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Enhance Human Security Preparedness in Renewable Energy

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Session III: Emerging security issues in the APEC region and the framework for collective actions

“Enhance Human Security Preparedness in Renewable Energy”.

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Contents:

1. Security and Prevention.

After the terrorist attacks of September 2001 and the 2004 Tsunami, the subject of security is part of APEC´s big concerns, such as the liberalization of commerce and investment. Unlike the international organizations that deal with the subject of security on the basis of reestablishing Peace or solving conflicts, the prevention of risks, conflicts and disasters is APEC´s first priority, with a

view to avoiding their occurrence or minimizing their human and/or material effects; in other words, APEC´s concern is to eliminate the degree of uncertainty while fully understanding that without risk and a certain degree of danger, there cannot be sustainable development. Security measures are also preventers of future possibilities.

To understand security from a preventive point of view, it is important to identify the historical characteristics of the problem, of the concepts, and of those responsible thereto, as well as to understand the dimensions of the individual, the society and the totality. To carry out this task, it is absolutely necessary that this be understood, since the subject of security is so broad and kaleidoscopic that it runs the risk of being nonsensical.

2. The situation in Renewable Energy (RE).

In this connection we shall used four levels of analysis. The first refers to the status of scientific research, the second to the transformation of inventions into technologies, the third concerns the situation of RE in the market, and the fourth relates to mentalities and cultures in connection to the acceptance and use of RE.

On the first level, it appears that energy-related inventions occurs with greater intensity in the case of Non-Renewable Energies (NRE) such as coal, gas and oil. Research in these fields is financed by the large corporations, governments, and related universities. On the contrary, RE inventions are the concerns of S&M enterprises , communities and local governments, as well as pioneering academicians. As an expert puts it thus:

“However, investment opportunities in the sector have remained a hard sell compared to the established model of generating power from fossil fuels. Fortunately, there are signs that entrepreneurial bankers are seeing the

investment potential of renewable energy for electricity generation. Awareness of the future commercial and environmental limits of fossil fuels is more widespread, and it is recognized that governments are undertaking the necessary regulatory work to create a conducive environment for investors. Small, flexible specialist finance houses are increasingly providing the human glue that bonds a good investment opportunity in renewable energy to the cash needed to get it into operation and produce green power. By the nature of their technology and energy sources, for example biomass, renewable energy projects tend to be smaller and subject to a far greater degree of decentralization than traditional high carbon energy generation. In terms of transmission infrastructure and capacity, this has clear benefits as decentralized power generation results in higher reliability of electricity supply. However, from a project development stance, it makes the financing more difficult. Companies for renewable projects are often equally small, unable to provide the level of collateral sought by traditional lenders. Although renewable energy has a profitable and improving track record, renewables continue to struggle for money in competition with the established commercial model of fossil fuel power generation".[1]

The conversion of inventions into instruments capable of being industrially produced and easily accessible to the consumer, shows the enormous breech between the REs and the NREs. This is due to the state of the inventions and the market mechanisms, for instance, the price of the REs is not competitive with relation to the NREs, the supply of NREs is greater than the demand of REs, and the demand for REs is limited to either the very poor sectors or to the elites. The White House recognizes this situation on a world-wide scale:
We recognize that one of the greatest needs for developing countries today is to provide the basic energy services necessary to lift their citizens out of poverty.

[1] Mike Allen: "Financiers Focus on Renewables", *Environmental Finance*, April 2006.

We believe that the advancement and deployment of technology can contribute to the solution of the problem. By developing clean, efficient, affordable energy technologies for the longer term, while continuing to improve and deploy the current generation of lower-emission technologies, we can help all natios, including developing countries, meet the energy needs of their people and grow their economies.[2]

There is a well known human paradox which Werner Heisenberg, just before his death, considered distinctive of any human form of society: "Material conditions are important, and it was society's duty to eliminate huge sectors of society, once technology and science made it possible." In the case of the REs, science and technology are possible.

On the cultural side, there is little information on the REs, and awareness on the need to preserve the environment and education of world conflicts have not become values and customs for society at large, individual security has not become compatible with social security. People do not know how to synchronize his individual with the social wellbeing. However, there is no doubt that security has a subjective reach.

A good part of the perception of insecurity is attributed to "a fear related to the social processes which accompany the expansion of the present development and modernization model". Human security, in its broad and integral perception, provides a plus of confidence for going forth in this uncertain future. Legitimacy and prestige of the public aspect, as well as confidence in the institutions, are also significant contributions to this argument.

