CanSIA
CANADIAN SOLAR INDUSTRIES ASSOCIATION | L'ASSOCIATION DES INDUSTRIES SOLAIRES DU CANADA

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Russell Andrews, Director, Generation and Transmission Policy, Alberta Energy
Dustin Owens, Director, Engagement and Integration, Alberta Energy
Transmitted electronically to russell.andrews@gov.ab.ca and dustin.owens@gov.ab.ca

July 13, 2017

Dear Mr Andrews and Mr Owens,

RE: CanSIA response to Alberta Energy Community Generation Stakeholder Workbook

The Canadian Solar Industries Association (CanSIA) is the national trade association that represents the solar energy industry throughout Canada. Our vision for electricity in Alberta in 2030 is one with the following four characteristics: i) more energy efficiency, demand-side management and local electricity generation; ii) delivered by a cleaner and smarter grid; with iii) greater choice for consumers; and iv) more resilience to the impacts of climate change.

This letter presents our response to the Community Generation Stakeholder Workbook circulated by Alberta Energy on June 09, 2017. (This content has also been submitted through the on-line survey. Please note there may be stylistic variances between this letter and the on-line response due to character limits).

In preparation for this submission, CanSIA has engaged with and consulted: the solar industry (including companies focused on the Alberta Community Solar market and those with experience and active in other Community Solar markets across North America); Community Energy stakeholders in Alberta and across Canada; and with Alberta's electricity sector (including incumbent generators, retailers and distribution facility operators) over a period of more than six months. Specific activities have included:

- Q4, 2016: "Community Solar & Virtual Net-Metering: Precedents & Regional Compatibility" panel discussion at CanSIA's national annual conference Solar Canada 2016 featuring panelists with Community Solar experience in Nova Scotia, Ontario,

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Alberta and in American States such as California, Massachusetts, New York and Vermont.

- Q1, 2017: Initiation of an Alberta Community Solar Forum to develop positions and recommendations on Community Solar policy, regulatory and program design in preparation for the Alberta Utilities Commission Distribution-Connect Generation Review (proceeding 22534) and the Alberta Energy Community Energy consultation.
- Q2, 2017: A webinar for CanSIA's Policy & Market Development Network entitled "Policy & Regulatory Scan for Community Solar & Virtual Net-Metering in Canada" which presented a jurisdictional scan of Community Solar and an overview of initial feedback received by CanSIA from the Alberta Community Solar Forum on key policy, regulatory and program design issues.
- Q2, 2017: Research and analysis commissioned from Power Advisory LLC a leading North American management consulting firm that specializes in electricity sector matters and solutions on market design considerations to integrate Community Solar into Alberta's electricity market to inform CanSIA's formal submission as an intervenor in proceeding 22534.
- Q2, 2017: Continued engagement with Alberta Community Solar Forum on the Alberta Energy Community Generation Stakeholder Workbook and participation as an intervenor in the oral proceedings for proceeding 22534.

The remainder of this letter presents CanSIA's responses to the questions in the Alberta Energy Community Generation Stakeholder Workbook that have been informed by CanSIA's extensive engagement and consultation process and associated research and analysis as described above. Thank you for the opportunity to participate in this process.

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Definition and Scope

7. Do you agree or disagree with the definitions?

7.1 & 7.2 "Community generation" & "Community-owned":

> **"Community generation" refers to community-owned, distribution-connected generation that generates electricity using exclusively sources of renewable or alternative energy.**
>
> **"Community-owned" means community members hold a majority ownership interest."**

CanSIA believes that the focus of the definition of Community Energy in Alberta should be that: more Albertan Communities are empowered to have the option to choose clean, locally generated electricity supply at a low cost; and those Communities should have the option to invest in and own those generation assets according to their preferences and as appropriate.

CanSIA strongly disagrees with the definitions of "community generation" and "community-owned" as they focus on who owns the asset but not: whether the asset serves a community; whether the asset benefits a community (or communities); nor whether the asset is located in/near a community.

CanSIA believes that distribution-connected solar electricity generation (SDCG) that supplies Communities such as non-market housing, schools and Indigenous communities is aligned with the intent of Community Energy regardless of whether a for-profit, not-for-profit or co-operative corporation holds no, a minority, or a majority interest in the asset.

CanSIA is supportive of Communities who both wish to, and have the financial and technical capability to, own generation assets according to their preferences and as appropriate.

