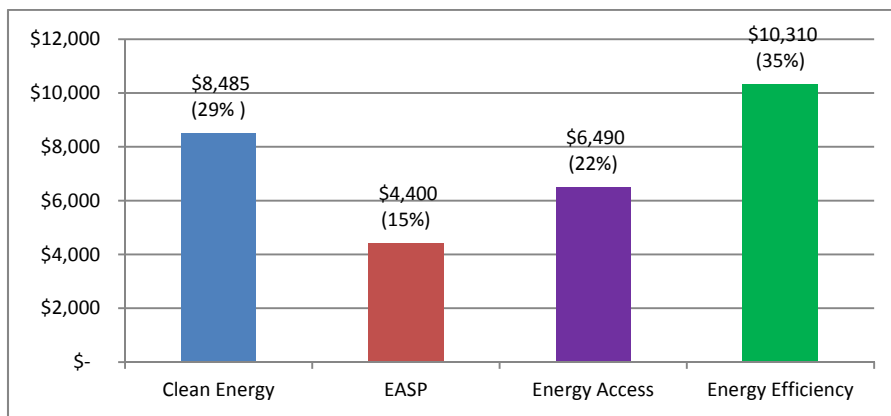
Figure 8.7 | Regional Disbursements, by Program and Fiscal Year, FY2009-13 (\$ thousand)



Global (Own-Managed Work) Disbursements, by ESMAP Program

66. **ESMAP Global program, which includes only own-managed and non-regional activities accounted on average for about 36% of the total disbursements.** Clean Energy and Energy Efficiency had the largest share of disbursements with \$19 million (Figure 8.8) accounting for about two-thirds of ESMAP’s Global program disbursements for the complete FY2009-13 business plan period. This increase in the share of Clean Energy and Energy Efficiency reflects efforts made by ESMAP to strengthen its strategic focus and its team in areas such as Energy Efficiency in Cities Initiative and Renewable Energy. By contrast, the share of Energy Access and EASP disbursements accounted for 22% and 15%, respectively, for the FY2009-13 business plan period.

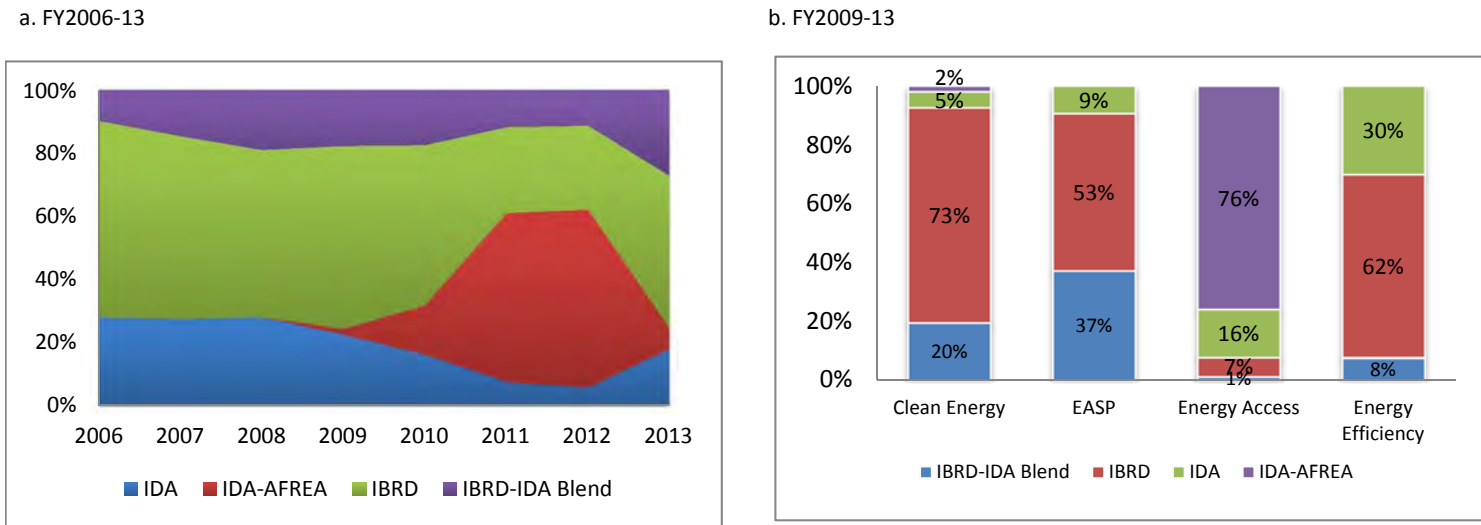
Figure 8.8 | ESMAP Global Program Disbursements (\$ thousand and percent)



Total ESMAP Disbursements, by World Bank Group Lending Category

67. **The share of ESMAP assistance going to IDA countries rose during the FY2009-13 business plan period.** IDA countries accounted for about half of all ESMAP assistance that is focused on individual countries. AFREA, which started in FY2008, has been instrumental in making this happen. The share of assistance going to IBRD and IBRD-IDA Blend countries has declined, although they constituted a large proportion of the activities implemented under ABG to regional units (Figure 8.9a). However, FY2013 showed a notable increase on assistance to IDA countries—not linked to AFREA activities—reflecting the higher emphasis on ESMAP support to these countries through ABGs and allocations under special programs (SE4ALL, Renewable Energy Resource Mapping, and SIDS DOCL). Program wise, IDA countries were most strongly represented in the Energy Access portfolio, while IBRD and Blend countries dominate the Clean Energy and EASP portfolios (Figure 8.9b). This trend is expected to change during the next years as Renewable Energy Resource Mapping is focused on IDA countries.

Figure 8.9 | Share of ESMAP Assistance, by World Bank Group Lending Category of Countries



OUTCOMES AND RESULTS, FY2009-13

68. **Following is a summary of the results and outcomes observed for ESMAP’s portfolio of activities implemented under the FY2009-13 Business Plan.** Results were measured against the five outcomes and respective indicators developed by the World Bank for AAA and formally implemented by ESMAP under its M&E system in FY2011. The implementation of the M&E system enabled the identification of outcomes at the level of beneficiaries while ensuring relevance to ESMAP’s mission and implementation strategy. It has helped to go a step beyond the delivery of goods and services (outputs) and focus on specific outcomes in trying to achieve the objectives of ESMAP’s programs and initiatives.
69. **There were a total of 318 activities implemented from FY2009 through FY2013 under the ESMAP portfolio.** Out of the 318 activities, 220 had been completed by the end of fiscal 2013 and 98 were still ongoing—out of which 57 were initiated in FY2013, being disbursed, and with no outputs delivered. During the business period, a total of **247** outcomes were observed in the ESMAP portfolio. The vast majority of the outcomes observed were from completed activities, although some results were also verifiable for several projects still under implementation at the close of FY2013 (Table 8.2).

Table 8.2 | Allocation and Outcomes of ESMAP Activities Implemented, FY2009-13 (as of end of FY2013)

Total # of Activities Implemented	318 (220 Completed, 98 Ongoing)
Total Development Financing Informed (\$ million)	\$14,6 Billion
# of Development Financing Informed Outcomes	77
# of Policy/strategy Informed Outcomes	83
# of Client Capacity Increased Outcomes	37
# of Knowledge Increased Outcomes	30
# of Innovative Approaches & Solutions Generated Outcomes	20
Total # of Outcomes Achieved	247
Ratio of Total Outcomes/Completed Activities	1.12

A Strong Portfolio with Quantifiable and Solid Results

70. Considering only completed projects, the ratio between the total of achieved outcomes (247) and total completed projects (220) was about 1.12, meaning that, on average, at least one outcome was achieved and verified for every activity completed during the FY2009-13 business period. It should be noted, however, that this value obviously includes activities without outcomes and activities with more than one outcome.
71. Program wise, and only considering the values within the relative size of each specific portfolio, the highest ratio between outcomes observed and completed activities was under the Energy Access program with 1.3. Sixty percent of all outcomes achieved under energy access were linked to informing lending operations (or credits) of the World Bank (IBRD and IDA) and influencing client/government policy or strategies in the energy sector. The same ratio for the other programs were close, ranging between 1.18 (Clean Energy) and 0.98 (EASP). Interestingly EASP had the lowest outcomes ratio, but the highest leverage ratio (development financing informed to value of allocation), while Energy Access was the reverse (highest outcome ratio, but lowest leverage ratio; Table 8.3).

Table 8.3 | Total Outcomes of ESMAP Activities Implemented FY2009-13, by Program

PROGRAM	NO. OF COMPLETED ACTIVITIES	VALUE OF ALLOCATION (\$ MILLION)	TOTAL DEVELOPMENT FINANCING INFLUENCED (\$ MILLION)	LEVERAGE RATIO	NO. OF OUTCOMES					TOTAL	OUTCOME RATIO
					DEVELOPMENT FINANCING INFORMED	POLICY/ STRATEGY INFORMED	CLIENT CAPACITY INCREASED	KNOWLEDGE INCREASED	INNOVATIVE APPROACHES & SOLUTIONS GENERATED		
Clean Energy	56	\$23.65	\$5,421	229	18	21	11	12	4	66	1.18
EASP	79	\$18.86	\$5,709	303	23	33	11	6	5	78	0.98
Energy Access	46	\$31.4	\$1,436	45.7	19	20	10	5	6	60	1.30
Energy Efficiency	39	\$8.98	\$2,062	229.6	17	9	5	7	5	43	1.10
Total	220	\$82.92	\$14,628	176.4	77	83	37	30	20	247	1.12

72. Making the same analysis based on the regional distribution of completed activities, SAR had the highest ratio with 1.57, followed closely by AFR with 1.55. These two regions also had the lowest leverage ratio. The remaining regions (including Global/Regional projects) had ratios ranging between 1.22 (LCR) and 0.71 (MNA; Table 8.4).

Table 8.4 | Total Outcomes for ESMAP Activities Implemented FY2009-13, by Region

REGION	NO. OF COMPLETED ACTIVITIES	VALUE OF ALLOCATION (\$ MILLION)	TOTAL DEVELOPMENT FINANCING INFLUENCED (\$ MILLION)	LEVERAGE RATIO	NO. OF OUTCOMES						OUTCOME RATIO
					DEVELOPMENT FINANCING INFORMED	POLICY/ STRATEGY INFORMED	CLIENT CAPACITY INCREASED	KNOWLEDGE INCREASED	INNOVATIVE APPROACHES & SOLUTIONS GENERATED	TOTAL	
AFR	27	25.66	1,713	66.75	15	11	7	2	7	42	1.55
EAP	36	4.93	2,243	455	16	12	9	2	1	40	1.11
ECA	30	4.45	3,973	893	8	12	3	3	2	28	0.93
LCR	31	7.84	2,850	363.5	9	16	6	6	1	38	1.23
MNA	28	5.41	2,603	481	11	8	0	0	1	20	0.71
SAR	14	5.07	1,247	246	7	7	5	2	1	22	1.57
Global	54	29.56	N/A	N/A	11	17	7	15	7	57	1.05
Total	220	\$82.92	\$14,628	176.4	77	83	37	30	20	247	1.12

ESMAP's Leverage and Influence

73. ESMAP played a key role in influencing the quality and direction of the World Bank Group's lending and strategy in energy sector, and in providing timely policy advice to client countries. This is reflected in the fact that "Development Financing Informed" and "Influencing Client Policy" accounted for 65% of the total outcomes observed since FY2009.
74. Over the five-year business plan period of FY2009-13, ESMAP contributed to the identification and design of WBG energy sector lending of \$14.6 billion. These lending operations, in turn, leveraged a further \$15 billion in funding from public, private, and other international sources.
75. While ECA activities had the largest volume of World Bank lending influenced (\$ 3.7 billion) represented by only eight loans, the EAP region had the highest number of outcomes achieved (measured in terms of number of loans approved = 16) with \$2.24 billion.
76. Although EASP had the lowest ratio between outcomes and completed activities in their relative portfolio (0.98), it had the largest number of outcomes achieved compared to other programs (78) or 31.5% of the total outcomes. EASP also had the biggest share of completed activities (79) or about 36% of the total compared to the other programs. Most outcomes under EASP activities were related to "Informed Lending" and "Informed Policies/Strategies"; this is due to some extent to the nature of EASP activities that are closely linked to policy decisions and translating those decisions into strategies and

programs, which often lead to new legal and regulatory frameworks, adoption of sector strategies and implementation plans, compliance with existing laws, or other policy formulations in the energy sector.

77. Along with EASP, Clean Energy activities had the largest number of “Knowledge Increased” outcomes (11). Clean Energy activities were particularly effective in increasing knowledge particularly due to key knowledge products delivered under Own-Managed activities such as the Geothermal Handbook, HEAT, CFL Toolkit, Renewable Energy Training, MACTOOL, EFFECT, and Smart Grid Platform, among others.
78. Regional activities had a greater proportion of the “Informed Lending” and “Informed Policy/Strategy” outcomes while Global (non-regional) activities had a larger share of the “Knowledge Increased” and “Innovative Approaches and Solutions Generated” outcomes. This in most cases reflects the objectives of these activities. Regional activities are generally more focused on informing country policy dialogue and lending operations while non-regional activities are more focused on increasing global knowledge and generating innovative approaches and solutions.

Activities with No Outcomes

79. **The portfolio review provided evidence that no measurable outcomes were identified for 31 activities, or about 10% of the total ESMAP portfolio implemented FY2009-13.** While most of these activities successfully delivered their outputs to clients, the portfolio review determined that no solid or quantifiable outcomes were identified. Results are still possible in the next one to three years for few of them. In several cases, as highlighted earlier, outcomes only materialize much later.
80. **The majority of not-achieved outcomes were under the category of “Policy/Strategy Informed” with 20, followed by “Client Capacity Increased” with 7.** The concentration of no measurable results on these two outcomes in comparison with the other three is not particularly surprising considering the large portion of expected results under ESMAP activities which are intended to influence governments (or World Bank) strategies or policies and aimed at strengthening skills of clients in different areas in the energy sector. Another key consideration was the difficulty to measure capacity at a client level following the implementation of some activities and, to some extent, the use of more adequate indicators. While allocation is more balanced across the regions, MNA and Global activities had the largest portion of activities with no measurable results with 8 and 7, respectively (Figure 8.10). Figure 8.11 shows number and percentage proportion of activities with no results relative to the number of total completed activities.
81. This review identified the following key factors that contributed to little or no meaningful results under 31 activities:
- Absence of, or unclear expected outcome, especially under activities approved before FY2011 when no M&E system, predefined outcomes, and indicators were established or implemented by ESMAP
 - Lack of political willingness to conduct, resume, or implement projects or recommendations
 - Shifting of priorities in governments’ energy sector agenda
 - Inadequate capacity or resources of clients to implement or adopt projects
 - Mismatch between the timing of delivery of activities’ products and their applicability and implementation

- Short “relevance or usefulness period” of outputs produced or recommended actions due a dynamic, sector-changing conditions in energy sector
- Replacement and/or lack of follow up from WB TTLs

Figure 8.10 | Distribution of Activities with No Results according to Outcome Type and Region

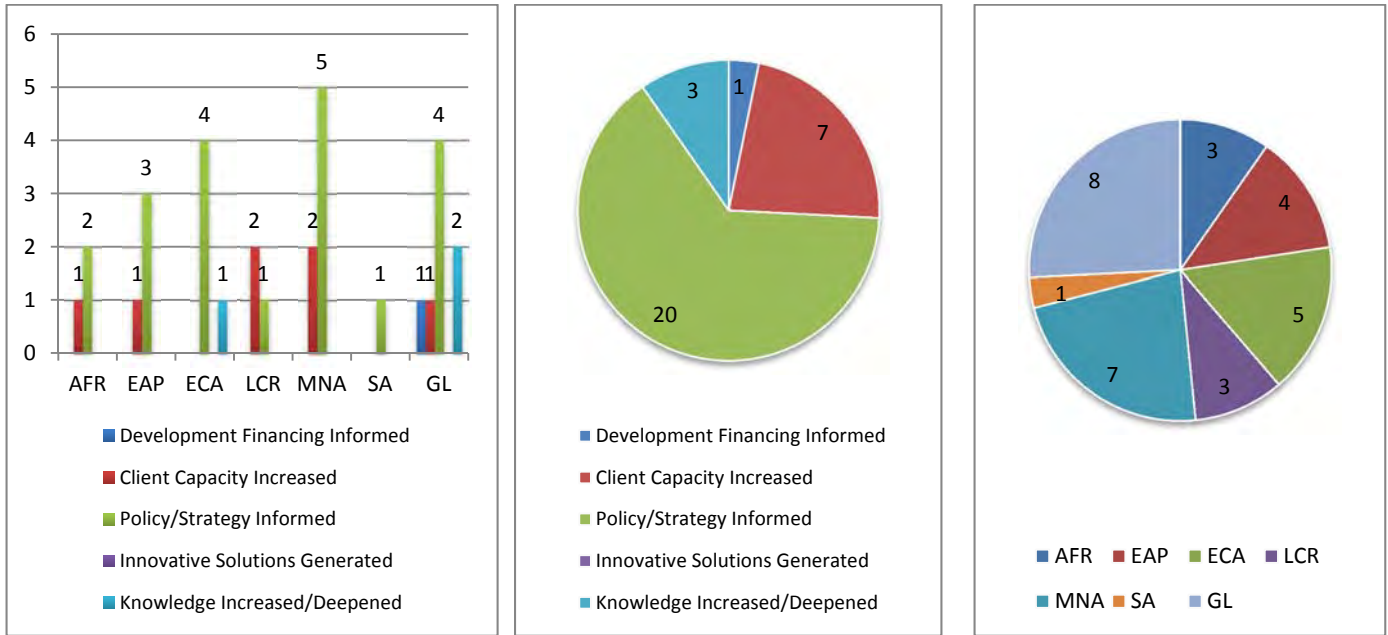
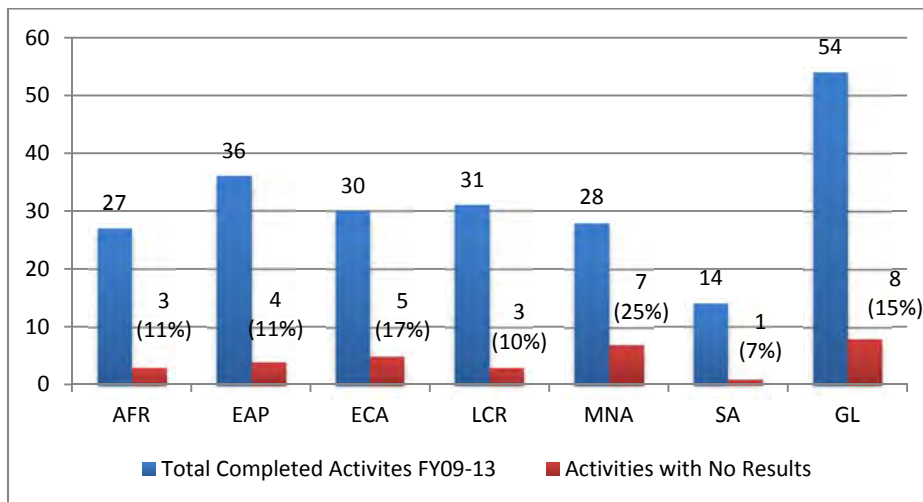


Figure 8.11 | Proportion of Activities with No Results Relative to Total Number of Completed Activities, by Region



ADDITIONAL LESSONS AND OBSERVATIONS FROM ESMAP STRATEGIC BUSINESS PLAN FY2008-13

82. Following is a summary of other conclusions and lessons learned during the FY2009-13 strategic business plan period:

- Measuring results is particularly challenging due to ESMAP's engagement at the upstream level in the World Bank. Impact at the client level and direct attribution from global products proved to be particularly difficult to measure and quantify.
- Clear identification of expected outputs, outcomes, and indicators, and a close monitoring of activities' implementation as an integral component of ESMAP's M&E system have helped track and measure results and identify strengths and weaknesses of the program.
- Credible and substantial evidence of results and impact associated with increased client capacity and deepened knowledge is particularly difficult to identify and measure following implementation and delivery of ESAMP projects. This, in part, is due to the broad and generic nature of the indicators used to measure knowledge and capacity, and the underlying difficulty in demonstrating the use and application of knowledge at the client level.
- The establishment of a single Multi-Donor Trust Fund (MDTF) for ESMAP in 2011, increased efficiency and greater flexibility to carry out ESMAP's mission and program objectives. It also allowed a more programmatic evaluation of outputs and results and systematic consistency in reporting to donors and World Bank management.
- To mitigate the challenges above and maximize measurable impacts, the implementation of ESMAP support is managed with a clear focus on:
 - Maximizing leveraging on other resources (notably, World Bank's own budget)
 - Ensuring strong commitment and client ownership upfront and during implementation
 - Continuing to allocate ESMAP support with a clear focus on operationalization,(i.e., support to the preparation of specific investment operations)
 - Defining clearly stated objectives and articulating outcomes/baseline/target values
 - Ensuring adequate monitoring and supervision during implementation
 - Putting emphasis on effective dissemination
- Several activities delivered unexpected results and outcomes. Although to some extent, this may be the result of realistic expectations or moderate results for activities at the time of design and formulation, some activities achieved an unintended outcome or result.
- As ESMAP expands its support on Gender Mainstreaming and Social Inclusion, the program should continue to strike the balance of advocacy and action. With gender, there may be a need for awareness building, and (re)defining the terms to make it tangible to the audience. Explaining that women have barriers to access credit or information about new energy technologies are important facts to highlight, but we must also equip teams with the necessary tools to address these barriers. ESMAP's close collaboration with the regions, especially AFREA, provided valuable lessons to ensure that knowledge was relevant and grounded in field-based reality.

