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August 13, 2019

Wayne MacKenzie  
Alberta Utilities Commission  
1400, 600 Third Avenue S.W.  
Calgary, AB  
T5J 2Y2

**Re: Bulletin 2019-09 – Changes to AUC Rule 007: Solar Glare Assessments**

Dear Mr. MacKenzie,

On behalf of our members, the Canadian Solar Industries Association (“CanSIA”) would like to provide feedback on Bulletin 2019-10 and the proposed changes to *AUC Rule 007: Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments (“Rule 007”)*. In particular, CanSIA would like to specifically comment on Issue #6: Solar Glint and Glare Assessment which, in summary, states that the AUC is considering implementing requirements within Rule 007 related to solar glare for future solar power plant applications in Alberta. As this requirement is atypical in North America, CanSIA has engaged DNV GL, a technical advisory firm with over 30 years’ experience in solar photovoltaic (PV) consulting, to opine on the potential implications associated with this proposed regulatory change and provide guidance to the AUC to effectively address future glint and glare concerns.

**DNV GL’s Assessment**

In DNV GL’s experience working on over 6 GW of solar PV projects in North America, only a small number of local jurisdictions require glint and glare assessments to be completed for solar project developments. At the state/provincial and federal levels, these requirements are limited to solar installations located within the vicinity of airports and air navigation infrastructure. This is largely due to the fact that the relative risk of glint or glare associated with solar projects is low and unsubstantiated through peer reviewed literature.

Solar PV panels are designed to absorb as much sunlight as possible in order to ensure maximum electricity production. Thus, it is in the best interest of the solar panel manufacturer to design a product that minimizes glint and glare through features such as anti-reflective coating, material composition and orientation. In fact, solar PV panels are said to reflect as little as 2% of the sunlight that hits them and are less reflective than characteristics that are often present in the vicinity of solar projects such as bare soil, snow, lake, wetland, window glass, wood shingles and agricultural vegetation.

Furthermore, the results produced by glint and glare assessment models for solar projects are conservative in that they not typically consider existing glare-reducing features such as ground undulation, vegetation (e.g., trees or tall shrubs), structures (i.e. shed, barns) or fencing. Therefore, the amount of glare produced by a solar project and the associated impacts can easily be misconstrued by stakeholders and overstated by those opposed to such projects. It is also important to note here that solar installations with tracking systems are likely to reflect even less sunlight as they have hydraulic or motor driven mechanisms that orient panels in such a way that they are continuously perpendicular to the sun in order to maximizing absorption and further reduce reflection.

**Conclusion and Recommendations**



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In consideration of the above, CanSIA is concerned that the implementation of requirements based on perceived, but unscientific, concerns regarding the health and safety impacts of solar glint and glare will provide an avenue for those opposed to the project to impede the development of solar projects in Alberta. Further, the requirements could raise unnecessary concerns with stakeholders that may not be opposed to the solar project. During a time when both the AUC and the Minister of Red Tape Reduction are engaged in red tape reduction exercises, the introduction of this requirement that has little scientific validity seems counterproductive to streamlining the regulatory approval process. Thus, CanSIA recommends that glint and glare assessment requirements be determined on a case-by-case basis and in consideration of project-specific characteristics such as proximity to an airport or stakeholder complaints.

Thank you for the opportunity once again to provide feedback on the proposed changes to Rule 007. If you have any questions or require further clarification on any of the comments presented within this letter, please do not hesitate to contact me at (613) 736-9077 ext.224 or at [wjohnston@cansia.ca](mailto:wjohnston@cansia.ca)

Regards,

Wes Johnston

President and CEO

Canadian Solar Industries Association/L'Association des Industries Solaires du Canada

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