



The green BRICS: how to cooperate and leverage renewable energy strategies

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Resumo:

Ainda hoje, não é lugar comum prever o futuro dos BRICS enquanto bem sucedido e um bloco transcontinental. Este artigo busca estudar a cooperação entre os cinco membros dos BRICS no setor energético, analisando as cúpulas bem como as parcerias firmadas no campo da energia sustentável

Palavras-chave: BRICS, Cooperação, Energia Sustentável

Abstract:

Until today, it is not unanimous to predict the BRICS' future as a successful transcontinental bloc. This paper aims at studying the cooperation amongst the 5 BRICS countries on the energy sector, by analyzing the summits as well partnerships signed on the field of sustainable energy.

Key words: BRICS, Cooperation, Sustainable Energy.

The acronym BRIC was first coined in 2001 by the economist Jim O'Neill in the paper entitled "Building Better Global Economic BRICs". The term referred to emerging economies with great importance to the world's trade and economy as a whole. South Africa got included in the group in 2010, becoming a strategic member in the African continent.

With the population of 3 billion people, a combined nominal GDP of US\$14.8 trillion, and an estimated US\$4 trillion in combined foreign reserves, Brazil, Russia, India, China and South Africa geographically represents 4 continents. If institutionalized as a formal international organization, the BRICS would be the first transcontinental bloc in the global relations. Until today, it is not unanimous to predict the BRICS' future as a successful transcontinental bloc. Some scholars are positive and support the idea of threat to western economic supremacy, while others agree that the five countries are losing their momentum.

This paper aims at studying the cooperation amongst the 5 BRICS countries on the energy sector, by analyzing the summits as well partnerships signed on the field of sustainable energy.

Recommendations will enlighten this work in order to present a feasible solution on how the BRICS shall proceed to leverage cooperation on renewable energy.

The 1st BRIC summit took place in Yekaterinburg, Russia in 2009 amid a global financial crisis turmoil. The official high level meeting between the heads of government of four countries, Luis Inacio Lula da Silva, Dmitry Medvedev, Manmohan Singh and Hu Jintao, brought in a broad agenda concerns related to current global issues such as the financial crisis, reform of international financial institutions, 2007-2008 world food price crisis, global development as well as the future cooperation between the BRIC group, among and other topics. The 1st BRIC summit gained the spotlights raising hopes for a doable international power shift. Its importance has also relied on the need to align the members' foreign policy, understandings and goals, as a kickoff to tighten future cooperation. The dialogue resulted on the adoption of a 'Joint Statement of BRIC Leaders on Global Food Security'.

Since the first Joint Statement, attention was given to renewable energy as a feasible way to investing in sustainable development, despite of not being the main priority in the summit. The joint statement concluded that:

We are for strengthening the coordination and the cooperation of states in the energy sphere, including between producers and consumers of energy and transit states, in the efforts to reduce uncertainty and ensure stability and steadiness...(BRICS LEADERS IN..., 2009).

There is a consensus amongst the BRICS countries that clean sources of energy

has, indeed, a much lower environmental impact than conventional energy technologies. The development of renewable energy is not a global trend, but a real and immediate necessity.

Sustainable development through investment in renewable energy is also a synergetic understanding in the international arena. The BRICS have shown extensive support to the United Nation Millennium Development Goals, which together with poverty reduction targets an integration of the principles of sustainable development into domestic policies, laws and development programs.

The 3rd BRICS summit in 2010 paid great attention to environmental issues and sustainability as a whole. The points 13, 18, 19, 20, 21, 22, 23 of the Joint Statement all tackled the issue at some sort. Special considerations on renewable energy highlighted its importance and commitments for further cooperation, as the point 18 states: “We support the development and use of renewable energy resources. We recognize the important role of renewable energy as a means to address climate change. We are convinced of the importance of cooperation and information exchange in the field of development of renewable energy resources.”

Among the BRICS members, synergies and discrepancies in terms of alternative energy developments are clear, which allow the governments to cooperate and exchange know-how on

the spheres of policies, legislations and implementations.

Currently, renewable energy in Brazil is responsible for more than 85% of the energy industry. The know-how and commitments towards a sustainable development has brought the country to a leading position in the international arena.