- ESMAP activities have helped shape the strategic direction of the World Bank, most notably in household energy. In proportion to the challenge, the Bank's involvement in household energy was extremely limited over the last decade. Less than 5% of World Bank's total energy lending went to this sector. Two ESMAP studies¹⁷ helped bring attention to this issue and also provided suggestions on ways to increase the Bank's involvement in this area. ESMAP continues to support the Bank's scale-up plans in this sector through assistance for the preparation of the World Bank's household energy strategy and work program in South Asia, as well as the design of the clean cooking initiatives in Africa, East Asia, and Central America.
- ESMAP activities informed regional energy trade and integration efforts, particularly in Africa. Assessments of regional energy trade and integration opportunities were carried out in West Africa, Southern Africa, Mashreq and Maghreb regions in the Middle East, Uzbekistan-Afghanistan-Pakistan in Central and South Asia, and Greater Mekong Sub-region in East Asia. These activities informed the preparation of \$1.6 billion of World Bank lending and four institutional and policy decisions on regional energy integration. The influence was particularly notable in Africa where more than \$500 million of Bank lending was informed, including the West Africa Power Pool (WAPP), the Cote d'Ivoire, Liberia, Sierra Leone and Guinea (CLSG) transmission interconnection project, and the Southern African Power Market Project.
- ESMAP helped establish enabling conditions for electricity markets and well-functioning transmission systems in client countries. ESMAP activities, amongst others, provided advice on optimal power market structure, prepared organizational transformation plans for a transmission utility in India, helped the government establish the framework for a competitive electricity market in Turkey, and helped establish policy principles for efficiently developing transmission for renewable energy. These activities informed the design of at least \$2.5 billion in World Bank lending and four institutional and policy decisions undertaken by ESMAP clients.
- ESMAP has made substantial contributions in important areas such as energy efficiency in cities. Energy efficiency in cities emerged as an area of comparative advantage for ESMAP in this Business Plan. ESMAP generated knowledge products on topics such as building codes, public procurement of energy services, energy efficiency in water and waste water utilities, transport systems management, and energy efficient lighting, and informed four policy and strategy decisions and World Bank lending projects of \$760 million in China, Vietnam, Mexico, Ukraine, Poland, and Uruguay. ESMAP's TRACE was deployed in 25 cities to help planners quickly identify sectors for improvement. ESMAP is now increasingly regarded as the "go-to" place for advice and resources on this topic in the World Bank and the wider energy practice.

¹⁷ In particular, two ESMAP studies—[Household Energy Access for Cooking and Heating: Lessons Learned and Way Forward](#) and [Modernizing Energy Services for the Poor: A World Bank Investment Review, Fiscal 2000-08](#)—served as the basis for Bank's discussions on household energy.

ANNEX 1 | METHODOLOGY AND DATA SOURCES

This portfolio review takes stock of the results and outcomes of ESMAP projects and activities approved and implemented since FY2009 (July 2008) under four major themes: Energy Assessments and Strategy Program (EASP), Energy Access (EA), Energy Efficiency (EE), and Clean Energy (CE). For this purpose, a three-step multilayered approach was followed:

Step 1 | Research and Data Collection. First, an inventory was undertaken of ESMAP activities that were implemented since FY2009, with a view to developing a comprehensive picture of the services delivered by ESMAP through its knowledge and technical services, and a detailed review of activities' status, theme, country/regional location, outputs, and key deliverables. For this purpose, ESMAP conducted a desk review of key project documentation from identification and approval until completion and dissemination. The following key documents were reviewed:

- Proposal Summary Form (PSF)
- Project Concept Document (PCN)
- Decision Review Meeting package
- Grant Funding Request (GFR)
- Activity Initiation Summary (AIS) / Activity Completion Summary (ACS)
- General project documentation (i.e., office reports, aide memoires, workshop proceedings, minutes and miscellaneous correspondence, general financial data)
- Activity Outputs and Deliverables (sector assessments, studies, best practice toolkits, dissemination seminars and workshops, training, and other forms of advisory and analytical assistance)
- Grant Reporting Monitoring (GRM)

These documents were accessed through World Bank information systems and selected databases, including SAP, WBDocs, Operations Portal, Business Warehouse, Image Bank, Trust Funds systems, and ESMAP publications database and website.

Step 2 | Assessment of Results and Outcomes Achieved. The assessment then focused on an ex-ante analysis of completed activities—before the ESMAP activity was carried out or implemented—evaluating the World Bank lending portfolio, knowledge and capacity of clients, as well as the regulatory, policy, and institutional framework in the energy sector for each of the countries supported by ESMAP, to establish a baseline to conduct the assessment. Using the baseline as a benchmark for comparison, an ex-post assessment was then conducted on five high-level outcomes¹⁸ defined under the ESMAP M&E framework: (i) Development Finance Informed; (ii) Policy / Strategy Informed; (iii) Client Capacity Increased; (iv) Knowledge Increased; and (v) Innovative Approaches & Solutions Generated. The achievement of each outcome (or outcomes) for each completed project or activity is assessed and measured based on a set of indicators developed for each outcome.

¹⁸ Adopted from the results framework of the World Bank for Economic Sector Work (ESW) and Technical Assistance (TA) implemented during FY2012.

Step 3 | Triangulation. Finally, the findings of the desk review were triangulated with information from other sources, including direct feedback from the Task Team Leaders (TTLs) of the activities, Country Assistance Strategies (CAS), Project Appraisal Documents (PAD), Country Partnership Strategies (CPS), World Bank's Independent Evaluation Group (IEG) reports, selected websites from ministries, agencies, and organizations from client countries governments. Key considerations and Limitations of this Portfolio Review include:

- The assessment was conducted for ESMAP activities approved since FY2009-12 under the four major themes (EASP, Energy Access, Energy Efficiency, and Clean Energy). Activities from previous fiscal years but finalized during early FY2009 were not considered under the review.
- For the purpose of this review, primarily completed activities under each of the portfolios were considered. A substantial portion of activities are still ongoing, and it would be premature to assess their outcomes. It should be noted that, in some particular cases, certain ongoing activities were included, as they have already started to demonstrate results.
- The review assessed ESMAP's influence and informing role, direct and indirect, on the WBG's lending operations and strategy on the energy sector. In most cases, although there is evidence of ESMAP activities informing Bank lending operations, it was not possible to segregate the specific loan amount directly linked to an ESMAP project from the full loan amount.
- For the purpose of this review, WBG lending refers to contributions from sources of IBRD, IDA, IFC, Global Environment Facility (GEF), and financing from Climate Investment Funds (CIFs), including CTF, forest investment program (FIP), and Scaling-Up Renewable Energy Program (SREP). Influenced investments, lending, or contributions from external partners or donors are listed but not included on the total amount of lending informed or influenced. In addition, amounts of lending operations currently in the pipeline and expected to be approved during FY2012 and FY2013 are noted but not included in the total influenced lending amount.
- Given the complex set of factors that affect outcomes, attribution to specific ESMAP activities is often difficult. In many cases, a direct link between ESMAP interventions and subsequent downstream activities is more evident.
- There was limited availability of adequate baseline data and target data in many of the projects assessed—most of which had been implemented before the M&E system was put in place in FY2011. In such cases baseline values were determined based on review of status/country data before the ESMAP intervention.
- No country surveys or visits were undertaken for any of the activities evaluated. Research and analysis were conducted solely based on the sources of information listed above.
- The assessment focuses only on tracking the results and outcomes directly influenced by ESMAP activities. Since ESMAP activities also have substantial indirect impacts, the results and outcomes compiled in this report are likely to under-report the overall influence of ESMAP activities. Also, given the upstream nature of these activities, the report does not cover impact assessment considering the longer time frame required for its proper tracking and measurement.

ANNEX 2 | GLOSSARY

Activity: Refers to the individual and specific project implemented under an ESMAP initiative or program.

Attribution: The ascription of a causal link between observed (or expected to be observed) changes and a specific intervention.

Baseline Value: An initial reference point against which progress can be assessed or comparisons made. Baseline values are identified at the Grant Funding Request (GFR) stage for every ESMAP activity.

Client: From ESMAP's perspective, refers to World Bank client countries (IBRD and IDA) represented through their governments, agencies, and target population.

Counterfactual: The situation or condition which hypothetically may prevail for individuals, organizations, or groups where there is no development intervention.

Disbursement Rate: Ratio between the grant disbursed amount and the grant allocation amount for an activity under implementation.

High-level Impact: The ultimate, global result to which a project is contributing—the impact of the project whether positive and negative, primary and secondary, long-term effects produced by a development intervention, directly or indirectly, intended or unintended. According to ESMAP's logframe, there are three high-level (global) impacts: (i) poverty alleviation; (ii) economic development; and (iii) climate change mitigation. ESMAP attribution for high-level impacts is very low.

High-level Outcome: The outcome level immediately higher to ESMAP low-level outcomes. According to ESMAP's logframe, high-level impacts (and their targets) are directly associated with the goals of SE4ALL, namely: (i) universal energy access (electricity and modern cooking fuels); (ii) renewable energy share in global energy mix; and (iii) global rate of improvement in energy efficiency. ESMAP attribution under high-level outcomes is low. [*The Global Tracking Framework*](#), co-authored by the World Bank, ESMAP, and the International Energy Agency (IEA), in partnership with 13 other agencies, monitors progress towards these three goals of the SE4ALL initiative.

Indicator: Quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement of an outcome. Each outcome has several sets of indicators.

Input: Resources required for conducting and delivering ESMAP work program. From ESMAP's perspective, this refers to: (i) contributions from donors; (ii) WB/ESMAP staff skills and continuity; (iii) ESMAP role in WBG energy practice; and (iv) World Bank operational processes and procedures for Bank-executed and Recipient-executed grants.

Implementation Rate: Ratio between the grant disbursed *plus* grant committed amounts, and the grant allocation for an activity under implementation.

Logframe: Management tool used to improve the design of interventions, most often at the project level. It involves identifying strategic elements (inputs, outputs, outcomes, impact) and their causal relationships, indicators, and the assumptions or risks that may influence success and failure.

Low-level Impact: The desired impact, from the World Bank's perspective, to which a project is contributing to. These include: (i) reduced energy poverty; (ii) improved energy security; (iii) low carbon development. ESMAP attribution under low-level impacts is low.

Low-level Outcome: Effect or behavior anticipated from each component/output, preferably at the client level. From ESMAP's perspective, low-level outcomes correspond to the ones designed for tracking results under World Bank AAA. ESMAP's attribution for low-level outcomes is medium.

Outcome: The likely or achieved short-term and medium-term effects of an intervention's outputs; effect or behavior anticipated from each component/outputs, preferably at the client level.

Output: Refer to the specific results and tangible products (goods and services) produced by undertaking a series of ESMAP tasks, activities, or program.

Project Description: Provides a narrative summary of what the project intends to achieve and how.

Results Chain: The casual sequence for a development intervention that stipulates the necessary sequence to achieve desired objectives beginning with inputs, moving through programs/activities, outputs, and culminating in outcomes, impacts, and feedback.

Target Group: The specific individuals or organizations for whose benefit the development intervention is undertaken.

Target Value: The desired and measurable result expected for an indicator at a specific time. Target values are identified at the Grant Funding Request (GFR) stage for every ESMAP activity.

ANNEX 3 | CLASSIFICATION OF AAA AND OUTPUT TYPES

Outputs produced by ESMAP are broadly categorized on the World Bank's product lines for Economic and Sector Work (ESW) and Technical Assistance (TA)—together referred as Analytical Advisory Activities (AAA)—and Knowledge Products (KPs).

Economic and Sector Work (ESW)

Economic and sector work (ESW) forms the Bank's knowledge base and provides a foundation for carrying out the policy dialogue with external clients, building countries' analytic capacity, formulating and implementing effective lending programs, and influencing the development community. ESW is the largest category of AAA.

To qualify as an ESW, an activity must: (i) be undertaken with the intent to influence the policies and/or programs of an external client; (ii) involve original analytic effort; and (iii) be “owned” by a specific Bank unit, representing the views of the Bank (not those of individual staff or consultants).

The Bank encourages client countries to participate in this process of building knowledge by contributing to the preparation and/or dissemination of ESW. An ESW can also be prepared jointly by the Bank and other donors. Joint efforts reduce duplication and costs, making better use of resources from the international development community.

ESW outputs are the primary means to communicate the Bank's analytic work encompassing the analysis and advice necessary to strengthen policy dialogue. ESW activities are classified as either a Report (RPT) or Policy Note (POL).

Reports are comprehensive in-depth studies outlining policy recommendations. They address sector-specific or thematic issues of high priority to provide upstream analysis for supporting and implementing effective lending programs and assessing their results. Policy Notes provide "just-in-time" advice to a client on a range of development issues.

Technical Assistance (TA)

Technical Assistance (non-lending; TA) captures services provided by the Bank to clients as a way to assist them in policy / program implementation, developing / strengthening institutions, and facilitating knowledge exchange. TA (non-lending) is the second largest category of AAA after ESW. These activities are freestanding (that is, not comprise an essential part of a lending project or ESW) and linked to a World Bank unit (i.e., ESMAP) with clear accountability for the service provided. Output types include implementation and advisory reports, and event proceeding documents.

TA is only one of the channels through which the World Bank Group enhances the capacity of its clients as capacity development is an integral part of all client services. The Bank delivers long-term capacity enhancement to client countries through other AAA tasks, various lending instruments (e.g., technical assistance loans), or other instruments with a TA component. To qualify as TA, an activity must: (i) have

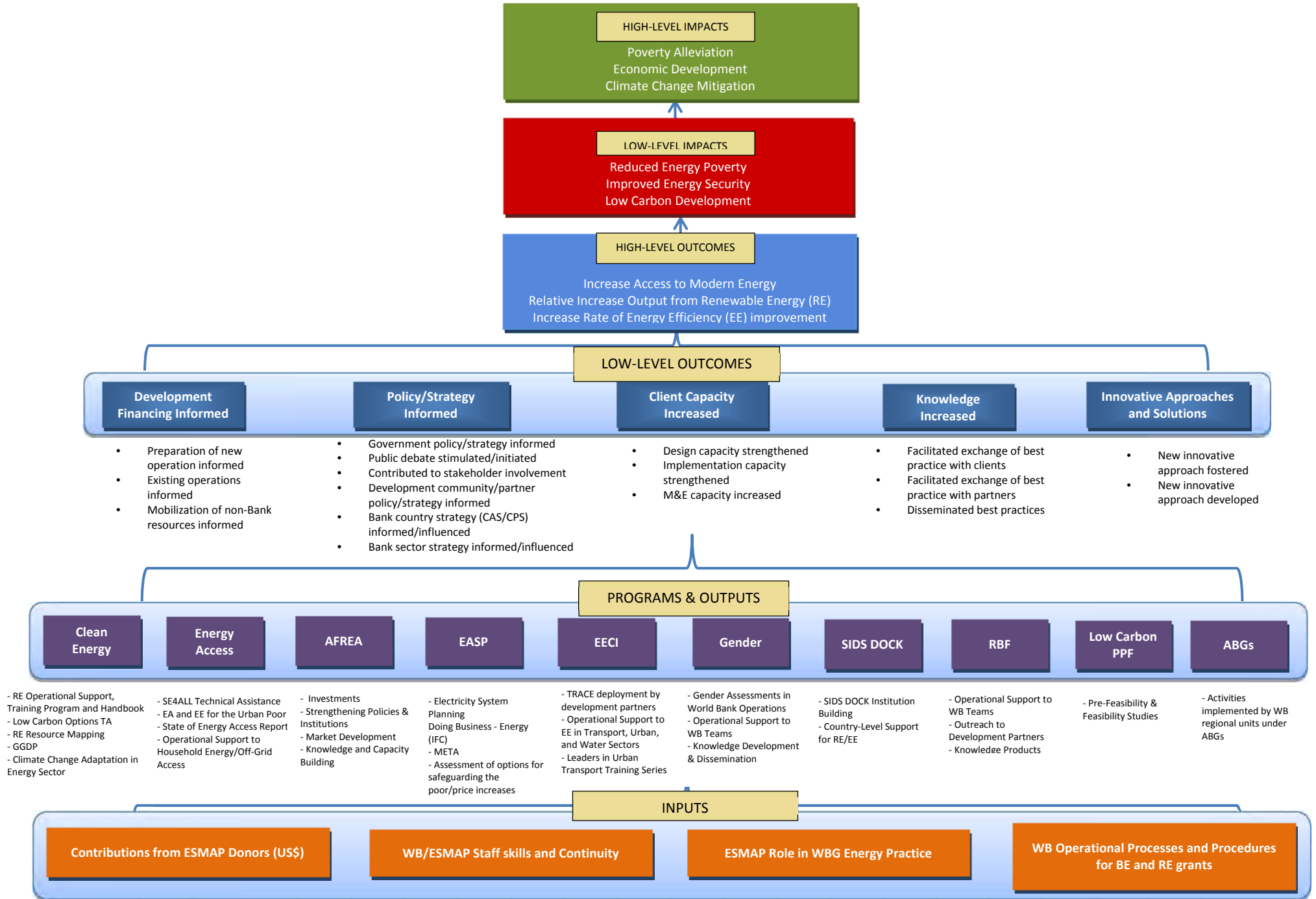
the primary intent of enabling an external client to implement reforms and/or strengthen institutions; (ii) be freestanding (that is, not comprise an essential part of a lending project or economic and sector work); and (iii) be linked to a World Bank unit with clear accountability for the service provided.

Knowledge Products (KPs)

Knowledge Products (KPS) refer to products, such as studies, toolkits, databases, handbooks, internal or external training, workshops, and dissemination events, which have a clear objective to support the Bank's business through the production, retention, and dissemination of knowledge. Knowledge Management (KM) Activities are those activities that support the Bank's key business processes through the production, retention, and dissemination of knowledge.

To qualify as a KP, an activity must: (i) have a clear objective to support the Bank's key business processes through the production, retention, and dissemination of knowledge; (ii) be self-standing (that is, not a part of another Bank deliverable, such as CAS, AAA, or lending, or other core business function); and (iii) have Bank staff as the primary audience, with the clear understanding that sharing with external audiences often adds value to the product.

ANNEX 4 | ESMAP RESULTS CHAIN, STRATEGIC BUSINESS PLAN FY2014-16



ANNEX 5 | SUMMARY OF ACTIVITIES WITH OUTCOMES MEASURED, FY2013

PROJECT # (SORT)	ACTIVITY TITLE	PROGRAM	OUTCOMES			REGION	COUNTRY	
			DEVELOPMENT FINANCING INFORMED	POLICY/ STRATEGY INFORMED	CLIENT CAPACITY INCREASED			KNOWLEDGE INCREASED
P099005	Renewable Energy Investment Climate in India	CE		2.2			SAR	India
P112430	Strategic Overview on Energy Procurement and Best Practices in Energy Auctions	EASP		2.2			LCR	Colombia, Guatemala, Honduras, Mexico
P115793	TOOL FOR RAPID ASSESSMENT OF CITY ENERGY (TRACE)	EECI		2.1	3.2	(5.2)	Global	Global
P116044	China Heat Regulation Phase II	EASP		2.1			EAP	China
P116206	Country Energy Sector Credit Constraints Assessment	EASP	1.1				MNA	Egypt Arab Republic of, Jordan
P116289	Task 3: Lighting Africa Market Development and QA	EA			(3.2)	5.1	AFR	Ghana, Kenya, Nigeria
P117917	Urban Transport Climate Change Strategy	EASP		2.1			EAP	China
P118280	Central America Programmatic Study V: Promoting Geothermal Energy	CE				4.1	LCR	Guatemala, Honduras, Mexico
P119291	Managing the Impact of High and Volatile Oil Prices	EASP		2.1			LCR	Costa Rica, Guatemala, Panama
P120447	ESMED Energy Access for Urban Poor - CA/IFC	EA		2.2		4.1	GBL	Global
P121518	Model for Electricity Technology Assessment (META)	EASP			3.2	5.1	GBL	Global
P121572	RESILIENT CITIES: DECISION-SUPPORT TOOLS	CE			3.1		EAP	Region
P121716	Serbia: Low Carbon Energy Path	CE		2.1			ECA	Serbia
P122951	Regional Energy Sector Note	EASP	1.1	2.1		4.1	ECA	Armenia, Azerbaijan, Georgia
P123004	Gender and Energy	EA	(1.1)	2.6	3.2		GBL	Global
P123047	Developing a Regulatory Framework for Maldives Energy Sector	EASP		2.1			EAP	Maldives
P123066	China - Government Facilities Energy Efficiency Project	EECI	1.1				EAP	China
P123139	Energy Adaptation Country Briefs	CE				5.1	GBL	Global
P123636	Philippines Rural Electricity Cooperatives: Reform and Restructuring	EASP		2.1				
P123996	China Low Carbon Cities	CE	1.1	2.1			EAP	China
P124390	Central America Improved Cookstoves Framework	EA		2.3			LCR	Costa Rica, Guatemala
P125354	Energy Efficiency for Water and Sanitation Utilities	EECI	1.1				GBL	Global
P125368	Geothermal Handbook	CE	1.1			(4.1)	GBL	Global
P125641	Electricity Transmission Planning	EASP				4.1	GBL	Global

P127143	Geothermal Power Generation Program	CE	1.1				AFR	Djibouti
P127168	Energy Sector Low Carbon Development Operational Support	CE	1.1	2.1			GBL	Global
P127169	Clean Energy Staff Training and Knowledge Platform	CE			3.2		GBL	Global
P127170	Climate Vulnerability in the Energy Sector	CE		2.3			GBL	Global
P127938	Smart Grids Knowledge/Experience Exchange	EASP		2.5	3.1	4.1	GBL	Global
P129510	Technical Assistance for Energy Planning in Peru	EASP		2.1	3.1	4.1	LCR	Peru
P130578	Facilitating Small and Medium Enterprise Financing for Energy Efficiency in Turkey	EECI	1.1		3.2		ECA	Turkey
P130999	Renewable Energy for Electrification - PLN Capacity Building in HOMER	CE			3.1		EAP	Indonesia
32			9	18	9	6	3	

Legend: Outcomes and Indicators

1. Development Financing Informed

- 1.1 Preparation of new operation informed
- 1.2 Existing operations informed
- 1.3 Mobilization of non-Bank resources informed
- 1.4 Government expenditure informed

2. Policy/Strategy Informed

- 2.1 Government policy/strategy informed
- 2.2 Public debate stimulated/initiated
- 2.3 Contributed to stakeholder involvement
- 2.4 Dev't community/partner policy/strategy informed
- 2.5 Bank country strategy (CAS/CPS) informed/influenced
- 2.6 Bank sector strategy informed/influenced

3. Client Capacity Increased

- 3.1 Design capacity increased
- 3.2 Implementation capacity strengthened
- 3.3 Monitoring & Evaluation capacity increased
- 3.4 Clients are recognized with good practice awards

4. Knowledge Increased

- 4.1 Facilitated exchange of best practice with clients
- 4.2 Facilitated exchange of best practice with partners
- 4.3 Disseminated best practices

5. Innovative Approaches & Solutions Generated

- 5.1 New innovative approach fostered
- 5.2 New innovative approach developed
- 5.3 Client is able to adopt/harness new technologies, innovative ideas, know-how

Note: Boxes with numbers in parentheses denote outcomes achieved/observed before FY2013.

