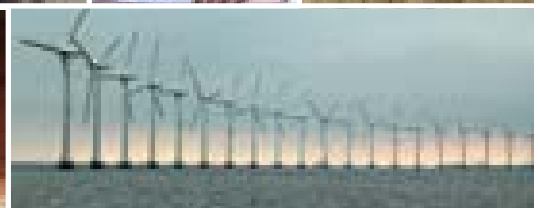
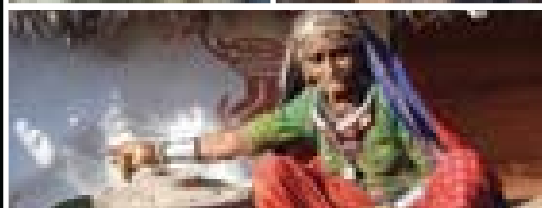


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2010

ANNUAL REPORT



MISSION

The Energy Sector Management Assistance Program (ESMAP) is a global knowledge and technical assistance program administered by the World Bank. Its mission is to assist low- and middle-income countries to increase know-how and institutional capacity to achieve environmentally sustainable energy solutions for poverty reduction and economic growth.

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For more than 25 years, the ESMAP program has been assisting low- and middle-income countries adopt environmentally sustainable energy solutions that support economic growth and reduce poverty. In 2010, our actions were guided by ESMAP's Strategic Business Plan 2008–13, which identifies three priorities: energy security, energy access, and climate change.

With infrastructure financing reduced as a result of the global recession, many low-income countries are struggling to meet rising demand for energy services. At the same time, climate change presents new challenges to generate energy from low-carbon sources and assess climate impacts on energy systems, while also using energy more efficiently.

ESMAP provides advice to countries seeking energy solutions in this complex and rapidly-changing terrain. It provides methodologies countries can use to analyze their current energy resource endowments and consumption patterns, as well as identify potential energy sources. The program also acts as a broker, connecting world-class experts with decision-makers charged with charting new energy paths. For many countries, this means bigger investments in renewable sources of energy—wind, solar, geothermal, and hydropower—and energy efficiency. ESMAP is supporting this transformation through analytical work such as power sector vulnerability assessments; energy efficiency case studies; transmission systems planning; and advice on procurement

and regulatory reform, among others. Our goal is to provide clients with a bridge to a sustainable energy future.

This year, a review of ESMAP's portfolio provided a scorecard on results and impacts on activities carried out since fiscal year 2009:

- ESMAP has supported more than 200 analytical and advisory activities, with about US\$50 million in grants disbursed.
- Seventy ESMAP activities influenced about US\$16 billion in World Bank Group (WBG) financing for energy projects in developing countries.
- ESMAP activities have underpinned scale-up programs for concentrating solar power in the Middle East and North Africa and in India, and for wind power in Mexico, several Investment Plans for the Climate Investment Funds, and transformative country sector dialogues in China, Egypt, India, Philippines, Turkey, and Vietnam.
- ESMAP has supported Lighting Africa in transforming the market for off-grid lighting products and the development of

sector-wide investment prospectuses in Kenya and Rwanda that mobilized over US\$1 billion for the two countries' energy access programs.

- Over 30 countries developed energy strategies, policies, institutions, or new legislation and regulations based on analyses and recommendations provided by 38 ESMAP activities.
- In 40 countries, ESMAP's support strengthened their capacity to implement national programs to improve energy sector performance and governance, increase access to reliable modern energy services, renewable energy deployment, and energy efficiency investments.
- ESMAP has pioneered planning tools for low carbon and climate resilient energy sector development, as well as a computer-based diagnostic tool for city authorities to assess

their energy efficiency performance and prioritize investments.

Over the past year, we have focused on building longer-term strategic partnerships with countries and regions to achieve "win-win-win" energy solutions that are at once pro-poor, pro-growth, and climate-resilient. This task requires innovation, partnerships, and responsiveness to client countries.



Rohit Khanna

Program Manager

Energy Sector Management Assistance Program





HOW ESMAP WORKS

ESMAP's Strategic Business Plan for 2008–2013 identifies its thematic priorities as energy security, energy access, and climate change.

ESMAP provides analytical services, technical assistance, capacity-building and project development advice to countries seeking solutions to address any or all of these priorities. The program draws on the expertise of energy economists, engineers, policy analysts, and financial specialists from the World Bank, as well as other organizations, public and private, to provide the best available analyses and recommendations tailored to clients' needs.

ESMAP is the primary source of funding in the World Bank for analytical and advisory activities within the energy sector. Each year, in partnership with others, ESMAP supports analytical studies that lead to development of national, sub-national and regional energy projects and programs that are often later supported by World Bank financing. Much of the Bank's energy sector policy dialogue and many lending programs are enabled, in part, by ESMAP's "upstream" support. Since its inception in 1983, ESMAP has supported more than 800 activities in over 100 countries.

ESMAP'S CORE FUNCTIONS IN 2010

- A think tank, ESMAP has sponsored high-quality advice to policymakers on efficient energy solutions.
- A convening body, ESMAP has organized and supported knowledge-sharing activities and training events.
- A capacity-builder, ESMAP has developed toolkits and learning materials that equip clients to design and manage energy sector programs.
- A partner, ESMAP has provided timely, focused technical assistance to resolve upstream project design issues.

ESMAP is administered by the World Bank and governed by a Consultative Group (CG) composed of representatives of Australia, Austria, Canada, Denmark, Finland, France, Germany, Iceland, the Netherlands, Norway, Sweden, the United Kingdom, and the World Bank.

A Technical Advisory Group (TAG) of internationally recognized experts selected by the CG provides informed and independent opinions to the CG about strategic directions and thematic priorities for ESMAP while highlighting emerging global issues in the energy sector likely to affect ESMAP's clients.

CONSULTATIVE GROUP MEMBERS FISCAL YEAR 2010

Australia	Germany
Austria	Iceland
Canada	Norway
Denmark	Sweden
Finland	The Netherlands
France	United Kingdom

Cosponsoring Organization
The World Bank Group

TECHNICAL ADVISORY GROUP MEMBERS FISCAL YEAR 2010

Elizabeth Cecelski
Amitav Rath
Winfried Rijssenbeek

oil imports relative to national income are especially vulnerable to the destabilizing effects of oil price shocks. In the most vulnerable countries, sustained high fuel prices threaten to roll back gains in poverty reduction.

GLOBAL ENERGY CHALLENGES

Energy Security

Turmoil in the world's energy and financial markets has pushed energy security to the top of the policy agenda for many countries. Steep increases in fossil fuel prices over the past decade have constrained energy supply for many nations, taking a toll on energy-intensive industries and playing havoc with balance of payments. Oil—and energy prices in general—are expected to remain at historic highs, while long-term price outlooks are uncertain. Low-income countries with large net

To ensure long-term energy security, countries must invest in energy efficiency, renewable energy technologies, diversification of supply, and improved sector governance. A key requirement is an effective policy and institutional framework, including efficient energy pricing, sound planning and sector regulation.

Long-term energy security depends on timely investments. However, the recent downturn in global credit markets has jeopardized countries' ability to meet energy investment targets, as the availability and cost of financing has grown uncertain. Although credit market conditions improved



in 2010, international financial markets remain volatile due to high government debt levels in several high-income countries. As a result, in some countries, energy projects foundered as financiers withdrew or raised financing charges to cover increased risks. Meanwhile, other projects are subject to more stringent approval thresholds by lenders. Some commercial lenders are withdrawing from energy project loan syndication because of capital constraints, while others seek to preserve their capital base, to remain sufficiently liquid and meet reserve requirements. In the face of these obstacles, some ESMAP clients may face the prospect of postponing or even cancelling essential investments in the energy sector.

Energy Poverty

About 1.4 billion of the world's people still lack access to electricity and about 2.7 billion rely on biomass—wood, charcoal, crop waste and dung—for cooking. Inevitably, the choking smoke from indoor wood burning causes respiratory diseases such as pneumonia and emphysema, killing over 1.6 million people a year, most of them women and children. ESMAP is working across sectors to respond to the need for expanding access to electrify and to promote other productive uses of electricity supply.

Access to modern, affordable and reliable energy services is essential to achieving the Millennium Development Goals. Without electric light, heat and appliances, access to other essential services and conditions — water, sanitation, nutritious food, safe childbirth, schools and study space— is impaired. Innovative programs and incentives are needed to develop and deliver energy solutions that bridge this access gap. In particular, many developing countries require assistance in developing strong institutions for the design and implementation of energy initiatives, durable financial mechanisms, and transparent legal and regulatory frameworks that encourage public-private partnerships.

Climate Change

Addressing climate change is critical to development and poverty reduction. Recently completed and ongoing analytical work by the World Bank confirms that the poorest countries stand to suffer the earliest and the most from the effects of climate change. In the energy sector, energy used for transport is a major source of greenhouse gas (GHG) emissions, accounting for about 65 percent of emissions worldwide. In the course of this century, as developing countries raise living standards, global energy demand is expected to more than triple. This rising energy demand must be met by a concerted effort to transform energy systems to sustainable, low-carbon sources, while also making more efficient use of energy.

Mitigation and Adaptation

Although energy sector practitioners have recognized the potential impacts of climate change, their response has focused mainly on GHG mitigation rather than on the risks climate change poses for energy services and resources. The fact is that climate change will directly affect energy resource endowment, infrastructure, and transportation, while indirectly affecting water and agriculture in multiple and complex ways within the energy sector. To tackle and—“manage the unavoidable”—involves considering the impact of climate change on existing and planned energy infrastructure, to avoid locking in unsustainable practices today through investments in long-lived infrastructure for the future.

To achieve a concerted effort to assist its clients, ESMAP has produced energy assessments focusing on the key components of successful energy policies and practices. Chapter 2 explores these and other ways in which ESMAP has helped developing nations make better-informed policymaking.



As ESMAP's clients map out their energy futures, they seek fresh ideas to shift to a low carbon, energy-efficient development path. They must also cope with the effects of the global credit crunch, volatile energy prices, and continuing climate variability. ESMAP's energy assessments focus on the key components of successful energy policy and practices. ESMAP mobilizes financial, technical, analytical and capacity-building support for developing countries in their efforts to design and implement energy policies that promote sustainable growth.

POWER SECTOR VULNERABILITY ASSESSMENTS

Since 2009, ESMAP has supported rapid diagnostic assessments of the short- to medium-term effects of the global financial crisis on key investments in the power sector in 19 developing countries aimed at providing informed strategic responses from the WBG. Each country assessment defines how the crisis affects the power sector, identifies measures that could counter adverse effects, and proposes options for implementing those measures—including filling potential financing gaps.

These assessments combine research and analysis of economic and financial data with wide-ranging interviews and surveys of government agencies, project sponsors, project financiers, and other stakeholders. Each assessment reviews the country's financing needs, examines investment plans, and proposes specific

interventions. Proposals include a plan to close the financing gap for power sector investment programs, and identify high-priority projects suitable for WBG support.

Although most developing countries have been affected by the financial crisis, the severity of its impact on the power sector varies from country to country, depending on underlying macro-economic conditions, and the level of sector reforms achieved before the crisis. For example, in the Kyrgyz Republic, the financial crisis has compounded long-running systemic challenges in the power sector, creating "crisis-within-the-crisis" conditions. While the credit crunch and economic contraction has dampened demand for electricity—providing temporary relief from permanent power shortage—these factors also constrained urgently-needed financing.

For some countries, vulnerability assessments have revealed large funding gaps. For instance,

in Ukraine, the estimated power sector investment needs for the period 2009–2015 were estimated at US\$38 billion, of which only US\$7 billion had been covered by the end of 2010. Particularly, this assessment calls for careful prioritization of the investment program and provides policymakers with a systematic framework of selection criteria. Various options, including private sector financing, are offered to fill the massive financing gap. In Egypt, the vulnerability assessment also identified a big financing gap in the medium term: the projected annual investment requirements show a steep increase from US\$0.5 billion in 2009 to US\$3 billion between 2010 and 2017. As a result, several priority projects identified in the assessment are being prepared for World Bank financing.

While the financial crisis has created uncertainty about the availability and cost of medium-term financing for power sector investments, it is also true that the financial performance of most national electric utilities has deteriorated as demand has dropped and tariffs have not been properly adjusted due to social or political considerations. Higher budget deficits have constrained public sector financing, resulting in cancelled and/or postponed projects. Debt financing now demands harder terms: higher interest rates, shorter maturities, more stringent approval thresholds and guarantee requirements. Equity financing has been the hardest hit source of financing for private investors. And, because public sector financing on this scale is limited by severe fiscal pressures, the vulnerability assessments provide national policymakers with an enabling policy framework to attract private investment through new mechanisms, including debt capital market instruments, such as corporate bonds and debentures, as has been the case in Egypt.

LOW CARBON DEVELOPMENT IN BRAZIL, INDIA, AND MEXICO

ESMAP has worked with seven emerging economies—Brazil, China, India, Indonesia, Mexico,

Poland, and South Africa—to assess their low carbon development priorities and identify GHG mitigation opportunities. In-depth studies undertaken by ESMAP in each of these countries have identified the financial, technical and policy requirements for transitioning to a lower carbon development path. The studies—developed in collaboration with governments, the private sector and other stakeholders—address carbon reduction opportunities in energy, industry, transport, and natural resource management. Another component of these in-depth studies is the integration of policy and implementation advice.

The result in each study is a framework for evidence-based decision-making that can support strategic, sustainable, and cost-effective low carbon growth, harness climate finance opportunities, while also increasing national competitiveness and know-how. This fiscal year, studies were completed for Brazil, India and Mexico.

The ESMAP study in Brazil revealed that GHG emissions could be reduced by up to 37 percent over the next 20 years while maintaining its development goals without negatively affecting growth or jobs. The study identified reducing deforestation as Brazil's most effective potential emission reduction measure; it concluded that deforestation could be reduced from its 1996-2005 average level by more than 80 percent by 2017.

In contrast, Mexico is already implementing measures to reduce GHG emissions, but it is also Latin America's largest consumer of fossil fuels. The case study identifies 40 short-term, low-cost actions to reduce emissions in transport, power generation, oil and gas, agriculture and forestry, as well as a host of energy-efficiency measure. The study also identified regulatory, institutional, and market barriers to implementation that prevent many interventions from occurring rapidly or at scale.

Different is the case in India, facing triple constraints of availability of reliable and affordable energy sources, financing, and institutional

capacity, including availability of adequate human resources—to carry out the ambitious goals outlined in National Action Plan for Climate Change (NAPCC). The low carbon case study supported by ESMAP offered an opportunity for policy-makers to reassess the validity of sector plans and other proposed actions in the NAPCC. The case study helped improve policymakers' analytical capacity to identify low carbon growth opportunities through a collaborative effort to develop an engineering-style model that was used as a consensus-building and planning tool to analyze key sectors.

One of the major policy impacts of the India low carbon growth study was bridging the “dialogue and knowledge gap” between policy-makers at the national and international level. In essence, the study shed light on what “was, is and will ever be possible” in the context of India when development and implementation constraints are objectively integrated.

