

## Comments for Oregon Solar Energy Code

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System setback requirements have a disproportionate impact on residential installers working with roof space that is already limited by orientation, shading, and building structure (gables, chimneys, vents).



Example: small home with 30' x 17' south-facing roof.

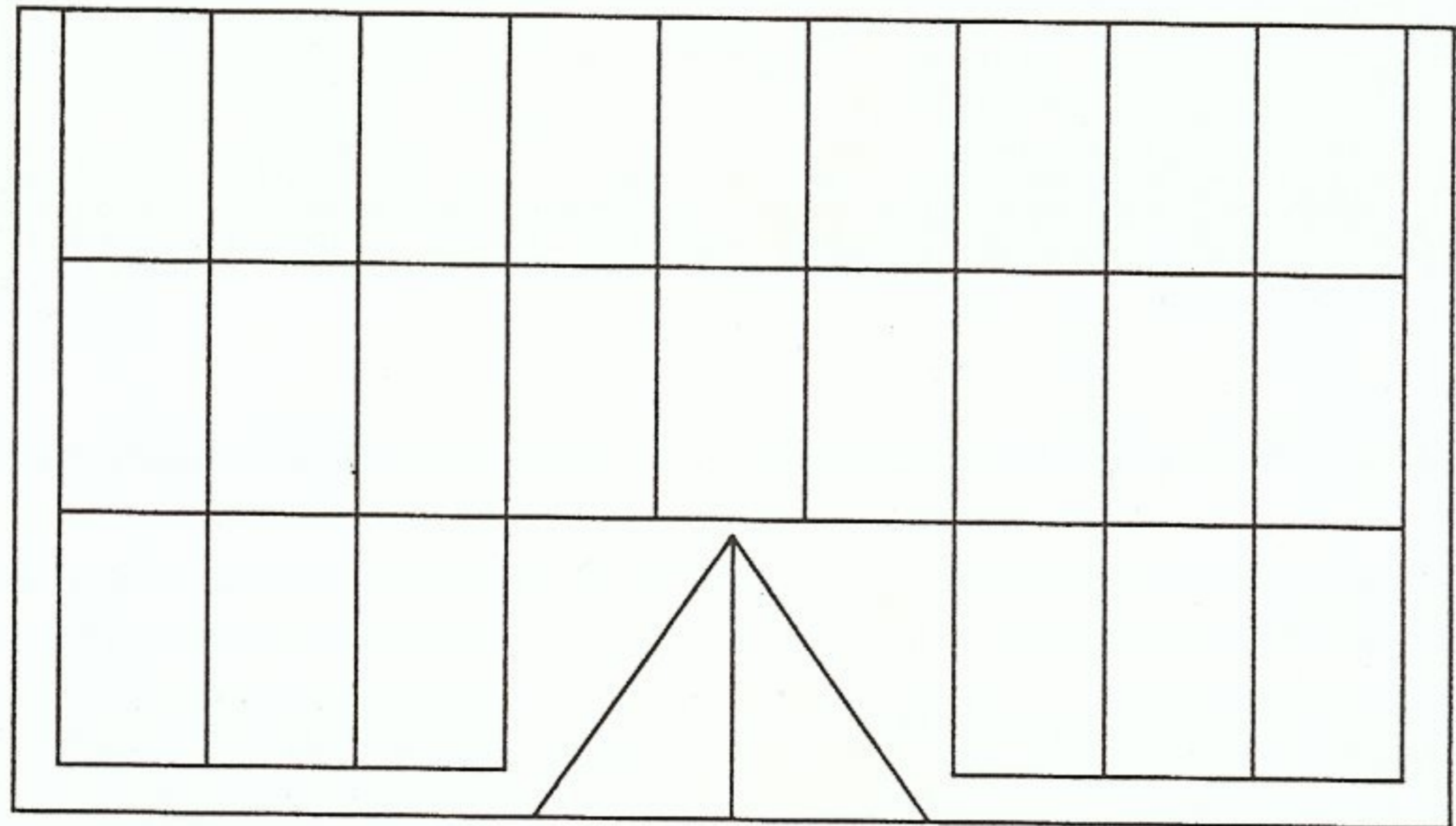
**Figure 1.**

Maximum potential capacity without setback:

