Developing Countries Leading the Way in Low CO₂ Energy Supply – Case Study of Costa Rica and Morocco

ADEGOKE, IRE-OLUWA DANIEL
M.Sc. Sustainable Energy Systems, University of Edinburgh

Abstract

Many developing countries are crippled with different development challenges and also face technological, social and institutional barriers to tackle climate change and transition to a low carbon economy. However, Costa Rica and Morocco are examples of developing economies that are making commendable strides to expand clean energy and reduce GHG emissions in all sectors. This proposal aims to showcase the achievement and commitment of Costa Rica and Morocco in tackling climate change challenges against all odds. It also draws leadership insights that will guide scholars and policymakers to deliver a low carbon and sustainable future in their respective countries.

Introduction

Costa Rica is an upper, middle-income country that has experienced steady economic growth in the past 25 years. The country is a recognized global leader for its successes in implementing environmental policies that promote biodiversity, environmental conservation and reversing deforestation.11

Morocco is a resilient, lower, middle income country characterized by rising domestic demand, a high dependence on energy imports and increasing economic activity. The government is working on new policies that bolster increased private sector participation, job creation, and inclusive growth with a modern social justice system.12, 14

Table 1 contains key indices on Costa Rica and Morocco economies.

<table>
<thead>
<tr>
<th>Region</th>
<th>GDP per Capita (2017 US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costa Rica</td>
<td>$16,900</td>
</tr>
<tr>
<td>Morocco</td>
<td>$8,600</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Major Exports</th>
<th>Major Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Equipment, Electronics, Coffee, Textiles, Electrical components,vegetables etc.</td>
<td>Refined petroleum, gas, wheat, cars etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transportation and Agriculture</th>
<th>Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morocco: Large scale public transport using electric trams and modern taxi system</td>
<td>National Public Transport Implementation Program</td>
</tr>
<tr>
<td>Costa Rica: Zero emission public transportation, uptake of EVs, improved efficiency in cargo transport</td>
<td>National Decarbonization Plan</td>
</tr>
</tbody>
</table>

Climate Change, NDC and Paris Agreement

The Climate Action Tracker rates Costa Rica’s current policy plans as “2°C Compactable”.

Costa Rica energy mix comprises of renewables and a small share of thermal (diesel). Since 2013, the country has achieved over 250 consecutive days of electricity using renewables.12 This remarkable feat has earned the country global recognition for its almost perfect deployment of renewables for electricity generation. However, the use of fossil fuel is still prevalent in other sectors of the economy. A mix of fossil and renewable sources meets Morocco’s energy needs. As at 2018, the total installed capacity is 10.9 GW, with a renewable share of 34%.14 Due to the rising cost of energy imports, Morocco has significantly increased the share of renewables in the energy mix.

Both countries operate a state-owned monopolistic market with a controlled private sector involvement. Figure 1 and 2 show the changes in the sources of electricity generation in 1997 and 2017.

Conclusion

Costa Rica and Morocco are noble examples of developing countries committed to addressing climate change, though, facing other socio-economic challenges. These governments have designed and implemented policies, laws and plans to significantly limit the amount of GHG emissions in the key economic sectors like energy, transport and agriculture. The achievement of the national and system leadership in Costa Rica and Morocco shows that policymakers must demonstrate a strong commitment to sustainability, design ambitious climate goals, build synergies within and externally, and equip citizens with the right education.

References

5. 2050Pathways.org. Morocco First NDC. Accessed 8/03/2020
23. Costa Rica First NDC. Accessed 8/03/2020
24. Morocco First NDC. Accessed 8/03/2020