

## **Reducing the Carbon Footprint – A Challenge for the Caribbean Utilities**

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Is an increase in carbon dioxide (CO<sub>2</sub>) emissions contributing to global climate change? Currently, this is a subject of great debate – especially in the energy sector. Regardless, environmentally conscious investors, financial institutions, and other stakeholders in the energy sector are progressively embracing carbon-reduction initiatives. Reducing the carbon footprint is therefore emerging as a focal point for the electric utility industry.

According to the Electric Power Research Institute (EPRI), one solution for reducing CO<sub>2</sub> emissions is to aggressively implement advanced technologies such as renewable energy, end-use energy efficiency, advanced light water nuclear reactors, advanced coal power plants, carbon dioxide sequestration, hybrid electric vehicles, and distributed energy resources. Furthermore, EPRI advocates a combination of these technologies; since no single technology can support a desired 45% CO<sub>2</sub>-reduction goal.

Considering that electricity in the United States is produced from a variety of energy sources, it is conceivable that the CO<sub>2</sub>-reduction goal is potentially achievable with technical, economic, and policy changes. The Caribbean utilities, however, use fossil fuels as a primary energy source to produce electricity. In addition, many of these utilities are already grappling with the issue of growing demand due to population growth and economic development. The end result is a potential increase of CO<sub>2</sub> emissions in striking contrast with the reduction initiative!

From the Caribbean perspective, the presentation will focus on:

- What options are economically feasible?
- What is the impact of status quo?
- How should CEO's address the inevitable socioeconomic pressure?



- EIC is an associate member with CARILEC.
- The paper has not been previously presented at any conference.
- The paper will be presented utilizing Microsoft Power Point software.
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Mr. Raj Mahadevaiah is President and CEO of Environmental International Corporation - an environmental engineering firm headquartered in the Atlanta metro area and is an associate member of CARILEC since 2004. Mr. Mahadevaiah has a M.S. degree in Civil Engineering (Groundwater Emphasis) from the University of Oklahoma, USA. Also, he is a registered professional engineer in over 13 states within the USA. Over the last 24 years, Mr. Mahadevaiah has developed expertise in conducting, environmental assessments and remediation, project management, and litigation support at over 200 sites in the North America, The Caribbean, The Middle East, South Asia, and other nations world-wide. At numerous sites, he has conducted multimedia due diligence and compliance audits for ISO 14001-related projects involving air, surface water, soil, groundwater, hazardous waste, and noise issues at various facilities. He has designed, implemented, operated, and maintained remediation systems at petrochemical storage and distribution facilities, public and private electric utilities, refineries, conveyance facilities, superfund sites, landfill, RCRA sites, and other hazardous waste facilities. At several sites, Mr. Mahadevaiah has critically evaluated existing remediation systems and developed cost-effective alternatives. He also developed telemetry-based remediation systems to manage remote sites in the Caribbean. In addition, he has solved environmental puzzles from multiple sources, during litigation support, and successfully served as an expert witness in trials for industrial, insurance, and law firms. Apart from over a dozen technical papers presented at various locations worldwide, Mr. Mahadevaiah has also served as a panelist representing the Electric Utility Industry concerning "The RCRA Reauthorization Bill proposed by the US Congress," at the Air and Waste Management Conference held in Vancouver, British Columbia. As an associate member of CARILEC, he has also actively presented various technical papers at the engineers and CEO conferences.