WIND ENERGY IN COLOMBIA

Renewable energy sources could help Colombia maintain the low carbon footprint of its power sector, while producing enough power to meet twice the country's energy demands. An ESMAP study concluded that wind power is a realistic renewable energy alternative in Colombia, given its technical maturity, its low cost relative to other sources, its potential, and the country's experience with wind power. But the study also concluded that current regulatory and financial conditions in Colombia reduce the competitiveness of wind projects, including some currently under consideration. The study, prepared in consultation with experts in the sector, outlined policy options to remove existing barriers to investment in wind power. Among the instruments proposed are long-term, low interest financing instruments, and regulatory changes. The last instrument includes reliability payments paid by governments or regulators to power

companies to cover their costs during periods of low demand, or low wind. Such payments, the report explains, can be calculated through formulas that measure and illustrate how wind complements the energy source mix in Colombia.

CONCENTRATED SOLAR POWER INITIATIVE IN MIDDLE EAST AND NORTH AFRICA

Concentrating solar power (CSP) could meet up to seven percent of the world's projected power needs in 2030 and about 25 percent in 2050. CSP is of particular interest to utilities considering renewable sources because it is seen as less expensive, more scalable and—because it can store heat—making it continuously available, unlike photovoltaic solar power.

Following a regional assessment of issues involved in realizing the potential for CSP use in the Middle East and North Africa, ESMAP is supporting a region-wide CSP Scale-Up Initiative. The region's abundant sunshine, low precipitation and vacant land near transmission lines are obvious competitive assets. Extensive consultations and capacity-building activities in Algeria, Egypt, Jordan, Morocco, and Tunisia are helping these countries leverage resources to assess the feasibility of CSP projects, and consider investing in them.

The success of a regional CSP initiative such as this calls for local manufacturers. Despite favorable production costs and abundant raw materials, challenges remain. Such as pricing regimes favoring conventional thermal power generation. To mitigate costs, ESMAP has provided guidance on sustainable incentive schemes and regulatory frameworks. These incentive schemes and regulatory frameworks must be integrated into broader national energy policies and strategies for industrial development. An initiative such as the creation of technology parks, regional platforms, and joint ventures could boost local manufactures,



attracting expertise, helping overcome barriers to innovation and expanding access to information and investors. Another area for development is in workforce education, and general access to knowledge, both of which are essential to development of local manufacturing.

ESMAP has also cited CSP storage, dispatchability, output guarantees, long-distance transmission, and grid interconnection as areas requiring more research and development. If international CSP manufacturers invest locally, ESMAP estimates the impact on the region's growth domestic product (GDP) could be as high as US\$14.3 billion and the impact on foreign trade as high as US\$3.3 billion—leading to about 180,000 new jobs.

REGIONAL POWER SECTOR INTEGRATION

Regional integration of the power sector across several developing countries can achieve economies-of-scale that enhance long-term energy security, as well as provide reliable, affordable electricity for industry, agriculture and household consumers. Increased electricity cooperation and trade that results from regional power sector integration (RPSI) can also attract increased investment, facilitate public financing, enable greater renewable energy penetration, and create synergies by sharing complementary resources. But integration is often complex, requiring extensive negotiations to align investment decisions, reconcile regulatory environments, build regional

institutions and find financing. These challenges have been complicated by the financial crisis, and caused delays in the development of several RPSI schemes. Despite the slow-down, however, no RPSI schemes have been abandoned or reversed.

Twelve case studies of RPSI projects were completed in fiscal year 2010 under ESMAP's Regional Energy Integration Strategies Program. These studies addressed bilateral trade agreements covering energy, multi-country trading regimes under regional rules, and fully-integrated competitive transnational markets. Together, they provide a series of in-depth policy lessons, drawn from diverse experiences on how to solve energy challenges through regional cooperation.

ESMAP's report, *Regional Power Sector Integration, Lessons from Global Case Studies and a Literature Review*, examines how integration projects deal with key aspects, such as finding the right level of integration, optimizing investment across a region, building appropriate institutions, and harmonizing technical and regulatory differences. Demonstrating what has worked and what hasn't in distinct regions, the report presents practical lessons to help policy-makers identify solutions (Box 2.1). Among them:

- Achieving full integration can take decades, but many factors—including institutional capacity—can speed the move from intermediate to higher levels of integration.
 - Optimizing generation and transmission investment on a regional basis can substantially reduce costs.
 - Explicit benefit-sharing mechanisms, such as allocating shares in cross-border projects, may help overcome reluctance to implement regional plans.
 - Although regional institutions are vital, no single institutional form is appropriate for all integration schemes.
- Because the strongest institutions grow organically from local initiatives, countries should explore opportunities to build on existing arrangements before creating new institutions.
 - Competitive power markets are not a prerequisite; RPSI can accommodate different degrees of power sector reform through careful design.
 - Enhanced RPSI can increase renewable energy penetration, except for non-hydro-power energy sources at low penetration levels.

BOX 2.1: FAILURE TO REALIZE REGIONAL POWER INVESTMENT GAINS | THE CASE OF THE SOUTHERN AFRICAN POWER POOL (SAAP)

The Southern African Power Pool (SAPP) has nine interconnected operating members (Botswana, Democratic Republic of the Congo, Lesotho, Mozambique, Namibia, South Africa, Swaziland, Zambia, and Zimbabwe) and three nonoperating members (Angola, Malawi, and Tanzania). SAPP's 2025 Pool Plan requires an investment of US\$89 billion to construct 57,000 MW of new generation capacity, plus funding for transmission lines. This cost is US\$48 billion or 45% less than the sum of the national power development plans for meeting the projected demand. This saving should galvanize SAPP members to implement the regional investment strategy, but experience is not encouraging.

SAPP members ignored the previous Pool Plan, announced in 2001, because the region had surplus capacity. By 2007–08, however, the surplus had been exhausted and member countries suffered blackouts and load shedding. The same fate could befall the new Pool Plan. Because of regional shortages, countries are now investing in electricity but they are keener than ever to pursue their national investment strategies. The lack of adequate reserves is expected to last at least until 2013.

ACTION PLAN FOR ENERGY ACCESS SCALE-UP IN AFRICA

Many African countries face a chronic electricity crisis, combining low access, frequent blackouts, and high costs. With coverage reaching only a quarter of the population continent-wide, Africa's electricity gap undermines business potential, reduces productivity and impairs delivery of public services including health care, transport and education. Economic growth and human development have been compromised as a result. Bridging Africa's electricity gap demands urgent action.

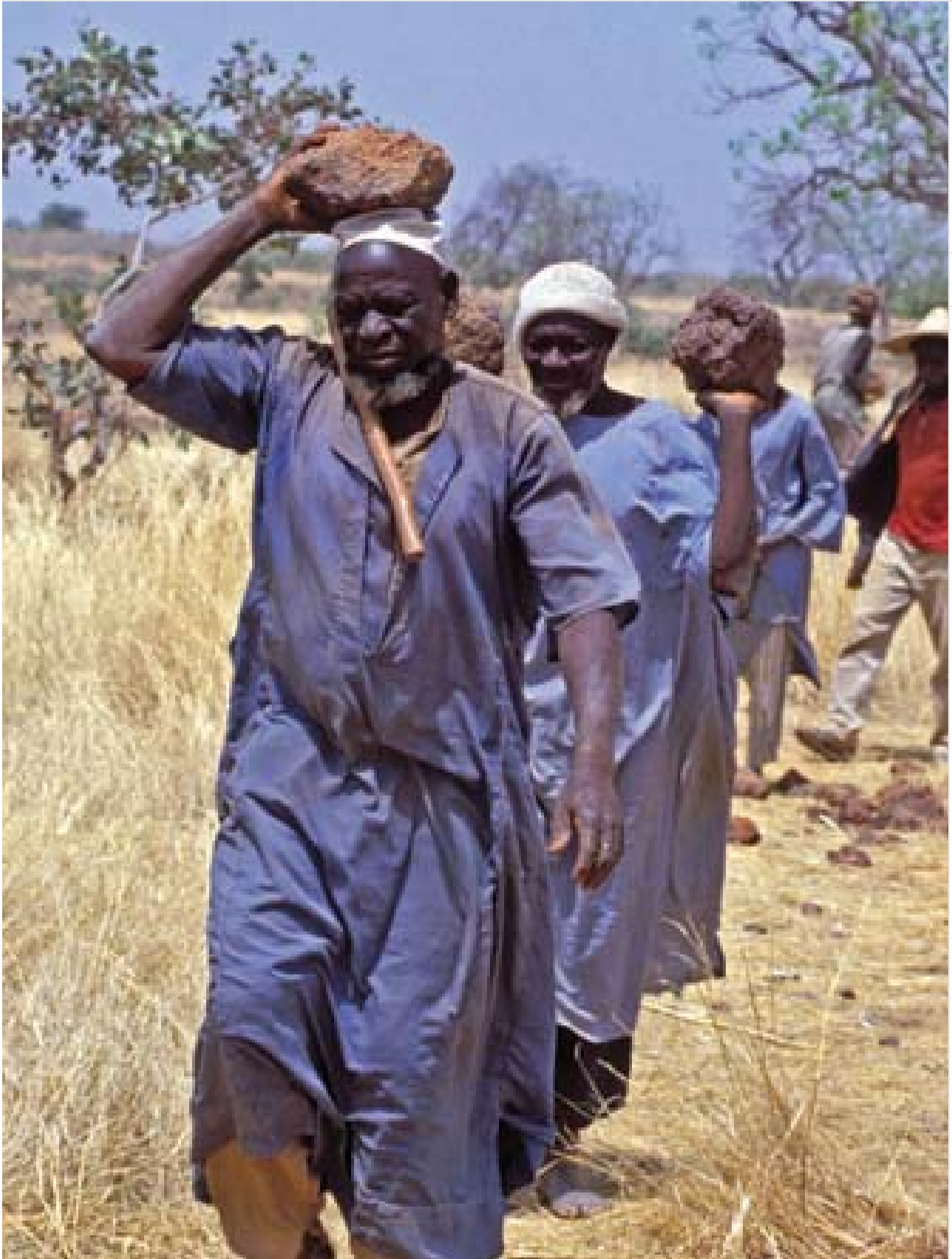
ESMAP and the Africa Renewable Energy Access Program (AFREA), a joint initiative of ESMAP and the World Bank's Africa energy unit, assisted Kenya and Rwanda in developing comprehensive, sector-wide programs to expand access to electricity by using innovative planning tools, including geospatial access planning, a least-cost financing program, and a sector financing model. Using a sector-wide approach (SWAp), governments in both countries developed an investment prospectus, underpinned by policy and institutional reform, with stretch targets for improved reliability, connectivity, and supply of electricity (Box 2.2).

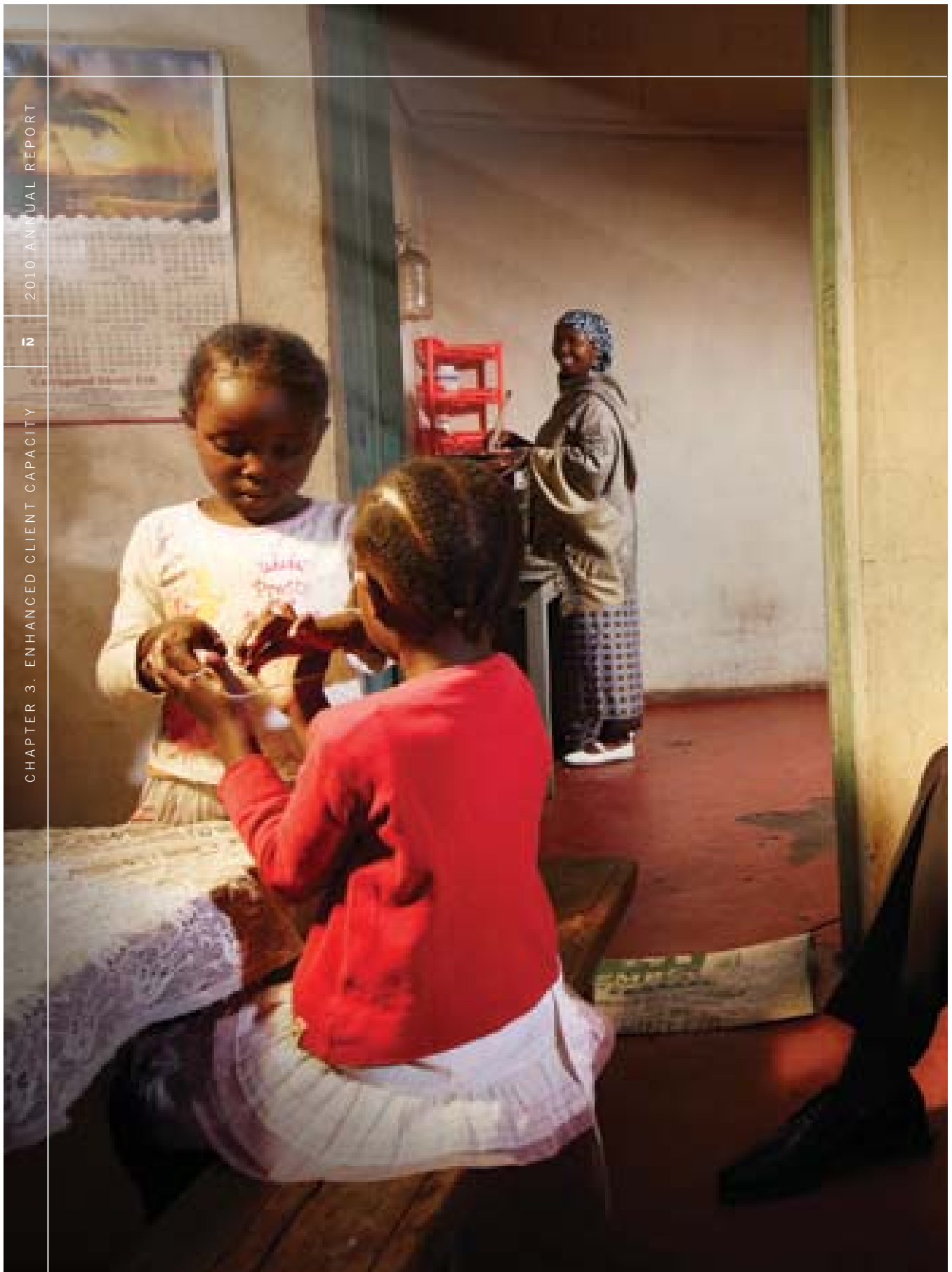
BOX 2.2: ESMAP AND ENERGY ACCESS: OBSERVABLE RESULTS AND OUTCOMES

Informed Bank Lending: As a result of the ESMAP-AFREA support for Implementing the Action Plan for Energy Access Scale-Up in Africa, a World Bank-financed Rwanda Electricity Access Scale-up and Sector-Wide Approach Development Project was approved, including a US\$51 million National Grid rollout component to increase access to electricity for areas identified in the ESMAP-funded National Electricity Access Program (NEAP), as suitable for grid connection. Similarly, the World Bank-financed Kenya Electricity Expansion Project, approved in May 2010, has a US\$34 million subcomponent to electrify rural schools, health clinics, and public buildings identified as priority loads.

Informed Bank Strategy: The activity introduced a sector-wide approach in preparing national electricity access programs in Kenya and Rwanda. The subsequent World Bank Rwanda Country Assistance Strategy includes support for energy sector reform, comprising an energy sector-wide approach to expand access. Similarly, a 2010-2013 World Bank Country Partnership Strategy for Kenya includes a commitment to support a sector-wide approach in multiple sectors, including energy.

