

Executive Summary

Renewable Energy Best Practices in the Promotion and Use for Latin America and the Caribbean

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Over the last several decades, global renewable energy use has grown slowly and steadily, now accounting for 16 percent of the world's energy production. In recent years, this growth rate has significantly accelerated. The US solar industry, for example, grew 67 percent from 2009 to 2010, increasing in value from \$3.6 billion to \$6.0 billion USD. Similarly, the US wind industry grew at a steady rate of 25 percent per year over the last decade. Global investments in clean tech, valued at over \$211 billion, have never been higher and have created competition among companies to patent technologies and secure "first-mover" advantages in the marketplace. These investments have helped create over 3.5 million renewable energy jobs worldwide and are the result of increased public acceptance toward renewable energy, manufacturing innovations, workforce improvements, and the passage of smart policies focused on increasing energy security and economic stability.

Renewable energy (referring to solar, wind, biomass, geothermal, and hydropower) is local, clean, abundant, and an effective way to mitigate energy and economic concerns. High energy costs have been one of the strongest catalysts for renewable energy production in the US and Europe. In the US, states with high energy costs (e.g., Hawaii, New Jersey, and California) have embraced renewable energy because of its cost-competitiveness. Considering that energy costs in the Caribbean are among the highest in the world, a similar opportunity is possible throughout the region. Barbados, for example, has the most expensive electricity in Latin America and the Caribbean. In response to this, it has become a renewable energy leader with two out of every five homes using clean energy produced by solar water heaters.

As a result of its heavy reliance on foreign imports, Latin America and the Caribbean are in a unique position to take advantage of renewable energy to sustain their energy demands. In the Caribbean, over 97 percent of electricity is generated from fossil fuels. With the exception of Trinidad and Tobago, all Caribbean nations are net importers of energy. While Latin America produces 13.9 percent of the world's oil (and is not as reliant on foreign imports as the Caribbean), its nations would similarly benefit from the creation of a more robust domestic renewable energy market. Investing in renewable energy keeps money that would normally be spent on energy imports in the local economy, where it can do the most good.

Two renewable energy technologies that are already helping Caribbean nations combat foreign energy dependence (by spurring lower domestic energy prices) are geothermal and wind power. Geothermal has allowed Costa Rica to virtually eliminate all foreign energy imports. Wind power has also helped stabilize the grid and lower electricity prices in the Dominican Republic, where at least 100 megawatts of wind power has been installed, and Jamaica, where 20 megawatts of wind power recently came on-

line. Because of global trade winds, wind energy can be depended on to supply electricity year round, helping to reduce electricity rate fluctuations. These examples show that a successful, domestically sourced renewable market can help stabilize long-term energy prices, acting as a hedge against rising electricity rates, while establishing new industry.

In an effort to cultivate vibrant renewable energy markets in the US, best practices for program development, rate design, financing, permitting, workforce development, and industry expansion have emerged. They are the result of several decades of public and private-sector involvement and cooperation aimed at advancing renewable energy. These practices include: simplifying permitting processes, creating renewable energy financing mechanisms, increasing competitiveness, and organizing community programs to better facilitate integration of renewable energy systems onto the local grid. These policies and approaches are well suited for replication in Latin America and the Caribbean and every effort should be made by those nations to do so.

Bold and meaningful action by government and public-private partnerships can help ensure that the best possible legal, financial, regulatory, and institutional frameworks are in place. Of all the possible incentives and tools that can be used to help accelerate a new industry, perhaps the most important of these is government leadership. For a city or region working to attract investments, the perception of market stability is critical. The U.S. Department of Energy has helped foster this sentiment by facilitating a public-private partnership to educate the public on renewable energy, invest in manufacturing research and development, and promote renewable energy project development by awarding loan guarantees. By pursuing a renewable energy market first, government can stimulate investment from the private sector in a meaningful and productive way. Finally, green energy goals, whether instituted by the government or agreed on by the private sector, are an important symbol of leadership in this area; however, these goals mean little without transparency and accountability.

A well constructed renewable energy industry brings jobs, energy security, education in science and technology, and modern infrastructure directly to the countries that need it most. Latin America and the Caribbean are no exception. On a much broader scale, these nations will benefit from having a more skilled workforce, safer environmental conditions, increased trade opportunities, and improved multinational relations. They will also generate extraordinary cost savings, allowing them to stimulate and encourage growth in other economic areas. Establishing and nurturing a comprehensive and strong renewable energy industry across such a vast landscape such as Latin America and the Caribbean is no small challenge - yet the rewards are well worth the efforts.