

PhD in Energetics

Research Title: Regional energy modelling for energy access

Funded by	Energy Center Lab/DENERG
------------------	--------------------------

Supervisor	Prof. Pierluigi Leone pierluigi.leone@polito.it Prof. Anna D'Ambrosio anna.dambrosio@polito.it
-------------------	--

Contact	https://www.denerg.polito.it/la_ricerca/gruppi_di_ricerca/gruppo_di_ricerca_m3es
----------------	---

Context of the research	<p>Energy access has been set as fundamental goal at 2030 to achieve a full energy transition, one that is sustainable, equitable and universal.</p> <p>Many research investigates this topic often considering minimum level of energy access and uncoupling electricity and clean fuel availability. Moreover, productive uses are not considering in the framework of energy access although they can act as enabler reducing risks and spur local economy development.</p>
--------------------------------	--

Objectives	<p>The main objective of the proposal is to improve existing regional scale energy access model by including both electrification and clean fuels access and considering both residential and industrial users.</p> <p>Specific objectives are:</p> <ul style="list-style-type: none">- Identify and modelling technologies for electricity access;- Identify and modelling technologies for clean fuel access;- Identify and modelling final energy uses;- Improve an existing bottom-up technology rich optimization model for energy access. (the model is a open source cose, namely OnSSET developed by KTH in cooperation with World Bank already used by the proponents).- Estimate impacts of energy access measures
-------------------	--

**Skills and competencies
for the development of
the activity**

- Background in the area of energy system modelling.
- Good programming skills (e.g., Python)
- Elementary experience on data analysis and elaboration.
- Inclination to multi-disciplinary team-working.