

## **SECTION C - DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK**

### **C.1 STATEMENT OF WORK**

#### **I. Background**

##### **Regional Context:**

Energy security — meeting the energy demands of a nation through clean, sustainable and reliable supplies at affordable prices — has become a major policy imperative of nations around the world. Strategies for accomplishing energy security involve a careful balance of national and international economics and politics, underpinnings these are the technical, financial and institutional limitations of the energy sector. Globally, mounting geopolitical concerns are driving energy security diversification policies and concepts toward national and sub-regional energy independence.

India and China are among leading emerging economies actively engaged in the pursuit of energy security together they are poised to become leading global energy consumers in coming decades. Countries of South Asia, including Afghanistan, Bangladesh, Bhutan, Nepal, Maldives, Pakistan and Sri Lanka are in the vortex of the China-India dynamic, and stand to realize significant gains as a result. Pakistan is actively engaged in an aggressive energy security strategy of its own, Bhutan is actively becoming a supplier to India, while other nations of the region are attempting to pursue strategies for energy sufficiency amidst more immediate concerns of conflict and political turmoil. Central Asia, the Middle East and Southeast Asia provide the potential for cost effective sources of energy. But links with countries such as Iran and Myanmar may come at unsustainable political costs.

Regional energy security is a driving political and economic priority in South Asia, while the lack of energy security is a destabilizing force leading to economic impoverishment and social unrest. The countries of South Asia possess significant untapped renewable and conventional resources, which if harnessed in a sustainable manner, would move the region toward energy independence. Meanwhile, Afghanistan and Pakistan can serve as an important land bridge to the cost-effective and sustainable resources of Central Asia for energy imports, leading the region toward greater energy security.

Underlying the South Asian drive for energy sufficiency and security are critical energy shortages and high anticipated demand increases throughout the region. In 2003, the total energy shortfall was estimated at 125 million tons of oil equivalent (mtoe)<sup>1</sup>. Meanwhile average GDP growth rates within the region are projected to continue at approximately 6% per year, with corresponding energy demand growth at a slightly higher level. Compounding the economic and political issues underlying the shortfalls is the regions high petroleum dependence, which averages 30% of total energy consumption, ranging from minimum of 25% to 100%. With electricity demand projected to triple between

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<sup>1</sup> EIA. International Energy Annual 2005. <http://www.eia.doe.gov/iea/>

2001 and 2030, India's investment requirements over that same period are estimated at around \$765 billion.<sup>2</sup> This amounts to nearly 2.5% of GDP for that period.

During a time of unprecedented foreign direct investment these inefficiencies in South Asian financial, commercial and energy legal and institutional structures remain as restrictions to investment in the energy sector. Domestic markets are not providing proper signals to consumers, and are dominated by high losses and low rates of recovery. Increasing access to regional and imported clean and sustainable energy would boost economic productivity of the region significantly, with strong social benefits flowing to most social sectors. However, India and the South Asian region face significant internal structural impediments that, until addressed, will leave energy security an unattainable goal. Principal among these are artificial constraints to proper market and pricing signals that constrain the growth of the energy sector.

The direct cost of energy insufficiency to South Asia's industrial and commercial sectors often is above 30% of operating costs due to needs for captive power using petroleum based fuels. This creates a competitive barrier to industrial growth in most of the nations of South Asia. There is a much higher cost to the region in energy intensity South Asia averages 0.79 tons of energy per dollar of GDP South Asian, three times the rate of the U.S.

As a result of the economic and political ramifications arising from energy shortfalls, improving the quantity and quality of electricity supply is an important priority of national and local governments. The South Asian countries are seeking to 1) increase their energy security; 2) diversify their traditional energy supplies; 3) increase their knowledge of technologies and market opportunities; 4) expand access to clean, commercial energy services to rural and peri-urban populations; 5) increase energy independence through renewable energy resources; 6) improve energy efficiency; and 7) provide enabling environments to support these objectives.

Energy independence and energy security are inherently linked; energy cooperation toward regional energy independence can enhance the overall energy security of the region. Recognizing the potential and the challenges, the USAID South Asia Regional Initiative for Energy (SARI/Energy) proposes a two-tiered approach: first to increase knowledge and capabilities to access clean energy; and second to improve market structures to facilitate proper price signaling, enabling investment to flow and the advantages of cross-border trade to be realized.

### **Clean Energy Supply and Access:**

The countries of South Asia possess significant untapped indigenous sources of energy that, if used in a proper and sustainable fashion, could form the foundation of regional and national energy security. Coupled with imports and the use of clean energy technologies and effective management structures, an appropriate foundation for energy

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<sup>2</sup> International Energy Agency. World Energy Investment Outlook 2003. "Global Energy Investment Needs."

security in South Asia might be enabled. Estimates show that the region possesses indigenous resources of over 47,000 mtoe, of which current estimates indicate that 800 mtoe is available as annually renewable resources, with the balance in fixed conventional resources, such as coal and gas<sup>3</sup>.

Many countries are taking important steps toward sustainable use of clean energy resources. While fossil fuel markets are growing slowly, renewable energy resources markets are rapidly expanding energy markets globally. India is already a global leader (recently moving into fourth place, ahead of Denmark) in the wind industry. Solar, biofuel and micro-hydro programs are taking off across the Asia region. Progress in South Asia in displacing imported oil in the transportation sector is encouraging, with substantial natural gas vehicle (NGV) fleets now operating in Pakistan, India and Bangladesh; Electric Vehicles (EVs) fleets in use in India and Nepal; and biofuel usage in India. With natural gas imports looming, there remains potential to leverage additional fuel substitutes for natural gas, such as hydrogen. Meanwhile, significant research, partnerships and demonstration projects are being undertaken in the use of clean technologies for conventional fuels, such as clean coal technologies and integrated gas combined cycle power plants.