However, CanSIA believes that a requirement for a "majority ownership interest", is not in the best interest of Communities, the Government of Alberta or the Community Energy sector.

i. *Participation is Inequitable: inequitable treatment toward those Communities without capital or access to capital.*
ii. *Community Choice is Limited: limits the ability of Communities to choose 0 – 49% asset ownership if that is their preferred approach.*

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iii. *Risks are Misallocated: ability to have a qualified partner manage development, technological, performance and operating risks removed.*

iv. *Benefits are Minimized: limits ability to leverage capital investment from private sources significantly limiting the contribution of Community Energy to meeting or exceeding Alberta's 30% by 2030 renewable electricity target or will require significant additional public financial support to achieve similar success. There are many ways that communities can benefit from Community Solar beyond a return on equity including: environmental footprint reduction; other financial benefits (i.e. electricity cost management, site leases, property taxes etc) job creation (i.e. operations & maintenance); education (i.e. creation of opportunities within local technical schools to provide hands-on training); and site-reclamation (i.e. reclamation and/or re-purposing of previously disturbed or contaminated sites not suitable for agriculture or other community use).*

v. *Costs are Increased: Many of the entities that would be defined as Communities would have difficulty receiving equity financing early in the development process due to the perceived risk of their creditworthiness. Allowing flexible partnerships with developers ensures that the Partnership can be maximized to capitalize on each entity's strengths and in recognition of the inherent differences of varying Communities.*

7.3 "Distribution-connected"

"Distribution-connected" means connected to the electricity distribution grid.

CanSIA agrees with what we understand to be the intent of this definition, explicitly defining "community-generation" as generation that is local. This definition as written may exclude Community Energy connected to micro-grids.

7. 4 "Renewable or alternative energy"

"Renewable or alternative energy" means electric energy generated from

(i) products having current EcoLogo certification, or

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(ii) solar, wind, hydro, fuel cell, geothermal, biomass or other generation sources, if the greenhouse gas emission intensity of

a. the electric energy produced, or

b. the total energy produced from the simultaneous generation of electric energy and production of thermal energy from the same fuel source is less than or equal to 418 kg CO_2 per MWh. per MWh.

CanSIA strongly disagrees with this definition of "renewable or alternative energy" as we believe the focus of the Community Energy policy and regulatory framework should be non-emitting electricity.

8. Is the definition of "community generation" complete? If not, what additional aspects need to be considered by government when defining community generation? Please explain.

CanSIA believes that the definition should not be considered complete without defining the entities that are eligible to be considered Communities. CanSIA recommends that Alberta Energy consider wording to the effect of the following: "i) Local governments (i.e. aboriginal, rural and urban); ii) Not-for-profit sector (e.g. education, healthcare etc); and iii) Multiple residential and small business electricity customers; (e.g. non-associated or co-operative)".

The Stakeholder Workbook references that entities including "rural and remote communities; First Nations; Métis Settlements; MUSH sector organizations; and community associations or co-operatives" could potentially fall under the definition of Community Generation. The wording recommended by CanSIA above presents broader eligibility than this for: non-profit organizations (i.e. not limited to MUSH, also clubs, societies, or associations that are organized and operated solely for: social welfare; civic improvement; pleasure or recreation; any other purpose except profit); and residential and small business electricity customers who do not incorporate as a co-operative.

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9. Is there an appropriate size limit (in kilowatts or megawatts) for a community generation unit? If so, what should be the size limit or range? Please explain.

No. Further to Response 7.3, CanSIA recommends that there not be an upper size limit for Community Energy. The requirement would be that the facility can be integrated into the distribution system at the point of interconnection (i.e. maximum size is dependant on the "hosting capacity" of the distribution system). This will enable Proponents to determine the optimal size for their system dependent on economies-of-scale, the demand sought to be met and site-based opportunities or constraints. The marginal cost of emissions abatement is lowest for incremental investments to increases facility size.

Furthermore, CanSIA recommends that a minimum size threshold is introduced so that the Micro-Generation Regulation continue to be the primary approach on sites where load is present. CanSIA recommends this minimum threshold to be 150 kW to align with the current division between small (<150 kW) and large (≥150 kW) Micro-generation and with the eligibility for participation in the Capacity Market (subject to Capacity Market design).

While many community generation programs in the United States have maximum facility size thresholds in the range of 1 – 5 MW, implementing such a size limit in Alberta would unnecessarily limit economies-of-scale thus not minimizing unit costs for Communities nor carbon abatement costs for the Carbon Levy.

10. Should a community generation unit be located within a specific proximity to its owner? What would be an appropriate distance and why? Please explain.

No. Further to 7.1 and 7.2, CanSIA does not believe that asset ownership is an appropriate requirement for defining community generation. For this reason, CanSIA understands the intent of the word "owner" in this question to be "electricity off-taker".

CanSIA believes that given the complexity and cost that would be associated with using multiple wires service territories, community generation would trend toward being sited within a single settlement zone. (This boundary would also facilitate a more streamlined approach for Community Solar to receive Distributed Generation Credits).

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However, as the electricity market is currently designed in such a way so as to permit an electricity customer to be the off-taker for the generation of a facility located in a difference settlement zone, this approach should not be disallowed.

Transparency for off-takers as to the location of facility or facilities that they are being served by could be an important aspect for residential consumer protection.

11. Should there be any restrictions or constraints on where a community generation unit can be located? Please explain.

Yes. Restrictions or constraints on siting should be driven by the significance of the facility's potential environmental impact. The potential environmental impact of a solar facility is proportionate to its footprint and the quality and function of the habitat where it is sited on or near. The Wildlife Directive for Solar Energy Projects and municipal land-use planning are the suitable mechanisms for defining the restrictions or constraints where a community generation unit can be located. The Wildlife Directive which is currently in Draft requires clarification for facilities that are between 1 and 10 MW in size. The Directive should be scaled accordingly such that lesser potential impact results in lesser regulatory rigour.

