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International experiences and roadmap for electricity access in Brazil

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1

RAP's International experiences with energy access

Main lessons learned



Sustainable Energy Solutions for Rural Alaska

- The project aimed to to understand the current state of energy and electricity access in the rural Alaska; explore cost-effective technical solutions; explore promising policy pathways

Sustainable Energy Solutions for Rural Alaska

Strengthening regionalization

Solutions must be local



Improving Accountability/Incentives

Aligning Incentives with Performance

Improving Operations/Planning

Looking for the cheapest options, Training, Investing smartly

Fostering Innovation in Energy Delivery

Be open to new technologies :
Telecomms
Third-Party Service Providers
Energy Efficiency,
Renewable Energy

Cooperative Governance: Opportunities to Enhance Rural Livelihoods in India

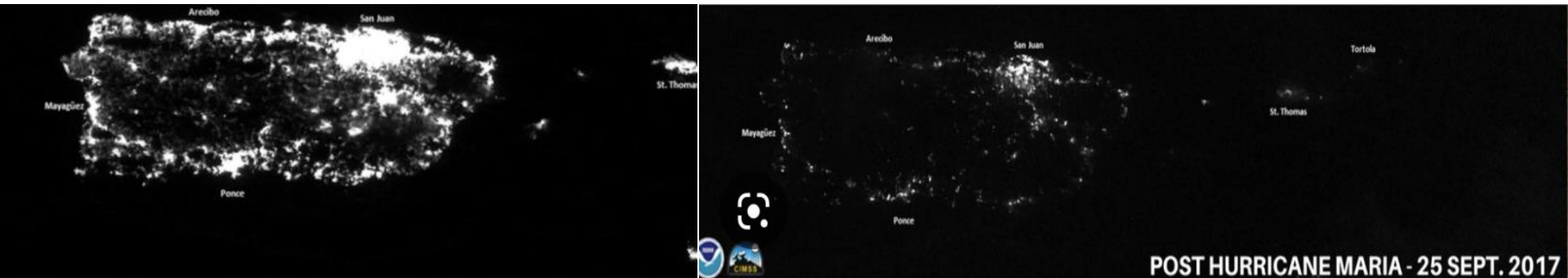
- The project aimed to explore pathways to overcome the persistence of agrarian distress in rural India with innovative problem-solving

Cooperative Governance: Opportunities to Enhance Rural Livelihoods in India



Providing the regulatory framework for Microgrids in Puerto Rico

- After hurricane Maria the grid was destroyed in many parts of the Island



- RAP supported the Regulator in Puerto Rico to define criteria for Minigrid deployment and to find when they were the least cost solution

The World Bank ESMAP experience

ESMAP has long tradition in promoting electricity access, such as the “2022 *Mini Grids for Half a Billion People: Market Outlook and Handbook for Decision Makers*” and the financial innovation for energy access



World Bank – ESMAP

Mini Grids for Half a billion people

- Achieving universal energy access will require **strong policies**, increasing private financing and comprehensive planning
- Mini Grids are more viable for off-grid areas with high population density and demand
- Mini Grids capital costs have steadily decreased at the same time quality has dramatically increased

