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# A Note from Minister Heikki Holmås

At the Oslo Conference on Energy Access for All, October 2011, co-organized with the International Energy Agency, Norway launched an international energy and climate initiative, the Energy+ Partnership. We are developing a sectoral approach to energy access and reduction of greenhouse gas emissions in developing countries through the use of payment by results, cash on delivery, and phased interventions.



*First*, we shall assist governments in developing comprehensive energy sector and low emission plans and work to strengthen their technical and institutional capacity to support commercial investment in the sector.

*Second*, Energy+ shall work out measurement, monitoring and reporting systems, ensure transparent and efficient regulatory regimes, and enable the functioning of incentive mechanisms for business and investments.

*Third*, Energy+ shall implement and demonstrate payment by results systems based on increased access to sustainable energy and reduced emissions of greenhouse gases relative to agreed base-lines.

There are considerable market opportunities for those who come forward with promising projects. Just consider the figures of energy poverty: There are 1.3 billion people without access to electricity in the world, 600 million in Africa alone, and 2.7 billion who depend on unhealthy and ineffective cook stoves.

On behalf of the Energy+ Partnership, the Technical Working Group has produced the present report. My main messages to the reader are:

• Energy access, climate mitigation and adaptation do not need to undermine each other. In fact, they can be mutually supportive. To that end, Energy+ is developing a payment by results model to support a wide continuum of innovative business opportunities for emerging public-private-community partner-ships.

• Using public money to leverage private investment is the key to unlocking green growth potential. Official development assistance must be used strategically to leverage the needed large-scale commercial investment. Norway is disbursing Energy+ development assistance to support those innovative business opportunities.

I appreciate the efforts by the members of the Technical Working Group in developing this report. The Technical Working Group is comprised of experts from Energy+ Partners and through their hard work and dedication this report has delivered in a timely manner. I also wish to acknowledge the key role of the Group's convenor, Dr. David Reed, in these efforts.

Minister Heikki Holmås Minister of International Development Norway

### I. Introduction

Addressing energy poverty, climate change, and energy security challenges, while also promoting broad-based economic growth, requires speeding the global transformation to the clean energy economy of the future. The Energy+ Partnership is a collaborative initiative among country partners and other stakeholders to speed that global transformation. It will promote universal access to modern energy services, and lower the global growth in greenhouse gas emissions by catalyzing widespread commercial investments in secure, safe, clean energy and energy efficiency solutions.

Over the long-term, Energy+ aims to lay the foundation for a sustainable, competitive global market, principally through the use of Payment by Results agreements and by preparing developing country partners for participation in new forms of climate finance.

#### Context

Tackling climate change requires significant reductions of global human-generated GHG emissions. The production and use of energy is the biggest contributor to emissions and is the primary cause of climate change. The necessary d growth of energy production and use in developing economies therefore presents one of the greatest challenges to meeting our global climate objectives.

Across the developing world, however, the energy infrastructure of the future has yet to be built. The International Energy Agency (IEA) estimates that investment in energy infrastructure in non-OECD countries will total over \$20 trillion over the next twenty-five years - nearly twice as much as in developed countries. This presents an enormous and urgent opportunity to redirect future emissions trajectories today by creating the conditions conducive to commercial

investment in low-emissions energy solutions and for mobilizing resources to scale-up such investments.

By working with developing country partners now to decrease their reliance on carbon intensive energy systems or avoid them all together, Energy+ seeks to shape a very different outcome for the future.

There is a parallel and equally pressing energy challenge facing developing countries: endemic energy poverty. Currently more than 1.3 billion people lack access to electricity, and at least 2.7 billion people are without clean cooking facilities. More than 95% of these people are either in sub-Saharan Africa or developing Asia. Energy poverty has long been recognized as one of the most serious global development challenges and solving it is a prerequisite for poverty eradication and economic growth.

