

## ***Interactive comment on “Long-term projections of global water use for electricity generation under the Shared Socioeconomic Pathways and climate mitigation scenarios” by Nozomi Ando et al.***

**Anonymous Referee #1**

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The paper presents a global analysis of future water requirements for electricity generation. From my perspective this is a high-quality paper, but the results have been reported in many previous studies and therefore the scientific significance is not completely clear to me.

The major drawback with the presented analysis and other previous global assessments is that feedbacks between future cooling technology choices and power generation costs are excluded. Switching to more water-efficient cooling technologies in the electricity sector is generally associated with an increase in cost and reduction in energy efficiency. These costs should be included in the CGE model calculations used to project the electricity generation mixtures in each AIM model region to understand

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how water constraints impact the mitigation pathways.

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2017-27, 2017.

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