

Policy Needs to Keep Up in the Shift to Renewable Energy

Presented By:

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8 of 12

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Requirements for Subsidized Solar Loan in DE

Green Grant Delaware

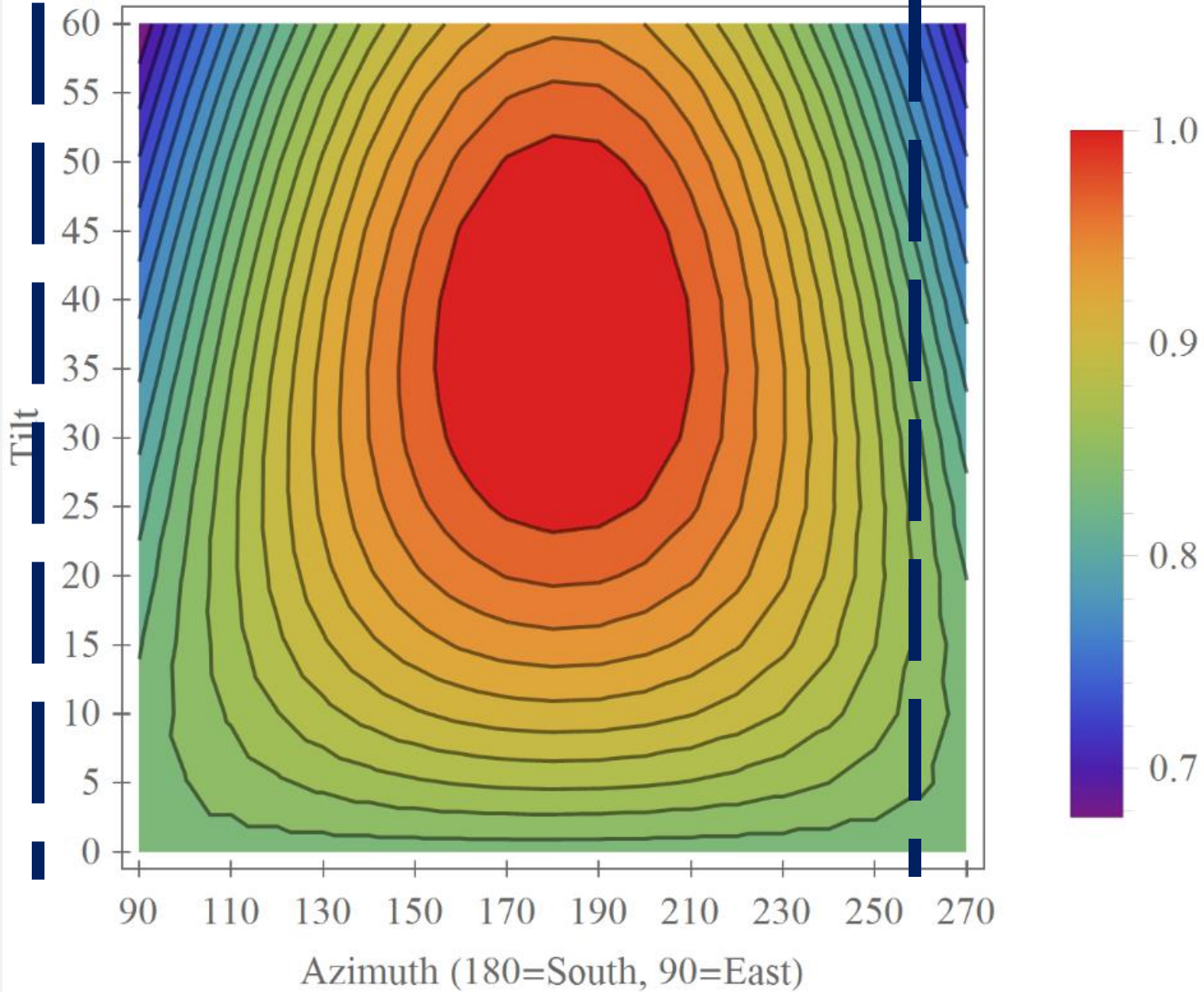


- Optimum array orientation is 180° . The program accepts solar arrays oriented between South of due East and South of due West or between 80° and 260° magnetic. Systems installed between 260° and 80° magnetic or North of due East and North of due West are not eligible for a Green Energy Program Grant.
- Optimum array tilt is equal to the latitude at the installation site. However, the program accepts array tilt parameters as specified by the module manufacturer which may allow for tilts greater than and less than latitude.