Mobilization of Funds from Development Community: At a donors' round table held on March 23, 2009, in Kigali, Rwanda, partners and sector institutions pledged contributions totaling US\$228 million to implement the ESMAP-AFREA-supported, five-year energy access program for Rwanda. Similarly in Kenya, the prospectus was presented on October 22, 2009 at a donor conference, where development partners confirmed the funding of US\$1.5 billion for the program.





Developing countries are working to provide their citizens with affordable and reliable energy services in an environmentally sustainable way. ESMAP's goal is to help countries build institutional capacity and know-how to develop and implement policy reform measures and robust strategies to meet short-, medium, and long-term challenges to their national energy systems.

RENEWABLE ENERGY MARKET REFORM IN PHILIPPINES

Through the Renewable Energy Market Transformation Initiative (REMTI), ESMAP helps countries develop national strategies to promote development of renewable energy technologies. In the Philippines, ESMAP supported the government's development of a comprehensive policy implementation framework to develop diversified renewable energy sources. The country plans to double its renewable energy capacity within 20 years, to become the world's top geothermal power producer and Southeast Asia's largest wind power producer. ESMAP's support includes capacity-building and technical assistance for energy sector reform initiatives undertaken by the Energy Regulation Commission and the National Renewable Energy Board.

With ESMAP's assistance, practitioners are planning a transmission system expansion that connects renewable energy with existing grids in the archipelago. At an April 2010 workshop, policymakers and practitioners learned about other countries' experience using mechanisms which

support the development of renewable energy markets, specifically feed-in tariffs, renewable portfolio standards, and green certificates. They also examined challenges in integrating renewable energy with transmission development and reliable system operation.

To help the Philippines attract the private sector investment needed to mainstream renewable energy, ESMAP is helping policymakers design a mechanism whereby tariffs—including consumer and feed-in tariffs—can cover the incremental costs to renewable energy developers. The ESMAP study will also provide guidance on pricing and contracting mechanisms for renewable power generation, such as mid-size geothermal.

ENERGY ACCESS IN AFRICA: AFREA

Africa has the lowest electrification rate of all the continents at 26 percent of households; about 547 million people lack access to electricity. On current trends, less than half of African countries will reach universal access to electricity even by



2050. In fact, the number of people without access to energy in sub-Saharan African countries is projected to rise by about 100 million in 2030, despite current efforts to reduce this number. In the rural areas, the picture is worse: fewer than 10 percent of rural households in Sub-Saharan Africa have access to electricity.

Persistent and multiple problems are behind this situation. They include a shortage of funding, as well as policy vacuums, or inappropriate, even counterproductive policies and programs that place obstacles in the way of expanding energy services to the poor. Knowledge gaps are an important cause of these problems, and the ESMAP-AFREA programs are working to bridge them by providing Africa's energy decision-makers and regulators with access to information on worldwide experience with energy laws, regulations and institutions.

In this respect, ESMAP and AFREA have supported the Africa Electrification Initiative (AEI), which is helping countries create a living body of practical knowledge and a network of practitioners in the design and

implementation of electrification—rural, peri-urban, and urban; on-grid and off-grid. The AEI initiative disseminates information through an online discussion network and library that provides rural electrification practitioners with access to rural electrification acts, operational manuals of rural electrification funds, and technical specifications for concession contracts, among others. Both the library and forum enable interactions that equip practitioners with tools and knowledge to plan and implement electrification. AFREA has also produced technical papers on regulation, carbon finance opportunities, and photovoltaic systems and solutions.

Lighting Africa

The ESMAP-AFREA programs supported *Lighting Africa* initiative bolsters the development of commercial off-grid lighting markets, with activities such as the *Lighting Africa International Business Conference and Trade Fair*, held in May 2010 in Nairobi, Kenya. This event, the second of its kind, helped nurture international and African lighting partnerships and disseminated knowledge

on energy markets and practices. More than 600 participants attended, and 85 percent reported high satisfaction with the event. The results of the Lighting Africa quality assurance activities have led to the development and publishing of a low-cost methodology for testing quality of portable off-grid light-emitting diode (LED) lighting systems, and in turn are transferred to laboratories in Kenya and Senegal. Over 30 products available in the African market have been tested, of which 8 have passed the quality tests and are being supported by Lighting Africa activities, such as the consumer awareness campaign (Box 3.1).

The Lighting Africa Development Marketplace—funded by ESMAP and AFREA—awarded 16 innovation grants to private sector and nongovernment groups for innovative design and delivery of low-cost, high-quality lighting products not based on fossil fuels. The target market for these products is among off-grid, low-income consumers. An evaluation report will be published in fiscal year 2011.

Lighting Africa has also launched an educational campaign to encourage people in rural Kenya to adopt solar lighting. Dubbed “Zonga Mblena Solar” (Stay Ahead with Solar), the campaign targets 13.5 million people across rural households and small businesses. It shows how by switching from fuel-based to solar lighting, rural populations can improve their health, increase their savings—households typically spend about 10 percent of their income on kerosene—and benefit from better lighting and more productive time in their homes, schools and businesses. The campaign is staging road shows in market towns to generate consumers’ interests in the solar portable lights that passed *Lighting Africa* quality tests. The road shows attracted crowds of up to 500 people, and featured product demonstrations and a chance to test the solar lights.

BOX 3.1: LIGHTING AFRICA EXPANSION PLANS

The Lighting Africa team has developed materials and tools, such as a market development campaign to stimulate off-grid lighting market development in Sub-Saharan countries not yet participating in the Lighting Africa program.

These tools respond to a growing interest by governments in Sub Saharan Africa to integrate support to affordable quality off-grid lighting in their rural energy programs.

Responding to this demand, Lighting Africa is currently assisting governments in Ethiopia, Liberia, Mali, Senegal and Tanzania in replicating successful approaches piloted by Lighting Africa in Ghana and Kenya. Expansion to additional countries, such as the Democratic Republic of Congo, Nigeria and Rwanda is now being explored.

CAPACITY BUILDING FOR ELECTRICITY MARKET OPERATIONS IN TURKEY

In Turkey, electricity sector reforms have boosted the share of renewable energy sources—primarily hydropower and wind—in the supply mix. The goal is for renewable sources to account for 25 percent of the country’s energy mix by 2020. In this context, ESMAP is supporting the development of an actively managed grid in the country to keep the power system operating optimally as the use of renewable energy grows. Specifically, ESMAP’s support facilitates and disseminates best practices in information technologies and communications systems, and supports provision of just-in-time advice on regulatory and technical issues involved in integrating renewable power generation into a smart grid. This activity will help build the capacity of system managers and the transmission operator to identify required system functionalities and enhance their decision making as they evaluate investments in hardware and software (Box 3.2).

GENDER SENSITIVITY IN ENERGY POLICIES AND PROJECTS IN AFRICA

Access to energy is determined in large measure by gender. To address obstacles to energy access resulting from gender inequality, ESMAP supports AFREA's Gender and Energy component.

This program seeks to integrate a gender-sensitive approach to energy projects in Africa, by providing funds for gender analysis to energy task teams and government agencies. The program takes a region-wide approach, undertaking surveys, documenting project and program experiences and results, developing case studies, and gathering evidence to guide action ensuring that energy solutions deliver benefits for men and women, and their families.

In fiscal year 2010, ESMAP developed an approach focused on: (i) identifying the possible

interventions on the ground that would contribute to the development of the models, tools and methodologies for good practice approaches; (ii) building a network of gender and energy experts to provide just-in-time assistance for energy task teams; and (iii) strengthening capacity for gender integration at the national and project levels.

In March 2010, an initial assessment in Mali identified components for gender activities in the country's Rural Energy Agency. In Senegal, technical guidance was provided for the preparation of an energy project to ensure that gender aspects are taken into account at the planning and implementation stages, and that monitoring and evaluation also incorporate gender indicators. This resulted in gender equality principles leading the project objectives, with gender sensitive actions to be implemented as part of the project. Similar efforts were undertaken in Tanzania and Kenya, and are planned in Mozambique and Benin.



BOX 3.2: TURKEY ELECTRICITY MARKET OPERATIONS

Since 2001, Turkey's electricity demand has grown more than 8 percent annually. The country has moved swiftly to overhaul the electricity sector to meet growing demand in an efficient and cost-effective manner. The reforms—consistent with the European Union's Acquis Communautaire framework—have so far unbundled the sector, restructured state-owned entities, privatized the electricity distribution business, created an independent market regulator, and established a competitive electricity market. ESMAP assisted the government in establishing the framework and capacity for a competitive electricity market, to be run by the Turkish Electricity Transmission Corporation (TEIAS).

ESMAP Activities

- *Supporting Electricity Market Operations* | 2007, Technical Assistance (Non-lending)
- *Capacity Building for Electricity Market Operations* | 2009, Technical Assistance (Non-lending)

Scope & Recommendations

- **Supporting Electricity Market Operations:** Provided the basis for the design and implementation of an innovative capacity mechanism, in addition to implementing an auction process for procuring new generation in a manner consistent with the competitive market. The ESMAP activity also helped address different aspects of market operations, such as using water value and dispatch models, determining system marginal prices based on bids and offers, and managing the settlement system through workshops, training, twinning arrangements, and toolkits. The outputs of the ESMAP activity were used as inputs into amendments to the Electricity Market Law, on supply security aspects including enabling provisions for introducing capacity measures and auctions.
- **Capacity Building for Electricity Market Operations:** Under this activity, ESMAP supported training and capacity building on market management systems and communication systems to enable TEIAS to transition to the final market design, and particularly in grid management for large scale renewable energy capacity additions. Additionally, ESMAP funded external experts to provide TEIAS staff with on-call advice on implementation issues and system operations. Equally importantly, ESMAP supported a needs assessment and conceptual design for advanced automated grid type solution to assist in integrating substantial amounts of intermittent wind generation into the transmission grid without causing instability.

Observable Results and Outcomes

- **Informed Government Policy:** Based on the recommendations from ESMAP, the following regulation and legislation were approved in Turkey:
 - Amendments to the electricity market law to monitor, evaluate and take measures to ensure security of supply (Law No. 5784 of July 26, 2008).
 - Modified balancing and settlement regulations to improve the functioning of the wholesale market (publicly issued in April 2009).
- **Informed World Bank Lending:** ESMAP's engagements with Turkey have helped catalyze an increase in World Bank lending for Turkey. World Bank energy lending to Turkey increased to US\$1.8 billion over the FY09-10 period compared with US\$269 million in the two years preceding that. ESMAP activities have played an important role in facilitating this scale up by helping provide the analytical underpinnings and enabling environment for World Bank investment operations, as well as helping build capacity in government agencies. ESMAP's reports have been used as inputs to the ongoing policy dialogue supported by World Bank energy policy loans and for designing investment operations in the country.



ESMAP continues to work on developing innovative tools to help practitioners assess energy problems and develop solutions. Client countries need practical ways to assess their needs, identify measures and approaches to meet those needs, and evaluate results. Incorporating real-world data on what works—and what does not—ESMAP’s tools advance countries’ capacity to plan effectively.

ENERGY EFFICIENT CITIES INITIATIVE CASE STUDY DATABASE

Energy efficient measures can help cities ease their public expenditures for energy, reduce investments in new infrastructure, and enhance their commercial competitiveness. Yet, it is difficult for cities to remain fully aware of which measures exist, implementation options, and global good practices from policies and programs that have worked in other cities. In fiscal year 2010, ESMAP launched a database of detailed case studies to showcase best practices by cities that have implemented energy efficiency policies and programs. This inexpensive platform provides complete information about program costs and benefits, financing, impacts, and lessons learned.

The real value for policymakers derives from the diverse initiative types and approaches, which provide a menu of policies and programs to consider for meeting economic development needs. The database is drawn from 15

case studies—in the buildings, transport, solid waste, water, public lighting, and heating/power sectors—from China, Colombia, Egypt, India, Mexico, Pakistan, South Africa, Ukraine, and Portland, Oregon (USA), as well as Eco² cities case studies from Australia, Brazil, Japan, New Zealand, Singapore, and Sweden. Additional studies will increase the database source countries to 30 in fiscal year 2011.

SMART METERING IN HUNGARY

The main goals of “smart” energy metering are increasing operating cost savings, encouraging energy efficiency, and reducing technical and commercial losses in the network. To support the regulatory work of the Hungarian Energy Office (the sector regulator) in introducing smart energy metering, an ESMAP study examined alternative technical design options and desirable implementation strategies. The study drew on a comprehensive assessment of existing international examples, extensive surveys of all national stakeholders, and cost-benefit analysis

of the alternative metering options. While the model of a single nation-wide meter operator yields the highest financial benefits from smart metering, the study, citing monopoly concerns, recommends a so-called “area operator” model involving multiple “metering” actors. It also recommends large-scale pilot efforts before nationwide application of the chosen model to assess actual implementation risks, consumer behavior, and the need for appropriate changes in the regulatory environment.

ASSESSING SOCIAL IMPACTS OF RURAL ENERGY IN NEPAL

A large section of the Nepalese population is deprived of electricity coverage despite huge hydropower potential, particularly in the rural areas. About 63 percent of Nepalese households lack access to electricity and depend on oil-based or renewable energy alternatives. The disparity in access is stark, with almost 90 percent of the urban population connected, but less than 30 percent of the rural population. Decentralized service delivery in the form of renewables such as micro-hydro and solar is envisaged to fill more of the gap in rural areas and the Government has set a target of 12 percent off-grid electrification in its 10th plan. The primary institutional responsibility of providing energy access in rural areas using renewable technologies falls on the Alternative Energy Promotion Center (AEPCC).

This ESMAP activity was designed as technical assistance to AEPCC to establish a monitoring system to continually assess the results of the renewable energy programs against the targets and to organize an evaluation system that measures the impact of micro-hydro installations on rural livelihoods. A set of key performance indicators (KPIs) has been selected across the results chain of monitoring framework to facilitate informed decision-making. The monitoring framework incorporates the final impacts of

electrification on households and businesses, evaluated using a primary household and enterprise survey. The KPIs are monitored using a robust management information system (MIS) throughout implementation to assess progress toward program objectives. This system enables the middle and top management of AEPCC to have timely access to reliable and accurate data for informed decision-making. The focus is not only on measuring day-to-day operational performance, but also using information as a strategic planning tool.

INNOVATIVE TOOLS

In fiscal year 2010, ESMAP developed several innovative tools designed to enhance policy-makers’ ability to identify practical options for meeting their country’s particular energy challenges.

EFFECT I Energy Forecasting Framework and Emissions Consensus Tool

Our actions today determine our future options. In the case of climate change, adaptation and mitigation are the flip sides of the same challenge, requiring a response on both fronts as countries move forward. Further, actions on climate change and development will become increasingly inter-linked in the coming decades. Developing countries must raise the living standards of their populations and bring many millions out of poverty. Eradicating poverty will require modern energy, making the challenge of low carbon growth that much more important. Since energy demands worldwide will more than triple over this century, a global effort is needed to transform the energy systems to sustainable, low carbon sources. The Energy Forecasting Framework and Emissions Consensus Tool (EFFECT Model) can help multiple stakeholders engage on the fundamental issues they will confront over the coming decades by supporting the development of plausible, longer term, low carbon development scenarios across the economy. These scenarios

help stakeholders explore realistic possibilities to lower GHG emissions built upon a vision for their country and uniquely attuned to the country's opportunities and constraints.

