



Thin-Film Solar For Buildings: How Ascent Solar Technologies is Changing the Game with Lightweight, Flexible PV

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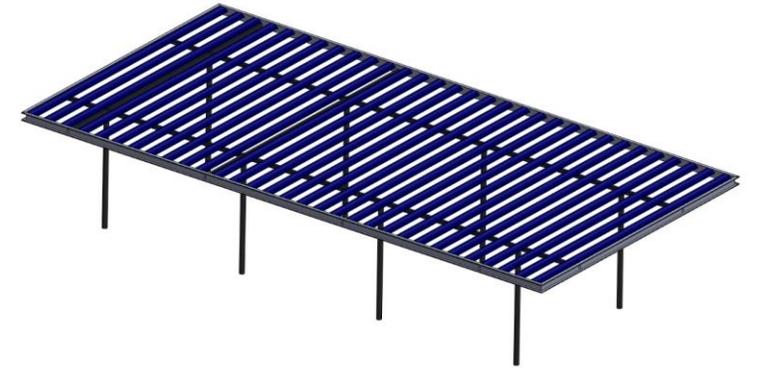
Topics

- Agrivoltaics (AgPV)
- Specialty Building Integration
- Looking forward



Agrivoltaics (AgPV)

- Growing Sector with significant power demands and existing market opportunity
- Dual-use of PV and traditional agriculture increases \$/acre annual yield
- Useful for homes or buildings on smaller-sized farms
- Tertiary benefits of installed systems
 - Water savings due to reduced evaporation
 - Crop Yield increase due to improved growing conditions
 - Stabilized temperatures under PV reducing extreme heat or cold
 - Reduction in “sunburn”
- On site benefits:
 - Access to on site power for water pumps, fans, sensors, lighting, etc.



Specialty Building Integration

- Structural requirements are minimal due to light weight and ease of installation
- Ideal for use in challenging environments:
 - Corrugated metal roofs and other structures that cannot bear weight of traditional panels
 - Isolated and austere locations; island nations and remote outposts where transport of bulky solar technology is not feasible
 - Locations that experience extreme weather events, such as high winds, hurricanes and similar where mobile debris is known to destroy traditional glass-based solar technology

Looking forward

- Thin-film solar is ideal for additional building integration projects that can take advantage of the extreme light weight and ease of installation, specifically existing structures that were not originally designed to handle the weight of a traditional crystalline based solar array.
 - Façade integration
 - Marine Environments
 - Industrial installations; large car lots and storage facilities
 - Large, industrial green house facility integration (existing structures)
 - Large, industrial manufacturing warehouse rooftop integration (existing structures)