April 2, 2010

Thomas S. Burack, Chairman
Site Evaluation Committee
N.H. Department of Environmental Services
29 Hazen Drive
Concord, NH 03302

Re: TWS Comments on Laidlaw Berlin Biopower Application to the NH Site Evaluation Committee

Dear Chairman Burack:

The Wilderness Society supports sound stewardship of forest resources, with a particular interest in public lands management. In these comments, we review information provided in the application of Laidlaw Berlin Biopower LLC, dated December 15, 2009, to the New Hampshire Site Evaluation Committee. Our comments focus on the sufficiency of woody biomass fuel to supply the proposed electricity plant (including competing uses for wood), greenhouse gas effects and other impacts of intensified harvesting on the region's forests, possible economic spin-offs from the plant, and the extent of state and federal subsidies for which the project will be eligible.

WOOD SUPPLY PROJECTIONS

Laidlaw Berlin Biopower provides a "conservative estimate" that its 70 MW biomass electric facility proposed for Berlin, NH will require 750,000 tons of wood per year as fuel (p. 98 of December, 2009 Laidlaw Berlin Biopower application). According to a fiber supply study completed by LandVest, Inc. and submitted as Appendix P of that application, "historical data support an estimate that 710,000 tons of biomass in excess of current demand is available and that it appears to be entirely feasible that significant additional volume is sustainably available in a more competitive situation." An addendum to the study issued in March, 2010 states that the "range of low-grade fiber available within our study area, above and beyond current consumption, is from 760,830 to 1,284,330 green tons per year". LandVest's supply analysis has two parts – an assessment of the net annual growth in the defined wood basket (including the low-grade portion that might be available for energy markets), and an analysis of how much of that supply is already utilized by other wood users. Our assessment indicates that the available supply is overestimated and the competing demands underestimated.

LandVest's wood supply estimate depends heavily on Forest Inventory and Analysis (FIA) data for current stocking, growth and removals (though the removals information was not used, as LandVest instead compiled its own estimate of demand for low-grade wood). FIA data have relatively high estimation errors for growth and removals, particularly for smaller acreage categories like federal lands. 2006 growth data reflect changes in the methodology for calculating tree volumes, and FIA is in the process of revising their estimates for 2007 using a new modeling approach. 2008 data, which are available from two online tools (FIDO at http://fiatools.fs.fed.us/fido/index.html and EVALidator at http://fiatools.fs.fed.us/Evalidator401/tmattribute.jsp) rely on a very limited number of sample plots for New Hampshire and Vermont, which lag behind Maine in instituting the annual FIA sampling protocol. FIA expects to have revised data available soon, and given the important consequences of supply estimates it would be prudent to wait for better data before permitting a major new use.

Assuming for the present that the data are sufficiently accurate, Table 3 on p. 9 of the initial LandVest analysis indicates that the only landowner group for which growth exceeds removals is federal lands, mostly comprised of the White Mountain National Forest. The multiple-use mandate of the National Forests, and the management designations determined by the Land and Resource Management Plan (USDA Forest Service, 2005), dictate that only a portion of these acres will supply biomass material. Of approximately 700,000 acres classified by FIA as timberland (not reserved from harvesting) on the White Mountain National Forest, only about half of that acreage is in management areas dedicated to timber production. Even areas designated for timber management are restricted by the need to protect resources such as stream buffers, high elevation areas, and scenic vistas, as well as the inaccessibility of some unroaded tracts.

LandVest adjusts wood supply estimates by deducting areas with serious obstacles to commercial harvest (reducing the total by 6%). Accessibility is mentioned in the text as an important limiting factor but quantitative reductions reflect only two factors - very steep slopes and wetlands. The cut-off for inoperable slopes, at 55%, is probably steeper than most operators would accept, particularly if low-value biomass fuel is the product. Harvesting of whole trees on such slopes could also cause serious soil erosion due to soil disturbance and removal of cover. Lack of access to roads, high elevation, deer yards, shoreline protection, and other common limitations are not reflected in the analysis.

