



A S T A E

# ESMAP-ASTAE 2014 ANNUAL REPORT ANNEXES

---

Following are the annexes to the ESMAP-ASTAE 2014 Annual Report to include the proceedings of ESMAP's and ASTAE's donor meetings; ESMAP's and ASTAE's results for FY2014 (including outcomes achieved and World Bank Group operations informed); and a list of all current activities and publications completed during FY2014.

ANNEX I   PROCEEDINGS OF CONSULTATIVE GROUP MEETING FOR ENERGY TRUST-FUNDED PROGRAMS .....	1
ANNEX II   ESMAP RESULTS, FY2014: OUTCOMES, OUTPUTS, AND WORLD BANK OPERATIONS INFORMED.....	8
ANNEX III   ASTAE RESULTS, FY2014: INDICATORS ACHIEVED AND WORLD BANK GROUP OPERATIONS INFLUENCED .....	16
ANNEX IV   COMPLETED, NEW, AND ONGOING ACTIVITIES, FY2014 .....	20
ANNEX V   PUBLICATIONS, FY2014 .....	27



# ANNEX I | PROCEEDINGS OF CONSULTATIVE GROUP MEETING FOR ENERGY TRUST-FUNDED PROGRAMS

## CONSULTATIVE GROUP MEETING FOR ENERGY TRUST-FUNDED PROGRAMS | ESMAP AND AFREA

4-5 March 2014, Washington, DC

The Consultative Group (CG) meeting for the World Bank-managed Energy Trust-Funded Programs was held in Washington, DC on March 4-5, 2014. The Technical Advisory Group (TAG) report session was chaired by Mr. Vijay Iyer, Director, Sustainable Energy Department, in the Bank's Sustainable Development Network, while ESMAP Program Briefings were led by their team leaders, respectively.

The outline below provides the discussion highlights for the sessions related to ESMAP. For more details regarding each session, please refer to the CG workspace [www.esmap.org/cg](http://www.esmap.org/cg) to access all reports, briefing materials, and presentations.

### Session 1 | TAG Report to the CG

- i. *Country-level coordination.* The TAG recommended that ESMAP and ASTAE explore mechanisms to promote coordination at the country level. The CG observed that there are existing in-country coordination mechanisms with development partners but ESMAP does not have an in-country presence. However, the CG noted that ESMAP should facilitate and support such coordination as part of its technical assistance program and Annual Block Grant (ABG) activities. In particular, the CG stressed the importance of informing the country dialogue about the full set of energy development solutions, including the nexus between energy, water, and other sectors.
- ii. *Knowledge dissemination.* The CG emphasized ESMAP's important role in promoting knowledge and suggested that the TAG assess how ESMAP and ASTAE could enhance its outreach to broader constituencies and stakeholders. The Chair also encouraged the CG to help disseminate ESMAP products through their networks, such as embassies and bilateral development programs.
- iii. *Impact statistics.* In response to the TAG's recommendation to include impact statistics on energy access in the annual report, the CG noted that attribution could be problematic given the "upstream" nature of most ESMAP-supported activities. ESMAP Program Manager confirmed, while recognizing limitations in causal linkages, that progress on high level outcomes associated with the SE4ALL goals (i.e., as part of the agreed ESMAP program logframe for FY2014-16 and based on the Global Tracking Framework) will be reported in the FY2014 Portfolio Review.
- iv. *Gender.* The CG noted that gender considerations are now better integrated into the program, both in terms of screening activities for their gender implications and being managed as a program activity in its own right (Social Inclusion and Energy, rather than as part of the Energy Access activities). The CG also emphasized the need for ESMAP and ASTAE to raise the profile of

its gender work, particularly externally. In response to TAG's comments, ESMAP confirmed that there will be a separate section on gender in the FY2014 Portfolio Review.

- v. *AFREA in the portfolio review.* In response to the TAG's questions about the lack of disaggregated data on AFREA in the FY2013 Portfolio Review, ESMAP Program Manager clarified that AFREA I has been reported under Energy Access to be consistent with the FY2009-13 Business Plan. However, ESMAP will report AFREA separately in the FY2014 Portfolio Review to be consistent with the FY2014-16 Business Plan. He also noted that, although there is no lending operation reported in the Africa Region as being informed by ESMAP/AFREA support, looking at the entire Business Plan period of FY2009-13, the outcome ratios (i.e., ratio between observed outcomes and completed activities) are high for the Africa region with 1.55—and energy access is the program area with highest ratio of 1.30.
- vi. *Cross-sectoral activities.* The CG agreed with TAG's recommendation that ESMAP give higher priority to activities related to cross-sectoral linkages, including energy-adaptation linkages.

## **Session 2 | Energy Access (including SE4ALL and AFREA)**

In the session on Energy Access, the ESMAP and Africa region energy units provided an overview of the program portfolio covering: SE4ALL Technical Assistance Program (S-TAP), Energy Access for the Urban Poor, and Africa Renewable Energy Access Program (AFREA). The component on SE4ALL Knowledge Hub was covered separately during a lunch session. Specific progress in two of the SE4ALL TA countries—Myanmar and Guinea—was also presented. The discussion with CG members touched upon a number of issues: the likely status of regional programs like AFREA in the new organizational structure of the World Bank; the potential for extending the energy access work to include nexus issues with food, security, and water; the nature of partnership with the Cities Alliance in the Energy Access to the Urban Poor Initiative; and tracking of program results consistent with the Global Tracking Framework. An important point of discussion was on relatively low contribution of energy access activities to the World Bank lending program in FY2013, as pointed out by the TAG report. Discussion on SE4ALL TA focused on the country-level capacity for implementation, partnerships with groups such as Global Alliance on Clean Cookstoves, and the relationship between investment prospectuses and the RISE initiative being carried out as part of the Knowledge Hub.

## **Session 3 | Energy Assessments and Strategies (including Energy Subsidy Reform and Delivery TA)**

The ESMAP team presented the key highlights of ongoing activities and future plans under the FY2014-16 Business Plan, mainly focused on the newly launched Energy Subsidy Reform and Delivery Facility. The team provided a snapshot of progress so far, including presentations from country teams utilizing the facility, such as Egypt, Kyrgyz Republic, and Central America. The team also presented recent progress on the Water-Energy Nexus work, and some examples of ABG-funded work in the regions. CG members appreciated the progress in various parts of the program, while noting the complexity of the energy subsidy reform work. CG and TAG members requested: (i) wide communication on the learning and experience from subsidy reform across countries as well as from the global political economy study; (ii) a study on the gender dimensions of energy subsidy reforms (the Gender Program is planning a specific assessment on this aspect later in the business plan); and (iii) increased effort on communicating

the results of the broader ABG program, along the lines of the successful communications program for the Water-Energy Nexus work.

#### **Session 4 | Clean Energy (including Global Geothermal Development Plan and Renewable Energy Resource Mapping)**

The CG demonstrated strong support for the strategic focus and scope of ESMAP's Clean Energy program. The discussion included representatives from the World Bank Group regional departments involved in rolling out the Clean Energy Program. The CG focused on three projects of the Clean Energy Program: Renewable Energy training, Global Geothermal Development Plan, and Renewable Energy Resource Mapping. In particular, the sessions served to brief the CG in more details about the multiple efforts undertaken by the teams to reach out to bilateral donors in countries for additional synergies. The sessions also informed the CG on implementation schedules, and on the current status of funding gaps and unmet demand.

#### **Session 5 | Energy Efficient Cities**

The Energy Efficient Cities team presented the key highlights and the focus areas under the FY2014-16 Business Plan, including the deployment of the Tool for Rapid Assessment of City Energy (TRACE), the support to transport and water energy efficiency projects, the development of knowledge products, and the new City Energy Efficiency Transformation Initiative (CEETI). CEETI is a \$10 million program spanning over three years with three main components: (i) capacity building; (ii) technical assistance; and (iii) knowledge creation and exchange. CG members were supportive of the overall program, recommending that the ESMAP team: (a) consider and incorporate means to increase the likelihood that TRACE assessments be followed by actual investments; (b) inform development partners of TRACE deployments in different cities; (c) consider how to better capture the results of ESMAP's work (e.g., energy savings), recognizing that ESMAP work in this area is mostly upstream; (d) explore linkages between energy efficiency and energy access; and (e) facilitate dissemination and sharing of lessons so that cities can learn from each other (including, for example, developing linkages with other cities networks).

#### **Session 6 | Portfolio Monitoring and Evaluation**

During the Monitoring and Evaluation (M&E) and Portfolio Review session, the ESMAP team provided a brief overview of the M&E system and a summary of the key messages of the FY202013 Portfolio Review. The discussion started by highlighting the objectives, scope, and key features of ESMAP's results framework and its alignment with that of the World Bank for Analytical Advisory Activities (AAA). ESMAP also presented an overview of the process to monitor activities from identification and planning to implementation and completion, followed by a detailed description of the methodology used to measure results and evidence of outcomes achieved under ESMAP activities. CG members also inquired about the key challenges faced by ESMAP as part of the monitoring process and measurement of results, the quality control of deliverables, linkages between ESMAP's outcomes to SE4ALL and the Global Tracking Framework, and the strategic and influencing role of ESMAP in the energy agenda of the World Bank. The session concluded with a short briefing to CG and TAG members on the specific developments

and achievements under the ESMAP results framework during the last fiscal year. CG members appreciated the progress made on the M&E system and encouraged ESMAP to continue its efforts. They also valued the Impact stories being disseminated, and would appreciate receiving more issues.

### **Session 7 | Social Inclusion and Gender**

The team presented the key highlights of the Social Inclusion, Gender and Energy Program. A brief retrospective highlighted the key accomplishments of the previous business plan, including knowledge products such as briefing notes and online tools on “Integrating Gender into Energy Operations,” trainings and capacity building workshops, and country-level support on gender and energy. The team presented the new program on Social Inclusion, Gender and Energy—introducing the broader focus on social inclusion issues while also expanding the topic areas beyond energy access and into energy infrastructure, energy policy, and clean energy, etc. Staff from the Bank’s Social Development unit and the World Bank Institute presented specific knowledge products being developed in partnership with ESMAP, such as research on Gender and Electricity Infrastructure and an online course on Gender and Energy. The AFREA Gender and Energy Program was also presented, with an overview of the engagement in the six pilot countries (Senegal, Benin, Mali, Kenya, Tanzania and Zambia) and some initial results (increased institutional capacity on gender mainstreaming and project-level results). A government representative presented the work in Senegal’s gender and energy program under AFREA, showcasing some of the significant impacts it has had in increasing the roles of rural women in decision-making and income-generating activities. During the discussions, CG members requested relevant materials and guidance that they could share within their organizations. CG members were supportive of the research on gender in the new topic areas—electricity infrastructure, policy (subsidies/tariffs), and clean energy—and encouraged the team to share findings and collaborate with others working in this field where possible.

