

International Upper Great Lakes Study – Sub-Product Reviews, Synthesis Product Reviews, and Draft Final Study Report Reviews Template

Peer Review of Manuscripts

This manuscript has been submitted for independent peer review to the Co-Chairs of the Independent Peer Review Group (IRG) as identified in the Independent Review Plan (IRP) of the International Upper Great Lakes Study (IUGLS).

The evaluation and acceptance of the technical report (documentation) will include, as part of the review criteria, how effectively the goals of the work have been accomplished within the limits as described in the “background and context statement in Article 9.3.1.2.

Manuscripts shall be evaluated on the extent to which the authors’ efforts have been covered/documented and the extent to which the reviewers can answer the review questions:

- Are the methods employed by the authors sufficient to answer the questions;
- are they being used correctly;
- are the analyses and tests appropriate for the problem at hand; and
- are the derived conclusions supportable by the model and analyses?
- Are there any other comparable methods or approaches that may/ought to be considered, which would provide more insight for the specific task under review?

Checklist for the Reviewer

Your review is:

- To provide the authors with directions as to how they could improve their analysis and technical report. Please provide clear instructions and comment objectively, remembering the efforts that they have made to prepare the manuscripts. On a separate sheet, you may provide comments for the editor that you feel are necessary. These separate comments will not be provided to the authors.

Some additional points are:

- Please document statements adequately so that authors may fully understand your concerns. You may do this using additional sheets and cross-referencing your additional comments to the specific questions below.
- Some of the questions follow a scale of 1 through 5, with 1 be the highest rank (yes -- always or excellent) and 5 being the lowest (no -- never or very poor). Please encircle your responses.

Manuscript: Electricity Price Outlook for Upper Great Lakes Hydroelectric Facilities

Author(s): International Upper Great Lakes Study Team

Name of Reviewer: Eric A. Van Deuren, PE

1. Are the objectives of the work clearly stated? 1 **2** 3 4 5
2. Are the methods employed valid, appropriate and sufficient to address the questions, hypotheses or the problem? 1 **2** 3 4 5
3. Are the observations, conclusions and recommendations supported by the material presented in the manuscript (e.g., data, model and analyses)? 1 **2** 3 4 5
4. Are the assumptions used valid and are the mathematics presented correct? **1** 2 3 4 5
5. Is the manuscript well organized, material precise and to the point, and clearly written using correct grammar and syntax? 1 **2** 3 4 5
6. Are all of the figures and tables useful, clear, and necessary? 1 2 3 **4** 5
7. What is the quality of the overall work? 1 **2** 3 4 5

Recommendation (please circle your response)

A - acceptable

B - acceptable with suggestions for revision

C - acceptable if adequately revised

D - unacceptable

If you have selected **C**, do you wish to receive the revised manuscript for further review? Not necessary, but open to review again if requested. yes **no**

Rating (Circle the rating you would like to give this manuscript. Unacceptable work should be given a score of 40 or less.)

100 90 **80** 70 60 50 40 30 20 10 0

Comments (limit responses to one paragraph for each question; reference pages, charts, and data. Please distinguish if responses are of major or minor concerns.)

A. What is the best/most unique part of the analysis?

The report presents a good summary of the power market in the region. It also identifies the project operational constraints related to the hydropower facilities and competing demands for the use of water in the Great Lakes.

B. What is the most critical aspect of the study/analysis? Why?

The report establishes an acceptable methodology for evaluating the impacts that changes in the operations or water management may have on the power generation purpose of the project.

C. Which aspect of the analysis/modeling is weakest? Why? How can it be improved?

The report, in the very first sentence, states that the objective is to investigate possible improvements to the regulation of the outflows from Lake Superior to better meet the contemporary needs of all the water dependent interests in the Great Lakes Region. The study appears to outline a method to evaluate the power generation interest and what value to put to the foregone generation resulting from those changes in regulation, but falls short on the other interests (which are potentially quite broad) as well as actually providing any evaluation or conclusions for potential changed regulations on the actual power generation. I am not sure if the intent was to take this study to this level, but that was the impression I had as I started to read the first section and it never really got there.

The report also seems to have a considerable effort in summarizing and drawing conclusions from the Synapse energy outlook, but the other aspects of the study appear to fall short in comparison. I am not sure if this is by design or not.

D. Are there any other suggestions that are related to how this analysis may be used more effectively or the results explicated in a more understandable manner?

I did not find the only graphic presented in the body of the report particularly helpful. Second conclusion that a slight increase in hydropower generation can be realized from upgrades is correct, but likely not due to better scheduling to meet peak demands (this will produce greater revenues potentially based on the spread and time of year, but likely not more power generation). There are some general statements such as "a good portion of total generating capacity" and "constitute a significant...source of power" that are subjective as written and would be stronger in supporting the purpose of these statements if they are more quantifiable.

Please indicate any confidential comments to the Co-Chair(s) of the Independent Peer Review Group in the space below. Comments for transmission to the author(s) should be on a separate sheet attached.

Signature: _____ Date: _____

Comments for Transmission to Authors

It would be useful to have both general comments and specific comments for major and minor revision. Please use additional sheets should they be required.