**5.5 kW**

24 X 230 W modules

~6000 kWh/yr



**Figure 2.**

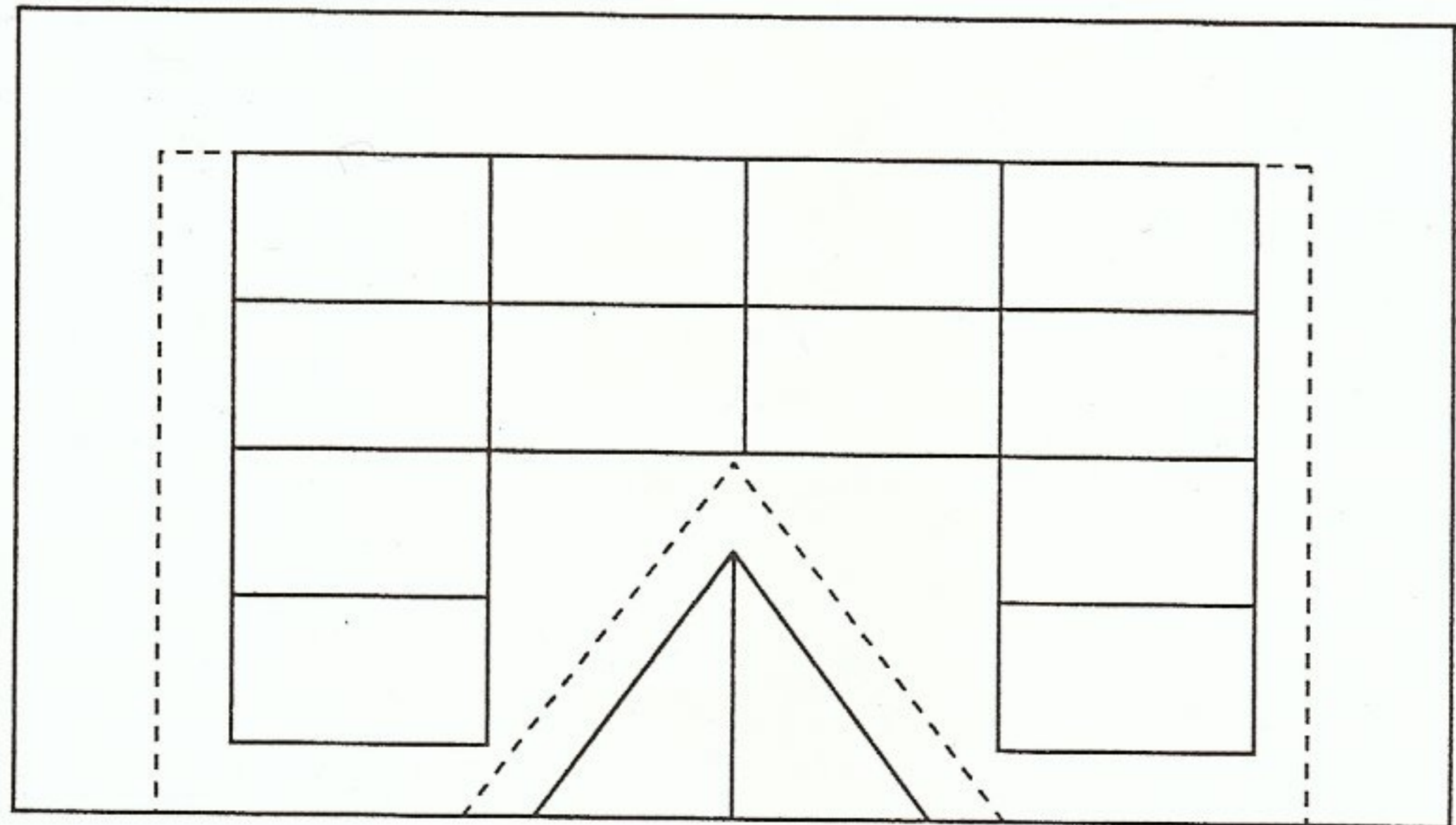
With proposed 3' setback:

**2.5 kW**

11 X 230 W modules

~2700 kWh/yr

*55% reduction in output*



**Figure 3.**

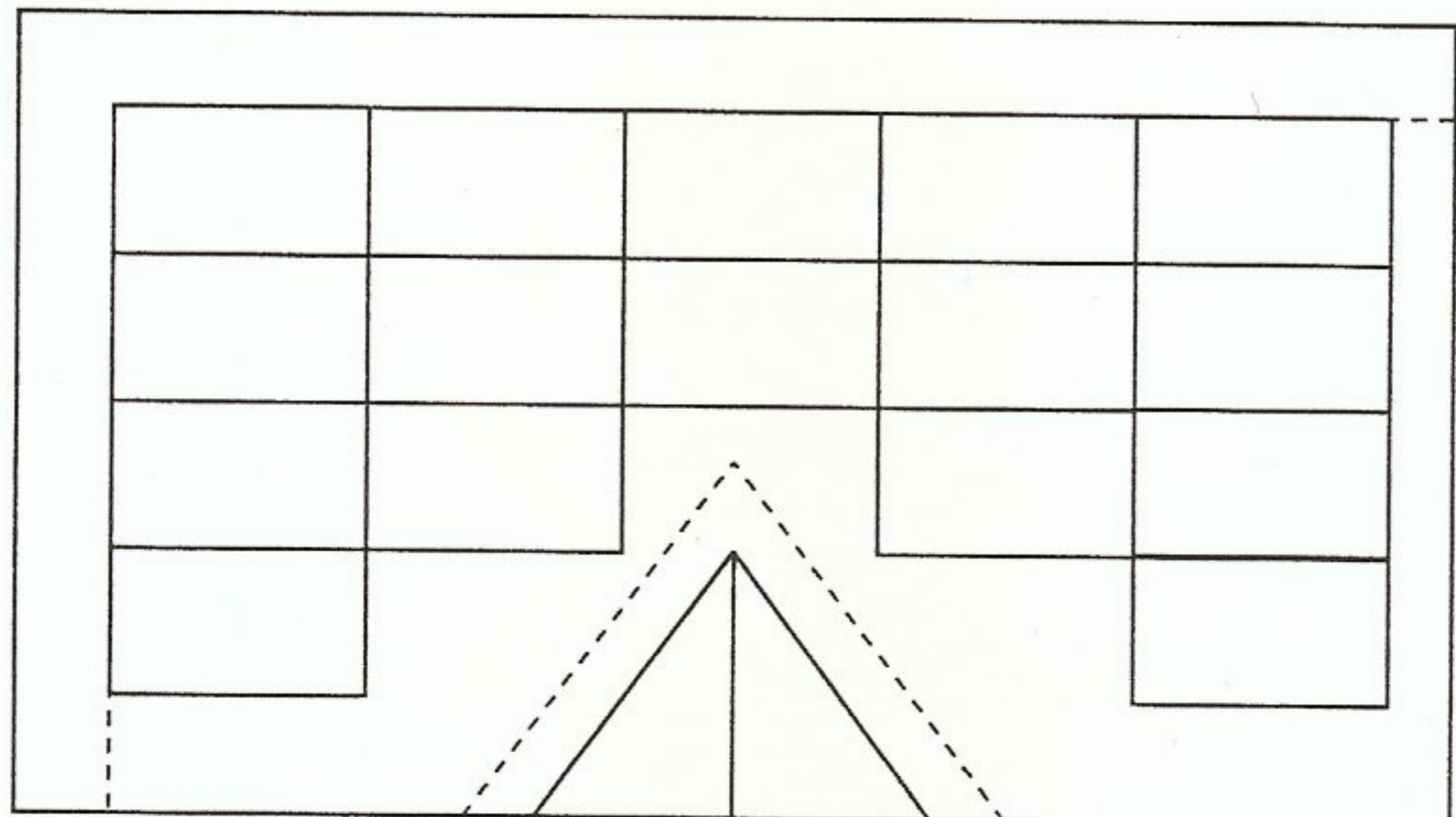
With 2' setback from ridgeline and one edge:

**3.7 kW**

16 x 230 W modules

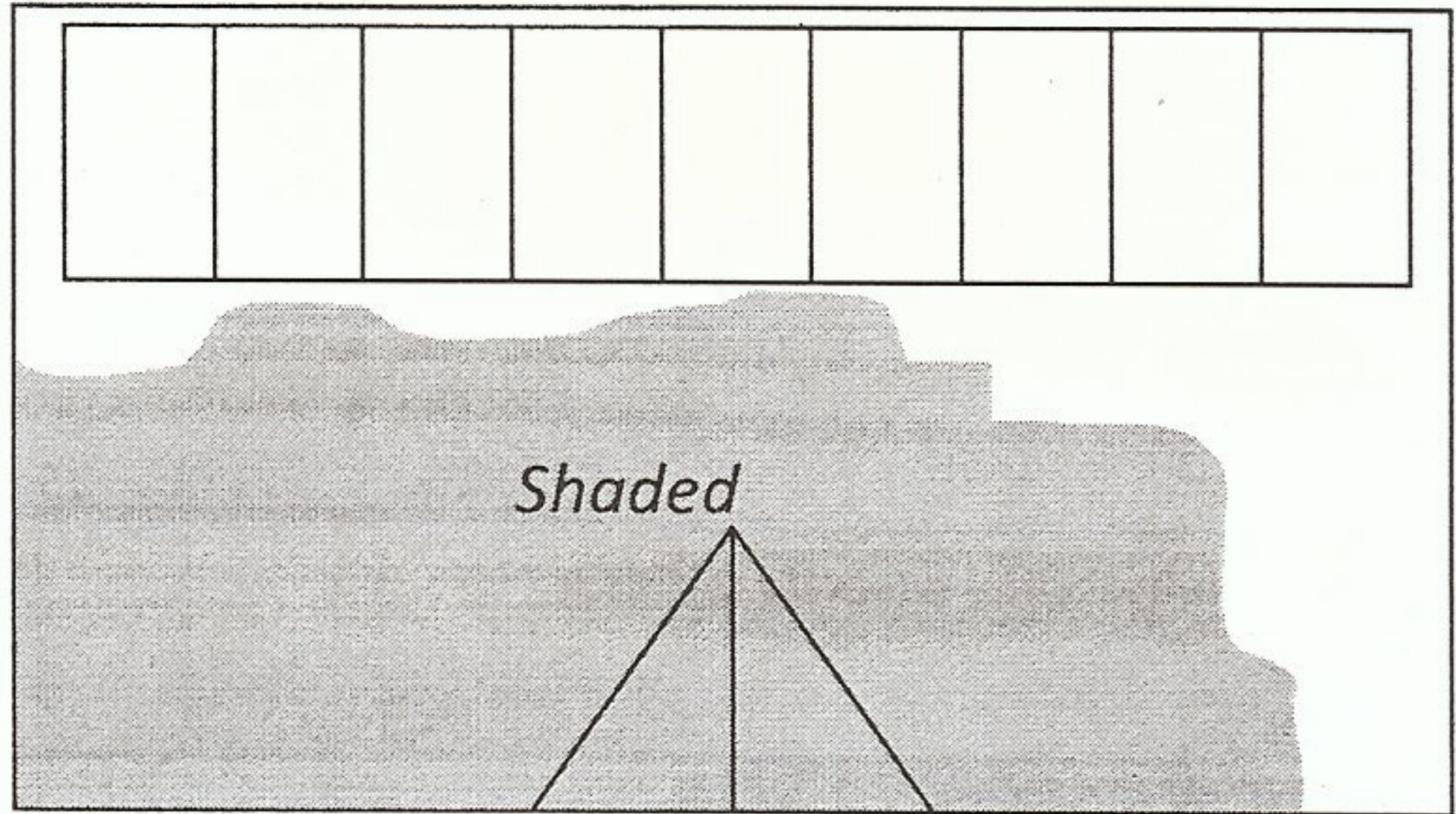
~4000 kWh/yr

*33% reduction in output*

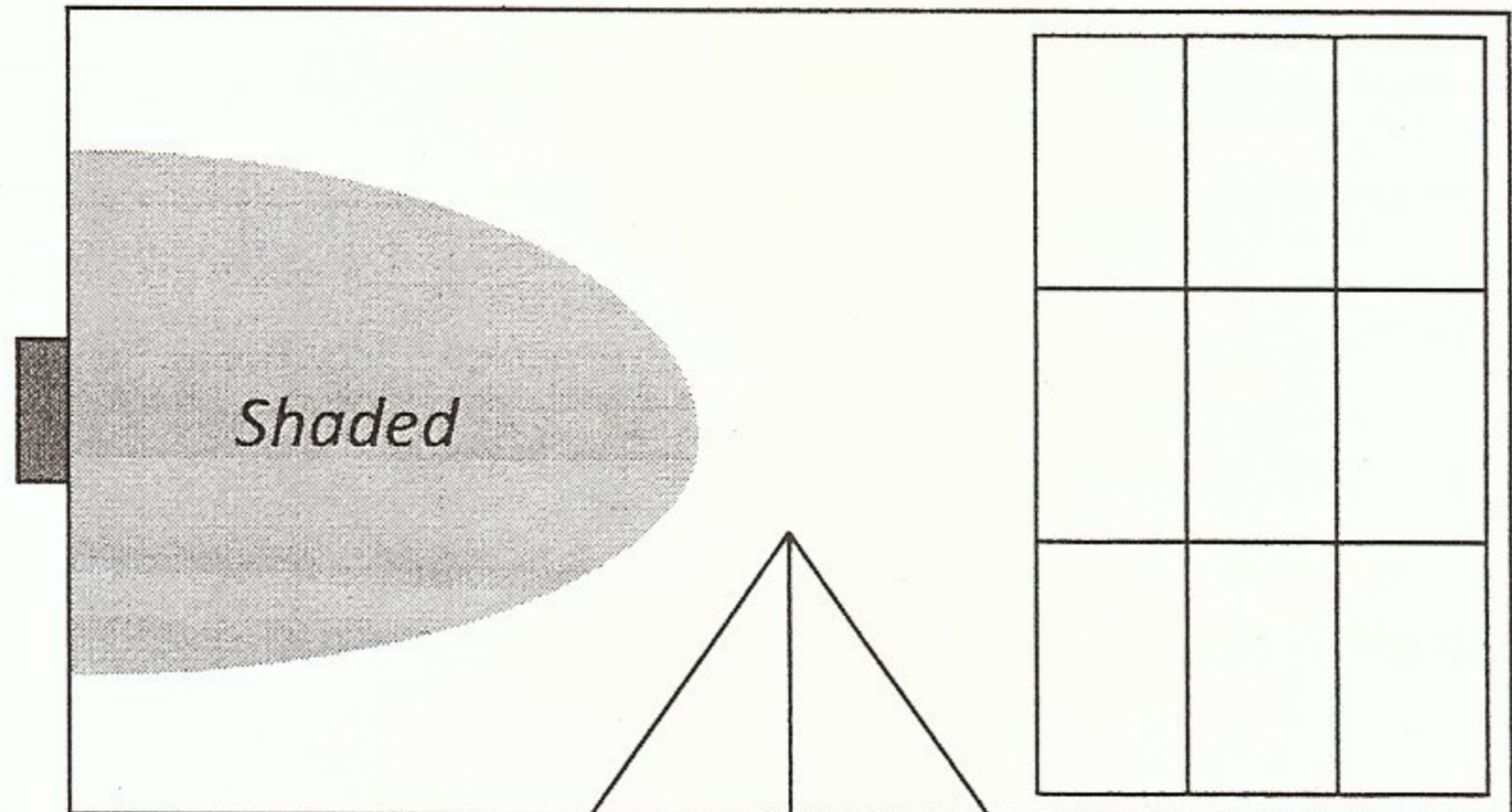


Even for small systems—where the majority of the roof remains uncovered and accessible—setbacks limit design options that allow installers to minimize shading impacts and maximize performance. Under the new feed-in tariff incentive structure, performance is critical to the customer’s payback on investment.

**Figure 4.**  
2 kW system with tree shading on lower half of roof.



**Figure 5.**  
2 kW system with shading on west side of roof from a chimney.



In areas with higher snow load, Energy Trust has traditionally asked that systems be installed at the ridgeline to prevent ice dams and costly damage to the home. As an alternative, the use of ice flashing adds material and labor costs to the system.