

**Submission of the Canadian Solar Industries Association with respect to the Proposed
Issues List**

**Re: Ontario Power Authority Application for Approval of the Integrated Power System
Plan**

Ontario Energy Board File No.: EB-2007-0707

The Canadian Solar Industries Association (“**CanSIA**”) is the national trade association that represents the interests of companies and individuals committed to solar energy. The Association works to strengthen the Canadian solar industry, increase the professionalism of companies, foster domestic and international markets, and promote the use of renewable energies. The Association presently has more than 200 corporate members from across Canada, and more than half that membership operates in the province of Ontario.

GENERAL COMMENTS ON THE ISSUES LIST

As a general comment, CanSIA believes that the Issues List as drafted by the Ontario Power Authority (“**OPA**”) gives insufficient direction to parties to prepare for the hearing. The additional issues proposed below are requested in order to provide certainty to CanSIA that issues of concern to its members and which, for example, are specifically addressed by the Minister in the Supply Mix Directive (“**Directive**”) will be raised and considered by the Board.

This lack of clarity plays itself out in the first question the OPA proposes. Here the OPA suggests that the Board only need review whether the Integrated Power System Plan (“**IPSP**”) outlines programs and policies which “aim to” reduce projected peak demand. This is an extraordinarily low threshold and reduces the Board’s role to one that ensures only that the OPA has tried. In other places on the Issues List, the OPA’s draft questions set a similar low bar, asking only whether the IPSP has a plan or that it assists or that it has developed strategies to achieve certain objectives. This occurs in the OPA’s second proposed issue which purports to copy the language of the Directive, but leaves out the first sentence, which clearly sets out the Government’s actual goal.

CanSIA would propose first that the mandate of the Ontario Energy Board (“**OEB**” or “**Board**”) in reviewing the IPSP and the statutory responsibility of the OPA is higher than that. For example, the Supply Mix Directive sets out that the IPSP must “increase Ontario’s use of renewable energy such as ... solar”. CanSIA submits that the OPA must comply with this Directive and the Board must review the IPSP to ensure that it does. However, the OPA Issues List seems not to accept this level of scrutiny, suggesting that the IPSP is only to be measured against the question of whether its plan “assists” the government in meeting its goal for increased installed capacity of new renewable energy.

Secondly, in order to provide specific guidance as to what is required of the OPA and of intervenors, CanSIA proposes that specific questions be added in respect of the clear directions outlined in the Supply Mix Directive. Proceeding in this fashion will make it clear that more than evidence of the existence of a plan but rather specific evidence, for example, of steps to be taken by the OPA to increase solar power electricity generation is required.

ROLE AND JURISDICTION OF THE ONTARIO ENERGY BOARD

1. What is the scope of the review by the Board of the IPSP?

The OPA argues that, given the “first order” statutory responsibility it exercises in the public interest, both certain substantive issues (such as the responsibility to conduct forecasts and electricity resources adequacy assessments) and certain criteria it uses in assessing the IPSP (such as the environmental performance and societal acceptance components of its Planning Criteria) are outside the scope of OEB review.

See Ex. A/Tab2/Sch. 2/ page 9 and page 18

In support of its position, the OPA uses a restrictive interpretation of “economically prudent” which confuses its use in the context of investment decisions made by certain entities in their own interest with the Board’s statutory obligation to ensure that the IPSP is economically prudent. Arguably, the use of the word “prudent” as opposed to “efficient” broadens the Board’s mandate.

In theory, the OPA’s position could result in certain parts of the IPSP and certain decisions of the OPA regarding the IPSP to be “off-limits” for consideration by the Board. There is no such apparent limitation of the Board’s jurisdiction in section 25.30(4) of the *Electricity Act, 1998* (“Act”). The Board is an expert body whose deliberations will be aided by the hearing process and there is no basis in the legislation which would suggest that characterizing the OPA as a “first order” entity should restrict the Board’s legislated mandate to determine that the OPA has met its statutory responsibility.

