Challenges in financing sustainable energy in Brazil

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EPF-IISD Roundtable, Geneva, June 6th 2016

Sustainable energy in Brazil

- **To investment up to R$ 1,4 trillion (US$ 390 billions) until 2024, of which R$ 376 billions (US$ 105 billions) in power generation and transmission.**
  - Based on growth of energy demand of 4,1% a year (2015-2024).
  - There is a need of extra 73.569 MW, an increase of 55% in supply of available power in the National System.
  - **An expected increase in power generation based in renewable sources from 118.380 MW in december 2015 to 173.417 MW in december 2024.**
    - **Biomass+Wind+Solar+Small Hydro:**
      - From 24.840 MW in 2015 to 56.445 MW 2024.
      - **From 17,7% in to 27,3% of total power generation in Brazil.**

Sustainable energy in Brazil

- **Goal: to reduce greenhouse gases emissions up to 37% in 2025 and to 43% in 2030 from 2005 levels.**

- Around 84,4% of the generation of power in Brazil came from renewable sources in 2015.
  - 6% is based in wind power as of today.

- **Inova Energia (R$ 3 billions 2013-2016) – BNDES-FINEP-ANEEL.**
  - Special focus on wind and solar powers and energy efficiency.

- **ProGD – Decentralized generation program (till 2030) – focus on solar power: World Bank, IDB, BNDES.**
  - R$ 100 billions needed; half an Itaipu in power generation; reduction of 29 millions of tons of CO2.

Sustainable energy finance
BNDES (2004-2016)

- **BNDES: the main source of finance for sustainale energy in Brazil (and for infrastructure in general).**

Around R$ 103 billion (US$ 29 billion) used for financing more than 350 projects of power generation based in renewable sources of energy (hydro, wind, solar, biomass) in Brazil.

  - R$ 76 billions (US$ 21,5 billions – 74% of the total disbursement by BNDES from 2004 to 2016) in hydroelectric power generation projects.
  - **R$ 25 billions (US$ 6,5 billions) in wind power and biomass.**
  - New incestives for solar power since 2014.

- **Plus R$ 50 billions(US$ 14 billions) for transmission, distribution and energy eficiency programs.**

Sustainable energy finance BNDES (2016)

- **R$ 35 billions (US$ 10 billions) are available for infrastructure and renewable energy projects in 2016.**
  - Of which R$ 8 billions (U$ 2,2 billions) for renewable energy ones (including small - 30MW and below - hydroelectric power projects).
- **Up to 70% of the costs of the projects.**
- Subsidised interest rates (around 6% a year).
  - Hydro and solar power: up to 20 years for amortization.
  - Wind power and biomass: up to 16 years for amortization.

Sustainable energy in Brazil

- **BNDES: infant solar power industry policy.**
  - *Subsidies and local content:*
    - Panels; small and big photovoltaic systems; trackers; stringbox, etc.
    - Building up value chains in the sector.
    - Rapid growth of the industry – is it to become internationally competitive?
    - Long-term prospects?

Sustainable energy in Brazil: challenges

- The Brazilian dependency on hydroelectric power to be reduced marginally in the mid-term.
- New mechanims to foster wind power and solar power generation in the long term.
- Matching the growth in sustainable sources in power generation with investments in transmission and distribution in Brazil.
- Redefining the agenda for energy efficiency.
    - Goal: at least 10% increase in efficiency until 2030.

Sustainable energy in Brazil: challenges

- **The need for changing the financing structure of the sector in Brazil:**
  - Rethinking BNDES´role as the main source of finance.
  - Bringing international private investors in:
    - to deal with regulatory and exchange rate fluctuation risks.
  - Partnerships with the new (and the old) multilateral development banks.

Thank you!

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