A major impediment to developing diversified, clean energy resources of the region is the still significant knowledge gap in the quantity and quality of these resources. Table 1: Renewable Energy Resources of South Asia is illustrative of how many key data points are still Not Available (NA). This is compounded by a lack of knowledge on technologies and financial models for utilizing these resources at both a large, grid-connected scale, and a smaller, distributed-energy level.

Table 1: Renewable Energy Resources in South Asia (excerpts from *Regional Energy Security for South Asia: Regional Report* (Table 4-3))

Country	Wind Energy Potential (MW)	Solar Energy Potential (MW)	Mini/Micro Hydro Potential (MW)	Biomass Potential (mt/yr)
Afghanistan	NA	NA	NA	NA
Bangladesh	NA	NA	NA	NA
Bhutan	NA	NA	NA	
India	45,000	50,000	15,000	~400
Maldives	NA	NA	NA	NA
Nepal	NA	NA	NA (80 GW lg-sc)	NA
Pakistan	1,100-40,000	V. Large	~1000	~25
Sri Lanka	24,000	Large	300	12.0*
<b>South Asia</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

\* 1.2 million hectares @ 10 t/hectare

<sup>3</sup> “Regional Energy Security for South Asia.” Produced with the assistance of USAID, SARI/Energy. 2006.

Access to energy is directly linked to increase in incomes, with studies showing incomes in previously un-electrified rural areas rising by 64%, and employment increasing by 52%<sup>4</sup>. This is an important linkage in South Asia, a region which ranks among the lowest in the world in per capita income despite recent rapid economic growth. South Asia also averages among the lowest levels of per capita energy consumption and overall electrification rates in the world, at an average of 380 kWh per capita per year and with less than 50% of the population having access to electricity. Access to energy in vulnerable populations can provide jobs and economic growth as alternatives to insurgency and trafficking.

## **Trade and Investment**

Investment in energy is a critical component of an improved energy security outlook for the South Asian region. Increasing access to clean energy requires investment inflows and, as stated above, the investment needs of South Asia are significant and represent more than national governments themselves can finance. Cross-border trade provides significant and linked energy security advantages by reducing investment needs and leveraging investment flows, with integration of electricity systems showing savings of 10% in generation capacity<sup>5</sup>.

The advantages of cross-border investment and trade also extend to political stability, with studies showing that doubling trade between two countries lowers the risk of conflict by 17 percent<sup>6</sup>. In fact, strong economic linkages make conflicts 'materially impossible' due to the linked interest in strategic sectors. Energy is one such sector, in which trade and investment linkages can strengthen regional economic integration, thus supporting regional political and economic stability.

The political realities of energy trade and investment within the region, and with neighboring regions, are complex. Iran as a source country and Myanmar as a source or transit country raise foreign policy issues making these untenable options for USAID assistance. Afghanistan as a transit country to Central Asia is a high priority objective, albeit troubled by security issues at present.

Regardless of political realities, external investment will not flow in a sufficient or sustainable manner until market and price signals function effectively. Proper price signaling results not only in increases in investment, but also increases in the quality and equitability of services to all customer classes, while reducing the total cost to the economy. The historical impact of market and political restriction is reflected in the low intra-regional energy trade, with 0.1% of the total regional energy trade coming from inside the region. Total intra-regional trade is at only 4.5% of the total trade done by

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<sup>4</sup> "Economic and Social Impact Evaluation Study of the Rural Electrification Program in Bangladesh" October 2002. Dr. Abul Barkat paper. Results over 5 years

<sup>5</sup> "An Introduction to Regional Electricity Cooperation and Integration" [E7 Guidelines for the Pooling of Resources and the Interconnection of Electric Power Systems \(RECI\)](#), October 2000

<sup>6</sup> CUTS International Centre for International Trade, Economics & Environment. "What Makes Regional Integration Work? Lessons for South Asia." Briefing Paper. March 2005. [http://www.cuts-citee.org/PDF/3-2005\\_What\\_Makes\\_Regional\\_Integration.pdf](http://www.cuts-citee.org/PDF/3-2005_What_Makes_Regional_Integration.pdf)

South Asia, in comparison to more than 60% in the EU and 23% in ASEAN<sup>7</sup>. Fortunately, countries of the region are beginning to realize this and to take gradual, remedial actions.

India is advocating regulatory structures that parallel transparent market pricing systems<sup>8</sup>, and hoping to attract as much as \$150 billion in FDI for infrastructure<sup>9</sup>. Principles behind this move and similar activities in other countries of the region are the benefits of the development of an improved market place, which include:

- Increase of the flow of investment to the sector through:
  - Transparency and consistency in regulation and pricing,
  - Reduction of perceived risk by potential investors
  - Increased joint venture potential, strengthening prospects for new capacity development
- More efficient utilization of the installed capacity through:
  - Capturing the complementarity of cross-grid and cross-border load profiles
  - Increased efficiency of the overall utilization rates
  - Improved system reliability
  - Better risk management
  - Reduction in the total investment required due to peak load complementarities
  - Reduced reserve capacity needs

Functioning energy markets can provide the affordability, flexibility, access, and the foundation for cross-border economic linkages that define energy security and foster regional stability. Investment flows to the energy sector, and inter-regional energy trade, can strengthen regional energy independence, close the supply-demand gap, reduce short-term supply risks, and increase supply and price stability. Without market structures that allow a significant increase in the flow and levels of investment, clean energy access and energy security in South Asia will remain unattainable.

