

Interactive comment on “Assessing residual hydropower potential of the La Plata Basin accounting for future user demands” by I. Popescu et al.

Anonymous Referee #2

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General comments: In general, the paper exposed an interesting, important and nowadays topic. The energy demand is a present issue in many of the development and developing countries around the world such as Brazil, Argentina and Uruguay. In this way, the research topic discussed in this paper is relevant to the topics exposed in this journal. The title of the paper mentions the concept "residual hydropower potential". This concept refers to the unexploited hydropower resource at the basin. As a general recommendation, define the concept "residual hydropower" could help the readers to understand the approach of this research. Despite, the research shows that LPB has more hydropower potential to exploit, the energy demands at the

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basin cannot be supplied just whit hydropower sources. Therefore, the LPB basin could experiment shortage of energy, affecting population and industrial development in the short term. The residual hydropower production has been calculated using historical data (the last 20 years). Base on that analysis, the residual hydropower potential does not consider the climate variability. This issue should be mention on the text in order to proposed further studies about the topic. Other comments: Page 5636 Line 17: " ... is computed considering that first the water supply needs for population, industry and agriculture are served and than hydropower energy is produced." Instead of "than" should be then. I am agree to select municipal water supply withdrawals as a first need, however the water needs for agricultural and industry are usually required on the middle basin and the hydropower intakes are usually located at upper basin. Therefore, it could be consider a percentage of the agricultural and industry water need go back to the system and is use for hydropower production; this point could be taking into account for further studies. Page 5642 Line 4: In order to clarify, the units system used for the formulas should be mentioned it (Metric International System, SI). Page 5647 Line 22: "... correlated with the nowadays measured agricultural ..." Instead of "nowadays" should be current or present. Page 5649 Line 21: "... based on the nowadays production ..." Instead of "nowadays" could be current or present. Page 5649 Line 23: "... is presented in Fig. 9." The paper does not content Figure 9, it should be refer to Figure 8. Page 5650 Line 24: "... of the idrological ..." It shoudl be "hidrological" Page 5651 Line 23: It should be Figure 8. Page 5653 Line 1: "... assessed the nowadays hydropower ..." It would be better current or present.

Please also note the supplement to this comment:
<http://www.hydrol-earth-syst-sci-discuss.net/9/C2647/2012/hessd-9-C2647-2012-supplement.pdf>

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