### **Session 8 | SIDS DOCK Support Program**

In the session on the SIDS DOCK Support Program, an overview of the program was presented. The institutional and operational issues with the program were discussed separately during the closed session.

### **Session 9 | Results-Based Funding**

A session was held to brief CG members on the cross-cutting work program on Results-Based Funding (RBF) for Energy Sector Development. The team described how the knowledge component was drawing to a close with the publication of a technical report on results-based aid later in 2014 (following the report on results-based financing in early 2013). This had been deliberately delayed in the anticipation of supporting more Energy+ case studies, and more recent discussions have focused on better aligning the work with the SE4ALL indicators on energy access. The team has continued to provide support to a number of external initiatives, including GIZ’s Energising Development pilot on RBF, and funding has been awarded to two World Bank cookstoves projects in Indonesia and Laos to explore RBF modalities. Donor representatives asked about plans for the future, in particular the mainstreaming of RBF into operational activity. The team replied that ESMAP has some funding available for additional country-

based technical assistance projects, but that the funding gap currently limits the ability to respond to new requests. More broadly, the team noted that there had been slow uptake in incorporating RBF into World Bank operational lending so far (aside from output-based aid), but that this could slowly start to change as a result of activities underway, including an AFREA-funded study into the potential for Program for Results (PforR) lending for grid expansion in Africa.

## CONSULTATIVE GROUP MEETING FOR ENERGY TRUST-FUNDED PROGRAMS | ASTAE

5 March 2014, Washington, DC

The opening remarks BY WHOM outlined the agenda for the meeting: (i) f ASTAE performance; (ii) strategic direction of ASTAE vis-a-vis the World Bank reorganization; (iii) implications of the closing date of the ASTAE MDTF in June 2015; (iv) draft ASTAE annual status report; and (v) financing of World Bank staff costs associated with activity delivery.

Given that the MDTF will close in June 2015, all ASTAE-financed activities need to be completed by December 2014, to allow sufficient time for disbursement of funds by June 2015. The MDTF has some unallocated funds and new ASTAE proposals may not be allowed to use these unallocated funds due to the impending closing date.

An overview of EAP energy sector and ASTAE's contribution towards the energy sector was then presented. Highlights included ASTAE's critical contribution to World Bank IDA and IBRD lending in the EAP region. EAP as a whole is an engine of growth in the global economy but consists of countries with very diverse scale, scope, growth, and endowment of social, natural, manufactured, financial, and human capital. One participant inquired what kinds of barriers existed to Greater Mekong Sub-region (GMS) power cooperation, which ASTAE recently started supporting as efforts had been renewed to realize the critical potential to promote sustainable power trade in GMS. It was noted that the main barriers were political, institutional, and economic rather than technical.

Therefore was also discuss on the implications of the World Bank's reorganization on ASTAE's decentralized implementation. As part of the reorganization, management oversight for the delivery of individual ASTAE field activities will shift from decentralized field managers in the EAP Regional Vice Presidency to a single EAP Energy Practice Manager in the Energy and Extractives Global Practice. CG members asked that client responsiveness and speed of decision-making be maintained under the new organizational arrangements.

This was followed by a presentation on SAR's energy sector. It was emphasized that it was essential to have regional cooperation in a politically fragmented region if real progress was to be made. The presentation highlighted the important role of ASTAE-financed activities to complement the Bank's investments such as CASA-1000. Under CASA-1000, a surplus of hydropower during the summer from the Kyrgyz Republic and Tajikistan in Central Asia will be transmitted to Afghanistan and Pakistan in

South Asia. Another highlight was ASTAE's contribution to the highly successful solar home system (SHS) installation in Bangladesh.

The CG discussed whether ASTAE should finance activities involving natural gas. ASTAE management noted proposals have been received to promote natural gas markets and supply chains, including liquefied natural gas and liquefied petroleum gas (for households), which were essential to promote energy supply and access, and consistent with the World Bank Energy Sector Directions Paper published in July 2013. However, ASTAE had not approved such proposals, except a natural gas loss reduction activity in Pakistan, which has considerable benefits to promote energy supply, efficiency, and mitigation of climate change. All three ASTAE donors showed, in principle, support for ASTAE to finance activities on natural gas, while taking into account the specificity of donor preferences.

Three examples of ASTAE-financed activities were presented. The first reviewed the possibilities of using satellite imagery to monitor progress of rural electrification projects. It was noted that while there were a few legal issues to be worked out, the technology itself was readily available to be utilized. One of the concerns raised by attendees was that the night-time satellite images were merely measuring light as opposed to power consumption. However, it was pointed out the positive correlation between the two, and it was generally accepted that satellite imagery had great potential to monitor electrification progress. Another presentation covered the development of the Philippines Renewable Energy Market (REM) rules and the Renewable Energy Certificates (REC) Registry. One query was why private companies or energy associations, instead of the World Bank, would not finance this type of activity. The response was that the World Bank could bring global expertise and knowledge, which will be adjusted to the specific developing country context, rather than simply transferring developed country experience.

The ASTAE donors accepted management's proposal for ASTAE to finance the World Bank staff cost associated with activity delivery, up to the level of 15 percent (on a portfolio average basis); which puts ASTAE on the same funding basis as ESMAP. Financing of staffing costs is already provided for in the Administration Agreements with the Donors.

On the future direction of ASTAE, five options were presented as proposed in the ASTAE and ESMAP Options Paper:

- Option 1: Phase out ASTAE as a stand-alone program by June 30, 2015, when the current ASTAE MDTF and Business Plan closes
- Option 2: Extend the ASTAE MDTF, as a separate trust-funded program, which will be mapped to the newly established Energy & Extractive Industries Global Practice beginning July 1, 2014
- Option 3: Extend the ASTAE MDTF and transfer management to ESMAP, a similar arrangement of the SIDS (Small Island Developing States) DOCK Support Program MDTF within ESMAP
- Option 4: Full consolidation into ESMAP's MDTF as in the Africa Renewable Energy and Access Program (AFREA) model



Option 5: A transition/hybrid model, allowing a more fluid transition, under which ASTAE would first continue under Option 2 to Option 3 or Option 4

It was emphasized that adequacy and predictability of resources is key given ASTAE's focus on operational support to the Bank IBRD and IDA lending. The characteristics of flexibility, just-in-time support and day-to-day operational support should be preserved in the case of an ASTAE/ESMAP merger. While donors generally preferred Option 4 and a transitional extension of the ASTAE MDTF closing date, one donor raised a concern on ASTAE being folded into an ESMAP MDTF, because the donor has two separate global and regional funding windows and each window has a different strategy.

Another donor expressed a preference for Option 3, but recommended that a final decision on ASTAE's future should be based on an external evaluation, which could be combined with the planned external evaluation of ESMAP in 2015. It was noted that the ongoing evaluation of ASTAE by the EAP trust fund unit focused on overall effectiveness of ASTAE, and by the World Bank's Independent Evaluation Group (IEG) focused on energy access and gender.

In response to a question on ASTAE's regional collaboration with other entities such as the Association of Southeast Asian Nations (ASEAN), it was noted that ASTAE team has explored such collaboration, through contacts with the ASEAN Center for Energy and Asia Pacific Energy Research Center (APERC), the Institute of Energy Economic (IEEJ; which are associated with Asia-Pacific Economic Cooperation (APEC)), and the Asian Development Bank (ADB). However, ASTAE's mandate is to directly support IDA and IBRD lending activities and these collaborations have been done at the level of individual ASTAE-supported activities in conjunction with other entities that focus on lending or grant operations.

## ANNEX II | ESMAP RESULTS, FY2014: OUTCOMES, OUTPUTS, AND WORLD BANK OPERATIONS INFORMED

During FY2014, ESMAP activities have contributed to the identification and design of approved World Bank Group energy lending of **\$1.73 billion**.

The following table gives a quantitative summary of ESMAP's results for fiscal year 2014. For the latest details of ESMAP's activities, development outcomes achieved, and monitoring and evaluation framework, go to [www.esmap.org](http://www.esmap.org) and click on the "Results" tab.

**Table A2.1 | Summary of ESMAP Results, FY2014**

	OBJECTIVE	INDICATOR	ACHIEVEMENTS
Outcomes	<p>Development Financing Informed</p> <p>Client countries provided with "just-in-time" technical assistance for pre-investment activities necessary to resolve program design issues and offer additional options</p>	<p>Existing operations informed</p> <p>Government expenditure informed</p> <p>Mobilization of non-Bank resources informed</p> <p>Preparation of new operation informed</p>	<p>World Bank Operations Informed: 15, existing and new</p> <ul style="list-style-type: none"> <li>• GPOBA W3: Kenya Electricity (Kenya / \$5.15 million)</li> <li>• Improved Forested Landscape Management Project (Democratic Republic of Congo / \$36.9 million)</li> <li>• Vietnam Climate Change Development Policy Loan 3 (Vietnam / \$70 million)</li> <li>• Belarus Biomass District Heating Project (Belarus / \$90 million)</li> <li>• District Heating Energy Efficiency Project (Ukraine / \$382 million)</li> <li>• Second Peru Electrification Project (Peru/ \$50 million)</li> <li>• Support to ONE (Office National de l'Electricité; Morocco / \$150 million)</li> <li>• ONEE Support Project (formerly, ONE Support Project; Morocco / \$40.5 million)</li> <li>• Accelerating Sustainable Private Investment in Renewable Energy Project (Maldives / \$27.684 million)</li> <li>• Regional and Domestic Power Market Development Project (Democratic Republic of Congo / \$296.7 million)</li> <li>• Additional Financing for the Regional and Domestic Power Market Project (Democratic Republic of Congo / \$283 million)</li> <li>• Mali Rural Electrification Hybrid System Project (Mali / \$45.4 million)</li> <li>• Burkina Faso Electricity Sector Support Project (Burkina Faso / \$50 million)</li> <li>• Electricity Network Reinforcement and Expansion Project (ENREP) (Ethiopia / \$200 million)</li> </ul>

- Increased Access to Electricity (Zambia / \$37.5 million)

Mobilization of Non-Bank Resources  
Informed: 2 outcomes

- North Africa Regional CSP Scale-Up Initiative (\$10 million from the Clean Technology Fund)
- Geothermal Scale-up Investment Plan (\$235 million from the Clean Technology Fund)