Landowner objectives are also missing as a significant supply limitation. Over 70% of the acreage within the defined wood basket is in small family ownerships. Only 76%

of the family forest owners surveyed from 2002-2006 in Vermont, New Hampshire and Maine by the National Woodland Owner Survey (http://fiatools.fs.fed.us/NWOS/tablemaker.jsp) planned to harvest their woodlot in the future, and even fewer (63%) planned commercial harvests. Since stated intentions do not always match reality, actual events might be a better indicator of likely landowner behavior. Harvest activity at any time during the current owner's tenure is reported for only 48% of family forests in these states. Applying these percentages to the private land biomass estimates would reduce supply considerably.

The March 2010 addendum to the wood supply study speculates that higher prices resulting from Laidlaw Berlin Biopower coming on-line will induce producers to "supply over one million tons per year in excess of current consumption". This level of harvest assumes use of up to 70% of tops and branches, rather than only 50% as the initial estimate assumes. Not all logging residues are truly "waste wood", however. Limits must be placed on the amount of tops removed to meet the needs of wildlife dependent on snags and large down logs, and to replenish forest floor nutrients. Although LandVest asserts that the Forest Guild has determined that 30% retention of tops and limbs is sufficient, the Guild has not yet finalized biomass harvesting guidelines for the region. It is likely that additional limitations on removals will be recommended to protect sensitive sites. The White Mountain National Forest Plan (USDA Forest Service, 2005, p. 2-29) also includes two Vegetation Management Standards that restrict whole tree harvesting:

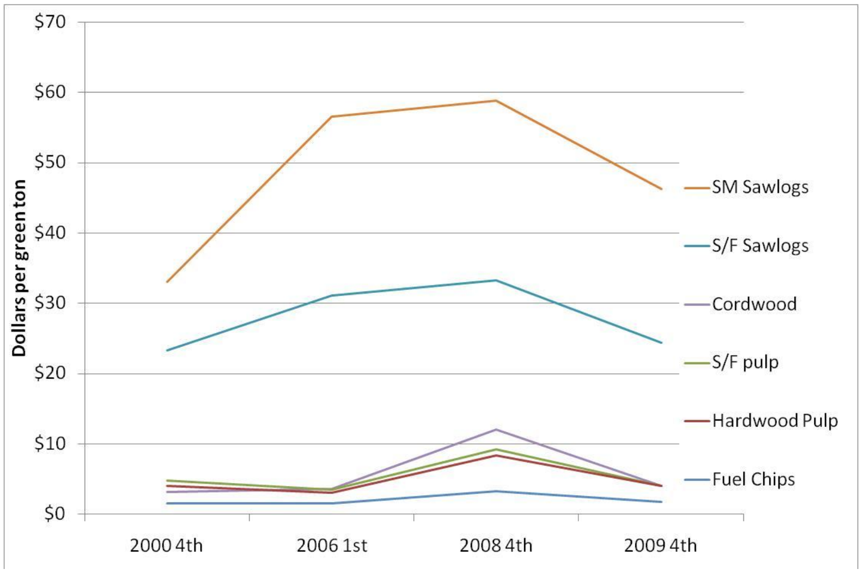
- S-2 Whole tree removal is limited to soils with sufficient nutrient concentration and nutrient replenishment capacity to support the new or residual stand of vegetation, maintain soil productivity, and meet other resource objectives.
- S-3 All tops and limbs from harvested trees must be scattered and left onsite when harvesting on outwash sands or soils shallow to ledge.

Due to these limitations, the LandVest assumption that 50% of tops and limbs will be available for harvest is probably optimistic, and use of 70% in the future is highly unlikely.

LandVest assumes that 15% of sawlog tons will be available as sawmill waste. The sawmill industry in this region of New England has worked hard over the years to maximize efficiency, leaving very little unutilized waste. To the extent that current uses of sawmill waste are excluded from the wood user list on p. 2 of the wood supply study supplement, the volume of available waste will be less than anticipated.

