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Renewable Energy in Latin America: Innovations and Future Prospects

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While Latin America and the Caribbean accounts for less than 10% of global greenhouse gas emissions, the region is particularly vulnerable to climate change.. As stated in a report recently published by the Economic Commission for Latin America and the Caribbean, conserving the “global public good” of the Earth is the one of the greatest challenges of the twenty-first century. It will require cooperation between governments, private sector, civil society and community/local organizations; it needs the participation of societal sectors. Latin America has made significant progress on a number of development indicators in recent years. They have reduced poverty rates, increased educational attainment, and lowered child mortality. However, these is still considerable work to be done to reach the Sustainable Development Goals (SDGs) and address the deep inequalities that mark the region. But inequalities, poverty and vulnerability and Climate Change are intertwined. Unless these are tackled, the LAC region risks not to achieve the SDGs.

While fossil fuels have admittedly driven some of Latin America’s development, they have also altered the climate. Because of this, Latin America should adopt a clean energy centered development model with decarbonization as the center piece. The six focus areas of this model are: (1) energy production and consumption patterns, (2) agriculture and forestry, (3) urban areas and infrastructure, (4) water sources, (5) forest and biodiversity, and (6) coastal management and sea level rise.

As one of the most urbanized regions in the world with several megacities of over 10 million inhabitants, 70% of Latin America’s greenhouse gas emissions comes from cities. Transport is the fastest growing source of energy demand and represents an opportunity for cleaner energy development through measures such as electric buses. However, de-carbonization of agriculture should also be a priority for the region as regional emissions from agriculture have grown significantly over the last 50 years.

Water, energy, and food are the elements essential for human wellbeing and sustainable development. They are closely interlinked; for example, in many parts of Latin America food is wasted because vendors do not have access to electricity to preserve it. Therefore, governments should make concerted efforts to offer financing mechanisms for green technology in rural sectors.

Demand for clean energy is growing quickly as the cost continues to go down. Renewables still only account for 3-4% of the entire energy mix, but investment is speeding up. As the price of renewable technology continues to go down, they will be able to compete with fossil fuels. Solar energy holds particular promise for countries that get lots of sunlight. Brazil, Uruguay, Colombia and Chile are leaders in the region. Costa Rica aims to use 100% renewable energy by 2025. Renewable energy has created more than 10 million jobs, including jobs for women and youth, who are often excluded from the labor market.

However, public and private investments are lagging behind and \$102 billion are needed to accomplish the SDGs. Governments should eliminate fossil fuel subsidies and redirect investments to renewable energy source such as energy storage and smart grid technologies. They should implement progressive tax on fossil fuels based on the social and environmental cost of carbon and accelerate integration of the power sector. Governments should also recognize the value of social innovation and invest in research and development for green energy. Technology in the energy sector would not only help Latin America fulfill its own energy needs, but can also enable the region to participate more actively in the strongly emerging RE global markets.

Renewable energy presents an opportunity for more regional cooperation. Efforts have been made to create frameworks for intraregional energy trade such as electricity pools, but countries often prefer to be buyers rather than sellers.

Another historic obstacle to fostering renewable energy in Latin America is the lack of continuity between administrations. Countries in the region must commit to long term plans that incorporate public-private partnerships. Costa Rica has proven successful at this, although its small size and natural resources may give it some advantages in prioritizing renewable energy. That said, there is no reason that larger countries cannot make the same achievements. While overcoming Latin America's reliance on fossil fuels will be a challenge, it also presents significant opportunities to foster long term sustainable development in the region.