12. Should there be any restrictions on who can own community generation units? If so, should there be a limit in any ownership interest in a community generation project? Please explain.

No. CanSIA believes that there should not be any restriction on who can own community generation units. Please refer to responses 7.1 and 7.2 for a complete rationale.

13. What other considerations should the Government of Alberta take into account in defining community generation?

CanSIA recommends that the definition of Community Energy supports long-term policy stability and predictability which are critical for Alberta's Community and Solar Energy sector(s) to become a central part of the province's electricity supply and no longer remain at the periphery.

<u>Regulatory Aspects</u>

14. Do you think pool participant requirements impact the ability of project owners to own and operate community generation? Please explain.

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CanSIA believes that the impact of pool participant requirements (currently for facilities >5 MW, potentially for facilities >150 kW in future with the introduction of the Capacity Market) on the ability of project owners to own and operate community generation is dependent upon the expertise and capabilities of said project owners and/or the third-parties with whom they partner or sub-contract for this task. Further to CanSIA's responses to 7.1 and 7.2, a flexible ownership structure ensures that each partner in a given project can be optimized to leverage their strengths. Experienced entities will be able to manage the requirements for their partners. Communities who are themselves unable, or who do not wish to partner with experienced entities, to adhere to the pool participant requirements may develop, own and operate facilities under the Micro-Generation regulation.

15. Should Alberta explore ways to ease pool participant requirements for owners of community generation? Please explain.

Given CanSIA's Response 7.1, 7.2 and 14, a flexible ownership structure ensures that each partner in a given project can be optimized to leverage their strengths. Experienced entities will be able to manage the requirements for their partners. For this reason, it would not be necessary to ease pool participant requirements for owners of community generation. Communities who are themselves unable, or who do not wish to partner with experienced entities, to adhere to the pool participant requirements may develop, own and operate facilities under the Micro-Generation regulation.

16. Are changes to the "Must-Offer, Must-Comply Rule" (offer all power not consumed to the electricity system) required to enable growth of community generation in Alberta? If so, what changes are required? Are there any considerations you think the Government of Alberta should take into account?

Given CanSIA's responses to 7.1, 7.2, 14 and 15, a flexible ownership structure ensures that each partner in a given project can be optimized to leverage their strengths. Experienced entities will be able to manage the requirements for their partners. For this reason, it would not be necessary to make changes to the "Must Offer, Must Comply Rule". Communities who are themselves unable, or who do not wish to partner with experienced entities, to adhere to the "Must Offer, Must Comply Rule" may develop, own and operate facilities under the Micro-Generation regulation.

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17. Does the current environmental and regulatory application processes accommodate community generation projects? Please explain. (3000 characters)

Please see the following excerpt from enclosed CanSIA (June 9, 2017) "RE: Review of Draft Wildlife Directive for Alberta Solar Energy Projects":

"*The Directive states that "review by a AEP Wildlife Biologist is not required when solar energy projects are small-scale (i.e. less than 1 MW) or within urban areas" due to "low impacts". CanSIA supports the principle of applying a level of regulatory rigour to facilities that is proportionate to the significance of their potential environmental impact. The extent of the facility's footprint and the quality and function of the habitat are two key considerations in this regard. Under the Alberta Utilities Commission (AUC) Rule 007, "for power plans with a capability of less than 10 megawatts, an application is only required if the applicant does not satisfy the requirements for exemption under Section 13 of the Hydro and Electric Energy Act or sections 18.1 or 18.3 of the Hydro and Electric Energy Regulation". CanSIA recommends that the Draft and Rule 007 are aligned such that facilities that are considered: i) "small-scale" and that are integrated into an existing anthropogenic footprint continue to be subject to less stringent regulation given their lower impact; and ii) "large-scale" continue to be subject to a stringent level of regulation that is based on their potential environmental impact. CanSIA recommends that facilities connected at the transmission voltage level be considered "large-scale". CanSIA recommends that further consultation is undertaken to determine thresholds for facilities at the distribution voltage level to determine the appropriate level of regulatory rigour in response to the facility's footprint and quality and function of the habitat." As such, current environmental and regulatory application processes do not accommodate community generation projects.*

18. Are there other future considerations that should be taken into account in the application process for community generation (for example, land use criteria)?

Please see the following excerpt from enclosed CanSIA (June 9, 2017) "RE: Review of Draft Wildlife Directive for Alberta Solar Energy Projects":

> *"i) The significance of the potential environmental impact of a PV facility is proportionate to its footprint and the quality and function of the habitat on which it is sited on or near. Thus, the Directive should be scaled accordingly such that lesser potential impact results in lesser regulatory rigour.*

ii) Significant environmental impacts on proximal habitats can be negated or minimized where there are existing disturbances or if appropriate mitigative measures are taken. Thus, the Directive should ensure that setback requirements from habitats that are enforced result in reduced environmental impact and are not established arbitrarily.
iii) There is no evidence that PV facilities pose a significant avian mortality risk in Alberta. Thus, an adaptive approach should be taken to post-construction monitoring thereof."