Only recently, however, has energy access moved to the center of the global development action agenda. Today, many countries across the developing world have energy access and energy efficiency targets that did not exist just a few years ago and half of developing countries have established specific targets for expanding access to electricity. By working with partners to achieve these targets through commercial investments, Energy+ can help ensure lasting change for billions of people.

#### **Overarching objectives**

When launched by the Government of Norway (GoN) and the UN Secretary General in Oslo in October 2011, the Energy+ Partnership emphasized that the challenges of climate change and energy poverty needed to be addressed in tandem, and thereby established two complementary objectives: Promote access to modern energy services and reduce greenhouse gas emissions by scaling-up renewable energy and increasing energy efficiency in developing countries. Those two objectives parallel the stated goals of the Secretary General's Sustainable Energy for All (SE4All) initiative that seeks by 2030 to:

- Ensure universal access to modern energy services
- Double the rate of improvement in energy efficiency
- Double the share of renewable energy in the global energy mix

Meeting the shared goals of Energy+ and SE4ALL will require a dramatic shift and increase in national and international financial flows and investments in the energy sector. Underlying the access, efficiency and renewable energy goals is a shared commitment to actively support the internationally-agreed below-2° C and 450 parts per million targets.

#### Seeking energy sector transformation

Meeting the challenges of climate change, energy poverty and green growth will require virtually all countries to fundamentally reorganize the way they generate, distribute and use energy. Such broad-based transformational action necessitates a sector-wide approach with support focused on achieving change at that level. To this end: the key characteristic of Energy+ is that the bulk of funding from the developed country partners will be used to pay the developing country partners for the results they achieve at the "outcome" or sector-wide level. This approach is intended to produce a clear focus on and provide positive incentives for the achievement of sectoral impacts.

Under Energy+, country-level funding arrangements will only be established after a developing country partner has articulated a credible pathway for energy sector transformation. The strategy will need to offer a plan for developing functional, well-regulated, competitive commercial markets for sustainable energy and for providing, where necessary, effective incentives for commercial investments. Typically, this pathway will be laid-out in a long-term Low Emissions Development Strategy (LEDS) which is further refined and implemented through a series of 3-5 year national energy plans. This strategic vision and implementation plan is the foundation on which all country-level Energy+ resource flows, activities and investments are predicated. Supplementing the country-level funding arrangements, Energy+ will sponsor a broad range of partnerships and financing approaches with multilateral financial institutions, phalanthropic organizations, civil society groups and private companies.

#### Purpose of this document

Framed by this transformational objective, this document is directed to current and potential Partners of the Energy+ Partnership. Its purpose is to highlight the innovative features of the country-level implementation strategy being pursued with a number of developing governments committed to transforming their respective energy sectors. The strategy is fully cognizant of and embraces the risks of promoting innovative approaches to energy sector transformation.

This brief document is divided into three main sections. First, it identifies many of the challenges that must be addressed to transform energy sectors in which commercial enterprise must play the dominant role in the long-term. These challenges emerge from background analysis and recent Energy+ consultations with commercial investors and entrepreneurs who have identified principal barriers that impede and further discourage commercial investment in energy access and renewable energy investments in developing countries. Second, we discuss the principal instruments proposed for national-level implementation strategies under the aegis of Energy+. Those instruments include the three-phase approach, resultsbased financing, and the national energy registry which includes a system for measurement, reporting and verification (MRV). To close, the document offers a guidance note relating to country partnerships.

# II. Scaling-up through Commercial Investment

Ultimately, commercial enterprise is the engine that will drive energy sector transformation. The current level of commercial investment in renewable energy in developing countries is growing, but still falls far short of the total volume needed. The capital required for transformation – now and in the future – makes it clear that success in meeting this challenge will hinge in large part on the capacity of Energy+ to unleash commercial sector capital through ongoing engagements and coordinated action among the public sector, civil society and the commercial sector.