LandVest also assumes that 100% of pulp, and some low-grade sawlogs, will be available to bioenergy markets. The total wood supply estimate on p. 11 of the original LandVest analysis projects that 4.78 million tons of "low-grade roundwood" will be available for low-grade wood uses. Table 3 on p. 9 indicates that only 2.7 million tons of pulp are typically harvested annually in the region. Current pulp volumes are inadequate to fulfill LandVest's assumed low quality roundwood supply. In order to make up the difference, over two million tons of low quality sawlogs currently used for items such as lumber and pallets would have to be shifted into energy market use. This is unlikely given the difference in stumpage prices. The chart below shows stumpage prices in New Hampshire by market segment.

Stumpage Prices for Wood in New Hampshire by Market Segment



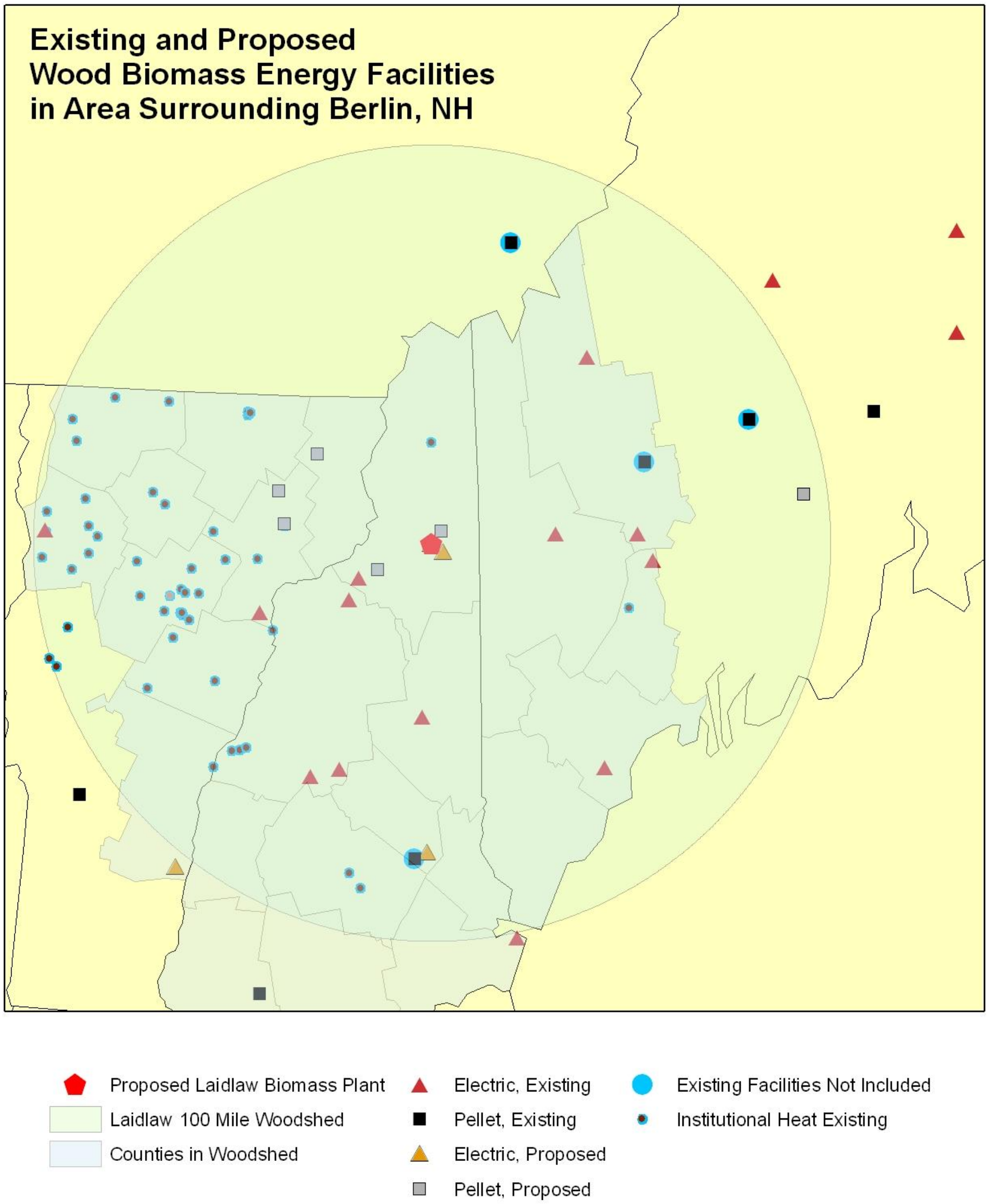
Source: New Hampshire Timberland Owners Association

Fuel chip prices bring much lower returns to landowners than sawlogs, pulp, or even firewood in some years. If landowners and logging contractors are unwilling to sell to energy markets at a much lower price, then total supply projections could be too high.

