



April 13, 2010

Ed Rice  
Executive Director  
Traverse City Light & Power  
1131 Hastings Street  
Traverse City, MI 49686

Dear Mr. Rice,

Following are the Watershed Center - Grand Traverse Bay's comments on Traverse City Light & Power's 30 x 20 plan, a proposed biomass component to that plan, the public process for this plan as well as a response to recent comments in the public regarding hydropower.

We applaud TCLP for taking the initiative on an aggressive plan to exceed the state's renewable energy standards. Coal-fired power poses risks such as mercury deposition, which results in fish consumption advisories, and climate change. Sustainable alternatives to coal-fired power should be pursued. However, in the pursuit of those alternatives, we must ensure that they are truly sustainable and do not result in other damages to the natural resources that are essential to our freshwater community. Water quality is the foundation of our region's economy and quality of life.

#### Importance of Trees to Water Quality

The Watershed Center is the author of the Grand Traverse Bay Watershed Protection Plan. That plan was developed in collaboration with 28 other regional organizations and agencies and approved by the US Environmental Protection Agency and the Michigan Department of Natural Resources and Environment (DNRE) in 2005. The plan finds that the top threat to water quality in streams and rivers in the watershed is sediments. Sedimentation of streams, primarily caused by erosion-inducing stormwater runoff, degrades fisheries by covering gravel-based stream bottoms that are the habitat for insects that form the base of the aquatic food chain.

The Watershed Center has long promoted the importance of trees and other deep-rooted vegetation along shorelines and streambanks for the purpose of erosion and sediment control as well as for taking up nutrients which also harm water quality. Recent research in Michigan and around the country is showing the importance of tree cover throughout a given watershed.

The Watershed Center is currently conducting a Watershed Forestry Analysis funded in part by a grant from the DNRE. That analysis will use current tree cover data and specialized software that will show the ecosystem benefits provided by the forest cover in the 1,000 square-mile Grand Traverse Bay watershed. Those benefits include stormwater filtered by tree cover.

According to the Watershed Forestry Resource Guide, trees and forests improve stream quality and watershed health primarily by decreasing the amount of stormwater runoff and pollutants that reach our local waters. Trees and forests reduce stormwater runoff by capturing and storing rainfall in the canopy and releasing water into the atmosphere through evapotranspiration. In addition, tree roots and leaf litter create soil conditions that promote the infiltration of rainwater into the soil. This helps to replenish our groundwater supply and maintain streamflow during dry periods.

The presence of trees also helps to slow down and temporarily store runoff, which further promotes infiltration, and decreases flooding and erosion downstream. Trees and forests reduce pollutants by taking up nutrients and other pollutants from soils and water through their roots, and by transforming pollutants into less harmful substances.

### Sustainability of Forestry Practices to Fuel Biomass Energy

The Watershed Center believes there are significant unanswered questions regarding the sustainability of biomass energy as it pertains to forests and related water quality.

Constructing a biomass plant would be a large investment and would likely operate for decades. If a plant is built, there will be significant economic pressure to operate it as long as possible to maximize generation revenue. This has been the experience with coal-fired power plants continuing to operate at over 60 years old. While the current TCLP staff and board have made assurances that forestry practices will be sustainable and not cause ecosystem damage, there is no guarantee that future leadership of TCLP, if faced with economic pressures to operate the plant for decades, will honor those assurances.

An overall reduction in forest cover would have a negative impact on water quality. Our concern is that it will not be possible to derive 60 years worth of fuel from the region's watersheds without reductions in forest cover that negatively impact water quality.

It is also unclear as to the exact sources of biomass and the related impacts from those sources. For example, it is unclear whether biomass fuel sources will be restricted to limbs and tree tops leftover from logging operations, whether whole trees would be harvested for fuel, or whether specific biomass fuel crops such as hybrid poplar would be grown. It appears that all of these could be possible fuel sources, but each has its own level of impacts that need to be considered.

The location of planned fuel sources is also critical. A large fraction of state forest land in the region is in the Boardman River watershed. Potential impacts to the Boardman River and its tributaries need to be considered.

Another concern is the impact of multiple biomass plants operating in the region and their cumulative, long-term impact on forest health. While TCLP has conducted studies of forest availability that conclude that currently planned biomass plants could operate in a sustainable fashion, this does not address the potential for additional plants not already planned. This calls for regional coordination by the state of Michigan.

DNRE Forestry staff, in their presentation at TCLP's forum on April 7, 2010, indicated that the revegetation-to-harvest ratio for forests in Michigan is 2.1:1. However, this is a statewide average. The revegetation rate in NW Michigan could be lower due to local soil types and conditions. We believe that a more focused study of revegetation rates should be conducted, again with consideration of multiple biomass plants potentially being built in this region.

