# Article information:

Energy demand and yield enhancement for roof mounted photovoltaic snow mitigation systems - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0378778822007733>

# Article summary:

1. PV system deployment is limited by lacking structural capacity of existing roofs, but PV snow mitigation systems can reduce heavy snow loads through active snow melting and utilize previously indisposed roof area.

2. The energy consumption and yield enhancement of PV snow mitigation systems were quantified using numerical simulations, with results showing that the energy consumption is <11.8 kWh/m2 and the yield enhancement <3 kWh/m2 per year depending on the climate and melting limit.

3. Actively mitigating snow potentially contributes to increased yield as the snow cover duration on the modules is shortened, but it may reduce profitability compared to ordinary PV systems due to energy usage for reducing snow loads.

# Article rating:

Appears strongly imbalanced: The article is written in a biased or one-sided way, and the information it provides is not trustworthy enough to be considered a reliable source. You should consult other sources to find reliable information on the presented issues.

# Article analysis:

该文章主要探讨了在现有屋顶结构容量不足的情况下，如何通过PV雪防系统来减轻重雪负荷并提高光伏发电系统的产能。然而，该文章存在以下问题：

1. 偏见来源：该文章没有考虑到可能存在的风险和负面影响。例如，使用大量能源来融化雪可能会导致环境污染和能源浪费。

2. 片面报道：该文章只关注了PV雪防系统对光伏发电系统产能的影响，但没有考虑到其他因素对产能的影响，例如天气条件、设备维护等。

3. 无根据的主张：该文章声称PV雪防系统可以解决现有屋顶结构容量不足的问题，但没有提供足够的证据支持这一观点。

4. 缺失的考虑点：该文章没有考虑到PV雪防系统对建筑物结构安全性和稳定性的影响。

5. 所提出主张缺失证据：该文章声称PV雪防系统可以提高光伏发电系统产能，但没有提供足够的证据支持这一观点。

6. 未探索反驳：该文章没有探讨可能存在的反驳观点或争议。

7. 宣传内容：该文章似乎是为了宣传PV雪防系统而写的，缺乏客观性和中立性。

综上所述，该文章存在一些偏见、片面报道、无根据的主张和缺失的考虑点。在未来的研究中，需要更全面地考虑各种因素对光伏发电系统产能的影响，并探讨可能存在的风险和负面影响。

# Topics for further research:

* Environmental impact of snow melting
* Other factors affecting PV system performance
* Evidence supporting the use of PV snow protection systems
* Impact of PV snow protection systems on building safety and stability
* Evidence supporting the claim that PV snow protection systems increase system performance
* Potential counterarguments or controversies surrounding PV snow protection systems

# Report location:

<https://www.fullpicture.app/item/60e1c21dafd39577c280cb578023140a>