



Since 2009 Residential - Commercial - Industrial

# Since 2009

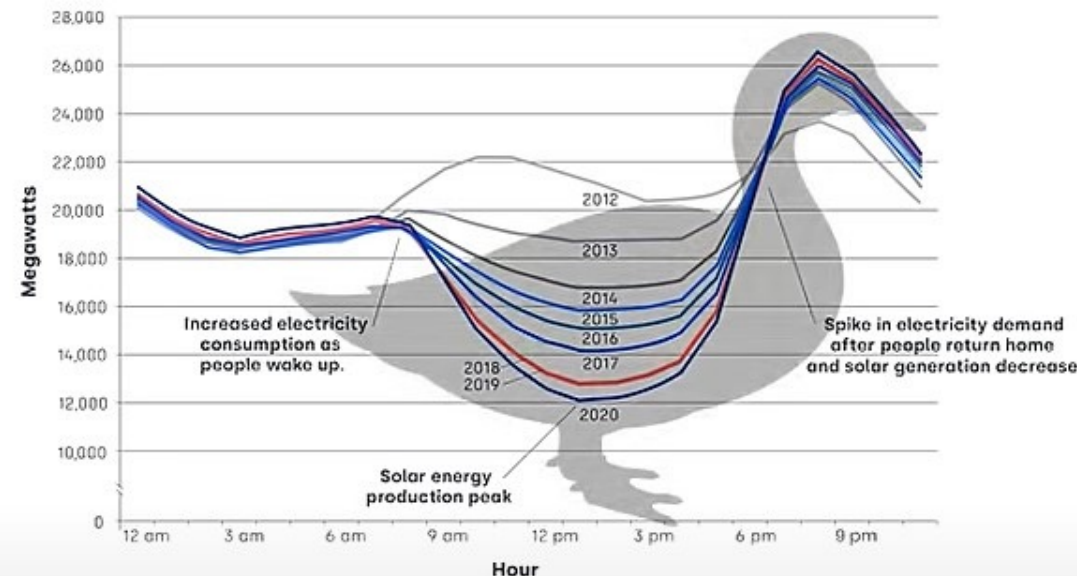
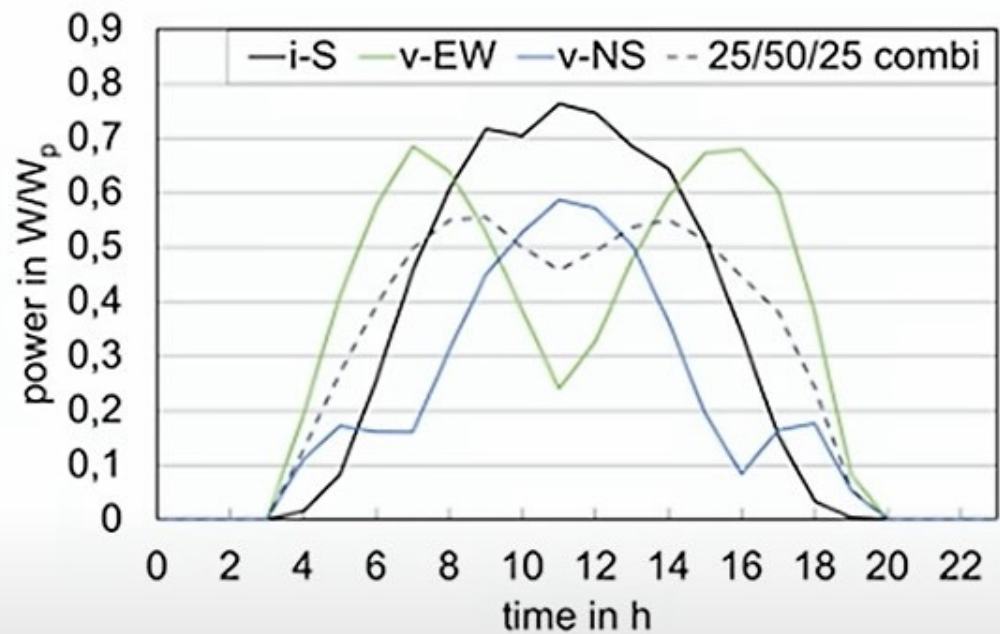
Friday, April 26, 2024



# Installation of a Commercial Solar Power Plant

A simple explanation of grid tied net metering, feed in tariff (FIT) solar systems and battery management systems (BMS).