### **SARI/Energy Program:**

USAID's South Asia Regional Initiative for Energy (SARI/Energy) is an eight country program that promotes regional energy security. Begun in 2000, the SARI/Energy program focuses on regional approaches to meet South Asia's energy security needs by increasing access to clean energy through trade and investment. SARI/Energy countries include: Afghanistan, Pakistan, India, Nepal, Bhutan, Bangladesh, Sri Lanka and the Maldives.

Working in close partnership with USAID's bilateral energy programs in South Asia, SARI/Energy has sought accomplishments that would lay the foundation for increased

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<sup>7</sup> As noted by CUTS International, the figure for intra-regional trade is close to 10% when considering informal trade.

<sup>8</sup> Draft Report of the Expert Committee on Integrated Energy Policy, Dec 2005, Planning Commission, Government of India

<sup>9</sup> Announced in India's 2006 Budget.

clean energy access, and improved market structures to facilitate regional energy trade and investment. Key results to date include:

1. Improving policy, legal and regulatory framework for cross-border energy trade:
  - SARI/Energy has supported the drafting of policies and national legislation, regulatory strengthening, and assistance to utilities in implementing laws that will facilitate good governance and rational structures for investment and the opening of cross-border energy trade in India, Sri Lanka, Bangladesh and Nepal.
2. Opening regional energy trade:
  - SARI/Energy has identified, assessed, or promoted four of the five cross-border energy trades and investments currently under negotiation between India and neighboring countries. SARI/Energy is supporting the bilateral energy program in Afghanistan to encourage power imports from Central Asia to Afghanistan, and longer-term transit of energy through to South Asia.
3. Spreading of best practices to promote environmentally sound and sustainable energy management and development:
  - This work has included a host of successes and results, including the establishment of energy efficiency standards in several countries; a Sustainable Guarantee Fund in Sri Lanka; a Rural Energy Training Network (RETN) between India, Nepal, Bangladesh and Sri Lanka; and capacity building in Sri Lanka and the Maldives in hybridized approaches to renewable energy development.
4. Advocacy and outreach of best practices for clean energy access and cross-border trade & cooperation:
  - The activities of the South Asia Regional Energy Coalition (SAREC), which is composed of regional business leaders and association executives. Focused media training which has resulted in improved energy reporting and coverage with over 285 articles on regional energy cooperation and development in the past year.

These results, and others described on the SARI/Energy website ([www.sari-energy.org](http://www.sari-energy.org)), have been accomplished through a combination of technical assistance, training, peer exchanges and grants. Key to these successes are the activities of the SARI/Energy implementing partners, as listed in Attachment 7, and coordination with the USAID bilateral energy/infrastructure or economic growth programs in the region.

To facilitate the efficacy of the program, a SARI/E Advisory Board was established in 2005. The Advisory Board is composed of South Asian Mission Directors, the RDM/A Director, the USAID/Washington Asia Near East Bureau, Technical Support (ANE/TS) Office Director, and the South Asia Office Director. The chair of the Advisory Board is the India Mission Director, who supervises the designated cognizant technical officer (CTO) for the resulting contract. The CTO is based in India, with a USAID Country Coordinator based in each of the USAID presence countries in South Asia.

## II. Objectives and Indicators

The fundamental objective of this program is to improve energy security in South Asia. The principle means of doing so are to provide assistance on improving market structures for enabling investment in and trade of clean energy, and in the spread of models, technologies and information on sustainable and clean uses of energy.

### *Strategic Objective*

The stated Strategic Objective of the South Asia Regional Initiative in Energy (SARI/Energy) program is to “Promote Energy Security in South Asia.”

### *Intermediate Results*

The SARI/E focus on energy security will be pursued through two targeted Intermediate Results areas. The first IR is “Increased Access to Diversified Clean Energy Supply”. The second IR is “Harmonize Markets to Enable Regional Energy Trade”.

### *Performance Indicators*

This contract shall include both measurable direct and indirect indicators. Direct indicators are listed in Section J., Attachment 8. Indirect indicators show overall progress of the region toward energy security. Offerors should provide estimates of the targets against those indicators. On an annual basis the contractor will report their progress against targets set for each indicator.

During the course of the program, the Contractor shall work with USAID to evaluate the data quality of the indicators, perform baseline analyses, and revise indicators where necessary. Whenever possible, the Contractor shall use data from the past SARI/E program as baseline data. The Contractor shall track progress against performance indicators and report progress on an annual basis. Targets will be refined by the USAID SARI/E CTO in coordination with the Contractor.

The contractor must be cognizant of the fact that USAID energy programs are annually required to report attributions to signature initiatives of the Administration, including the following:

- *Clean Energy Initiative* (primarily emphasis on renewable energy resources);
- *Climate Change Initiative* (primary emphasis on mitigating carbon emissions in the energy sector [including transportation] and adaptation to climate change); and
- *Methane to Markets Partnership* (primarily emphasis on getting under-utilized methane resources to market, e.g. landfill gas in India).

