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The Summits of the Americas Policy Brief Series provides OAS Member States, social actors and other Summit stakeholders with an analysis of key policy areas relevant to the inter-American agenda, and are intended to enrich the multilateral dialogue and consensus-building inherent to the Summits process in order to facilitate collective approaches to the Hemisphere's challenges.

Energy Security in the Americas

Introduction

This policy brief addresses the critical issue of energy security in the Americas, which makes up one of the main pillars of the Fifth Summit of the Americas to be held in Trinidad and Tobago in April 2009. This brief complements the Policy Dialogue held on December 5, 2008, which brought together experts and practitioners from the private sector, international institutions, and civil society to discuss with representatives of OAS Member States and the general public a variety of viewpoints on energy security in order to further dialogue in the context of the Summit of the Americas process.



Energy for Sustainable Development

Recognizing that energy security is indispensable to human development, the Governments of the Americas, at the First Summit hosted in Miami in 1994, adopted a strategy for Partnership for Sustainable Energy Use, which confirmed the strong link between energy issues, economic growth and sustainable development within the Hemisphere. At the Summit of the Americas on Sustainable Development held in Santa Cruz, Bolivia in 1996, the countries reaffirmed their commitment to energy growth consistent with the goals of sustainable development and the promotion of increased private sector investment. At the second Summit of the Americas held in Santiago, Chile, in 1998, the Heads of State and Government acknowledged that the development of energy links among countries and the intensification of trade in the energy sector strengthens regional integration, contributes to the sustainable development of nations, and improves the quality of life of the people. At the third Summit of the Americas held in Quebec City in 2001, the countries committed to pursue renewable energy initiatives, promote energy integration and enhance regulatory frameworks and their application, while promoting the principles of sustainable development. Finally, at the 37th General Assembly held in Panama City in 2007, OAS Member States unequivocally recognized as an essential goal, the need to generate and strengthen regional markets for the use of cleaner and renewable energy, as well as the exchange of information and experiences pertaining to sustainable energy for achieving sustainable development within the Hemisphere.

What is energy security?

Energy security is a complex theme that relates to the reliability, resilience and sustainability of energy supplies. For policy makers, energy security concerns vary widely and include: the stability of fossil fuel prices; the long-term availability of energy resources; the impact of energy production on the local and global environment; and the susceptibility of energy infrastructure to acts of violence and natural disasters. Further, the availability and reliability of cost-effective

energy supplies impact directly many aspects of a country's social and economic development, including poverty alleviation, private sector modernization, and the Balance of Trade.

Energy security can therefore be defined as a nation's ability to supply reliable and affordable energy to meet the energy demand and to promote sustainable development.

*“Energy security is paramount to economic growth, development, poverty alleviation, and health. It is also linked to environmental issues such as contamination and global warming.” – Alfonso Quiñónez,
Executive Secretary for Integral Development, OAS*

What are the present and future challenges to Energy Security?

It is generally recognized that the countries of the Americas have the potential to deliver sufficient energy to meet their current energy demands by exploiting more fully the mix of fossil fuel and renewable energy resources at their disposal. The Americas is a region endowed with abundant natural resources for energy production. For example, Venezuela is the 7th largest producer of oil in the world; and Canada is the world's 5th largest producer of natural gas. The United States holds the largest reserves of coal in the world, while Colombia is Latin America's top exporter of that product. However, recent global events have drastically changed the perception of energy security and have given greater impetus to the need for countries to urgently address a suite of traditional and emerging challenges to their energy security including:

1. INCREASING ENERGY DEMAND, RESOURCE DISTRIBUTION AND ENERGY ACCESS

According to the International Energy Outlook (2007), energy consumption within the countries of the Americas is projected to increase significantly during the years 2008 and 2030. This increase is triggered mainly by population growth and the expansion of the economies of the region. It is expected that North, Central and South America will increase at average annual rates of between 1.1 and 2.4 percent, respectively. With growing demand comes more pressure on energy prices, and demands for an

expansion of energy infrastructure (electricity grid, pipelines, roads, etc.).

In addition to the growing demand from the traditional economic sectors, there remains the need and obligation to deliver sustainable energy to the poorest segments of the population. While Latin America has relatively high levels of electrification – approximately 85% of the population is electrified – large numbers of people in rural areas of many countries of the region are without access to modern electricity services. It is well known that large electricity deficits, in rural and urban areas alike, can lead to wide-ranging security concerns, including social instability and crime.

Considerable progress has been made during the past 3 decades with the extension of power grids throughout the region, including many cross-border interconnections such as the Central American Power Grid (SIEPAC – Electrical Interconnection System for the Countries of Central America). However, more than 40 million people in the Americas still lack access to reliable electricity.

As a result, increasing *access to modern energy services* to the entire population is a key priority that is linked to poverty alleviation and the promotion of democracy. According to a report released in 2004 by the International Energy Agency, access to modern energy services is an indispensable element of sustainable

human development. It contributes not only to economic growth and household incomes, but also to the improved quality of life that comes with better education and health services. Without adequate access to modern, commercial energy, poor countries can be trapped in a vicious circle of poverty, social instability, and underdevelopment.

Fortunately, there are a variety of solutions that may be pursued to extend or deliver electricity services to people in remote, isolated communities who are currently un-electrified and who are willing to use decentralized energy technologies.

