The Potential of Distributed Energy Resources in Brazil

Britcham – Panel Lunch

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ABOUT EPE







Energy Research Office – EPE

Brazil





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Federal office part of the structure of the Ministry of Mines and Energy



EPE develops studies and data/statistics to support formulation, implementation and evaluation of energy policies, as well as to promote efficient and competitive energy markets

> Member of the Board of the National Council for Energy Policy (CNPE)





Products & publications







Webmap EPE: an useful tool







https://gisepeprd.epe.gov.br/webmapepe/







Biogas & biomethane potential: "greening" gas supply









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ENERGY TRANSITION IN BRAZIL: THE ROLE DISTRIBUTED ENERGY RESOURCES





Energy transition is not only about energy...







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PRIMARY ENERGY MATRIX OF BRAZIL

TPES, %





Mtoe: Million tons of oil equivalent

Other Renewables: wind, solar, biodiesel, black liquor, among others.

Other Non-Renewables: industrial waste, coking oven gas, refineries gas, among others.

Fontes: EPE (2019). PDE 2029 (http://www.epe.gov.br/pt/publicacoes-dados-abertos/publicacoes/plano-decenal-de-expansao-de-energia-2029); IEA (2019). WEO (www.iea.org/weo).





Power Sector: Integration of hydro, solar, wind & biomass





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Energy transition: towards low carbon, competitive, decentralized and efficient markets

Increasing role of Distributed Energy Resources



Distributed generation (DG)



Energy storage



Electric vehicles / recharging stations



Energy efficiency



Demand-side management

Massive integration of variable renewables

Wind and Solar PV getting cheaper and cheaper...

And driving demand for transmission, storage and flexible generation such as hydro reservoirs and gas-fired power plants

There are opportunities for gas & biogas cogeneration too!





The challenge of expansion...

Of a system in change





- Tariff components
- Model for micro and mild DER
- DSM, etc...

Already in the agenda: Planning, Policy and Regulation





Distributed, but Integrated Energy Resources: DER 🗇 Power Grid









FINAL REMARKS





A new role for Energy Planning

As we move into the future, Energy Planning is more and more focused on how to prepare energy systems to better deal with and benefit from innovation and new solutions

Not to predict the future, but get prepared to make the most of it

And improve **COMMUNICATION**!







Obrigado!

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