<p><b>Policy &amp; Strategy Informed and Client Capacity Increased</b></p> <p>Increased institutional capacity of ESMAP client countries to plan, manage, and regulate the implementation of policies, strategies, and programs that deliver clean, reliable, and affordable energy services required by their citizens for poverty reduction and environmentally sustainable economic growth</p>	<p>Bank country strategy informed/influenced Bank sector strategy informed/influenced Contributed to stakeholder involvement Development community/partner policy/strategy informed Government policy/strategy informed Public debate stimulated/initiated Client is recognized with good practice or similar awards Design capacity strengthened Implementation capacity strengthened</p>	<p>Bank country or sector strategy informed/influenced: 2 outcomes</p> <p>Government policy/Strategy Informed: 16 outcomes</p> <p>Public debate stimulated/initiated: 3 outcomes</p> <p>Design capacity strengthened: 4 outcomes</p> <p>Implementation capacity strengthened: 8 outcomes</p>
---	--	--

<p><b>Knowledge Increased/Deepened and Innovative Approaches &amp; Solutions Generated</b></p> <p>ESMAP-supported research and analyses strengthen the sector's knowledge and evidence-base to deliver improved clean energy access, energy efficiency, and generation in developing countries</p>	<p>Disseminated best practices Facilitated exchange of best practice with clients Facilitated exchange of best practice with partners New innovative approach developed Other action/behavior adopted or observed New innovative approach fostered</p>	<p>Disseminated best practices: 3 outcomes</p> <p>Facilitated exchange of best practices with clients: 8 outcomes</p> <p>New innovative approach developed: 2 outcomes</p> <p>New innovative approach fostered: 3 outcomes</p>
--	--	--

<p><b>Outputs</b></p>	<p>Economic and Sector Work (ESW) &amp; Technical Assistance (TA) Research &amp; Knowledge Products Academic Mentions/References of ESMAP Products/Knowledge Impact Stories Peer-Reviewed Research</p>	<p># of Research (ESW, TA) and Knowledge Products Published # Academic Mentions # Impact Stories Developed and Disseminated # of Peer-Reviewed Research Published</p>	<p>Total # of Outputs: 364</p> <p>ESW &amp; TA Outputs: 72 Knowledge Products: 89 Academic Mentions: 196 Peer-Reviewed Research: 3 Impact Stories Published: 4</p>
-----------------------	--	---	--

The following tables summarize the outputs under each of the ESMAP program areas in FY2014, in line with the M&E system introduced in 2010.

**Table A2.2 | ESMAP Program Outputs, FY2014**

<b>AFRICA RENEWABLE ENERGY ACCESS PROGRAM (AFREA)</b>		
<b>1</b>	<b>ANALYTICAL &amp; ADVISORY ACTIVITIES</b>	<b>ECONOMIC AND SECTOR WORK: SECTOR OR THEMATIC REPORTS TECHNICAL ASSISTANCE: IMPLEMENTATION / ADVISORY REPORTS, EVENT PROCEEDINGS DOCUMENTS</b>
	AFR	From the Bottom Up: How Small Power Producers and Mini-Grids Can Deliver Electrification and Renewable Energy in Africa
	AFR	Overview of Low Cost Technologies Paper
	Senegal	Baseline and Feasibility of Alternative Fuels in Senegal
<b>2</b>	<b>KNOWLEDGE PRODUCTS</b>	<b>TOOLKITS, OPERATIONAL GUIDES, MODELS, HANDBOOKS, DATABASES, INTERNAL AND EXTERNAL TRAININGS, FORUMS, AND WORKSHOPS</b>
	Conference	Solar in the Sahel Conference (Dakar, Senegal, May 1-7, 2014)
	Training	Quality Assurance and Technical Support Consultative Committee Discussion (Senegal, September 5, 2013)
	Video	Energy to Change Women's Lives in Africa
	Video	Sustainable Energy: African Women Turn Manure into Opportunity
	Workshop	Capacity Building and Experience Sharing Workshop (Dakar, Senegal, April 7-9, 2014)
	Workshop	Gender Mainstreaming Capacity Building Workshop Kenya Power (Nairobi, August 27-28, 2013)
	Workshop	Gender Mainstreaming Workshop Ministry of Energy and Petroleum (Nairobi, August 29-30, 2013)
	Workshop	Local Low Cost Technology and Policy Electrification Workshop (Lusaka, Zambia, May 12-13, 2014)
	Workshop	Low-Cost Electrification Technologies Workshop (Benin, March 2014)
	Workshop	Low-Cost Electrification Technologies Workshop (Tanzania, September 2013)
	Workshop	Low-Cost Electrification Technologies Workshop (Zambia, May 2014)
<b>CLEAN ENERGY</b>		
<b>1</b>	<b>ANALYTICAL &amp; ADVISORY ACTIVITIES</b>	<b>ECONOMIC AND SECTOR WORK: SECTOR OR THEMATIC REPORTS TECHNICAL ASSISTANCE: IMPLEMENTATION / ADVISORY REPORTS, EVENT PROCEEDINGS DOCUMENTS</b>
	China	Applying Abatement Cost Curve Methodology for Low Carbon Strategy in Changning District, Shanghai
	Global	Energy Storage Technological Options for Variable Renewable Energy Integration: Implications for Planners and Policy-makers
	Global	Integrating Variable Renewables into Power Grids: Case Studies (Background Report)
	Global	Integrating Variable Renewables into Power Grids: Markets and Applications of Energy Storage (Background Report)
	Global	Integrating Variable Renewables into Power Grids: Role of Natural Gas in Supporting Scaling-up Renewable Energy (Background Report)
	Global	Integrating Variable Renewables into Power Grids: The Role of Natural Gas and Energy Storage
	Global	Morocco: Analysis of Low Carbon Development Options in the Power Sector Long Term Planning Simulations
	Global	Natural Gas Technological Options for Variable Renewable Energy Integration: Implications for Planners and Policy-makers
	Global	Planning for Renewable Energy Scale-Up: Understanding the Role of System Modeling
	India	Development of Local Supply Chain: A Critical Link for Concentrated Solar Power in India (Summary)
	India	Development of Local Supply Chain: The Missing Link for Concentrated Solar Power Projects in India
	India	Paving the Way for a Transformational Future: Lessons from Jawaharlal Nehru National Solar Mission Phase I
	Indonesia	Technical Assistance for Geospatial Mapping and Least-Cost Electrification Planning
	LCR	Climate Change Auctions Best Practices

LCR	Climate Change Auctions: International Experience and Key Lessons for Promoting Greenhouse Gases Abatements in Emerging Markets, Synthesis Report
LCR	Climate Market Auctions in the European Union
LCR	The Role of Auctions in Promoting GHG Abatement in Emerging Markets
Mexico	Background Documents for the International Renewable Energy Forum
Mexico	Leveling the Field for Renewables: Mexico's New Policy Framework for Incorporating External Costs of Electricity Generation
MNA	Concentrated Solar Power in the Middle East and North Africa Region: A Review of Issues and Options
Tunisia	Low Carbon Action Plan for Transport Sector: Technical Assistance to Improve Energy Efficiency and Reduce the Carbon Footprint of the Transport Sector in Tunisia
Tunisia	<i>Une Vision stratégique pour le secteur tunisien de l'énergie: Réflexion sur des Thème Prioritaires</i>
<b>2</b>	<b>KNOWLEDGE PRODUCTS</b>
	<b>TOOLKITS, OPERATIONAL GUIDES, MODELS, HANDBOOKS, DATABASES, INTERNAL AND EXTERNAL TRAININGS, FORUMS, AND WORKSHOPS</b>
Forum	International Renewable Energy Forum (Mexico City, Mexico, May 19-20, 2014)
Forum	Re-thinking the Future of Energy (Washington DC, March 4, 2014)
Online Platform	Renewable Energy Project Resource Center
Roundtable	Global Geothermal Development Plan Roundtable (ESMAP KEF, The Hague, Netherlands, November 19-20, 2013)
Training	Renewable Energy Training for the IFC Sustainable Energy Finance Group (Washington DC, June 16-18, 2014)
Training	Renewable Energy Training for the South Asia and East Asia and Pacific Regions (Pattaya, Thailand, April 23-25, 2014)
Workshop	China MAC Tool Workshop (Beijing, China, September 26-27, 2013)
Workshop	Ocean Thermal Energy Conversion (OTEC): Status and Challenges (Washington DC, December 18, 2013)
Workshop	Renewable Energy Mapping Experts Workshop (Frascati, Italy, October 9-11, 2013)
Workshop	Renewable Energy Markets in Latin America, India, and China: An Update from Bloomberg New Energy Finance (Washington DC, April 10, 2014)
Workshop	Renewable Energy: from Mapping to Policy to Commercial Investment (ESMAP KEF, The Hague, Netherlands, November 21, 2013)
Workshop	South-South Exchange Workshop: Strengthening the Solar Energy Option - Utility-Scale Solar Power Development & Management (Marrakesh, Morocco, October 21-22, 2013)
Workshop	Using Marginal Abatement Cost (MAC) Curves to Design Low Carbon Strategies: Lessons Learned from the Brazil MAC Curve (Washington DC, May 8, 2014)

## ENERGY ACCESS

<b>1</b>	<b>ANALYTICAL &amp; ADVISORY ACTIVITIES</b>	<b>ECONOMIC AND SECTOR WORK: SECTOR OR THEMATIC REPORTS</b> <b>TECHNICAL ASSISTANCE: IMPLEMENTATION / ADVISORY REPORTS, EVENT PROCEEDINGS DOCUMENTS</b>
	Ghana	Energizing Economic Growth in Ghana: Making the Power and Petroleum Sectors Rise to the Challenge
	Guatemala	Guatemala Country Action Plan for Clean Cookstoves and Fuels
	Peru	<i>Proyecto de Electrificación en las zonas rurales de los distritos de La Libertad de Pallán, Miguel Iglesias, Chumuch y Sucre de la provincia de Celendín, Región de Cajamarca empleando energía solar fotovoltaica</i>
<b>2</b>	<b>KNOWLEDGE PRODUCTS</b>	<b>TOOLKITS, OPERATIONAL GUIDES, MODELS, HANDBOOKS, DATABASES, INTERNAL AND EXTERNAL TRAININGS, FORUMS AND WORKSHOPS</b>
	Conference	Enabling Factors for Providing Modern Energy Services to Rural Areas (Global Conference: Rural Energy Access - A Nexus Approach to Sustainable Development and Poverty Eradication, Addis Ababa, Ethiopia, December 5, 2013)
	Expo	China 8th Clean Stoves Expo (Hebei Province, China, April 2014)
	Forum	Session on Clean Mini-grids (First SE4ALL Forum, New York, June 2014)
	Forum	Session on Innovations in Finance for Energy Access (First SE4ALL Forum, New York, June 2014)
	Forum	Session on Investment Prospectuses under Sustainable Energy for All (SE4ALL) Country Action (First SE4ALL Forum, New York, June 2014)
	Forum	Session on Private Sector Investments (First SE4ALL Forum, New York, June 2014)