Not required for annual reporting purposes, but other signature programs of the Government that may have reporting requirements in the future, include the following:

- *International Partnership for the Hydrogen Economy (IPHE)* (primary emphasis on international cooperation in accelerating the transition to a global hydrogen economy, with hydrogen as a key energy carrier of more diversified, clean and

- sustainable primary energy resources to a wider range of energy markets). India is currently the only South Asia member country of IPHE; and
- *Asia Pacific Partnership for Clean Development and Climate (APP-CDC)* (primary emphasis on voluntary approaches to reductions in carbon emissions, especially in India and China in the developing world). India is the only South Asia country currently targeted by APP-CDC.

### **III. Statement of Work**

Under the South Asia Regional Initiative for Energy, USAID will contract with a vendor to manage and coordinate the provision of expert technical assistance, training, and subgrants to initiate and complete a set of selected activities. The Contractor shall facilitate and leverage USAID funds through public-private partnerships. The Contractor shall be responsible for providing all necessary personnel, materials, and other facilities required to complete each of the tasks and deliverables outlined below, and thereby contribute to the achievement of target project outcomes in a timely manner.

The following categories and listing of illustrative tasks and deliverables provide a summarized description of the responsibilities that the Offeror could undertake and complete over the life of the contract. The details contained in each summary description, related to how the Offeror is to achieve the stated target objectives and results, vary depending upon the level of definition that USAID has been able to develop at the time of issuance this scope of work. In most cases the Offeror will be expected to propose what may be innovative or new processes to accomplish the desired results. Therefore, Offerors are invited to be creative in developing proposed operational modalities and implementation plans so as to allow for innovative partnering or sub-contracting with uniquely qualified sources whenever a particular task requires a set of skills or experiences that are not readily available from more conventional sources. As noted in Section M. evaluation criteria, creativity and innovation will be materially and may be favorably considered (credited) during the proposal review and evaluation process.

The scope of the Institutional Contractor will comprise the following tasks. Each is expected to be structured to promote and increase energy security in the South Asia region. Overall objectives are defined below; specific annual objectives will be defined in the annual work plan. Offerors shall demonstrate a coherent, strategic approach to ensure that all activities maximize the use of limited resources to accomplish the specific contract deliverables, results and programmatic indicators.

Task 1: Increase Access to Diversified Clean Energy Supply

Task 2: Increased Investment and Trade in Diversified, Clean Energy through opening of Market Structures

Task 3: Overall Support Tasks

All of the activities undertaken by the Contractor will be regional in nature; this program and contract will only allow country-specific activities that specifically meet regional

objectives. All in-country activities require close coordination with, and seek concurrence from, bilateral USAID Missions.

Each task is described below, with anticipated activities and deliverables. The subtasks and activities spelled out are not comprehensive and the program will largely be administered by technical direction letters (TDLs) from the CTO. Each task may involve technical assistance; training (workshops, seminars); advocacy and outreach; technical analysis and support; grants administration; public-private partnerships; and partnerships between institutions in two or more countries and other related activities as defined annually. Deliverables shall be on an as-needed basis to include reports, analysis, training and other activities and materials as requested by USAID.

### **TASK 1: ACCESS TO DIVERSIFIED, CLEAN ENERGY SUPPLY IN SOUTH ASIA**

The objective of this task area is increasing sustainable access to clean energy supply. Increasing access can occur through improved use of *existing* resources, or development of *new* energy resources. There are a number of subcategories, technologies, and systems/user classes that may be defined by the Contractor, working with the CTO, over the life of the contract.

Though innovative approaches are highly encouraged, it is anticipated that two basic categories of outcome will be pursued in order to improve cross-border or regional energy security:

1. Spread of models, policies and protocols for improving clean energy access
2. Implementation of projects that improve existing or provide new access

The USAID SARI/Energy program works collaboratively with organizations throughout the region to accomplish goals and objectives in energy security which are mutually beneficial. This is in recognition of the fact that a significant amount of expertise and experience is resident within the region in this field; however, this expertise is often unevenly distributed both regionally (from nation to nation) and within energy sub-sectors. Thus SARI/Energy has formed a Rural Energy Access Network (REAN) that serves as a resources for capturing and spreading lessons and expertise. These resources are of critical import, and have already proven a valuable resource for countries and sectors in which expertise is lacking.

The Contractor shall take cognizance to ensure that initiatives taken by other donor agencies at a national or regional level or initiatives undertaken by host country governments are leveraged or complimented by this program as relevant to the program's objectives.

Offerors should demonstrate clearly the types of projects they envision launching to accomplish the objectives and deliverables described below, including the direct linkages to results and contributions to program indicators.

All activities under this program must demonstrate the potential to be applicable at a regional level, with country-specific initiatives only undertaken if such linkages are clear. Regional means at least two countries, though it is preferred to involve as many countries of the region in each activity as is reasonable and practicable. Projects that do not actually involve the transfer of resources across borders may demonstrate regional potential by involving investors or technologies originating from one country and used in a second country. Projects may also demonstrate regional potential by having adapted concepts, technologies or models from one country that are applied to a second.