# Complementary power generation profiles



- Two maximum peaks in the morning and afternoon for vertical east-west modules

**it does fit much more closely with our energy needs than standard horizontal panels do.**

SOURCE: S. Reker, J. Schneider, C. Gerhards *Smart Energy*, Volume 7(2022)

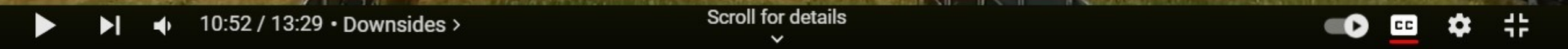
SOURCE: CA

# Have we been doing Solar wrong all along?

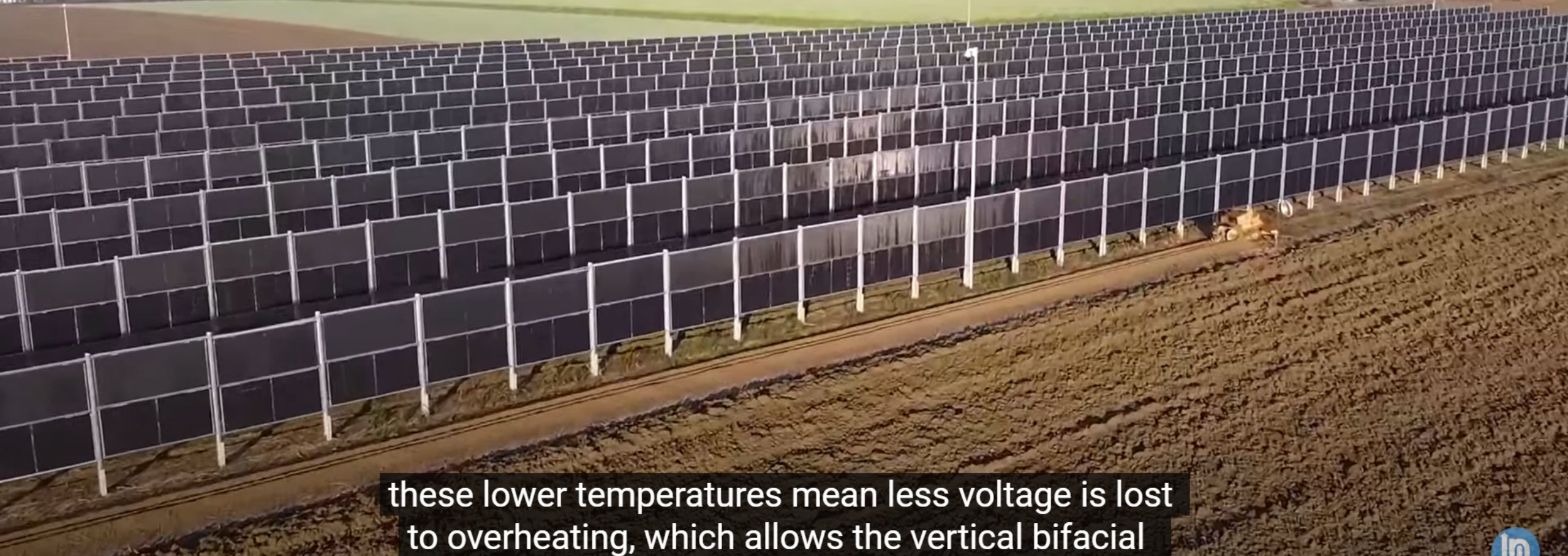


as long as they don't block too much sun. What else likes a lot of sun, but isn't too tall?

SOURCE: Next2Sun



Have we been doing Solar wrong all along?



these lower temperatures mean less voltage is lost to overheating, which allows the vertical bifacial

SOURCE: Next2Sun





Agrivoltaics: Vertical East West Bifacial modules with batteries. This is ideal for maxed out feeders and sub stations from south facing modules.