As such, future considerations for the application process for community generation should take these three principles into account.

19. In Alberta, a distributed generator is currently required to pay all incremental interconnection costs as determined by the DFO, including any costs to upgrade the existing distribution grid. Are there any other important considerations that should govern how the costs of community generation projects are allocated? Please explain. Possible examples include: reliable and resilient electricity system; improved environmental performance; reasonable costs to electricity customers; Economic development and job creation.

Under the Micro-Generation Regulation, generators do not pay all incremental interconnection costs as determined by the DFO. CanSIA recommends that Community Energy facilities are responsible for incremental interconnection costs as determined by the DFO and as regulated by the AUC.

20. As the Government of Alberta works to transition to a capacity market, will interim measures related to municipal ownership need to be developed by government to enable community generation in the near term? (300 characters)

As per section 95, part 6 (8) of the Electric Utilities Act (EUA) "no municipality and no subsidiary of a municipality may hold, directly or indirectly, an interest in a generating unit except in accordance with any or all of the provisions" including where generating units are "within the boundaries of the municipality on property of which the municipality or subsidiary is the owner or tenant if a majority of the electric energy produced annually by the unit is used by the municipality or subsidiary on that property".

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CanSIA recommends that the intent of this requirement remain (i.e. the municipality or subsidiary must be the electricity off-taker to hold an interest) but that they may hold, directly or indirectly, an interest in a generating unit less than or equal to a level that meets their annual electricity needs regardless of the location on the generating unit (i.e. whether the unit is sited inside or outside the boundaries of the municipality) and regardless of site ownership (i.e. whether the municipality or subsidiary is the owner or tenant of the site).

21. (Contd. from 20) Please explain your rationale on what changes may or may not be required. (3000 characters)

The changes described in Response 20 will enable Municipalities to overcome "i) Capital restrictions: the capital available to the Individual or Community or their access to finance; ii) Siting restrictions: the suitability of the Individual or Community's building or site or adjacent building or site (including shading, building structural or geo-technical constraints) and/or their right to amend the site (for reasons including whether they own or lease the site); iii) Sizing restrictions: economies-of-scale are limited by the requirement that the Individual or Community size their system such that generation does not exceed their on-site annual demand; and/or iv) A combination of some or all of the above" by participating in CanSIA's proposed "Shared Solar Approach to Enabling Community Solar in Alberta" (please see Response 37).

22. In defining community generation, what considerations should the Government of Alberta take into account to ensure that Indigenous communities will benefit appropriately from community generation projects? (3000 characters)

Flexibility in the ownership structures permitted for facilities to qualify as "community generation" would enable a broader array of Indigenous communities to participate in community generation projects in a greater variety of forms. Capacity to navigate the regulatory process is rare in any Communities that have not previously built any community generation. By permitting Indigenous communities to determine ownership structure for their own community projects, they may have the opportunity to engage with experienced entities that have already navigated the regulatory approval process, thereby facilitating project construction.

Furthermore, and as discussed in Response 7.1 & 7.2, the potential benefits of community generation to Indigenous communities extends beyond a return on equity to include:

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environmental footprint reduction, other financial benefits, job creation; education; and site-reclamation.

23. What measures can the Government of Alberta put in place to assist Indigenous communities with navigating regulatory approval processes for community generation projects? (1500 characters)

Capacity funding has played an important role in other Canadian jurisdictions in enabling Indigenous renewable energy projects. For example, the BC Indigenous Clean Energy Initiative, the BC First Nations Clean Energy Business Fund, and the Ontario Aboriginal Renewable Energy Fund have helped communities to develop renewable energy projects and navigate the approval processes.

24. What measures can the Government of Alberta put in place to assist Indigenous communities with applying for federal and provincial program funding for community generation? (1500 characters)

The province should seek to ensure that Indigenous communities and their partners have adequate access to capital. To this end, a bankable Power Purchase Agreement (PPA) is critical in order to allow participants to raise money and secure debt. In addition, and for example, partners such as non-profits, communities and Indigenous Peoples frequently struggle with access to capital, and typically are not able to secure capital until much later in the development cycle (when project completion is very near certain). The government could help these groups pursue projects early in the development cycle through providing or helping to ensure guarantees or direct loan facilities. Again, qualification would need to be rigorous and would include: a proven and strong equity partner, a project that has a line of site to successful completion, and strong governance within the project entity or beneficiary of the loan or guarantee.

25. Does your organization have any additional comments about supporting the development of community generation in Indigenous communities? (1500 characters)

N/A

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26. As noted above, each DFO has different requirements when connecting generation to the grid. Should certain aspects of the application process be standardized for community generation across different service areas? Please explain. (1500 characters)

Standardization for all solar electricity generation connected at the distribution level should be strived toward including: application forms (as is the case with the Micro-Generation Regulation application form); interconnection studies and/or costs thereof; and approaches to capacity queueing and allocation.