Illustrative activities include:

1. Analyzing the key elements of successful models of increasing access to diversified, clean and modern energy services in South Asia, in both the power and transportation sectors, presented as a compilation in tabular form, and useable as a check list and guide for creating and promulgating models for new communities with different social conditions.
2. Pilot projects to prove models as appropriate for a specific region, and simultaneously set up the institutional structure to promulgate the model further. Monitoring and oversight will be critical components of the work.
3. Activities in cross-border or regional (1) areas with underserved electricity needs or areas with a high benefit to cost ratio that would serve as sound examples of implementing best practices; (2) areas that can demonstrate the potential of sustainable oil import displacement models for wider replication in the region, (3) both grid-connected and distributed modalities for electricity.
4. All proposed community-level, industrial sector, and transportation sector clean energy access models will be considered to the extent that they lead toward energy security at the regional and cross-border level.
5. Productive energy uses for vulnerable communities and jobs creation will be of particular emphasis. Programs to increase reliance on domestic, clean and low or no-carbon renewable energy resources are a USAID priority.
6. Training stakeholders on the options and models for increasing diversified, clean energy access.
7. Strengthening and continuing to expand the SARI/E network of institutions that can provide training for communities wishing to replicate successful models
8. Preparing, awarding and administering small grants between two or more countries for sharing experiences and supporting pilot projects.
9. Strengthening and continuing to expand the SARI/E network of business partners, primarily through the grants program, support of SAREC or other appropriate forum, to facilitate PPPs and projects
10. Advocacy through grants and the PPPI for appropriate legislative, institutional and regulatory reform
11. Policy, legal, regulatory and institutional reform work may be directly required to facilitate access in the range of clean energy markets that are prioritized for development.
12. From local to national levels, training and institutional support may be required.
13. Strengthening of REAN

Required activities shall include, but not be limited to:

### **Subtask 1.2: Clean Energy Access Network**

The contractor will continue REAN activities with a refinement of scope toward the program objectives, and an expansion of membership to include additional expert resources.

During the first year of the contract (USG FY2007), the Contractor shall launch a targeted initiative to accomplish the objectives and results of this task area. The initiative will, at a minimum, demonstrate an integration of the activities of Task 3 areas such as grants, private sector and partnership activities to accomplish the results and deliverables for this task area. This work will also, at a minimum, include analysis of clean energy sources or energy efficiency options to improve energy supply and enable increased energy access. Public-private partnerships should be a major focus of this effort, with a strong emphasis on leveraging non-USAID funding and other resources.

### **Subtask 1.2: Spreading Clean Energy Models**

Identifying and demonstrating the spread of at least two models per year for improving access to diversified, clean energy throughout South Asia.

At a minimum, these models will demonstrate means to increase access to clean energy supply either at a consumer level (e.g. number of people, commercial establishment, industries for example) or in energy (e.g. MW, kWh, output/kWh) supplied or saved. Models can be applied at a regional, national or local level. However, all models must demonstrate regional potential. The model may utilize any clean technology that either provides or saves clean energy, increasing the overall resource that is accessible. In addition to working with existing models and resources of the region, the Contractor will identify new and appropriate models to apply to the situation(s) in South Asia and shall be responsible for development of criteria for identifying successful models.

Models may include technical models (e.g. adapting and improving technologies or technological practices), social models (e.g. spreading technologies), financial models (e.g. that enable a project to start), commercial models (e.g. that enable successful businesses), management models (e.g. running a better system), consumer models (e.g. efficiency), and policy models (e.g. regulation, pricing and tariffs), or other models that the contractor can demonstrate will provide value to regional energy security through access to clean energy. The contractor should describe and justify their selection and is expected to apply creative approaches to meet the energy security needs of the region.

Promulgation of a model means that a model is either:

- i. A new model that is tested by the program or through the program's activities in one country, and then accepted by one or more institutions in another country for

application on projects, by utilities or other entities operating in the energy sector, or applied in independent training programs.

- ii. A well-proven model in one or more countries that is adapted to a new scenario in a new country, providing regional “scale-up,” and then accepted by one or more institutions in the recipient country for application on projects, by utilities or other entities operating in the energy sector, or applied in independent training programs.

The contractor may define other models or modes of promulgating models provided they meet the requirement of increasing access to clean energy, and are approved by USAID.

### **Subtask 1.3: Clean Energy Project Implementation**

The contractor will implement two or more pilot projects that create energy access, with the expectation of escalation of this number or replication of these pilot projects in each successive year of the contract as defined in the annual work plan. At a minimum, these projects will directly result in tangible increases of the number of people or entities (commercial, industrial or institutional) with access to energy, or the amount of energy available for consumption. Projects may demonstrate direct increases in access to clean energy supply either at a consumer level (e.g. number of people, commercial establishment, industries for example) or in energy (e.g. Mw, kWh, output/kWh) supplied or saved. Projects should be of a scale or of a type that are clearly linked to improving energy security in South Asia; therefore they should address a critical sector or sub-sector, a critical technology, fuel or fuel diversification or reduction. The contractor will be responsible for demonstrating this linkage to USAID for their approval, and the contractor is encouraged to take innovative approaches to meeting energy security needs through this subtask area.

Projects may demonstrate the application of clean energy access models developed in deliverable 2 of this task area, or others. Projects must demonstrate sustainability, regional applicability, and the potential for scale-up. Projects are preferred which demonstrate or leverage innovative and replicable financing mechanisms; it is not required that the contractor directly finance the projects. However, if the contractor is not providing direct financing, the contractor must at a minimum demonstrate responsibility for playing a leading role in providing technical support or technical/financial facilitation for the matching of models, opportunities, financial mechanisms, investors, developers and communities that directly result in the development of the project.

The contractor may define other projects or project types provided they meet the requirement of increasing access to clean energy, and are approved by USAID.

## **TASK 2: INCREASED INVESTMENT AND TRADE IN DIVERSIFIED, CLEAN ENERGY THROUGH OPENING OF MARKET STRUCTURES**

This task is focused on the second of the two activity approaches to addressing energy security: to leverage balanced and secure clean energy access through market structures

that would promote trade and investment. Fundamental to the strategy of this task area is the precept that projects may drive reform more rapidly than reform may attract projects. In the rapidly growing economies of South Asia this is often proving to be the case.

