

**BARRIERS TO GREENHOUSE GAS MITIGATION OPTIONS IN
DEVELOPING ECONOMIES LIKE SRI LANKA AND STRATEGIES TO
OVERCOME THEM**

**Priyantha D C Wijayatunga
Public Utilities Commission of Sri Lanka & University of Moratuwa
UNFCCC Workshop on Mitigation
Bonn, May 23, 2005**

The main emphasis in greenhouse gas mitigation in small developing economies is on the deployment and diffusion on cleaner technologies rather than innovation due to limitations financial resources for research and development in these countries.

The diffusion of cleaner and energy efficient technologies in small power systems such as the one in Sri Lanka has encountered many a problem. This has caused major concerns in the context of growing need to reduce harmful emissions in the energy sector from the point of view of both the local environmental pollution as well as the global warming concerns.

This paper presents the outcome of a study involved in identifying and ranking the barriers to the promotion of certain cleaner and energy efficient technologies most appropriate for Sri Lanka and strategies to overcome these barriers. Barriers for renewable energy based systems such as wind and wood fuel fired plants and cleaner fuels and technologies such as Liquefied Natural Gas (LNG) fired combined cycle and IGCC were identified based on a survey. The most effective strategies are proposed to address the three major barriers for each of these technologies based on extensive discussions with all the stakeholders in the electricity industry.

It was found that lack of financing instruments, high initial cost and lack of assurance on resource supply or availability are the main barriers for renewable technologies mentioned above. As for cleaner fuel and technology options associated with conventional generation systems, lack of a clear government policy, uncertainty on fuel supplies and their prices and the reliability of the technologies themselves were identified as major barriers.

Strategies are identified to overcome the above barriers. Establishment of a proper feed-in-tariff, geographical diversification installations and capacity building in commercial banks are suggested for wind power. Investment incentives, streamlining of wood production and research on site identification are proposed for wood fuel fired plants. Also the study suggests combined planning with other sectors of the economy,

incorporating environment cost in planning and investment incentives as strategies for IGCC and LNG based technologies.