ANNEX 6 | COMPLETED, ONGOING, AND NEW ACTIVITIES, FY2013

COMPLETED ACTIVITIES

COUNTRY/REGION	ACTIVITY	TASK MANAGER
CLEAN ENERGY		
China	Capacity Building for Smart Grid Development in China	Ximing Peng
China	Evaluation of Incentive Mechanisms (Taxation & Pricing) for Wind Power in China	Yanqin Song
Global	Climate Vulnerability in the Energy Sector	Pierre Audinet
Indonesia	Geothermal Risk Mitigation Framework in Indonesia	Anh Nguyet Pham
Lebanon	Wind Power Development Study	Simon J. Stolp
Nigeria	Climate Change Implications for Growth in the Non-Oil Sector in Nigeria	Raffaello Cervigni
Turkey	National Watershed Management	Aziz Bouzaher
Yemen	Yemen Renewable Energy Framework	Jianping Zhao
ENERGY ACCESS		
Global	Clean Cookstoves Mapping	Venkata Ramana Putti
Global	Gender and Energy Development Strategies Program	Venkata Ramana Putti
Global	Household Energy Access: Lessons Learned and Scaling Up Opportunities	Koffi Ekouevi
Global	Household Energy Guidance Note	Koffi Ekouevi
LCR	Central America Improved Cookstoves Framework	Xiaoping Wang
Philippines	Philippines Rural Electricity Cooperatives: Reform and Restructuring	Alan F. Townsend
ENERGY EFFICIENCY		
Belarus	Biomass-based District Heating	Pekka Kalevi Salminen
China	Government Facilities Energy Efficiency Project	Gailius J. Draugelis
Egypt Arab Republic of	Energy Efficiency Strategy (Phase2)	Jianping Zhao
Global	Public Procurement of Energy Efficient Products	Jasneet Singh
Turkey	Facilitating Small- and Medium-Enterprise Financing for Energy Efficiency in Turkey	Jas Singh
Uzbekistan	Energy Efficiency Strategy for Industrial Sector	Iskander Buranov
ENERGY ASSESSMENT AND STRATEGY PROGRAMS (EASP)		
Armenia	Power Sector Tariff Study	Artur Kochnakyan
Bulgaria	Bulgaria Gas Dialogue	Peter Johansen
China	China Heat Regulation (Phase II)	Gailius J. Draugelis
Global	International Experience with Private Sector Participation and Open Access in Power Grids	Victor B. Loksha
Global	Private and Public Sector Roles in the Power Sector: Towards a New Policy Agenda	Maria Vagliasindi
India	Luhri Hydro Electric Project	Kwawu Mensan Gaba
LCR	Managing the Impact of High and Volatile Oil Prices	Rigoberto Yopez-Garcia
MNA	Arab World Electricity Networks Integration	Husam Mohamed Beides
Peru	Technical Assistance for Energy Planning in Peru	David Reinstein
Tajikistan	Power Supply Options Study	Daryl Fields

NEW ACTIVITIES

COUNTRY/REGION	ACTIVITY	TASK MANAGER
CLEAN ENERGY		
China	China Electricity Regulation to Integrate Climate Change Considerations	Ximing Peng
Djibouti	Geothermal Power Generation Project	Ilhem Salamon
Global	Assessing Climate Risks of Electricity Systems	Xiaoping Wang
Global	Renewable Energy Resource Mapping	Oliver Knight

Indonesia	Financing Options with Private Sector Participation for a Medium Hydropower Project in Outer Islands Indonesia	Anh Nguyet Pham
Indonesia	Geospatial Mapping and Least-Cost Electrification Planning in Indonesia	Dhruva Sahai
LCR	Assessment of Geothermal Potential in LCR	Migara Jayawardena
Mexico	Greening Electricity Generation	Rigoberto Yopez-Garcia
SA	Low Water Growth and Water Efficiency in South Asia	Charles Joseph Cormier
ENERGY ACCESS		
AFR	Enhancing Regional Power Trade in Africa	Erik Magnus Fernstrom
Burundi	SE4ALL Technical Assistance for Burundi	Kyran O'Sullivan
Global	Incubating Innovation for Rural Electrification	Venkata Ramana Putti
Global	State of Access Report	Venkata Ramana Putti
Guinea	SE4ALL Technical Assistance for Guinea	Moez Cherif
Indonesia	Support to the Design of an Results-Based Funding Mechanism for the Implementation of the Indonesia Clean Stove Initiative	Yabei Zhang
Liberia	SE4ALL Technical Assistance for Liberia	Zayra Luz Gabriela Romo Mercado
Mozambique	SE4ALL Technical Assistance for Mozambique	Christopher Philip Trimble
Papua New Guinea	Support the Development of an Electrification Roll-Out Plan	Roberto Gabriel Aiello
Peru	Peru Second Rural Electrification	Janina Andrea Franco Salazar
Senegal	SE4ALL Technical Assistance for Senegal	Awa Seck
ENERGY EFFICIENCY		
ECA	Energy Efficiency Scale-Up Plan in Buildings	Jas Singh
Ethiopia	CFL and Incandescent Lamp Recycling Operation Framework	Abdolreza B. Rezaian
Global	Capacity Building for Energy Efficiency Urban Transport	Om Prakash Agarwal
Global	Energy Efficient Urban Transport Policy Toolkit	Om Prakash Agarwal
Kyrgyz Republic, Tajikistan	Heating and Energy Efficiency Assessment for the Building Sector of the Kyrgyz Republic and Tajikistan	Ani Balabanyan
LCR	Green Transport and Energy Efficiency Initiatives	Shomik Raj Mehndiratta
LCR	TRACE Model in Pilot Cities in Latin America	Todd M. Johnson
LCR	LCR Regional Workshop on Energy Efficiency/NRW	Carmen Rosa Yee-Batista
Turkey	Sustainable Cities Action Plan	Stephen George Karam
West Bank and Gaza	Development of a Manual to Procure New Energy Efficient Water/Sewage Pumping, Street Lighting, and Public Building Services	Soraya Goga
ENERGY ASSESSMENT AND STRATEGY PROGRAMS (EASP)		
AFR	Harnessing African Gas for African Power	David John Santley
AFR	Integration of Mining Sector Demand for Power Sector Development in Africa	Sudeshna Ghosh Banerjee
Armenia	Armenia Power Sector Policy Note	Artur Kochnakyan
ECA	Assessment of the Role of Glaciers in Stream Flow from the Pamir and Tien Shan Mountains	Winston Yu
ECA	Strategic Analysis of Water Resources Development Options in the Upper Amu Darya Basin	Sanjay Pahuja
Global	Economic Tradeoffs of the Water and Energy Nexus	Diego Juan Rodriguez
Global	Energy Subsidy Reform and Delivery: Safeguarding the Poor and Vulnerable	Sameer Shukla
Global	International Experience with Private Sector Participation in Power Grids	Victor B. Loksha
India	Institutional Strengthening of Power Utilities in North-East Region	Rohit Mittal
Indonesia	Financing Options with PPP for a Medium Hydro Power Project in Outer Islands	Anh Nguyet Pham
Iraq	Capacity Development for Electricity Sector Reform	Simon Stolp
Kenya	Kenya's Power Sector: Future Role of the Public and Private Sectors	Kyran O'Sullivan
Kyrgyz Republic	Power Sector Note	Ani Balabanyan
LCR	Energy Sector Diagnostics in Latin America	Migara Jayawardena
LCR	Introduction of Liquefied Natural Gas in Central America and the Caribbean	Rigoberto Yopez-Garcia

MNA	A Compendium on Power Sector in the MNA Region	Fowzia Hassan
Nicaragua	Greater Managua Water and Sanitation (PRASMA)	Lilian Pena Pereira Weiss
Pakistan	Pakistan Power Distribution Non-Technical Losses Reduction Strategy	Rashid Aziz
Sudan	Electricity Sector Strategy Note for South Sudan	Raihan Elahi
Yemen	Yemen Energy Sector Strategy	Jianping Zhao
SIDS DOCK		
Cape Verde	Cape Verde Energy Conservation and Energy Efficiency Plan	Fabrice Karl Bertholet
Dominica	Geothermal Development in Dominica	Migara Jayawardena
LCR	Eastern Caribbean Energy Regulation Authority	Chandra Shekhar Sinha
Mauritius	Preparation of a Grid Code, Feed-in-Tariffs & Model Energy Supply Purchase Agreements for Renewable Energy Systems Greater than 50kW	Noreen Beg
Sao Tome and Principe	Power Sector Efficiency Improvement	Silvia Martinez Romero
Seychelles	Determination of the Grid Absorption Capacity of the Public Utilities Corporation Grid Code, Feed-in-Tariff for Renewable Energy	Silvia Martinez Romero
Vanuatu	Vanuatu Energy Sector Development Project	Kamleshwar Prasad Khelawan

ONGOING ACTIVITIES

COUNTRY/REGION	ACTIVITY	TASK MANAGER
CLEAN ENERGY		
China	Defining and Measuring Low Carbon Cities in China	Xiaodong Wang
Global	Clean Energy Guidebooks and Briefs	Silvia Martinez Romero
Global	Clean Energy Staff Training and Knowledge Platform	Silvia Martinez Romero
Global	Energy Sector Low Carbon Development Operational Support	Pierre Audinet
Global	Geothermal Scale-up Investment Plan	Pierre Audinet
Global	Integration of Renewable Energy Technologies in Sustainable Infrastructure	Silvia Martinez Romero
Global	Low Carbon Development in Power Sector	Venkata Ramana Putti
Global	Smart Grids Knowledge Exchange Platform	Marcelino Madrigal
India	Concentrated Solar Power Initiative	Ashish Khanna
LCR	Climate Change Auctions Best Practices	Chandra Shekhar Sinha
MNA	North Africa Regional CSP Scale-Up Initiative	Chandrasekar Govindarajalu
Tunisia	Low Carbon Action Plan for Transport Sector	Olivier P. Le Ber
Tunisia	Low Carbon Power Sector Strategy	Fanny Kathinka Missfeldt-Ringius
ENERGY ACCESS		
AFR	AAA ESMAP Lighting Africa	Dana Rysankova
AFR	Africa Electrification Experience	Raluca Georgiana Golumbeanu
AFR	Biomass Energy Initiative for Africa (BEIA)	Juliet Pumpuni
AFR	Clean Cooking Initiative for Africa	Dana Rysankova
Ghana	Energy Sector Review	Sunil W. Mathrani
Global	Defining and Measuring Access to Energy	Mikul Bhatia
Global	Economics of Household Energy	Venkata Ramana Putti
Liberia	Catalyzing New and Renewable Energy in Rural Liberia	Clemencia Torres De Mastle
ENERGY EFFICIENCY		
AFR	Energy Efficiency Development in African Cities	Karan Capoor
Brazil	Brazil Green Freight Transport	Georges Bianco Darido
China	Issues and Options in Monitoring, Verification, and Reporting in Energy Efficiency	Xiaodong Wang
Global	Making Cities More Energy Efficient	Feng Liu
Global	Tool for Rapid Assessment of City Energy - Deployment and Dissemination	Pedzi Makumbe
Ukraine	Facilitating Commercial Municipal Energy Efficiency Finance in Ukraine	Astrid Manroth
ENERGY ASSESSMENT AND STRATEGY PROGRAMS (EASP)		
ECA	Regional Energy Development Strategy Update	Salvador Rivera

Egypt, Arab Republic of	Cairo Congestion Study	Ziad Salim El Nakat
Egypt, Arab Republic of	Policy Note on Social Accountability in the Egypt Energy Sector	Waleed Saleh I. Alsuraih
Global	Direct Delivery of Power Subsidy to Rural Consumers	Mohinder P. Gulati
Global	Model for Electricity Technology Assessment (Deployment Phase)	Sameer Shukla
India	The Indian Power Sector: A Stocktaking and Directions for the Future	Sheoli Pargal
LCR	Impacts of High Oil Prices in Latin America	Rigoberto Yepez-Garcia
MNA	Synchronization of Mashreq, Turkey, and European Union Electricity Grids	Waleed Saleh I. Alsuraih
Morocco	Natural Gas Master Plan (Phase II)	Fanny Kathinka Missfeldt-Ringius
Niger	Energy Sector Assessment	Issa Diaw
RESULTS-BASED FINANCING		
Global	Results-based Funding for Energy Sector Development	Oliver Knight
SIDS DOCK		
Global	Small Island Developing States Revolving Fund Options Paper	Almudena Mateos Merino
Global	Promoting Innovation in Renewable Energy and Energy Efficiency in Small Island Developing States	Habiba Gitay
Global	Virtual Network to Support SIDS DOCK Platform	Ethelstan Angus Friday

World Bank Regions | **AFR** – Africa | **EAP** – East Asia and Pacific | **ECA** – Europe and Central Asia | **MNA** – Middle East and North Africa | **LCR** – Latin American and the Caribbean | **SAR** – South Asia

ANNEX 7 | WBG LENDING OPERATIONS INFLUENCED BY ESMAP ACTIVITIES, FY2009-13

WBG LENDING OPERATION	REGION	COUNTRY
Regional and Domestic Power Market Development Project	AFR	Africa
Southern African Power Market Project (Adaptable Program Loan 1)	AFR	Africa
Energy Access Project	AFR	Burkina Faso
Energy Sector Development Project	AFR	Cameroon
Forest Investment Program	AFR	Congo, Democratic Republic of
Growth with Governance in the Mineral Sector	AFR	Congo, Democratic Republic of
West Africa Power Pool Adaptable Program Loan 4 (Phase 1)	AFR	Côte d'Ivoire, Sierra Leone, Liberia, Guinea
Ghana Energy Development and Access Project (GEDAP)	AFR	Ghana
Electricity Expansion Project	AFR	Kenya
Liberia Electricity System Enhancement Project (Additional Financing)	AFR	Liberia
Lighting Lives in Liberia	AFR	Liberia
Energy Sector Project	AFR	Malawi
Household Energy and Universal Access Project (Additional Financing)	AFR	Mali
Scaling Up Renewable Energy Program	AFR	Mali
Energy Development and Access Project	AFR	Mozambique
Energy Development and Access Project (EDAP)	AFR	Mozambique
Mozambique-Malawi Transmission Interconnection Project (Adjustable Programmatic Loan 2)	AFR	Mozambique-Malawi
Electricity Access Scale-up and Sector Wide Approach Development Project	AFR	Rwanda
Second Sustainable and Participatory Energy Management Project (PROGEDE II)	AFR	Senegal
Escom Renewables Support Project	AFR	South Africa
Energy Development and Access Project	AFR	Tanzania
Sustainable Management of Mineral Resources	AFR	Tanzania
Rural Electrification and Transmission Project	EAP	Cambodia
Beijing Rooftop Solar Photovoltaic Scale-Up (Sunshine Schools) Project	EAP	China
Global Environment Facility Provincial Energy Efficiency Scale-up Program	EAP	China
Global Environment Facility Tianjin Eco-city Project	EAP	China
Guangdong Green Freight Demonstration Project	EAP	China
Ningbo New Countryside Development Project	EAP	China
Shandong Province Energy Efficiency	EAP	China
Urban Scale Building Energy Efficiency and Renewable Energy Project	EAP	China
Climate Change Development Policy Loan I	EAP	Indonesia
Climate Change Development Policy Loan II	EAP	Indonesia
Geothermal Clean Energy Investment Project	EAP	Indonesia
Rural Electrification Project – Phase I (Adaptable Program Loan)	EAP	Lao People's Democratic Republic
Rural Electrification Project – Phase II	EAP	Lao People's Democratic Republic
Mining Sector Technical Assistance Project	EAP	Mongolia
Second Mining Sector Institutional Strengthening Technical Assistance	EAP	Papua New Guinea
Clean Technology Fund (IFC)	EAP	Philippines
Kunming Urban Rail Project	EAP	China
Climate Change Development Policy Loan 1	EAP	Vietnam
Climate Change Development Policy Loan 2	EAP	Vietnam
Ho Chi Minh City Green Transport	EAP	Vietnam
Poverty Reduction Strategy Credit 10	EAP	Vietnam
Power Sector Reform (Development Policy Operation 2)	EAP	Vietnam

Vietnam Poverty Reduction Strategy Credit 9	EAP	Vietnam
Vietnam Transmission and Distribution (Additional Financing 2)	EAP	Vietnam
Electricity Supply Reliability Project	ECA	Armenia
Energy Efficiency Project	ECA	Armenia
First Competitiveness and Growth Development Policy Operation	ECA	Georgia
Second Competitiveness and Growth Development Policy Operation	ECA	Georgia
Global Environment Facility Sustainable Energy Project	ECA	Macedonia, former Yugoslav Rep. of
Energy Project II (Additional Financing)	ECA	Moldova
Energy Efficiency Development Policy Loan	ECA	Poland
Energy Community of South East Europe Adaptable Program Loan	ECA	South Eastern Europe
Energy Community of South East Europe (ECSEE) Adaptable Program Loan #6	ECA	Turkey
Environmental Sustainability and Energy Sector (Development Policy Loan 2)	ECA	Turkey
Private Sector Renewable Energy and Energy Efficiency Project	ECA	Turkey
Private Sector Renewable Energy and Energy Efficiency Project (Additional Financing)	ECA	Turkey
Programmatic Electricity Sector Development Policy Loan	ECA	Turkey
Small- and Medium-Enterprises Energy Efficiency Project	ECA	Turkey
Energy Efficiency Project	ECA	Ukraine
Ukraine Energy Efficiency Project	ECA	Ukraine
Energy Efficient Industrial Enterprises	ECA	Uzbekistan
Decentralized Infrastructure for Rural Transformation Project (IDTR)	LCR	Bolivia
Electrobras Distribution Rehabilitation Project	LCR	Brazil
Rebuilding Energy Infrastructure and Access Project	LCR	Haiti
Power Sector Efficiency Enhancement Project (PROMEF)	LCR	Honduras
Scaling Up Renewable Energy Program - Honduras Investment Plan	LCR	Honduras
Energy Investments and Technical Assistance	LCR	Jamaica
Efficient Lighting and Appliances	LCR	Mexico
Framework for Green Growth Development Policy Loan	LCR	Mexico
Global Environment Facility Energy Efficient Lighting and Appliances Project	LCR	Mexico
Global Environment Facility Wind Umbrella Project III	LCR	Mexico
Low Carbon Development Policy Loan	LCR	Mexico
First Rural Electrification Project	LCR	Peru
Rural Electrification Project	LCR	Peru
Second Rural Electrification Project	LCR	Peru
Administracion de las Obras Sanitarias del Estado Response for Climate Change Project	LCR	Uruguay
Geothermal Power Generation Project	MNA	Djibouti
Ain Sokhna Power	MNA	Egypt, Arab Republic of
Giza North Power Project	MNA	Egypt, Arab Republic of
Helwan South Power Project	MNA	Egypt, Arab Republic of
Kom Ombo Solar Power	MNA	Egypt, Arab Republic of
Wind Power Development Project	MNA	Egypt, Arab Republic of
Energy Sector Development Policy Loan	MNA	Morocco
Ouarzazate Concentrated Solar Power	MNA	Morocco
Urban Transport Development Policy Loan	MNA	Morocco
Concentrated Solar Power	MNA	Tunisia
Energy Efficiency and Renewable Energy Investment Project	MNA	Tunisia
Tunisian Electricity and Gas Company (STEG) Concentrated Solar Power	MNA	Tunisia
Municipal Development Program Phase I	MNA	West Bank and Gaza
Power System Development Project	SAR	Afghanistan
Clean Air Sustainable Environment (CASE) Project	SAR	Bangladesh
Rural Electrification and Renewable Energy Development (RERED; Additional Funding)	SAR	Bangladesh
Coal-Fired Generation Rehabilitation (IBRD)	SAR	India
Coal-Fired Generation Rehabilitation (GEF)	SAR	India

Haryana Power System Improvement Project	SAR	India
IFC Loan for Maharashtra State Electricity Transmission Corporation Limited (MSETCL)	SAR	India
Kabeli Transmission Project	SAR	Nepal
Electricity Distribution and Transmission Improvement Program Project	SAR	Pakistan

World Bank Regions | **AFR** – Africa | **EAP** – East Asia and Pacific | **ECA** – Europe and Central Asia | **MNA** – Middle East and North Africa | **LCR** – Latin American and the Caribbean | **SAR** – South Asia

ANNEX 8 | ACTIVITIES WITH ACHIEVED OUTCOMES, FY2013

Projects are listed in ascending order according to project ID

P099005 - Renewable Energy Investment Climate in India
P112430 - Strategic Overview on Energy Procurement and Best Practices in Energy Auctions
P115793 – TOOL FOR RAPID ASSESSMENT OF CITY ENERGY (TRACE)
P116044 - China Heat Regulation Phase II
P116206 - Country Energy Sector Credit Constraints Assessment
P116289 - Task 3: Lighting Africa Market Development
P117917 - Urban Transport Climate Change Strategy
P118280 - Central America Programmatic Study V: Promoting Geothermal Energy
P119291 - Managing the Impact of High and Volatile Oil Prices
P120447 - ESMED Energy Access for Urban Poor - CA/IFC
P121518 - Model for Electricity Technology Assessment (META)
P121572 - RESILIENT CITIES: DECISION-SUPPORT TOOLS
P121716 - Serbia: Low Carbon Energy Path
P122951 - Regional Energy Sector Note
P123004 - Gender and Energy
P123047 - Developing a Regulatory Framework for Maldives Energy Sector
P123066 - China - Government Facilities Energy Efficiency Project
P123139 - Energy Adaptation Country Briefs
P123636 - Philippines Rural Electricity Cooperatives: Reform and Restructuring
P123996 - China Low Carbon Cities
P124390 - Central America Improved Cookstoves Framework
P125354 - EE for Water and Sanitation Utilities
P125368 - Geothermal Handbook
P125641 - Electricity Transmission planning
P127143 - Geothermal Power Generation Program
P127168 - Energy Sector Low Carbon Development Operational Support
P127169 - Clean energy staff training and knowledge platform
P127170 - Climate vulnerability in the energy sector
P127938 - Smart Grids Knowledge/Experience Exchange
P129510 - Technical Assistance for Energy Planning in Peru
P130578 - Facilitating Small and Medium Enterprise Financing for Energy Efficiency in Turkey
P130999 - Renewable Energy for Electrification - PLN Capacity Building in HOMER

Project at a Glance

ACTIVITY NAME: Renewable Energy Investment Climate in India
COUNTRY: India
WORLD BANK PROJECT ID: P099005

Activity Details

Region:	South Asia	Project ID:	P099005
Country(s):	India	Product Line:	Economic and Sector Work (ESW)
Responsible Unit(s):	SASDE	Activity Approval Date:	03/13/2006
Status:	Closed	Task Team Leader:	Ashish Khanna
ESMAP Reviewer:	Pierre Audinet	Fiscal Year of Approval:	2006
Sector:	Other Renewable Energy	Theme:	Financial and private sector development
Program:	Clean Energy	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The activity comprises the following tasks: 1. Develop a methodology for the evaluation of the quality of the investment climate for renewables in India. The quality of the investment climate is determined by the following indicators: (a) Quality of renewable energy resources (b) policy environment (c) incentive schemes (d) regulatory environment (e) power evacuation infrastructure (f) availability of financing. 2. Identify key policy actions and market interventions required to improve the quality of the investment climate for each country. Identify areas of future demand for knowledge services to address barriers to private investment in renewable energy 3. These tasks are carried out by a regional consultant in partnership with the World Bank task team and a stakeholders group representing private investors in renewable energy.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Unleashing the potential of renewable energy in India	Actual	Sector or Thematic Study	Government of India	Yes

Output Details:

India has 150 GW of renewable energy potential, about half in the form of small hydropower, biomass, and wind and half in solar, cogeneration, and waste-to-energy. Developing renewable energy can help India increase its energy security, reduce the adverse impacts on the local environment, lower its carbon intensity, contribute to more balanced regional development, and realize its aspirations for leadership in high-technology industries. This diagnostic note draws on a detailed analysis conducted by a PricewaterhouseCoopers India consulting team in 2008-09 for the World Bank. The data are based on information on about 180 wind, biomass, and small hydropower projects in 20 states, as well as information from and norms of the Ministry of New and Renewable Energy (MNRE) and the Central Electricity Regulatory Commission (CERC). The study is intended to provoke discussions of the feasibility of renewable energy development in India. Why is renewable energy development relevant? How much development is economically feasible? What needs to be done to realize the potential? Each of these topics is addressed in a separate chapter, all of which suggest a few implementable measures that India can consider to tap its economically feasible unharnessed potential.