Another issue is the adequacy of the standards that would be used to measure whether forestry practices are sustainable. Under its renewable energy portfolio standards, the state of Michigan has established sustainable forestry standards that must be met to receive credits under the state's program. However, at a January 21, 2010 TCLP forum, Professor Robert Froese of Michigan Tech University and a TCLP consultant, acknowledged that those forestry standards may not be adequate. TCLP should investigate, in partnership with key stakeholders, the adequacy of the standards and adjust them accordingly.

### Public Process

The Watershed Center shares the concern voiced by others in this debate that the public involvement process regarding the biomass issue has not been adequate. We are concerned that the letter sent to TCLP ratepayers in mid-March contained statements intended to influence public opinion before the public involvement process, and a TCLP planned public opinion survey, was complete. In fact, that letter was sent to ratepayers the same week TCLP staff met with Watershed Center staff and board members, ostensibly to take input from the Watershed Center.

The Watershed Center believes that the biomass issue is significant enough for this community that it demands a special process for involving the public and stakeholders in a more meaningful way. TCLP should create a process to more fully involve the public and key stakeholders to address outstanding questions and concerns regarding biomass energy.

An enhanced stakeholder process should address issues, such as forest sustainability raised above, as well as others. Examples of work products that TCLP should develop through an enhanced public process include:

A sustainable forestry plan that guarantees no negative impacts to water quality or other long-term ecosystem impacts. This should include, as suggested by the Michigan Land Use Institute, a legally binding agreement with the City of Traverse City and other stakeholders regarding the sustainability of the fuel supply. This plan should include

agreed-upon trigger mechanisms to enact changes in operation if negative impacts are detected.

Detailed estimates of fuel sources - logging waste, biomass crops, whole trees, other sources - as well as locations of those sources.

A plan to monitor water quality and other potential impacts of forestry practices.

## Hydropower

There have been recent public calls for TCLP to reexamine hydropower on the Boardman River. Some have expressed that hydropower was not adequately studied during the process to determine the fate of the Boardman River dams. The reality is that several independent analyses were conducted on the feasibility of continuing hydropower generation at the three upper dams on the Boardman.

First, TCLP conducted its own analysis which concluded it was no longer economically feasible to operate hydropower operations. This led to TCLP's decision to end hydropower operations and to surrender its FERC license. Second, detailed analysis conducted under the Boardman River Dams Committee also found that resolving safety and environmental problems at the dams would be extremely costly; on the order of \$17 million. Third, the Watershed Center conducted an analysis that showed that restoring hydropower at the dams, including resolving safety and environmental problems would be so cost-inefficient, that a similar investment in wind power would result in twice the electricity production as the dams. And this included a capacity factor acknowledging the fact that wind is an intermittent resource. Finally, the owners of the dams – the City of Traverse City and Grand Traverse County – invited proposals for restoring the dams to produce hydropower. No credible proposals were submitted.

Dams harm natural resources in many ways. They obstruct fish passage. They create artificially warm water environments both downstream and in the impoundments, which displaces cold water fisheries. They increase sedimentation in the shallow impoundment areas, covering habitat in the former stream bottom. Correcting some of these problems is expensive, involving fish ladders and cold water bottom-draw systems. The Boardman dams also have structural deficiencies, which cause safety concerns downstream, which are also expensive to resolve.

The Boardman River is a significant natural asset to our freshwater community. It is the second largest tributary to Grand Traverse Bay, providing 30% of the surface water flow to the Bay. Removing the upper three dams will restore over three river miles of native coldwater fisheries habitat. Over 250 acres of wetlands will be restored as well as nearly 60 acres of upland habitat. Restoring the river will also bring positive economic benefits to the region; over \$3 million from increased recreation, tourism and property values.

For both economic and environmental reasons, TCLP made the correct decision to decommission the dams. That decision was supported by several independent analyses.

## Conclusion

The Watershed Center believes that the above issues and concerns regarding the potential impacts on forest cover, water quality and sustainability should be resolved before a decision is made to pursue biomass energy. An enhanced public involvement process focused on answering unresolved questions and concerns should be pursued. TCLP has already met the state's renewable energy portfolio standards with existing and contracted future energy sources. TCLP has ten years to meet its own, more ambitious goals. There is time to answer unresolved questions and still meet TCLP's own timeframe. In the meantime, TCLP should aggressively pursue the other portions of its plan such as increased energy efficiency programs and wind power.

We acknowledge the importance of moving from a coal-based energy portfolio to one that includes a greater balance of energy efficiency and renewable energy. We also believe it is essential to ensure we are not trading one set of natural resources damages for another. We look forward to continued discussions with TCLP on these important issues. Thank you for considering these comments.

Sincerely,

Andy Knott  
Executive Director

c: TCLP Board  
City Commission