Hydrology and
Earth System
Sciences
Discussions

Interactive comment on "Projections of the Affluent Natural Energy (ANE) for the Brazilian electricity sector based on RCP 4.5 and RCP 8.5 scenarios of IPCC-AR5" *by* C. da Silva Silveira et al.

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1. "The topic as such (projection of streamflow for hydropower production) would be suitable for HESS."

a. Ok. Thanks.

2. "rather crude simulation method" . . . "simplified streamflow simulation method (direct use of global climate model output, linear regression between streamflow series)"

a. We use global model directly because the size of the water basin is big enough to

cover plenty of pixels from the global models. b. We performed a statistical downscaling to correct the bias from the global models. c. Regionalization of the streamflow is a methodology using nowadays in the ONS. This procedure used linear regression. The reservoirs considered in base stations are representative for each hydrosystem.

3. "cannot be deemed useful to project climate change impacts"

a. We evaluate the methodology for twenty century and calibration for hydrological model is good, then the methodology could represent the rainfall-runoff transformation. b. The procedure to calculate the Affluent Natural Energy was based on methodology used by ONS. It is considered the best on operational level in Brazil. c. Therefore, we evaluate that is reliable to estimate the impacts of the Climate Change on Streamflow and Hydropower production in Brazil.