Deviation Details:
N/A

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Policy/Strategy Informed	Public debate stimulated/initiated		Actual	n/a	10/17/07	n/a	12/31/09	07/30/12

Outcome Details:

The release of the report generated significant media attention, with articles highlighting a central point of the report: if the government is to meet its target of expanding renewable installed capacity by 40 GW by 2022, substantial financial and regulatory barriers will have to be addressed.

The study effectively set out the concepts for improving risk and reward allocations under the existing regulatory framework. It sets out three models that attempt to capture the range of regulatory approaches seen across states in India. By doing so - it created a framework to enable discussions to take place between state regulators. A number of models (anchored in real projects) were developed to bring in the private sector. These were successfully road tested at a conference held for the private sector but no specific outcomes have been identified at this point.

To improve the operating environment for renewable energy, the report recommended streamlined, market-based government interventions to take the place of a number of current incentive programs, the establishment of a national renewable energy fund, and the creation of dedicated renewable energy parks. It highlights the lack of adequate grid interconnections as one of the largest obstacles and recommends making the expansion of transmission infrastructure for renewable energy a top priority.

In April 2011, India's Environment Minister at the time, Jairam Ramesh, sent a letter to Prime Minister Manmohan Singh, drawing attention to the report. At the same time, World Bank engagement with India on the scale-up of renewables has intensified.

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
SAP data was not found. No Trust Fund number(s) have been defined for this project.			

Impl. Progress

Last Updated By: Andres Londono **Date:** 01/30/13 **Rating:** On Track

Project at a Glance

ACTIVITY NAME: Strategic Overview on Energy Procurement and Best Practices in Energy Auctions
 COUNTRY: Colombia, Guatemala, Honduras, Mexico
 WORLD BANK PROJECT ID: P112430

Activity Details

Region:	Latin America and Caribbean	Project ID:	P112430
Country(s):	Colombia, Guatemala, Honduras, Mexico	Product Line:	Economic and Sector Work (ESW)
Responsible Unit(s):	LCSEG	Activity Approval Date:	10/20/2008
Status:	Closed	Task Team Leader:	Luiz T. A. Maurer
ESMAP Reviewer:	Istvan Dobozi	Fiscal Year of Approval:	2009
Sector:	General Energy	Theme:	Regulation and Competition Policy
Program:	Energy Assessments & Strategy Program (EASP)	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	This study provides an overall view of auctions as an instrument to procure energy competitively, within a broader context of power trading. The focus of this study is to examine the kinds of auctions that result in construction of new generation capacity. Furthermore, the study investigates auction mechanisms that may provide more liquidity to the energy market and reduce some of the risks associated with new capacity developments.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Electricity auctions : an overview of efficient practices	Actual	Sector or Thematic Study	Client countries	Yes

Output Details:

This report assesses the potential of electricity contract auctions as a procurement option for the World Bank's client countries. It focuses on the role of auctions of electricity contracts designed to expand and retain existing generation capacity. It is not meant to be a 'how-to' manual. Rather, it highlights some major issues and options that need to be taken into account when a country considers moving towards competitive electricity procurement through the introduction of electricity auctions. Auctions have played an important role in the effort to match supply and demand. Ever since the 1990s, the use of long-term contract auctions to procure new generation capacity, notably from private sector suppliers, has garnered increased affection from investors, governments, and multilateral agencies in general, as a means to achieve a competitive and transparent procurement process while providing certainty of supply for the medium to long term. However, the liberalization of electricity markets and the move from single-buyer procurement models increased the nature of the challenge facing system planners in their efforts to ensure an adequate and secure supply of electricity in the future at the best price. While auctions as general propositions are a means to match supply with demand in a cost-effective manner, they can also be and have been used to meet a variety of goals.

Deviation Details:

N/A

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Policy/Strategy Informed	Public debate stimulated/initiated		Actual	N/A	10/20/08	N/A	07/28/11	06/30/13

Outcome Details:

Based on a review of international best practices, this ESMAP activity assessed the benefits, challenges and pitfalls related to the implementation of different types of energy auctions, including issues pertaining to: (i) auction design, (ii) auction process and (iii) choice of auction over other procurement and contracting mechanisms. The report "Electricity Auctions - An Overview of Efficient Practices" highlighted key issues and options that need to be taken into account when a country considers moving towards competitive electricity procurement through the introduction of electricity auctions.

The report garnered substantial interest from client countries and shed light into the ongoing debate of Feed-in-tariffs versus competitive auctions for renewables. Key issues such as the importance of competitive bids to reduce prices, make energy more affordable, the process more transparent and expanding renewables were put back on the table. Several client countries have used the report as reference in their policy making process and in designing their competitive procurement bids. It helped countries in the policy decision FIT versus auctions.

The report was also referenced in the article "Fostering Wind Power Through Auctions: the Brazilian Experience" from IAEE Energy Forum journal, a publication of the International Association of Energy Economics (IAEE) during second quarter 2012.

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P112430	201,334.91	201,334.91	0.00
P112430	41,092.15	41,092.15	0.00

Impl. Progress

Last Updated By: David James Lighton **Date:** 01/07/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: TOOL FOR RAPID ASSESSMENT OF CITY ENERGY (TRACE)

COUNTRY: Global

WORLD BANK PROJECT ID: P115793

Activity Details

Region:	Global	Project ID:	P115793
Country(s):	Global	Product Line:	Technical Assistance (TA) (non-lending)
Responsible Unit(s):	SEGES	Activity Approval Date:	01/28/2009
Status:	Active	Task Team Leader:	Pedzi Makumbe
ESMAP Reviewer:	N/A	Fiscal Year of Approval:	2009
Sector:	Energy Efficiency in Power Sector, Water Supply, Other Sector	Theme:	Climate Change, Environment and natural resources management , Municipal Governance and Institution Building
Program:	Energy Efficiency	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The Tool for Rapid Assessment of City Energy (TRACE) is a decision-support tool designed to help cities quickly identify under-performing sectors, evaluate improvement and cost-saving potential, and prioritize sectors and actions for energy efficiency (EE) intervention. It covers six municipal sectors: passenger transport, municipal buildings, water and waste water, public lighting, solid waste, and power and heat. TRACE consists of three modules: an energy benchmarking module which compares key performance indicators (KPIs) among peer cities, a sector prioritization module which identifies sectors that offer the greatest potential with respect to energy-cost savings, and an intervention selection module which functions like a "playbook" of tried-and-tested EE measures and helps select locally appropriate EE interventions. TRACE is designed with the intention to involve city decision makers in the deployment process. It starts with benchmark data collection, goes through an on-location assessment involving experts and decision makers, and ends with a final report to city authorities with recommendations of EE interventions tailored to the city's individual context.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Rapid assessment framework : an innovative decision support tool for evaluating energy efficiency opportunities in cities	Actual	Implementation Advisory Report	Public dissemination	Yes
Output Details: The Quezon City Energy Efficiency Report documents the findings from a two week study of energy use and efficiency opportunities during February 2010. The study was undertaken as part of a wider program of work commissioned by the World Bank's Energy Sector Management Assistance Program (ESMAP) to field test and validate an early version of the Energy Efficient Cities Initiative Rapid Assessment Framework (RAF). Deviation Details: N/A				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Innovative Approaches & Solutions Generated	New innovative approach developed		Actual	Not measured	01/28/09	Not measured	11/22/10	12/30/11

Outcome Details:

The innovative city energy diagnostic tool, Tool for Rapid Assessment of City Energy (TRACE, previously named Rapid Assessment Framework) was developed to help cities quickly assess their EE performance, determine underperforming sectors and identify measures the city can take to make improvements and reduce energy cost. TRACE offers better-informed solutions to make a city energy-efficient that helps reduce escalating energy costs on basic services. As a part of the capacity building exercise, ESMAP provided training of city local relevant authorities how the tool works and what it delivers.

TRACE was developed during two phases

- Phase I of the project (Design, development and field testing of the beta version of the tool) was completed in September 2010. A field testing of the tool was conducted in Quezon City, Philippines and a final report was prepared based on TRACE results and its field validation.
- Phase II of the project included a pilot testing of the beta version of the tool and its upgrade in the city of Gaziantep, Turkey (November 2010 - March 2011).

TRACE has a great potential to be adapted as an open resource, similar to many of the products the World Bank has delivered earlier. Both ECA and EAP regions have shown keen interest in implementing TRACE in a number of cities in their region. For example, under an AusAID project on Sustainable Urban Energy Program, TRACE has been deployed in three cities in East Asia namely, Danang (Vietnam), Cebu (Philippines), and Surabaya (Indonesia) with country teams.

Deviation Details:
N/A

2. Policy/Strategy Informed	Government policy/strategy informed		Actual	N/A	06/02/10	N/A	06/03/14	06/30/13
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Outcome Details:

The TRACE tool has been very well received from city officials, helping them understand clearly how they compare to their peer cities, assess energy performance, prioritize under-performing sectors, and identify actions to be taken to lower their energy bills and save money. As new cities use TRACE, additional city benchmark data will be added to the tool, as well as more case studies, making it even more effective in the years ahead. Following are some examples of the achievements of the TRACE tool in selected client countries:

Indonesia:

The WB used TRACE to conduct city-level case studies. Findings from the case studies are being used to create Energy and Emissions Sustainability Plan (EESP) Guidelines which will be distributed throughout the entire East Asia and the Pacific region.

Macedonia: TRACE has fed into the broader Green Growth Agenda, and is helping inform bank-financed Municipal Infrastructure Investment Project.

Georgia:

TRACE results are contributing to the development of the Georgia's Municipal Development Fund, where a third generation of the fund will consider using a sustainable cities investment framework.

Brazil:

TRACE implemented in Rio de Janeiro (hosting 2016 Olympics & 2014 FIFA World Cup) and Belo Horizonte (hosting FIFA World Cup). TRACE identified appropriate interventions, helped in creating EE Strategic Plans. World Bank currently working on a US\$500million EE Investment program for the two cities.

Mexico:

TRACE is being implemented in 2 cities as pilots. The national government has plans to extend the implementations to several cities for state-wide in order to identify energy efficiency investment programs

Deviation Details:
N/A

3. Client Capacity Increased	Implementation capacity strengthened		Actual	N/A	06/05/10	N/A	06/30/14	06/30/13
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Outcome Details:

Implementation capacity increased for 25 cities of 17 clients countries Training provided to 70 people belonging to 5 independent entities which can implement TRACE on their own

Notable training, client assistance and knowledge exchange activities carried out:

WBI Translating training into Chinese

LBNL – customization of the TRACE tool

Servicios Ambientales SA: Miguel Rodriguez , +591 795 82582. Training about 15 people. They are implementing TRACE in Quito (Ecuador), Lima (Peru) and La Paz (Bolivia) funded by CAF

EUEI PDF: 49 61 96 79-1667, david.otieno@euei-pdf.org trained with team consultants for their energy efficiency efforts in Yaoundé: 5 people attended.

AUSAid – I trained colleagues on the suite of all ESMAP tools as part of the an introduction to the suite of all ESMAP tools.

ESMAP knowledge exchange training – trained about 20 participants at the KEF in Paris. Iller Bank – part of the Sustainable Cities Project. Trained about 20 colleagues. Nilay Deniz – ndeniz@ilbank.gov.tr

Deviation Details:
N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P115793	245,631.69	245,631.69	0.00
P115793	380,726.40	380,726.40	0.00

Impl. Progress

Last Updated By: Marie-Gisele Zoua Morrison **Date:** 01/24/14 **Rating:** On Track

Last Updated By: Andres Londono **Date:** 06/20/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: China Heat Regulation Phase II
COUNTRY: China
WORLD BANK PROJECT ID: P116044

Activity Details

Region:	East Asia and Pacific	Project ID:	P116044
Country(s):	China	Product Line:	Technical Assistance (TA) (non-lending)
Responsible Unit(s):	EASCS	Activity Approval Date:	02/05/2009
Status:	Closed	Task Team Leader:	Gailius J. Draugelis
ESMAP Reviewer:	Victor Loksha	Fiscal Year of Approval:	2009
Sector:	Energy Efficiency in Power Sector	Theme:	Climate Change, Regulation and Competition Policy
Program:	Energy Assessments & Strategy Program (EASP)	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The objective of this activity is to support the development of a Heat Regulation to be prepared by the Ministry of Housing, Rural, and Urban Development		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. China - Enhancing the Institutional Model for District Heating Regulation: Outside Perspectives and Suggestions	Actual	Implementation Advisory Report	China - Ministry of Housing, Rural, and Urban Development.	Yes
Output Details: Interim Report on Institutional Models Deviation Details: N/A				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Policy/Strategy Informed	Government policy/strategy informed		Actual	Not measured	02/05/09	Not measured	12/30/11	12/31/12
Outcome Details: The TA provided advisory support to the Ministry of Housing Urban Rural Development (MOHURD) on enhancing the institutional model for district heating. The recommendations were presented, discussed and well received during a workshop in Beijing in April 2010, attended by Deputy Directors General from the (MOHURD). The ESMAP activity also helped shape the scope of a follow up project implemented directly by the government through a recipient executed project (GEF Heat Reform and Building Energy Efficiency Project) which includes support for policy development in district heating sector reform. Deviation Details: N/A								

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P116044	15,509.05	15,509.05	0.00
P116044	127,759.61	127,759.61	0.00
P116044	69,714.01	69,714.01	0.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 04/22/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Country Energy Sector Credit Constraints Assessment
COUNTRY: Egypt Arab Republic of, Jordan
WORLD BANK PROJECT ID: P116206

Activity Details

Region:	Middle East and North Africa	Project ID:	P116206
Country(s):	Egypt Arab Republic of, Jordan	Product Line:	Technical Assistance (TA) (non-lending)
Responsible Unit(s):	MNSSD	Activity Approval Date:	04/08/2009
Status:	Closed	Task Team Leader:	Rome Chavapricha
ESMAP Reviewer:	Not assigned	Fiscal Year of Approval:	2009
Sector:	General Energy	Theme:	Environment and natural resources management
Program:	Energy Assessments & Strategy Program (EASP)	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The objective of this activity is to estimate the short-to-medium term impact of the emerging credit constraints ("the credit crisis") on the on-going and future capital investment plans and programs in the power sector.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Power Sector Financial Vulnerability Assessment -Impact of the Credit Crisis on Investments in the Power Sector	Actual	Implementation Advisory Report	Government of Jordan	Yes
Output Details: To estimate the short-to-medium term impact of the emerging credit constraints ("the credit crisis") on the on-going and future capital investment plans and programs in the power sector. Report not for public dissemination. Deviation Details: N/A				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Development Financing Informed	Preparation of new operation informed	585,000,000	Actual	Not measured	03/05/09	Not measured	07/16/10	12/31/12
Outcome Details: This loan was identified based on the assessment carried out by ESMAP to estimate the impact of the financial crisis in Egypt and Jordan and to identify investment shortfalls in the power sector. This project was flagged by the Egyptian government as requiring priority financing from the World Bank. Two additional loans, also influenced by ESMAP are currently being proposed: Egypt Dairut Independent Power Project and Jordan Fujeij Wind IPP. WB Lending Operation Informed Egypt - Helwan South Power Project (P117407,2013,\$585M WB loan) Deviation Details: N/A								

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P116206	69,993.24	69,993.24	0.00

Impl. Progress

Last Updated By: David James Lighton **Date:** 01/14/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Task 3: Lighting Africa Market Development and QA

COUNTRY: Region

WORLD BANK PROJECT ID: P116289

Activity Details

Region:	Africa	Project ID:	P116289
Country(s):	Region	Product Line:	Technical Assistance (TA) (non-lending)
Responsible Unit(s):	SEGEN	Activity Approval Date:	04/09/2009
Status:	Closed	Task Team Leader:	Katherine Deaton Steel
ESMAP Reviewer:	Venkata Putti	Fiscal Year of Approval:	2009
Sector:	Other Renewable Energy	Theme:	Infrastructure Services for Private Sector Development, Rural Services and Infrastructure
Program:	Energy Access	Sub-program:	AFREA
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The activity comprises a quality assurance program for off-grid lighting products. A cost-shared technical assistance provides demand-driven testing and technical advisory services to manufacturing and distribution companies. The project also includes communication outreach to SSA francophone countries in French, including translation of key documents, French version of the web-site, Lighting Africa presence in regional electrification/renewable energy events etc; Market research and intelligence in priority countries, such as Senegal Program development in Senegal and outreach to Francophone West Africa.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. 3RD INTERNATIONAL OFF-GRID LIGHTING CONFERENCE AND TRADE FAIR	Actual	Event Proceeding Document	Client countries AFR region	Yes
<p>Output Details: Report not for public dissemination</p> <p>Deviation Details: N/A</p>				
2. Lighting Africa Operational Toolkit	Actual	Implementation Advisory Report	Client countries AFR region	Yes
<p>Output Details: Report not for public dissemination</p> <p>Deviation Details: N/A</p>				
3. Lighting Africa scale up plan and market expansion	Actual	Implementation Advisory Report	Client countries AFR region	Yes
<p>Output Details: Report not for public dissemination</p> <p>Deviation Details: N/A</p>				
4. Lighting Lives project support - Liberia	Planned	Implementation Advisory Report	Government of Liberia	Yes
<p>Output Details: Report not for public dissemination</p> <p>Deviation Details: N/A</p>				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Client Capacity Increased	Implementation capacity strengthened		Actual	Not measured	02/29/12	Not measured	01/30/13	01/30/13

Outcome Details:

Under a competitive grant program sponsored by the Lighting Africa Initiative, AFREA funded three award-winning projects in Namibia, Nigeria, and Tanzania. Although the award recipients in Namibia and Nigeria faced difficulties, the Tanzanian recipient successfully implemented its proposal. It resulted in 42,000 LED lanterns and other lighting products sold, providing improved lighting to 8,450 households and 331 organizations, while creating 123 local jobs. Lessons learned from the grant-funded initiative have informed the design of the Lighting Rural Tanzania activity, which adopted a similar approach to providing grants.

This outcome is similar to project P113808-LIGHTING AFRICA DEVELOPMENT MARKETPLACE AWARDEES SUPERVISION

Deviation Details:

N/A

2. Innovative Approaches & Solutions Generated	New innovative approach fostered		Actual	N/A	04/09/09	N/A	06/30/12	06/30/13
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Outcome Details:

As of August 2012, the Lighting Africa program had made it possible for about four million Africans to enjoy better quality lighting, reducing their reliance on kerosene and other polluting lighting fuels. To sustain and enhance growth, Lighting Africa will develop working capital and trade finance facilities across the supply chain and deepen its focus on building consumer trust in modern, quality assured lighting products through consumer education.

The World Bank will accelerate its work with clients to build Lighting Africa activities into energy access programs that it finances, helping spur consumer demand and supply chains to the base of the pyramid.

In conjunction with the Global Off-Grid Lighting Association, Lighting Africa is also developing an environmental sustainability plan for greening the design of new lighting products and ensuring proper disposal of spent lanterns and their components.

Overall, experience to date in Africa shows that solar portable lanterns are fast becoming a must-have products for off-grid households, much as mobile phones are today.

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P116289	249,811.26	249,811.26	0.00
P116289	580,000.00	535,842.33	23,259.41
P116289	2,033,628.30	2,033,628.30	0.00

Impl. Progress

Last Updated By: Alain Ouedraogo **Date:** 06/28/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Urban Transport Climate Change Strategy

COUNTRY: China

WORLD BANK PROJECT ID: P117917

Activity Details

Region:	East Asia and Pacific	Project ID:	P117917
Country(s):	China	Product Line:	Economic and Sector Work (ESW)
Responsible Unit(s):	EASCS	Activity Approval Date:	08/05/2009
Status:	Closed	Task Team Leader:	Ke Fang
ESMAP Reviewer:	O.P. Agarwal	Fiscal Year of Approval:	2010
Sector:	General Transport	Theme:	Climate Change
Program:	Energy Assessments & Strategy Program (EASP)	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The objective of the activity is to effectively promote a national urban public transport development strategy aimed at slowing the growth in transport GHG emissions, improving urban air quality, and providing better transport services for the vast majority of urban dwellers who do not own a car.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Urban rail development in China : issues and options	Actual	Sector or Thematic Study	Government of China	Yes

Output Details:
Report

Deviation Details:
N/A

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Policy/Strategy Informed	Government policy/strategy informed		Actual	No tools used or adopted	02/18/10	At least one tool is adopted	06/29/10	06/30/13

Outcome Details:

An accessibility planning tool was designed to help decision makers in Chinese cities to make more informed decisions on how to integrate transport system planning and implementation with spatial development. The TA conducted a pilot project in Wuhan, China to demonstrate the value of accessibility metrics in the urban planning decision making process, including a description of the tools used and policy lessons generated.

