I am exploring the relevance, value, and potential feasibility of applying blockchain solutions to renewable energy microgrids in a sub-Saharan African context. There is a lot of research into challenges to microgrids, and some on blockchain applications to microgrids in developed countries like Germany and Australia. However there seems to be a key research gap regarding how blockchain technology can be applied to microgrids particularly in sub-Saharan Africa. This is where my research comes in.

It seems that blockchain technology can add value in two key ways: 1) funding the upfront capital costs of microgrid development (which is currently one of the most significant challenges to microgrid development); and 2) enabling the direct p2p trading of energy between microgrid users in order to balance the grid, creating a local energy market and economy within the microgrid community; and incentivising the deployment and use of renewable energy by reducing a reliance on diesel-generators as energy supply back-up.

I have had about 10-11 semi-structured interviews with industry experts and professionals in the field.

Challenge: usually a methodology section is used to answer a specific set of pre-defiend questions, which have been informed by a robust body of academic and substantial literature. However, the blockchain field is very new and emergent. So - the interviews I have had are not only answering my questions, but also actually helping me re-define the very questions I ask in the first place, and also clarifying the context and background of the issue. So - do I put methodology before the literature review? A methodology presupposes that the questions it answers are known and valid. This doesn't seem to be the case for me so much...

Another challenge: the final chapter of my paper will be to suggest how a BC system would actually have to be designed to enable p2p energy trading between microgrid users. I come from a philosophy/social science background, so this last more technical exercise will take some extra thought and time. I also think this could be a key way in which the BRA community could help me, as well as helping me to define exactly which features of BC technology are relevant for a rural micogrid in a developing counry context.