Forum	Session on Small Island Development Nations (First SE4ALL Forum, New York, June 2014)
Forum	Technical Presentation of the Global Tracking Framework on the Multi-tier Access Indicators (First SE4ALL Forum, New York, June 2014)
Forum	Technical Presentation of the Knowledge Hub for SE4ALL (First SE4ALL Forum, New York, June 2014)
Forum	World Bank 2nd East Asia and Pacific Clean Stove Initiative Regional Forum (Beijing, China, April 2014)
Knowledge Note	Capturing the Multi-Dimensionality of Energy Access
Video	<a href="#">Estufas mejoradas para salvar vidas en Centroamérica</a>
Video	<a href="#">Una buena nutrición No Tiene Por Qué Ser Cara</a>
Workshop	A New Multi-Tier Approach to Measuring Energy Access (Washington DC, February 19, 2014)
Workshop	Achieving Universal Energy Access: Strategy and Vision (ESMAP KEF, The Hague, Netherlands, November 21, 2013)
Workshop	Innovative Approaches to Promoting Clean Cooking Solutions, including Private Sector Venture Investment, Value Chain Innovation and Open-innovation (Washington DC, December 2013)
Workshop	Papua New Guinea National Stakeholders Consultation Workshop on Third-Party Access Code and Grid Code and National Electrification Roll-Out Plan
Workshop	South-South Knowledge Exchange on Slum Electrification Approaches (Nairobi, Kenya, May 19-23, 2014)
Workshop	What Does Success Mean For Improved Cookstove Programs?: A Conversation with a Global Expert on Cookstove Quality, Performance and Scale (Washington DC, December 2013)
Workshop	Workshop with the World LP Gas Association: Can Cooking for Life (Washington DC, April 2014)

## ENERGY EFFICIENCY

<b>1</b>	<b>ANALYTICAL &amp; ADVISORY ACTIVITIES</b>	<b>ECONOMIC AND SECTOR WORK: SECTOR OR THEMATIC REPORTS TECHNICAL ASSISTANCE: IMPLEMENTATION / ADVISORY REPORTS, EVENT PROCEEDINGS DOCUMENTS</b>
	Brazil	A Commuter-based Traffic Demand Management Approach for Latin America: Results from Voluntary Corporate Mobility Pilots in São Paulo and Mexico City
	Brazil	Brazil Green Freight Transport Report
	Colombia	<a href="#">Identificando Oportunidades de Eficiencia Energética en Medellín</a>
	Colombia	Report: Tool for Rapid Assessment of City Energy Use (TRACE) in Bogota, Colombia
	ECA	The Residential Energy Efficiency Program in Lithuania: Case Study
	ECA	Western Balkans: Scaling Up Energy Efficiency in Buildings
	Egypt	Technical Assistance for Data Analytics for Urban Transport to Mitigate Climate Change - Cairo
	Global	Formulating an Urban Transport Policy: Choosing Between Options
	LCR	Technical Assistance for Traffic Demand Management Pilots in São Paulo, Mexico and for a Demand Management Study in Colombia
	Mexico	Report: Tool for Rapid Assessment of City Energy Use (TRACE) in Leon, Mexico
	Mexico	Report: Tool for Rapid Assessment of City Energy Use (TRACE) in Puebla, Mexico
	Mexico	TRACE Technical Assistance for Puebla and Leon, Mexico
	Philippine	Metro Manila Road Transit Rationalisation Study
	Ukraine	Facilitating Municipal Energy Efficiency Finance in Ukraine
	Uzbekistan	Assessment of Heating and Hot Water Supply and Demand Options for Andijan, Chirchik, and Sergili District of Tashkent
<b>2</b>	<b>KNOWLEDGE PRODUCTS</b>	<b>TOOLKITS, OPERATIONAL GUIDES, MODELS, HANDBOOKS, DATABASES, INTERNAL AND EXTERNAL TRAININGS, FORUMS, AND WORKSHOPS</b>
	Conference	C40 Cities Climate Leadership Group Mayors Summit (Johannesburg, South Africa, February 4-6, 2014)
	Conference	City Energy Efficiency Transformation Initiative (CitiSense Conference, Barcelona, Spain, November 18, 2013)
	Conference	City Energy Efficiency Transformation Initiative (Smart City Expo World Congress, Barcelona, Spain, November 21, 2013)
	Conference	Conference on Energy Efficiency in Cities (Mexico City, Mexico, June 17-18, 2014)
	Conference	Global Conference on Energy Efficiency in Street Lighting (New Delhi, India, March 19-20, 2014)
	eLearning Course	Systematic eLearning Course on Integrated Urban Transport Planning

Forum	Session on Energy Efficiency Accelerators (First SE4ALL Forum, New York, June 2014)
Guidance Note	Driving Energy Efficiency Markets through Municipal Procurement
Manual	Energy Efficiency Procurement Manual for the Municipal Development and Lending Fund (MDLF)
Guidance Note	Establishing and Operationalizing an Energy Efficiency Revolving Fund: Guidance Note
Guidance Note	Energy Services Market Development: Guidance Note
Guidance Note	Financing Energy Efficiency Measures for Residential Building Stock: Guidance Note
Guidance Note	Municipal Budgeting and Finance: Guidance Note
Training	TRACE Training for the Ministry of Energy (Mexico City, Mexico, May 6-7, 2014)
Workshop	China-ASEAN Energy Efficiency Knowledge Exchange Event (Beijing and Xi'an, China, June 2014)
Workshop	Energy Efficiency Community of Practice Session (World Bank Forum 2014, Washington DC, February 24, 2014).
Workshop	From Planning to Implementation of an Energy Efficient Metropolitan City (Growing Green: Greater Paris' Strategic Plan for Sustainable Economic Growth, Washington DC, November 26, 2013)
Workshop	Introducing IFC's EDGE Green Building Program (Washington DC, May 19, 2014)
Workshop	Leaders in Urban Transport Planning Program (Ahmedabad, India, August 2013)
Workshop	Leaders in Urban Transport Planning Program (Rabat, Morocco, September 2013)
Workshop	Leaders in Urban Transport Planning Program (Seoul, Korea, October, 2013)
Workshop	Leaders in Urban Transport Planning Program (Singapore, January 2014)
Workshop	Leaders in Urban Transport Planning Program (Mexico City, Mexico, May 2014)
Workshop	Leaders in Urban Transport Planning Program (Marseille, France, June 2014)
Workshop	Leaders in Urban Transport Planning Program (Dubai, United Arab Emirates, June 2014)
Workshop	TRACE Workshop (Bangkok and Lampang, Thailand, May 2014)

## ENERGY ASSESSMENT AND STRATEGY PROGRAM (EASP)

<b>1</b>	<b>ANALYTICAL &amp; ADVISORY ACTIVITIES</b>	<b>ECONOMIC AND SECTOR WORK: SECTOR OR THEMATIC REPORTS</b> <b>TECHNICAL ASSISTANCE: IMPLEMENTATION / ADVISORY REPORTS, EVENT PROCEEDINGS DOCUMENTS</b>
	AFR	Harnessing African Natural Gas: A New Opportunity for Africa's Energy Agenda?
	AFR	The Power of the Mine: A Transformative Opportunity For Sub-Saharan Africa
	ECA	Analysis of Pragmatic Institutional Options for Managing the Related Trans-Boundary Issues
	ECA	Strategic Analysis of Water-energy Scenarios for Exploring the Implications of the Proposed Rogun Hydroelectric Project in a Basin Context
	Egypt	Cairo Traffic Congestion Study
	Egypt	Energy Subsidy Reforms in Egypt (Policy Brief)
	Egypt	Supporting Energy Subsidy Reform in Egypt (Communications Strategy)
	Global	Direct Delivery of Power Subsidy to Agriculture
	Global	International Experience with Open Access to Power Grids: Synthesis Report
	Global	International Experience with Private Sector Participation and Open Access in Power Grids: Private Sector Participation Component - Global Review
	Global	International Experience with Private Sector Participation and Open Access in Power Grids: The Philippines Country Case Study
	Global	International Experience with Private Sector Participation in Power Grids: Peru Country Case Study
	Global	International Experience with Private Sector Participation in Power Grids: Turkey Country Case Study
	Global	Lessons Learned from Private Sector Participation in Transmission and Distribution of Electricity: Synthesis Report
	Global	Private Sector Participation in Transmission and Distribution Systems in Brazil: Country Case Study
	India	Final Report on Diagnostic Study in Transmission and Distribution Utilities of Assam
	India	Final Report on Diagnostic Study in Transmission and Distribution Utilities of Meghalaya
	India	Final Report on Diagnostic Study of the Electricity Department, Government of Manipur
	India	More Power to India: The Challenge of Electricity Distribution
	India	North Eastern Region Power Sector Improvement Project: As-is Study Report - Mizoram
	India	North Eastern Region Power Sector Improvement Project: As-is Study Report - Nagaland
	India	North Eastern Region Power Sector Improvement Project: As-is Study Report - Tripura
	Kyrgyz Republic	Power Sector Policy Note for the Kyrgyz Republic

LCR	Planning for Higher Oil Prices: Power Sector Impact in Latin America and the Caribbean
MNA	Prospects for Advancing Integration of the Mashreq Power Systems with Turkey and Europe
South Sudan	Analysis of Juba Distribution Network and Capacity Building Needs in the Electricity Sector Advisory Services Document (Consultant's Summary Report)
<b>2</b>	<b>KNOWLEDGE PRODUCTS</b> <b>TOOLKITS, OPERATIONAL GUIDES, MODELS, HANDBOOKS, DATABASES, INTERNAL AND EXTERNAL TRAININGS, FORUMS, AND WORKSHOPS</b>
Tool Implementation	META Tool Implementation conducted in Morocco (March 2014)
Training	META Training as part of ESMAP's Renewable Energy Training Program (Thailand, April 2014)
Training	META Training for the Inter-American Development Bank (Washington DC, February 2014)
Training	META Training for the World Resource Institute (Washington DC, March 2014)
Workshop	International Experience with Open Access to Transmission and Distribution Systems in the Electricity Sector (Washington DC, December 3, 2013)
Workshop	Role of Open Access to Transmission & Distribution Systems in Electricity Markets (International Energy and Environment Fair and Conference, Istanbul, Turkey, April 24-26, 2014)
Workshop	Tajikistan: Addressing Energy Deprivation in a Low Income/Cold Winter Environment (Washington DC, April 1, 2014)
Workshop	Thirsty Energy: Will Water Constrain our Energy Future? (World Future Energy Summit, Abu Dhabi, United Arab Emirates, January 21, 2014)