For example, CanSIA will be taking the position before the Board that a long-term analysis of the economic and environmental benefits of larger-scale solar generation, solar heating and customer-based solar generation should lead to a greater investment in this technology. Included in CanSIA’s position will be assertions regarding the appropriate weight to be given to environmental and societal factors which it will be argued the Board ought to be able to assess. It will be important to know that these factors are ones that the Board can review.

In any event, whether certain issues and/or analysis is within the scope of the Board’s review of the IPSP is a relevant issue.

2. What standard of review should the OEB apply in reviewing the IPSP and what degree of deference should the decisions of the OPA be shown, and in respect of what issues?

The OPA suggests that the Board owes it a high degree of deference, arguing both for a presumption of prudence for its decisions and the presumption that it has taken relevant considerations into account even if not explicitly addressed. Only in the area of cost-effectiveness is the OPA prepared to admit that it is not owed a high degree of deference by the Board.

See Ex. A/Tab2/Sch. 2/ page 18

For example, the IPSP purports to meet the Directive regarding the use of renewable energy from solar for electricity generation only to 2010 and then includes no incremental generation from solar/photovoltaic after that point. The OPA appears to suggest that its decision to meet the renewable requirement in this fashion should be subject to a high degree of deference as it argues that it has the unfettered scope to decide the issue of how it meets the Directive as long as it takes steps to meet it.

See Ex. A/Tab2/Sch. 2/ page 11

CanSIA takes the position that consideration of how the Directive is met, with respect to the use of renewable resources such as solar, is an appropriate matter for full review by the Board. Section 25.20(4) of the Act is clear that the Board shall review the IPSP to “ensure it complies with any directions” from the Minister. The fact that the OPA has grouped the six points in the Directive into a single category or “Resource Requirement” and then argued that this group is subject to its analysis of “prudence”, should not supplant the Board’s jurisdiction to ensure that the Directive to increase renewable energy generation including from solar is met. The Act makes it clear that the OPA “must follow” the Minister’s directives and the OEB has the obligation to ensure that they do.

Electricity Act, 1998, subsections 25.30(2), (4)

Again, what standard of review should be applied and in respect of what decisions in the IPSP is an issue that the Board will have to decide as a threshold matter.

CONSERVATION

- 3. Has the OPA outlined plans for solar in the IPSP that satisfy the directions issued by the Minister in the Directive that the IPSP should rely on initiatives such as solar heating and small-scale customer-based generation to achieve load reduction?**
- 4. Does the IPSP facilitate the availability and use of solar technology as a component of customer-based generation?**

The Directive clearly establishes that the OPA is required to assume that conservation includes load reduction from solar heating and small-scale customer-based generation. CanSIA submits that the specific mention of solar heating and the fact that among renewable and environmentally prudent forms of customer-based generation solar would rank as very effective and potentially efficient (in residential rooftop, façade and industrial/commercial applications) requires that the IPSP take specific account of and take steps to encourage solar-based technology as a component of load reduction.

The OPA appears to recognize this point as the IPSP highlights that solar technology is an integral component of Ontario’s potential energy sources. However, the IPSP outlines very little proposed effort or investment in either solar heating or in solar technology as a key component of small-scale customer based generation to meet the total peak demand reduction targets.

OPA Exhibit D: *Supply-Renewable Resources*, at pp. 1 (reference to Directive re. conservation)
OPA Exhibit D: *Supply-Renewable Resources and Conservation Resource* sections

Further, CanSIA agrees with the conclusions of the Board's Guidelines for the IPSP review process that the goals of the Directive and hence the IPSP should and do go beyond merely ensuring adequate supply and that a "mandatory portfolio of supply and conservation resources" are included in the Directive.

Ontario Energy Board, *Report of the Board on the Review of, and Filing Guidelines Applicable to, the OPA's IPSP and Procurement Process* (December 27, 2006), p. 4

Given these mandated goals, CanSIA submits that the IPSP has not met the threshold of complying with the Directive by sufficiently incorporating solar technology into its conservation plan and that this is an appropriate issue for the Board to review and decide.