2. MITIGATING THE IMPACTS OF NATURAL DISASTERS

Natural disasters such as earthquakes and extreme weather events (hurricanes, drought, forest fires and floods) represent a diverse and persistent threat to achieving and maintaining a secure energy infrastructure. These events can disrupt petroleum supply exploration and distribution, and damage the energy production and distribution infrastructure at national and local level, that ultimately influence the socio-economic development of impacted countries. It is predicted that many of these climate-related disasters may worsen as a result of global climate change. Consequently, energy policies should take account of these likely impacts and strategies should be implemented to protect energy infrastructure and generally to mitigate any potential negative impacts.

In addition, energy policies should acknowledge that a reduction in the use of fossil fuels is critical to mitigating the impacts of climate change. Thus, these policies should reflect a strong commitment to placing a greater focus on the links between energy security, renewable energy, climate change mitigation and adaptation.

3. MANAGING OIL PRICE VOLATILITY

The recent dramatic volatility of oil prices represents a significant threat to energy security in the Americas. Fossil fuels provide approximately 45 percent of the America's energy needs and as much as 95 percent of the fuel used in the transportation sector. It also plays a critical role in rural agriculture, helping to provide food for the 600 million people in the Americas. Fossil fuels and the internal combustion engine transformed the world within a single century (the 20th Century), generating cheap, efficient and affordable power and transport systems, and fuelling the emergence of a

globalized economic system. However, it is necessary to recognize that fossil fuels are finite commodities and thus are subject to depletion. It is projected that all hydrocarbons will be totally depleted between 2050 and 2060 if the current rate of consumption is maintained.

4. MANAGING TERRORISM-RELATED THREATS

Due to increased global pressure for energy, the development of nuclear energy has begun to receive renewed attention, in the process giving rise to concerns over the vulnerability of an expanded network of nuclear-power plants to acts of terrorism as well as the risks to environmental sustainability posed by the transshipment of nuclear waste. Thus energy policies that contemplate the use of nuclear energy should also consider the attendant security risks.



Possible Hemispheric Response to Challenges to Energy Security

In response to the highlighted challenges, hemispheric energy cooperation and integration could be enhanced and encouraged as a means of facilitating the development of energy for sustainable development within the Americas. The political will that motivated the adoption of the Panama Declaration '*Energy for Sustainable Development*' should be extended to energy cooperation in helping to build an effective response to the following energy security issues.

1. DIVERSIFY THE ENERGY MIX AND ENERGY EFFICIENCY

Countries could enhance their efforts to increase their energy mix and energy efficiency by encouraging the deployment of renewable energy sources and strengthening and/or establishing renewable energy and energy efficiency policies and programs that respond to both climate change and energy security frameworks. Such policies could seek to:

- Provide reliable energy services and products by diversifying the energy mix or portfolio to avoid supply disruptions and to achieve national and hemispheric environmental, social, and economic goals, including the Millennium Development Goals.
- Promote and develop renewable energy to increase the region's participation in the emerging global carbon market, which can in turn generate major gains for local, national, and regional energy industries, for the protection of the environment and for complying with the provisions of international sustainable development agreements;
- Facilitate the transfer of clean, innovative and alternative energy technologies between the countries in the region.
- Facilitate the sharing of bi-national or multinational energy management and development capacity and promote knowledge exchange within the Western Hemisphere.
- Facilitate the design, establishment or strengthening of efficiency standards within the energy sector, which includes the promotion of innovative, environmentally sound technologies for energy generation.
- Disseminate the necessary technological updates to foster energy conservation as well as to prevent energy losses in different sectors of the economy to make them more resilient to external shocks.
- Decouple economic development from energy consumption or intensity.

2. BUILD PUBLIC-PRIVATE PARTNERSHIPS

Improved public-private partnerships could promote and secure the necessary financing for the diversification of energy sectors within the Hemisphere. It is recognized that in Latin America and the Caribbean (LAC) investments in energy infrastructure do not reach 2 percent of GDP. As well, substantial financing is needed to support the research and development of renewable energy and energy efficiency technologies, to foster institutional capacity building, and to facilitate the integration of technical standards and energy cooperation in the region. Public-private partnerships could include:

- Collaboration on identifying energy resources and performing (pre)-feasibility studies to facilitate major investments in energy infrastructure, renewable energy and low-carbon intensity technologies.
- Making funds available for improving institutional capacity at national levels to effectively respond to the energy demand while achieving social and environmental goals.
- Identifying bankable energy projects that trigger increased foreign direct investment for sustainable energy development. This includes: investments for increasing installed capacity to meet energy demand; improving vulnerable energy facilities comprising unreliable power generation plants and transmission lines; investments in cross-border grids to facilitate the trading of electricity between countries; and investments for expanding or introducing energy services and products in rural areas.



As the region seeks to attract investment capital and infrastructure development, there are many advantages to be derived from harmonizing policy and regulatory frameworks, integrating power grids and pipelines, and exchanging natural and human resources. The key challenge to the region's energy security is the efficient development, exploitation and management of its energy resources, together with its ability to effectively allocate or trade these resources in an equitable, timely, and cost-effective manner.

In summary, the Fifth Summit of the Americas to be held in Trinidad & Tobago gives the countries of the Hemisphere the opportunity to establish commitments that address the emerging energy security challenges of the 21st century. The actions suggested above require significant political motivation and coordination to facilitate the deployment of renewable energy technologies, and to promote energy efficiency, as well as energy integration and cooperation efforts. The people of the Americas and their leaders must quickly scale-up their renewable energy initiatives and lead the region into a new era of energy security.

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