COMPETING DEMANDS FOR WOOD

Laidlaw Berlin Biopower alone would use over 40% of the total chip harvest that has been produced over recent years within the defined wood basket (about 1.7 million green tons in 2007, Appendix P, Figure 4 on p. 11). A new user of this magnitude must either increase total supply or compete with existing users. It is apparent that there is little room to increase supply while remaining within sustainable forest capacity. Given limits on supply, public policy should encourage a mix of uses that provide the greatest benefits. This requires not just inventorying existing users, but also anticipating likely future ones.

The list of current users in Table 6 on p. 17 of the original wood supply analysis included only electricity generators and paper/fiberboard manufacturers; the addendum released in March 2010 added two additional electricity plants and one pellet plant. The revised study still omits two pellet plants - Geneva Wood Fuels and Lakes Region Pellets - that are now fairly minor users but plan to expand in the future. Energex, a pellet manufacturer in Quebec, and Maine Woods Pellet Company in Athens, ME are also within 100 miles of Berlin and together use about 570,000 tons of wood, but are outside the counties in the defined wood basket. The March 2010 addendum did account for net exports of low-grade wood to Canada, which would theoretically include use by Energex. But it still omits other facilities located outside the study area that likely utilize wood from within the area. The map below shows wood users within 100 miles of Berlin, NH, with those excluded from the wood supply analysis highlighted in bright blue. It also indicates other major users that fall just outside the defined wood basket, but that may source some of their wood from within the area of interest.



Neither the original study nor the addendum account for proposed new electricity and pellet facilities to be located within the wood basket, which could use an additional 1,332,000 green tons of material if all of them were actually built. (These facilities have varying likelihood of actually being built, but some are well under way.)

Existing and Proposed Wood Power and Pellet Facilities within the Laidlaw Biopower Wood Basket Not Included in Supply Study

Facility	Type	MW	Wood Use (green tons)	Location	Status
Geneva Wood Fuels	Pellet	0	46,000	Strong, ME	Existing
Lakes Region Pellets	Pellet	0	18,000	Barnstead, NH	Existing
Barnstead Power and Light	Electric	5	60,000	Barnstead, NH	Proposed
Clean Power Development	Electric	25	250,000	Berlin, NH	Proposed
Burke Sawmill site	Pellet	0	200,000	Sutton, VT	Proposed
Greenova LLC	Pellet	0	400,000	Berlin, NH	Proposed
International Wood Fuels, LLC	Pellet	0	200,000	Burnham, ME	Proposed
Presby Environmental	Pellet	0	100,000	Whitefield, NH	Proposed
Vermont Pellet Works Corp.	Pellet	0	100,000	Lyndonville, VT	Proposed
Vermont Renewable Energy Co.	Pellet	0	22,000	Island Pond, VT	Proposed

Smaller community-scale users like schools and other public buildings were not included in the wood use inventory. These types of facilities within the defined wood basket utilize nearly 60,000 green tons of wood annually, with much potential for expansion. (Middlebury College, which uses 30,000 tons year, is within the 100-mile radius but is excluded from the county-by-county wood basket.) These smaller heating facilities tend to source their wood from nearby, so most would be drawing wood from within the defined wood basket. Siting of wood energy facilities should consider the best future use of the limited available resource. Heating facilities commonly convert 60-80% of fuel energy into useful heat compared to about 25% for biomass electricity. A large new buyer in a tight market would drive up wood fuel prices, and existing or newly-proposed small community-based wood-heat projects would find it hard to compete.