Brazil is widely recognized as a model for sustainable development since it has the largest and most cost-effective hydroelectric and biofuel industries in the world. The United Nations praises the country for its continuous efforts and currently supports the inauguration the headquarters of the International Renewable Energy Center in the country.

Domestic laws and policies have passed in the Congress mostly as provisional measures in order to give legal foundation to the 2010-2019 PDE Plan for Energy Expansion and the Strategic Energy Plan ¹. The legal framework concerning renewable energy is not presented in a unified document, but their effectiveness and reduced bureaucracy are clear.

Despite of the success of renewable energy, the large dependence on hydropower, the weather dependent fluctuations in power output and the need to improve the legal framework pose as main challenges to leverage the diversification of renewable energy in Brazil.

¹ Provisional measure is a legal act in Brazil through which the President of Brazil can enact laws without approval by the National Congress.

New regulations on solar power and wind power were enacted in 2013 as these fields are not yet developed in the country. The gaps that still exist on the legal documents are slowing been filled out, so it is the government's commitment to sustainable development.

One may conclude that Brazil has effective laws and programs and most importantly, know-how on certain renewable energy technologies such as ethanol and biofuel that can be beneficial to the other BRICS members.

Russia is another strong country in the energy industry, since it has second largest coal reserves as well as one of the largest hydrocarbons reserves in the world. The Russian renewable energy industry is, nonetheless, new and there is an immediate need to improve domestic legislations for solar power, wind power and hydroelectric power.

The solar power industry, for instance, is nearly inexistent and the hydroelectric power, even with great potential, needs further development. Russia's deep dependence on hydrocarbons and nuclear energy has shown an increasing deficiency in the energy sector.

In 2013, the government released the programs "Energy Efficiency and Energy Development in Russia 2013-2020" as well as the draft law Renewable Energy Source Development Measures, which are expected to boost the green energy industry in the country, especially

in the North-West of the country, where large resources able to support green energy projects.

Russia is expected to allocate \$2 billion to renewable energy projects in a short run through power purchase agreements, which are not yet specified nor regulated.

In the highly populated India, as the growth of energy demand still poses a challenge, the implementation of the ethanol-blending program has become one of the governments top priorities. The goal is to double renewable energy capabilities by 2017 for solar, wind power and biomass.

The costs of renewable energy have been pointed out by the government the main barrier for sustainable development, thus the blackout in 2012 brought about the necessity to re-think and implement new strategies for the power sector.

The Indian legal framework has brought several difference sources such as Electricity Act of 2003, India Energy Policy (IEP) 2006, 11th Five Year Plan. In 2013, a new draft on National offshore wind energy policy got released through which new investments on the field shall be done promptly.

The legal frameworks in India and in Russia are still new, so is in South Africa, as will be analyzed later. Both countries have indeed acknowledged the immediate need to implement new laws, policies and investment in the renewable energy field.

Due to the raise of the energy consumption, the development of green energy industry in China recorded the greatest expansion globally. The Renewable Energy Law (2005 and April 2010) and the 12th Five Year-Plan in 2008, have resulted on great achievements: China has become the world solar photovoltaic technology manufacturer besides increasing investments that reach 10 trillion yuan into strategic sectors.

China has become the largest producer of hydropower, the third largest producer of biofuels, and the fifth largest producer of wind energy ². Its vast territory poses as great foundation for sustainability. Notwithstanding, according to the World Bank, comprehensive package of policy measures, including fiscal, financial and economic incentives, overly regulation phasing out fossil fuel subsidies and the carbon pricing are some of the fields in considerable need of improvements.

Finally, in South Africa, great attention has been giving in order to enact laws since few alternative energy projects for electricity generation have been deployed. Despite of most of the energy being provided by coal-fired power stations, South Africa has good solar and wind resources, which could contribute for further green energy developments in the country.

In 2008 the Energy Act was enacted, followed by the White Paper on Renewable Energy, Integrated Energy Plan, Integrated Resource Plan 2010-

2030. The purpose of the Act is to ensure that diverse energy resources are available, in sustainable quantities and at an affordable prices; integrated energy planning; increased generation and consumption of renewable energies; appropriate energy infrastructure; and also establishment of institutions responsible for energy research.

Among the BRICS countries, Brazil and China have shown efficient developments on renewable energy despite of acknowledged areas for improvements in different sectors. It is primordial, therefor, to pinpoint how each of them can contribute with the other members.

