



379 Ronka Road  
Worthington, ON  
P0M 3H0  
(705) 866-1677

[LindaH@OntarioRiversAlliance.ca](mailto:LindaH@OntarioRiversAlliance.ca)  
[OntarioRiversAlliance.ca](http://OntarioRiversAlliance.ca)

---

21 July 2013

Paul Norris, President  
Ontario Waterpower Association  
380 Armour Road, Suite 210  
Peterborough, ON  
K9H 7L7  
Email: [PNorris@owa.ca](mailto:PNorris@owa.ca)

Dear Paul:

**Re: Proposed Amendments to the Class Environmental Assessment for Waterpower**

Jim and I would like to thank you for taking the time to meet with us in March of this year. It isn't easy being at opposite ends of the issues, but I think we all agree that it is extremely important that waterpower development is environmentally, socially and economically sustainable, and that the public and stakeholders are provided every opportunity to have meaningful input. We appreciate that you have taken the time to look for common ground Paul.

I would like to follow up on our discussion regarding potential changes that Ontario Rivers Alliance (ORA) would like to see incorporated into the Class EA for Waterpower. You suggested we make two recommendations; however, it was impossible to only choose two when there are so many areas in need of improvement. We also understand that this is an opportune time as the Ontario Waterpower Association (OWA) is considering amendments to the Class EA for Waterpower as part of its five year review process, and that our amendments could be incorporated through that process.

Therefore, ORA is making a formal request to amend the Class EA for Waterpower as follows:

Text underlined is to be inserted, text ~~crossed out~~ is to be deleted, text without either is to remain the same.

**1. Public Consultation:**

**Concern:**

ORA and our members have repeatedly met with resistance and secrecy from developers who are relying on the assurances of a pre-approved environmental assessment process - telephone calls not returned, information not provided, and consistently told by developers that "you can't stop the project - it is a done deal".

It is unacceptable that the public has had to deal with such arrogance, resistance, deception, and an overall lack of disclosure of vital aspects of the project until the ER is issued. Our members have used the formal Freedom of Information process to obtain relevant details, only to be met with an appeal by the proponent when ordered to provide the documentation.

This attitude has created an environment of mistrust which in the end only delays and lengthens the process.

**Reason for Amendment:**

If OWA requires a higher standard of transparency, openness and cooperation, it would lessen mistrust and therefore opposition, and overall this would instill more confidence and trust in the project and the process, and result in fewer delays.

**Proposed Amendment:**

Section 6.2.1 Public Consultation Principles, P-62:

Effective engagement and participation is premised on commonly-held principles of the EA process. These core principles include:

- Transparency
  - ~~Sufficient~~ Full transparency, openness and cooperation will result in ~~information for~~ meaningful and constructive participation and consideration of values, and fewer delays in project approvals
- Trust
  - That all ~~have a vested interest in~~ involved will ensure the environmentally, socially and economically sustainable development and use of Ontario's waterpower resources
- Openness
  - Draft Environmental Reports are made available to registered stakeholders

**2. ER Documentation:**

**Concern:**

ORA and its members have met with extreme frustration when working with ER documents when they have been locked and we were unable to search, copy, paste, and highlight text, and this frustration is compounded by a 30 day comment period.

**Reason for Amendment:**

ORA submits that if all pertinent documents are contained within the ER, and all documents are user friendly, that it will improve the integrity of the public consultation process and provide a greater opportunity for the public and stakeholders to have meaningful input.

**Proposed Amendments:**

Section 4.4.1 Environmental Report, P-40 – the following be added:

The ER must contain:

- Agency, public and First Nation consultation documents regarding issues or concerns, including all key correspondence and minutes of agency/proponent meetings;

- User friendly and workable ER documents providing ability to search, copy, cut, paste, highlight, and make notations;
- Supporting documentation and copies of all correspondence not contained in the ER (made available for public or agency review if requested);

### 3. Comment Period:

**Concern:**

It has been ORA's experience that it is unrealistic to expect the public and stakeholders to have the ability to adequately familiarize themselves within 30 days on the complex technical details in an ER that contains many hundreds of pages of technical jargon, to fully comprehend its meaning, and then to be able to offer meaningful comment.

**Reason for Amendment:**

ORA is requesting that the Class EA for Waterpower recommend a 90 day comment period to strengthen the public and stakeholder consultation process.