27. Each DFO's terms and conditions of service contain provisions that govern liability and establish insurance requirements for a distributed generator. Is access to appropriate insurance currently a barrier to owning community generation? Are there other barriers from a liability standpoint that need to be addressed? Please explain. (3000 characters)

With respect to insuring the assets and associated third party liabilities, access to insurance should not be a barrier for facilities developed, constructed and operated using best practices and under ownership structures where risks are appropriately allocated.

Under CanSIA's "Shared Solar Approach to Enabling Community Solar in Alberta" (see Response 37), a retailer or the entity fulfilling the retailer function is responsible for procuring enough electricity to meet their off-takers load profile. For this reason, the retailer or the entity fulfilling the retailer function would manage a "failure to supply" situation by procuring electricity from other sources. Insurers are currently not typically providing coverage for damages (i.e. business interruption, spoilage, etc) associated with a failure to supply for generators. This risk is typically offset through proper oversight and asset management.

28. As the sun doesn't always shine and the wind doesn't always blow, should DFOs be required to ensure that communities serviced by community generation continue to receive an uninterrupted supply of power? Please explain. (300 characters)

The AESO is responsible for ensuring the uninterrupted supply of power to all consumers in Alberta. The AESO does this by dispatching all generation supply resources connected to either the Distribution or Transmission system regardless of whether they are variable and non-variable to meet the real-time electricity demand. CanSIA strongly recommends that Community Energy projects are integrated into the system in the same way all resources are connected and

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integrated today regardless of location or ownership structure. This approach is consistent with the requirements of the Electric Utilities Act, the regulatory regime, current energy-only market design and the AESO's Straw Alberta Market proposal for the Capacity Market. Deviating from this approach would require significant changes to the regulatory and market regime, would be time consuming, would create significant risks and costs for communities and developers and would offer arguably no benefit.

DFOs currently have an obligation to serve. As is currently the case, DFOs should be required to ensure that communities within their service territory and who are connected to their distribution network continue to receive an uninterrupted supply of power regardless of whether they are served by community generation or not. Under CanSIA's "Shared Solar Approach to Enabling Community Solar in Alberta" (see Response 37) or the Micro-Generation Regulation this would not represent an excursion from current practices.

Where community generation is connected to the distribution network as part of a micro-grid, visibility and control and cost allocation are important topics to be resolved for this specific new instance.

29. (Contd. from 28) If so, what considerations should the Government take into account to ensure this uninterrupted supply? If not, please explain. (1500 characters)

CanSIA's "Shared Solar Approach to Enabling Community Solar in Alberta" (see Response 37) would result in the associated wires costs being recovered from each participating Community electricity customer. CanSIA recommends that Alberta do not move toward 100% fully fixed-charges for wires cost recovery for the rationale presented in the following excerpt from Regulatory Assistance Program (2015) "Smart Rate Design for a Smart Future"

"Utilities in some parts of the United States are seeking changes to rate design that sharply increase monthly fixed charges, with offsetting reductions to the per-unit price for electricity. This approach deviates from long-established rate design principles holding that only customer-specific costs — those that actually change with the number of customers served — properly belong in fixed monthly fees. They mistakenly use the notion that short-run so-called "fixed" costs should be recovered through fixed charges. As a result, they do not appropriately reflect long-term costs, all of which are variable. The effect of this type of rate design is to sharply increase bills for most apartment dwellers, urban consumers, highly efficient homes, and

customers with DG systems installed, while benefitting high-use larger homes and rural customers with aboveaverage distribution costs. While these rates do provide revenue stability for utilities, there are more appropriate and economically sound approaches that should be used in their stead. The use of these rates risks placing consumers on an ill-advised consumption path, while putting the very viability of the industry in question."

Further information may be found here: http://www.raponline.org/document/download/id/7771

30. (Contd. from 28) If this obligation is implemented, what additional functionality would be needed at the DFO level to ensure and maintain the electricity distribution system in a safe and reliable manner? (4500 characters)

Please refer to enclosed CanSIA (May, 2017) "RE: Evidence Submission (4/4) on "Wires & Wires Owners" to AUC DCG Review (22534)"

<u>Role of the Retailer in Enabling Community Generation</u>

31. Currently, a community that wishes to meets its own electricity needs through a community generation unit would need to retain an electricity retailer or become a self-retailer. This retailer would procure electricity (from the community generation unit) on behalf of the community members and bill the members for electricity and delivery charges. Do you agree or disagree with the above characterization? Please comment.

CanSIA agrees with the above characterization in the circumstance that the Community is not islanded from the distribution network.

For facilities that are not islanded from the distribution network, CanSIA agrees that this is one option. Alternatively, these arrangements could be through the AESO using Net Settlement Instructions which would negate the need to become a self-retailer. It may also be possible to have the Balancing Pool play an intermediary role.

32. Becoming a self-retailer entails a number of obligations. Should a community that becomes a self-retailer for the purposes of meeting its own electricity needs through a community generation unit be subject to the same obligations as industrial/commercial self-retailers? Please explain.

Please see Response 31. Furthermore, a flexible ownership structure ensures that each partner in a given project can be optimized to leverage their strengths. Experienced entities will be able

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to manage the requirements for their partners. Communities who do not wish to partner with experienced entities nor be subject to the same obligations as industrial/commercial self-retailers may develop, own and operate facilities under the Micro-Generation regulation.