HEAT | Hands-on Energy Adaptation Toolkit

In Albania, where about 90 percent of its electricity comes from hydropower, energy sector stakeholders worked with ESMAP and the World Bank to assess climate risks that could reduce hydroelectricity output by 15 to 20 percent a year by 2050. The results revealed an energy shortfall equivalent to three percent of total demand. They then developed a plan to integrate adaptation options for 20 key risks into energy sector policymaking and planning. Drawing on this experience, ESMAP developed the *Hands-on Energy Adaptation Toolkit* (HEAT), a practical guide to help policymakers assess the risks to power systems of climate change and demand shifts.

TRACE | Tool for Rapid Assessment of City Energy

To help cities address rising demand for new energy sources, ESMAP's *Energy Efficient Cities Initiative* (EECI) developed an innovative tool for diagnosing energy use and identifying measures that can improve cities' performance. The *Tool for Rapid Assessment of City Energy* (TRACE) offers local authorities a simple way to compare their energy use with peer cities, rank underperforming sectors, identify measures to improve their performance, and develop plans to implement them. It examines energy efficiency in six municipal sectors: transport, buildings, water, public lighting, solid waste, and power and heating. The framework has two components—a city energy benchmarking tool and a playbook of tested energy efficiency interventions. They are woven into a user-friendly application that takes the user from gathering data to developing a matrix of energy efficiency recommendations tailored to the city's context, with implementation and financing options. The tool was field-tested in Quezon City, Philippines in fiscal year 2010, where city officials are already acting on some

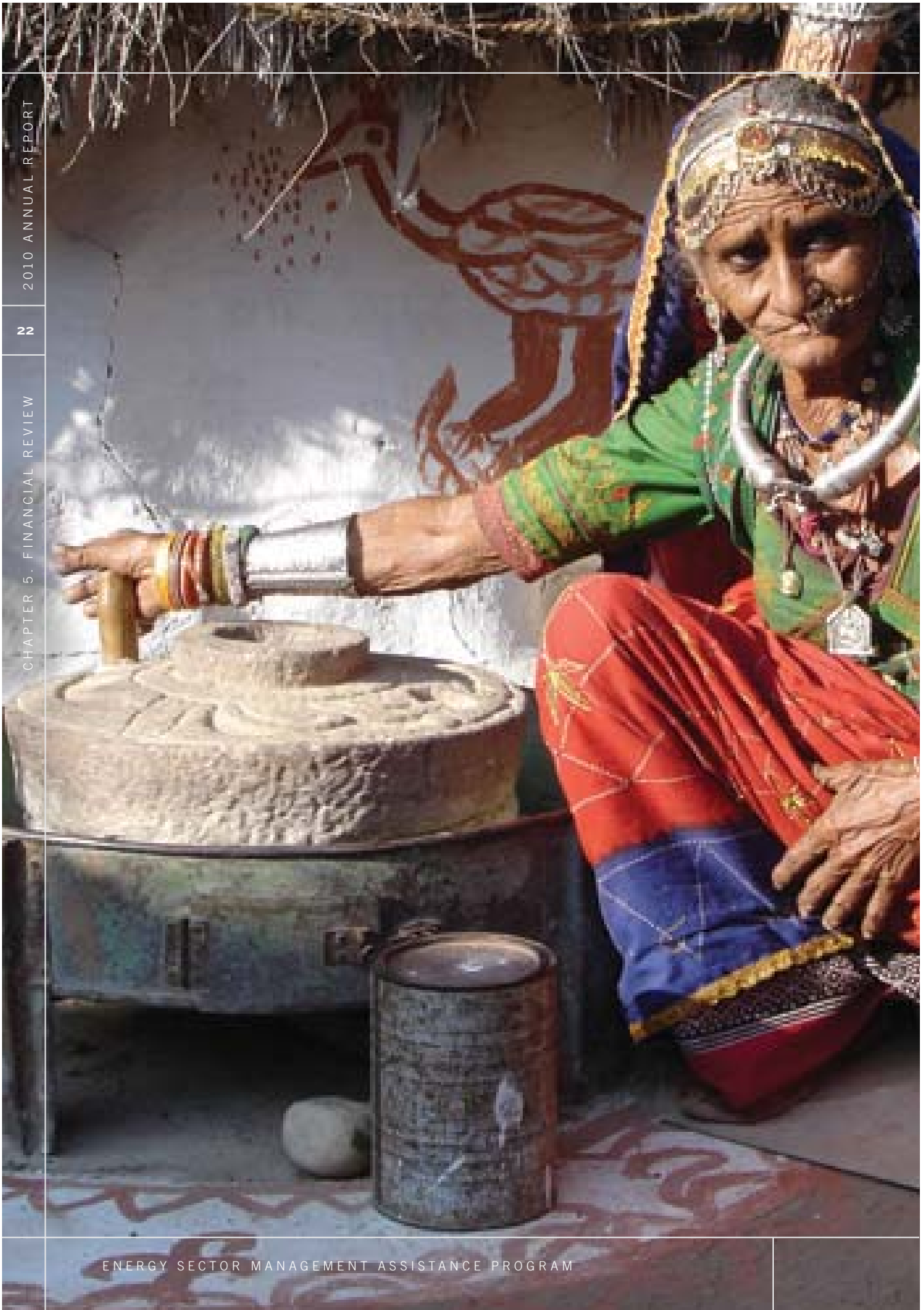
of the recommendations that emerged from the experience, and will be applied to five cities in fiscal year 2011.

Public Procurement

The public sector is a largely untapped energy efficiency market in developing countries. An ESMAP book published in fiscal year 2010, *Public Procurement of Energy Efficiency Services: Lessons from International Experience*, addresses this market in a comprehensive review of how governments around the world promote energy efficiency and, in particular, use energy savings performance contracts (ESPCs) to do so. The book examines factors that determine large-scale losses, such as insufficient incentives, rigid budgeting and procurement procedures, and limited access to financing. It identifies seven models for promoting energy efficiency service provisions in public agencies and describes implementation experiences with them. It also offers schemes for mixing and matching elements to tailor solutions to a specific country or city. Program and project case studies from more than 15 countries offer recommendations on how countries can address these challenging issues. ESMAP is disseminating the findings to policymakers and public sector practitioners from South Africa to Armenia to China.

CFL Toolkit

To encourage broader replication of large-scale residential lighting programs, ESMAP launched a Web-based information exchange platform this year. *The Compact Fluorescent Lamp (CFL) Toolkit* provides operational documents, ranging from terms of reference to technical specifications to evaluation techniques, as well as commonly used implementation models, bulb specifications and prices, lessons learned, and program effects. Rather than prescribe models or methods, the toolkit shares operational documents from projects in many countries to help inform new ones. It is being applied by several countries, among them Armenia, China, Malawi, and Mexico.



CONTRIBUTIONS RECEIVED

ESMAP receipts from its donors totaled US\$9.1 million in fiscal year 2010. The decrease in receipts is explained by the fact that existing trust funds supporting the previous business plan closed during fiscal year 2010. Subsequent to the CG's approval of the current Strategic Business

Plan 2008-13, new contributions are expected to commence in fiscal year 2011.

Table 5.1 shows actual receipts by individual donors for fiscal years 2008-2010, as well as actual receipts in fiscal year 2011.

TABLE 5.1. ESMAP FUNDING (RECEIPTS/PLEDGES), FISCAL YEARS 2008-2010 (US\$ THOUSANDS)

COUNTRY				RECEIPTS	TOTAL RECEIPTS	%
	2008	2009	2010	2011	08-10	
Australia	2,682	-	453		3,135	5.0%
Austria (ADA; MoF)	658	588	424	2,634	1,671	2.7%
Canada	-	396	100	-	496	0.8%
Denmark	1,962	1,762	1,849	1,617	5,573	8.9%
Finland	-	-	741	-	741	1.2%
France	1,052	885	-	-	1,937	3.1%
Germany	2,805	4,801	2,185	1,972	9,791	15.6%
Iceland	200	300	200	-	700	1.1%
Netherlands	-	23,890	-	11,286	23,890	38.0%
Norway	750	750	750	839	2,250	3.6%
Sweden	1,589	-	-	-	1,589	2.5%
United Kingdom	3,367	4,615	1,961	-	9,942	15.8%
World Bank	450	280	437	-	1,167	1.9%
Grand Total	15,515	38,268	9,100	18,347	62,883	100%

Notes:

- Actual receipts for fiscal years 2008-2009 have been updated to take into account donors (the Netherlands and United Kingdom) contributions to ESMAP's Multi-Donor Trust Fund for CEIF, which includes the AFREA sub-fund.
- A Netherlands commitment of US\$11.2 million currently under agreement for fiscal year 2011 is for AFREA.

DISBURSEMENTS

Disbursements in fiscal year 2010 totaled US\$20.4 million. The disbursements figure includes those made under the Clean Energy Investment Framework (CEIF) for AFREA. Project expenditures from the Annual Block Grant to the Bank's regional operations units in fiscal year 2010 were about the same as in fiscal year 2009.

TABLE 5.2. ESMAP DISBURSEMENTS AND SOURCES OF FUNDING, FISCAL YEARS 2008-2010 (US\$ THOUSANDS)

	FY08		FY09		FY10	
PROJECT COST	\$12,189.33	88%	\$18,450.53	93%	\$18,449.26	90%
Africa	\$2,003.16		\$2,996.48		\$3,925.70	
East Asia	\$938.34		\$1,408.04		\$1,365.88	
Europe & Central Asia	\$1,184.40		\$780.38		\$1,350.60	
Latin America and the Caribbean	\$1,282.83		\$2,793.76		\$2,082.50	
Middle East and North Africa	\$1,119.99		\$1,718.66		\$1,227.06	
South Asia	\$733.47		\$1,183.13		\$1,946.30	
SDN-VP (Anchors Units)	\$2,219.27		\$4,687.17		\$2,454.67	
ESMAP own managed	\$2,707.86		\$2,882.92		\$4,096.56	
PROGRAM MANAGEMENT AND ADMINISTRATION	\$1,667.31	12%	\$1,495.84	7%	\$2,036.90	10%
TOTAL	\$13,856.64	100%	\$19,946.37	100%	\$20,486.16	100%
<i>Of which:</i>						
Funded by Donors	\$13,056.24		\$19,234.42		\$19,509.16	
Funded from World Bank budget	\$ 450.40		\$283.45		\$437.00	
Funded from Fee Income	\$ 350.00		\$428.50		\$540.00	

Notes:

- Actual disbursements in fiscal years 2008-2009 have been updated to take into account disbursements made under ESMAP's Multi-Donor Trust Fund for CEIF, including AFREA.





MONITORING AND EVALUATION SYSTEM

In March 2010, the Consultative Group endorsed a new Monitoring and Evaluation (M&E) system for ESMAP, which includes detailed results frameworks for each of its programs and initiatives. The M&E system was developed in accordance with the current ESMAP Strategic Business Plan to assess the effectiveness of its activities in enabling timely and sustainable delivery of development outcomes. The M&E system goes beyond the simple delivery of outputs to ascertain if the outcomes achieve the objectives of ESMAP's programs and initiatives.

OBJECTIVES

The M&E system has four key objectives:

1. **Assess the effectiveness** of ESMAP's programs and initiatives in achieving timely and sustainable outcomes for clients;
2. **Promote accountability** for achieving ESMAP's program-level outcomes by systematically assessing both program results and the performance effectiveness of stakeholders who implement and benefit from ESMAP's activities;
3. **Enhance the use of performance-based criteria** for making decisions about ESMAP policies, strategies, program management, and activities; and
4. **Facilitate feedback, learning, and sharing of knowledge and lessons learned**, improving recognition of ESMAP's achievements and wider replication of its results.

METHODOLOGY

ESMAP serves countries by providing knowledge and technical advisory services, categorized under its *think tank*, *knowledge clearinghouse*, and *operational leveraging* core functions. Products delivered under these core functions include assessments, studies, capacity building, workshops, toolkits, training, and other forms of advisory and analytical activities. Development impact is determined by the extent to which ESMAP's products influenced the adoption, application, or mainstreaming of strategies and policy recommendations in client countries.

A logical framework used to assess the development impact for each ESMAP program initiative identifies four high-level outcomes:

- (i) Informing lending operations of the WBG;
- (ii) Informing and enhancing government policy;
- (iii) Building and enhancing client capacity; and
- (iv) Introducing cutting-edge energy solutions.

For each outcome, a set of indicators is monitored to determine results and measure achievements. The outcomes, in turn, help shape ESMAP's program-level objectives and contribute to achieving its ultimate goal of assisting low- and middle-income countries to increase know-how and institutional capacity to achieve environmentally sustainable energy solutions to contribute to poverty reduction and sustainable economic growth.

NEXT STEPS

Although the M&E system became fully operational in fiscal year 2011, ESMAP is tracking activities approved since fiscal year 2009. (See Annex 3 for delivery status of fiscal years 2009 and 2010 outputs). As data on outcomes accumulates, ESMAP will make additional efforts to enhance the M&E system. Among others, it will:

- Design and develop a web-based portal of the M&E system.
- Align the M&E framework with World Bank systems to better demonstrate ESMAP's impact on leveraging Bank resources.
- Continue to improve mechanisms for baseline data collection and identification of milestones.
- Sharpen systems to track development and delivery of outputs, identify appropriate indicators, and conduct ex-post assessments of all ESMAP-supported activities.