Doubling the annual rate of improvement in energy efficiency, that is, bringing it to 2.4% per year by 2030 and doubling the share of renewable to 30% of the global energy mix, also by 2030, would require significantly larger investments above those anticipated with current trend lines. Estimates of resources required to meet these goals run in the order of US\$300 billion per year worldwide, half of which would be required in non-OECD countries. The IEA estimates that investment of US \$48 billion per year will be needed to provide universal access to basic modern energy by 2030 - more than five times the level of investment in 2009. Clearly such levels of investment cannot be attained through national treasuries or through official development assistance (ODA).

There are additional reasons why commercial enterprise will need to be the engine that drives energy sector transformation. The commercial sector brings essential expertise and capacity that will be critical for accelerating the pace at which energy access is provided. Competitive commercial markets tend to reduce the costs to government and the public by achieving economies of scale, and developing new technologies and improving commercial services needed to increase the affordability, access and overall reliability of the energy system. Finally, commercial sector activity provides local capacity building, and knowledge and skills transfer that are critical to improving local know-how while establishing networks between local firms and small and medium enterprises (SMEs). These networks enable companies to source inputs and connect with customers more easily.

In recognition of the importance of the commercial sector, the Energy+ Partnership has already launched a series of global private sector consultations, starting in Washington, DC in November 2011, replicated in Nairobi, Kenya in March 2012, and to continue to other key regions and markets in the course of the next two years. These consultations with leading SMEs, development firms and financial services providers have identified some of the principle obstacles to and opportunities for scaling up the use of renewables and increasing energy access and energy efficiency through Energy+ country-level programs and multilateral interventions. The following sections highlight the challenges and identify operational changes that, among many others, will have to be addressed by country governments in partnership with local commercial actors to acquire the transformation impacts sought through Energy+ programs.

# Policies, coordination, information and regulation

Early engagement with the commercial sector to develop a national energy plan to facilitate investment and to disseminate information on resources and market demand can set the stage for achieving a country's low emissions development goals. Investors have consistently identified maintenance of a stable and predictable policy environment, including a clear strategy and plan for the development of the energy sector based on broad-based support, as critical precondition to investment. The lack of coordination between the government, both at national and local levels, and the commercial sector has been identified as a major barrier to developing an energy plan that takes into consideration the interests of both parties. Comprehensive national and local-level resource assessments can help the private sector evaluate the revenue generation and energy production potential of renewable resources and projects, and baseline information can be used to evaluate market demand. Access to a central portal containing this sort of information would prevent a duplication of efforts and expense, enabling investors to allocate capital more efficiently and lowering entry costs across the board.

Finally, private sector investors provided multiple examples of how their investment plans were impeded by regulatory obstacles including inefficient project approval, permits, licensing and land leasing procedures and uncompetitive electricity markets dominated by vertically integrated national energy companies. These problems are often the result of a complex web of causes, including immature institutions, inexperienced bureaucrats, and corruption. Resolving them requires targeted interventions, increased transparency and institutional capacity building.

#### Early stage project development support

Investors underscored how early stage financial and technical support has the potential to bring a reliable pipeline of bankable projects to market. Funding for relatively high-risk feasibility studies is difficult to obtain. In terms of project implementation, enabling infrastructure is often lacking, as well as the local technical and management capacity to support more complex renewables technologies.

Consultations consistently identified the gap between the risk/return expectations of most private sector investors and the risk/return profile of renewable energy investments in developing countries, making it difficult to obtain financing. Real and perceived risks that are keeping

investors out and driving interest rates up will need to be targeted, both with new financing models that pool risk more effectively and a range of public and private mechanisms that create a de-risked investment environment.

Due to the nascent stage of the renewables market in many developing countries, local financial institutions may also lack the technical capacity to understand and appraise projects and may therefore be unwilling to shoulder the risks. Empowering local lenders to evaluate project risk, conduct due diligence, and offer loans in local currency will, in particular, benefit smaller renewables projects that currently struggle to access financing.

#### The challenge of energy efficiency

Energy efficiency ultimately allows us to accomplish the same activities while using less energy – ultimately freeing up more energy for use elsewhere while reducing GHG emissions relative to business as usual. However, there are a number of barriers that investors have identified which continue to limit the widespread the uptake of such measures.