The GIS tool ArcGIS Desktop v10 was used to model and visualize accessibility, while Metronamica was used for the dynamic modeling of land use - transport dynamics. The tool is now utilized in the Chinese cities of Wuhan, Xiangyang, and Xining.

The exercise demonstrated the practical applications of these tools for use in understanding transport/land use dynamics in World Bank client cities.

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P117917	75,000.00	75,000.00	0.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 01/30/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Central America Programmatic Study V: Promoting Geothermal Energy
COUNTRY: Guatemala, Honduras, Mexico
WORLD BANK PROJECT ID: P118280

Activity Details

Region:	Latin America and Caribbean	Project ID:	P118280
Country(s):	Guatemala, Honduras, Mexico	Product Line:	Economic and Sector Work (ESW)
Responsible Unit(s):	LCSEG	Activity Approval Date:	07/29/2009
Status:	Closed	Task Team Leader:	Xiaoping Wang
ESMAP Reviewer:	Pierre Audinet	Fiscal Year of Approval:	2010
Sector:	General Energy	Theme:	Climate Change, Infrastructure Services for Private Sector Development, Regional Integration, Regulation and Competition Policy
Program:	Clean Energy	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The objective of the study is to prepare the energy authorities of the Central American countries with the information and know-how for developing geothermal power generation. After a thorough investigation and assessment of the countries' geothermal data and plans, the proposed study reflects the relevant information available on the geothermal potential of the country and its status of systematization. A set of actions required to scale up the development of the resource is developed, which helps the country to confirm its awareness about existing geothermal resources, but also to present its business case to financial institutions or apply for grants and funds from multilateral donor institutions. Further development of geothermal sites could eventually lead to requests for funding assistance from the WBG and other bilateral donors.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Drilling Down on Geothermal Potential: An Assessment for Central America	Actual	Sector or Thematic Study	Government	Yes

Output Details:

A study to assess the potential for expanding the use of geothermal energy for electric power generation in Central America and to discuss how the countries of the region can overcome the resource uncertainties as well as the policy, institutional, and financing constraints facing geothermal power development.

Deviation Details:

N/A

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Knowledge Increased	Facilitated exchange of best practice with clients		Actual	Not measured	08/25/11	Not measured	06/30/12	12/26/12

Outcome Details:

The project on promoting geothermal energy constituted a module within the CENTRAL AMERICA PROGRAMMATIC STUDY. It built upon the knowledge obtained in the renewable energy module and addressed the issues related to geothermal energy development in greater depth.

The activity provided a good assesment of the situation and helped identify and disseminate the key barriers in geothermal development in Central America. A few follow-up activities were directly influenced by or related to this study: 1. Latin America geothermal database and risk screening---completed in June 2012 2. Nicaragua geothermal policy note (still under preparation) 3. Latin America geothermal study (still under preparation) 4. Caribbean geothermal initiative + Dominica geothermal TA (funded under SIDS-DOCK program).

Further assistance will be needed by the client countries to follow up on the recommendations to specific countries and the region as a whole.

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P118280	49,054.34	49,961.08	0.00
P118280	153,996.01	153,996.01	0.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 01/25/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Managing the Impact of High and Volatile Oil Prices
COUNTRY: Costa Rica, Guatemala, Panama
WORLD BANK PROJECT ID: P119291

Activity Details

Region:	Latin America and Caribbean	Project ID:	P119291
Country(s):	Costa Rica, Guatemala, Panama	Product Line:	Economic and Sector Work (ESW)
Responsible Unit(s):	LCSEG	Activity Approval Date:	09/21/2009
Status:	Closed	Task Team Leader:	Rigoberto Yepez-Garcia
ESMAP Reviewer:	Sameer Shukla	Fiscal Year of Approval:	2010
Sector:	General Energy	Theme:	Regulation and Competition Policy
Program:	Energy Assessments & Strategy Program (EASP)	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	This study evaluates the impact of oil price volatility on the power sector, then moves on to addressing how this fuel price volatility flows through the power sector in affecting overall macroeconomic standing. An assessment of power sector exposure to oil price volatility identifies the major stakeholders in the industry.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Mitigating Vulnerability to High and Volatile Oil Prices	Actual	Sector or Thematic Study	Client countries Central America and the Caribbean	No

Output Details:

The team will deliver at least one presentation on the results and recommendations of the report at a location in Central America. The goal of the presentation would be to deliver the recommendations of the report to Planning, Energy, and Finance bodies within Governments of Central America and the Caribbean.

Deviation Details:

The report took longer to complete, mainly on account of extensive reviews by peer reviewers.

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Policy/Strategy Informed	Government policy/strategy informed		Actual	N/A	09/21/10	N/A	06/30/13	06/25/13

Outcome Details:

The activity was relevant and timely delivered to provide tools to policy makers to manage the vulnerability posed to public utilities by high and volatile oil prices. Dissemination activities were critical to deliver the conclusions and policy recommendations proposed in the report. As a result of the relevance of the topic, the engagement with policy makers and the overall usefulness of the report the authors of the report were able to engage in a constructive dialogue with client countries to discuss options available to policy makers to manage high and volatile oil prices. The dialogue with government officials of three countries (Mexico, Honduras and Dominican Republic) has been productive and has enabled informed policy decisions. Pursuant to this study's completion, these countries have requested assistance from the Bank in helping them address the impacts of over-dependence on oil. This project might be replicable in other countries with high vulnerability to oil prices such as those in the Caribbean and Central America.

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P119291	177,978.91	177,978.91	0.00
P119291	153,572.52	153,572.52	0.00

Impl. Progress

Last Updated By: Sameer Shukla **Date:** 06/26/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: ESMED Energy Access for Urban Poor - CA/IFC

COUNTRY: Global

WORLD BANK PROJECT ID: P120447

Activity Details

Region:	Global	Project ID:	P120447
Country(s):	Global	Product Line:	Partnership (PT)
Responsible Unit(s):	SEGES	Activity Approval Date:	12/07/2009
Status:	Closed	Task Team Leader:	Venkata Ramana Putti
ESMAP Reviewer:	Not assigned	Fiscal Year of Approval:	2010
Sector:	Energy Efficiency in Power Sector	Theme:	Micro, Small and Medium Enterprise Support
Program:	Energy Access	Sub-program:	
Relevance of Social/Gender Aspects:	<p>Not Monitored</p> <p>High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage</p> <p>Medium: There is scope to consider social/gender aspects and the PCN should address them</p> <p>Low: Minimal opportunity to incorporate specific social/gender aspects</p>		
Activity Description:	<p>The overall objective of this project is to utilize consultations among the practitioners to identify best practice and develop guidelines that could inform design of action / implementation plans for expanding energy access for the poor in the urban areas of developing countries. The outcomes of the consultations are made widely available to stakeholders including practitioners, policy makers, donors and NGOs to help prioritize areas for action planning energy access related programs</p>		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Action Plan FY 13-15	Actual	Not Applicable	Client countries	Yes
<p>Output Details: Report not for public dissemination</p> <p>Deviation Details: N/A</p>				
2. ENERGY ACCESS AND PRODUCTIVE USES FOR THE URBAN POOR - Ghana	Actual	Not Applicable	Government of Ghana	Yes
<p>Output Details: Report not for public dissemination</p> <p>Deviation Details: N/A</p>				
3. Face-to Face Consultation (Workshop)	Actual	Not Applicable	Client countries	Yes
<p>Output Details: Report not for public dissemination</p> <p>Deviation Details: N/A</p>				
4. Proceedings of Consultations	Actual	Not Applicable	Client countries	Yes
<p>Output Details: Report not for public dissemination</p> <p>Deviation Details: N/A</p>				
5. Virtual Consultation Forum	Actual	Not Applicable	Client countries	Yes
<p>Output Details: Report not for public dissemination</p> <p>Deviation Details: N/A</p>				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Policy/Strategy Informed	Public debate stimulated/initiated		Actual	not measured	12/07/10	not measured	12/07/10	12/30/12

Outcome Details:

The virtual, online consultation brought together over 100 participants from city authorities, electricity and LPG utilities, NGOs and civil society organizations from Africa, Asia and Latin America to discuss challenges and solutions in scaling up access to affordable and reliable electricity and clean cooking fuels and stoves.

The virtual discussion culminated in a two-day, face-to-face, practitioner workshop during the ESMAP Knowledge Exchange Forum in May 2012, held at the World Bank in Washington and co-sponsored by the Cities Alliance.

Deviation Details:

n/a

2. Knowledge Increased	Facilitated exchange of best practice with clients		Actual	not measured	12/07/10	not measured	12/07/10	12/30/12
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Outcome Details:

Practitioners shared innovative approaches to reaching poor urban communities, including the following:

- In Brazil, AES Eletropaulo trained large numbers of local agents that reached out to about 1.4 million households in slum communities to ensure safe electricity connections and realize energy efficiency improvements while reducing electricity theft.
- In India, the NGO Shelter Associates combined community outreach and GIS technology to build evidence and initiate dialogue with local governments for improved access to energy services
- In Kenya, Kenya Power substantially expanded electricity connections by putting in place simple technologies such pre-paid meters and outdoor connection boards while extending credit to low-income consumers.

They also offered ideas on interventions that governments and the international development community can undertake to improve urban energy access.

The workshop informed the design of ESMAP's urban energy access activities that will be implemented jointly with Cities Alliance. Workshop participants' ideas were further analyzed in collaboration with Cities Alliance and led to the development of analytical, operational support, and knowledge exchange activities.

Deviation Details:

n/a

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments

SAP data was not found. No Trust Fund number(s) have been defined for this project.

Impl. Progress

Last Updated By: Andres Londono **Date:** 02/21/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Model for Electricity Technology Assessment (META)

COUNTRY: Global

WORLD BANK PROJECT ID: P121518

Activity Details

Region:	Global	Project ID:	P121518
Country(s):	Global	Product Line:	Knowledge Product (KP)
Responsible Unit(s):	SEGES	Activity Approval Date:	04/01/2010
Status:	Closed	Task Team Leader:	Bipul Singh
ESMAP Reviewer:	N/A	Fiscal Year of Approval:	2010
Sector:	General Energy	Theme:	Technology Diffusion
Program:	Energy Assessments & Strategy Program (EASP)	Sub-program:	Electricity Technical Options Assessment
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The primary task is to update and extend the scope of the 2007 ESMAP study on technical and economic assessment of electrification technologies. Specifically, an assessment model is to be developed, tested and validated as well as published electronically in a user-modifiable, internet-accessible form. Task 1: Technical and economic assessment of power generation options. Task 2: Technical and economic assessment of power delivery options. Task 3: Development of interactive technology assessment tool (spreadsheet model). Task 4: Dissemination of deliverables.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Model for Electricity Technology Assessment (META) - Modeling tool	Actual	Databases	Client countries	Yes
Output Details: Modeling tool and operational guide. Deviation Details: N/A				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Client Capacity Increased	Implementation capacity strengthened		Actual	N/A	09/19/10	N/A	06/30/11	06/30/13

Outcome Details:

The activity has helped develop a user-modifiable and internet-based model to allow comparative assessment of the economic costs of thermal and renewable electricity generation options, as well as power storage called Model for Electricity Technology Assessment (META). Hands on training on using the model was provided to Bank staff and external audiences in June 2012. The model is currently being used by Bank staff in Latin America and Caribbean and Africa units of the Bank. In addition, private sector firms such as General Electric have also expressed interest in learning more about the tool.

Thanks to its innovative features, META has already proved popular even though it has not yet been publicly rolled out. At the KTH Royal Institute of Technology in Sweden, META has been integrated into a course on energy systems analysis. At the Wharton School of Business in the US, it was used to assess energy supply costs as part of a class on energy investments in developing countries. META is being implemented by a team led by the Worldwatch Institute to support government ministries in two countries—Haiti and Jamaica. In both cases, the team looked at the current cost of electricity supply, surveyed renewable energy resources, and analyzed fossil fuel use. That country-specific data was combined with META analysis to determine the projected cost of electricity from various sources over time. These findings were then packaged into various scenarios, allowing the ministries to make better informed decisions about their electricity future. In Jamaica, the Ministry of Energy has requested the use of META for continuing work in this area.

Deviation Details:

N/A

2. Innovative Approaches & Solutions Generated	New innovative approach developed		Actual	Not measured	04/01/10	Not measured	06/30/13	06/30/13
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Outcome Details:

The Model for Electricity Technology Assessment (META) is one step towards helping energy policymakers negotiate this difficult terrain. Developed by ESMAP, META provides a comparative assessment of costs for a range of electricity supply options, including renewable energy. To make effective comparisons, META uses "levelized" costs—the price at which electricity must be generated from a specific source to break even over time. One of the advantages of META is that it covers a comprehensive range of technologies, ranging from solar, wind, and geothermal, to fossil fuel-based power.

One of the most prominent features of the model is that it integrates environmental externalities. This gives energy ministries a simple way to see the cost of adding or expanding generation from a particular power source if the health costs of local pollution and a carbon price are factored in.

META also makes it easier to calculate the economy-wide costs of higher-carbon generation options over time. The tool estimates negative externalities based on the demonstrated healthcare costs for local pollution, plus international carbon prices. All such assumptions are transparent, and adjustable depending on local costs and conditions.

META takes into account changes in capital and operating costs over time, and can also factor in transmission and distribution costs for different power supply options. It can be used in conjunction with commonly-used power system planning tools, by enabling preliminary technology screening and by providing detailed technical and cost breakdowns. Users can look at options categorized by scale: off-grid, mini-grid, and grid-connected.

META was rolled out to the World Bank Group and selected partners and clients in June 2012. It is now being field tested by almost a dozen teams in academia, government, and the private sector. The tool will be made publicly available in mid-2013, along with a report detailing the development of the model, its data sources and assumptions.

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P121518	49,369.30	49,369.30	0.00
P121518	514,956.45	514,956.45	0.00
P121518	45,833.10	45,833.10	0.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 03/15/13 **Rating:** On Track

Project at a Glance

ACTIVITY NAME: RESILIENT CITIES: DECISION-SUPPORT TOOLS
COUNTRY: Region
WORLD BANK PROJECT ID: P121572

Activity Details

Region:	East Asia and Pacific	Project ID:	P121572
Country(s):	Region	Product Line:	Technical Assistance (TA) (non-lending)
Responsible Unit(s):	EASIN	Activity Approval Date:	03/25/2010
Status:	Closed	Task Team Leader:	Fatima Zehra Shah
ESMAP Reviewer:	Not assigned	Fiscal Year of Approval:	2010
Sector:	Flood Protection	Theme:	Climate Change, Other Urban Development, Other Theme
Program:	Clean Energy	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The overall objective is to assist sub-national, national, and international partners with tools for identifying and operationalizing disaster risk mitigation and climate adaptation measures at the city level. Specific objectives of this technical assistance activity are to provide (i) policymakers and planners in East Asian cities with decision support tools on assessing, mitigating, and benchmarking urban risk arising from natural hazards and climate change; (ii) national governments with tools to allocate funding and to translate national policy into local action; and (iii) development partners with a rapid assessment to help focus international assistance on cities where the biggest payoff is likely in terms of increasing resilience.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. A multi-hazard City Risk Index	Actual	Implementation Advisory Report	Governments countries EAP	Yes
Output Details: A standardized metric to capture aggregate risk at the city level, and help establish a baseline and measure performance over time and relative to peers -- as part of refining the methodology for the index, 5 city pilots will be undertaken, including Bangkok, Ningbo, and 3 cities in Indonesia. Report not for public dissemination Deviation Details: N/A				
2. A Workbook on Developing Local Resilience Action Plans	Actual	Implementation Advisory Report	Governments countries EAP	Yes
Output Details: A guide on assessing risks and vulnerabilities, identifying and prioritizing disaster risk mitigation measures, and decision support tools on adopting an implementation strategy; and (ii) a multi-hazard City Risk Index - a standardized metric to capture aggregate risk at the city level, and help establish a baseline and measure performance over time and relative to peers -- as part of refining the methodology for the index, 5 city pilots will be undertaken, including Bangkok, Ningbo, and 3 cities in Indonesia. Report not for public dissemination Deviation Details: N/A				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Policy/Strategy Informed	Government policy/strategy informed		Actual	Not measured	06/03/10	Not measured	06/04/11	06/29/12

Outcome Details:

This activity, partially funded by ESMAP, helped to develop tools for identifying and operationalizing disaster risk mitigation and climate adaptation measures at the city level. As part of refining the methodology for the index, three city pilots were undertaken and completed in the cities of Ningbo, Manila, and Bangkok. This has immediately led to interest and downstream work in Manila for the design of a barangay-level neighborhood risk index that can function as a damage assessment tool, an emergency response tool and a land-use planning and investment decision support mechanism.

The Index was to provide a standardized metric to capture and aggregate risk from multiple hazards at the city level, and help establish a baseline and measure performance over time and relative to peers. The exercise helped to reach a better understanding of the multiple hazards facing cities, and offered tools on how to analyze and communicate disaster and climate risks. The activities engaged officials in a dialogue about the importance of risk assessment and reduction, awareness raising about disaster and climate risks in the city, social and institutional impacts of hazards, and potential mitigation options such as rezoning, flood control infrastructure, building and infrastructure standards, etc.

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Commitments

SAP data was not found. No Trust Fund number(s) have been defined for this project.

Impl. Progress

Last Updated By: Andres Londono **Date:** 04/18/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Serbia: Low Carbon Energy Path
COUNTRY: Serbia
WORLD BANK PROJECT ID: P121716

Activity Details

Region:	Europe and Central Asia	Project ID:	P121716
Country(s):	Serbia	Product Line:	Knowledge Product (KP)
Responsible Unit(s):	ECSSD	Activity Approval Date:	04/07/2010
Status:	Closed	Task Team Leader:	Arturo S. Rivera
ESMAP Reviewer:	Oliver Knight	Fiscal Year of Approval:	2010
Sector:	Energy Efficiency in Power Sector, Oil and Gas	Theme:	Climate Change, Environment and natural resources management , Environmental Policies and Institutions
Program:	Clean Energy	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	This study supports the development of a strategy note to help policymakers in Serbia improve the sustainability of power generation, facilitate investment, and allow the national power sector to effectively compete in the regional power market. A particular focus is possible linkages between gas, district heating, and renewable generation. The strategy note assesses the impact of regional developments and the prospect of electricity markets for the Western Balkans.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. NATIONAL BUILDING ENERGY EFFICIENCY STUDY FOR SERBIA	Actual	Studies	Government of Serbia	No

Output Details:

The paper provides a comprehensive and practical analysis of energy efficiency in the buildings sector:

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Policy/Strategy Informed	Government policy/strategy informed		Actual	Lack of concise Strategic document illustrating Serbia's Energy Sector Carbon Status	04/08/10	Government takes any specific action on suggested steps to achieve a Low Carbon Energy Sector	12/31/12	05/30/13

Outcome Details:

Following the dialogue established during this activity and building on the recently closed Energy Efficiency Project (IBRD loan), the Ministry of Energy has requested the Bank further financing support for a National Program on Energy Efficiency in the Buildings sector. The request is now being considered by the Ministry of Finance to be included in the Country Partnership.

Based on the findings of the report, a consensus was created on the need to implement a sustainable, national-scale Energy Efficiency Buildings Program (NBEEP) in Serbia. The activity provided a good platform to establish dialogue among key stakeholders to reach an agreement on the best delivery mechanisms to implement the NBEEP. It is likely that the Government's program in the building's sector takes onboard some of the recommendations developed during the activity.

The Bank team was able to establish a fruitful policy dialogue on this subject with the government and other stakeholders and it is now recognized in Serbia as a leading development partner in this field.

The task developed a set of recommendations around target markets, remedies to market barriers, institutional arrangements and financing mechanisms in order to develop a large-scale and sustainable national EE program in the buildings sector. Such recommendations were largely disseminated with the government and other key stakeholders in Serbia including municipal governments, private sector providers of EE products and services, as well as other developing partners.

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Commitments
P121716	57,640.56	57,640.56	0.00
P121716	99,944.20	99,944.20	0.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 11/25/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Regional Energy Sector Note
COUNTRY: Armenia, Azerbaijan, Georgia
WORLD BANK PROJECT ID: P122951

Activity Details

Region:	Europe and Central Asia	Project ID:	P122951
Country(s):	Armenia, Azerbaijan, Georgia	Product Line:	Knowledge Product (KP)
Responsible Unit(s):	ECSSD	Activity Approval Date:	10/04/2010
Status:	Closed	Task Team Leader:	Arturo S. Rivera
ESMAP Reviewer:	Sameer Shukla	Fiscal Year of Approval:	2011
Sector:	General Energy	Theme:	Climate Change, Infrastructure Services for Private Sector Development, Other Public Sector Governance, Regional Integration, Regulation and Competition Policy
Program:	Energy Assessments & Strategy Program (EASP)	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The study: (1) updates its knowledge on the power sectors of Armenia, Azerbaijan and Georgia; this includes: status of the present power system, current and expected power demand at country and regional level, development program for the next 10 years, issues facing the sector and development opportunities, including regional trade. Since Turkey is a natural market for regional power, the study also prepares a Stock Taking on main characteristics of the Turkey power market, power prices in the market, key constraints and opportunities; (2) identifies preliminary investment needs in the power sector of each country; (3) identifies which investments, policy and regulatory interventions are necessary for promoting regional trade and integration in short and medium terms; and (4) identifies key elements of the policy agenda to complete the identified investments.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Country reports in powerpoint format and an integrated regional report	Actual	Studies	Armenia, Azerbaijan, Georgia, Turkey	Yes

Output Details:

Country reports/ppt and an integrated report/ppt that will summarize cross country issues and opportunities for South Caucasus power.

Report not for public dissemination.

Deviation Details:

The first phase report has been completed and shared with the client. A second phase study is now ongoing.

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Knowledge Increased	Facilitated exchange of best practice with clients		Actual	Lack of knowledge on best practices to integrate regional power markets; lack of priority investment and policies to facilitate power trade in Southern Caucasus.	01/27/12	A list of agreed priority investments by country is identified; market rules and regional power trade experiences by practitioners are disseminated.	11/14/12	06/30/13

Outcome Details:

Facilitated knowledge transfer and dissemination of best practices and harmonization of regulatory framework and key investments to increase regional power trade in the Southern Caucasus

Deviation Details:

N/A

2. Policy/Strategy Informed	Government policy/strategy informed		Actual	Not measured	10/04/10	Not measured	06/30/13	06/30/13
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Outcome Details:

The activity helped take stock of the latest technical, legal and regulatory developments in power sectors in the Southern Caucasus and identified potential technical and economic benefits of electricity trade in the region. Additionally, the results of the activity are feeding into an ongoing DPO series, where the activity has informed the policy conditions relating to creation of market rules.