<http://greengrantdelaware.com/energize-delaware/>



DELAWARE TECH



Energy
Production
Fraction as a
Function of
Tilt/Azimuth
of a Solar
Array

Complex Rate Structure

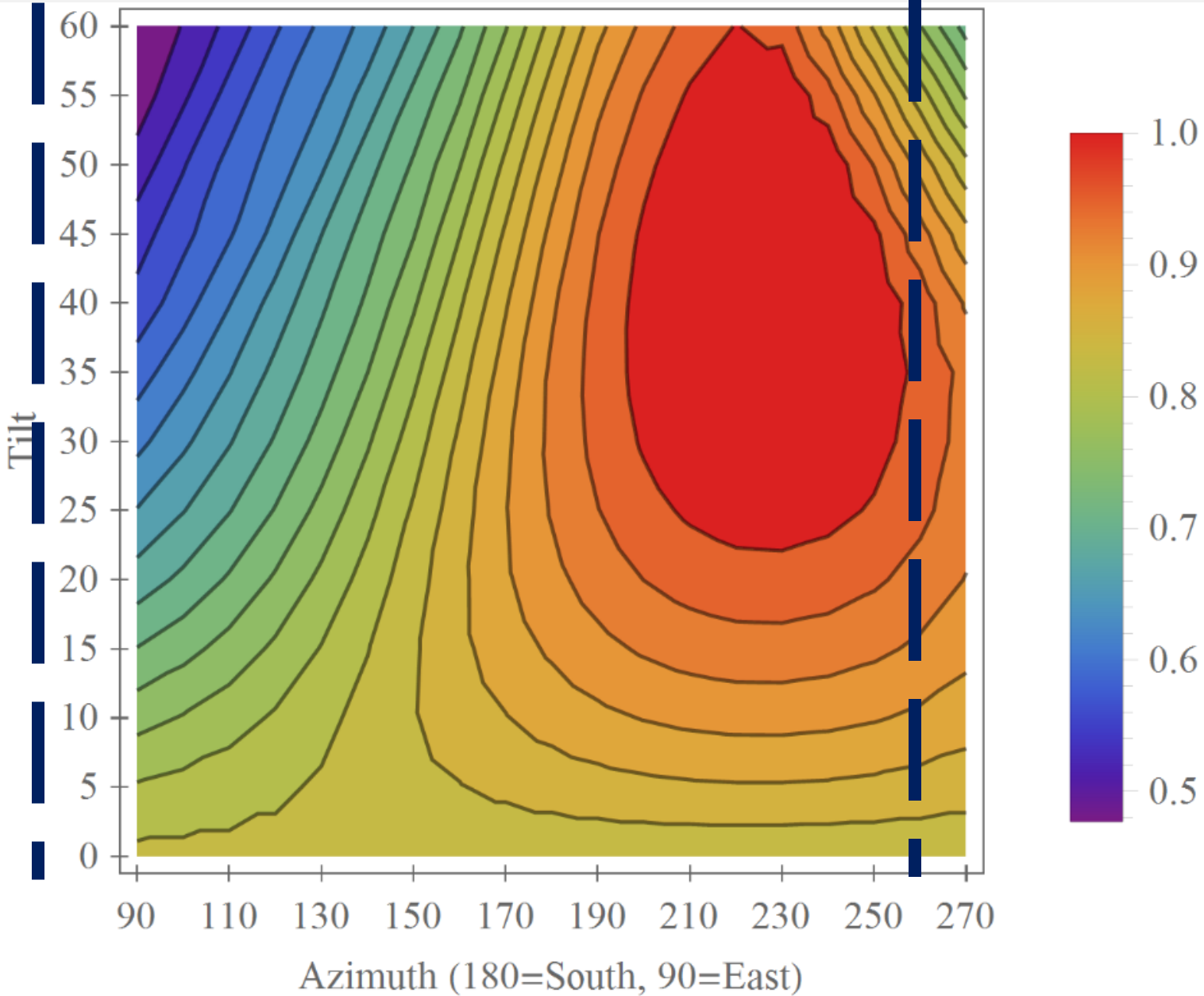
	Summer Demand Charges (\$/kw)	Winter Demand Charges (\$/kw)	On Peak Energy Charges (\$/kwh)	Off Peak Energy Charges (\$/kwh)
DE LGS-S Rate Structure	Summer: \$18.13	Winter: \$13.89	Summer:\$0.055 Winter:\$0.063	Summer:\$0.039 Winter:\$0.045

Note: When Eastern Standard Time is in effect the peak hours are from 6am-10pm, and when Eastern Daylight Savings Time is in effect the peak hours are from 9am-10pm.

When does the peak for a school usually occur? Where is the sun generally at that time?