Flat Roof-no roof penetrations picture!!!

Slip sheets below protects roof, solar system rated to 130 MPH.

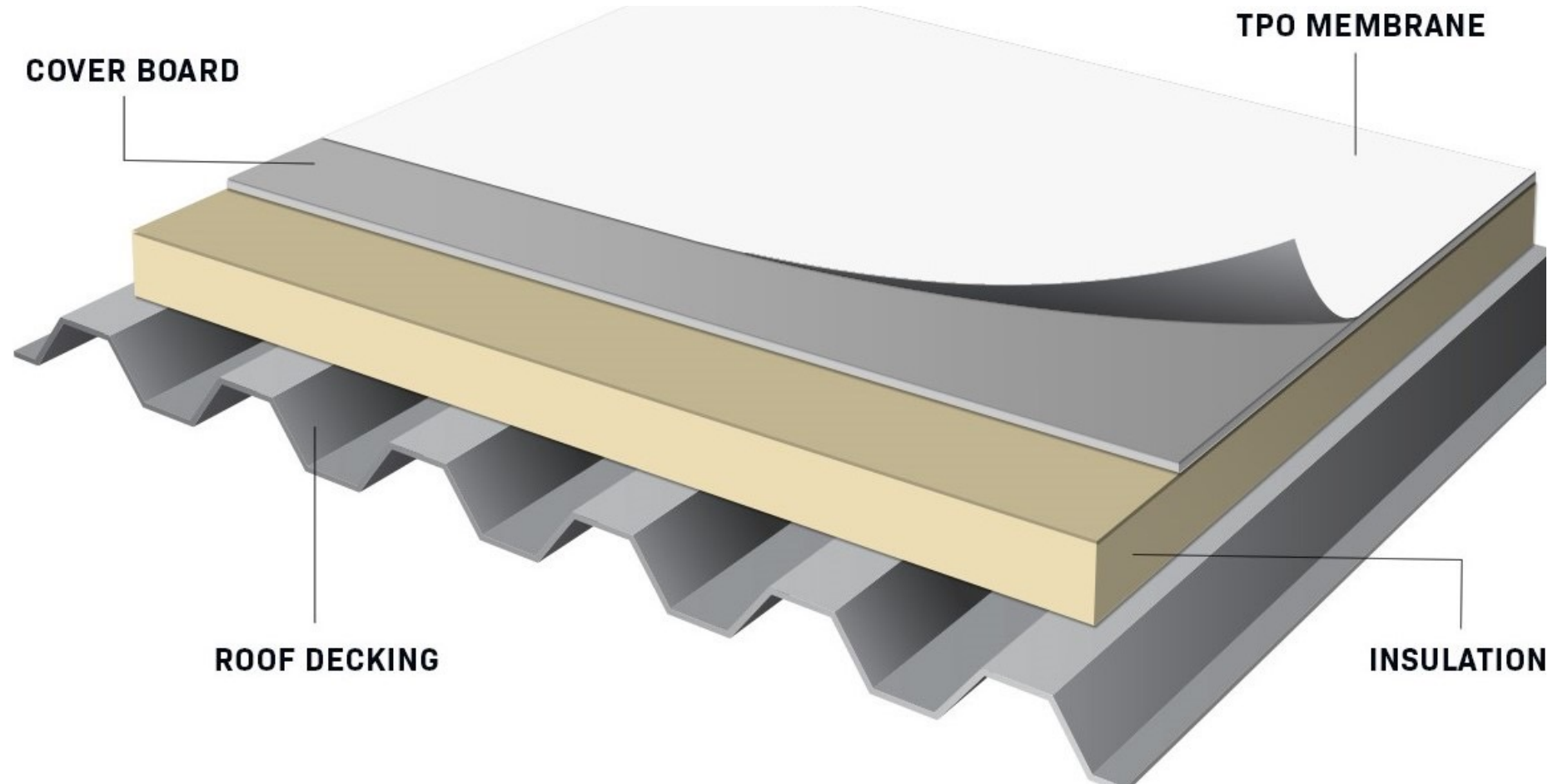


1. Hybrid Solar on a Flat Roof with Bifacial Modules (25% more power).
  2. Minimal roof penetrations with ballast.
  3. The roof becomes part of the solar system and qualifies for the 30% ITC.
  4. System rated to 130 mph
  5. No leaves will accumulate under modules reducing the risk of a fire and clogged roof drains .
- 