Deviation Details:

Outcome not anticipated

3. Development Financing Informed	Preparation of new operation informed	120,000,000	Actual	Not measured	10/04/10	Not measured	06/30/13	07/19/12
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Outcome Details:

As per the Study recommendations for Georgia on the need to establish clear transit tariff rules and strengthen the framework for capacity allocation and congestion management, the World Bank approved two lending operations in FY2013 which will among other things, develop clear market rules to facilitate power trade:

World Bank Lending Operations Informed:

- First Competitiveness and Growth Development Policy Operation Program (\$ 60 million IDA, P129597, FY2013).
- Second Competitiveness and Growth Development Policy Operation (\$60 million IBRD/IDA, P143060, FY2013).

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P122951	125,000.00	100,685.29	22,865.35
P122951	98,296.00	98,296.00	0.00

Impl. Progress

Last Updated By: Sameer Shukla **Date:** 05/30/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Gender and Energy Development Strategies Program

COUNTRY: Global

WORLD BANK PROJECT ID: P123004

Activity Details

Region:	Global	Project ID:	P123004
Country(s):	Global	Product Line:	Technical Assistance (TA) (non-lending)
Responsible Unit(s):	SEGES	Activity Approval Date:	07/29/2010
Status:	Closed	Task Team Leader:	Venkata Ramana Putti
ESMAP Reviewer:	Not assigned	Fiscal Year of Approval:	2011
Sector:	Energy Efficiency in Power Sector, Other Renewable Energy	Theme:	Gender
Program:	Energy Access	Sub-program:	AFREA
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	Under ESMAP's Strategic Business Plan 2008-2013, the Gender & Energy Development Strategies (GEDS) Technical Assistance Program has been developed to provide gender focused support to energy solutions. The GEDS Program will broaden the scope of ESMAP's analytical and TA activities to address obstacles and to formulate appropriate incentives to address gender issues in the energy sector. GEDS is building on the significant gender-sensitive work already taking place within the energy sector and connecting with partners, task teams and regional activities to strategically identify activities that can include gender based interventions to enhance access to affordable and modern energy. One of the main aims of the GEDS program is to develop traction on the ground to contribute to the on-going regional work with clients. The GEDS program focuses on enhancing client capacity through a i) regional and ii) thematic focus while leveraging ESMAP's iii) knowledge sharing and think tank expertise to deliver results.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. BBL - Gender & Energy - Rio+20	Actual	Event Proceeding Document	World Bank, Client countries	Yes
Output Details: BBL - Gender & Energy - Rio+20 Deviation Details: N/A				
2. BBL - Social Development & Energy Specialist Briefing	Actual	Event Proceeding Document	World Bank, Client countries	Yes
Output Details: BBL - Social Development & Energy Specialist Briefing Deviation Details: N/A				
3. Energy to Change Women's Lives in Africa - Video	Actual	Event Proceeding Document	World Bank, Client countries	Yes
Output Details: Energy to Change Women's Lives in Africa (Video) Deviation Details: N/A				
4. Gender: Social Inclusion in the Energy Sector Online Resources	Actual	Implementation Advisory Report	World Bank, Client countries	Yes
Output Details: Gender: Social Inclusion in the Energy Sector - Online Resources in ESMAP website Deviation Details: N/A				
5. Integrating Gender Considerations into Energy Operations	Actual	Implementation Advisory Report	World Bank, Client countries	Yes
Output Details: Report - Integrating Gender Considerations into Energy Operations Deviation Details: N/A				
6. Workshop - Africa Electrification Initiative	Actual	Event Proceeding Document	World Bank, Client countries	Yes
Output Details: Workshop - Africa Electrification Initiative Deviation Details: N/A				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Development Financing Informed	Preparation of new operation informed	24,000,000	Actual	Not measured	02/29/12	Not measured	07/31/13	07/31/13
<p>Outcome Details: In Senegal, the joint AFREA-ESMAP Gender & Energy team assisted the World Bank team preparing the second phase of the Senegal - Second Sustainable and Participatory Energy Management project (PROGEDE I) in drawing the lessons learned from the first phase of the project and recommending future gender-sensitive activities. The recommended activities were included in the design of the project's second phase (PROGEDE II), which is financed by the World Bank. The project development objective explicitly states gender equality: "the project development objective is to contribute to increase the availability of diversified household fuels in a sustainable and gender equitable way, and to contribute to increase the income of participating communities while preserving the forest ecosystems."</p> <p>Deviation Details: N/A</p>								
2. Client Capacity Increased	Implementation capacity strengthened		Actual	Not measured	02/29/12	Not measured	07/31/13	07/31/13
<p>Outcome Details: In Mali, the Gender & Energy operational support resulted in the Household Energy and Rural Electrification Agency (AMADER) formally establishing a gender desk within its organizational structure to better mainstream gender in its operations. The AFREA/ESMAP-funded Africa Gender & Energy program has been assisting AMADER in assessing the gender dimensions of the World Bank-financed Household Energy & Universal Access Project, and in preparing an action plan. The assistance resulted in the inclusion of gender impact assessment in the additional financing for the Household Energy and Universal Access Project.</p> <p>Deviation Details: N/A</p>								
3. Policy/Strategy Informed	Development community/partner policy/strategy informed		Actual	Not measured	02/29/12	Not measured	07/31/13	03/31/13
<p>Outcome Details: In Mali, the Gender & Energy operational support resulted in the Household Energy and Rural Electrification Agency (AMADER) formally establishing a gender desk within its organizational structure to better mainstream gender in its operations. (Decision No.196/MEE-AMADER-DG-DAF);</p> <p>In Tanzania, the Rural Energy Agency created a new gender focal point and a technical and capacity building unit within its rural energy agency to advance work on gender within the REA. In Benin, based on a country level gender assessment the team has begun advising the Energy Department on how to integrate gender dimension in the revised energy policy.</p> <p>Deviation Details: N/A</p>								

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P123004	264,660.91	264,660.91	0.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 06/10/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Developing a Regulatory Framework for Maldives Energy Sector
COUNTRY: Maldives
WORLD BANK PROJECT ID: P123047

Activity Details

Region:	East Asia and Pacific	Project ID:	P123047
Country(s):	Maldives	Product Line:	Technical Assistance (TA) (non-lending)
Responsible Unit(s):	SASDE	Activity Approval Date:	08/14/2010
Status:	Closed	Task Team Leader:	Abdulaziz Faghi
ESMAP Reviewer:	Sameer Shukla	Fiscal Year of Approval:	2011
Sector:	General Energy	Theme:	Climate Change, Other Urban Development, Regulation and Competition Policy
Program:	Energy Assessments & Strategy Program (EASP)	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The activity provided an option analysis report to GoM identifying and exploring potential scenarios for the creation of the regulatory framework, and an analysis of alternatives and recommendations on the most optimal schemes for the Maldives based on international experience. It also included assistance in designing a comprehensive regulatory framework and establishing/empowering a regulatory entity that is able to effectively monitor and regulate the performance of the electricity utilities and provide assurance to power companies and other private investors by means of establishing a robust electricity market and tariff regime.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. DEVELOPING A REGULATORY FRAMEWORK FOR THE MALDIVES ENERGY SECTOR	Actual	Implementation Advisory Report	Government of Maldives	Yes
Output Details: Report not for public dissemination Deviation Details: N/A				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Policy/Strategy Informed	Government policy/strategy informed		Actual	no regulatory framework for the energy sector in place	09/19/10	decision on institutional arrangements and related regulatory framework is made	06/30/11	01/16/13

Outcome Details:

The regulatory framework developed through this task laid out the overall regulatory architecture and policy principles for key regulatory elements such as licensing, investment approvals, compliance monitoring, and energy efficiency which would guide the Government and the Maldives Energy Authority (MEA) with instituting the appropriate regulations for the sector. The skills-gap analysis that was carried along with other capacity building activities were supported MEA's institutional development and strengthened its' ability to effectively exercise its regulatory mandate.

It also contributed to an important facet of the government's policies and objectives of scaling up renewable energy in the country through projects and programs currently being developed. By strengthening the regulatory regime, the country is able to achieve better efficiencies in sector operations, create an interface between service providers and the consumers and facilitate investment in new sustainable sources of energy.

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P123047	199,550.54	199,550.54	0.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 01/30/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: China - Government Facilities Energy Efficiency Project

COUNTRY: China

WORLD BANK PROJECT ID: P123066

Activity Details

Region:	East Asia and Pacific	Project ID:	P123066
Country(s):	China	Product Line:	Technical Assistance (TA) (non-lending)
Responsible Unit(s):	EASIN	Activity Approval Date:	07/26/2010
Status:	Closed	Task Team Leader:	Gailius J. Draugelis
ESMAP Reviewer:	Martina Bosi	Fiscal Year of Approval:	2010
Sector:	Energy Efficiency in Power Sector	Theme:	Climate Change
Program:	Energy Efficiency	Sub-program:	
Relevance of Social/Gender Aspects:	<p>Not Monitored</p> <p>High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects</p>		
Activity Description:	<p>The activities under this AAA are fully linked to the thematic challenges of Energy Security and Energy and Climate Change. China's leadership has focused on building a resource-saving society, because sustainable and strong economic growth in China over the long term is more likely if natural resources are used more efficiently. Due to China's size, its efficient use of natural resources is also critical for sustainable development globally. China is already the world's second largest energy consumer and is (or soon would be) the largest emitter of CO2.</p> <p>The activities under for the project are as follows:</p> <ul style="list-style-type: none"> - Policy research on existing and planned energy laws, policies, regulations, directives, codes, and/or standards in China to determine key aspects needed for a supportive framework for government facilities to meet goals on rational use of energy and comply with regulatory requirements. This includes an initial review of government agency budget appropriations, financing mechanisms, and capacity building requirements, which are essential for implementation of cost-effective energy management programs and investment projects. - Workshop or individual consultation with government authorities and other stakeholders to identify demonstration project concept development for wider dissemination and replication of energy efficiency in public sector. 		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Improving Energy Efficiency in Public Institutions	Actual	Implementation Advisory Report	Government of China	Yes
<p>Output Details: Policy research on existing and planned energy laws, policies, regulations, directives, codes, and/or standards in China to determine key aspects needed for a supportive framework for government facilities to meet goals on rational use of energy and comply with regulatory requirements. This will include an initial review of government agency budget appropriations, financing mechanisms, and capacity building requirements, which are essential for implementation of cost-effective energy management programs and investment projects.</p> <p>Deviation Details: N/A</p>				
2. Workshop	Actual	Implementation Advisory Report	Government of China	Yes
<p>Output Details: Workshop or individual consultation with government authorities and other stakeholders to identify demonstration project concept development for wider dissemination and replication of energy efficiency in public sector.</p> <p>Deviation Details: N/A</p>				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Development Financing Informed	Preparation of new operation informed	120,000,000	Actual	Not measured	08/23/10	Not measured	06/30/11	04/30/13
<p>Outcome Details: The activity has helped review policies and initiatives and provided international experience and initial recommendations to improve the energy efficiency of existing public buildings belonging to central, provincial, and municipal government agencies, including office buildings, schools, universities and hospitals. The AAA yielded direct operational support for school and hospital energy conservation components for the Beijing municipality in the Beijing Rooftop Solar Photovoltaic Scale-Up (Sunshine Schools) Project .</p> <p>WB Lending Operation Informed</p> <p>China - Beijing Rooftop Solar Photovoltaic Scale-Up (Sunshine Schools) Project (P125022, \$120 million, March 2013)</p> <p>Deviation Details: N/A</p>								

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P123066	119,991.90	119,991.90	0.00

Impl. Progress

Last Updated By: Marie-Gisele Zoua Morrisson **Date:** 05/16/13 **Rating:** On Track

Project at a Glance

ACTIVITY NAME: Energy Adaptation Country Briefs
 COUNTRY: Global
 WORLD BANK PROJECT ID: P123139

Activity Details

Region:	Global	Project ID:	P123139
Country(s):	Global	Product Line:	Knowledge Product (KP)
Responsible Unit(s):	SEGES	Activity Approval Date:	08/18/2010
Status:	Closed	Task Team Leader:	Pierre Audinet
ESMAP Reviewer:	Not assigned	Fiscal Year of Approval:	2011
Sector:	Energy Efficiency in Power Sector, General Transport	Theme:	Climate Change, Gender, Regulation and Competition Policy
Program:	Clean Energy	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The objective of this activity is to develop an approach jointly with the World Bank's Climate Change team and in consultation with key energy stakeholders to develop a screening tool of potential climate stressors for the energy sector, by identifying current and potential climate risks and energy sector vulnerabilities, as well as potential adaptation options. The approach is to be applied in 3 countries with outputs presented in a synthesized form through a standardized dashboard and tailored country briefing notes that will be later used by the WB Climate change team to prepare online versions within the Climate Change Knowledge Portal. The operational tool will be structured for possible further development as an online automated tool that help a country/ project screen for and identify potential vulnerable energy assets		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Climate Risk Management Approaches in the Electricity Sector: Lessons for Developing Countries from Early-Adapters	Actual	Studies	Client countries	Yes
Output Details: This paper draws upon the knowledge developed by ESMAP on climate change vulnerability, risks and adaptation in the energy sector. It is intended to take stock of initiatives from electricity utilities aimed at assessing and managing the risks of a changing climate, and extract lessons for developing countries. Deviation Details: N/A				
2. ESMAP Energy and Climate Adaptation Initiative: Promoting Climate Resiliency in Energy Systems	Actual	Studies	World Bank	Yes
Output Details: The document explains the rationale for the Energy and Climate Adaptation that was later developed by ESMAP. It describes the scope and focus on knowledge and outreach, by employing a learning-by-doing approach, working with subject matter experts and testing pilot programs. Deviation Details: N/A				
3. Terms of Reference Energy Vulnerability to Climate Change - Approach, Toolkit and Briefing Notes	Actual	Studies	World Bank	Yes
Output Details: Firm TOR and Mission to DC to consult and brainstorm on Country Briefs with Energy Teams. Deviation Details: N/A				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Innovative Approaches & Solutions Generated	New innovative approach fostered		Actual	N/A	08/11/10	N/A	06/30/12	11/30/11

Outcome Details:

This ESMAF activity helped develop an approach jointly with the World Bank's Climate Change team and in consultation with key energy stakeholders to develop a screening tool of potential climate stressors for the energy sector, by identifying current and potential climate risks and energy sector vulnerabilities, as well as potential adaptation options. The approach was applied in several countries with outputs presented in a synthesized form through a standardized dashboard and tailored country briefing notes that used by the WB Climate change team to prepare online versions within the Climate Change Knowledge Portal.

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P123139	46,197.20	46,197.20	0.00
P123139	3,065.89	3,065.89	0.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 01/29/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Philippines Rural Electricity Cooperatives: Reform and Restructuring
COUNTRY: Philippines
WORLD BANK PROJECT ID: P123636

Activity Details

Region:	East Asia and Pacific	Project ID:	P123636
Country(s):	Philippines	Product Line:	Technical Assistance (TA) (non-lending)
Responsible Unit(s):	EASPS	Activity Approval Date:	03/07/2012
Status:	Closed	Task Team Leader:	Alan F. Townsend
ESMAP Reviewer:	Silvia Martinez Romero	Fiscal Year of Approval:	2012
Sector:	General Energy	Theme:	Financial and private sector development
Program:	Energy Access	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	This activity is designed to provide advice to the Government of the Philippines in several areas of critical importance to power sector development, including in variable renewable energy, Mindanao energy strategy, market development, regulatory aspects, natural gas, access, energy security, and other areas. The Philippines has developed a power sector that is headed in the right direction. Most subsidies have been eliminated. Access is 80% and growing. Tehcnical losses are coming down. The purpose of the Bank assistance is to contribute to the locking in of these gains by providing high quality technical advice that help accelerate the implementation of remaining elements of the reform program. The Bank can also respond to specific requests for assistance because of the provision for demand-driven, just-in-time advice in the project design.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Report and Workshop: Philipines Rural Electricity Coopertatives Reform and Restructuring	Actual	Implementation Advisory Report	Philippines - NEA	Yes
Output Details: This report will focus on the role of NEA, and new possibilities for transformation and consolidation in the sector. The workshop will include initial recommendations. Deviation Details: N/A				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Policy/Strategy Informed	Government policy/strategy informed		Actual	At present, there is no adequate knowledge of DOE, NEA and EC officials about existing options for improving governance of ECs	09/08/11	DOE, NEA and EC officials identify and/or adopt policy options for reforming the existing regulatory framework governing electric cooperatives in the Philippines	04/30/12	02/21/13

Outcome Details:

This project concluded successfully with the approval by the Energy Regulatory Commission of the recommended changes to the PGC, so that variable renewables like wind and solar can more easily be connected to the grid, and then have clear operating protocols.

Based on this TA, the National Grid Management Commission approved an addendum to the national grid code that for the first time established connection requirements and performance standards for variable renewable energy sources being integrated into the national grid. These include solar and wind, which are expected to make up an increasing share of the country's electricity supply, particularly in the Visayas, the Philippines' middle islands. This is expected to have positive ramifications for the entire national renewable energy effort as defining the provisions for integrating renewables into the grid was seen as the last regulatory hurdle preventing the development of projects eligible for feed-in tariffs.

Deviation Details:

N/A

2. Development Financing Informed	Preparation of new operation informed	1	Planned	No lending operations informed	04/17/12	One lending operation informed	06/28/13	
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Outcome Details:

The preparation of the IBRD/CTF financed Philippines Renewable Energy Development (PhRED) project is benefiting from the work undertaken on renewable energy policy and regulatory implementation.

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P123636	150,000.00	150,000.00	0.00
P123636	140,000.00	132,940.15	0.00

Impl. Progress

Last Updated By: Alain Ouedraogo **Date:** 07/01/13 **Rating:** On Track

Project at a Glance

ACTIVITY NAME: China Low Carbon Cities
 COUNTRY: China
 WORLD BANK PROJECT ID: P123996

Activity Details

Region:	East Asia and Pacific	Project ID:	P123996
Country(s):	China	Product Line:	Economic and Sector Work (ESW)
Responsible Unit(s):	EASCS	Activity Approval Date:	10/18/2010
Status:	Closed	Task Team Leader:	Axel E. N. Baeumler
ESMAP Reviewer:	Pierre Audinet	Fiscal Year of Approval:	2011
Sector:	Energy Efficiency in Power Sector, General Transport, Water Sanitation and Flood Protection	Theme:	Climate Change, Urban development
Program:	Clean Energy	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The activity disseminates the recently completed book on Low Carbon Cities in China. Specifically, it includes: (i) policy dialogue and capacity building through dissemination of the book; and (ii) knowledge transfer through the provision of 'just in time' advice to cities who are interested in engaging with the World Bank operationally on developing low carbon cities strategies and projects.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Sustainable low-carbon city development in China	Actual	Other	Public dissemination	Yes

Output Details:

Cities contribute an estimated 70 percent of the world's energy-related greenhouse gases (GHG). Their locations, often in low-elevation coastal zones, and large populations make them particularly vulnerable to the impacts of climate change. But cities often take steps, even ahead of national governments, to reduce GHG emissions. So it is with China's cities, which are well placed to chart a low-carbon growth path to help reach China's national targets for reducing the energy and carbon intensity of its economy. China's cities will need to act on multiple fronts, in some cases scaling up elements of existing good practice, in others changing established ways of doing business. Actions affecting land-use and spatial development are among the most critical to achieving low-carbon growth as carbon emissions are closely connected to urban form. Spatial development also has very strong 'lock-in' effects: once cities grow and define their urban form, it is almost impossible to retrofit them because the built environment is largely irreversible and very costly to modify. Furthermore, cities need energy-efficient buildings and industries. They need a transport system that offers alternatives to automobiles. They need to shift to efficient management of water, wastewater, and solid waste. And they need to incorporate responses to climate change in their planning, investment decisions, and emergency-preparedness plans.

Deviation Details:

N/A

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Policy/Strategy Informed	Government policy/strategy informed		Actual	At present there is limited knowledge of government officials about policy options for promoting energy efficient and low carbon in cities	09/30/11	Increased awareness and policy dialogues engaged in low carbon cities development challenges	06/30/12	12/30/12

Outcome Details:

The activity lead to the development of thinking strategically on low carbon city development in a number of different institutions (i.e., through training of NDRC officials etc.). The AAA has become the "go to" reference publication on Low Carbon City Development in China

Deviation Details:

N/A

2. Development Financing Informed	Preparation of new operation informed	12,000,000	Actual	No lending operation informed	06/20/12	One lending operation informed or influenced based on the ESMAP activity.	06/30/13	04/30/13
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Outcome Details:

The ESMAP activity fed directly into the China - Urban Scale Building Energy Efficiency and Renewable Energy Project approved by Board on April 2013.

The objective of the project is to improve selected national and city-level policies for (1) the promotion of low-carbon, adaptive and livable urban forms; (2) an increase in energy efficiency in public and commercial buildings; and, (3) the scale-up of commercially viable rooftop solar PV deployment. The global environment objective of the project is to reduce carbon dioxide emissions from buildings in selected Chinese cities by supporting improved policy making and implementation in promoting low-carbon, adaptive and livable urban forms, increasing energy efficiency in public and commercial buildings, and scaling up commercially viable rooftop solar PV deployment.

World Bank Lending Influenced

China - Urban Scale Building Energy Efficiency and Renewable Energy Project (P130786, GEF, \$12 million, FY2013)

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Commitments
P123996	29,148.11	29,148.11	0.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 01/25/13 **Rating:** On Track

Project at a Glance

ACTIVITY NAME: Central America Improved Cookstoves Framework
 COUNTRY: Costa Rica, Guatemala
 WORLD BANK PROJECT ID: P124390

Activity Details

Region:	Latin America and Caribbean	Project ID:	P124390
Country(s):	Costa Rica, Guatemala	Product Line:	Economic and Sector Work (ESW)
Responsible Unit(s):	LCSEG	Activity Approval Date:	10/26/2010
Status:	Closed	Task Team Leader:	Xiaoping Wang
ESMAP Reviewer:	Venkata Putti	Fiscal Year of Approval:	2011
Sector:	Coal Mining, General Energy, Other Renewable Energy	Theme:	Climate Change, Infrastructure Services for Private Sector Development, Regulation and Competition Policy
Program:	Energy Access	Sub-program:	n/a
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The activity includes the following four tasks: 1. Development of the background paper 2. Moderate the online regional consultation on the background paper on identified parameters and criteria to ensure discussions are appropriately targeted to the development of the toolkit. 3. Participate in workshop with major stakeholders to review, discuss and agree on the criteria considered to establish the ICS performance toolkit 4. Develop final ICSs performance toolkit for Central America.		

