



# Photovoltaics and Embodied Carbon Emissions

Opportunities For Additional GHG Emissions Reductions



# Ultra Low Carbon Solar – The What

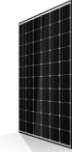
- Solar photovoltaic (PV) is the fastest growing global energy source.
- Not all PV is created equal – embodied carbon can be 50% different.



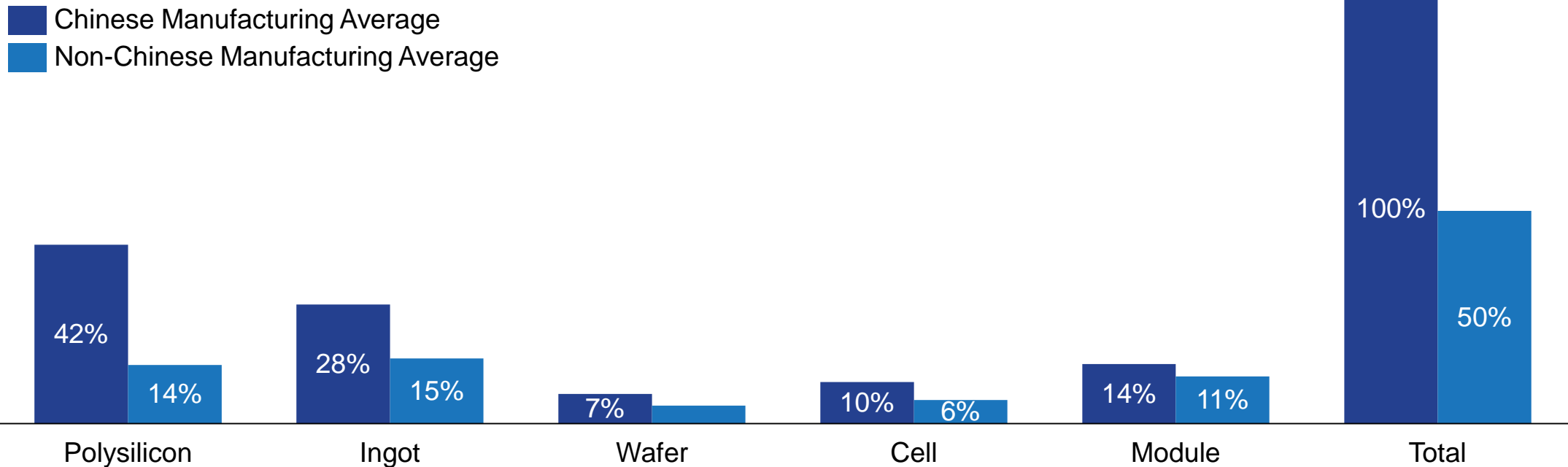
## Ultra Low Carbon Solar Delivers:

- ✓ Low carbon polysilicon
- ✓ No added cost
- ✓ Tier 1 panel technology
- ✓ US Polysilicon
- ✓ Support local economy

# Solar PV Supply Chain Embodied Carbon



% Of Embodied GHG Emissions  
In Finished Module



# How Much Better is Low-Carbon PV?

430,000 tonnes of Supply Chain Emissions Avoided through Ultra Low-Carbon Solar for a 100MW Project!

That's Equal to:



Not burning 473 million pounds of coal!



Replacing 7,000 Gas Powered Cars with EVs!



<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>  
Yue, You, Darling, Life cycle energy and environmental comparative analysis  
Auto emissions values for CA from DOE Vehicle Technologies Office, 15 year vehicle life.

# Ultra Low Carbon Solar Collaboration



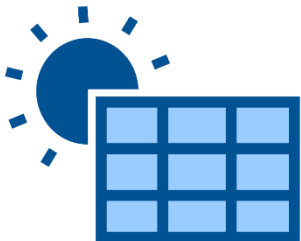
Request ultra low carbon panels early in the RFP process



Educate developers on merits of low carbon panel sourcing



Low-carbon panels achieve scope 3 emissions reduction



Achieve acceleration of climate goal AND support the local economy!