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## RC\_2008\_31 Capacity credits for solar facilities

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### Submitted by

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### Submission

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#### 1. Please provide your views on the proposal, including any objections or suggested revisions

LGP has reviewed the IMO's Draft Rule Change Report and the submission by Alinta.

We continue to support the Rule Change and the IMO's position on it on the grounds that it removes an existing inequity impeding solar generation in a manner that properly and rationally recognises its contribution to system capacity without diminishing other facilities and technologies.

We reiterate our perception that this proposal removes an inequity whereby solar generation would otherwise be allocated capacity credits significantly below its true contribution. We agree with Alinta's position that this perception is intuitive and that no empirical support for it has not been provided. However, we note that under the existing rules, capacity credits are allocated to renewable/intermittent generators according to their average output, and that solar facilities produce notionally zero output during darkness and operate at full output only during the middle of the day when the sun is high in the sky and is not obscured by clouds. No study is required to 'know' that solar facilities are therefore limited to a maximum certification of around 50% of rated capacity under this approach. Further, it is well established that the annual system peaks occur during the middle of the day, when solar is potentially available at maximum output. The proposal assesses the extent to which this potential availability correlates with the system

peaks by sampling it across the top 250 intervals and then certifying at only the 90% confidence level. We perceive that this approach means that solar generation would be certified according to its indicative historical contribution to system capacity, and thereby would not receive significant preferred treatment. In this respect, solar is arguably the most valuable form of renewable/intermittent technology. This contrasts with wind farms, which are certified at up to around 40% of output despite empirical evidence from System Management that suggests that this figure is far in excess of the actual contribution to system capacity. It is also stated in the industry literature (albeit without substantiation) that a particular significant WA windfarm is estimated to contribute only 5.6% of rated capacity as firm peak capacity.

While LGP would not suggest that the proposed rule should be applied to existing intermittent generators because of the financial impairment that that would cause, we perceive that it must be given consideration by the Renewable Energy Generators Working Group for application to all future renewable/intermittent generation. That is, if only one of the two approaches was to be continued in a scenario of high intermittent penetration, we perceive that it is more likely to be the new approach rather than the current one. On that basis, LGP perceives no need to restrict the proposal to only intermittent solar facilities. We perceive that the new rule is actually onerous for intermittent generators and if they wish to have it applied, they should be free to so elect.

LGP acknowledges that wintertime peaks occur during twilight and darkness, so that solar will not make a significant contribution to them. However, we note that these peaks are of lesser significance than the summer peaks; otherwise, they would be captured in the top 250 intervals. We recognize this as a potential subsidy being provided to solar, but support such a subsidy.

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## **2. Please provide an assessment, whether the change will better facilitate the achievement of the Market Objectives**

LGP supports the IMO's position that the proposal supports market objectives (b) (to encourage competition among generators and retailers and (c), avoiding discrimination against particular energy options and technologies.

We reiterate our perception that this Rule Change is an essential upgrade of the Rules to facilitate utilization of Western Australia's abundant solar resource and thereby enhanced participation in the revised federal Mandatory Renewable Energy Target.

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## **3. Please indicate if the proposed change will have any implications for your organisation, (for example changes to your IT or business systems) and any costs involved**

LGP would incur no organisational costs as a consequence of adopting the change.

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## **4. Please indicate the time required for your organisation to implement the change, should it be accepted as proposed**

LGP would be able to implement this Rule Change immediately.