## GENDER | SOCIAL INCLUSION IN THE ENERGY SECTOR

<b>1</b>	<b>ANALYTICAL &amp; ADVISORY ACTIVITIES</b> <b>ECONOMIC AND SECTOR WORK: SECTOR OR THEMATIC REPORTS</b>
	<b>TECHNICAL ASSISTANCE: IMPLEMENTATION / ADVISORY REPORTS, EVENT PROCEEDINGS DOCUMENTS</b>
Bolivia	Technical Assistance: Gender Assessment of Bolivia's Rural Electrification Project
<b>2</b>	<b>KNOWLEDGE PRODUCTS</b> <b>TOOLKITS, OPERATIONAL GUIDES, MODELS, HANDBOOKS, DATABASES, INTERNAL AND EXTERNAL TRAININGS, FORUMS, AND WORKSHOPS</b>
Forum	Gender and Energy Training Clinic (World Bank Forum 2014, Washington DC, February 2014)
Forum	Session on Energy and Health (First SE4ALL Forum, New York, June 2014)
Forum	Session on Partnership to Scale up Energy Access through Women's Empowerment (First SE4ALL Forum, New York, June 2014)
Forum	Session on Women, Energy and Economic Empowerment (First SE4ALL Forum, New York, June 2014)
Online Forum	Gender and Energy Online Space – Collaboration for Development (Launched June 2014)
Operational Guides	Integrating Gender Considerations into Energy Operations (French version)
Workshop	Climate Change Leadership Corps – Gender, Energy and Climate Change Session (Chicago, USA, August 2013)
Workshop	Gender-Based Violence Report Launch (Washington DC)
Workshop	US State Department Gender, Energy and Climate Change (Washington DC, August 2013)

## RESULTS-BASED FINANCING (RBF)

<b>1</b>	<b>KNOWLEDGE PRODUCTS</b> <b>TOOLKITS, OPERATIONAL GUIDES, MODELS, HANDBOOKS, DATABASES, INTERNAL AND EXTERNAL TRAININGS, FORUMS, AND WORKSHOPS</b>
Workshop	Technical Workshop on Results-Based Funding (Paris, France, May 19-20, 2014)

## SIDS DOCK

<b>1</b>	<b>ANALYTICAL &amp; ADVISORY ACTIVITIES</b> <b>ECONOMIC AND SECTOR WORK: SECTOR OR THEMATIC REPORTS</b>
	<b>TECHNICAL ASSISTANCE: IMPLEMENTATION / ADVISORY REPORTS, EVENT PROCEEDINGS DOCUMENTS</b>
Dominica	Geothermal Power Development in Dominica: A Gap Analysis for the Preparation of the Wotten Waven-Trafalgar-Laudat Field in the Roseau Valley
Global	Financial Mechanisms for Clean Energy In Small Island Developing States: Consolidated Final Report
<b>2</b>	<b>KNOWLEDGE PRODUCTS</b> <b>TOOLKITS, OPERATIONAL GUIDES, MODELS, HANDBOOKS, DATABASES, INTERNAL AND EXTERNAL TRAININGS, FORUMS, AND WORKSHOPS</b>
Online Platform	SIDS DOCK Virtual Knowledge Network



## IMPACT STORIES

#5	Mexico	ESMAP Lighting Toolkit Helps Mexico Achieve Record-Breaking Feat (August 2013)
#6	Africa	ESMAP Support Helps Lighting Africa Brighten Off-Grid Communities (September 2013)
#7	India	India State of Maharashtra Builds Capacity to Double Electricity Transmission (April 2014)
#8	Liberia	Rehabilitated Hydro Plant Highlights Success of Liberia's Rural Electrification Agency (May 2014)

## ANNEX III | ASTAE RESULTS, FY2014: INDICATORS ACHIEVED AND WORLD BANK GROUP OPERATIONS INFLUENCED

By providing advisory services and technical assistance, ASTAE supports the preparation, execution and evaluation of World Bank energy projects in East and South Asia. ASTAE's result indicators include only IDA/IBRD/GEF financed projects that are approved by the Board. ASTAE-supported IDA/IBRD/GEF projects approved by the Board totaled \$1.312 billion in FY2014. The cumulative FY2012-14 total is \$3.413 billion, exceeding the target for the current Business Plan. Physical target indicators are obtained from the Project Appraisal Documents (PADs) of IDA/IBRD/GEF projects that ASTAE supported.

**Table A3.1 | ASTAE Business Plan Result Framework, FY2012-16**

DIRECT INDICATORS	UNIT	VALUE PLEGGED	VALUE ACHIEVED FY12-13	VALUE ACHIEVED FY14	VALUE ACHIEVED FY12-14	PROGRESS (PERCENT)
<b>1. Total World Bank Lending Catalyzed by ASTAE Activities</b>						
Project and Program Lending	million US\$	3,200	2,101 <sup>1</sup>	1,312	3,413	107%
<b>2. New Capacity and Increased Generation of Renewable Electricity</b>						
Renewable Energy, Capacity	MW	1,500	205	1,104	1,309	87%
Renewable Energy, Generation	GWh/year	3,000	1,208	1,052	2,630	88%
<b>3. Electricity Savings Resulting from Efficiency Improvements</b>						
Energy Savings, Capacity	MW equivalent	1,000	350		350	35%
Energy Savings, Generation	GWh/year	2,000	2,980		2,980	149%
<b>4. Households with Access to Modern Energy Services</b>						
Access to Electricity (new)	households	2,000,000	558,000		558,000	28%
Access to Electricity (improved)	households	1,000,000	0	150,000	150,000	15%
Improved Stoves for Heating (cooking & space)	households	5,000,000	1,195,000		1,195,000	24%
<b>5. Avoided Greenhouse Gas Emissions</b>						
Direct CO <sub>2</sub> Avoided Over 20 Years	million tons	200	280	95	375	187%
<b>6. Countries Benefiting from ASTAE Support</b>						
Number of Countries	Countries	15	12	16	16	107%

<sup>1</sup> Adjusted value from the FY13 ASTAE Annual Report

Note: Direct refers to values achieved, or expected to be achieved, in the course of World Bank-funded projects that benefited from ASTAE support.

Table A3.2 links the ASTAE activities and the IDA/IBRD/GEF projects that contributed to the above ASTAE indicators during FY2014.

**Table A3.2 | Link between ASTAE Activities and Bank Projects, FY2014**

ASTAE ACTIVITY (FISCAL YEAR WHEN ACTIVE)	WORLD BANK PROJECT (IDA/IBRD/GEF) (FISCAL YEAR APPROVED)	INVESTMENT LEVERAGE (US\$ MILLION)	RENEWABLE ENERGY PILLAR	INDICATORS			
				ENERGY EFFICIENCY PILLAR	ACCESS PILLAR	CO <sub>2</sub> MITIGATION	SOURCE OF INDICATOR
<b>China</b>							
China Renewable Energy Scale-up Program (CRESP) Phase II and Shanghai Low-Carbon City Preparation (FY10-FY11)	The Second Phase of The Renewable Energy Scale-Up Program (FY14)	27.28	370 GWh/yr			78 Mtons over 20 years	World Bank Project Appraisal Document - Annex 1-Result Framework
Support the preparation of CRESP Phase II and Shanghai Low-Carbon City, for project design on policy studies, technology improvements, and capacity building; as well as the planned IBRD project on renewable energy and energy efficiency.							
<b>Indonesia</b>							
Support to Integrated Catchment Program for Upper Cisokan Pumped Storage Project (FY14)	Upper Cisokan Pumped Storage Hydro-Electrical Power (1040 MW) Project (FY11)	800.00	1040 MW				World Bank Project Appraisal Document - Annex 1-Result Framework
Transfer knowledge on Integrated Catchment Management (ICM) for the Upper Cisokan Pumped Storage (UCPS) Project. The ICM approach will deal with the competing demands for land in the project area and its close vicinity through an integrated approach on habitat restoration, community development, sustainable forest management and watershed management. ICM can lead to the creation of a platform for a sustainable conservation approach to create and maintain protection zones for endangered species while at the same time achieving goals of employment and livelihood opportunities for the local communities.							

ASTAE ACTIVITY (FISCAL YEAR WHEN ACTIVE)	WORLD BANK PROJECT (IDA/IBRD/GEF) (FISCAL YEAR APPROVED)	INVESTMENT LEVERAGE (US\$ MILLION)	INDICATORS				
			RENEWABLE ENERGY PILLAR	ENERGY EFFICIENCY PILLAR	ACCESS PILLAR	CO <sub>2</sub> MITIGATION	SOURCE OF INDICATOR
<b>Lao People's Democratic Republic</b>							
Strategic Advisory for the Lao Power Sector Reform (FY14)	Technical Assistance for Capacity Building in the Hydropower and Mining Sectors (FY10)– Additional Financing (FY14)	28.34					World Bank Project Additional Financing Project Paper
Assist/support Government of Lao PDR efforts to review the current situation, develop the necessary framework, prepare a road map and develop an action plan for the Lao hydropower sector reform.							
<b>Maldives</b>							
Development of Private Sector Models for Off-Grid Electrification in South Asia (FY14)	Accelerating Sustainable Private Investment in Renewable Energy Project (FY14)	27.68	20 MW 32,610.6 MWh/yr		150,000 (improved access to electricity)	0.517,667 Mtons over 20 years	World Bank Project Appraisal Document – Annex 1-Result Framework
Develop tools that support transactions that help achieve access to electricity linking to livelihoods in South Asia, which houses 420 million people without electricity access, and models and a framework that favors a financially sustainable approach to electrification.							
<b>Vietnam</b>							
Capacity Building Support to Vietnam Pumped Storage Power Program (FY14)	Trung Son Hydropower Project (FY11)	411.72	43.5 MW 1,019 GWh/yr			16.45 Mtons over 20 years	World Bank Project Appraisal Document - Annex 1-Result Framework
Strengthen capacity of the Government of Vietnam in planning and developing the Vietnam pumped storage power program through: (i) conducting a relevant knowledge sharing study tour for the relevant Ministries and Electricity of Vietnam (EVN) to China, where a large pumped storage program was implemented, including those funded by the World Bank; and (ii) organizing an international knowledge and experience sharing workshop in Hanoi.							