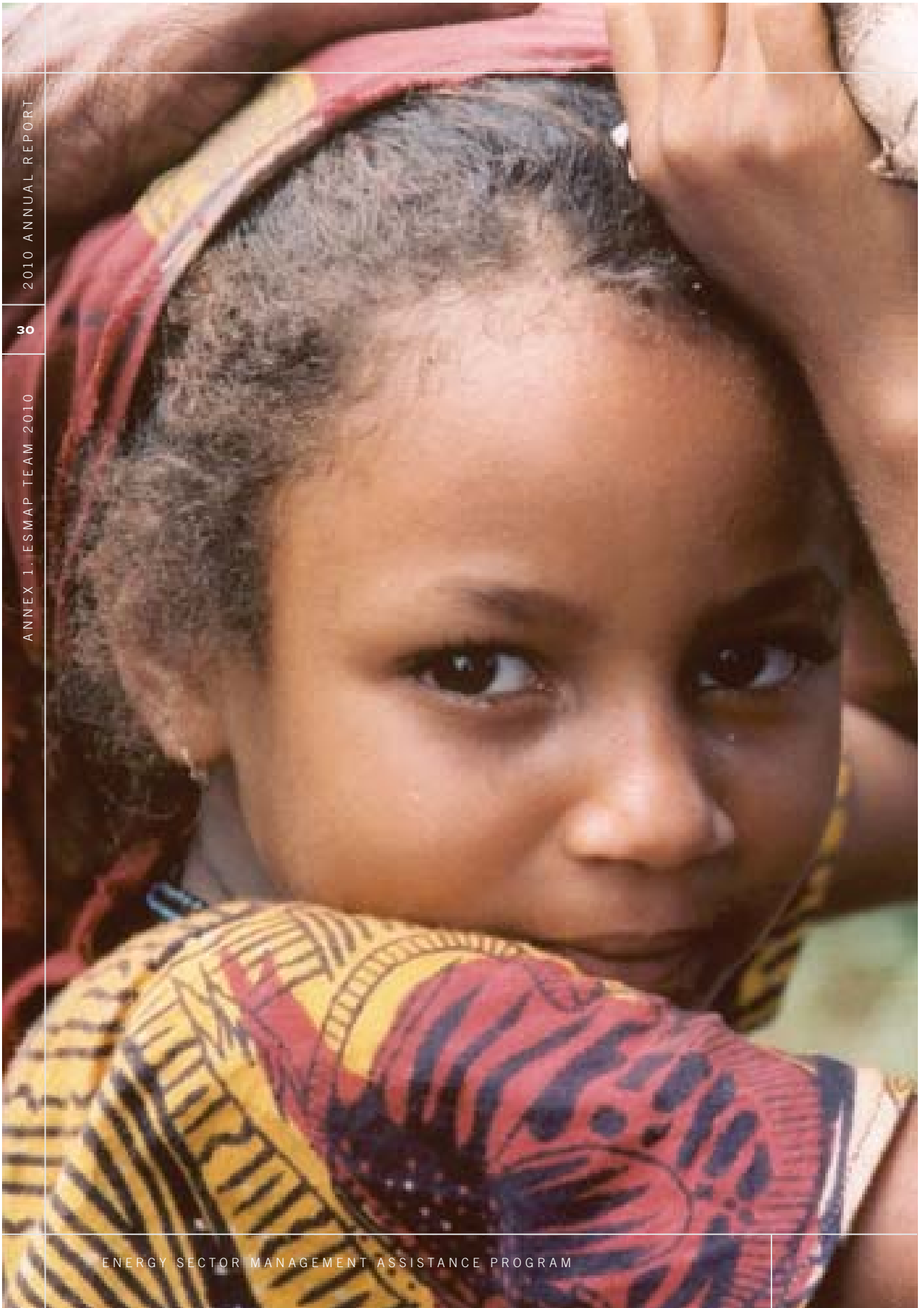
ESMAP PORTFOLIO REVIEW, FISCAL YEARS 2009-2011

ESMAP is conducting a review of results and observed impacts achieved in its 2009-11 portfolio of activities. The review classifies all activities under four categories—energy access, energy efficiency, low carbon and renewable energy. It also reviews activities implemented under the Energy Assessment and Strategy Program (EASP), and evaluates their results, high-level outcomes and impacts. The criteria for the evaluation includes effectiveness, influence, and value-added in the WBG's dialogue and energy strategy with particular client countries. The portfolio review also identifies evidence of results of ESMAP activities as defined by the higher-level outcomes framework (Table 6.1).

TABLE 6.1. ESMAP'S HIGHER LEVEL OUTCOMES AND INDICATORS, FISCAL YEAR 2010

OUTCOME(S)	OUTCOME INDICATOR(S)
Inform World Bank Lending / Strategy	<ul style="list-style-type: none"> ■ Agreed lending program for sector/country ■ WB loan under preparation/implementation ■ Influence country's CAS/CPS ■ Other action undertaken by WBG
Inform / Enhance Government Policy	<ul style="list-style-type: none"> ■ New policy or legislation adopted/implemented ■ Compliance with law/regulation achieved ■ Government decree issued ■ New government strategy adopted ■ Other action undertaken by client country/stakeholders
Build/Enhance Client Capacity	<ul style="list-style-type: none"> ■ Client makes major analytical contribution ■ Client learns to use/implement or produce output independently ■ Client has increased ability to monitor/evaluate projects or operations ■ Client has increased capacity to design strategies/programs ■ Clients are recognized with good-practice or similar awards ■ Feedback, inquiries received by clients ■ Other action or behavior
Introduce Cutting-Edge Energy Solutions to Client	<ul style="list-style-type: none"> ■ Client is able to adopt/harness new technologies, innovative ideas, know-how ■ Other action or behavior





ANNEX I . ESMAP TEAM 2010

The ESMAP Unit is responsible for the day-to-day management, following the strategy outlined in its business plan, as approved by the Consultative Group and the annual work program managed by the Energy, Transport, and Water Department (ETWD) of the World Bank Group.

Amarquaye Armar, Program Manager*

Heather Austin, *Publishing Associate*

Ranjan Bose, *Sr. Energy Specialist*

Yvette Bossman, *SME Specialist*

Agnes Biribonwa, *Communications Assistant*

Amadou Camara, *Resource Management Analyst*

Rogério Carneiro de Miranda, *Sr. Energy Specialist (Biomass Energy)*

Jonathan Coony, *Sr. Energy Specialist (Energy Technology)*

Istvan Dobozi, *Lead Energy Economist*

Jane Ebinger, *Sr. Energy Specialist (Climate Change)*

Miki Endo, *Operations Officer, Trust Fund Administration*

Femi Faleye, *Research Analyst*

Magnus Gehringer, *Sr. Energy Specialist (Geothermal Energy)*

Feng Liu, *Sr. Energy Specialist (Energy Efficiency)*

Andres Londono, *Operations Officer, Portfolio Management*

Vanessa Lopes, *Operations Analyst*

Elvira Morella, *Economist*

Marie-Gisele Morrisson, *Program Assistant **

Alain Ouedraogo, *Operations Analyst*

Imelda Sevilla, *Resource Management Assistant*

Bipulendu Singh, *Operations Analyst*

Jas Singh, *Sr. Energy Specialist (Energy Efficiency)*

Cindy Suh, *Sr. Strategy and Operations Officer (Renewable Energy/Partnerships)*

Lydia Kruse Tietz, *Sr. Resource Management Officer*

Voravate (Tig) Tuntivate, *Energy Access Specialist*

Nyra Wallace, *Program Assistant*

Gloria Jean Whitaker, *Program Assistant*

Tao Xue, *Research Analyst*

Regional Coordinators

Africa

Tjaarda Storm Van Leeuwen, *Adviser*

East Asia and Pacific

Beatriz Arizu de Jablonski, *Sr. Energy Specialist*

Europe and Central Asia

Peter Johansen, *Sr. Energy Specialist*

Latin America & Caribbean

Xiaoping Wang, *Sr. Energy Specialist*

Middle East and North Africa (vacant)

South Asia

Sudeshna Banerjee, *Sr. Economist*

* Left ESMAP before the end of fiscal year 2010



ANNEX 2 . PROCEEDINGS FROM CG MEETING 2010

CONSULTATIVE GROUP MEETING FOR ENERGY TRUST FUNDED PROGRAMS

Friday, 26 March 2010, Washington DC
(updated 19 April 2010)

Draft Minutes. The Consultative Group (CG) meeting for the Energy Trust Funded Programs, managed by the World Bank Group, was held in Washington, DC on March 26, 2010. The meeting was chaired by Mr. Jamal Saghir, Director of the World Bank's Energy, Transport, and Water Department and Chair of the World Bank's Energy and Mining Sector Board. It was attended by CG members, ESMAP Program Manager, ESMAP staff, and other guests. The meeting was comprised of five sessions: (i) an opening session; (ii) Program Manager's report on ESMAP; (iii) report to the CG on regional trust funds; (iv) Technical Advisory Group (TAG) report to the CG; and (v) a closed session. The meeting followed immediately the inaugural ESMAP Knowledge Exchange Forum held on March 25, 2010. Summary proceedings were recorded as follows:

Opening Session. The Chair welcomed the CG and made introductory remarks to highlight vulnerabilities the energy sector currently faces and the role of ESMAP in helping developing countries respond to these challenges. He also emphasized the progress ESMAP has made in enhancing its result orientation and putting in place its monitoring and evaluation (M&E) framework. Mr. Saghir then invited the Honorable Vice Minister Doo Huu Hao, Vietnam Ministry of Industry and Trade, and Mr. Pham Manh Thang, Director General, Electricity Regulatory Authority of Vietnam, to make a presentation on the Vietnam Energy Development Strategy and the support provided by ESMAP and the Asia Sustainable and Alternative Energy Program (ASTAE). The Vice Minister described a wide range of support from rural electrification, renewable action and gas master plans, to

energy efficiency improvement, and expressed how the support by ESMAP and ASTAE has helped achieve the targets set out in the National Strategy for Energy Development. Following the presentation, the discussion focused on the use of biomass for cooking, the pricing structure of electricity services, and the use of coal as power sources in Vietnam. Mr. Saghir concluded the session by noting that Vietnam's experience and success could be shared with other countries in Africa and Asia.

Program Manager's Report on ESMAP. Mr. Amarquaye Armar, ESMAP Program Manager, presented ESMAP's first year achievements under the 2008-2013 Strategic Business Plan and highlighted its M&E framework, website upgrade, and the funding outlook for FY2011. Mr. Armar explained how ESMAP programs, initiatives, and partnerships—the Energy Assessments and Strategy Programs, the Energy Efficient Cities Initiative, the Renewable Energy Market Transformation Initiative, and the Pro-Poor Energy Access Technical Assistance Partnerships—have been addressing the global thematic challenges set out in the Business Plan. He further updated the CG on each program and initiative's FY2010 achievements and indicated future activities. Illustrating an innovative approach that ESMAP undertook to inform its think tank programs, Mr. Armar informed the CG that the ESMAP expert panel has led to potential engagement on climate vulnerability assessment and low carbon power sector development. The presentation also highlighted that ESMAP has developed a more robust M&E framework, aligned with both the Business Plan objectives and the World Bank's evaluation mechanisms. Continuing the program highlights, Mr. Armar updated the meeting that ESMAP has almost completed its website development, which includes key new features to be launched in end April 2010. Mr. Armar concluded its presentation by stating that ESMAP is in a healthy state for FY2010 and providing the funding outlook for FY2011.

The CG praised Mr. Armar for his comprehensive presentation and successful management and ESMAP's impressive achievements. The CG inquired about gender inclusion, alignment of the Multi-Donor Trust Fund (MDTF) with the Business Plan, and ESMAP's role in supporting green energy technologies development. In response, Mr. Armar explained that ESMAP has adopted a broader and concerted approach to incorporate gender dimensions into its programs. In particular, a team is being set up in partnership with the World Bank's Social Development Department and the Africa Renewable Energy Access (AFREA) program, to provide just-in-time solutions, and ESMAP is funding a gender and energy issues paper to inform the World Bank Energy Strategy. With regard to green energy technologies, Mr. Armar informed the meeting of an ESMAP future flagship activity to develop a web-based toolkit to guide decision-makers on electricity technology options. Regarding the trust funds, he clarified that the old trust funds are being phased out and that all donors would participate in the MDTF. He further explained that, like ASTAE, the AFREA program has been separated from ESMAP, which is consistent with the Business Plan approach. Finally, Mr. Armar emphasized the need for a single MDTF to achieve the Business Plan's objectives.

Report to the CG on Regional Trust Funds.

Mr. Tjaarda Storm van Leeuwen, Adviser, Africa Energy Unit, made the presentation by stating the important and large role biomass is expected to play in Sub-Saharan Africa. To support the sustainable development of energy in Africa, efforts being made by the AFREA program center around three pillars: improvement in the scale-up of regional generation and transmission capacity; improvement in functioning of utilities in hybrid markets; and increase in access to modern energy services in rural and urban areas. Mr. van Leeuwen also touched on the World Bank Group's growing business volume in Africa during FY2004-2009, and mentioned the current active portfolio reaches about US\$4 billion.

Mr. van Leeuwen highlighted some of the AFREA program's results, including commitments by Kenya and Rwanda to mobilize funding for their projects, and a successful workshop in Maputo attended by over 170 electrification experts from 42 African countries. He emphasized that the AFREA program's activities are well aligned with the ESMAP core thematic areas, and thus how crucial ESMAP support is to the program. Mr. van Leeuwen also shared with the CG some examples of the AFREA's activities, such as small grants for innovative projects to deliver affordable lighting in rural Tanzania, and a SWAT team of energy experts being organized to build capacity in various countries. He also noted that the AFREA program could learn from other countries and ASTAE, and South-South cooperation could help the program.

Mr. Vijay Jagannathan, Sector Manager, Transport, Energy and Urban Unit, East Asia and Pacific Region, presented the implementation report on ASTAE. The presentation illustrated ASTAE's achievements during 2007-2009, particularly activities undertaken to increase integration of renewable energy, promoting energy efficiency and improving energy access. He stressed ASTAE's outcome-oriented approach, and close coordination with ESMAP and other World Bank trust funds in contributing to the Bank's operations and client countries' energy agendas. Looking forward, Mr. Jagannathan highlighted access to modern energies as central to the development agenda, and continued effort to promote renewable energy and energy efficiency. Ideas for the next cycle of financing, focusing on response to green growth and improvement of governance, were also proposed. The CG commended the work done by ASTAE.

Mr. Jagannathan explained different scopes and time frames of ASTAE activities to the CG. Activities supporting the World Bank projects are often completed in a shorter time frame and generate immediate outputs, while capacity-building activities require continued engagement with client countries to achieve long-term

impacts. He also noted that the clear link between economic growth and energy service helped promote an energy agenda in client countries.

TAG Report to the CG. The TAG members—Amitav Rath, Elizabeth Cecelski, and Winfried Rijssenbeek—presented their report to the CG. Mr. Rath initiated the presentation and provided the TAG overall assessment that ESMAP has been performing very well, but there is still room for improvement in reporting mechanisms to donors by ESMAP. Continuing the presentation, Ms. Cecelski highlighted ESMAP's impressive achievements, praised its ability to smoothly shift to the MDTF, and acknowledged the significant progress made in the M&E framework. Despite these outstanding accomplishments, she suggested that the M&E framework be simplified, the divergence between the 2009 fiscal year disbursements and Business Plan provisions be explained, and its decreasing number of publications be addressed. Moving forward, the TAG recommended that the CG guide ESMAP on budget allocations and support ASTAE, whose funding expires in 2011. Mr. Rijssenbeek concluded the TAG report to the CG by presenting ESMAP potential roles further to Copenhagen Climate Change negotiations and the completion of World Bank Energy Strategy.

The CG thanked the TAG for their comprehensive report. Responding to issues raised by the TAG, Mr. Armar indicated that the disbursement divergence is misleading and more flexibility is required to respond to the Business Plan's challenges. He also explained that ESMAP is

moving toward a greater focus on program outcomes, as recommended during the last CG meeting, and has diversified the way it disseminates its products, which implies fewer reports. He noted that TAG did not report on ESMAP Power Vulnerability Assessments under way in 20 countries. Following Mr. Armar's remarks, Mr. Saghir requested that ESMAP send written responses to the TAG to address certain statements. The CG supported Mr. Saghir's request and further discussed the TAG's role. The CG proposed that ESMAP management in the future be given the opportunity to react to any misleading facts and figures of the TAG report and a management response from ESMAP on the TAG report be distributed prior to the CG meeting. The CG also proposed that the agenda for the meeting be modified to enable focused discussion of key TAG recommendations. The CG expects a corrected version of the 2009 TAG report. The CG acknowledged the importance of the TAG but agreed that the terms of reference for the TAG would be reviewed. Finally, the CG discussed TAG requests to guide ESMAP. They emphasized that the endorsed Business Plan, which adopts a balanced, flexible, and programmatic approach in addressing the thematic challenges, should serve as a reference. Some CG members pointed out the importance of cross-sectoral initiatives.

