

A hosting capacity methodology for Brazilian distribution networks

C4 - PS1 - Challenges and Advances in PQ and EMC

Question 5: What does the future look like for increased hosting capacity levels in distribution networks beyond what is being predicted or practiced currently, paying attention on techno-economic and other issues?

Igor Visconti, Brazil

PV Noronha I - 600 kWp

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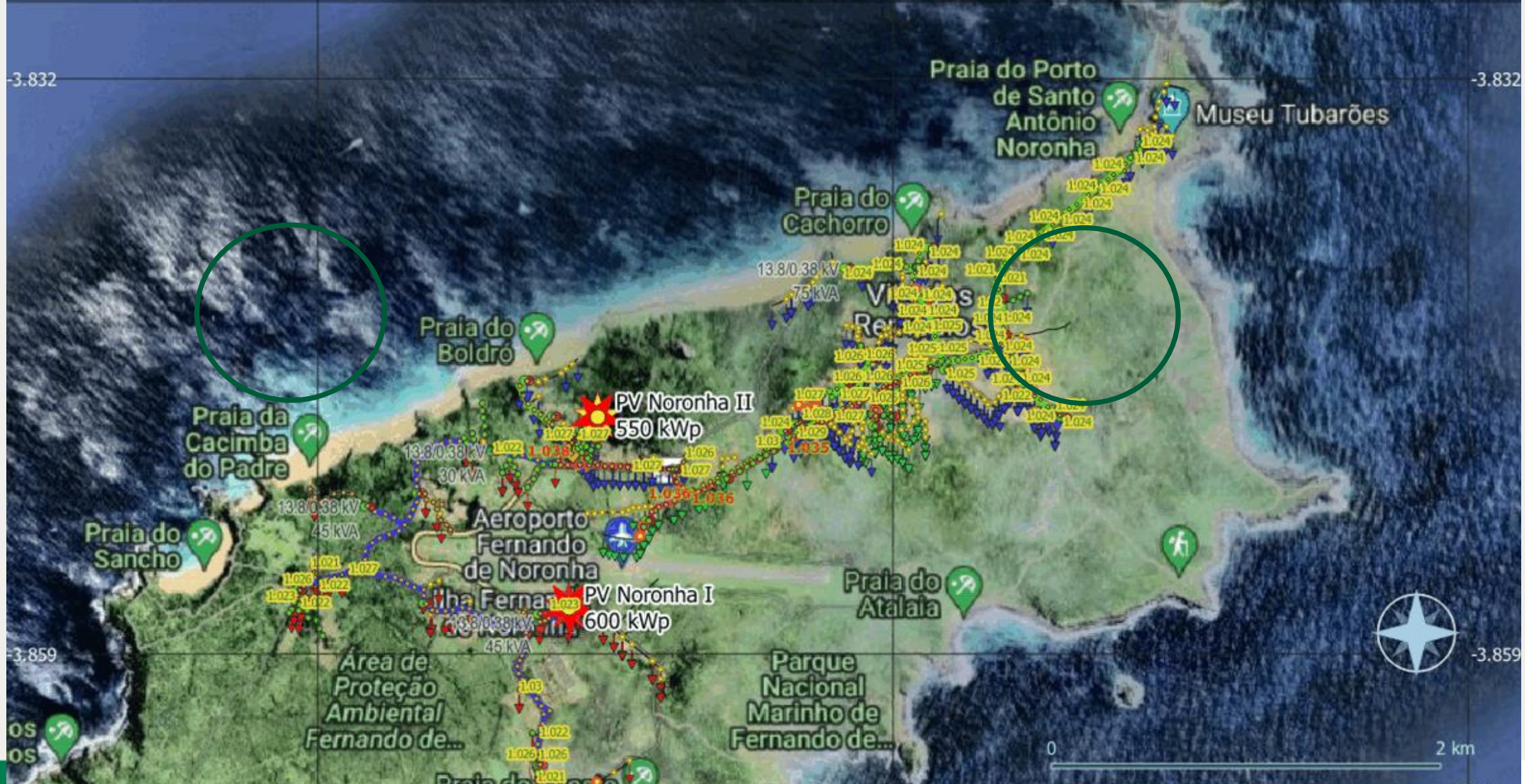
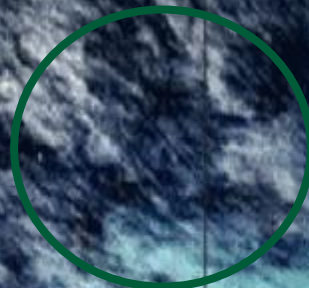
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Network Data Model standardization is essential

- The accuracy of three-phase load flow/short-circuit simulations results relies on network data quality.
- System interoperability and data integration may benefit from standard relational / spatial databases.
 - Brazilian Agency of Energy (ANEEL) designed a GIS-based network data model adopted by more than 80 utilities.
 - Common Interface Model (CIM) is becoming The standard for transmission and distribution network modelling.

GIS may be useful

- Spatial query integrates data using localization and allows climate data to be used within Spatio-temporal simulations

Battery technology will be more cost effective?

- Battery Energy Storage Systems (BESS) can play a major role in system stability to cope with DER intermittency.
- Vehicle-to-grid (V2G) schemes may be more attractive whether electric vehicle battery costs drop or their durability increases.

Group Discussion Meeting