3. The role of APEC in Security and Energy

[2] Energy Security, Energy Efficiency, Renewables and Economic Development, June 20, 2005, http://www.whitehouse.gov./ June 20, 2005.

In this connection, we can differentiate between the recent and the old roles of this association. On the recent side is the Task Force for Prevention as well as several studies on risk. As for the old role, questions arise with regard to the actions carried out by the various task forces on the matter, and mainly on the problem of lack of cooperation between them. The old role referred to the structures, and concern mainly economics:

"The Asia Pacific area includes 52% of the earth's surface ~~area~~, 59% of the world's population, and over 70% of the world's natural disasters. APEC recognizes that natural disasters which affect one economy can affect others and that member economies can benefit from sharing expertise and collaborating on emergency preparedness and response".

As an immediate response to the Indian Ocean Tsunami as well as a collective response to prepare for future natural disasters, APEC Senior Officials adopted an APEC Strategy on Response and Preparedness for Natural Disasters and Emergencies at SOM I, March 2005. They specifically called for the establishment of a Virtual Task Force for Emergency Preparedness (VTFEP). This task force was later renamed by SOM as the Task Force for Emergency Preparedness (TFEP).

In 2002, Leaders encouraged economies to put emergency plans in place, including the option of strategic oil stocks, and to share information during supply disruptions. economies committed to continue and accelerated development of energy emergency response plans, including strategic oil stocks and other response mechanisms. By June 2004, EWG will recommend, for energy ministers' approval, best-practice principles for managing strategic stocks and will establish a program to provide capacity-building assistance on technical and policy issues. In addition, by June 2004, the EWG should develop a real-time information sharing and coordination system[3].

[3]APEC Fifteenth Ministrial Meeting: " APEC Action Plan to Enhance Energy Security, Purpose: Consideration. Submitted by: United States. Bangkok, Thailand, 17-18 October 2003, page 2.

“APEC Leaders, cognizant that stable supplies of energy are critical to sustained economic growth, endorsed the Energy Security Initiative (ESI) in 2001 and 2002.

The ESI responds directly to the energy security challenges faced by the region and has demonstrated how voluntary partnerships between economies can successfully address potential threats to economic growth and development. In the short-term, the ESI calls for energy data-sharing and emergency preparedness, and over a longer horizon, for the development of clean, reliable, and sustainable energy sources. APEC members should enhance energy security by endorsing an Action Plan that focuses on facilitating natural gas trade, enhancing preparations for energy emergencies, and developing clean and sustainable energy. This Action Plan expands on the Energy Security Initiative (ESI) and the ESI Implementation Plan and on other work in the energy program”.

In conclusion, the APEC position in energy security respect to the security has undergone modifications. In the ESI days the main concern was the economy, to assure the economic growth. In 2004 the preoccupation is the human security. In the former days the question was to take care of the NRE, while the RE would be a matter for the long term. For today we thought that APEC understands security as human security and the RE constitutes a priority and not a subject for the long term.

Fortunately, the Seniors Official Meeting that took place in Ha Noi, Viet Nam, in March 2006, considered as high priority: “Enhance Human Security: Counter Terrorism, Health Security, Disaster Preparedness and Energy Security” and on the matter it maintained that: “ It is important for APEC members to cooperate in enhancing preparedness to rebuff all kinds of terrorist acts, natural disasters, emerging avian and pandemic influenza. Enhanced preparedness will definitely

help minimize consequences caused by these sources of insecurity and thus facilitate a more secure environment for people and businesses to live and work in. Further measures should be taken to respond to oil price volatility, energy supply disruptions and address the broader challenges facing the region's energy security".

All APEC working groups and forums are advised to intensify their efforts in enhancing disaster management capacity building, educating their respective populations about natural disaster prevention and rescue skills, increasing public awareness of the importance of disaster preparedness.

In addition, human security in energy fortifies the Busan Roadmap Plan, which is to obtain a Strategic Approach to Capacity Building.