The SARI/Energy program has launched a Regional Energy Markets Initiative (REMI) to begin these activities. In FY07 and beyond, the Contractor shall build upon the first year of efforts with the REMI. SARI/Energy implementing partner USEA is providing a significant amount of the deliverables for this activity including peer exchanges, workshops and an executive level forum; the contractor should take these activities into consideration and demonstrate their capabilities to work in an integrated manner to support these activities both logistically and with technical inputs.

Offerors should demonstrate clearly the types of projects they envision launching to accomplish the objectives and deliverables described below, including the direct linkages to results and contributions to program indicators.

Illustrative activities include:

*Policy Forum* to address legal, regulatory and institutional reforms. Goal is to improve investment climate at both national and regional levels. This will include laws, regulations and institutions for internal reforms, as well as harmonization for regional trade and cooperation.

1. Analysis of needs, training and advocacy for legislative, institutional and regulatory reform toward the objectives of this tasks area
2. Development and implementation of harmonized regulatory practices that facilitate the development of clean energy markets and cross-border energy trade and investment in the region
3. Technical assistance for power and transport fuel sector reforms, in order to create an enabling environment for local and cross-border trade and investment
4. Advocacy on the advantages of market structures, working with the private sector through the PPI, SAREC and other forum

*System Planning:* address national and regional planning and coordination for power systems, energy balance, and development and operation of national and regional grids. In medium to long term this could include grid code and transmission system planning, and structure and design of national and regional ISO/TSOs.

1. Technical assistance towards and a feasibility study of electricity interconnections among South Asian countries, including an undersea cable between Sri Lanka and India to trade renewable and conventional power from large-scale projects on either side of the border.
2. Technical assistance towards and/or a feasibility study of creation and adoption of a Regional Energy Sector Master Plan, including conventional and renewable (including hydro) sources, with the intent to strategically maximize the entry of renewable resources into regional markets

*Market Design and Internal Reforms:* provide TAs for national and regional market design based on international best practices, and well defined criteria, such as national policies and goals, technical constraints and options, and competitiveness.

1. Analysis of and training on the structure, merits and drawbacks of different clean energy market models for domestic and cross-border trade applications that are being exercised around the world.
2. Technical assistance and possible training on mechanisms to enable public-private partnerships
3. Support activities to the SARI/Energy Regional Energy Markets Initiative
4. Development of market-place structures such as power exchanges or power pools

*Cross-Border Trade Facilitation:* provide TA support for specific projects, policies, and institutions; like trade opportunities between India-Sri Lanka, India-Nepal, and Afghanistan-Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan).

1. Technical analyses, such as pre-feasibility and/or feasibility studies, in support of selected cross-border trade projects
2. Training, workshops and partnerships to facilitate the understanding of how to negotiate the complicated commercial, legal and regulatory structures throughout the countries of the region
3. Harmonize regulations, codes and standards
4. Technical reviews of legal and financial arrangements to facilitate selected projects (e.g., review of energy purchase or sales agreements; identification of financial instruments and models to support a project)
5. Technical support for negotiations between parties upon request of the parties and approval from USAID.
6. Preparation, award and administration of small grants between two or more countries
7. Facilitation of energy investment and trade.
  - a. Designing and facilitation of the adoption by the concerned entities of project documents that reflect sustainable business practices and should result in successful projects.
  - b. Leverage non-program funding and demonstrate a replicable financing mechanism, e.g. it is not required that the contractor directly finance the projects, in fact it is preferred that the projects be of a significant size and scale so as to make a measurable impact on a localities' energy security or energy access. Nor is the contractor to be held responsible for the actual transfer taking place after the initial agreements are reached.
  - c. Projects involving investments would include for example investors from one country financing a project in another, or similar activities. Projects involving transfer of services may involve financial, technical or other substantial involvement in one country in facilitating the project that takes place in another country. Projects involving trade, or the transfer of assets, may involve equipment purchases from one country for installation in another, or linkages that are constructed which transfer electricity or fuels which provide a cleaner alternative for energy resources.

Required deliverables and anticipated results include, but will not be limited to:

### **Subtask 2.1: Regional Energy Markets Initiative**

The Contractor shall provide technical assistance and training, and facilitate regional policy dialogue on improving the regional energy marketplace. These markets may also be linked to global markets. The contractor will be responsible for evaluating the progress of this work to date and, in consultation with USAID, improving and continuing the activities of REMI, which will include:

Bringing together prospective project developers, investors, financiers, policy makers, regulators and other relevant parties from all countries of the region to discuss specific energy trade and investment opportunities through;

Working with governments of the region on the harmonization of codes, standards, laws, policies in order to facilitate trade and investment; and

Weaving through these activities is the concepts and principles of transparent, effective market structures that would enable investment and trade.

### **Subtask 2.2: Regional Energy Investment and Trade**

The contractor will be responsible for initiating two or more energy market trades or investments per year of this partnership, with the expectation of escalation of the number of partnerships that are added each year as defined each year in the annual work plan. The contractor will seek through these projects to increase investment and trade across-borders within South Asia, and with strategic trading regions such as Central Asia and possibly other with the approval of USAID.

The types of activities to be measured as deliverable include any legally binding agreement between two entities, this may include public-private partnerships, joint ventures, USAID mechanisms such as GDA or DCA, or other mechanisms such as those involving other donor agencies or multi-lateral banks. Such mechanisms will leverage outside sources of funding for energy market developments, trades or investments.