Closed Session. The closed session, chaired by Mr. Saghir and attended by principals of the CG, discussed issues relating to the recruitment process of ESMAP's Program Manager, a new TAG, and funding pledges.



ANNEX 3 . MONITORING AND EVALUATION FRAMEWORK: STATUS OF PROGRAM OUTPUTS, FISCAL YEARS 2009-2010

The following tables present a summary status of the outputs and deliverables for fiscal years 2009-2010 under each of the ESMAP programs and initiatives according to the M&E system introduced in 2010. For each program component, there is a corresponding table listing the outputs and deliverables extracted from the logical framework matrices developed under the M&E. Each output includes the indicators with milestone (expected) and actual (achieved) values for fiscal year 2009 (July 1, 2008 – June 30, 2009) and fiscal year 2010 (July 1, 2009 – June 30, 2010).

PROGRAM COMPONENT 1. ENERGY ASSESSMENTS AND STRATEGY PROGRAMS (EASP)

PROGRAM IA. COUNTRY ENERGY SECTOR VULNERABILITY ASSESSMENTS (GESVA)	
Output 1: Carry out Power Sector Vulnerability Assessments (PSVAs) in client countries to estimate short- to medium-term impact of credit crisis on power sector and to inform potential strategic response from the WBG.	
■ INDICATOR: Number of PSVAs carried out in client countries.	
Milestone FY 2009: 3	Actual: 3
Milestone FY 2010: 14	Actual: 15
Output 2: Carry out Oil Price Vulnerability Assessments (OPVAs) in selected regions to examine measures of oil price volatility and evaluate policy instruments to cope with volatility.	
■ INDICATOR: Number of OPVAs carried out in client countries.	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 1	Actual: 1
Output 3: Carry out Climate Vulnerability Assessments (CVA) in the Europe and Central Asia Region to develop a framework for decision-making to support adaptation of energy infrastructure to climate change; develop a toolkit documenting the approach and methodology of pilot assessments.	
■ INDICATOR: Number of CVAs carried out in ECA.	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 2	Actual: 1
■ INDICATOR: Number of toolkits developed	
Milestone FY 2009: 0	Actual: 0
Milestone FY 2010: 1	Actual: 1
■ INDICATOR: Number of analytical and advisory activities (AAA)/technical Assistance (TA) carried out in support of the joint task force between ESMAP and the Global Expert Team for Adaptation.	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 1	Actual: 0

PROGRAM IB. REGIONAL ENERGY INTEGRATION STRATEGIES (REIS)	
Output 1: Conduct region-specific AAA to inform and facilitate strategy development by stakeholders in regional organizations (East Africa, South Africa, West Africa, Central America, Greater Mekong Sub-region, Southeast Europe, etc.).	
<ul style="list-style-type: none"> INDICATOR: Number of AAA introduced to decision-making processes of client countries and regional organizations. 	
Milestone FY 2009: 4	Actual: 4
Milestone FY 2010: 3	Actual: 3
Output 2: Carry out region-specific energy assessments (e.g., energy efficiency potential, energy pricing regimes, energy resource assessments) to inform policy-harmonization initiatives by regional organizations and/or national authorities.	
<ul style="list-style-type: none"> INDICATOR: Number of region-specific energy assessments. 	
Milestone FY 2009: 4	Actual: 4
Milestone FY 2010: 3	Actual: 3
Output 3: Develop knowledge exchange products (reports, policy notes, brochures, internal workshops, outreach events, and external forums) on "global best practices."	
<ul style="list-style-type: none"> INDICATOR 1: Develop, publish, and disseminate policy notes and reports targeted at policymakers to share lessons, results, and best practices on regional energy integration strategies and/or regional energy efficiency assessments. 	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 1	Actual: 1
<ul style="list-style-type: none"> INDICATOR 2: Conduct internal workshops and learning events to share experience on the conduct of regional energy assessment and/or strategy AAA within WBG. 	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 3	Actual: 4
<ul style="list-style-type: none"> INDICATOR 3: Support and participate in external forums to disseminate lessons and share information with at least 3 regional organizations in Africa (in partnership with EUEI PDF) and Central America (in partnership with the Latin American Energy Organization, OLADE). 	
Milestone FY 2009: 1	Actual: 0
Milestone FY 2010: 2	Actual: 1
PROGRAM IC. LOW CARBON GROWTH COUNTRY STUDIES PROGRAM (LCGS)	
Output 1: Conduct low carbon growth (LCG) country-specific studies to examine pathways and interventions to support low carbon growth to 2030.	
<ul style="list-style-type: none"> INDICATOR: Number of LCG studies developed and fully completed 	
Milestone FY 2009: 1	Actual: 1
Milestone FY 2010: 3	Actual: 3
Output 2: Develop and pilot "learning-by-doing" activities within an analytic framework to facilitate country-specific assessment of low carbon power system development paths.	
<ul style="list-style-type: none"> INDICATOR: Number of country-specific analytic frameworks applied and tested 	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: Concept note for analytic framework approved	Actual: Concept note approved in April 2010

Output 3: Develop an e-learning front end for selected analytic and/or modeling tools developed under LCG study program and placed in public domain.

- **INDICATOR:** Number of e-learning front end and/or modeling tools developed

Milestone FY 2009: 0	Actual: N/A
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Milestone FY 2010: 1 activity initiated	Actual: 2 activities initiated
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Output 4: Develop knowledge exchange products (reports, brochures, internal workshops, and external forums) on "global best practices."

- **INDICATOR 1:** Number of brochures produced & disseminated in connection with LCGS pilot studies.

Milestone FY 2009: 1	Actual: 1
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Milestone FY 2010: 2	Actual: 3
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- **INDICATOR 2:** Number of internal workshops & learning events delivered in conjunction with the World Bank Institute (WBI) and CCDP.

Milestone FY 2009: 1	Actual: 1
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Milestone FY 2010: 3	Actual: 5
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- **INDICATOR 3:** Number of external forums delivered by ESMAP and/or in cooperation with WBI/CCDP to disseminate lessons and share information with global energy practice.

Milestone FY 2009: 1	Actual: 1
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Milestone FY 2010: 7	Actual: 9
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PROGRAM COMPONENT 2. ENERGY EFFICIENT CITIES INITIATIVE (EECI)

PROGRAM/INITIATIVE 2. ENERGY EFFICIENT CITIES INITIATIVE (EECI)

Output 1: Conduct city-specific energy efficiency (EE) assessments.

- **INDICATOR:** Number of Tool for Rapid Assessment of City Energy (TRACE) assessments conducted for evaluating EE opportunities across all key city sectors.

Milestone FY 2009: 0	Actual: 1
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Milestone FY 2010: 1	Actual: 1
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Output 2: Design programmatic EE interventions for urban sector development.

- **INDICATOR 1:** Number of TA activities on EE provided to cities to complement Cities Alliance's City Development Strategy grant.

Milestone FY 2009: 0	Actual: N/A
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Milestone FY 2010: 2	Actual: 1
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- **INDICATOR 2:** Number of AAA and project preparation support provided to client countries to design and/or incorporate programmatic EE measures into World Bank urban sector lending operations.

Milestone FY 2009: 1	Actual: 1
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Milestone FY 2010: 3	Actual: 8
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Output 3: Develop knowledge exchange products (brochures, case studies, internal workshops, external forums, outreach events etc) on “global best practices.”	
■ INDICATOR 1: Number of case studies and/or tools developed to share lessons and best practices on EE achievements.	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 12	Actual: 9
■ INDICATOR 2: Database of case studies developed.	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 1	Actual: 1
■ INDICATOR 3: Virtual Panel established to inform the development of TRACE.	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 1	Actual: 1
■ INDICATOR 4: Number of practitioners’ workshops.	
Milestone FY 2009: 2	Actual: 1
Milestone FY 2010: 3	Actual: 2
■ INDICATOR 5: City awards for EE implementation launched and operational.	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 1	Actual: 1
■ INDICATOR 6: Number of internal and external outreach events to disseminate lessons and share information on EE.	
Milestone FY 2009: 5	Actual: 7
Milestone FY 2010: 4	Actual: 5

PROGRAM COMPONENT 3 RENEWABLE ENERGY MARKET TRANSFORMATION INITIATIVE (REMTI)

PROGRAM / INITIATIVE 3. RENEWABLE ENERGY MARKET TRANSFORMATION INITIATIVE (REMTI)	
Output 1: Conduct country-specific “market transformation strategies” to scale-up deployment of grid-tied renewable energy (RE) systems.	
■ INDICATOR: Number of strategies completed and deployed.	
Milestone FY 2009: 2	Actual: 2
Milestone FY 2010: 2	Actual: 4
Output 2: Develop country/region roadmaps for scaling up renewable technology deployment for accelerated utilization of RE resources (GSP, geothermal, wind, hydropower) for grid-tied power supply.	
■ INDICATOR: Number of country/regional road maps adopted by client countries.	
Milestone FY 2009: 4	Actual: 1
Milestone FY 2010: 1	Actual: 2

Output 3: Design a market support mechanism to facilitate grid-tied deployment of RE technologies for power generation by low-income client countries.

- **INDICATOR:** Mechanisms for an “output-based revenue support mechanism” developed and accepted for implementation by donors and client countries.

Milestone FY 2009: 0	Actual: N/A
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Milestone FY 2010: “Basic OBA design developed”	Actual: Completed
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Output 4: Develop knowledge exchange products (brochures, internal workshops, external forums) on “global best practices.”

- **INDICATOR 1:** Number of policy notes to share ESMAP lessons, results, and best practices on country-specific “strategies” and/or “road maps.”

Milestone FY 2009: 0	Actual: N/A
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Milestone FY 2010: 2	Actual: 0
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- **INDICATOR 2:** Number of internal workshops and learning events to share experience within WBG.

Milestone FY 2009: 3	Actual: 0
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Milestone FY 2010: 5	Actual: 1
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- **INDICATOR 3:** Number of external forums to disseminate lessons and share information with global energy practice (in partnership with external organizations, such as Renewable Energy and Energy Efficiency Partnership (REEEP) and International Renewable Energy Agency (IRENA).

Milestone FY 2009: 1	Actual: 0
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Milestone FY 2010: 1	Actual: 2
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- **INDICATOR 4:** Number of “best-practice” case studies prepared.

Milestone FY 2009: 1	Actual: 0
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Milestone FY 2010: 2	Actual: 1
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PROGRAM COMPONENT 4 PRO-POOR ENERGY ACCESS TA PROGRAMS (PEA-TAP)

PROGRAM 4A. RURAL ELECTRIFICATION STRATEGIES (RES)

Output 1: Support the design and implementation of country-specific rural electrification impact M&E for rural electrification projects in Sub-Saharan Africa.

- **INDICATOR:** Number of rural electrification Impact M&E frameworks designed and adopted by Sub-Saharan countries.

Milestone FY 2009: 1	Actual: 0
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Milestone FY 2010: 1	Actual: 0
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Output 2: Develop an “Operational Manual on Productive Uses of Electricity (PUE)” to provide guidance on design, planning, and implementation of PUE Action Plans in Sub-Saharan African countries (Technical Assistance Facility leveraging on expertise of GTZ).

- **INDICATOR:** An operational manual on PUE completed and disseminated.

Milestone FY 2009: 0	Actual: N/A
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Milestone FY 2010: 0	Actual: PUE Manual initiated
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Output 3: Deployment of PUE specialist to provide on-site support in Sub-Saharan African countries (Technical Assistance Facility leveraging on expertise of GTZ).	
■ INDICATOR: Number of PUE capacity building interventions completed in Sub-Saharan countries	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 1	Actual: 0
Output 4 (Under the AEI): Develop knowledge exchange products (website, blog, BBLs, discussion papers, policy notes, workshops, outreach events, external forums, etc.) on “global best practices.”	
■ INDICATOR 1: Number of discussion papers published and disseminated	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 2	Actual: 5 discussion papers and 2 technical/research papers completed
■ INDICATOR 2: Number of thematic BBLs / mini-workshops organized	
Milestone FY 2009: 1	Actual: 0
Milestone FY 2010: 0	Actual: 2
■ INDICATOR 3: Development of a website as a collaboration space for the AEI	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 0	Actual: AEI website completed
■ INDICATOR 4: Development of an online collaboration network for AEI	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 0	Actual: AEI online network completed
PROGRAM 4B. ENERGY SME DEVELOPMENT STRATEGIES (ESMED) — ENERGY ACCESS FOR THE URBAN POOR (EAfUP)	
Output 1: Develop and implement community-adapted energy access programs for households and SMEs in client countries—aligned with Cities Alliance-sponsored “Nationwide Slum Upgrading Action Plans.”	
■ INDICATOR: Number of Energy Access Programs implemented for households and SMEs in client countries.	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 3	Actual: 1
Output 2: Conduct demand-responsive, capacity-building support for community energy institutions and community-based institutions.	
■ INDICATOR: Number of capacity building activities conducted to support institutions and higher learning community-based organizations.	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 1	Actual: 3
Output 3: Develop knowledge exchange products (policy notes, brochures, internal workshops, and external forums) on “global best practices.”	
■ INDICATOR 1: Conduct 2 practitioner’s forums in partnership with Cities Alliance to promote knowledge exchange among community-based energy access working groups.	
Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 2	Actual: 0 (The Cities Alliance program is still at the design stage in Ghana and Uganda).

■ INDICATOR 2: Conduct 2 practitioner's forums in partnership with Cities Alliance to promote knowledge exchange among SME energy service providers.	
Milestone FY 2009: 1	Actual: 0
Milestone FY 2010: 2	Actual: 0
■ INDICATOR 3: Publish and disseminate 2 brochures to share lessons, results, and best practices.	
Milestone FY 2009: 1	Actual: 0
Milestone FY 2010: 4	Actual: 0

PROGRAM 4C. GENDER AND ENERGY DEVELOPMENT STRATEGIES (GEDS)

Output 1: Develop energy-specific "gender strategies" for regions and thematic programs to enhance gender in the energy sector based on gender analysis and action research.

- INDICATOR: Number of gender strategies carried out and completed.

Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 2	Actual: 2 strategies initiated

Output 2: Conduct capacity building programs/forums and establish platforms of dialogue between gender and energy experts and client counterparts.

- INDICATOR 1: Number of regional workshops on gender and energy organized.

Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 1	Actual: 1

- INDICATOR 2: Number of Gender and Energy training events

Milestone FY 2009: 1	Actual: N/A
Milestone FY 2010: 1	Actual: 1

Output 3: Develop knowledge exchange products (brochures, tools, templates internal workshops, outreach events, external forums, etc.) on "global best practices."

- INDICATOR 1: Number of guidance notes/issues papers developed to share ESMAP lessons, results, and best practices on gender-specific "strategies" and/or "road maps."

Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 1	Actual: 3

- INDICATOR 2: Number of energy and gender tools, templates, or "best-practice" case studies.

Milestone FY 2009: 0	Actual: N/A
Milestone FY 2010: 0	Actual: 3

- INDICATOR 3: Number of internal workshops and learning events carried out to share experience within WBG.

Milestone FY 2009: 1	Actual: 1
Milestone FY 2010: 1	Actual: 1

- INDICATOR 4: Number of external forums carried out to disseminate lessons and share information with global energy practice.

