How Impactful is Regulatory Uncertainty in the Economics of Community Microgrids?

Gonçalo MENDES*, Samuli HONKAPURO

*Corresponding author: goncalo.mendes@lut.fi

Background

- Community microgrids have gained increasing attention as **locally coordinated grid solutions serving groups of customers** in urban areas with high DER penetration;
- These systems face **myriad regulatory challenges**, which makes their economic value proposition uncertain;
- This research looks at two such challenges: 1) **Adequate charging of franchise fees**, and 2) **Recovery of distribution costs**.

Case study

- A site composed of three commercial buildings in urban Los Angeles is chosen as test case.

**BASECASE (BAU-serviced buildings):**

**REFERENCE CASE (Microgrid):**

- **Specific LADWP tariff for DG-owner customers**;
- **More favorable energy rate ($13-9c/kWh)**;
- **Participation in FiT Program (2019 $14.5c)**;
- **Per kW “facility charge” applied to either the highest electric demand or highest export.**

Results

- The following plots show preliminary sensitivity results:

Concluding insights

- FFs and new distribution cost recovery mechanisms can **disrupt optimal DER portfolio decisions** and strongly impact key revenue streams of a microgrid;
- **Strict regulation may deem certain microgrids infeasible.**

CONTACTS:

Gonçalo MENDES
goncalo.mendes@lut.fi

Samuli HONKAPURO
samuli.honkapuro@lut.fi

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