Outputs

Output Name	Category	Type	Output Target Group
1. What Have We Learned about Household Biomass Cooking in Central America	Actual	Sector or Thematic Study	government official - energy practioners Central American countries
<p>Output Details: The objective of this study is to better understand current developments in clean and efficient biomass cooking solutions, factors that have precluded a larger penetration of ICS within the region and lessons learned from past programs—both in the region and in other countries—that may be relevant to Central America. The study recommends key actions that may help the region with its current dissemination efforts and promote sustained use of ICS, a first step toward universal access to ICS by fuelwood users. Its intended audience includes different stakeholders, including government agencies, regional and international organizations, as well as various implementing entities who are thinking or rethinking appropriate technologies, policy interventions, financing mechanisms and delivery mechanisms for Central America to promote ICS.</p> <p>Deviation Details: N/A</p>			
2. Workshop - CHALLENGES AND OPPORTUNITIES TO UNIVERSAL ACCESS TO CLEAN BIOMASS COOKSTOVES IN CENTRAL AMERICA	Actual	Sector or Thematic Study	governments, non-governmental sectors and officials of multilateral organizations, Central American countries
<p>Output Details: Regional Workshop Organized by SICA's General Secretariat (SICA-SG) and the World Bank in Coordination with the Ministry of Energy and Mines of Nicaragua and the Secretariat of Natural Resources and Environment (SERNA) of Honduras.</p> <p>The objective of the workshop is to discuss key challenges and opportunities to identify common challenges and opportunities to: (a) reach the target established within the framework of the Central American Sustainable Energy Strategy (2020) to install 1 million clean biomass cookstoves to help reduce fuel consumption by 10% by 2020; (b) to contribute to the national agenda related to sustainable fuelwood use for energy purposes; and (c) support universal access to clean cookstoves in the long-term.</p> <p>Document not for external dissemination.</p> <p>Deviation Details: N/A</p>			

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Policy/Strategy Informed	Contributed to stakeholder involvement		Actual	Not measured	10/12/10	Not measured	03/30/12	08/30/12

Outcome Details:

The study included a comprehensive review of the experience and lessons learned in Central America in promoting clean biomass cooking solutions in Central America. One of the major recommendations made by the study was to create an enabling environment and designating a national and regional institution championing the clean cooking agenda. It was well received by the regional stakeholders at the dissemination workshop. As a follow-up, SICA will take the lead in creating a regional clean cooking program for Central America with initial support from the World Bank. The study has also helped bring together public and private sector stakeholders and initiate public debates on what a regional program should entail going forward.

Deviation Details:

N/A

2. Development Financing Informed	Preparation of new operation informed	1	Planned	No loan approved	10/12/10	One grant/credit approved for Honduras	07/30/14	
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Outcome Details:

ESMAP supported the development of an Improved Cook Stove (ICS) toolkit that assesses technical performance, as well as socioeconomic, gender and cultural aspects of cook stove uses in Central American countries. The activity assisted the unit preparing the SREP investment plan for Honduras in defining studies needed to disseminate improved cook stoves successfully. The assistance resulted in the SREP investment plan including a subcomponent to disseminate 50,000 improved cook stoves, under the component 3 of the plan – Sustainable Rural Energization. SREP funding amounts to US\$30 million. In addition, the activity has also fed into Component 2B: Efficient Cookstove Program of IDA grant Sustainable Rural Energy Services Project for Honduras (P131602, \$9.79 m) that is currently under preparation and it's scheduled for Board approval in FY2015.

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Commitments
P124390	273,660.88	273,660.88	0.00

Impl. Progress

Last Updated By: Alain Ouedraogo **Date:** 06/28/13 **Rating:** On Track

Project at a Glance

ACTIVITY NAME: EE for Water and Sanitation Utilities

COUNTRY: Global

WORLD BANK PROJECT ID: P125354

Activity Details

Region:	Global	Project ID:	P125354
Country(s):	Global	Product Line:	Knowledge Product (KP)
Responsible Unit(s):	SEGES	Activity Approval Date:	12/22/2010
Status:	Closed	Task Team Leader:	Feng Liu
ESMAP Reviewer:	Not assigned	Fiscal Year of Approval:	2011
Sector:	Energy Efficiency in Power Sector	Theme:	Climate Change, Infrastructure Services for Private Sector Development, Other Public Sector Governance
Program:	Energy Efficiency	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The objective of the activity is to provide Bank clients and staff with practical advice on geothermal energy scale-up strategies. In particular, the guidebook covers aspects of policy analysis and project development necessary for the deployment of geothermal power on a larger scale. The guidebook targets policy makers, energy sector specialists and utility managers with responsibility for the planning, development and financing of geothermal projects in Bank client countries.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. A Primer on Energy Efficiency for Municipal Water and Wastewater Utilities	Actual	Studies	Client countries	Yes

Output Details:

This primer is concerned with energy use and efficiency of network-based water supply and wastewater treatment in urban areas. It focuses on the supply side of the municipal water cycle, including the extraction, treatment, and distribution of water, and collection and treatment of wastewater-activities which are directly managed by Water and Wastewater Utilities (WWUs). The main challenges to scaling up Energy Efficiency (EE) in municipal water and wastewater services stem from sector governance issues, knowledge gaps, and financing hurdles. Utility governance affects the overall performance of individual WWUs and influences decision making, incentives and actions for energy management. This is likely the most significant barrier to WWU EE in many developing countries. Addressing knowledge gaps requires efforts to systematize data collection, training, and capacity building at utilities, supported by local and national governments. Financing hurdles can be reduced by introducing dedicated EE funds to address large but disaggregated investment needs and by promoting third-party financing through energy/water savings performance contracts. This primer is part of Energy Efficient Cities Initiative's (EECI's) knowledge clearinghouse function to inform World Bank (WB) staff working in urban water supply and wastewater management, as well as in energy, about the opportunities and good practices for improving EE and reducing energy cost in municipal WWUs.

Deviation Details:

N/A

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Development Financing Informed	Preparation of new operation informed	42,000,000	Actual	Not measured	07/01/08	Not measured	07/30/12	07/05/12

Outcome Details:

This ESMAP activity discusses the main issues, options, approaches, cost and benefits of energy use and efficiency for network-based water supply and wastewater treatment in urban areas. It provides a simple operational framework to help strategic decision-making on how to best invest resources over the range of options, supplemented with guidance on successful models to implement such strategies. This note provided World Bank urban and energy operational staff with the basic information and useful guidance for engaging client countries on managing energy costs and improving EE in wastewater utilities.

ESMAP, through EECI, supported the preparation of OSE Response to Climate Change Project (P118064) for Uruguay, which, among other things, supports the development and implementation of a comprehensive energy management program for Uruguay's national water and wastewater utility.

OSE Sustainable and Efficient (P118064), IBRD Loan, \$42,000,000, FY013

Deviation Details:
N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Commitments
P125354	0.00	75,230.17	0.00

Impl. Progress

Last Updated By: David James Lighton **Date:** 01/07/13 **Rating:** On Track

Project at a Glance

ACTIVITY NAME: Geothermal Handbook
 COUNTRY: Global
 WORLD BANK PROJECT ID: P125368

Activity Details

Region:	Global	Project ID:	P125368
Country(s):	Global	Product Line:	Knowledge Product (KP)
Responsible Unit(s):	SEGES	Activity Approval Date:	12/27/2010
Status:	Closed	Task Team Leader:	Pierre Audinet
ESMAP Reviewer:	Not assigned	Fiscal Year of Approval:	2011
Sector:	General Energy, Other Renewable Energy	Theme:	Climate Change
Program:	Clean Energy	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The overarching goal of the proposed guidebook is to provide Bank clients and staff with practical advice on geothermal energy scale-up strategies. In particular, the guidebook seeks to cover aspects of policy analysis and project development necessary for the deployment of geothermal power on a larger scale. The proposed guidebook targets policy makers, energy sector specialists and utility managers with responsibility for the planning, development and financing of geothermal projects in Bank client countries.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Geothermal Handbook: Planning and Financing Power Generation	Actual	Studies	Client countries	Yes

Output Details:

The Geothermal Handbook is a comprehensive guide to planning and financing geothermal projects. Based on lessons learned from multiple investment successes and failures, the handbook presents a step-by-step understanding of the phases of geothermal project development, looking at the risks involved and at the policies, institutions and financing mechanisms needed to successfully bring projects to fruition.

The report stresses the importance of concerted international assistance to help finance geothermal scale-up in the early, risky phases of development, in order to mitigate risk and make projects attractive to private investment.

Deviation Details:

N/A

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Knowledge Increased	Facilitated exchange of best practice with partners		Actual	not measured	01/02/13	not measured	01/02/13	01/02/13

Outcome Details:

ESMAP has supported the development of the Geothermal Handbook which is dedicated to geothermal energy as a primary source for electricity production and aims to provide energy investment practitioners with practical advice on how to set up, design, and implement a geothermal development program. The World Bank has supported geothermal development in Europe, Asia, Latin America, and Africa and hopes to contribute with this handbook to scaling up the use of this energy. The study has been published in September 2012 and the process of producing this study has led to considerable knowledge exchange with the regions and partners who are developing geothermal activities in Ethiopia, Malawi and Djibouti. The UN university for geothermal UNU-GTP has confirmed they will use this handbook as part of training courses.

The Handbook was also highlighted during the learning event "Expanding Geothermal Investments in Bank Operations" as part of the Learning Days program sessions for the Bank's SDN Week in March 2013.

Deviation Details:

N/A

2. Development Financing Informed	Preparation of new operation informed	1	Actual	Not measured	12/27/10	Not measured	06/30/13	06/30/13
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Outcome Details:

The Geothermal Handbook was instrumental in providing the basis for the financial model applied during the appraisal of the Djibouti Geothermal Project approved by the Board in June 2013.

Deviation Details:

Amount of loan informed under Djibouti Geothermal Project no included above to avoid duplication.

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P125368	68,163.52	68,163.52	0.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 03/26/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Electricity Transmission planning

COUNTRY: Global

WORLD BANK PROJECT ID: P125641

Activity Details

Region:	Global	Project ID:	P125641
Country(s):	Global	Product Line:	Economic and Sector Work (ESW)
Responsible Unit(s):	SEGEN	Activity Approval Date:	09/29/2009
Status:	Closed	Task Team Leader:	Marcelino Madrigal
ESMAP Reviewer:	Not assigned	Fiscal Year of Approval:	2010
Sector:	Coal Mining, General Energy	Theme:	Climate Change, Infrastructure Services for Private Sector Development, Regulation and Competition Policy, State-Owned Enterprise Restructuring and Privatization
Program:	Energy Assessments & Strategy Program (EASP)	Sub-program:	Renewable Energy
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The activity includes research and analysis on the barriers and emerging solutions to transmission access for renewable energy; data gathering to analyze the economic implications of transmission expansion and cost-allocation schemes; communication and logistics cost for interviews with transmission system operators, regulators, and transmission experts.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Transmission Expansion for Renewable Energy Scale-Up Emerging Lessons and Recommendations	Actual	Sector or Thematic Study	Client countries	Yes
Output Details: Report Deviation Details: N/A				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Knowledge Increased	Facilitated exchange of best practice with clients		Actual	(i) No clear understanding of the factors affecting transmission services for RE; (ii) no attention to problem in operational work; (iii) not influencing decisions	10/01/10	(i) clear understanding of the factors and classification of solutions; (ii) direct cross-support to at least three countries;	12/01/11	06/30/13

Outcome Details:

The activity has increased capacity and knowledge of World Bank staff and clients regarding the barriers impeding the development of transmission systems for renewable energy scale up. Key lessons from the report have already been shared with clients in their request for knowledge regarding the development of transmission infrastructures. This includes the following countries: Philippines, Mozambique, South Africa, Saudi Arabia, and Morocco. The reports makes emphasis on taking special note that the recommendation need be adapted in different countries given different sector structures and technical capacity to implement the solutions.

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P118729	76,818.30	76,818.30	298.75

Impl. Progress

Last Updated By: David James Lighton **Date:** 01/07/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Geothermal Power Generation Program

COUNTRY: Djibouti

WORLD BANK PROJECT ID: P127143

Activity Details

Region:	Africa	Project ID:	P127143
Country(s):	Djibouti	Product Line:	Technical Assistance (TA) (non-lending)
Responsible Unit(s):	MNSSD	Activity Approval Date:	09/13/2011
Status:	Active	Task Team Leader:	Ilhem Salamon
ESMAP Reviewer:	Pierre Audinet	Fiscal Year of Approval:	2012
Sector:	Other Renewable Energy , Thermal Power Generation	Theme:	Climate Change
Program:	Clean Energy	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	This activity funds the consulting services of a Senior Economic Advisor and an Geothermal Power Engineer Advisor to provide support to the Task Team Leader of the TTL of the DJibouti Geothermal Power Generation Program. The project's development objectives are to finance both the exploration phase and the tendering process of the development of a 50 MW geothermal power plant in the Lac Assal region, 80 Km away from the city of Djibouti.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Economic Analysis	Actual	Implementation Advisory Report	Government of Djibouti	Yes

Output Details:
Economic Analysis for the DJ Geothermal Project and relevant Annexes to the PAD

Deviation Details:
N/A

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Development Financing Informed	Preparation of new operation informed	6,000,000	Actual	No design studies have been conducted for the exploration phase and tendering process for a geothermal plant under a proposed Bank lending operation for Djibouti.	03/15/12	A Bank lending operation informed/approved	06/30/12	06/05/13

Outcome Details:
ESMAP directly influenced the Djibouti Geothermal Power Generation project, approved by the Board in June 5, 2013. ESMAP also provided financing, through the GGDP, for \$1.1 M as part of the financing plan of the transaction. The project is aimed at assessing the commercial viability of the geothermal resource in Fiale Caldera within the Lake Assal region in Djibouti.

Deviation Details:
N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P127143	28,305.00	28,305.00	0.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 06/14/13 **Rating:** On Track

Project at a Glance

ACTIVITY NAME: Energy Sector Low Carbon Development Operational Support

COUNTRY: Global

WORLD BANK PROJECT ID: P127168

Activity Details

Region:	Global	Project ID:	P127168
Country(s):	Global	Product Line:	Technical Assistance (TA) (non-lending)
Responsible Unit(s):	SEGES	Activity Approval Date:	10/13/2011
Status:	Active	Task Team Leader:	Pierre Audinet
ESMAP Reviewer:	N/A	Fiscal Year of Approval:	2012
Sector:	General Energy	Theme:	Climate Change
Program:	Clean Energy	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	<p>ESMAP has led and supported the development of several low carbon studies and country based activities (India, China, Indonesia, Mexico, Brazil, South Africa, Poland). The aim of this activity is to build up on the knowledge developed in the course of preparing those various studies to accompany the current expansion in low carbon development planning in multiple developing countries carried by the Bank (Vietnam, Nigeria, Macedonia, Colombia, Morocco, Tunisia, etc.) and to share lessons with other donors. This activity focuses on the deployment and dissemination of two low carbon modeling tools developed by ESMAP:</p> <p>EFFECT: The Energy Forecasting Framework and Emissions Consensus Tool (EFFECT) is an open and transparent modeling tool used to forecast greenhouse gas (GHG) emissions from a range of development scenarios. It focuses on sectors that contribute to and are expected to experience a rapid growth in emissions. The model was initially developed by the World Bank while working with the Government of India on an analysis of their national energy plan. EFFECT has since been used in eleven countries, including Brazil, Poland, Georgia, Macedonia, Nigeria, and Vietnam.</p> <p>MACTool: The Marginal Abatement Cost Tool (MACTool) is a transparent, flexible software tool which provides an easy way for building marginal abatement cost curves, and for calculating break-even carbon prices. The user-friendly interface guides users through a simple data entry process, which generates marginal abatement cost curves.</p>		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Support to EFFECT development and dissemination	Planned	Implementation Advisory Report	Client countries	No
Output Details: EFFECT Model downloadable and usable inside and outside Bank				
2. Support to MACTool development and dissemination	Planned	Implementation Advisory Report	Client countries	No
Output Details: MACTool Model downloadable and usable inside and outside Bank				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Development Financing Informed	Preparation of new operation informed	140,000,000	Actual	not measured	01/02/13	not measured	01/02/13	01/02/13

Outcome Details:

Over 2007-2011, ESMAP has led and supported the development of seven low carbon studies. In the course of preparing the low carbon studies, several low carbon development planning tools have been developed, given some gaps in the market for user-friendly quantitative tools to enable consensus building around policy options to mitigate emissions. Two tools in particular have been developed: EFFECT (Energy Forecasting Framework and Emissions Consensus Tool) and MACtool (Marginal Abatement Cost Tool). This technical assistance activity has focused on refining the tools developed, in particular to add specific sectors to expand their scope, enhance technologies to improve their software, support country level use of the tools and further dissemination and training.

In Vietnam, ESMAP has been helping the government assess low carbon development options through the use of the tools and by sharing its experiences with the low carbon assessments in seven countries. This technical assistance informed the Vietnam Climate Change DPLs with the endorsement of the key outs of the assessment included as a policy condition for the loan.

WB Lending Operation Informed

Vietnam Climate Change DPL 1 (P122667) FY2012, \$70 M (IDA)

Vietnam Climate Change DPL 2 (P127201) FY2013, \$ 70 M (IDA)

Vietnam Climate Change DPL 3 (P131775) In pipeline for FY14

Deviation Details:

An additional loan has been informed (FY2014)

2. Policy/Strategy Informed	Government policy/strategy informed		Actual	Not measured	11/15/11	Not measured	08/31/12	06/25/13
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Outcome Details:

EFFECT has informed government policy in several countries, including:

India: EFFECT was used by disparate government departments working together as they developed a national low carbon development plan. The results highlighted the importance of regional electricity transmission and hydropower. The World Bank subsequently prepared financing for India in both areas.

Poland: EFFECT analysis helped to facilitate the approval of a US\$1.1B loan to Poland for renewable energy and energy efficiency work in June 2011. The EFFECT analysis concluded that good policy on energy efficiency and low cost renewable energy would make a substantial difference in keeping the cost of climate change mitigation low.

Georgia: EFFECT was the key tool in the analysis of various green transportation interventions proposed to the government. The green transportation strategy was championed by the Ministry of the Economy & Sustainable Development as part of a drive towards lower fuel imports.

Nigeria: The Energy Commission of Nigeria created an EFFECT Modeling Group within its Energy Planning and Analysis Department to investigate generation options for a 30-year time horizon.

Deviation Details:

Outcome not anticipated.

Financial Data

ProjectID	Allocation	Current Fiscal Year	
		Total Disbursements	Committments
P127168	387,527.00	245,888.32	57,815.00
P127168	391,840.05	391,840.05	1,253.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 06/05/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Clean energy staff training and knowledge platform

COUNTRY: Global

WORLD BANK PROJECT ID: P127169

Activity Details

Region:	Global	Project ID:	P127169
Country(s):	Global	Product Line:	Knowledge Product (KP)
Responsible Unit(s):	SEGES	Activity Approval Date:	09/01/2011
Status:	Active	Task Team Leader:	Almudena Mateos Merino
ESMAP Reviewer:	N/A	Fiscal Year of Approval:	2012
Sector:	Other Renewable Energy	Theme:	Climate Change
Program:	Clean Energy	Sub-program:	
Relevance of Social/Gender Aspects:	<p>Not Monitored</p> <p>High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects</p>		
Activity Description:	<p>The objective of the activity is to increase the level of knowledge of Bank's Staff and the access to updated information on renewable energy project design, financing and performance monitoring to enhance ability of staff to contribute to AAA, TA and lending operations related to Renewable Energy development. In particular, the training modules cover technical aspects of each technology, competitive analysis, environmental impact and aspects of policy analysis, integration and project development necessary for the deployment of renewable energy on a larger scale.</p>		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Module 1 - Photovoltaic Power Generation (PV)	Actual	Operational Guides	World Bank	Yes
<p>Output Details: PV technologies, solar resource assessment, project development and integration issues are the core of this module. Innovative approaches for solar rooftop mapping carried out in San Francisco and New York, and a description of the ESMAP PV toolkit for rural electrification are described in detail.</p> <p>Deviation Details: N/A</p>				
2. Module 2 - Concentrated Solar generation (CSP)	Actual	Operational Guides	World Bank	Yes
<p>Output Details: Covers all the diverse CSP technical solutions available and its relevance to world energy markets . By the end of this training, participants should be familiar with CSP technologies, their potential environmental impacts and the regulations and financing incentives being used for their promotion. Case studies from MENA, Latin America, China and other regions are presented</p> <p>Deviation Details: N/A</p>				
3. Module 3 - Wind Power	Actual	Operational Guides	World Bank	Yes
<p>Output Details: This module covers from wind technology evolution to wind resource assessment, project development and wind integration issues. Special attention was paid to the environmental and social impact of this technology. Finally, an analysis of the emerging market worldwide is provided, together with case studies of WBG projects.</p> <p>Deviation Details: N/A</p>				
4. Module 4 - Geothermal	Actual	Operational Guides	World Bank	Yes
<p>Output Details: This module covers a description of the types of geothermal technologies and applications, its potential worldwide and the cycle of project development, with focus on test and production drillings. Case studies from Indonesia and Nicaragua are showcased.</p> <p>Deviation Details: n/a</p>				
5. Module 5 - Bioenergy	Actual	Operational Guides	World Bank	Yes
<p>Output Details: Overview of the key aspects of bioenergy: biofuels, solid biomass, biogas and waste heat recovery. Analyzes different technologies; market analysis and sustainability, including food security, environmental and social impacts; case studies from Brazil, Philippines, Tanzania and India.</p> <p>Deviation Details: n/a</p>				
6. Module 6 - Grid integration	Actual	Operational Guides	World Bank	Yes
<p>Output Details: After an introduction to the key concepts of T&D, the module analyzes the impact of variable RE generation, depending on the flexibility of the system and the RE penetration rate as well as the solutions and strategies to mitigate this variability and increase the reliability of supply. The roles of operator, generators and regulators is also discussed. Various case studies from Mexico, Hawaii and California,</p> <p>Deviation Details: n/a</p>				
7. Module 7 - Policy incentives	Actual	Operational Guides	World Bank	Yes
<p>Output Details: Overview of the all mechanisms to scale-up renewables worldwide. Price (feed-in tariffs) and quota mechanisms (renewable portfolio standards combined with reversed auctions) are analyzed in detailed, showcasing the most interesting case studies of developed and developing countries.</p> <p>Deviation Details: n/a</p>				
8. Module 8 - Financing of RE projects and due diligence	Actual	Operational Guides	World Bank	Yes

Output Details:

Includes detailed description of financing structures of public and private projects, as well as PPPs. It describes all the relevant financing and risk mitigation options for different project types in a developing country context.