ASTAE ACTIVITY (FISCAL YEAR WHEN ACTIVE)	WORLD BANK PROJECT (IDA/IBRD/GEF) (FISCAL YEAR APPROVED)	INVESTMENT LEVERAGE (US\$ MILLION)	INDICATORS				
			RENEWABLE ENERGY PILLAR	ENERGY EFFICIENCY PILLAR	ACCESS PILLAR	CO <sub>2</sub> MITIGATION	SOURCE OF INDICATOR
Support for the Preparation of the Vietnam Renewable Energy Project (REDP) (FY08-11)	Vietnam Renewable Energy Development Project (carbon finance component) (FY14)	15.59	Already counted in previous Business Plan	Already counted in previous Business Plan	Already counted in previous Business Plan	Already counted in previous Business Plan	World Bank Project Portal and Task Team Leader
Under this ASTAE support, guidelines for carbon financing were prepared, in addition to other outputs: 1) Framework documents and guides for environmental impact assessment and impact mitigation; 2) REDP Operations Manual; 3) Administrative Unit and Project Management Board staff trained; 4) Report on least lifecycle cost procurement; 5) Assistance with actual procurement provided; and 6) Two study tours to China conducted).							

# ANNEX IV | COMPLETED, NEW, AND ONGOING ACTIVITIES, FY2014

Table A4.1 | ESMAP Completed, New, and Ongoing Activities, FY2014

<b>COMPLETED ACTIVITIES</b>		
<b>COUNTRY/ REGION</b>	<b>ACTIVITY</b>	<b>TASK MANAGER</b>
<b>AFRICA RENEWABLE ENERGY ACCESS PROGRAM (AFREA)</b>		
AFR	Africa Clean Cooking Energy Solutions I	Jan Kappen
AFR	Africa Electrification Initiative	Jenny Hasselsten
AFR	Gender and Energy Program	Awa Seck
AFR	Lighting Africa	Daniel Murphy
Benin	Increased Access to Energy	Franklin Gbedey
Liberia	Electricity System Enhancement	Clemencia Torres De Mastle
Rwanda	Sustainable Energy Development	Paul Baringanire
<b>CLEAN ENERGY</b>		
Global	Clean Energy Guidebooks and Briefs	Silvia Martinez Romero
Global	Integration of Renewable Energy Technologies in Sustainable Infrastructure	Silvia Martinez Romero
Global	Low Carbon Development in Power Sector	Venkata Ramana Putti
India	Concentrated Solar Power Initiative	Ashish Khanna
Indonesia	Geospatial Mapping and Least-Cost Electrification Planning in Indonesia	Dhruva Sahai
LCR	Climate Change Auctions Best Practices	Chandra Shekhar Sinha
Mexico	Greening Electricity Generation	Rigoberto Yopez-Garcia
Tunisia	Low Carbon Action Plan for Transport Sector	Olivier P. Le Ber
Tunisia	Low Carbon Energy Strategy	Fanny Kathinka Missfeldt-Ringius
<b>ENERGY ACCESS</b>		
Ghana	Energy Sector Review	Sunil W. Mathrani
Peru	Peru Second Rural Electrification	Janina Andrea Franco Salazar
<b>ENERGY EFFICIENCY</b>		
Brazil	Brazil Green Freight Transport	Georges Bianco Darido
ECA	Energy Efficiency Scale-Up Plan in Buildings	Jasneet Singh
Egypt	Cairo Congestion Study	Ziad Salim El Nakat
Global	Capacity Building for Energy Efficiency Urban Transport	Om Prakash Agarwal
Global	Global Energy Efficient Urban Transport Policy Toolkit	Om Prakash Agarwal
Global	Making Cities More Energy Efficient	Feng Liu
LCR	Green Transport and Energy Efficiency Initiatives	Shomik Raj Mehndiratta
LCR	LCR Regional Workshop on Energy Efficiency & Non-Revenue Water	Carmen Rosa Yee-Batista
LCR	TRACE Model in Pilot Cities in Latin America	Todd M. Johnson
Ukraine	Facilitating Commercial Municipal Energy Efficiency Finance in Ukraine	Astrid Manroth
West Bank and Gaza	Development of a Manual to Procure New Energy Efficient Water/Sewage Pumping, Street Lighting, and Public Building Services	Christianna Johnnides Brots
<b>ENERGY ASSESSMENTS AND STRATEGIES PROGRAMS (EASP)</b>		
Armenia	Armenia Power Sector Policy Note	Artur Kochnakyan
ECA	Strategic Analysis of Water Resources Development Options in the Upper Amu Darya Basin	Sanjay Pahuja
Global	Direct Delivery of Power Subsidy to Rural Consumers	Mohinder P. Gulati
Global	International Experience with Private Sector Participation in Power Grids	Victor B. Loksha
India	The Indian Power Sector: A Stocktaking and Directions for the Future	Sheoli Pargal

COUNTRY/ REGION	ACTIVITY	TASK MANAGER
LCR	Impacts of High Oil Prices in Latin America	Rigoberto Yopez-Garcia
MNA	Synchronization of Mashreq, Turkey, and European Union Electricity Grids	Waleed Saleh I. Alsuraih
Nicaragua	Greater Managua Water and Sanitation (PRASMA)	Lilian Pena Pereira Weiss
Niger	Energy Sector Assessment	Awa Seck
South Sudan	Electricity Sector Strategy Note for South Sudan	Rahul Kitchlu
<b>SIDS DOCK</b>		
Global	Promoting Innovation in Renewable Energy and Energy Efficiency in Small Island Developing States	Habiba Gitay
Global	Small Island Developing States Revolving Fund Options Paper	Almudena Mateos Merino
Global	Virtual Network to Support SIDS DOCK Platform	Almudena Mateos Merino
<b>NEW ACTIVITIES</b>		
<b>AFRICA RENEWABLE ENERGY ACCESS PROGRAM (AFREA)</b>		
AFR	Africa Clean Cooking Energy Solutions II	Jan Kappen
AFR	Africa Electrification Initiative II	Jenny Hasselsten
AFR	Africa Region Solar Strategy	Daniel Murphy
AFR	Gender and Energy Program II	Awa Seck
AFR	Increased Electricity Access Support: On-Grid Access Team	David Vilar
AFR	Lighting Africa II	Daniel Murphy
AFR	New Models to Scale Up Power Generation Investments in Africa	Elvira Morela
AFR	Power and Agriculture in Africa	Sudeshna Banerjee
AFR	Power Subsidies in Sub Saharan Africa	Christopher Trimble
AFR	Review of Hydropower Development in Africa	Frederic Louis
AFR	Roadmap for Energy Access Program-for-Results	Manuel Berlingiero
Niger	Electricity Access Expansion Program	Clemencia Torres De Mastle
Nigeria	Electrification Access Program Development	Rahul Kitchlu
South Sudan	Energy Sector Technical Assistance Project	Rahul Kitchlu
<b>CLEAN ENERGY</b>		
Global	Turn Down the Heat - Phase 3	Kanta K. Rigaud
Indonesia	Geothermal Clean Energy Investment Project	Anh Nguyet Pham
Indonesia	Renewable Energy Resource Mapping and Geospatial Planning: Indonesia	Dhruva Sahai
LCR	Technical Assistance for Geothermal Project Preparation in LCR	Migara Jayawardena
Lebanon	Lebanon Wind Energy Resource Mapping	Fowzia Hassan
Madagascar	Renewable Energy Resource Mapping and Geospatial Planning: Madagascar	Vonjy Miarintsoa Rakotondramanana
Maldives	Renewable Energy Resource Mapping and Geospatial Planning: Maldives	Abdulaziz Faghi
Mexico	Renewable Energy Forum	Karen Bazex
Pakistan	Renewable Energy Resource Mapping and Geospatial Planning: Pakistan	Anjum Ahmad
Papua New Guinea	Renewable Energy Resource Mapping and Geospatial Planning: Papua New Guinea	Roberto Gabriel Aiello
Tanzania	Renewable Energy Resource Mapping and Geospatial Planning: Tanzania	Anders Cajus Pedersen
Uruguay	Uruguay Low Carbon Study	John D. Nash
Vietnam	Renewable Energy Resource Mapping and Geospatial Planning: Vietnam	Ky Hong Tran
Zambia	Renewable Energy Resource Mapping Initiative: Zambia	Abdolreza B. Rezaian
<b>ENERGY ACCESS</b>		
Global	Energy Access for the Peri-Urban/Urban Poor	Alain Ouedraogo
Global	Piloting Multi-Tier Energy Access Metric	Mikul Bhatia
LCR	Central America Clean Cooking Initiative (CACCI)	Koffi Ekouevi
LCR	Deploying New Solar Technologies for Isolated Rural Areas: Supporting Their Adoption in LCR	Lucia Spinelli

