Energy Research & Social Science
Volume 50, April 2019, Pages 82-91

From Kyoto to Paris: Measuring renewable energy policy regimes in Argentina, Brazil, Canada, Mexico and the United States

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https://doi.org/10.1016/j.erss.2018.11.010

ABSTRACT

There are numerous strategies to lower greenhouse gas (GHG) emissions or to mitigate global climate change. One of them is to promote polices for developing renewable energy sources. There has been a growth in such policies but not enough is known about their effectiveness. We use a revised version of Schaffrin et al.'s (2015) Index of Policy Activity (IPA)[1] to examine the historical development (1998–2015) of federal and state/provincial renewable energy policies across five federal countries in the Americas: Argentina, Brazil, Canada, Mexico and the United States. Here the focus is on "policy output," which is defined as a function of policy density and intensity. Policy density is measured by counting the number of policies in each country relating to a particular goal during our time frame, while policy intensity, or the strength the policy has toward meeting specific goals, is measured by summing scores for six indicators: objective, scope, integration, budget, implementation and monitoring. The higher the policy score for a country, the more likely the country will be able to meet its intended goals. Our results show that the U.S. has the densest renewable energy policy output followed by Canada, Mexico, Brazil, and finally Argentina has the least-dense policy output. Overall, Brazil and Canada's renewable energy policies were the most intense, followed by Argentina's and the U.S.'s, with Mexico's policies receiving the lowest intensity scores. These countries differ in how long they have supported renewable energy policies and the levels of government that implement them. These findings show that countries may be spending resources on producing myriad renewable energy policies, but without coordination between different levels of government or a concerted effort to ensure that the policy instruments are effective, those resources may be wasted while GHGs continue to rise. This research contributes to the understanding of how individual federal and state/provincial government make efforts toward implementing or enforcing energy policies to influence long-term policy change.

Keywords : Policy output; Pan-America; Renewable energy; Climate change