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# How bright is solar energy's future in Brazil?

Inter-American Dialogue's Latin American Energy Advisor

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***Q and A: How Bright is Solar Energy's Future in Brazil?***

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A ban on state subsidies for nondomestic solar panel parts is thwarting solar-energy projects in Brazil, Bloomberg News reported Aug. 8. While developers in Chile have announced plans for more than 1,000 megawatts of solar panels this year, that figure is just 67.5 megawatts for Brazil. In the face of cheaper wind power, new shale gas developments and the enormous potential of pre-salt discoveries, what is the short- to medium-term future of solar energy in Brazil? What more should the government do to promote the sector?

**A: Arnaldo Vieira de Carvalho, lead energy specialist at the Inter-American Development Bank:**

"Solar energy is indeed booming worldwide, as the latest REN 21 Renewables 2012 Global Status Report just confirmed: the solar photovoltaics implementation rate during 2006-2011 was greater than any other renewable energy source, with operating capacity increasing an average of 58 percent annually. In 2011, solar photovoltaics accounted for more new electric generating capacity in the European Union than any other technology. However, most of this growth was the result of huge subsidies that are not necessarily sustainable in the medium to long term. Proper economic evaluation easily justifies the provision of subsidies for mobilizing investments toward off-grid solar photovoltaics projects in order to provide access to electricity for remote communities. However, subsidies are not necessarily the only nor the best way to encourage grid-connected sustainable energy projects, especially in a region such as Latin America and the Caribbean where renewables are already being used at a much greater proportion than any other region in the world and where many other renewables are more cost-competitive than solar energy. If not properly designed and with an adequate exit strategy, subsidies for grid-connected projects just distort economic signals and make allocation of financial resources done in a less than optimal way. This changes the order of the implementation of the best projects and increases costs to the society. Facilitating access to financing, proper regulatory framework and helping remove other non-technical barriers are better ways to help grid-connected solar energy be implemented in a more sustainable way than through subsidies."

**A: Maria Gabriela da Rocha Oliveira, head of Latin America research and analysis at Bloomberg New Energy Finance:**

"The potential for the development of a Brazilian solar market probably lies not in large utility-scale projects as in the Chilean case, but in the distributed residential market. A few policies in Brazil will help kick-start the residential solar market, such as the recent regulations of distributed generation, dynamic pricing and smart meters. Still, a lot must be done to create financing mechanisms for end-users to purchase the equipment. Most importantly, Brazil needs to lift some of the heavy taxes on imported equipment. To date, there has been little discussion in Brazil of a feed-in-tariff scheme to support solar, though such tariffs have driven major development in Germany and other European nations. For homeowners in Brazilian states such as Minas Gerais, solar can already make sense economically even without subsidies. Still, mass deployment is hardly right around the corner. Further policy frameworks are still needed."

**A: Scott Sklar, president of The Stella Group in Washington:**

"According to PV-Tech, Brazil's total installed capacity is estimated to be between 12 and 15 megawatt peak (MWp) and mostly supplies telecommunication systems (50 percent) and rural installations. In 2009, around 5 million square meters of solar thermal panels were installed in Brazil, according to data from the International Energy Agency, with an increase of almost 20 percent between 2008 and 2009. In 2009, approximately 2 percent of Brazilian households used solar panels to heat water, or 27.11 square meters per 1000 inhabitants. The Sept 2010 study, 'Renewable Energy Potential of Brazil,' by the Global Energy Network Institute (GENI) states: 'Brazil is located in a region on Earth where solar radiation is one of the highest in the world, especially in the north of the country ... The Amazon is the sunniest region of Brazil, but it is also the worst location for ecological and economical reasons for the energy to be tapped there.' It adds that the net solar energy potential is estimated at 114 GW, which is 'significantly higher than actual Brazilian electricity needs.' The Brazilian government is readying enactment of a pair of regulations designed to promote solar energy resource development, according to a Bloomberg News report. The Agência Nacional de Energia Elétrica, Brazil's national electricity regulator, announced that upcoming regulations will offer solar energy tax breaks to utilities and enact net metering, which would allow consumers and businesses to sell electricity from renewable sources to grid operators. Utilities would receive an 80 percent discount on taxes paid for distributing electricity generated from large solar photovoltaic systems, according to the new rules. In July, newly formed Sistema de Energia Renovável announced plans to build a total 600 MW of solar power capacity in Brazil by 2020, according to Clean Technica. As Brazil institutes various proven policy tools—interconnection standards and net metering rules, tax incentives and waivers, renewable portfolio standards or specialized electric tariffs, and de-subsidizing conventional energy—the country should be able to eventually catch up to the United States, Europe, Japan, India and China, joining the world's solar leaders."

*The Energy Advisor welcomes responses to this Q&A. Readers can write editor Gene Kuleta at [gene.kuleta@thedialogue.org](mailto:gene.kuleta@thedialogue.org) with comments.*