**Proposed Amendment:**

Section 4.4.3 Notice of Completion, P-41, be amended to read:

For all other categories of projects, the Notice of Completion will also be sent to the distribution list created for the Notice of Commencement. Note that the deadline for comments and/or requesting a Part II Order is ~~30~~ 90 days unless otherwise extended by the proponent. and

Deadline for comment (~~30~~ 90 days);

### 4. Definitions of Types of Dams to be Included in Glossary of Terms and Acronyms

**Concern:**

Many developers are referring to their peaking and cycling facilities as run-of-river when they are storing water in headponds to produce power during peak demand hours. This is very misleading to the public as it gives the false impression of a benign facility with no water being held back, and very few negative impacts.

Recently an ER for a hydroelectric renovation referred to their project as a run-of-river, however, upon being questioned the proponent revealed they had been and were intending to continue peaking their facility to produce power during peak hours. This important detail was not mentioned anywhere in their ER.

Also, there was a "strict run-of-river" hydroelectric proposal which entailed an additional 91 hectares of newly inundated land, bringing the total inundation to just under 200 hectares on a 4 dam cascade project.

**Reason for Amendment:**

Clarity and consistency of terms and definitions will allow the public to be clear about what type of operation is being proposed, and this would help restore integrity to the EA process.

**Run-of-River:**

There are two very good references we can rely on to clarify that run-of-river means no water storage or impoundment, as follows:

- a. Guide to EA for Electricity Projects:  
Hydroelectric generating stations use the energy released by falling water to turn turbines and generators which transform this energy into electricity. Hydroelectric generating facilities usually involve dams and headponds (i.e., impoundment) **but can also be run-of-the-river (with no impoundment)**.<sup>1</sup>
- b. Natural Resources Canada has a very good definition of a Run-of-river operation: "Run-of-river" refers to a mode of operation in which the hydro plant uses only the water that is available in the natural flow of the river, as depicted in Figure 6. "Run-of-river" implies that there is no water storage and that power fluctuates with the stream flow."<sup>2</sup>

Figure 6

**Proposed Amendment:**

ORA is therefore recommending an amendment to the Glossary of Terms in Appendix A, P-80, to include a definition for each type of hydroelectric operation, such as, "Run-of-river", "Modified River Flow", "Modified Peaking", "Peaking", "Cycling", and "Kinetic". There is already a definition for Pumped Storage strangely enough, but we thought it could be improved.

**Appendix A: Glossary of Terms and Acronyms**

**Run-of-River** - Uses only the water that is available in the natural flow of the river, and implies that there is no water storage, and that power fluctuates with the stream flow.

**Modified River Flow** - This type of operation manipulates the natural flow of the river by increasing its elevation/head, and/or bypassing a portion of the river to provide the speed and/or pressure required to spin the turbines for maximum

<sup>1</sup> Guide to Environmental Assessment Requirements for Electricity Projects, January 2011, P-2

<sup>2</sup> CLEAN ENERGY PROJECT ANALYSIS: RETSCREEN® ENGINEERING & CASES TEXTBOOK, SMALL HYDRO PROJECT ANALYSIS CHAPTER

power generation. This type of operation results in inundated land, known as a headpond or reservoir, and/or low flow stretches of riverbed, and implies that power fluctuates with stream flow, and that no cycling or peaking occurs.

**Modified Peaking** - Uses inundated land, known as a headpond, to store water for power generation during hours of peak demand, and save water during hours of low demand.

**Peaking** - Reservoir Storage and Cascade Systems: These systems use reservoirs to store water during periods of high flow, such as the spring to be used to generate electricity during low flow periods such as the winter or summer. The reservoirs may be managed specifically for waterpower production at the site or may serve a series (or cascade) of facilities downstream.

**Pumped Storage** - a method of storing and producing electricity to supply high peak demands by moving water between reservoirs at different elevations. Pumped storage facilities pump water from a lower reservoir to a higher reservoir during off-peak periods. This water is then released from the upper reservoir through the plant to generate electricity during peak periods. One example of a pumped storage facility is the Sir Adam Beck facility in Niagara Falls.

**Cycling** - Uses limited storage of water to optimize power generation.

**Kinetic** - Turbines are placed in the river and use only the existing water flow, with no head, to generate electricity. Kinetic systems are generally used for smaller scale projects such as a remote cottages or resorts.

## 5. Additional Definitions to Appendix A – Glossary of Terms and Acronyms

### Concern:

Many important environmental safeguards, such as the precautionary principle, watershed and ecosystem planning, cumulative effects and sustainability are not defined or in some cases even mentioned in the current Class EA for Waterpower.