33. Currently, customers can choose to purchase their electricity from a competitive retailer or, if they use less than 250 MWh a year, a RRO Provider. Should there be a requirement to purchase retail electricity from a community generation project? Please explain.

The choice to purchase electricity from a competitive retailer is available to electricity customers who are connected to a DFOs distribution network. Electricity customers who are connected to a micro-grid could be subject to the terms and conditions of the micro-grid owner.

34. Should the ability to choose a competitive retailer or a RRO Provider stay in place for communities powered by a community generation project? Please explain.

For an islanded micro-grid community generation project, the ability to choose a competitive retailer would not be present. For a grid-tied micro-grid community generation project, if a Community as an off-taker of a community generation project terminates their contract early to choose a competitive retailer, then would then be subject to the various early termination clauses of their contract but may do so if they wish.

35. (contd. from 34) If this access to choice was curtailed, what mechanisms would be required to ensure that customers face just and reasonable rates? Please explain.

For islanded micro-grid community generation projects, just and reasonable rates may not be regulated.

<u>Program Elements</u>

36. Please provide feedback on the proposed principles.

CanSIA's responses to 36 and 37 are combined herein. In the enclosed CanSIA (May 30, 2017) "RE: Evidence Submission (2/4) on Community Solar to AUC DCG Review (22534)", CanSIA presented: a vision for electricity in Alberta in 2030 with the following four characteristics: i) more energy efficiency, demand-side management and local electricity generation; ii) delivered by a cleaner and smarter grid; with iii) greater choice for consumers; and iv) more resilience to the impacts of climate change. Please continue reading in Response 37.

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37. What other principles should the Government of Alberta consider in designing program(s) to promote community generation?

Continued from Response 36. In that same submission, CanSIA proposed a "Shared Solar Approach to Enabling Community Solar in Alberta" whose design was guided by the following four principles: "i) Broaden Access: enable Individuals and Communities to overcome capital, siting and sizing restrictions so that a larger more diverse group of Albertans can receive the resultant electricity and/or financial benefit from Community Solar; ii) Leverage Consumer Demand: provide Individuals and Communities with avenues to exercise a preference for solar electricity while ensuring that investments in new Community Solar electricity generation capacity responds to and is proportionate with their demand; iii) Integrate into Market Structure: ensure that Community Solar can realize a fair market value for the electricity, system benefits and environmental attributes produced to enable it to become a meaningful part of the electricity supply over time; and iv) Allocate Risks Appropriately: do not require that Individuals and Communities own a majority stake in a generation asset so that facilities can be developed, constructed, owned or operated in partnership between Communities, Public Sector entities and/or Private Sector as each party sees fit."

CanSIA believes that the Proposed Principles presented in the Stakeholder Workbook are not misaligned with this vision and guiding principles with note to the following caveats/exceptions: CanSIA believes that an explicit Principle of Community Energy should be broadening access to clean locally generated electricity to households, small businesses, local governments and not-for-profits; CanSIA believes that the focus of Community Energy should be electricity consumption not generation (please see response 7.1 and 7.2); while emphasis on minimizing cost impacts is important, it should also be noted that Community Energy will bring benefits to wire owners, electricity ratepayers and Alberta taxpayers; while optimal siting can provide grid benefits and incur minimal system upgrades, in instances where a generator pays for said upgrades or where upgrades provide benefit to the system, it is not clear why avoiding system upgrade costs would be a Principle.

38. How can the Government of Alberta support and convey long-term investment certainty to stakeholders? Please explain.

CanSIA's response 38 and 40 are combined herein. As was documented by the AESO (May, 2016) "Renewable Electricity Program Recommendations", there is minimal appetite to invest

in electricity generation assets in Alberta if it is the case that the majority of anticipated revenue streams are merchant. As a result, the "Indexed-REC" was introduced to provide complete revenue certainty for utility-scale electricity generation facilities for a period of twenty years. Therefore, it should not be expected that Community Generation would (or should) assume a higher level of merchant risk than utility-scale nor for a shorter term.

As discussed in the enclosed CanSIA (May 30, 2017) "RE: Evidence Submission (3/4) on Retail & Rate Design to AUC DCG Review (22534)", revised approaches to rate design for: electricity; system benefits; and environmental attributes, are needed to send build signals for SDCG. As the Stakeholder Workbook states that "policies targeting distribution (e.g. distribution tariff design)" are not within the scope of this consultation, this response will focus on electricity and environmental attributes. However, it should be noted that Distributed Generation Credits are an important revenue stream for SDCG.

Distributed Generation Credits aside, in order to determine how to provide Community Energy with complete revenue certainty for the electricity and environmental attributes that it produces over a period of no less than twenty years, two questions need to be answered: with whom does the generator enter into an off-take agreement for the electricity and/or environmental attributes and how are the electricity and environmental attributes paid for? Please continue reading in Response 40.

39. How can the Government of Alberta support different stakeholder groups or sectors whose access to capital, land or technical resources may vary?