For each deliverable the contractor must at a minimum demonstrate responsibility for playing the leading role in providing technical support and in technical and financial facilitation that matches the opportunities, financial mechanisms, investors, developers and other entities directly resulting in the development of the project. The contractor will not be responsible for actually insuring that the goods or services are delivered. However, for each trade or investment initiated the contractor will be responsible for developing (in consultation and with the approval of USAID and the relevant parties) an assistance package that defines a strategy that will result in a successful project, using best business practices for that scenario.

The contractor shall work with USAID to define and, with CTO approval, implement other types of agreements or indicators of trade or investment that meet the requirement of increasing the amount of cross-border trade or investment within South Asia.

### **Subtask 2.3: Harmonization of practices for facilitation of cross-border trade and investment**

The contractor will be responsible for the harmonization and implementation of one or more codes, standards, regulations or policies between countries. The code, standard, regulation or policy must be one that is based-on and facilitative of transparent and effective market structures that facilitate investment or trade in South Asia. Harmonized means that the practice is the same or sufficiently similar between two or more countries as to allow ease of the transfer of assets or investments between the two. The word “implementation” means that the practice has been put into effect by each host country government and is in fact being applied or followed by the relevant entities in both countries. The contractor may, working with USAID and with CTO approval, expand the definition of activities that may be harmonized to facilitate cross-border investment and trade.

### **TASK 3: OVERALL PROGRAM SUPPORT**

The activities undertaken in task 3 will run be in support of or inform the above two technical task areas.

Required deliverables and anticipated results include, but will not be limited to:

#### **Subtask 3.1: Energy Security Technical Analysis**

The Contractor shall conduct ongoing technical analyses of the barriers, progress and developments in energy security in South Asia. Contractors must draw on reporting previously done by SARI/E as well as up-to-date, commercial and international publications, information and databases on energy (i.e. by subscribing to, monitoring, accessing, and analyzing information available through such sources). The Contractor shall submit these analyses in the form of a report on a quarterly basis.

The contractor’s quarterly “Regional Energy Security Status” report will details the regional energy security health and progress made since the previous quarter. The report will be focused on a financial, commercial, and legal assessment of the region’s ability to meet its energy security needs and will cover each of the aspects deemed to be a part of energy security. For example, each report will include a quarterly analysis of the investment climate of each of the countries of South Asia, drawing primarily on pre-existing commercial data and analyses. The contractor shall have access to leading commercially and publicly available financial and energy databases, and have an analyst on staff with the required expertise to provide this analysis and other associated support as needed. The report should provide overviews of the latest trends within the energy industry within South Asia, with FDI and other finance sector indicators within South

Asia, and with global trends in both the energy industry and financial flows that would impact energy security in South Asia.

(Note: In the proposal, Offerors must submit a sample report (of no more than 10 pages), and a list of sources used to support the analysis. Section L.)

The Contractor shall also conduct in-depth technical and financial analyses based on current data available through commercial sources and to a standard comparable with consultancy services being provided to private sector entities in the power sector seeking analyses to inform business decisions. This technical assistance shall be provided on an as-needed, topic-specific basis as requested by USAID.

### **Subtask 3.2: SARI/Energy Small Grants**

The Contractor shall manage a small grants program; grant activities will cover both technical areas described in tasks 1 and 2 above. The grants will leverage additional in-region capabilities to accomplish the specific deliverables of this contract and the results and indicators of the program overall. The purpose of the grants program is to leverage the significant amount of regional expertise available in both technical areas, and to foster a growth of the linkages between countries in those areas of expertise. The grants will be additionally utilized as a strategic tool to leverage results and sustainability within the two technical task areas. Each round of grant activities should demonstrate clear and direct linkages to other program work, and leverage the overall results. These grants should build upon and be informed by the lessons of the previous grant activity which is coming to an end in FY06.

Grants management includes:

- Due diligence for proposed projects;
- Analytical support regarding environmental impact, long-term cost, expected development impact, and plans for sustainability;
- Administrative support in the disbursement of, and accounting for, funds;
- Documentation, in writing and pictorially, the progress made on the project;
- Upon completion of the project, documentation, in writing and pictorially, the development impact (immediate or expected) of the project, any difficulties encountered along the way and measures taken to rectify, and the project's prospects for sustainability; and
- Capacity building and advisory services relevant to the above mentioned subject areas.

Grants shall be awarded by the contractor on a competitive basis to organizations in South Asia in order to implement activities which leverage results and accomplish the objectives of the SARI/Energy Program across task areas 1 & 2 defined above as applicable. Activities supported by the grants shall be woven in along a strategic timeline with other projects and activities undertaken by all SARI/Energy implementing partners. The USAID CTO or designee will serve on the evaluation team for each grant application.

The size of the grants program will be developed by the contractor in consultation with and with the approval of USAID. However it is anticipated that the grants component will not be greater than 10% of the total budget in any given year. Offerors will provide a sample grant program in their proposal that is taken from a past grant activity.