Deviation Details:

n/a

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Client Capacity Increased	Implementation capacity strengthened		Actual	Bank Staff is becoming more involved in AAA and TA that require high level of expertise and access to updated information. External Training is not available for all Staff due to resource restrictions	10/26/11	Offer training on RE to at least 50% of the Bank's staff mapped to the energy practice	04/24/13	12/31/12

Outcome Details:

The RE Training was successfully delivered from March through December 2012 with more than 250 participants. The training program was comprised of several modules, most of them technology-specific. Each module was divided in 4-hour sessions. The number of sessions per module varied from 2 to 4, depending on the complexity and breadth of the issues to be covered. Training contents for each session were developed and delivered by leading experts, both internal and external to the Bank, and reviewed by the program's Advisory Committee. Participants benefited from selected background documents, thematic presentations and case studies, as well as from the discussions happening during the training sessions. Speakers comprised the main technology providers for each technology, developers, independent engineers, project rating agencies, professional associations and leading experts at reputed universities and The World Bank Group.

A follow up survey conducted by ESMAP confirmed the level of knowledge of participants has been increased by the training and the materials have been used in Bank projects (35% in non-lending activities, 22% in lending activities and 2-3% in corporate activities and energy anchor activities).

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P127169	140,000.00	56,648.80	37,428.20

Impl. Progress

Last Updated By: Almudena Mateos Merino **Date:** 12/11/13 **Rating:** On Track

Last Updated By: Almudena Mateos Merino **Date:** 12/11/13 **Rating:** On Track

Last Updated By: Andres Londono **Date:** 06/05/13 **Rating:** On Track

Project at a Glance

ACTIVITY NAME: Climate Vulnerability in the Energy Sector

COUNTRY: Global

WORLD BANK PROJECT ID: P127170

Activity Details

Region:	Global	Project ID:	P127170
Country(s):	Global	Product Line:	Knowledge Product (KP)
Responsible Unit(s):	SEGES	Activity Approval Date:	09/01/2011
Status:	Closed	Task Team Leader:	Pierre Audinet
ESMAP Reviewer:	N/A	Fiscal Year of Approval:	2012
Sector:	General Energy	Theme:	Climate Change
Program:	Clean Energy	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	This activity focused on developing, disseminating and applying a screening tool for climate vulnerability assessment in the energy sector This is a knowledge product in the form of an online toolkit with interactive dashboards and tools. This toolkit is primarily designed for Bank practitioners as a entry level set of information to help team raise issues related to energy sector climate vulnerability in country sector dialogues.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Country-level Screenings / dashboards	Actual	Databases	Governemnts of Vietnam, Nepal, Uzbekistan, Zambia	Yes
Output Details: Climate Change and Energy Vulnerability Country dashboards for four countries (Vietnam, Nepal, Uzbekistan, Zambia) Deviation Details: N/A				
2. Excel-based and processed content dissemination for screening tool (Acclimatise)	Actual	Databases	Client countries	Yes
Output Details: The Rapid Assessment of Climate Change Vulnerability, Risk and Adaptation in the Energy Sector was designed to help World Bank operations staff raise awareness within ministries of energy and finance about the implications of climate change for the energy sector. This product is a joint ESMAP-ENV effort, the continuation of the pilots and dissemination should also continue to cut across both the energy and environmental sectors, as well as maintain a cross-sectoral approach when possible. Deviation Details: N/A				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Policy/Strategy Informed	Contributed to stakeholder involvement		Actual	On going dialogue on measures to mitigate climate risks in the energy sector currently limited to 2 countries in Central Asia (Albania, Uzbekistan).	08/29/11	Two additional countries in which a dialogue on measures to mitigate climate risks in the energy sector has been engaged.	07/31/12	12/31/12

Outcome Details:

The activities strengthened the ability of Bank teams to engage counterparts in a dialogue on measures to mitigate climate risks in the energy sector. Dialogue is being engaged with Mozambique and Zambia to explore scope for operationalizing the results of rapid screening of adaptation measures in the energy sector.

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P127170	43,472.84	43,472.84	0.00
P127170	95,104.18	95,104.18	0.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 05/23/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Smart Grids Knowledge Exchange Platform

COUNTRY: Global

WORLD BANK PROJECT ID: P127938

Activity Details

Region:	Global	Project ID:	P127938
Country(s):	Global	Product Line:	Economic and Sector Work (ESW)
Responsible Unit(s):	SEGES	Activity Approval Date:	08/23/2011
Status:	Active	Task Team Leader:	Marcelino Madrigal
ESMAP Reviewer:	N/A	Fiscal Year of Approval:	2012
Sector:	Transmission and Distribution of Electricity	Theme:	Infrastructure Services for Private Sector Development
Program:	Clean Energy	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	Building on the wide range of ESMAP knowledge products, this activity supports the production of operational guidebooks on geothermal, concentrated solar power, wind and smart grids project development, as part of an overall update of the web-based RE Toolkit. The overarching goal of the proposed handbooks is to provide Bank staff and their clients with practical advice and guidance on renewable energy investment program development and scale-up strategies. The handbooks will cover all aspects of investment program design and implementation, clarifying the needs for policy measures and specific government intervention to support project development necessary for the deployment of renewable energy on a larger scale.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Smart Grid Technologies Dissemination Platform	Actual	Other	World Bank	Yes
<p>Output Details: An internal website with different tabs (or layers) developed to serve as information repository on smart grids and grid modernization issues. This repository – Smart Grid Knowledge Exchange Portal (SGKEP) acts like a filter helping WBG staff to identify relevant information on smart grids and providing references to credible external knowledge sources. It focuses on the following areas:</p> <ul style="list-style-type: none"> (i) definitions of smart grids in different countries and external sources of information; (ii) smart grid roadmaps; (iii) roadmapping methodologies including cost benefit analysis and interoperability issues; (iv) specific experience on technology application in different segment of the transmission, distribution, and end-user segment; (v) policies, plans, regulatory and legal aspects related to smart grids; and (vi) World Bank’s smart grids and grid modernization experiences <p>Deviation Details: N/A</p>				
2. Technical Brief on Defining Grid Modernization Priorities: Roadmapping	Planned	Other	World Bank	No
<p>Output Details: Given the large number of technologies considered as key for grid modernization, roadmaps are becoming an important tool to define priorities for utilities. The technical brief on roadmapping describes the step-by-step process that Bank staff and utilities should/could undertake to define priorities for grid modernization, including not-so-new technologies that could be useful for countries in an early stage of national grid development.</p> <p>The step by step guide includes the process by which grid’s challenges and opportunities are translated into a form of ‘Smart Grid development curve’ which specifies which grid modernization activities should be pursued first and which ones later.</p> <p>The roadmap also describes which technologies should be piloted, which ones could be immediately rolled out, and which ones require further investigation. Roadmaps are the equivalent to least-cost planning in the generation side and are potentially helpful to define investment priorities in grid modernization, which can translate into potential activities to be financed by Bank interventions.</p>				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Client Capacity Increased	Implementation capacity strengthened		Actual	At present there is limited guidance of energy practitioners on the use of new Cutting Edge Smart Grid Technologies in electricity networks	11/08/11	Increased knowledge and awareness of clients on Cutting Edge Smart Grid Technologies in electricity networks.	01/31/12	06/30/13

Outcome Details:
1. Saudi Arabia.

The activity helped MENA's energy team to respond to their client with a request related to Smart Grids strategy for the Kingdom of Saudi Arabia. Support was on conceptualizing a task that will: (i) transfer knowledge on smart grids to the client, (ii) prepare a Smart Grid Road high level policy road map document for the client. Various workshops were organized in the area of Smart Grid both in Saudi Arabia and in DC including site visits in the USA to the General Electric Smart Grid center and the control room of PJM. The knowledge transfer activities served as the foundation to prepare the Smart Grid Road Map for Saudi Arabia. The road map has been finalized and is under final review by the Minister of Energy and Water. The Road Map will set the vision, goals, and pillars of action for Smart Grid implementation in the Kingdom. The Smart Grid web platform developed by the team, the knowledge exchanges activities in DC and other sites, were fundamental for the teams (anchor and region) to be ready to respond to the Saudi request.

2. Philippines.

Besides efficiency and reliability improvement, integrating renewable energy into the grids is one of the main objectives pursued by smart grid programs. In this case, the activity helped the Philippines understanding the international experience with regard to managing variability in grid operations. One of the key regulatory aspects of managing new technologies in the grid is the definition of grid interconnection rules (aka "grid codes") for these sources. The activity helped the Philippines energy team organizing workshop to transfer knowledge, define the terms of reference, engage a consultant and supervise him in order to help the Philippine energy sector defining the grid interconnection requirement for variable power sources. The grid code update, as called formally, was a key implementation gap in the Philippines renewable energy market implementation program. The team was able to bring expertise from and outside the Bank, leveraging information that has been gathered by the Smart Grid knowledge exchange platform. The grid code was approved by the regulator in the month of February.

3. Other countries.

Other clients have requested help with improving their understanding and grid operational rules to integrated variable power sources. The team has helped with rapid support to various other countries in the regions. These include work to be carried out by the Caribbean islands.

Deviation Details:

N/A

2. Policy/Strategy Informed	Bank sector strategy informed/influenced		Actual	At present there is limited guidance to Bank TTLs and energy practitioners on the use of new Cutting Edge Smart Grid Technologies in electricity networks	08/23/11	Increased knowledge and awareness from TTLs on Cutting Edge Smart Grid Technologies in electricity networks leading to the preparation of a Bank lending operation	12/30/13	06/30/13
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Outcome Details:

The Smart Grid Knowledge and Experience Exchange Platform delivered under the activity has served as an effective mechanism to disseminate to World Bank energy teams and cross-support activities about particular smart grid technology applications.

The platform acts as a filter directing audience to solid, credible, and operationally relevant information organized in an intuitive manner. It has been a key instrument for Bank teams to collect information and to quickly respond to regional teams to request from the teams and the clients in relation to smart grid development.

Deviation Details:

N/A

3. Knowledge Increased	Facilitated exchange of best practice with clients		Actual	Not measured	08/23/11	Not measured	06/30/13	06/30/13
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Outcome Details:

The activity has enabled the wide dissemination of the costs, benefits, institutional aspects and risks associated with new grid technologies. The Smart Grid Platform has served as an effective mechanism to disseminate to teams and cross-support activities about particular smart grid technologies.

Events have included training workshops and also numerous BBL. Some of these workshops are the following:

- a. Energy Learning Days – March 1, 2012 - Session: Building Smarter Grids and Integrating RE into Grids: (a.1) Smart Grid: Transmission SCADA and EMS by Ken Geisler, Siemens, and (a.2) Distribution Grid Technologies by Byron Flynn, General Electric.
- b. Mini-Workshop on Distribution Automation and Launch of Smart Grid Knowledge Exchange Platform – August 30, 2012.
- c. Smart Grids and the World Bank: Key Concepts and Approaches to Client Requests by Marcelino Madrigal, SEGEN.
- d. Safe, Reliable, Economical Electricity for the Developing World by Dr. Edmund O. Schweitzer III, Schweitzer Engineering Laboratories, Inc.
- e. BBL on Smart Grid Knowledge Exchange Portal, September 12, 2012
- f. BBL on Smart Grids, Competition, and Regulation, September 12, 2012

g. Smart Grid: An Example of Technology Innovation and Issues in Regulated Markets by Dr. Ashley Brown, Harvard Electricity Policy Group

In addition, the Smart Grid platform has helped deliver specific sessions of the ESMAP renewable energy training program that directly related to smart grid aspects for renewable energy. These include: (i) the integration issues for renewables during the renewable energy training, and (ii) special sessions on designing grid codes for the integration of renewable energy.

Deviation Details:
N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P127938	69,740.44	69,740.44	0.00
P127938	109,000.00	48,993.24	2,400.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 06/17/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Technical Assistance for Energy Planning in Peru

COUNTRY: Peru

WORLD BANK PROJECT ID: P129510

Activity Details

Region:	Latin America and Caribbean	Project ID:	P129510
Country(s):	Peru	Product Line:	Technical Assistance (TA) (non-lending)
Responsible Unit(s):	LCSEG	Activity Approval Date:	12/20/2011
Status:	Closed	Task Team Leader:	David Reinstein
ESMAP Reviewer:	Sameer Shukla	Fiscal Year of Approval:	2012
Sector:	General Energy	Theme:	Other Public Sector Governance
Program:	Energy Assessments & Strategy Program (EASP)	Sub-program:	
Relevance of Social/Gender Aspects:	<p>Not Monitored</p> <p>High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects</p>		
Activity Description:	<p>The activity assists the Ministry of Energy in Mines in evaluating, designing and implementing, if considered appropriate, a planning unit for the energy sector. The assistance would help to provide knowledge on the energy planning models used in other countries such as Brazil and Colombia, and help to adapt specific aspects of these models to the Peruvian context.</p>		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. PLANEAMIENTO MINERO - ENERGÉTICO: BASES CONCEPTUALES Y PROPUESTA DE ORGANIZACIÓN	Actual	Implementation Advisory Report	Minister of Energy and Mines - Peru	Yes

Output Details:

The output of the activity is a just-in-time technical assistance to the Ministry of Energy and Mines on a continuous basis over the critical period of establishing the energy planning unit in 2011 and 2012 and a short report documenting the activities that were carried out for the development of the energy planning unit in Peru. The report is an internal document to be used by the Ministry of Energy.

Deviation Details:

ESMAP-financed consultants worked with a Government Committee to prepare a report jointly, describing the roles and relationships of the proposed Planning Unit in the Ministry. Based on the report, a law/presidential decree is being drafted, and the Unit is aimed to be set up by end-December 2012.

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Policy/Strategy Informed	Government policy/strategy informed		Actual	There is currently no energy planning unit within the MEM	12/07/11	Evidence that government has considered establishing or established an energy planning unit in MEM (Ministry of Energy and Mines)	12/06/12	05/13/13
<p>Outcome Details: The Government of Peru used the output as a support document to regroup the internal organization of the Ministry of Mines and Energy to include planning functions in a more explicit and clear institutional arrangement (Supreme Decree No. 030-2012-MEM). The team of the Energy Unit working in the country are to follow up on the results of the new institutional arrangements and the performance of the planning activities stated in the mentioned Decree.</p> <p>Deviation Details: N/A</p>								
2. Client Capacity Increased	Design capacity strengthened		Actual	Little or no capacity in MEM for integrated energy planning, guidance and regulation	12/07/11	Evidence of increased capacity for energy planning as demonstrated by the quality of involvement of different government institutions involved in the dialogue and discussions.	12/06/12	05/13/13
<p>Outcome Details: The TA assisted the Ministry of Energy in Mines in evaluating, designing and implementing a planning unit for the energy sector within the Ministry.</p> <p>The report was prepared with help from two consultants hired by the project, one of them acted as President of the Ad Hoc Commission on Mining and Energy Planning officially created to undertake the task. The Commission was created by a Ministerial Resolution N°478-2011- MEM/DM dated November 2, 2011.</p> <p>Deviation Details: N/A</p>								
3. Knowledge Increased	Facilitated exchange of best practice with clients		Actual	Limited knowledge of energy planning in other countries	12/07/11	Evidence of knowledge sharing on energy planning in other countries as demonstrated by information exchange among stakeholders .	12/06/12	05/13/13
<p>Outcome Details: Increased knowledge of client on the energy planning models using other countries such as Brazil and Colombia, and help to adapt specific aspects of these models to the Peruvian context.</p> <p>The TA helped to provide knowledge on the energy planning models using other countries such as Brazil and Colombia, and helped to adapt specific aspects of these models to the Peruvian context.</p> <p>Deviation Details: N/A</p>								

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P129510	43,572.21	43,572.21	0.00

Impl. Progress

Last Updated By: Sameer Shukla **Date:** 06/28/13 **Rating:** On Track

Project at a Glance

ACTIVITY NAME: Facilitating Small and Medium Enterprise Financing for Energy Efficiency in Turkey
 COUNTRY: Turkey
 WORLD BANK PROJECT ID: P130578

Activity Details

Region:	Europe and Central Asia	Project ID:	P130578
Country(s):	Turkey	Product Line:	Technical Assistance (TA) (non-lending)
Responsible Unit(s):	ECSS2	Activity Approval Date:	02/10/2012
Status:	Closed	Task Team Leader:	Jas Singh
ESMAP Reviewer:	Pedzi Makumbe	Fiscal Year of Approval:	2012
Sector:	Energy Efficiency in Power Sector	Theme:	Financial and private sector development
Program:	Energy Efficiency	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	The activity aims to better inform commercial banks on the identification and appraisal of energy efficiency projects in the SME and building sectors. This is achieved by: (i) conducting a bank portfolio market assessment, in order to determine key subsectors and technical product lines for replicable energy efficiency investments; and (ii) developing an energy calculator, a tool which banks could use to do quick assessments of financial viability of the energy efficiency retrofits.		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. FACILITATING SME ENERGY EFFICIENCY FINANCING IN TURKEY (Final Market Assessment Report and Development of EE Screening Calculator)	Actual	Implementation Advisory Report	commercial banks - Turkey	Yes
Output Details: Final Market Assessment Report and Development of EE Screening Calculator. Deviation Details: N/A				

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Client Capacity Increased	Implementation capacity strengthened		Actual	Financial institutions have no technical expertise or tools needed to assess the financial viability of energy efficiency projects in SMEs and buildings	02/08/12	Three banks have acquired the skills and technical capacity to identify and screen potential energy efficiency projects in SMEs and buildings.	06/30/12	09/30/12
Outcome Details: The activity has been effective in increasing the capacity of commercial banks and other financial institutions to identify and screen potential energy efficiency retrofits in SMEs and buildings. The screening tool was delivered to the three partner banks (Halk, Vakif and Ziraat Banks) as well as relevant government entities (Ministry of Energy and Natural Resources, SME Agency (KOSGEB), Treasury) and shared with other banks (e.g., TKB, SKB). The tool is used by these banks for marketing, subproject screening, and preliminary subproject cash flow assessments under the a SME EE IBRD credit line. In the long term, it is expected that the tool will help banks reduce their transaction costs for smaller projects. KOSGEB and MENR are also planning to disseminate the tool to other banks, energy service companies (ESCOs), SMEs and others to help promote energy efficiency within the industrial sector. Deviation Details: N/A								
2. Development Financing Informed	Preparation of new operation informed	200,000,000	Actual	N/A	02/08/12	N/A	06/30/13	03/31/13
Outcome Details: The activity has helped carry out i) bank portfolio market assessments, in order to determine key subsectors and technical product lines for replicable EE investments; and (ii) developed an energy calculator as a tool which banks could use to do quick assessments of financial viability of the EE retrofits. These outputs helped inform the design of the Turkey SME Energy Efficiency Project - a US\$200 million loan to three financial institutions (FIs). The tools developed under the ESMAP TA will be used by participating Banks for determining determine key subsectors and technical product lines for replicable EE investments and for determining the financial viability of the EE retrofits. Turkey SME Energy Efficiency Project, P132189, \$200 M, FY2013 Deviation Details: Influenced Bank lending operation was not originally envisaged.								

Financial Data

ProjectID	Allocation	Current Fiscal Year	
		Total Disbursements	Commitments
P130578	49,575.00	49,575.00	0.00

Impl. Progress

Last Updated By: Marie-Gisele Zoua Morrisson **Date:** 05/16/13 **Rating:** On Track



Project at a Glance

ACTIVITY NAME: Renewable Energy for Electrification - PLN Capacity Building in HOMER
COUNTRY: Indonesia
WORLD BANK PROJECT ID: P130999

Activity Details

Region:	East Asia and Pacific	Project ID:	P130999
Country(s):	Indonesia	Product Line:	Technical Assistance (TA) (non-lending)
Responsible Unit(s):	EASIS	Activity Approval Date:	03/16/2012
Status:	Closed	Task Team Leader:	Dhruva Sahai
ESMAP Reviewer:	Venkata Putti	Fiscal Year of Approval:	2012
Sector:	Other Renewable Energy	Theme:	Climate Change, Pollution Management and Environmental Health, Rural Services and Infrastructure
Program:	Clean Energy	Sub-program:	
Relevance of Social/Gender Aspects:	Not Monitored High: Social/Gender aspects are highly relevant and should be incorporated at the PCN stage Medium: There is scope to consider social/gender aspects and the PCN should address them Low: Minimal opportunity to incorporate specific social/gender aspects		
Activity Description:	This objective of the activity is to assist the Government of Indonesia to enhance the national power utility's (PLN) technical capacity to design renewable energy generation projects and to transfer know-how on renewable energy technology integration		

Outputs

Output Name	Category	Type	Output Target Group	Delivered
1. Capacity building to support remote electrification in Indonesia	Actual	Implementation Advisory Report	PT Perusahaan Listrik Negara (PLN)	Yes

Output Details:
Report not for public dissemination

Deviation Details:
N/A

Outcomes

Outcome Name	Indicator(s)	Amount Financing Informed	Category	Baseline Value	Baseline Value Date	Target Value	Target Value Date	Date Measured
1. Client Capacity Increased	Design capacity strengthened		Actual	Currently there are only two people trained in HOMER at Indonesia's national power utility, PLN.	03/15/12	A group of 30 to 40 PLN staff will have acquired the skills needed to use HOMER for the design, analysis, and mitigation of financial risk of renewable energy power systems.	06/30/12	06/30/12

Outcome Details:

The activity increased technical capacity of 60 PLN staff in the use of a renewable energy project design software (HOMER) to enable the design, analysis, and mitigation of financial risk of renewable energy power systems.

As a result, staff was able to use HOMER to prepare about a 170 feasibility studies for solar-diesel hybrid power plants across Indonesia. HOMER was used to optimize system design leading up to the preparation of the financial and economic analysis for each location.

Deviation Details:

N/A

Financial Data

		Current Fiscal Year	
ProjectID	Allocation	Total Disbursements	Committments
P130999	49,344.00	49,344.00	0.00

Impl. Progress

Last Updated By: Andres Londono **Date:** 01/30/13 **Rating:** On Track