In the enclosed CanSIA (May 30, 2017) "RE: Evidence Submission (2/4) on "Community Solar" to AUC DCG Review (22534)", CanSIA proposed a "Shared Solar Approach to Enabling Community Solar in Alberta" whose design is intended to overcome the ways in which the current policy and regulatory framework for Community Solar limits the number of Communities who can receive the resultant electricity and/or financial benefit from Community Solar including: "i) Capital restrictions: the capital available to the Individual or Community or their access to finance; ii) Siting restrictions: the suitability of the Individual or Community's building or site or adjacent building or site (including shading, building structural or geo-technical constraints) and/or their right to amend the site (for reasons including whether they own or lease the site); iii) Sizing restrictions: economies-of-scale are limited by the requirement that the Individual or

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Community size their system such that generation does not exceed their on-site annual demand; and/or iv) A combination of some or all of the above."

As discussed in Response 36, the first guiding principle (i.e. "broaden access") for this approach directly addresses access to capital and the fourth (i.e. "allocate risks appropriately") directly addresses technical resources. The approach is flexibly designed to enable different stakeholder groups or sectors to act independently, or in partnership with others, to advance their projects as they best deem appropriate thus addressing the access to technical resources. Additional support from the Government of Alberta could include financial support for feasibility studies for specific target groups and the development of capacity building or best practices resources.

The province should seek to ensure that partners on community projects have adequate access to capital.

To this end, a bankable Power Purchase Agreement (PPA) is critical in order to allow participants to raise money and secure debt. In addition, for example, partners such as non-profits, communities and Indigenous Peoples frequently struggle with access to capital, and typically are not able to secure capital until much later in the development cycle (when project completion is very near certain). The government could help these groups pursue projects early in the development cycle through providing or helping to ensure guarantees or direct loan facilities. Again, qualification would need to be rigorous and would include: a proven and strong equity partner, a project that has a line of site to successful completion, and strong governance within the project entity or beneficiary of the loan or guarantee.

40. Given a set funding mechanism, what length of time is desired to ensure policy and program certainty to make projects more desirable? Please explain. (1,505 of 3,000 characters)

Continued from Response 38.

Central options for electricity off-taker include the Provincial Government, Crown Corporation or a Regulated Entity (e.g. the Government, Energy Efficiency Alberta, the AESO etc) with revenue certainty provided by the Carbon Levy (i.e. a Contract for Differences with the wholesale market).

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Competitive options for electricity off-taker include a private-sector entity (e.g. existing Retailers and/or new types of entity that fulfill functions similar to a retailer) with revenues certainty provided by Electricity Consumers (i.e. long-term competitive retail contracts).

There are pros and cons to central and competitive off-takers. CanSIA believes that the provision of revenue certainty through contracting electricity with Communities competitively is the optimal approach for Community Energy in Alberta for the reasons described in the enclosed CanSIA (May 30, 2017) "RE: Evidence Submission (2/4) on Community Solar to AUC DCG Review (22534)".

Central options for environmental attributes off-taker include the provincial government with revenue certainty provided by the purchase of SRECs with revenues from the Carbon Levy.

Competitive options for environmental attributes off-taker include Specified Emitters purchasing the environmental attributes for compliance with the Output Based Allocation (i.e. revenue certainty not guaranteed).

In order to provide complete revenue certainty for a period of 20 years, CanSIA believes that the only available option is central off-take paid for by revenues from the Carbon Levy i.e. SRECs purchased at a centrally set price for a fixed term.

41. What is an achievable target (e.g., X MW) for annual incremental increase in community generation? Please explain. (466 of 300 characters)

Under CanSIA's proposed "Shared Solar Approach to Enabling Community Solar in Alberta" market growth is driven by consumer demand. As such, the key limiting factor to market growth of community generation would be Communities willing to be the off-taker from SDCG (assuming that environmental attributes and system benefits can be appropriately monetized). Under this approach, ≥100 MW could be added per year 2020. There is a significant pipeline of facilities in development in Alberta today that would have a Commercial Operation Date(COD) within 6 to 24 months of contracting.

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42. What is the maximum project capacity which should be eligible for program funding (e.g. program cap)? Should the clustering/effective aggregation of smaller generation units be allowed? If so, how? If not, why not? (457 of 4,500 characters)

As discussed in Response 9, CanSIA recommends that the maximum eligible system size is that which can be integrated at the point of interconnection. Limiting system size arbitrarily reduces the economies-of-scale that can be achieved and inhibits system designers from designing their system optimally according to the characteristics of their sites. By enabling sizing flexibility, clustering/effective aggregation would not be an approach that Proponents would pursue.

43. How can the Government of Alberta support different types of technologies (e.g. wind, solar, combined heat and power, biomass)? Should programs remain technology agnostic? If yes, why? If not, why not? (1,457 of 4,500 characters)

Under CanSIA's proposed "Shared Solar Approach to Enabling Community Solar in Alberta", there are three revenue streams: i) electricity; ii) system benefits; and iii) environmental attributes.