Milestone FY 2009: 0	Actual: 3
Milestone FY 2010: 0	Actual: 0



ANNEX 4 . COMPLETED, NEW, AND ONGOING ACTIVITIES, FISCAL YEAR 2010

COMPLETED ACTIVITIES

COUNTRY/ REGION	ACTIVITY	TASK MANAGER
ENERGY ASSESSMENT AND STRATEGY PROGRAM		
AFR	Regulatory Review of Power Purchase Agreements Utility Performance Benchmarking	Ada Karina Izaguirre
AFR	Indicative Generation and Transmission Expansion	Andrey Gurevich
AFR	LED Lights Quick Screening Methodology	Ravindra Anil Cabraal
AFR	Regulating Electricity Exports and Imports in South African Development Community (SADC) Countries: Roles for National Regulators	Wendy E. Hughes
AFR	Implementing the Action Plan for the Energy Access Scale Up in Africa (including new FEMA activity)	Kyran O'Sullivan
AFR	Lighting Africa Development Marketplace Awardees Supervision	Ravindra Anil Cabraal
AFR	Petroleum Downstream Markets in Sub-Saharan Africa	Masami Kojima
AFR	LED Lights Quick Screening Methodology	Dana Rysankova
AFR	West Africa Power Pool Broadband Program Assessment	Mavis A. Ampah
Bangladesh	Country Energy Sector Vulnerability Assessment	Alan Townsend
Brazil	Low Carbon Study	Christophe De Gouvello
China	Biomass Cogeneration Development	Ximing Peng
Djibouti	Electricity Master Plan	Pierre Audinet
EAP	East Asia Regional Energy Flagship Study	Xiaoping Wang
ECA	Affordable Gas-fired District Heating in Energy Efficiency	Peter Johansen
ECA	Western Balkans Energy Efficiency Study	Peter Johansen
ECA	South East Europe Wholesale Market Opening	Kary Nyman
Global	Economic Benefits of Electrification	Pierre Audinet
Global	Global Energy Assessment (Phase 2)	Istvan Dobozi
Global	Review of Strategies for Sustainable Production of Commercial Fuelwood	Rogerio Carneiro
Global	Operational Toolkit for Energy Efficiency Lighting	Ashok Sarkar
Hungary	Smart Metering	Istvan Dobozi
India	Strategies for Low Carbon Growth	Kwawu Mensan Gaba
India	Best Practice of Coal-fired Power Plant Rehabilitation	Bjorn Hamso
India	Improving State Level Investment Planning and Regulation	Mustafa Zakir Hussain
India	Capacity Building Initiatives for Maharashtra State Electricity Transmission Company, Ltd.	Kavita Saraswat

India	Strategies For Low Carbon Growth	Kwawu Gaba
LCR	Programmatic Approach in Support of the Power Sector in Central America	Juan Cayo
LCR	A Strategic Overview on Energy Procurement and Best Practices in Energy Auctions	Luiz T. A. Maurer
LCR	Electricity Challenge	Rigoberto Yepez-Garcia
Liberia, Sierra Leone, Guinea	West Africa Power Pool Action Plan	Fanny Kathinka Missfeldt-Ringius
MNA	Explore Potential Electricity Trade and Interconnection between Yemen, Djibouti and Golf Cooperation Council (GCC) Countries	Waleed Saleh I. Alsuraih
MNA	Assessment of Potential for Energy Integration in the Mashreq and Neighboring Countries	Husam Mohamed Beides
MNA	Maghreb Vulnerability Assessment	Silvia Pariente-David
MNA	Country Energy Sector Credit Constraints Assessment	Rome Chavapricha
Moldova	District Heating Restructuring	Gary Stuggins
Montenegro	Public Private Partnership Options for Electricity Generation	Franz Gerner
Morocco	Energy Efficiency in the Transport Sector	Jean-Charles Crochet
Morocco	Energy Supply Strategy	Silvia Pariente-David
Mozambique	Modern Biofuels Assessment	Boris Enrique Utria
Nepal	Energy Efficiency	Michael Haney
Pakistan	Support for the Development of a Large-Scale Energy Efficiency	Ashok Sarkar
Peru	Peru Natural Gas Study	David Reinstein
Sri Lanka	Environmentally Sustainable Power Development	Mudassar Imran
Syria	Electricity Sector Strategy	Husam Mohamed Beides
Tunisia	Strategy for Low Carbon, Low Intensity Transport	Michel Bellier
Turkey	Mitigation Risks to Medium-Term Electricity Supply	Fan Zhang
Ukraine	Thermal Power Plant Rehabilitation: Assessment of Needs, Costs, and Benefits	Dejan R. Ostojic
Vietnam	Gas Sector Development Framework	Richard Jeremy Spencer
West Bank, Gaza	Energy Efficiency in the Transport Sector	Ibrahim Khalil Dajani
Yemen	Institutional Framework for Energy Efficiency	Chandrasekar Govindarajalu
PRO-POOR ENERGY ACCESS TA PROGRAM		
AFR	Light-up Africa (formerly Rural Lighting Initiative for Africa)	Anil Cabraal
Bangladesh	Improving Health of Women and Children through Renewable and Efficient Cookstoves	Priti Kumar
Global	Joint infoDev/ESMAP SME Assessment	Heidi Stensland
Global	GEDS Knowledge Exchange	Cindy Suh
Global	Gender and Energy Gender Action Plan	Rogério C. de Miranda

Haiti	ESMED Pilot Evaluation	Armarquaye Armar
LCR	Capacity Building for Renewable Energy for Implementing Agencies of Rural Electrification Projects	Susan Bogach
Nepal	Assessing the Social Impacts of Rural Energy Services	Sudeshna Ghosh Banerjee
ENERGY EFFICIENCY CITIES INITIATIVE		
Global	Building Energy Efficiency Codes Compliance	Feng Liu
Global	Energy Efficiency in Water Utilities	Feng Liu
RENEWABLE ENERGY MARKET TRANSFORMATION INITIATIVE		
Bulgaria	Building Up Regulatory Capacity for Renewable Energy	Peter Johansen
China	Power Dispatch Energy Efficiency Improvement	Beatriz Arizu de Jablonski
China	Evaluating the Renewable Energy Target in China	Carter J. Brandon
Global	Knowledge Exchange (Geothermal)	Cindy Suh
India	Renewable Energy Investment Climate	Ashish Khanna
MNA	Regional Concentrating Solar Power Initiative	Chandrasekar Govindarajalu
Nepal	Removing Obstacles to Nepal's Hydropower Development	Michael Haney
Peru	Overcoming Barriers to Hydropower	Susan Bogach

AFR – Africa **EAP** – East Asia and Pacific **ECA** – Europe and Central Asia

MNA – Middle East and North Africa **LCR** – Latin America and the Caribbean **SAR** – South Asia Region

NEW ACTIVITIES

COUNTRY/REGION	ACTIVITY	TASK MANAGER
ENERGY ASSESSMENT AND STRATEGY PROGRAM		
China	China Urban Transportation Climate Change Strategy	Ke Fang
ECA	Impact of Financial Crisis on Power Sector	Edon Vrenezi, Ani Balabanyan
Egypt	Giza North Power Project	Jianping Zhao
Egypt	Energy Efficiency Strategy	Jianping Zhao
Global	Contribution to Carbon Footprinting	Marcelino Madrigal
Global	Smart Meters	Marcelino Madrigal
Global	Energy Sector Strategy	Masami Kojima
Global	Household Energy Access: Lessons Learned and Scaling Up Opportunities	Koffi Ekouevi
Global	Low Carbon Development in Power Sector	Venkata Ramana Putti
Global	Review Design Performance Renewable Energy Policy	Gabriela Elizondo Azuela
Global	Electricity Transmission Planning	Marcelino Madrigal

Global	Private and Public Sector Roles	Maria Vagliasindi
Global	Gender and Energy Development Program	Nilufar Ahmad
Global	Electricity Technology Options Assessment Guide	Istvan Dobozi
Global	External Panel, Energy Supply, Access, and Climate Change	Jane Ebinger
Indonesia	Low Carbon Growth Strategy	Josef Lloyd Leitmann
LCR	Managing High and Volatile Oil Prices	Rigoberto Yepez-Garcia
LCR	Impact of Credit Crisis on Energy in Latin America	Karen Bazex
Mongolia	Impact Diagnostic on the Global Economic Crisis and the Power Sector	Tumentsogt Tsevegmid
Poland	Low Carbon Growth Study	Erika A. Jorgensen
SAR	Removing Barriers to Hydropower	Raghuveer Y. Sharma
SAR	South Asia Regional Energy Sector Vulnerability Assessment	Mohua Mukherjee
Serbia	Low Carbon Energy Path	Salvador Rivera
Vietnam	Fuel Efficiency, Trade Facilitation	Moustafa Baher El-Hefnawy
Vietnam	Vietnam Financial Impact Assessment (Phase 2)	Beatriz Arizu de Jablonski
Vietnam	Vietnam Energy Reform Dissemination and Outreach	Beatriz Arizu de Jablonski
PRO-POOR ENERGY ACCESS TA PROGRAM		
Global	Gender and Energy Development Program	Nilufar Ahmad
Laos	Stimulating Small and Medium Enterprises for Productive Uses of Electricity	Jie Tang
ENERGY EFFICIENCY CITIES INITIATIVE		
Global	International Benchmarking Network (IBNET) Energy Monitoring and Tracking Pilot Technical Assistance	Feng Liu
Global	Country Energy Efficiency Performance Indicators	Feng Liu
Global	Urban Mobility Strategies	Ranjan Bose
RENEWABLE ENERGY MARKET TRANSFORMATION INITIATIVE		
Belarus	Belarus Energy Efficiency	Pekka Kalevi Salminen
Bosnia	Bosnia Vrbas River Basin Hydro	Guy J. Alaerts
EAP	Capacity Building for Renewable Energy	Beatriz Arizu de Jablonski
Global	Concentrating Solar Power: Regulatory and Financial Incentives	Nataliya Kulichenko
India	India Concentrating Solar Power Initiative	Gevorg Sargsyan
LCR	Geothermal Assistance Component	Xiaoping Wang
Mexico	Promoting Mini-hydropower Development and Other Renewables	Rigoberto Yepez-Garcia
Mexico	Renewable Energy Assistance Program	Leopoldo Montanez

AFR – Africa **EAP** – East Asia and Pacific **ECA** – Europe and Central Asia

MNA – Middle East and North Africa **LCR** – Latin America and the Caribbean **SAR** – South Asia Region

ONGOING ACTIVITIES

COUNTRY/REGION	ACTIVITY	TASK MANAGER
ENERGY ASSESSMENT AND STRATEGY PROGRAM		
Chile	Support for Development of National Energy Efficiency Program	Lucia Spinelli
China	Municipal Heating Regulation (Phase I)	Gailius J. Draugelis
China	Heat Regulation (Phase 2)	Gailius J. Draugelis
China	Greater Mekong Sub-Region Power Trade	Beatriz Arizu de Jablonski
ECA	Climate Change: Energy Vulnerability	Daryl Fields
Global	Power Sector Market Structure	Maria Vagliasindi
Global	Regional Energy Integration: Global Case Studies	Jonathan Coony
Global	Rehabilitation of Hydropower Infrastructure	Caroline Van Den Berg
LCR	Energy, Environment, and Population (Phase II)	Alonso Zarzar Casis
MNA	Maghreb Energy Trade	Silvia Pariente-David
Peru	Assessment of Climate Impact on Peru's Hydrology: Development of a Methodology	Walter Vergara
South Africa	Low Carbon Growth Study	Xiaodong Wang
Turkey	Capacity Building for Electricity Market Operations	Sergio Augusto Gonzalez Coltrinari
PRO-POOR ENERGY ACCESS TA PROGRAM		
Bangladesh	Improving Indoor Air	Susmita Dasgupta
Bangladesh	Introducing Energy-Efficient and Cleaner Technologies and Practices in the Brick-making Sector	Maria Sarraf
Global	Work on Gender and Youth in Extractive Industries	Adriana Eftimie
Global	Evaluation of Rural Electrification	Shahidur R. Khandker
Global	ESMED Energy Access for Urban Poor	Koffi Ekoevi
Global	Energy Efficient Cities Project Support Facility	Feng Liu
ENERGY EFFICIENCY CITIES INITIATIVE		
Global	Small Grants	Jas Singh
Global	Good Practice Awards	Jas Singh
Global	Rapid Analytical Framework	Ranjan Bose
RENEWABLE ENERGY MARKET TRANSFORMATION INITIATIVE		
Philippines	Renewable Energy Development	Beatriz Arizu de Jablonski
LCR	Guidelines for Scaling-up Wind Energy Development	Roberto Gabriel Aiello
Iran	Renewable Energy	Vladislav Vucetic

AFR – Africa **EAP** – East Asia and Pacific **ECA** – Europe and Central Asia

MNA – Middle East and North Africa **LCR** – Latin America and the Caribbean **SAR** – South Asia Region



ANNEX 5. COMMUNICATIONS, FISCAL YEAR 2010

During fiscal year 2011, ESMAP teamed up the World Bank's regional energy units to highlight results and share knowledge and best practices through a wide variety of media: blogs, websites, web articles, and monthly electronic newsletters; academic publications, briefing notes, traditional reports, and user-friendly program brochures; and various social media outlets (Flickr, You Tube, and Facebook). ESMAP also continues to reach out to global audiences at international events, such as Carbon Expo 2010 (Cologne, Germany) and Concentrated Solar Power Workshop (Botswana). A redesigned ESMAP website was launched in mid-2010 to reflect priorities of the Strategic Business Plan.

