SURVIVING THE HURRICANE SEASON: WIND-RESISTANT DESIGN OF SINGLE-AXIS PV TRACKING SYSTEMS

WHY BOTHER?
- 50% of utility-scale PV failure due to weather
- need to protect your investment
- Detailed knowledge of wind loads on solar arrays is key.
- Wind loads comprise not only static, but especially dynamic components: resonance effects may double or triple the static loads!
- For the 1st time ever, we present results of a comprehensive and concise study with a broad range of parameters affecting wind loads on single-axis PV tracking systems.

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PV CLAIMS IN NORTH AMERICA

<table>
<thead>
<tr>
<th>Event</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Breakdown</td>
<td>2.30%</td>
</tr>
<tr>
<td>Lightning</td>
<td>0.50%</td>
</tr>
<tr>
<td>Fire</td>
<td>36.10%</td>
</tr>
<tr>
<td>Electrical Failure</td>
<td>9%</td>
</tr>
<tr>
<td>Weather</td>
<td>49.80%</td>
</tr>
</tbody>
</table>

Data taken from „Crate, Interrupted“ (2016) by GCube Insurance

"KNOWLEDGE IS POWER"
Sir Francis Bacon

Only the combined information makes your system wind-resistant!