One of the key barriers is lack of awareness and limited availability of information about energy use and energy savings opportunities and technologies. This challenge is felt across the spectrum of energy market participants, from households, to commercial enterprises, to financial institutions. A second key hurdles is the lack of sector-specific technical expertise and training. Finally, there is a range of financing and economic barriers. These include: high upfront investment costs with rapid payback requirements from lenders, or related, high upfront costs with benefits accrued over a longer term than allowed for under standard commercial investment terms; the unpredictability of energy prices, and revenue loss resulting from shut-down while energy efficiency improvements are made.

#### **Distinct needs of off-grid renewables**

Off-grid renewables projects face a set of distinct challenges including but not limited to: getting dispersed and remote rural projects to scale, attracting a good management team and securing carbon credit investments for small distributed projects. Rural communities are often unable to afford the sizable upfront costs of renewables projects. High levels of poverty present the challenge to develop models that build on users' ability to pay smaller amounts over longer repayment period than other customers.

On the payment side, rental and pay-as-you go billing approaches help reduce the up-front costs for consumers. Successful partnerships and pilot projects that address these issues of management, financing, distribution and consumer payback, should be replicated and scaled up to reduce the costs and risks traditionally associated with developing off-grid projects.

While the barriers listed above are recognized as generic problems besetting virtually all countries, consultation participants emphasized the importance of using the Energy+ consultation process as a vehicle for identifying specific problems particular to each country. Moreover, the Energy+ consultation approach enables public and private partners to identify and implement practical ways of overcoming those impediments and thereby lead to accelerated private investment. Removing more complex institutional and policy barriers are longer-term objectives that become embedded in the outputs and outcomes to be addressed through Energy+ country programs.

# III. Key Features of a National Implementation Strategy

Developed country partners are under increasing domestic pressure to show on-the-ground results and to demonstrate the value of public resources directed to developing country programs. The transformational ambition of Energy+ country partnerships places additional burden of proof on partners to deliver results during the lifetime of a country program. A results chain can be used to specify key results milestones, initially in the form of outputs, and then illustrate how a country program will move to achieve agreed, higher-level outcomes as the program progresses.

In addition, results-based payments, and their corresponding metrics, need to be agreed among all parties as a prerequisite for operational effectiveness that will enable the developing country partner to manage internal resource allocation issues effectively and create the political commitment needed to put in place the enabling investment environment.

The need to demonstrate measurable results from international financial support has kindled a strong interest in applying Payment by Results (PBR) to international development programs in a number of different sectors. PBR instruments have three common characteristics:

- Payments are made against pre-agreed results;
- Recipients have discretion over how the results are achieved;
- Independent verification of results is required for payments to be triggered.

The centrality of the energy sector in all climate change scenarios further suggests that the use of PBR in the energy sector is likely to grow despite the fact that there has been very limited application in the sector to date. A central feature of the Energy+ country-level strategy will therefore be the use of Payment by Results across the full range of activities at the country and international levels, as follows:

- Energy+ country partnerships will be structured according to a *three-phase approach* that will steadily raise the level of deliverables from specific outputs to higherlevel outcomes associated with sector transformation;
- Results-based financing (RBF) will be promoted as the primary mechanism by which programs and activities are implemented at the country level by both developing country governments and their development partners. Underpinning RBF is the need to develop a system for measuring increased access to energy and reduced GHG emissions;
- A national energy registry will be established by each developing country partner to not only ensure transparent verification and communication of the results through a system for monitoring, reporting and verification (MRV), but also to facilitate financing from diverse international and

domestic financing sources. The development of an MRV function within the national registry through Energy+ will also have important implication for the use of carbon financing looking forward.

Each of these features, including MRV, will now be described in turn, with an emphasis on how they could be implemented as a central pillar of Energy+ country implementation strategy.

