## **RED WOLF** Rethink Electricity Distribution WithOut Load-Following

What challenge or problem are you addressing? What is the need for the project? (80 words max)

The challenge is reducing GHG emission and increasing energy security by raising renewables' penetration. Including high shares of variable power, both on the customers' (typically domestic PV) and on the grid's side (wind/solar farms, etc.) requires updating the energy provision/uptake pattern. Distributed storage on the users' side with two timescales, daily and seasonal, will relax the grid's need of following demand. Baseload generation can also be reduced. Power provision to rural areas could improve with less network upgrades.

Objective of the project: What your project wants to achieve/change (30 words max)

Energy balance with PV and storage reservoirs (daily and seasonal) will be modeled for households and SMEs, to plan for reduction of load-following plants and also of baseload ones.

Why do you need transnational cooperation? (50 words max)

Per capita NWE's GHG emissions are high and climate differences are significant, despite the limited geographical extension. These differences impact both power demand and renewable generation. Collaborating with transnational partners allows to address these differences, enabling a flexible NWE solution adaptable to local geographical and socio-economical opportunities /constraints.

What kind or partners are you looking for? (40 words max)

The project will need utility companies; possibly two in different NWE regions. SMEs will be needed to understand/sample their energy usage and potential to develop storage/microgeneration; city housing associations will provide sampling/ expertise on domestic energy consumption.









## Your contact details

Name	Dr Giuseppe Colantuono
Organisation	Leeds Beckett University
Region	West Yorkshire
Country	UK
Telephone number	0044( 0)741 5597850
Email	g.colantuono@leedsbeckett.ac.uk
Website	http://www.leedsbeckett.ac.uk/leeds-sustainability-institute/