COUNTRY/ REGION	ACTIVITY	TASK MANAGER
Myanmar	Development of Myanmar National Electrification Program	Dejan R. Ostojic
Nepal	Nepal Developing Improved Solutions for Cooking	Sandeep Kohli
<b>ENERGY EFFICIENCY</b>		
China	China-ASEAN Energy Efficiency South-South Knowledge Exchange	Xiaodong Wang
China	Developing Low Carbon Strategy for Shenzhen	Xiaodong Wang
ECA	Wholesaling Energy Efficiency in Water Utilities in the Danube Region	Bjorn Philipp
Egypt	Data Analytics for Urban Transport to Mitigate Climate Change - Cairo	Isabelle Huynh
Global	Capacity Building for Leaders in Energy Efficient Urban Transport Planning	Om Prakash Agarwal
Global	City Energy Efficiency Transformation Initiative: Low Carbon Growth for Cities through Energy Efficiency	Ivan Jaques Goldenberg
India	India Efficient & Sustainable City Bus Services: Capacity Building Program in Fuel Efficiency	Nupur Gupta
Indonesia	Reforming the Minibuses in Surabaya	Reindert Westra
Iraq	Iraq Energy Efficiency Action Plan	Ferhat Esen
LCR	Achieving Energy Efficient Urban Transport in Cities in Latin America	Shomik Raj Mehndiratta
LCR	Energy Efficiency in Water and Wastewater Utilities in LCR	Carmen Rosa Yee-Batista
LCR	LCR Urban Energy Efficiency	Todd M. Johnson
Macedonia	Macedonia Municipal Energy Efficiency Promotion	Jasneet Singh
Philippines	Metro Manila Bus Network Optimization Plan	Ajay Kumar
SAR	Scaling Up Energy Efficiency and Demand Side Management Business Line in South Asia	Ashok Sarkar
Sri Lanka	Colombo Low Carbon Urban Transport Technical Assistance	Zhiyu Chen
Turkey	Turkey Energy Efficiency Institutional Review	Jasneet Singh
Ukraine	Ukraine Energy Efficiency Transformation in Cities	Tamar Sulukhia
Uzbekistan	Least Cost Assessment for the Heating Sector of Uzbekistan	Pekka Kalevi Salminen
West Bank and Gaza	Energy Efficiency Action Plan	Roger Coma Cunill
West Bank and Gaza	Energy Management for Water Utility Program	Iyad Rammal
<b>ENERGY ASSESSMENTS AND STRATEGIES PROGRAMS (EASP)</b>		
Afghanistan	Afghanistan Energy Security Trade-Offs under High Uncertainty	Richard Spencer
AFR	Liquefied Natural Gas Import Options for West Africa	Syed Waqar Haider
Belarus	Belarus Heat Tariff Reform and Social Impact Mitigation	Fan Zhang
China	Promotion of Power Sector Reform to Unlock Renewable Energy Development	Xiaodong Wang
Dominican Republic	Strengthening Capacity for Commodity Risk Management in the Energy Sector in the Dominican Republic	David Reinstein
ECA	ECA Energy Subsidy Core Group	Ani Balabanyan
ECA	Western Balkans Biomass Heating Study	Jari Vayrynen
Egypt	Egypt Energy Pricing and Subsidy Technical Assistance	Sudeshna Ghosh Banerjee
Egypt	Egypt Gas Regulator Capacity Building	Husam Mohamed Beides
Haiti	Distributional Analyses and Reform Options for Petroleum Price Reforms	Raju Singh
Honduras	Strategic Engagement in the Power Sector	Rigoberto Yepez-Garcia
Indonesia	Local Benefit Sharing for Hydropower Projects in Indonesia	Anh Nguyet Pham
Jamaica	Jamaica Emergency Integrated Resource Plan	Todd M. Johnson
Kazakhstan	Power Market Structure Options for Kazakhstan	Mirlan Aldayarov
Kyrgyz Republic	Tariff Setting Methodology	Ani Balabanyan
LCR	Best Practices for Sustainable Hydropower Development	Ernesto Sanchez-Triana
LCR	Pricing Policies in the Energy Sector	Rigoberto Yepez-Garcia
MNA	Benchmarking Electricity Utilities Performance in MNA	Daniel Camos Daurella
Moldova	Moldova Power Sector Note	Sandu Ghidirim
Philippines	Electric Cooperative Regulatory Efficiency	Alan F. Townsend
Turkey	Energy Reform Milestones and Challenges	Kari J. Nyman



COUNTRY/ REGION	ACTIVITY	TASK MANAGER
<b>GENDER</b>		
Global	Gender and Large Energy Infrastructure	Maria Beatriz Orlando
Global	Gender Equality and Development e-Course	Adyline Waafas Ofosu-Amaah
SAR	Gender Mainstreaming in Energy Sector in South Asia	Chaohua Zhang
<b>RESULTS-BASED FINANCING</b>		
Lao PDR	Background Analysis and Design of Health Impact Results-Based Funding Mechanism for Clean Stove Initiative	Natsuko Toba
<b>ESMAP ONGOING ACTIVITIES</b>		
<b>CLEAN ENERGY</b>		
China	China Electricity Regulation to Integrate Climate Change Considerations	Ximing Peng
China	Defining and Measuring Low Carbon Cities in China	Xiaodong Wang
Djibouti	Geothermal Power Generation Project	Ilhem Salamon
Global	Assessing Climate Risks of Electricity Systems	Xiaoping Wang
Global	Clean Energy Staff Training and Knowledge Platform	Almudena Mateos Merino
Global	Energy Sector Low Carbon Development Operational Support	Pierre Audinet
Global	Geothermal Scale-up Investment Plan	Pierre Audinet
Global	Renewable Energy Resource Mapping	Oliver Knight
Global	Smart Grids Knowledge Exchange Platform	Marcelino Madrigal
Indonesia	Financing Options with Public-Private Partnership for a Medium Hydropower Project in Outer Islands	Anh Nguyet Pham
LCR	Assessment of Geothermal Potential in LCR	Migara Jayawardena
Lesotho	Renewable Energy Resource Mapping Initiative: Lesotho	Daniel Croft
MNA	North Africa Regional Concentrated Solar Power Scale-Up Initiative	Fanny Kathinka Missfeldt-Ringius
SAR	Low Water Growth and Water Efficiency in South Asia	Chandra Shekhar Sinha
<b>ENERGY ACCESS</b>		
AFR	Enhancing Regional Power Trade in Africa	Erik Magnus Fernstrom
Burundi	SE4ALL Technical Assistance for Burundi	Kyran O'Sullivan
Global	Defining and Measuring Access to Energy	Mikul Bhatia
Global	Economics of Household Energy	Venkata Ramana Putti
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
Liberia	SE4ALL Technical Assistance for Liberia	Zayra Luz Gabriela Romo Mercado
Mozambique	SE4ALL Technical Assistance for Mozambique	Mustafa Zakir Hussain
Papua New Guinea	Support the Development of an Electrification Roll-Out Plan	Roberto Gabriel Aiello
Senegal	SE4ALL Technical Assistance for Senegal	Awa Seck
<b>ENERGY EFFICIENCY</b>		
AFR	Energy Efficiency Development in African Cities	Karan Capoor
China	Issues and Options in Monitoring, Verification, and Reporting in Energy Efficiency	Xiaodong Wang
Ethiopia	Ethiopia CFL and Incandescent Lamp Recycling Operation Framework	Raihan Elahi
Global	Tool for Rapid Assessment of City Energy (Deployment & Dissemination)	Pedzi Makumbe
Kyrgyz Republic & Tajikistan	Heating and Energy Efficiency Assessment for the Building Sector of the Kyrgyz Republic and Tajikistan	Ani Balabanyan
<b>ENERGY ASSESSMENTS AND STRATEGIES PROGRAMS (EASP)</b>		
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

COUNTRY/ REGION	ACTIVITY	TASK MANAGER
ECA	Assessment of the Role of Glaciers in Stream Flow from the Pamir and Tien Shan Mountains	Winston Yu
Egypt	Policy Note on Social Accountability in the Egypt Energy Sector	Waleed Saleh I. Alsuraih
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	Model for Electricity Technology Assessment (Deployment Phase)	Bipulendu Narayan Singh
India	Institutional Strengthening of Power Utilities in North-East Region	Rohit Mittal
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
LCR	Energy Sector Diagnostics in LCR	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
Yemen	Yemen Energy Sector Strategy	Jianping Zhao
<b>RESULTS-BASED FINANCING</b>		
Global	Results-Based Funding for Energy Sector Development	Oliver Knight
Indonesia	Support to the Design of an Results-Based Funding Mechanism for the Implementation of the Indonesia Clean Stove Initiative	Yabei Zhang
<b>SIDS DOCK</b>		
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 50 kW	Silvia Martinez Romero
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 Tariffs for Renewable Energy	Silvia Martinez Romero
Vanuatu	Vanuatu Energy Sector Development Project	Kamleshwar Prasad Khelawan

**Table A4.2 | ASTAE Completed, New, and Ongoing Activities**

<b>ASTAE COMPLETED ACTIVITIES</b>		
COUNTRY/ REGION	ACTIVITY	TASK MANAGER
<b>ENERGY ACCESS</b>		
India	Access to Electricity Solutions in South Asia	Sheoli Pargal
Philippines	Electric Cooperatives Reform and Restructuring – Phase II	Alan F. Townsend
<b>RENEWABLE ENERGY</b>		
Bangladesh	Showcasing Results in World Bank Supported Intervention in Bangladesh Rural Electrification	Zubair K.M. Sadeque
Indonesia	Building Innovation Capacity in Clean Energy in Indonesia	Ratna Kesuma
Mongolia	Enhance Awareness of Effort at Electrification of Rural Herders through Solar Home Systems in Mongolia	Peter Johansen
Mongolia	Evaluation of Social Impacts of Mongolia Renewable Energy and Rural Electricity Access Project	Peter Johansen
Nepal	Photovoltaic Technology Workshop in Kathmandu*	Jie Tang
Regional	Renewable Energy Training for South Asia Officials*	Laurent Durix
Vietnam	Cumulative Impact Assessment on Small Hydropower Projects on River Cascades	Franz Gerner

\* Implemented and completed in FY2014

## ASTAE NEW ACTIVITIES

COUNTRY/ REGION	ACTIVITY	TASK MANAGER
<b>ENERGY ACCESS</b>		
Indonesia	Indonesia Clean Stove Initiative - Piloting Biomass Cookstove Markets - RBF Component	Yabei Zhang
Indonesia	Indonesia Clean Stove Initiative - Piloting Biomass Cookstove Markets - MEMR Component	Yabei Zhang
Regional	Development of Private Sector Models for Off-Grid Electrification in South Asia	Sandeep Kohli
Regional	EAP-Clean Stoves Initiative Forum	Yabei Zhang
<b>ENERGY EFFICIENCY</b>		
Indonesia	Large Enterprises Energy Efficiency Project	Dhruva Sahai
Philippines	Philippines ERC Capacity Strengthening	Alan F. Townsend
Vietnam	Sustainable Urban Energy and Emissions Planning (SUEEP) – Phase 3: Energizing Green Growth of Da Nang City in Vietnam	Dejan R. Ostojic
Vietnam	Renewable Energy Integration and System Efficiency and Reliability Enhancement	Peter Johansen
<b>RENEWABLE ENERGY</b>		
Bangladesh	Household Energy in South Asia Region	Zubair K.M. Sadeque
India	PREPARE for energy access in UP and Bihar (TF081759)	Ashish Khanna
Indonesia	Support to Integrated Catchment Program for Upper Cisokan Pumped Storage Project	Peter Johansen
Indonesia	Support for Preparation of Indonesia Hydropower Project	Anh Nguyet Pham
Nepal	Scaling up Decentralized Energy Access in Nepal	Priti Kumar
Tuvalu	Preparation and early implementation support for the Tuvalu Energy Sector Development Project	Roberto Gabriel Aiello
Vietnam	Capacity Building Support to Vietnam Pumped Storage Power Program	Franz Gerner
Lao PDR	Strategic Advisory for the Lao Power Sector Reform	Sombath Southivong
Regional	Impacts of Climate Change on Water	Pravin Karki
Regional	EAP-SAR Renewable Energy and Energy Efficiency South-South Knowledge Exchange	Dejan R. Ostojic
Regional	Renewable Energy and Energy Efficiency Knowledge Exchange for Pacific Island Countries	Roberto Gabriel Aiello