#### **Three-phase approach**

The first central feature of the Energy+ country implementation strategy is use of the threephase approach that will match developed country contributions with achievement of agreed deliverables by developing country partner over an established time frame. Initially progress will be measured in the form of activities and outputs but, as the program matures, deliverables take the form of higher-level outcomes associated with changing the energy sector. Figure 1 shows how the three-phase approach fits alongside an indicative results chain. This figure also provides some headline objectives and indicators that match the three focus areas of Energy+: energy access, renewable energy, and energy efficiency.



#### Figure 1: Indicative results chain illustrating relationship with the three-phase approach

## Figure 2: The Three-phase Energy+ Country Partnership "At-a-glance"

Phase 1: Readiness			
Public Sector	Commercial Sector	Funding Mechanisms	
Activities: (i) confirm/prepare sector-wide Energy Plan (EP) as part of Low Emissions Development Strategy (LEDS); (ii) establish National Energy Registry, including MRV arrangements, and commercial sector engagement mechanisms; (iii) resource, data mapping and market analysis; (iii) stakeholder engagement to assess gover- nance and institutional capacity and policy and regulatory framework; (iv) establish baseline reference levels; (v) design implementation and scale-up programs, agree institutional framework for financing, develop methodolo- gies and proxy indicators for emissions and access <b>Results:</b> (i) LEDS and national EP; (ii) priorities of work for enhancing governance and institutional capacity and policy and regulatory framework; (iii) National Energy Registry; (iv) business-as-usual reference level/baseline; (IV) Energy+ Program incl. financing and results meas- urement agreements	Activities: (i) dialogue with government and other stakeholders; (ii) sharing of knowledge, best practices <b>Results:</b> (i) LEDS and national EP; (ii) priorities of work for enhancing gover- nance and institutional capacity and policy and regulatory framework; (iii) National Energy Registry	Traditional: (i) Grants; (ii) technical assistance; Innovative-Payment by Results (PBR)	
Phase I Objectives: Agreement of Energy+ program; Esta	ablish foundations for energy sector transfor	mation	
Phase 2: Implementation			
Public Sector	Commercial Sector	Funding Mechanisms	
Activities: (i) governance and institutional capacity, and policy and regulatory framework technical assistance (ii) energy infrastructure investments required to facilitate commercial investment; (iii) provide incentives for com- mercial investment through Energy+ RBF programs. (v) implement MRV system <b>Results:</b> (i) energy policy reform; (ii) training and capacity building; (iii) infrastructure to access renewable energy is in place; (iv) demonstration/market catalyzing projects	Activities: (i) technical training, capacity building activities, including business model development building and the development of a pipeline of bankable projects (ii) energy infrastructure invest- ments required to facilitate commercial investment; (iii) investments supported by Energy+ RBF <b>Results:</b> (i) demonstration/market catalyz- ing projects; (ii) increased capacity in the commercial and financial sectors to undertake renewable energy; (iii) expand- ed portfolio of investment grade projects	Traditional: (i) Grants; (ii) technical assistance; (iii) loans Innovative-PBR: results-based financ- ing	
Phase II Objectives: Achieve Partnership Outputs, such as: (i) Kwh delivered, (ii) cookstoves supplied, and (iii) energy			
saved; Create conditions conducive to commercial deployment of clean energy			
Phase 3: Scaling-up		_	
Public Sector	Commercial Sector	Funding Mechanisms	
Activities: Continue to provide incentives for commercial investment, principally through national RBF programs (ii) Maintain stable legal, regulatory and incentive frameworks; (iii) Continue implementation of LEDS and EP. Results: (i) stable legal, regulatory and incentive framework; (ii) investments and other activities in accordance with LEDS and national EP.	Activities: Investments in sustainable energy and energy efficiency, incl those supported by national RBF programs Outputs: (i) New energy capacity, (ii) new connections, (iii) units of non-grid equipment sold; (iv) savings in fossil ener- gy	innovative-PBR	
Phase III Objectives: Achieve Partnership Outcomes, such as: (i) Increased energy access; (ii) Increased output of renew- able energy; and (iii) improved energy efficiency; Scaled-up commercial energy investments and activities			
Country Partnership Impacts: (i) Reduced energy poverty; (ii) Avoided greenhouse gas emissions			