For example, CanSIA estimates that over 47% of Ontario homes have the potential of installing a 3-kW photovoltaic ("PV") array on their roofs and asserts that it is technically feasible now to install over 3,000 MW of PV on single, detached homes in Ontario. Given the right policy conditions the technical potential for PV on all buildings in Ontario is over 14,000 MW by 2025.

CanSIA also estimates that 2,228,000 homes in Ontario have the technical potential to install solar hot water heaters now - this could rise to 4,700,000 home by 2025 with proper community planning. Other nations have shown the large contribution that solar thermal (specifically Solar Domestic Hot Water Heating ("SDHW")) can have on reducing the demand for energy from other sources. Austria (with a population 75% of Ontario and a similar solar resource) for example had installed over 200,000 SDHW on homes by 2004 and the solar heater market is continuing to grow at 20% annually.

CanSIA argues that SDHW is the cheapest source of energy for heating hot water in Ontario and is a key tool to facilitate customer-based generation. The barrier to its deployment is the high upfront cost that the homeowner must bear. Under the conservation goal created by the Supply-Mix Directive, the OPA is required to consider following the lead of other nations and introduce a program to facilitate residential use of solar technologies.

Review of the OPA Supply Mix Advice Report: No Forecast of Sunny Days for Ontario, The Canadian Solar Industries Association, R. McMonagle (V2.1 January 30, 2006), at pp. 2

Furthermore, industrial/commercial applications of solar heating and solar photovoltaic technology comprise an important part of customer-based generation in other countries and other markets. Given the impressive cost performance of solar in the absence of large market uptake and larger scale installations in Canada, the failure of the Plan to outline a sufficient component of solar heating and solar technology as part of a load reduction plan suggests that the IPSP has failed to adequately comply with the Directive.

Canadian Energy Research Institute, *Electricity Generation Technologies: Performance and Cost Characteristics*, Chapter 8, (August 2005), Background Report for the OPA Supply Mix Advice Report

SUPPLY

5. **Has the OPA outlined plans for solar in the IPSP that satisfy directions issued by the Minister in the Directive that the IPSP should increase Ontario's use of solar energy for electricity generation?**
6. **Does the IPSP facilitate the availability and use of solar energy as a component of meeting the Near Term and 2025 Renewable Resources targets?**

Again, the Supply-Mix Directive clearly establishes that the OPA is to increase Ontario's use of solar and other renewable resources as part of its energy generation infrastructure. To 2010, the IPSP outlines 88 MW of committed resources for solar. To 2025, the IPSP outlines no further committed resources; they remain at 88 MW. Moreover, the entire solar energy component is accounted for by procurement contracts previously mandated by the Government outside of the IPSP process. The OPA, despite the further directions issued by the Minister, has no current plans to increase the role of solar energy sources over and above the existing Standard Offer Program.

OPA Exhibit D: *Supply-Renewable Resources*, at pp. 1, 2, 3, 5, 9, 22 and 30
OPA Exhibit D, Tab 5/ Sch.1 at pages 2 and 3.

Report of the Board on the Review of, and Filing Guidelines Applicable to, the OPA's IPSP and Procurement Process (December 27, 2006), at pp. 6

CanSIA acknowledges that the OPA has rhetorically highlighted that solar is an integral component of Ontario's potential energy sources but takes the position that the complete absence of any current plan to increase solar energy electricity generation beyond 88 MW in either the near term or to 2025 does not comply with the Directive.

7. **Is it economically prudent that the IPSP's 2025 Renewable Resources Target does not consider the impact over time of technological improvements, cost reductions, economies of scale and competition effects in assessing how to increase electricity generation from solar sources as mandated by the Directive?**
8. **Did the OPA adequately assess or assess at all other non-quantitative, non-financial, and non-economic factors in its plan for increasing Ontario's use of solar energy for electricity generation?**

CanSIA supports the view that the Board has outlined that in assessing the economic prudence and cost effectiveness of the IPSP, the OPA may also take into account other non-quantitative, non-financial, and non-economic factors in choosing how to achieve the goals set out in the Directive. In addition, CanSIA also supports the contention that the Directive's incorporation of the IPSP regulation permits the Board to review the IPSP for its consideration of environmental externalities.