## ASTAE ONGOING ACTIVITIES

<b>ENERGY ACCESS</b>		
Indonesia	Clean Stove Initiative, Support to the Emergence of Scalable Biomass Stoves Markets	Yabei Zhang
Indonesia	Integration of Social Dimension in Energy Access Projects	Helene Monika Carlsson Rex
PNG	Assessing the Key Elements for the Development of a Third Party Access Code for the Transmission and Distribution Networks in Papua New Guinea	Roberto Gabriel Aiello
Regional	Fundamentals of an Energy Roadmap in Small Island Developing States – Experiences from the Pacific	Roberto Gabriel Aiello
Regional	Using Satellite Imagery to Monitor Progress of Rural Electrification	Kwawu Mensan Gaba
Lao PDR	Clean Stove Initiative Phase 2 (Bank executed part)	Natsuko Toba
Vietnam	Strategic Options for Enhanced Financial Performance of Vietnam's Electricity Companies	Joel J. Maweni
<b>ENERGY EFFICIENCY</b>		
Pakistan	Natural Gas Loss Reduction	Bjorn Hamso
Regional	Greenhouse Gas Emission Mitigation in Road Transport: Toolkit Implementation and Life-Cycle Analysis	Holly Krambeck

<b>COUNTRY/ REGION</b>	<b>ACTIVITY</b>	<b>TASK MANAGER</b>
Regional	Mitigation Options for Short-Lived Climate Pollutants in South Asia	Chandra Shekhar Sinha
<b>RENEWABLE ENERGY</b>		
Indonesia	Geothermal Power Development Program II	Peter Johansen
Indonesia	Indonesia - Renewable Energy Access Improvement	Dhruva Sahai
Maldives	Clean Energy Development and Regulatory Support	Abdulaziz Faghi
Nepal	Support to Sustainable Hydropower Development in Nepal	Pravin Karki
Pakistan	Strategy to Scale-up Renewable Energy: Pakistan	Mohammad Saqib
Philippines	Philippines Renewable Energy policy Implementation Support	Alan F. Townsend
Regional	Solar Market Development for Off-grid Access in Pakistan and Afghanistan	Mohua Mukherjee
Solomon Islands	Tina River Hydropower Development Project: Benefit Sharing and Technical Quality Assurance	Joel J. Maweni
Tonga	Implementation Support for the Tonga TERM-IU	Roberto Gabriel Aiello

## ANNEX V | PUBLICATIONS, FY2014

Table A5. 1 | ESMAP Publication, FY2014

ISBN, PUB. NO., OR PROJECT ID	COUNTRY/ REGION	TITLE	AUTHOR/PTL
WB Directions in Development 978-1-4648-0093-1	AFR	<a href="#">From the Bottom Up: How Small Power Producers and Mini-Grids Can Deliver Electrification and Renewable Energy in Africa</a>	Bernard Tenenbaum, Chris Greacen, Tilak Siyambalapatiya, James Knuckles
P131804	AFR	<a href="#">Harnessing African Natural Gas: A New Opportunity for Africa's Energy Agenda?</a>	David Santley, Robert Schlotterer, Anton Eberhard
Joint Study	AFR	<a href="#">Productive Use of Energy (PRODUSE): Impact Monitoring and Evaluation of Productive Electricity Use, An Implementation Guide for Project Managers</a>	GIZ-ESMAP
Joint Study	AFR	<a href="#">Productive Use of Energy (PRODUSE): Measuring Impacts of Electrification on Small and Micro Enterprises in Sub-Saharan Africa</a>	GIZ-ESMAP
P129835	China	<a href="#">Applying Abatement Cost Curve Methodology for Low Carbon Strategy in Changning District, Shanghai (vols. 1 &amp; 2)</a>	Susan Bogach (consultant), Xiaodong Wang
P133200	ECA	<a href="#">Scaling Up Energy Efficiency in Buildings in the Western Balkans: The Residential Energy Efficiency Program in Lithuania, Case Study (English)</a>	Viktoras Sirvydis
P131421	Ghana	<a href="#">Energizing Economic Growth in Ghana: Making the Power and Petroleum Sectors Rise to the Challenge</a>	Sunil Mathrani, David Santley, Richard Hosier, Fabrice Bertholet, et al.
ESMAP Technical Report (001/12) 978-7-5608-5304-8	Global	<a href="#">A Primer on Energy Efficiency for Municipal Water and Wastewater Utilities</a> (Chinese)	Feng Liu
Live Wire Knowledge Series (No. 2014/16)	Global	<a href="#">Capturing the Multi-Dimensionality of Energy Access</a>	Mikul Bhatia, Nicolina Angelou
Administrative Report	Global	<a href="#">ESMAP 2013 Annual Report</a>	Nick Keyes
P127172 ESMAP Technical Report(002/12)	Global	<a href="#">Guide Géothermique: Planification et Financement de la Production D'Énergie</a> (French, online only)	Magnus Gehringer, Victor Loksha
Energy & Mining Sector Board Discussion Paper Series No. 27	Global	<a href="#">Household Energy for Cooking: Project Design Principles</a>	Koffi Ekouevi
P128995 ESMAP Knowledge Series (016/14)	Global	<a href="#">International Experience with Open Access to Power Grids: Synthesis Report</a>	Victor Loksha, Ashley Brown, Eduardo Ellery, Enrique Crousillat, Budak Dilli; Rauf Tan; EMI, AF-Mercados
P127172 ESMAP Technical Report (002/12)	Global	<a href="#">Manual de Geotermia: Como Planificar y Financiar la Generación de Electricidad</a> (Spanish)	Magnus Gehringer, Victor Loksha
Brochure	Global	<a href="#">META: Model for Electricity Technology Assessment</a>	Victor Loksha
WB Study 978-0-8213-9762-6	Global	<a href="#">Revisiting Public-Private Partnerships In The Power Sector</a>	Maria Vagliasindi

ISBN, PUB. NO., OR PROJECT ID	COUNTRY/ REGION	TITLE	AUTHOR/PTL
	Global	<a href="#">Urban Transport Data Analysis Tool (UT-DAT): User's Manual</a>	O.P. Agarwal, Gouthami Padam, Aroha Bahuguna, Salvador Pena
ESMAP Knowledge Series (017/14)	Guidance Note	<a href="#">Driving Energy Efficiency Markets through Municipal Procurement: Mayoral Guidance Note #1</a>	Jas Singh
P119536	India	<a href="#">Development of Local Supply Chain: A Critical Link for Concentrated Solar Power in India (Summary)</a>	Nataliya Kulichenko, Ashish Khanna
P119536	India	<a href="#">Development of Local Supply Chain: The Missing Link for Concentrated Solar Power Projects in India</a>	Nataliya Kulichenko, Ashish Khanna
WB Directions in Development 978-1-4648-0233-1	India	<a href="#">More Power to India: The Challenge of Electricity Distribution</a>	Sheoli Pargal, Sudeshna Ghosh Banerjee
P119536	India	<a href="#">Paving the Way for a Transformational Future: Lessons from Jawaharlal Nehru National Solar Mission Phase</a>	Ashish Khanna, Kanv Garg
ESMAP Knowledge Series (015/14)	Indonesia	<a href="#">Scaling-Up Renewable Geothermal Energy in Indonesia</a>	Migara Jayawardena, M. Baher El-Hifnawi, Gangadhar Shukla, Yan Li
P133446	Kyrgyz Republic	<a href="#">Power Sector Policy Note for the Kyrgyz Republic</a>	Ani Balabanyan, Jessica Merrill, Denzel Hankinson,
P128535	LCR	<a href="#">Planning for Higher Oil Prices: Power Sector Impact in Latin America and the Caribbean</a>	Rigoberto Ariel Yeppez-Garcia, Luis San Vicente Portes, Luis Enrique Garcia
P132533	Mexico	<a href="#">Leveling the Field for Renewables: Mexico's New Policy Framework for Incorporating External Costs of Electricity Generation</a>	
P127726	Senegal	<a href="#">Baseline and Feasibility of Alternative Fuels in Senegal</a>	Mattia Vianello (Practical Action Consulting), Ewan Bloomfield, Abdou Ndour, Secou Sarra, Yacine Diagne Gueye, Smail Khennas, Hilawe Lakew,
P127726	Uganda	<a href="#">Results-Based Financing for Clean Cookstoves in Uganda</a>	IMC Worldwide for Africa Clean Cooking Energy Solutions (Srilata Kammila)

## PEER-REVIEWED PAPERS SUPPORTED BY ESMAP

Vogt-Schib, Adrien, and Stephane Hallegatte. 2014, March. Marginal Abatement Cost Curves and the Optimal Timing of Mitigation Measures. *Energy Policy*, 66: 645-653.

Adrien Vogt-Schilb, and Stéphane Hallegatte, Christophe de Gouvello. 2014, March. Long-Term Mitigation Strategies and Marginal Abatement Cost Curves: A Case Study on Brazil. Policy Research Working Paper Series 6808. The World Bank.

Sunil Malla, and Govinda R Timilsina. 2014, June. Household Cooking Fuel Choice and Adoption of Improved Cookstoves in Developing Countries: A Review. Policy Research Working Paper Series 6903. The World Bank.

Table A5.2 | ASTAE Publications, FY2014

COUNTRY/ REGION	TITLE	AUTHOR/PTL
India	<a href="#">Lighting Rural India: Experience of Rural Feeder Segregation Across States</a>	Ashish Khanna, Mohua Mukherjee, Sudeshna Ghosh Banerjee, Kavita Saraswat, Mani Khurana
Mongolia	<a href="#">Mongolia: Development Impacts of Solar-Powered Electricity Services</a>	Peter Johansen, Ivy Cheng, Roberto La Rocca
Indonesia	<a href="#">Geothermal Resource Risk in Indonesia: A Statistical Inquiry</a>	Subir K. Sanyal, James W. Morrow, Migara S. Jayawardena, Nouredine Berrah, Shawna Fei Li, Suryadarma
Vietnam	<a href="#">Cumulative Impacts and Joint Operation of Small-Scale Hydropower Cascades: Case Studies for Selected River Basins in Northwest Vietnam</a>	Franz Gerner, Ky Hong Tran, Thi Ba Chu, Lien Thi Bich Nguyen
China	<a href="#">China: Accelerating Household Access to Clean Cooking and Heating</a>	Yabei Zhang, Yun Wu, Xiaofu Chen, Guangqing Liu