### Reason for Amendment:

Defining these terms will promote consideration by developers of measures to ensure that environmental integrity is a high priority on waterpower projects.

### Proposed Amendment:

Add the following definitions to:  
Appendix A: Glossary of Terms and Acronyms

**Adaptive Management** - continuously improve and adapt approaches, policies and management by incorporating new knowledge and innovative design, practices and technology from ongoing science and monitoring.<sup>3</sup>

**Cumulative Effects** - changes to the environment that are caused by an action

<sup>3</sup> Based on the definition developed for the Lake Simcoe Protection Plan.

in combination with other past, present and future human actions.<sup>4</sup>

**Ecosystem Approach** – individual components of the system, including humans and our activities, affect and are affected by other parts of the system. The ecosystem approach uses best available science, considers cumulative impacts, and promotes watershed and subwatershed approaches. It recognizes that a healthy environment provides the foundation for healthy communities and a healthy economy.<sup>5</sup>

**Science-based Precautionary Approach** – exercised to protect the environment when there is uncertainty and environmental risks.<sup>6</sup>

**Sustainable Development** – equitably meet the developmental and environmental needs of present and future generations.<sup>7</sup>

## 6. Precautionary Principle and Cumulative Effects Assessed on a Watershed Basis:

### Concern:

Currently the only reference in the Class EA for Waterpower to cumulative effects was in reference to the Canadian Environmental Assessment Act, which has now been repealed. This gap needs to be filled. The word precaution does not even appear.

The lack of attention to a watershed approach is also a problem, because many of these projects impact many kilometers of riverine ecosystem, and have numerous other developments that are already impacting the watershed. Some hydroelectric projects are cascading systems destined for rivers running through towns, cities and First Nation reserves, and are not adequately considering the cumulative effects.

### Reason for Amendment:

Requiring development, water quality, water quantity, and fisheries management decisions to be guided by the precautionary principle, and consideration of cumulative effects on a watershed basis, will ensure more environmentally, socially and economically sustainable projects.

### Proposed Amendment:

Include the following immediately under 4.3.1 Assessment of Effects:

All development, water quality, water quantity, and fisheries management decisions are to be guided by a science-based precautionary approach, and cumulative effects assessed on a watershed basis.

## 7. Water Management Plan:

### Concern:

Currently a facility is incorporated into the water management plan by way of Section 14, 16 or 23(1) of the Lakes and Rivers Protection Act, but is not required until after the

<sup>4</sup> Cumulative Effects Assessment Practitioners Guide, 2.1 Cumulative Effects Defined, CEAA, Government of Canada.

<sup>5</sup> Ibid.

<sup>6</sup> Based on the definition developed for the Lake Simcoe Protection Plan.

<sup>7</sup> Based on the definition for sustainable development that resulted from the United Nations Rio + 20 Conference, held in 2012 in Rio de Janeiro, Brazil.

Statement of Completion is issued. This means the public and stakeholders do not have all pertinent and crucial information when commenting on the Environmental Report.

**Reason for Amendment:**

ORA submits that water management planning must be completed by the time the Notice of Completion is issued so that all operating strategies, flows, levels, and sharing of resources have been agreed upon by all operators. This would allow the public and stakeholders an opportunity to be consulted and have input on this crucial component of the approvals process. This measure would also provide assurance that operating plans and strategies will be approved as submitted in the Environmental Report.

**Proposed Amendment:**

**2.5.2 Water Level / Flow Management and Aquatic Ecology**

Of particular relevance for new projects on unmanaged river systems and of possible consideration for projects on managed river systems is the potential resultant change in the water management regime. The increasing ~~interest in~~ recognition of "flow" as one determinant of aquatic ecosystem integrity and the potential considerations for optimal water management regimes for electricity production warrants specific attention.

Accordingly, a Water Management Plan setting out water levels and flows shall be prepared in accordance with the Ministry of Natural Resources, Water Management Planning Guidelines for Waterpower, and will be submitted at the time of filing of the Notice of Completion and Environmental Report.

~~Proponents should have an early concept of water availability and have the flexibility to pursue site-specific strategies.~~ **Appendix C** lists reference material available through the OWA, including that related to water levels and flows.

**8. Decommissioning Provisions:**

**Concern:**

The Class EA for Waterpower does not require up-front decommissioning provisions to be set aside for future dam removal, and yet the mining industry is required to do so. Climate change is already having a major impact on river flows and levels, and scientists are predicting more extreme droughts in the future. Some rivers ran dry in 2012, and these conditions are predicted to worsen.