Wood Heat Facilities within the Laidlaw Biopower Wood Basket

Facility	State	Type	Wood Use (green tons)	Status
Turner - Leavitt	ME	school	?	Existing
Concord Steam	NH	district	35,000	Existing
Dixville - Balsams	NH	private	?	Existing
Hanover - Richmond School	NH	school	458	Existing
Hanover - Sachem Village	NH	district	?	Existing
Hanover School	NH	school	769	Existing
Penacook - Merrimack Valley	NH	school	636	Existing
Barre - Spaulding	VT	school	1,977	Existing
Barre City Elementary	VT	school	672	Existing
Barre Town Elem	VT	school	731	Existing
Berlin Elem	VT	school	150	Existing
Burlington	VT	school	1,026	Existing
Cabot	VT	school	?	Existing
Calais	VT	school	120	Existing

Facility	State	Type	Wood Use (green tons)	Status
Colchester - Camp Johnson	VT	Nat. Guard	?	Existing
Danville K12	VT	school	270	Existing
East Montpelier Elementary	VT	school	116	Existing
East Montpelier U32	VT	school	790	Existing
Franklin Elementary	VT	school	?	Existing
Green Acres Housing	VT	district	?	Existing
Hardwick - Hazen	VT	school	319	Existing
Hartford - White River Junction	VT	school	427	Existing
Hinesburg Champlain Valley	VT	school	1,140	Existing
Hyde Park - Lamoille	VT	school	1,200	Existing
Jericho - Browns River	VT	school	417	Existing
Jericho - Mt Mansfield High	VT	school	725	Existing
Johnson Elementary	VT	school	1,980	Existing
Lyndonville - Lyndon Town	VT	school	244	Existing
Moretown - Harwood	VT	school	?	Existing
Newport - North Country High	VT	school	558	Existing
Newport - North Country Middle	VT	school	450	Existing
Newport North Country	VT	hospital	?	Existing
Plainfield	VT	school	?	Existing
Randolph	VT	school	625	Existing
Richford	VT	school	?	Existing
Richmond - Camels Hump	VT	school	322	Existing
Saint Albans Town Ed Center	VT	school	359	Existing
Shelburne Farms	VT	private	300	Existing
Swanton - Missisquoi	VT	school	?	Existing
Vershire - Mountain School	VT	school	550	Existing
Waterbury Office Complex	VT	state	?	Existing
Wells River - Blue Mountain	VT	school	437	Existing
Westford Elementary	VT	school	175	Existing
Williamstown	VT	school	475	Existing
Montpelier Office Complex	VT	state	5,000	Proposed

If half of the proposed new wood energy facilities are actually built, and half the wood for proposed and existing operations omitted from the supply analysis is sourced within the Laidlaw plant wood basket, and even excluding demand from facilities located just outside the wood basket counties, about 395,000 additional green tons of wood would be needed annually to fulfill demand beyond the level documented in Laidlaw's supply analysis.

Once users were (incompletely) listed, the March 2010 supply study addendum allocated wood demand according to a complex formula which bears careful scrutiny. In some parts of the region, wood supply areas overlap to such an extent that there is insufficient overall supply within the pre-defined wood baskets assigned to each. LandVest's approach to modeling where the wood deficit might come from for these deficit facilities is best understood with an example. Assume that 75% of a deficit facility's wood basket overlaps Laidlaw's defined wood supply area. Researchers assigned a random number between 0 and 1 to reflect the probability of sourcing wood inside Laidlaw's wood basket. If the random number is > 0.75, then 75% of this facility's deficit will come from within the Laidlaw wood basket and the rest from outside. If the random number is 0.75 or less, the entire deficit is sourced elsewhere. With random drawing repeated 1,000 times we expect that ¾ of the time this facility's surplus will be drawn entirely from outside Laidlaw's procurement area, and the rest of the time ¼ of the deficit will be sourced from outside the area.

In the extreme case that a facility's wood basket overlaps 100% with Laidlaw's, this procedure would source very nearly the entire deficit outside of Laidlaw's supply area. Recognizing the absurdity of such a result, the researchers added a special rule that deficit facilities with more than 90% overlap would source all their wood within Laidlaw's supply area. But the need for such a fix reveals the flaw in the underlying system. Essentially, the procedure guarantees that the greater the overlap of a deficit facility's wood basket with Laidlaw's the less the chance that its wood deficit would be sourced within Laidlaw's procurement area.