The contract price for electricity is set by consumer willingness-to-pay and market-forces, not by the Government of Alberta. If the Government of Alberta is setting contract prices for electricity, CanSIA recommends that it is in part based on the resource or technology's coincidence with wholesale market pricing and that effort is spent to explain why those rates are different to Alberta's non-time responsive rate design (i.e. the RRO).

Rate design for system benefits (i.e. Distributed Generation Credits) are technology agnostic in that they are calculated with reference to the technology or resource's generation profile co-incidence with system peak. In principle, this is a market-based approach and is an efficient way to incentivise the appropriate site of distribution-connected generation irrespective of technology.

Rate design for environmental attributes (i.e. RECs) can be technology agnostic in that each MWh of grid electricity displaced by each said technology or resource is equivalent. In principle, this is a market-based approach and is an efficient way to incentivise a desired outcome of distribution-connected generation (i.e. GHG emissions displacement). As the Carbon Levy revenues may target additional policy objectives, the value of the REC could be tiered for varying

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resources, technologies, scales of generation or community participants as the Government sees fit.

44. What type of assistance would support project start-up and reduce barriers? (3,000 characters)

Under CanSIA's proposed "Shared Solar Approach to Enabling Community Solar in Alberta", the Community would need to enter into a long-term contract in some instances before the facility is in-service. The entity fulfilling the retailer functions could offer incentives for early-adopters or could request deposits to support project start-up. Ontario's Community Power Fund could serve as an example of a program to build capacity within Communities.

45. With program funding or other financial mechanisms, do you foresee additional benefit or additional barriers in considering, for example, the inclusion of production credits or carbon offset credits into the structure? Please explain. (3000 characters)

Further to response 40, CanSIA recommends that the means of program funding delivery is the central purchase of the environmental attributes with revenues from the Carbon Levy (i.e. Renewable Energy Certificates). The reasons for this approach are numerous but include: i) performance incentives are the most efficient means of incentivizing long-term results as opposed to near-term actions; and ii) purchasing environmental attributes addresses a market failure that has historically under-accounted for to cost of GHG emissions and creates a more level playing-field for emitting and non-emitting electricity sources to compete.

46. If the costs of connecting and operating a community generator were paid by all electricity ratepayers, is that sufficient to enable participation or is more direct financial support, such as programming, required? Please explain. (3000 characters)

As discussed in the enclosed CanSIA (May 30, 2017) "RE: Evidence Submission (3/4) on Retail & Rate Design to AUC DCG Review (22534)", revised approaches to rate design for: electricity; system benefits; and environmental attributes, are needed to send build signals for SDCG. In the absence of adequate and certain revenue streams, direct financial support such as programming would be required to enable participation.

CanSIA does not believe that it is appropriate for the cost of connecting and operating large community generators to be paid by all electricity ratepayers.

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47. Should the private sector or industry be eligible to participate if they have already acquired approvals or development permits for their sites? Please explain. (4500 characters)

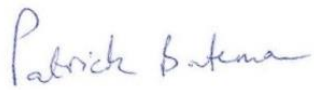
As per several other previous Responses, facilities developed by private sector or industry should be eligible to participate provided that there are Community off-takers for the electricity. A Community way wish to mandate that they be able to own a part of the asset in order to enter into a partnership with said private sector or industry (or not as per their preference).

48. To enable community generation within Alberta, would small to medium pilot projects be a beneficial transition and learning opportunity? Please explain. (4500 characters)

No, this is not necessary with the adoption of flexibility of ownership structure. An added benefit of this structure is that a community could start at a size of their ability and build capacity for future projects, where they may choose a different structure. In addition, Communities may wish to develop, own and operate small and medium projects under the Micro-Generation Regulation.

We look forward to participating in the in-person stakeholder sessions and to responding to additional questions that you may have throughout this process. Thank you for your consideration.

Best regards,



Patrick Bateman

Director of Policy & Market Development

Canadian Solar Industries Association (CanSIA)

CanSIA
CANADIAN SOLAR INDUSTRIES ASSOCIATION | L'ASSOCIATION DES INDUSTRIES SOLAIRES DU CANADA
150 Isabella St., Suite 605, Ottawa, ON, CANADA K1S 1V7 | T 613-736-9077 • TF 1-866-522-6742 • F 613-736-8938 • E info@cansia.ca • www.cansia.ca

CC:

- *Monica Curtis, CEO, Energy Efficiency Alberta*
- *Tim Weis, Special Advisor to the Minister - Climate Change, Environment & Parks*
- *Mike Fernandez, Assistant Deputy Minister, Environment and Parks*
- *Ben Thibault, Ministerial Assistant - Electricity, Energy*
- *Andrew Buffin, Executive Director, Generation and Transmission Branch, Alberta Energy*

Enclosures:

- *"RE: Review of Draft Wildlife Directive for Alberta Solar Energy Projects" (June 9, 2017)*
- *"RE: Evidence Submission (4/4) on "Wires & Wires Owners" to AUC DCG Review (22534)" (May, 2017)*
- *"RE: Evidence Submission (2/4) on Community Solar to AUC DCG Review (22534)" (May 30, 2017)*
- *"RE: Evidence Submission (3/4) on Retail & Rate Design to AUC DCG Review (22534)" (May 30, 2017)*