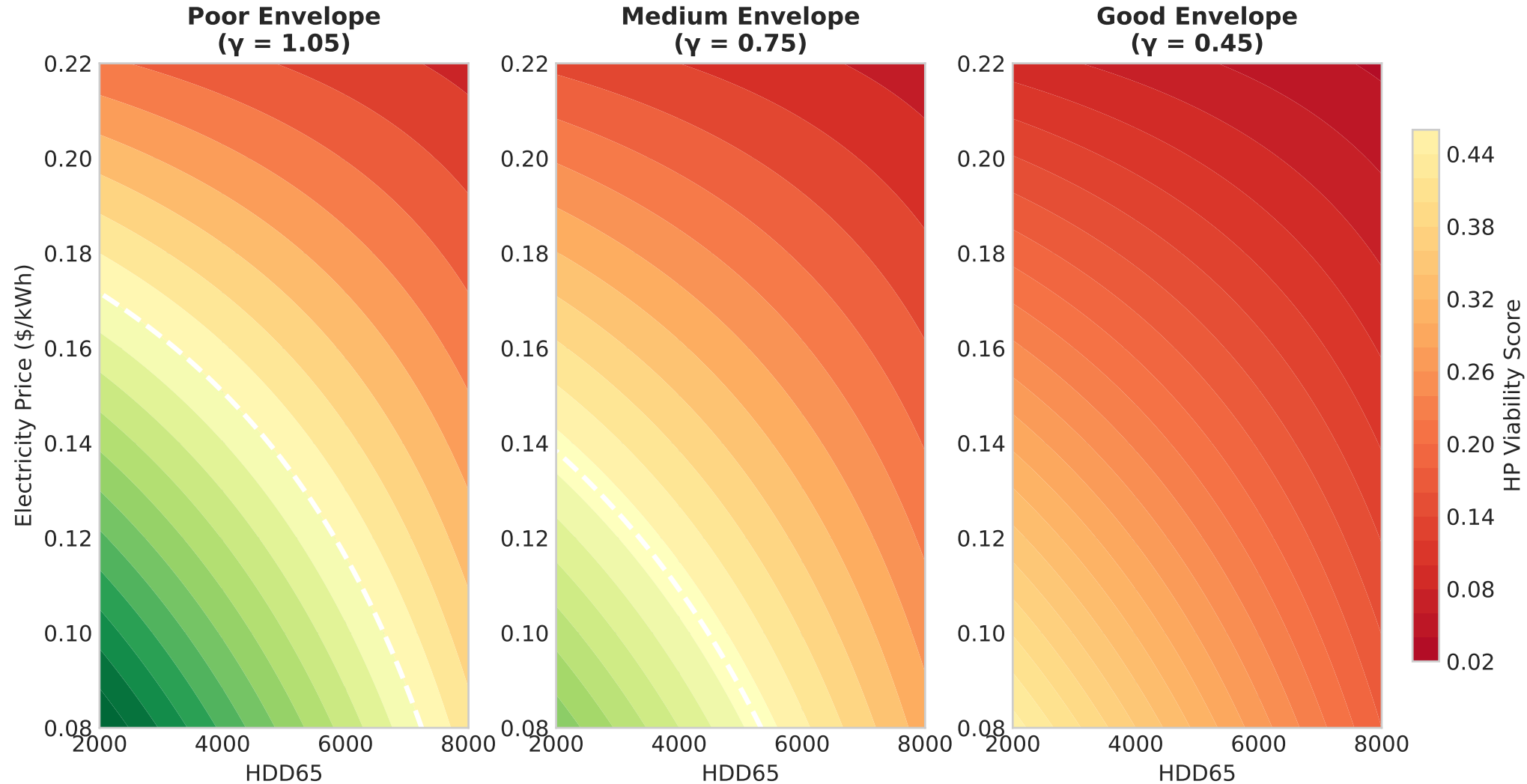


Figure 9: Heat Pump Viability Score by Climate, Price, and Envelope Class



HP Viability Score (V)

$$V = (1 - \alpha \cdot H^*) \times (1 - \beta \cdot P^*) \times \gamma$$

Where:

$$H^* = (\text{HDD} - 2000) / 6000$$

$$P^* = (\text{price} - 0.08) / 0.14$$

$$\alpha = 0.6 \text{ (climate weight)}$$

$$\beta = 0.8 \text{ (price weight)}$$

$$\gamma = \text{envelope factor}$$

Interpretation:

$V > 0.5 \rightarrow$ Viable (green)

$V \approx 0.5 \rightarrow$ Conditional

$V < 0.5 \rightarrow$ Low (red)

White dashed line = $V = 0.5$
(Tipping point boundary)