This procedure apparently further assumes that every acre of land produces 0.67 tons of low-grade wood per year – the average for all accessible *timberland* across the woodbasket counties. Total county area is nearly 14 million acres, and on average only 72% of the total area is accessible timberland. If available supply in deficit polygons was estimated as 0.67 tons per acre of the polygon, the deficit would be underestimated since non-timberland acres produce no wood. As explained earlier, low-grade wood per acre is likely to be even lower on the White Mountain National Forest, which is likely included in many deficit polygons.

A more straightforward approach would be to expand the wood basket radius for every deficit facility until all facilities obtain sufficient supply from accessible timberland acres. Since the facilities analyzed are all located within the Laidlaw wood supply area, expanding their wood baskets would result in much of their deficit being made up from the areas with remaining capacity within Laidlaw's procurement area. This process would result in a much lower, and more realistic, estimate of available supply. It could also generate a map of areas where wood markets are already saturated, which would be a very useful planning tool to help locate future wood energy facilities where wood supply is abundant.

IMPACTS – GREENHOUSE GASES AND FOREST CONDITION

Climate mitigation is an important reason for many renewable energy subsidies, so it is important to track actual greenhouse gas (GHG) impacts and protect the carbon sequestration capacity of forests that supply energy feedstocks. The wood supply study makes a common assumption that wood is, by definition, a "carbon neutral" fuel. This assumption is unfounded, not only because fossil fuels are required to harvest and transport and process the wood (these emissions may in fact be less than those for fossil fuels), but because of higher combustion emissions and impacts on carbon storage in the source forest.

Wood generates more GHGs per unit of useful energy than fossil fuels, for three major reasons:

1) Wood has a high carbon:hydrogen ratio and hence generates more CO_2 and less H_2O than most fossil fuels when burned completely;
2) Wood has a high moisture content which means that much of the energy in the fuel goes to evaporate water rather than generate useful energy;
3) Depending on combustion technology, the unevenness of wood fuel tends to result in less complete combustion.

These three factors, together with average electricity line losses of 8% on the way to the final consumer (which applies to any power plant), produce the comparative emissions profiles illustrated in the table below (these are samples only - exact emissions will depend on fuel characteristics, life-cycles, and energy technologies).

Greenhouse Gas Emissions for Selected Fuels
(pounds per million Btu useful energy)

Fuel	Heat	Electricity
LP Gas	220	-----
Natural Gas	155	337
No. 2 Fuel Oil (distillate)	238	714
No. 6 Fuel Oil (residual)	244	565
Bituminous Coal	331	636
Wood Chips	297	933
Wood Pellets	283	743

Sources: Emissions coefficients from Energy Information Administration (EIA) Voluntary Reporting of Greenhouse Gases Program, Fuel and Energy Source Codes and Emission Coefficients, http://www.eia.doe.gov/oiaf/1605/coefficients.html and EIA . 2002. Updated State-level Greenhouse Gas Emission Coefficients for Electricity Generation, 1998-2000, Table 4. http://www.eia.doe.gov/pub/oiaf/1605/cdrom/pdf/e-supdoc.pdf. Energy conversions from Fuel Value Calculator. 2009. Trendlines..USDA Forest Service, Forest Products Laboratory; Bergman, R., Zerbe, J. 2008. Primer on Wood Biomass for Energy. Madison, WI: USDA Forest Service Forest Products Laboratory; and EPA E-Grid. http://cfpub.epa.gov/egridweb. Transmission loss from Unnasch,S., Riffel, B., 2009. Requirements for Developing a Low Carbon Fuel Standard for Northeast States, for NESCCAF. Life-cycle emissions for fossil fuels Wang, M. GREET 1.8.

Argonne National Laboratory. Life-cycle emissions for pellets (wood chips) INRS for Unnasch, S. and Riffel, B. 2009. Requirements for Developing a Low Carbon Fuel Standard for Northeast States, prepared for NESCCAF.