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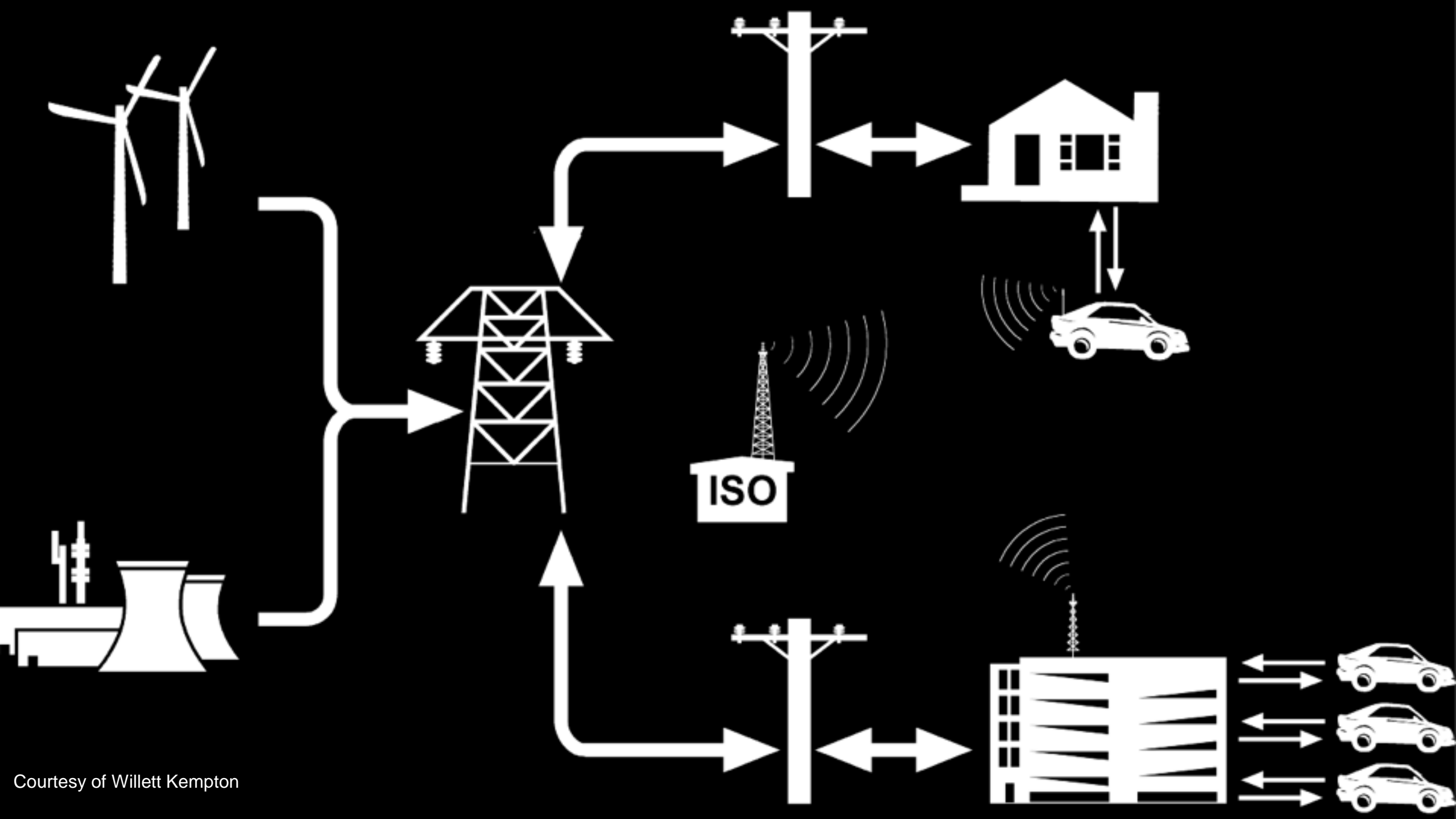


Revenue Generation Fraction as a Function of Tilt/Azimuth of a Solar Array

Note: Data for a school in Delaware on the LGS-S tariff with a 300kW solar array

Tilt/Azimuth	Generation Fraction	Revenue Fraction
40°/180°	100%	91%
40°/230°	93%	100%
40°/130°	91%	70%

Energy generation (or savings) can never be a proxy for revenue.



Courtesy of Willett Kempton

	Summer Demand Charges (\$/kw)	Winter Demand Charges (\$/kw)	On Peak Energy Charges (\$/kwh)	Off Peak Energy Charges (\$/kwh)
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Bold Prediction: In the future, time of use rates will be required and will change depending on the sun and wind forecasts/conditions.

We need to shift our thinking from simply incentivizing renewable energy generation.

Thank you!

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