Canadian Bioenergy Association

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Attention: To whom it may concern, August 25, 2005

Ontario Power Authority
Supply Mix Submissions
(By e-mail: supplymixsubmissions@powerauthority.on.ca)

Canadian Bioenergy Association (CANBIO) comments to OPA on Ontario Supply Mix

CANBIO is a national, industry-driven, non-profit organization of individuals**,** businesses and non-governmental organizations interested in the development, promotion and use of bioenergy.

Our Mission: To promote industry and public support for increasing awareness, development and use of renewable, sustainable and environmentally-responsible biomass energy.

CANBIO is pleased to have the opportunity to provide some initial comments to the OPA relating to Ontario's electricity supply mix, and as noted in the closure of our letter we would be pleased to met with the OPA or its consultant to discuss further information requirements. We note that a number of comments have been made to the OPA through the RFP assessment process, some of which are applicable to bioenergy development. As requested, we've structured our comments to correspond with the information requirements outlined in the call for written submissions.

Minister's specific requests:

- Recommendations with respect to additions of new renewable energy capacity by 2015, 2020 and 2025 taking into account the targets already set by the Government of Ontario for 2007 and 2010, and

Response: CANBIO made a presentation to the Electricty Conservation and Supply Task Force on August 14, 2003. Though it is somewhat dated, and was not based on a rigorous analysis, this presentation is attached for your information. At that time a conservative estimate was made of the potential undeveloped biomass electrical energy potential in Ontario of 1700 MW and 12 TWh per year.

OPA issue areas:

Issue 1

- Appropriate analytical planning approaches that focus on assessment of risks, environmental attributes and cost characteristics of various portfolios. The approaches

will be of the greatest value where they include assessments of the risks that could affect portfolio performance, including financial, market, environmental and other quantifiable and qualitative risks;

Response: CANBIO recommends that planning approaches should ensure the attributes of bioenergy (many of them unique) are fully recognized, quantified, valued and appropriately considered:

- Significant environmental benefits through reductions in GHG emissions and other pollutants compared to fossil fuels
- Economic impacts of local job creation related to biomass feedstock acquisition
- Addition of value and improved economics to Ontario's forestry and wood processing industries based on their natural synergy with bioenergy
- The energy in biomass is storable and transportable. New and emerging collection, processing and utilization technologies, combined with increasing value of biomass for meeting GHG commitments on a global scale will create opportunities for suppliers to economically transport it farther than is being done now. This is an opportunity for increased local (within Ontario) use of supplies that may not be economic now. If economic conditions favour out of province or even off-shore export, the environmental benefits may be lost to Ontario and Canada.
- Increasing conventional energy costs are driving the increased use of bioenergy within the forestry and wood processing sectors, and in some locations in central and eastern Canada conventional supplies of mill residues and wastes are therefore decreasing. Forest floor biomass (the unused harvesting residue) is a very large source of bioenergy that is largely untapped. The evolving opportunities and issues relating to forest floor biomass need to be considered. There is an opportunity for governments to create an environment that favours use of forest floor biomass for bioenergy. *CANBIO is conducting a workshop in Quebec City on September 8, 2005 to explore the opportunities and issues relating to forest floor biomass. The web link is:* *http://www.canbio.ca/pdf/Quebec%20workshop.pdf*
- There may be potential for using biomass energy crops for bioenergy power production. The current economics don't support this however at some point energy values will likely make the use of some biomass energy crops feasible.
- Unlike wind, solar and small hydro renewable technologies, bioenergy is dispatchable. It also has a high capacity factor relative to other renewable technologies.
- Bioenergy projects require a secure long term fuel supply at a predictable cost. They also are often located at a host site that buys steam and electricity. When fuel supply and

project electricity and thermal product sales are linked to forestry and wood processing industries, supply and project economics can be impacted by company closures and trade disputes (such as the softwood lumber dispute). OPA bioenergy based power procurement processes should allow flexibility for such cases. Specific comments have been made in this regard by a number of respondents to OPA's request for information on the RFP processes.

- There is considerable potential to increase the extent to which bioenergy can contribute capacity and energy to Ontario's electricity supply mix. This potential will only be realized if there is a long term stable climate for investment and reasonable procurement processes for bioenergy, specifically:
    - Allowing developers to appropriately access the value of all environmental attributes
    - Policies to encourage utilization of forest floor biomass
    - Allowing developers to access the value of the unique dispatchability, predictability and reliability of biomass based generation
    - Connection policies and rules that allow projects at host electricity and thermal customer sites to avoid the transmission and distribution costs associated with electricity generated and consumed on site
    - Designing procurement processes to be realistic with respect to eligibility requirements and reasonable with respect to risk allocation, development effort to achieve a contract, power pricing and flexibility to accommodate future changes.

Issue 2

- Appropriate approaches to constructing Conservation and Demand Management (CDM) portfolios for inclusion in long-term plans. These approaches will be of the greatest value where they include established data on technical and achievable potential, costs, implementation barriers, sector specific characteristics, experience in implementation of CDM and technology developments;

Response: CANBIO agrees CDM should be an important part of the supply mix. Dispatchable bioenergy generation at local electricity customer sites could be used to manage the customer demand from the grid.

Issue 3

- Assessments of different supply technologies and resources in the Ontario setting, including, but not limited to, natural gas generation, coal gasification, nuclear (new and

refurbished), wind, biomass and hydro-electric resources. The assessments will be of the greatest value where they:

- Use recent source information or current data on capital and operating costs, performance characteristics, technology life cycle, environmental impacts and any other relevant characteristics, and
- Present data on a consistent basis across the supply technologies and resources that would be suitable for planning studies.

Response: There are many sources of information on both conventional and emerging biomass based generation from many jurisdictions. CANBIO made a presentation to the Electricty Conservation and Supply Task Force on August 14, 2003. Though it is somewhat dated, this presentation is attached for your information. CANBIO would be pleased to meet with OPA or its consultant with a view to determining specific information requirements and providing specific relevant information and sources of information to OPA.

Issue 4

- Appropriate methods to assess the impact on the natural environment of supply options. The methods will be of the greatest value where they are:
  - Methodologically suited to long-term planning;
  - Provide for identification and quantification of relevant environmental factors for assessment;
  - Capture the cumulative environmental impacts; and
  - Provide indications of the sustainability of options and supply mix plans.

Response: CANBIO recommends the assessment methods should:

- Be able to model and address the opportunities and issues identified in Issue 1.
- Allow for flexibility of changing assumptions throughout the modeling timeframe. For biomass based bioenergy particularly important parameters include: local and global values of CO2 and methane reductions, value of SOX reductions, quantity and cost estimates of economically usable biomass feedstocks, changing costs of emerging and developing generation technologies, extent of tradable renewable credits markets.

CANBIO thanks you for the opportunity to comment. We would be happy to meet to discuss any further information requirements and provide additional information.

Sincerely,

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