The table above generally assumes low transportation emissions for wood fuels, but long transport distances can change this assumption. For a 50-mile-radius woodshed with average trucking distance of 25 miles, total trucking miles for a plant of the scale proposed would be 50 miles round trip x 100 trucks/day x 313 days/year = 1,565,000 miles per year. At average mpg of 5.3 for a tractor trailer, this transport would require 295,283 gallons of diesel fuel, which would emit about 2,963 metric tons of CO_2. A 100-mile-radius woodshed is four times larger than a 50-mile radius woodshed, so diesel fuel use and CO_2 emissions would be roughly 11,852 metric tons of CO_2 for the same volume of wood used. For comparison, New Hampshire's total GHG emissions were about 22 million metric tons CO_2e in 2005 (NH Climate Action Plan).

Drive distance will be greater than direct map distance, particularly in rural areas with few direct route choices. As the six randomly selected destinations below indicate, actual mileage and its associated GHG emissions could be substantially higher than calculated above.

Map Distance and Driving Distance from Sample Locations to Berlin, NH

Town	Direct Distance from Berlin (miles)	Drive Distance (miles) (via Google Maps)	Percentage Extra Driving Miles
Colebrook, NH	33	51	55%
Oquossuc, ME	39	66	69%
Paris, ME	42	49	17%
Hardwick, VT	58	81	40%
Tilton, NH	66	97	47%
Bethel, VT	85	131-144 miles	54-59%

Source: Google Maps

Since wood energy actually increases GHG emissions at the plant, its potential as a climate change strategy depends upon minimizing processing and transport and maintaining and enhancing carbon stocks in the forest where the wood is grown. If forests quickly absorb most of the CO_2 emitted through combustion, then the energy cycle as a whole has a small atmospheric impact. Laidlaw Berlin Biopower's wood supply study asserts that the region's forests are still intact after many decades of harvesting for pulp/paper, and that Best Management Practices will ensure that wood is harvested sustainably. Traditional uses over the past century and more did not normally involve use of whole trees, however, and the impacts of this more intensive type of harvesting over long periods remain uncertain. BMPs are designed to protect water quality, and do not yet address whole-tree harvesting impacts or carbon sequestration. Tradition and voluntary standards alone will not guarantee sustainable practices, nor ensure that biomass electricity will actually reduce GHG emissions. The Site Evaluation

Committee should require that any large new facility adopt procurement standards that protect forest resources over the long term.

Laidlaw states on p. 8 of its application that “the facility will … seek to keep the purchase of the renewable timber supply in the immediate vicinity of the power plant.” It is unlikely, and in fact undesirable, that most wood could be sourced locally, as the region nearest the proposed plant has been heavily harvested in recent years. A study released by the Society for the Protection of New Hampshire Forests (Sundquist and Birnie 2008) concluded that “if the scale of harvest we see recently in Success and Berlin were true for a large part of the North Country, there clearly would be huge cause for concern, but the majority of municipalities are experiencing harvests well within the bounds of sustainability”. The images below are derived from satellite data from 1990 and 2005, and show areas of nonforest land use and heavy cutting in pink.

Area Surrounding Berlin, NH
1990

2005

Source: USGS. TerraLook satellite imagery. http://terralook.cr.usgs.gov/

Another concern expressed in this study was the occurrence of harvesting across more than one-quarter of the private land above 2,700 feet in elevation since 1988 (Sundquist and Birnie 2008). Many of these lands were covered by voluntary Memoranda of Understanding between landowners and the state Division of Forests and Lands that restricted activity in these fragile areas. If these agreements did not succeed in protecting high-elevation areas, that might cast doubt on the ability of voluntary best management practices to protect forests from poorly conducted whole-tree harvests. If fuelwood depends on logging residue to the extent predicted in this study, then whole-tree harvesting will become more common.

LOCAL ECONOMIC SPIN-OFFS AND PUBLIC FINANCIAL SUPPORT

Laidlaw's application projects that either $70 million (p. 4) or $80 million (p. 7) will be injected into the local economy during plant construction from local purchases of goods and services. Construction projects in rural areas tend to produce relatively few local jobs, however, due to a mismatch between skills required and skills available and the need to order supplies from outside the region. When the need for labor is known to be short-term, as in the case of plant construction, it is common for specialized crews to be imported temporarily from elsewhere.