The three phases of Energy+ can be summarized in the following terms:

#### Phase 1: Readiness

The purpose of this phase is to implement activities that are required for the successful delivery of the higher-level agreed outcomes in following years. Activities undertaken during this phase include strategy development, capacity building, program design, establishment of necessary institutions (e.g. MRV and registry), and stakeholder engagement. Donor support might take

the form of technical assistance coupled with initial payments to ensure creation of the enabling policy environment and institutional scaffolding.

In many cases developing country partners will already have in place credible strategies for addressing climate change and sustainable energy sector growth and active systems for communicating and working effectively with commercial partners. Where these supporting systems do not exist, Energy+ funding can be used to ensure their development.

#### Three-phase approach in practice: Ethiopia

At the time of writing this strategy document, the Governments of Ethiopia and Norway are actively developing what will be the first country partnership agreement under Energy+.

Ethiopia's Climate Resilient Green Economy (CRGE) Strategy outlines how to protect Ethiopia from the adverse effects of climate change and to build a sustainable economy. Under this, 150 initiatives have been identified and 60 prioritized for implementation.

The Government of Ethiopia is already developing a Fuel-Efficient Stoves Implementation Plan to expand the adoption and use of improved/advanced cookstoves. This plan, combined with the CRGE (which is Ethiopia's version of a LEDS), provides a solid foundation on which to build a partnership based on verified results at the outcome level.

The country partnership agreement between Ethiopia and Norway represents a true partnership, with jointly agreed results milestones and corresponding financial contributions. This includes reference to a three-phase approach whereby Norway will initially support further strategic planning (Phase 1). This initial step is closely followed by support for the implementation of the plans, policies, and regulatory and incentive measures that are needed to "stimulate markets, build capacity, encourage innovation, and catalyze investments" (Phase 2).

Results-based financing is envisaged as a key implementation mechanism to simulate private and public investment. However, the ultimate goal is to move to the "provision of results-based payments according to the outcomes delivered by way of access to sustainable energy and avoided or reduced emissions of greenhouse gases relative to a business as usual baseline" (Phase 3).

The ambition is to implement the first two phases from 2012 to 2015 and to start the implementation of Phase 3 in 2016, depending on progress made. Initial payment milestones will take the form of process outputs (e.g. development of results-based financing options and channelling modalities by the end of 2013), moving to a series of proxy indicators, and eventually to actual outcome indicators in the medium term.

#### Phase 2: Implementation

This phase involves the completion and delivery of outputs such as effective policy frameworks, operational institutional arrangements, training competent professional staff and also delivery of outputs on the ground, including infrastructure, demonstration projects and MRV systems. The expectation is that results-based financing instruments will be designed and implemented by the recipient country government (and its development partners) during this phase to begin the process of building or expanding markets, stimulating private sector delivery of goods and services, and encouraging innovation.

Results-based payments by developed country partners may be linked to process or activity milestones, or could be provided directly to results-based financing programs. Initially proxy indicators for measuring access to energy and reduced GHG emissions, as well as for policy measures, will be used.

#### Phase 3: Scaling-up

Reaching this phase is the ultimate goal of Energy+. The objective is for results-based payments to be linked to creating conditions for transformational change. This means that preagreed outcomes should be ambitious and achievable only through catalytic activities that create the right enabling environment, leverage commercial investment, and support innovative new business models and technologies. There should be a correspondingly large reward in the form of results-based payments over a number of years for successful delivery at scale.

#### **Results-based financing**

The second major operational feature of the Energy+ country implementation strategy is results-based financing. Energy+ proposes a major focus on expanding the use of resultsbased financing<sup>1</sup> for the implementation of programs and activities at the country level. RBF is often used as a broad term to describe programs, projects or policies that link public funding disbursements to the delivery of predefined outputs, and could be used to incentivize the provision of goods or services, create or expand markets, or stimulate innovation. Taken together, such interventions would be designed to deliver catalytic outcomes, such as number of households with improved energy access or increased share/diversity of renewable energy in the energy mix, but disbursements would be made against outputs – such as the number of mini-grid connections installed, or the number of kWhs supplied by a particular form of renewable energy .