Due to climate change, withdrawal of the FIT Program, or even major damage due to flooding or an earthquake, it may be necessary to repair or remove the dam. Many hydroelectric facilities on smaller rivers could become environmentally, socially or economically unsustainable and need to be removed; however, there are currently no dollar provisions made for future removal of the dam and rehabilitation of the site. This expense and liability must not be left up to the taxpayer, but instead must be borne by the developer who, over the 40 year term of the FIT contract, will reap many rewards from these Crown assets. The mining industry has mandatory decommissioning provisions, and so should the waterpower industry.

**Reason for Amendment:**

If all Environmental Reports include mandatory up-front funds for dam decommissioning, and for some reason the facility is no longer viable, sufficient funds will be in place to cover the costs for removal. This will relieve the public of the financial responsibility, and ensure Ontario rivers are provided an opportunity to restore balance.

**Proposed Amendment:**

Up-front funds are set aside for future dam decommissioning, and detailed decommissioning plans are set out clearly in the ER.

## 9. Notices Listed on OWA's Website

**Concern:**

The list of waterpower proposals on OWA's "Notices" webpage is incomplete, inconsistent, and lacks transparency. The Ministry of Environment has a very useful and comprehensive list of renewable energy projects, including project status, on their website, and ORA requests something similar, or at least equal to this list.

**Reason for Amendment:**

A full and complete list of waterpower proposals would provide transparency of the number and scope of waterpower proposals going through the approvals process. Transparency helps to build trust.

**Proposed Amendment:**

Include the following under 4.2.1 Notice of Commencement

The OWA will post ~~all Notices of Commencement~~ a complete list of waterpower proposals on its website and include:

- The project title
- The name of proponent
- The name of rapids or falls and river
- Link to webpage containing documentation
- Date of Notice of Commencement
- Status

## 10. Projects Associated with Existing Infrastructure

**Concern:**

Recently the proposed Enerdu Expansion and Redevelopment Project's Environmental Report illustrated graphically that any upgrade to an existing hydroelectric facility that results in an increase in output of power generation, or increases the size of the inundated area, or that would negatively impact on communities or built heritage or economic resources, must take into account the zone of influence of the entire project, and that the water management plan must be revisited. This type of project should be held to the same rigorous standards as any other waterpower development.

**Reason for Amendment:**

Tightening up the requirements for environmental impact studies will restore confidence in the process, and ensure upgrades, retrofits and redevelopments are environmentally, socially, and economically sustainable.

**Proposed Amendment:****3.1.1 Projects Associated with Existing Infrastructure**

Projects associated with existing infrastructure ~~are least likely to~~ may or may not involve new significant effects and/or create broad public, Aboriginal community and/or agency interest. In general, this category of projects ~~will~~ can involve relatively localized direct effects to the environment and, while project size may vary, the scope of change ~~will~~ can often be restricted to the infrastructure itself.

~~However, t~~These types of facilities may have been in existence for many years and may have built cultural heritage value or interest. These projects, therefore, have the most likelihood to affect buildings or structures of cultural heritage value or interest ("built heritage"). ~~However, the possibility of affecting built heritage is potentially relevant to all categories.~~

(This paragraph is moved down one.)

Projects within ~~the~~ this category that result in any changes to area of inundation, flows, levels, or power generation output, require identification and assessment of relevant social and environmental values and interests, to determine the potential impacts and benefits on the environment and built heritage. The area of assessment must encompass the entire upstream and downstream zone of influence.~~that involve significant changes in water management regimes are likely to be more complex than those that do not.~~

In addition to the limitations imposed by changes to existing infrastructure, it is reasonable to expect that water management regimes ~~are already established~~ will be revisited, either as expressed through a formal water management plan review, or through the identification of relevant social and environmental values and interests.

ORA has submitted the above proposed amendments in the hopes of improving the consultation and commenting experience for stakeholders, and to ensure strong and environmentally responsible and sustainable waterpower projects. Our goal is to also ensure the Class EA for Waterpower places a much stronger emphasis on openness, cooperation, transparency, climate change, cumulative effects, and ensures the precautionary principle is exercised in all waterpower development.

ORA thanks you in advance for your consideration, and would be pleased to meet with you to discuss the proposed amendments.

Respectfully,



Linda Heron  
Chair, Ontario Rivers Alliance