DOI: 10.20396/revpibic2720191573

XXVII Congresso de Iniciação Científica Unicamp
16 a 18 de outubro de 2019 - Campinas | Brasil

Chinese Strategies and Policies for Coping with Climate Change

Marina Betetto Drezza*, Maria Cristina Oliveira Souza, Guilherme Nascimento Gomes, Rosana Icasatti Corazza

Abstract

There were high expectations about China's Nationally Determined Contribution (NDC) to Paris Agreement. The intensive and extensive use of coal allowed the country a long and significant growth over the last decades. From 2007, the country has become the leading global emitter of greenhouse gases (GHG). Beside this, the country has taken the lead in the production of knowledge on renewable energy sources and related technologies to track a transition to a low carbon economy. This research sought to identify technological strategies and public policies of the country focused on the theme.

Key words:
China, Climate Change, Low Carbon Economy.

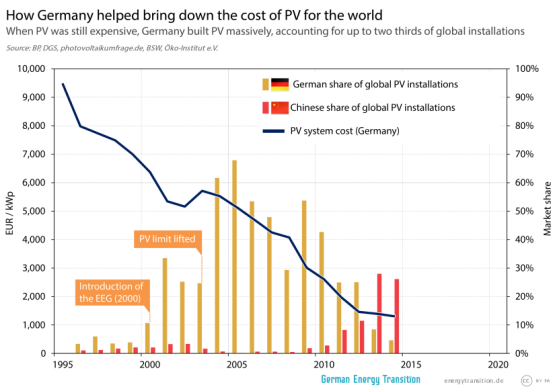
Introduction

Considered a "climatic power", China is the largest emitter of GHG and a country with great impact on the climatic dynamics (VIOLA, 2010). The country's proposals and actions regarding climate change, such as its Nationally Determined Contributions (NDCs), are of great relevance in the context of global negotiations on the issue (FERREIRA, BARBI, 2016). In this sense, it is interesting to note that, since 2010, the country has been the main producer of photovoltaic panels, surpassing even countries like Germany. On the other hand, the financing granted by the two main Chinese investment banks, the Chinese Development Bank (CDB) and the Export-Import Bank of China (Ex-Im), point to the deepening of the fossil dependence of Chinese growth. This research puts these issues in perspective.

Results and Discussion

The official document on the Chinese targets for the Chinese Paris Agreement (CAIT / WRI, 2017) broadly envisions sectoral and intersectoral goals aligned with the recommendations of the Intergovernmental Panel on Climate Change (IPCC). Below, we can see the results of China's efforts to increase photovoltaic facilities, compared to Germany, the previous leader in the sector.

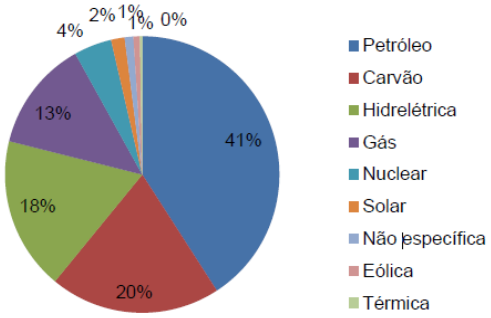
Figure 1. Growth of photovoltaic installations in Germany (orange) and China (red), decrease in the cost of the solar source (blue) (%) (1995 - 2015)



Fonte: SUN VULT, sítio institucional. Acesso em: 25/08/2018

Contrast these data with the investments of Chinese banks. These are the financing for the energy production sector around the world, from 2000 to 2017, as presented in Gallagher (2018).

Figure 2. Energy investments of the two Chinese development banks (2000-2017)



Fonte: prepared by authors based on Gallagher (2018).

Conclusions

China's proposals (NDC) show an alignment with the recommendations of the Intergovernmental Panel on Climate Change.

In the last two decades, Chinese investment banks have heavily financed fossil fuel sources (74% of investments have gone to oil, coal and natural gas) and only marginally alternative energy (2% for solar and 1% for wind). Investments in fossil fuels mean a structural commitment, with effects on future GHG emissions.

China's position in terms of strategies and policies for tackling climate change is apparently paradoxical: the country has become the largest producer of photovoltaic solar panel and at the same time, increased investment, production and consumption of fossil fuels.

Acknowledgement

We thank the São Paulo Research Foundation (FAPESP) for the scholarship granted (Process 2018/08351-0).

BUITRAGO, J. As políticas de inovação em solar fotovoltaica (FV) nos países líderes. O que o Brasil pode aprender? Conference: ALTEC 2015 Brasil - *XVI Congresso Latino-Iberoamericano de Gestão da Tecnologia*, 1-21, 2015.

DA COSTA FERREIRA, Leila; BARBI, Fabiana. The challenge of global environmental change in the anthropocene: An analysis of Brazil and China. *Chinese Political Science Review*, v. 1, n. 4, p. 685-697, 2016.

GALLAGHER, Kevin P. China's global energy finance: Poised to lead. Energy Research & Social Science, v. 35, p. 15-16, 2018.

SOUZA, M. C. O. *Mudanças climáticas e energia*: um estudo sobre contribuições brasileiras diante de um novo regime climático. (Dissertação de mestrado) Campinas: Unicamp, 2017.

VIOLA, Eduardo. A dinâmica das potências climáticas e o acordo de Copenhague. *Boletim da Sociedade Brasileira de Economia Ecológica*, Edição Especial - Nº 23/ 24 pp. 16-22, 2010.

WRI-CAIT. *Enhanced actions on climate change*: China' s Intended Nationally Determined Contributions. WRI/CAIT, 2017.