On a permanent basis, Laidlaw estimates that the Berlin facility will create 40 plant jobs and 300 others for loggers and truckers. These jobs are more likely to bring permanent employment to local workers as the jobs would be well-matched to the skills of Berlin residents. Laidlaw's non-mill job estimate is higher than estimates for similar biomass plants elsewhere. A Massachusetts study (Timmons et al 2007) found that producing 1 million tons of wood biomass per year (more than the Laidlaw plant) would support about 60 logging/chipping jobs and 48 trucking jobs. It is possible that indirect and induced employment (from plant purchases and new spending by plant employees, loggers, and truckers) would be higher, but areas with smaller less diverse economies tend to have smaller multipliers so total direct and indirect employment will probably be considerably less than 300.

Laidlaw states on p. 8 of its application that the project will have no impact on outdoor recreation in the region surrounding Berlin. Yet if, as planned, logging activity is concentrated in the local area, active harvesting operations and the depleted state of the forest are bound to affect public access and the attraction of the area for visitors. The Berlin area is just beginning to be known for its outstanding recreational opportunities - paddling and fishing on the Androscoggin River, cross-country skiing, dog-sledding, mountain biking, snowmobiling and ATV riding. Impacts on tourism employment should be assessed as a possibly significant economic impact from this project.

Like many renewable energy projects, the Laidlaw Berlin Biopower facility will be eligible for a variety of federal and state subsidies which encourage development of new energy sources. Federal renewable electricity production tax credits of $0.011/kWh for ten years are available for plants that are operational by 2013. For the Laidlaw facility, these tax credits would amount to more than $6 million per year if the plant operates at 90% capacity. (Under the American Recovery and Reinvestment Act, facilities may choose to use instead Federal Business Energy Investment Credits which cover up to 10% of construction cost on the first 15 MW of capacity. The same facility cannot receive both benefits, and this option might be closed by the time this plant would be built).

The federal Biomass Crop Assistance Program makes matching payments to providers of wood biomass to a certified facility, paying up to $45 per dry ton of fuel (about $22.50/green ton). These payments would increase the availability of fuel, and assuming that part of the subsidy is reflected in lower market prices it could lower fuel costs to biomass buyers. With current mill-delivered chip prices at about $30/green ton, the subsidy could have a total value of about $11 million. However, BCAP program regulations are currently being rewritten, so this subsidy may be more difficult to obtain in the future.

Laidlaw has agreed to sell Renewable Energy Certificates (RECs) to PSNH at the alternative compliance payment rate – which is currently about $60.93/MWh for Class I energy and is adjusted yearly for inflation. This revenue source, which is essentially a subsidy paid by electricity consumers (since the utility passes the cost along) to support increased renewable energy, would amount to over $33 million/year if the plant operates at 90% capacity. The alternative compliance payment serves as a floor for REC prices (if renewable energy prices rise excessively, utilities will make the payment rather than purchasing certificates). A guaranteed price at this rate exempts Laidlaw from competing with other energy providers to supply those RECs, and will commit PSNH to buying RECs at the highest possible price.

Altogether, federal and state energy subsidies for the Laidlaw Berlin Biopower plant could amount to nearly $50 million per year for the first 5 to 10 years of operation, considerably more than the total value of the power produced, and a significant return on a project with estimated construction costs of $110 million. If the public invests this heavily in a project that purports to generate renewable low-carbon energy, it should expect the project to deliver on the full range of expected benefits. Protection of the source forest, including its value for recreation, water quality, and wildlife habitat, should be a primary concern of the Site Evaluation process. Given limited supplies of wood in northern New England, and a wealth of wood energy opportunities just beginning to emerge, it is also in the best interest of New Hampshire and its citizens to consider carefully before committing large volumes of wood fuel over many years to a single large-scale facility.

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We would be happy to further discuss these comments or provide additional feedback during the site evaluation process. Please do not hesitate to contact us. Thank you for your time and consideration.

Sincerely,

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References

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