ISBN, PUB. NO. OR PROJECT ID	COUNTRY/REGION	TITLE	AUTHOR/PTL/PROGRAM
Briefing Notes			
BN001-09	Global	Low Carbon Growth Country Studies—Getting Started: Experience from Six Countries	Jane Ebinger
BN002-09	Albania	An Assessment of Climate Change Vulnerability, Risk, and Adaptation in Albania's Energy Sector (English, Albanian)	Jane Ebinger
BN003-10	Mexico	Low-Carbon Development for Mexico	Jane Ebinger
BN004-10	Global	Regional Power Sector Integration: Lessons from Global Case Studies and a Literature Review	Johnathan Cooney
BN005-10	Brazil	Brazil Low Carbon Country Case Study	Jane Ebinger
Brochures			
--	CESVAP	Country Energy Sector Vulnerability Assessments Program: Helping Countries Prepare an Effective Energy Sector Response	Istvan Dobozi
--	REMTI	Renewable Energy Market Transformation Initiative: Scaling Up Deployment of Grid-Connected Renewable Energy Technologies for Power Supply Diversification	Cindy Suh
EXTOP Publications			
P099234	AFR	Monitoring Performance of Electric Utilities: Indicators and Benchmarking in Sub-Saharan Africa	Prasad Tallapragada/ Maria Shkaratan, Ada Karina Izaguirre, Jaakko Helleranta, Saifur Rahman, Sten Bergman
978-0-8213-7897-7	Bangladesh	Restoring Balance: Bangladesh's Rural Energy Realities	Shahidur Khandker/ Doug Barnes/ M. Asaduzzaman
978-0-8213-8104-5	Global	Energy Efficient Cities: Assessment Tools and Benchmarking Practices	Ranjan Bose

978-0-8213-8122-9	Mexico	Low-Carbon Development for Mexico	Todd M. Johnson/ Claudio Alatorre/Zayra Romo/Feng Liu
Knowledge Resources			
Article in Press	Global	Financing Energy Efficiency in Developing Countries—Lessons Learned and Remaining Challenges (<i>Elsevier</i>)	Ashok Sarkar, Jas Singh
2-pager	Global	Regional Power Sector Integration (RPSI): Lessons from Global Case Studies and a Literature Review An Overview	Johnathan Cooney
PII0201	LCR	Managing an Electricity Shortfall: A Guide for Policymakers	Pierre Audinet, Martin Rodriguez Pardina
PII8014	LCR	Assessing the Impact of the Economic and Financial Crisis on Power Sector Investments in LCR: Colombia, Peru and Jamaica	Karen Bazex
Workshop	Moldova	Action Plan for the Financial Stabilization of the District Heating Sector in Chisinau	Gary Stuggins
ASTAE	Vietnam	Vietnam: Expanding Opportunities for Energy Efficiency	Robert P. Taylor, Jas Singh, Alberto U. Ang Co
Regional Reports			
Formal Report 329/09*	AFR	Designing Strategies and Instruments to Address Power Projects Stress Situations	Gerald Meyerman, Ananda M. Covindassamy
PI09700	AFR	Petroleum Product Markets in Sub-Saharan Africa: Comparative Efficiency Analysis of 12 Countries	Sanjoy Rajan, Robert Murphy, Masami Kojima, Robert Bacon
PIII483	AFR	Guidelines for Regulating Cross-border Power Trading in Southern Africa	Anthony Hughes (consultant report)
PIII483	AFR	International Experience with Cross-Border Power Trading	Anthony Hughes (consultant report)
5333I-ALB	Albania	Climate Vulnerability Assessment An Assessment of Climate Change Vulnerability, Risk, and Adaptation in Albania's Power Sector	Jane Ebinger
53304-BG	Bulgaria	Building Regulatory Capacity for Renewable Energy Sources	Istvan Dobozi, Peter Johansen
	Colombia	Review of Policy Framework for Increased Reliance on Wind Energy In Colombia: Options For Market Entry of Wind Power in Colombia's Energy Mix	Walter Vergara
PII0548	ECA	Status of Energy Efficiency in the Western Balkans: A Stocktaking Report	Peter Johansen, Hinderikus Busz, Ana Plecas
Formal Report 333/10*	Honduras	Power Sector Issues and Options	Lucio Monari, Xiaoping Wang, Dante Mossi, Manuel Dussan, Angel Baide, Juan Manuel Rojas

PII0874	Hungary	Assessment of Smart Metering Models: The Case of Hungary	Dobozi (consultant report)
PII6206	Jordan	Power Sector Financial Vulnerability Assessment Impact of the Credit Crisis on Investments in the Power Sector Hashemite Kingdom of Jordan	S. Pariente-David, P. Roos, R. Chavapricha, J. Rho, H. Al-Harazi, S. Kpundeh
52106-LAC	LCR	Managing an Electricity Shortfall: A Guide for Policymakers	Pierre Audinet, Martin Pardina
55210	Macedonia	Restructuring Paper on a Proposed Project Restructuring of Sustainable Energy Project	Peter Johansen
Formal Report 338/09*	Mexico	Innovative Financial Mechanism to Implement Energy Efficiency Projects in Mexico	Charles Feinstein
53047-MNA	MNA	Exploring the Potential for Electricity Trade and Interconnection among Yemen and GCC Countries	Waleed Alsuraih, Husam Beides, Khalid Boukantar
54455-MNA	MNA	Potential of Energy Integration in Mashreq and Neighboring Countries	Husam Beides, Hossein Razavi, Doug Bowman, Khalid Boukantar
PII3570	Moldova	Policy Note Action Plan for the Financial Stabilization of the District Heating Sector in Chisinau	Gary Stuggins, Shinya Nishimura, Claudia Vasquez
PII2552	Montenegro	Public-Private Partnership (PPP) Options For Future Power Generation In Montenegro	Gerner (consultant report)
PI08120	Morocco	Options for a Low Carbon Energy Future in Morocco	Silvia Pariente-David (consultant report)
53719-PE	Peru	Peru: Overcoming Barriers to Hydropower (English, Spanish; unpublished)	Enrique Crousillat, Susan V. Bogach
49923-SY	Syrian Arab Republic	Electricity Sector Strategy Note (unpublished)	Husam Beides, Ananda Covindassamy, Waleed Alsuraih, Henk Busz, Khalid Boukantar
PII6216	Tunisia	Power Sector Vulnerability Assessment Impact of the Credit Crisis on Investments in The Power Sector: The Case of Tunisia	S. Pariente-David
PI05603	Ukraine	Case Study: How to Improve the District Heating Sector in Kharkiv	(consultant report)
52865-VN	Vietnam	Gas Sector Development Framework	Richard Spencer
54790-GZ	West Bank	Public Transport Performance and Tariff Setting	Ibrahim K. Dajani, Dr. Faisal Awadallah, Brendan Finn, Abdallah Awad, Khalida Al-Qutob
PII0209	West Bank	Strategic Assessment On Energy Efficiency And Security For Public Transport In The West Bank	Ibrahim K. Dajani, Roger Rault, Khaled Alshahili, Lamis Aljounaidi, Gregoire Gauthier, Khalida Al-Qutob

Webstories	
<ul style="list-style-type: none"> ■ South Asia's Power Sector Relatively Unaffected by Global Financial Crisis, Says New Report ■ ADF 7 Side Event sponsored by ESMAP, World Bank and UNECA discusses Energy and Climate for Development ■ ESMAP Energy & Climate Adaptation Highlights ■ Energy Adaptation Toolkit Helps Policymakers Assess Climate Change Risks To Power Systems ■ Europe and Central Asia: New Strategy Makes District Heating Efficient and Affordable to All ■ ESMAP Helps Maharashtra's Public-Private Partnership Double Electricity Production and Transmission ■ Cleaner Motor Fuels in Sub-Saharan Africa by 2020 ■ A New Report Offers Energy Options To Policymakers ■ Getting East Asia onto a Sustainable Energy Path- World Bank/ESMAP Funded Study ■ ESMAP Discusses Outcomes of NATO's Advanced Research Workshop on Weather and Climate Risk Management for the Energy Sector ■ Egypt: Policymakers Use ESMAP Analysis in Ongoing Policy Reform Discussions ■ SIDA: World Bank/ESMAP Presents Ways to Secure Climate Adaptable Energy Services for Low Income Countries. ■ A Show Case of Albania's Climate Vulnerability Assessment at World Bank's Sustainable Development Network Forum ■ Power Sector Vulnerability Assessments: Training Session 2010 ■ New Report: Petroleum Product Markets in Sub-Saharan Africa: Comparative Efficiency Analysis of 12 Countries ■ Twelve African Countries Could Pay Less for Oil Products: New Study Reveals ■ ESMAP Develops a Framework to Support Adaptation of Energy Infrastructure to Climate Change ■ ESMAP Funds Oil and Gas Sector Programs in Sub-Saharan Africa and Vietnam ■ Albania Assesses Climate Change Risk to Energy Sector 	CESVAP
<ul style="list-style-type: none"> ■ ESMAP Launches Program to Support Jordan Develop an Energy Efficient City Transport Plan ■ Cities Have Started Using A New ESMAP tool to Quickly Diagnose their Energy Use, Says Program Manager, Rohit Khanna ■ Beijing: A World Bank/ESMAP funded Program Eases Traffic Congestion Using Buses, Says Newspaper ■ Developing Countries Must Make Energy Efficiency a Pillar in Building Construction ■ Energy Needs of Mega-cities Can Be Met Efficiently, Says ESMAP Expert at World Energy Congress ■ ESMAP Sponsors Energy Efficiency Workshops in Brazil and Russia ■ Roundtable on Energy Efficiency Metrics & National Energy Efficiency Assessment in Developing Countries ■ EECI Launches City Energy Efficiency Good Practice Awards ■ ESMAP Offers Practical Energy Efficiency Solutions To Meet Energy Needs in Cities ■ Large-Scale Residential Energy Efficiency Programs Based on Compact Fluorescent Lamps (CFLs) ■ Energy Efficient Cities Initiative Project Database ■ ESMAP's Energy Efficient Cities Initiative Attains Early Gains in 2010 ■ Cities Crucial to Attaining Energy Efficiency across Sectors: Book Launch ■ Rapid Assessment Framework (RAF): New Tool to Help Cities Use Energy Efficiently ■ New Publication Outlines Energy Saving Solutions in the Public Sector ■ Climate Change Mitigation in the Buildings Sector ■ New Study Provides Solutions to Beijing's Transport Needs ■ Energy Efficient Cities Initiative Celebrates Its First Anniversary 	EECI
<ul style="list-style-type: none"> ■ ESMAP Becomes a CLEAN Partner ■ Latest Country Study Offers Low Carbon Options Coupled with Growth ■ Carbon Expo Session Unveils Tools for Low-Carbon Development ■ ESMAP Conducts a Hands on Workshop on Low Carbon Development ■ ESMAP Conducts a Knowledge Sharing Session on Low Carbon Growth 	LCGCS

<ul style="list-style-type: none"> ■ WB/IMF Annual Meetings: ESMAP Hailed for Low Carbon Energy Plans and Its Energy Access Program ■ ESMAP Joins UN's Global Alliance for Clean Cook stoves ■ An ESMAP Funded Program Helps Rwandese Break Out of Poverty Says Irish Times ■ Unveiled Monitoring System to Allow Nepalese Gauge Energy Benefits ■ Gender and Energy Capacity Building Workshop for South Asia Dhaka, Bangladesh ■ Lighting Africa: Winners picked as best off-grid lighting products in Sub-Saharan Africa ■ New Web Site for Africa Electrification Initiative (AEI), Funded by ESMAP-AFREA, Now Available ■ A Beneficiary of World Bank/IFC/ESMAP's Lighting Africa Initiative Wins UN Prize ■ Highlights: ESMAP's Gender and Energy Development Strategies Program (GEDS) ■ Energy Access For The Urban Poor: Strategies For Promoting Productive Uses Of Modern Energy ■ New ESMAP Program Provides Gender Based Interventions for Equitable Development 		PEA-TAP	
<ul style="list-style-type: none"> ■ Middle East Countries Could Boost Their Electricity Through Cross Border Trade ■ South East Europe: Results of a Study on Power Sector Integration and Market Reform ■ Regional Energy Integration: Early Findings from an ESMAP Regional Power Study ■ South East Europe: A Regional Approach to Energy Security 		REISP	
<ul style="list-style-type: none"> ■ REEEP and ESMAP Highlight Successful Low Carbon Energy Projects ■ CSP Manufactures Critical for Program Effectiveness in Middle East & North Africa ■ A Wind Measuring Tool Could Support Deployment of Electricity in Developing Countries ■ Geothermal Energy Could Help Diversify The Global Energy Mix Says ESMAP Expert ■ Southern African Regional Workshop on Concentrating Solar Thermal Power ■ New ESMAP Program Supports the RE development Process: Renewable Energy Market Transformation Initiative ■ Workshop to Help Accelerate the Deployment of Concentrated Solar Programs ■ Central America Energy Integration: Workshop on Energy Sector Challenges and Opportunities ■ ESMAP's Renewable Energy Initiative Registers Progress in Helping Countries Diversify Their Energy Supply Mix ■ ESMAP Outlines Ways to Scaling Up Deployment of Grid-Connected Renewable Energy Technologies at DFID's UK Event ■ Clean Technology Fund approves US\$750 million to expand Concentrated Solar Power in MENA countries ■ Mexico Adopts New Law to Diversify Energy Sources with ESMAP/ World Bank Assistance ■ Assessing the Impacts of Climate Change on Mountain Hydrology: The Case Study of Peru ■ Middle East & North Africa launches the Scale-up Concentrated Solar Power Program ■ Over 1.5 Million Colombians Can Benefit From an Energy Mix that Includes Wind ■ An Analysis of Renewable Energy Generation in Sri Lanka ■ Latin America Electricity Challenge: capacity building initiatives ■ Development of Small and Medium Hydropower in Peru: Overcoming Barriers 		REMTI	
Workshop Proceedings			
WP009-10	Cambodia	Fighting Poverty through Decentralized Renewable Energy Energy SME Conference	Yvette Bossman
WP010-10	Philippines	International Experience on Renewable Energy Development Technical Workshop	Susan Bogach
--	Bangladesh	Gender and Energy Capacity Building Workshop for South Asia	Adriana Eftimie

**Discontinued series as of June 30, 2009.*



ABBREVIATIONS AND ACRONYMS

AAA	analytical and advisory activity	GDP	gross domestic product
AEI	Africa Electrification Initiative	GEDS	Gender and Energy Development Program (ESMAP)
AFREA	Africa Renewable Energy Access Program, the World Bank	GHG	greenhouse gas
AEPC	Alternate Energy Promotion Center	HEAT	Hands-on Energy Adaptation Toolkit
ASTAE	Asia Sustainable and Alternative Energy Program, the World Bank	IBNET	International Benchmarking Network
BBL	brown bag lunch	IRENA	International Renewable Energy Agency
CAS	country assistance strategy	LCG	low carbon growth
CCDP	Climate Change for Development Professionals	LED	light-emitting diode
CEIF	Clean Energy Investment Framework	MDTF	multi-donor trust fund
CESVA	Country Energy Sector Vulnerability Assessments Program (ESMAP)	M&E	monitoring and evaluation
CFL	compact fluorescent lamp	MIS	management information system
CG	Consultative Group	MW	megawatts
CPS	country partnership strategy	NAPCC	National Action Plan for Climate Change
CSP	concentrated solar power	NEAP	National Electricity Access Program
CVA	climate vulnerability assessment	OBA	output-based aid
EAFUP	Energy Access for the Urban Poor (ESMAP)	OLADE	Latin American Energy Organization
EASP	Energy Assessments and Strategies Program (ESMAP)	OPVA	oil price vulnerability assessment
ECA	Europe and Central Asia, the World Bank	PEA-TAP	Pro-poor Energy Access-Technical Assistance Program (ESMAP)
EE	energy efficiency	PSVA	power sector vulnerability assessment
EECI	Energy Efficient Cities Initiative (ESMAP)	PUE	productive uses of electricity
EFFECT	Energy Forecasting Framework and Emissions Consensus Tool	RE	renewable energy
EI	extractive industries	REEEP	Renewable Energy and Energy Efficiency Partnership
ESMAP	Energy Sector Management Assistance Program	REMTI	Renewable Energy Market Transformation Initiative (ESMAP)
ESMED	Small and Medium Enterprises Development Program (ESMAP)	RPSI	regional power sector integration
ESPC	energy savings performance contracts	SADC	Southern African Development Community
ETW	Sustainable Energy Department (SEG), formerly Energy, Transport, and Water Department, the World Bank	SAPP	Southern African Power Pool
EUEI PDF	European Union Energy Initiative Partnership Dialogue Facility	SME	small and medium enterprises
FEMA	Federal Emergency Management Agency	SSA	Sub-Saharan Africa
FY	fiscal year	SWaP	sector-wide approach
GCC	Gulf Cooperation Council	TA	technical assistance
		TAG	Technical Advisory Group
		TRACE	Tool for Rapid Assessment of City Energy
		U.S.	the United States
		US\$	United States dollar
		WBG	World Bank Group
		WBI	World Bank Institute



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