Brazil has been a strong player in renewables, as the Sanya declaration states:

23. ... China, Russia, India and South Africa appreciate Brazil as the host of the 2012 UN Conference on Sustainable Development and look forward to working with Brazil to reach new political commitment and achieve positive and practical results in areas of economic growth, social development and environmental protection under the framework of sustainable development... (SASHA, 2011).

Brazil's strengths rely on the effectiveness of the ethanol and biofuel industries. The Brazilian ethanol program (or Proalcool) was launched in the 1970s after the oil crisis. Along more than 30 years, Brazil was able to implement successfully regulations for green ethanol (out of the residual cane-waste) as well as developing its own agricultural technology for both ethanol and biodiesel/biofuel, with competitive price.

² Gloria Coleman

According to the government, Brazilian ethanol is currently the world's best and most advanced option for sustainable production of biofuels on a large scale. It is for this reason that, by law, 25% of ethanol shall be blended into the gasoline, while biodiesel shall be added to diesel oil in the proportion of 5%.

The German Federal Ministry of Economic Cooperation and Development has highlighted in their Policy Analysis the advantages Brazil carries concerning renewable energy:

Brazil has built an attractive regulatory and technical environment facilitating target achievement. First, liberalization of the electricity market has allowed new power producers to enter the market [...] Secondly, Brazil has improved and extended its power grid over the last ten years, having established the technical basis for integrating RE electricity into the power system [...] Thirdly, the Brazilian government has focused on providing support to competitive RE technologies only [...] it has helped avoid higher electricity prices often occurring under regimes of fixed tariffs or subsidies. (GERMAN FEDERAL MINISTRY..., 2012, p. 47)

The Brazilian strategy focuses on a basket of effective regulations, liberalization of the electricity market and technological development. This strategy has allowed the prices to be competitive, resulting on an increase of investments as a whole.

Meanwhile in China, incentives and supportive policies have driven the renewable energy industry, which contribute for immense

investment allocations in the field. According to the Forbes magazine, since 2004, China has invested more than \$1 trillion in renewable energy, being the solar and wind technology the industries that have faced major changes and achievements.

The Chinese technology for both solar panels and wind turbines has not only allowed China to become one of the biggest manufactures in the world in both fields, but also one of largest investor abroad.

The Chinese strategies rely on the use of Development Banks loans for solar and wind projects in developing countries. Chinese companies have developed generation capacity from wind and solar energy sources as well as plans to invest in renewable energy projects in South Africa in the next few years. The China-Africa Development Fund may support and fund such projects.

Mutual financial and investment is also a key mechanism for cooperation. The BRICS Multilateral Cooperation and Co-financing Agreement for Sustainable Development resulted from the 5th BRICS Summit in Durban, in 2013, brought two different developments that shall contribute for further investments in the renewable energy.

One is the cooperation among the BRICS member's Development Banks. The Brazilian Development Bank (BNDES), the Bank for Development and Foreign Economic

Affairs (Vnesheconombank), the Export-Import Bank of India, the China Development Bank (CDB) and the Development Bank of Southern Africa (DBSA) seek to finance projects related to sustainability and the low-carbon economy.

Moreover, the Joint Statement stated the founding of a common BRICS Bank that may be established in few years would fund both infrastructure and renewable energy projects. It was discussed a mutual contribution of around \$100 million dollars for the initial capital of the bank as a start up, to be split equally among the members, however, further discussions are needed if the plan is to inaugurate the bank in 2016. The banking cooperation and the BRICS bank are, indeed, valuable tools for the renewable energy field. The success of this cooperation is still unclear, yet promising.

Mutual cooperation through the exchange of successful policies and regulations, cooperation in green technology and mutual investment are paramount to build a green BRICS.

The necessity to develop the clean energy industry has been acknowledged, however, Russia, India and South have a long path. Brazil, with effective green energy laws and ethanol technology together with China will strong funding allocation and solar and wind technologies can learn from each other's failures and success in order to make the BRICS a future green power.

At last, the BRICS Multilateral Cooperation and Co-financing Agreement for Sustainable Development seeks to establish the basis for coordination and an exchange of information between the development institutions in the five countries, aimed at improving mechanisms for sustainable development and building partnerships in this area.

If all of these instruments are put in practice within the next few years, the BRICS has great potential to become the new green power.

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