### **Subtask 3.3: SARI/Energy Partnerships**

The contractor shall manage activities that achieve the following:

1. Development and sustainable operation of a regional forum for understanding and representation of private sector view points on energy security
2. Leverage of private sector resources that enable project development
3. Creation of public private or private-private partnerships
4. Leverage the public sector, donors and multi-lateral bank support to reduce the risks of finance for energy sector projects in South Asia

The contractor will be responsible for support and coordination of the activities of the South Asia Regional Energy Coalition (SAREC), an entity created under a U.S. Chamber of Commerce cooperative agreement that is concluding in FY06. A critical component of this activity will be engagement of the U.S. private sector project developers, investors and other relevant U.S. entities with the prior approval of USAID. The contractor will provide support and assistance to SAREC for expansion of U.S. and regional membership. The contractor will engage in focused work with SAREC toward accomplishing the objectives of this contract. Offerors should demonstrate their capabilities to bring in both regional and U.S. energy sector companies and relevant investors and financial sector entities in their response.

The contractor will actively seek to develop public private partnerships (PPPs) or other partnerships that would create the projects described in Task Areas 1 and 2. PPPs or other partnerships delivered by the contractor will involve a formal, legally binding relationship. Partnerships may also include those between donor agencies or financial institutions that result in the creation of financial risk mitigation mechanisms. Partnerships should include the application of USAID mechanisms such as the application of GDA or DCA to tangible clean energy investments in a country that involve or are replicable between two or more countries, or trades between two or more countries.

### **Subtask 3.4: SARI/Energy Outreach**

Promotional outreach and marketing materials and strategies, and select media releases will be required of the contractor. This will include a periodically updated program brochure and related materials, a monthly updated country-by-country one-page activity summary. All materials may cover the full range of SARI/Energy activities, including those of other implementing partners.

The SARI/Energy website ([www.sari-energy.org](http://www.sari-energy.org)) will be transferred to the contractor, who shall manage the website and develop a long-term plan for optimal management of the website, including monitoring its usage. All project technical documents, upcoming events and reports will be posted to the website.

The SARI/Energy Resource Center contains resources (manuals, reports, etc) from the program over the years. The Contractor shall be responsible for maintaining the Resource Center.

### **Subtask 3.5: Stakeholder Consultations and Logistical Support**

To support the objectives of SARI/E, the contractor shall arrange meetings with stakeholders in the region to discuss energy security matters and other related energy topics. In particular, the Contractor shall provide administrative and logistics support for three annual meetings (or two, logistics permitting) that may take place in South Asia or Washington DC:

- **Annual Stakeholders Meeting**: This meeting will review SARI/Energy's program progress and involve participation from USAID staff and regional stakeholders. The contractor should budget for logistics and secretarial support for approximately 50-100 participants per annual meeting. In addition, the contractor shall fund the travel and per diem costs of approximately 20 regional stakeholders who USAID will invite to participate in these annual meetings. The contractor may assume that all of the annual stakeholder meetings will be in one of the cities in the region. The exact location will be notified by the Cognizant Technical Officer (CTO) one month prior to the date of the annual meeting.
- **Implementing Partners Meeting**: This meeting will focus on program progress review and planning (including development and coordination of the integrated work plan), and will occur in conjunction with the Annual Board Members Meeting
- **Annual Board Members Meeting**: Participants will include board members, implementing partners, and some regional champions. The meeting will take place in conjunction with a regional South Asia (or Asia) USAID Mission Directors meeting, should such an event occur; if not, the meeting will take place in Washington, D.C. in conjunction with a global Mission Directors meeting; lastly, if neither of these should occur, the Annual Board Members and Implementing Partners meeting will take place in one of the cities in the region. For purposes of the proposal, the Contractor may assume that the Annual Board Members meeting will occur in Washington, D.C.

USAID may require the contractor to set up one-on-one or focus group meetings with selected officials and stakeholders in the region or in the U.S. on policy issues related to energy cooperation. The contractor should budget for developing the background material for such meetings and provide logistics support such as meeting space, audio-visual presentational materials support, meals and breaks. The contractor may also be responsible for coordination within the donor community to leverage mutual opportunities in the energy sector of South Asia.

#### **IV. Program Management**

The Contractor shall mobilize to establish its main office in New Delhi, India, staffed with management and support personnel; while headquarters will be based in New Delhi, the Contractor may also have field offices in key countries as necessary and cost effective. In particular, presence of at least one dedicated expatriate staff in Afghanistan may be required. The program management functions and responsibilities include establishing project management controls; budget and cost reporting; liaison with USAID, government agencies, other donors and other contractors; administrative support to contract staff; securing approvals; reporting; personnel management; and performance monitoring. Additional specific responsibilities are implementation planning, subproject development and assessment, and environmental compliance with USAID Environmental Regulations (22 CFR Part 216), especially with regards to pilot projects and other projects supported and facilitated under this Contract.

#### **Implementation Plan**

The Contractor shall develop a detailed implementation plan including a schedule (timeline) that will ensure, to the maximum extent possible, the necessary performance and input from all parties to complete the overall program on time and within budget. It will include major milestones (such as energy trades having taken place and sustainable transference of energy models, not something like development of the website) tied to the timeline. Section E.3 provides a fuller description of the elements and process of producing this key document for USAID approval.

#### **Reporting**

The contractor will submit regular reporting of the progress of their activities. This reporting cycle will begin 30 days after award and include monthly reports, quarterly reports and annual reports. The contractor will develop a work plan each year, 30 days prior to the beginning of the new fiscal year. The work plan will delineate clearly the specific tasks the contractor will engage in to accomplish the deliverables, results, and indicator targets. The contractor will need to demonstrate creativity and flexibility in their approach to setting annual work plan tasks in response to the dynamic South Asian political and economic environment surrounding the issues of regional energy security. A project closeout report will be due within 30 days of completion of this activity.

#### **V. Gender Statement**

The Contractor shall undertake a gender analysis as described in Attachment 6.