RBF could be implemented as a domestic policy mechanism with a partner country government as the 'principal' (with or without external support),

or as a standalone instrument with a multilateral or bilateral development agency taking on this role. The beneficiaries, or 'agents', might be private sector companies, state or local governments, public utilities or individuals. While there is no direct link to the results-based payments that would be made under Phase 3 of Energy+, RBF fits well within an overall PBR approach when the funding received from results-based payments from donors is used by the developing country partner to cover the implementation costs of the former, and when there is a clear results chain between the two.

Although there is significant experience of using RBF in sectors such as health, energy sector experience is primarily limited to around 50 projects targeting pro-poor service delivery, such as the installation of solar home systems. Recognizing that RBF has not been widely applied in the energy sector, a key near-term objective is to expand the range of RBF modalities to assess their effectiveness and then scale up successful approaches. An area of particular interest would be market-focused instruments that aim to catalyze private sector delivery and self-sustaining business models, as opposed to capital support for public service delivery. This suggests an initial focus on opportunities related to energy access, distributed renewable energy, and energy efficiency; largescale electricity generation is perhaps better supported through instruments such as feed-in tariffs<sup>2</sup> and regulation.

Finally, it should be noted that MRV is usually an in-built and automatic feature of RBF instruments, in that it is required to trigger disbursements. This means that RBF instruments are a potentially rich source of data, much of which will be generated close to, or in, real time.

#### National energy registry

The third feature of the Energy+ country-level strategy is establishing a national energy registry. Fulfilling the transformational aspiration of Energy+ will require close coordination with many national and international stakeholders – public, private and civil society – already active in the energy arena. Additionally, the success-ful implementation of the PBR program will also require a transparent system for tracking and monitoring activities, results and payments and for the independent verification of the same.

The need for more effective communication and improved harmonization and for tracking and verifying results and payments makes establishing a National Energy Registry (NER) an imperative component of energy sector transformation. With a modest investment, a NER can be launched as a central portal for information exchange and developed into a clearinghouse to coordinate programs, facilitate matchmaking of energy financing, and importantly tracking and monitoring results. NER needs to be compatible with the climate registry being developed under the UNFCCC.

The Energy+ Partnership calls for the creation of national-level registries in partner countries to support the scaling up and delivery of energy access and climate change investments. The national registry is a proactive mechanism that provides real-time information on projects, tenders and investment opportunities in the energy sector, on the one hand, and tracks results and payments on the other. It will serve as a central portal to provide information on national energypolicy, sector development and investment plans, infrastructure and grid expansion plans, among others.

At the early stage of developing the registry, it should focus on two principal functions, the information and matching functions as explained below. Subsequently, the registry will be developed in to the system for implementing and monitoring the PBR program.

Information and knowledge management functions: In this function the E+ registry collects, posts and disseminates information from concerned parties regarding:

- The country's energy sector national development strategies including the RE/EE sector development plans;
- The demand for financing in the form of specific programs plans and projects that would extend energy access and reduce GHG emissions through renewable energy and energy efficiency;
- The supply of financing, in the form of funding opportunities available to the country from national and international sources, both public and private; and
- Updates tracking disbursement of resultsbased financing and aid along with data on outputs and benefits associated with those financial flows.

Matching functions: Through the matching function the registry proactively helps to align financing and technical needs presented in national and sector development strategies with resources offered through public and private financing mechanisms. For example the E+ Registry may use its information and knowledge management functions to support periodic national investment roundtables with the private and public investors. Likewise this function can bring information to the country dialogue with international multilateral funds, such as the GCF, or other bilateral sources, signaling to them when country level E+ needs and opportunities arise.