4. Colima University´s experience in the CE APEC.

The authors of this paper follow up on various APEC groups -- Energy, Intellectual Property, and Human Resources -- and we wish to pose the following questions: How does the subject of RE relate to our specific subject? What has been proposed by the task forces above referred to in response to our question? For us, the subject became a sort of focus or viewpoint from which to utilize concepts that we are familiar with, while at the same time it became locus or object for specific study. The approach had to be interdisciplinary.[4]

The results obtained were as follows:

a) From the point of view of the APEC Energy Working Group analysis, it was stated that the preoccupation regarding the relation between security and ER is shared by all the APEC economies, both developed and developing. The comparison between RE and NRE showed that NRE cover the most part of the world-wide market, and also the private investments. This situation is the same in the APEC region. Furthermore diverse RE technologies have different degree

[4] Obregón, Isidro R.: "Aproximación a los conceptos de seguridad sostenible y de seguridad humana e identificación de las entidades que los promueven (I)," Barcelona: Boletín de Gobernabilidad y Seguridad Sostenible No. 15.

of advance and acceptance in the market. In the APEC region the RE are used to support local communities and in many cases to alleviate poverty.
b) In the matter of IPR, few inventions were found in the economies, and very little protection via patents or utility models. Nor were many commercial items found which could indicate that the ERs had penetrated those markets.
c) It is true that there are in all of the economies institutions with better human resource formation programs in NREs than in REs. On the other hand, the REs are better related with the ideas of Economy based on KBE, Information Society, Knowledge Society, with emphasis on innovative aspects derived from the use of the new technologies of information and communication in the field, as well as of security and multicultural coexistence, in accordance with the following priorities for improving APEC:
To Promote Integration Capacity through Human Resources Development. IT cooperation, and Partnership for Development.

To facilitate the effective integration of Member Economies into the world economy and narrow the development gap among them, APEC will deliver improved capacity building initiatives to enhance cooperation in the areas of human resource development, knowledge-based economy, information technology, environment protection and build partnerships for development.
This aspect of the Coordination between the groups has been emphasized by the SOM, proposed as a priority:
Reform APEC towards a smore Dynamic and Effective Community.
APEC will take further actions to enhance the coordination and efficiency of various working groups/fora/task forces, improve the project appraisal and management so as to make projects more reflective of APEC´s priorities and foster closer linkages between APEC Economic and Technical Cooperation (ECOTECH) and Trade and Investment Liberalization and Facilitation (TILF).

5. Test Project

With the objective of comparing results, learn from one another and most of all to expand cooperation, we propose to make a seminar about the role and importance of RE to achieve security on energy matters.

Besides that objective, we propose several specific objectives for the seminar.

- Concept of RE from the perspective of security in the APEC region.
- To share the “best practices” on RE safety
- Analyze successful RE inventions
- Share Universities experiences regarding formation of experts on RE and its safety issues.

As told, one of the objectives of the seminar would be to analyze RE inventions that achieved acceptation in the APEC market and to to know the results that universities had in matter of quality of formation, jobs created, income; obtained by the graduates of such programs in the universities of the APEC region.

We propose that the organizers of the seminars should be the governments or the local communities, given the fact; they suffer the higher risks on energy issues. And the mentioned communities are imposed the installation of NRE power plants. They should have as well the opportunity to utilize RE to minimize such risks.

Community will be able to create and preserve network with various actors: states, international organizations, universities and research centers, private institutions, non-governmental organizations.

Another reason for the communities to be involved un the seminar is that while NRE follow a wealth concentration scheme, the use of RE can help to avoid this scheme.

The main point is to adopt and promote the concept of human security, to place persons on the debate and involve them in decision making processes regarding safety and RE.

6. Conclusions

In view of APEC´s objectives, the concept of security must emphasize the prevention of conflicts and disasters, both to prevent them as to minimize their effects. The REs are an excellent way to prevent security conflicts in the field of energy.

6.2 APEC should adopt the concept of human security, given that people, more than economic growth, suffer insecurity.

6.3. For the REs to fulfill that preventive role requires actions from the inventions to market mechanisms and social values, a) promoting applied research, b) accepting the energy consumer´s viewpoint, c) suppporting the initiative taken by PYMES and local governments and communities.

6.4. The APEC groups deal with the RE directly or indirectly. In both cases, coordination is possible and fits into the Strategic Approach to Capacity Building proposed by the Busan Roadmap to the Bogor Goals.

6.5. An event or work shop to examine what has been presented here would be advisable.

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WEB SITE

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APEC Emergency Preparedness website hosted by Australia (http://www.dfat.gov.au/apec/emprepp/)

European Patent Academy (http://academy.epo.org)