Report of the Board on the Review of, and Filing Guidelines Applicable to, the OPA's IPSP and Procurement Process (December 27, 2006), at pp. 8 and 9

CanSIA submits that these factors are relevant in determining whether the IPSP has sufficiently taken into account the Minister's directions regarding solar energy. The OPA has acknowledged that "solar technology and associated technologies will continue to improve, and that additional solar resources will arise over the period of the Plan". Nevertheless, the IPSP fails to account for factors such as declining costs of raw materials/production, increased efficiencies due to technological advancements, cost reductions, economies of scale and the effects of competition that have already driven down the cost of solar generation and will continue to do so in the future, with a concomitant increase in demand.

OPA Exhibit D: *Supply-Renewable Resources*, at pp. 23

Experience in other countries supports this view. CanSIA submits that solar electricity (PV) is the fastest growing energy source in the world - with annual growth rates in the range of 25- 35% over the last 10 years. In 2004 there was an installed capacity of over 2,500 MW globally - in Germany alone the market grew by 87% and 360 MW of PV was installed.

Review of the OPA Supply Mix Advice Report: No Forecast of Sunny Days for Ontario, The Canadian Solar Industries Association, R. McMonagle (V2.1 January 30, 2006), at pp. 4

It is not clear that in assessing the role of solar as a component of the IPSP, the OPA sufficiently took account of other non-quantitative, non-financial, and non-economic factors. For example, peak demand load is typically supported by energy sources which are more environmentally problematic than solar. Over the long term, impacts such as these can be part of offsetting any cost-effectiveness of other sources of electricity generation.

PROCUREMENT AND BARRIERS TO IMPLEMENTATION

- 9. Does the OPA procurement plan, including the Standard Offer Program ("SOP") procurement process, sufficiently facilitate the participation of the solar industry in contributing to increasing Ontario's electricity generation from renewable sources and to meet load reduction targets through small-scale customer-based generation?**
- 10. Does the IPSP outline measures to reduce or eliminate barriers to implementation of its existing or proposed procurements?**

CanSIA takes note of the Board's conclusion that it will not assess the economic prudence or cost-effectiveness of the SOP but would suggest that a review of barriers to implementation of the SOP which contributes to either increase renewable resource electricity generation or reduce peak load demand is within an appropriate scope of review. Both the IPSP regulation and the OPA Procurement Process regulation identify factors that would suggest that an analysis of barriers to an effective procurement process are appropriate.

Ontario Regulation 424/04, section 2(1).4, .5, .6

Ontario Regulation 426/04, section 3(2)

CanSIA's members have faced significant impediments to completing projects arising from the actions or inaction of third parties and insufficient resources or planning at the OPA. For example, members have reported difficulties with delays in the approval process at the OPA, with variable interconnection procedures and high and/or unpredictable interconnection costs all resulting in increased development costs.

ONGOING REVIEW

- 11. Does the IPSP provide for an adequate review mechanism of supply targets, conservation measures, procurement processes and the efforts at reducing barriers to implementation for solar PV and solar thermal given its inadequate inclusion in the current Plan and how does it propose to assess solar renewable resources in the future based on the expected future costs, technological advancements, market developments and other economic, non-economic or environmental policies that will impact the cost and viability of solar PV and solar thermal?**

The IPSP assumes the future contribution of certain technologies and initiatives, including solar, based largely on current assumptions regarding cost-effectiveness, performance, and risk. Any ongoing review mechanism should be flexible enough to respond to these factors as they change over time. While CanSIA recognizes that the Plan is to be reviewed every 3 years, there will be a significant bias to the existing plan – which largely excludes solar. Further, significant investments and planning will be commenced in the next 3 years towards important interim targets and goals and in other system resources such as transmission that may preclude or significantly reduce the potential for solar energy development. Flexibility for earlier review and/or an update of the Plan's key assumptions regarding solar energy on a regular basis would be more consistent with meeting the directions of the Minister outlined in the Directive.

Respectfully submitted,

Canadian Solar Industries Association