#### MRV and the link to future carbon finance

The need to use public climate finance more effectively and catalytically and to scale up carbon market operations is central to the on-going climate negotiation and is critical for the success of Green Climate Fund (GCF). However, at present no clear framework exists through which to understand what is required to be ready to use international climate finance in a transformational way and how result-based financing approaches can be applied to get there. Neither have the synergies and complementarily between carbon market and public climate finance been effectively explored under the existing programs, such as Clean Development Mechanism (CDM), the Global Environment Facility (GEF) or the Climate Investment Funds (CIF).

The Energy+ result-based financing approach for sectoral market transformation can help to spearhead the development of sectoral crediting mechanisms in developing countries. Energy+, while addressing the key challenge of shifting away from project-based funding to those with more potential for rapid scale-up, will generate important hands-on knowledge and lessons to inform the negotiation on international climate finance and operations of the GCF. Most importantly, Energy+ will be pioneering systems which can be applied to future MRV regimes, such as building capacities to track and validate financial flows and energy-sector outcomes, such as GHG emission reductions.

Through a learning-by-doing approach Energy+ will help countries to develop MRV systems to enable measurement, reporting and verification of results, outputs, outcomes and impact. The MRV system for emissions reductions should preferably be based on the 2006 IPPC Guidelines and where, relevant, take into account methodologies developed under the CDM. Energy+ may work on the development of sector-specific methodologies to establish baselines and track the progress.

Energy+ will demonstrate the feasibility of sectoral, results-based financing approaches, thus facilitating its subsequent application by the GCF and providing a prototype for sectoral carbon crediting schemes and new carbon market architecture. Furthermore, Energy+ will prepare developing country partners for the next generation of climate finance.

### IV. Implementing Country Partnerships

The driving force for success of Energy+ will be the development of strong country partnerships. Energy+ seeks to transcend the traditional donor/recipient construct by fostering inclusive partnerships that focus on the needs of all energy market participants – households, companies, communities, and investors.

A country partnership will be an agreement or a set of complementary agreements negotiated by the contributing and receiving governments and other Energy+ partners that are parties to the agreements. The agreements will detail the actions that each specific partnership will undertake to promote energy access, renewable energy and energy efficiency contributing to the transformation of the energy sector.

Clear energy sector targets embedded in an overall national strategy have been identified by commercial energy market participants as the most important incentive for renewable energy deployment in developing countries. A LEDS, the long-term roadmap for addressing climate change, identifies strategic, cost-effective approaches to achieving transformational clean energy solutions as part of the broader national development strategy.

National energy plans reflect more near-term commitments, typically setting out national targets on a three-to five-year horizon while putting in place the public instruments and institutions necessary to achieve those targets. Ultimately, these country-owned plans form the basis of the Energy+ country partnership agreements.

Developing country partner governments will lead the development of the country partnership agreement. The government will be the principal responsible party for coordinating the actions planned therein, and will ultimately manage the flow of resources that are provided through the PBR agreement. Partners will link funding and other commitments to a simple, measurable set of indicators that facilitate a strong MRV. Country partnerships will be developed and implemented in accordance with the Energy+ principles and the Paris Declaration on Aid Effectiveness and the Accra Agenda for Action.

Partnerships may include: developing countries governments; contributing countries; contributing development partners, such as UN agencies and multilateral and national development banks; participating CSOs, contributing philanthropic organizations; and in certain cases, commercial organizations (such as industry groups) and individual firms. In all cases, strong engagement and consultations by partners with the commercial energy sectors will inform the development of the partnership framework.

#### Endnotes

<sup>1</sup> A more detailed description of results-based financing will be made available through the Energy+ website.

<sup>2</sup> Feed-in tariffs are likely to be difficult to support through Energy+, as the commitment periods are much longer than typical budgetary timelines in donor countries.

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#### **Energy+ Technical Working Group**

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The thoughts and opinions expressed in this document are those of the individuals participating in the Energy+ Technical Working Group alone. They do not represent the positions of either the funding institutions or the institutions employing the participants.



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