World Bank – ESMAP

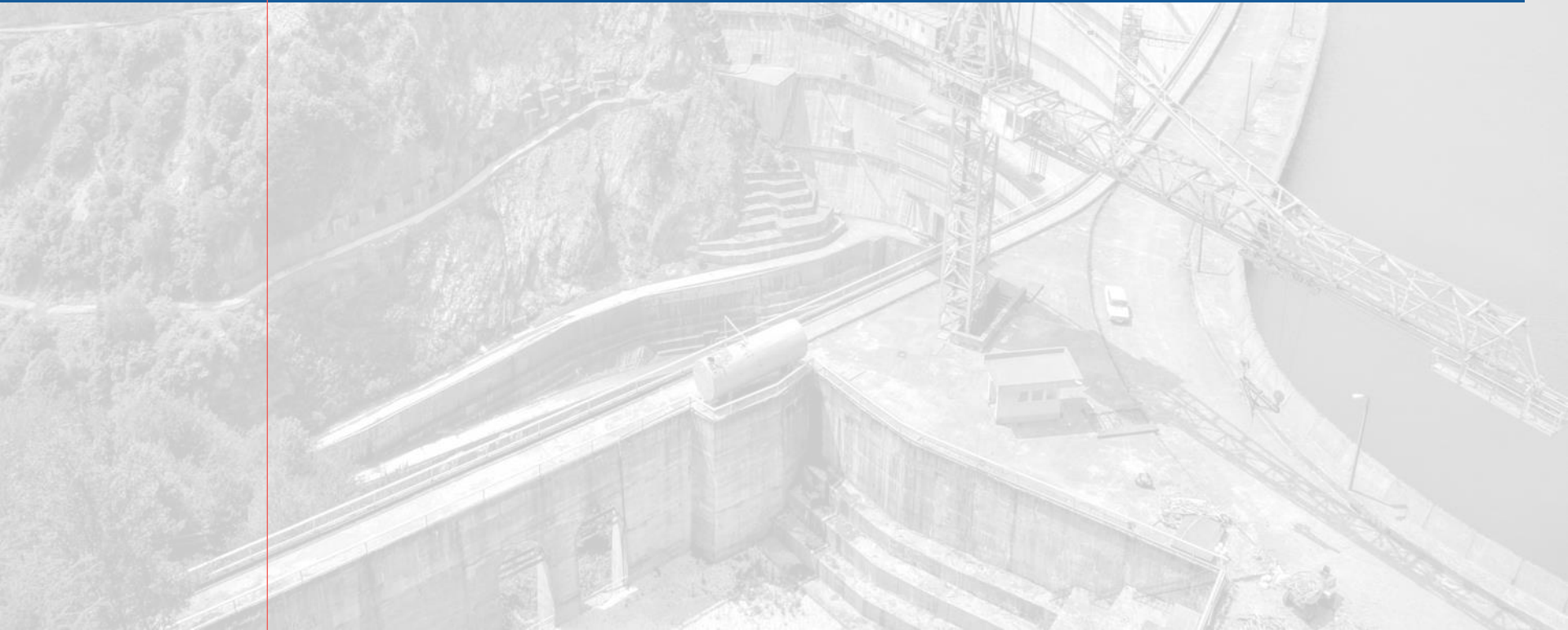
Mini Grids for Half a billion people

- New successful models :
 - Technology - solar-hybrid schemes, smart and digital technologies
 - Commercial models : pay-as-you-go
- Constant improvement- Future evaluation should include the impact of different policy mechanisms, systematic data collection, identify synergies between grid extension and mini grids and identify successful business schemes

2

RAP Roadmap for Brazil electricity access

Exploring pathways to improve electricity access in the amazon region



Brazil has successful policies and programmes for expanding energy (electricity) access

- ‘*Luz para Todos – LpT*’ since 2003 and ‘*Mais Luz para Amazonia – MLA*’ have enabled electricity access to several isolated communities
- The EPE centralized planning for isolated systems has provided important information for future demands and actions

RAP Roadmap for Brazil electricity access

- In 2021, RAP started to analyse the Brazilian context of electricity access and decarbonisation in the Amazon region (remote and isolated systems)
 - Review of analyses, policies and studies
 - Interview with Brazilian experts
 - Organizing existing knowledge and providing additional ideas

RAP Roadmap for Brazil electricity access (isolated and remote systems)

Building capacity for change

Look at international examples and advocate for clean energy **workforce** development

Reforming Planning and auctions process

Reviewing planning requirements, clean energy first criteria

Accelerate the deployment of clean technologies

Review auctions, promote longer contracts, use renewable portfolio standards, building basis **for standard taxation** and innovative incentives

Reform auctions, **clean energy first criteria**, support biodiesel, restrict diesel-based solutions and establish earlier retirement schemes

Reduce the petroleum-based diesel

Reform auctions, avoid use of CCC for fossil projects, establish carbon price

Stop 'Dash to Gas'

Improve communication with communities and change **incentives**, for distribution companies- transparency and accountability

Transparency and accountability

Final message

Even with successful energy access policies, ***Brazil can further develop electricity access by changing incentives ; building and improving local capacity and capabilities; align energy access agendas with other energy agendas*** (e.g. modernization of power sector, reform of distribution market design, regulation of decentralized energy resources- ancillary services, flexibility, etc.)

Resources

- [Sustainable Energy Solutions for Rural Alaska](#)
- [Cooperative Governance: Opportunities to Enhance Rural Livelihoods in India](#)
- [ESMAP Electricity access program](#)

About RAP

The Regulatory Assistance Project (RAP)® is an independent, non-partisan, non-governmental organization dedicated to accelerating the transition to a clean, reliable, and efficient energy future.

Learn more about our work at raponline.org



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