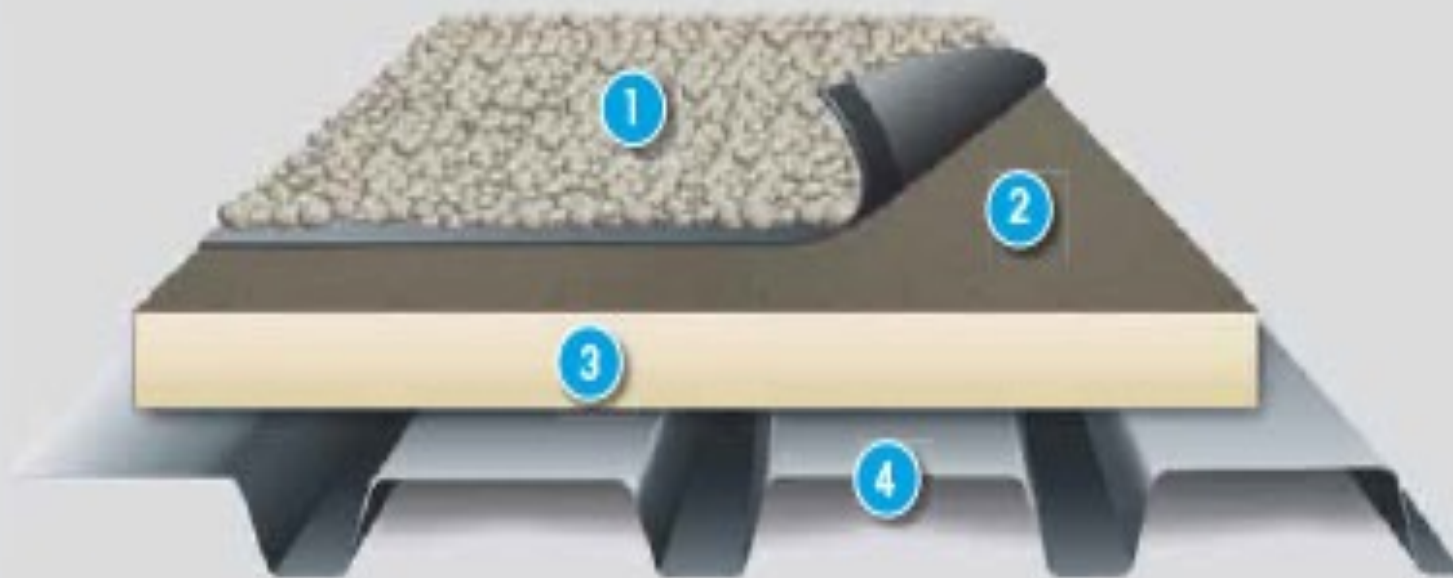


Thermoplastic polyolefin(TPO) roof. High density board (cover board) adds life to the roof. TPO is many times stronger and durable than a rubber roof (EPDM). New white roofs with bifacial modules qualify for a 30% Investment Tax Credit.



EPDM Ballast roof system removed.

Roof will support additional four to six pound per square foot or ballast solar system when stones are removed.




### Typical Application

- 1 Approved Ballast
- 2 VersiGard® EPDM Membrane with QAT
- 3 Acceptable Insulation
- 4 Approved Roof Deck

Ballasts non penetrating system (no roof penetration) adds an additional four to six pound per square foot to roof.





Modules are  
at a low  
angle of  
inclination  
(10 degrees)

# Ballast Mount Solar in RI using Solar Edge with multiple RTU's



Hybrid racking (ballast and minimal with OMG roof penetrations) with bifacial modules





Hybrid racking provides more sunlight for Bifacial Modules.  
Easy access to power optimizers and wire connections. No areas for leaves to accumulate.

