

Retrofitting Fume Hoods

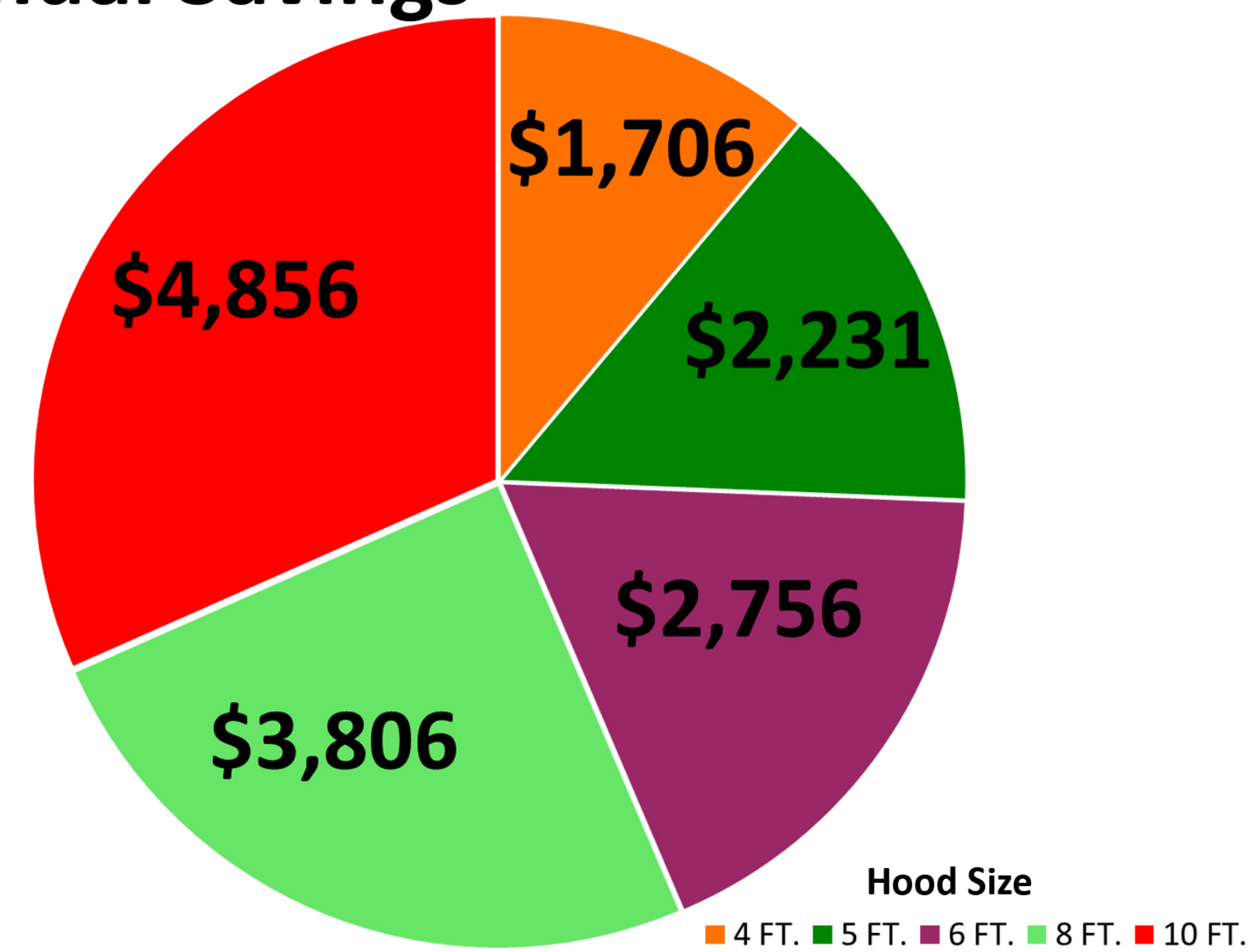
Energy reduction through optimization



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OPTIMIZE

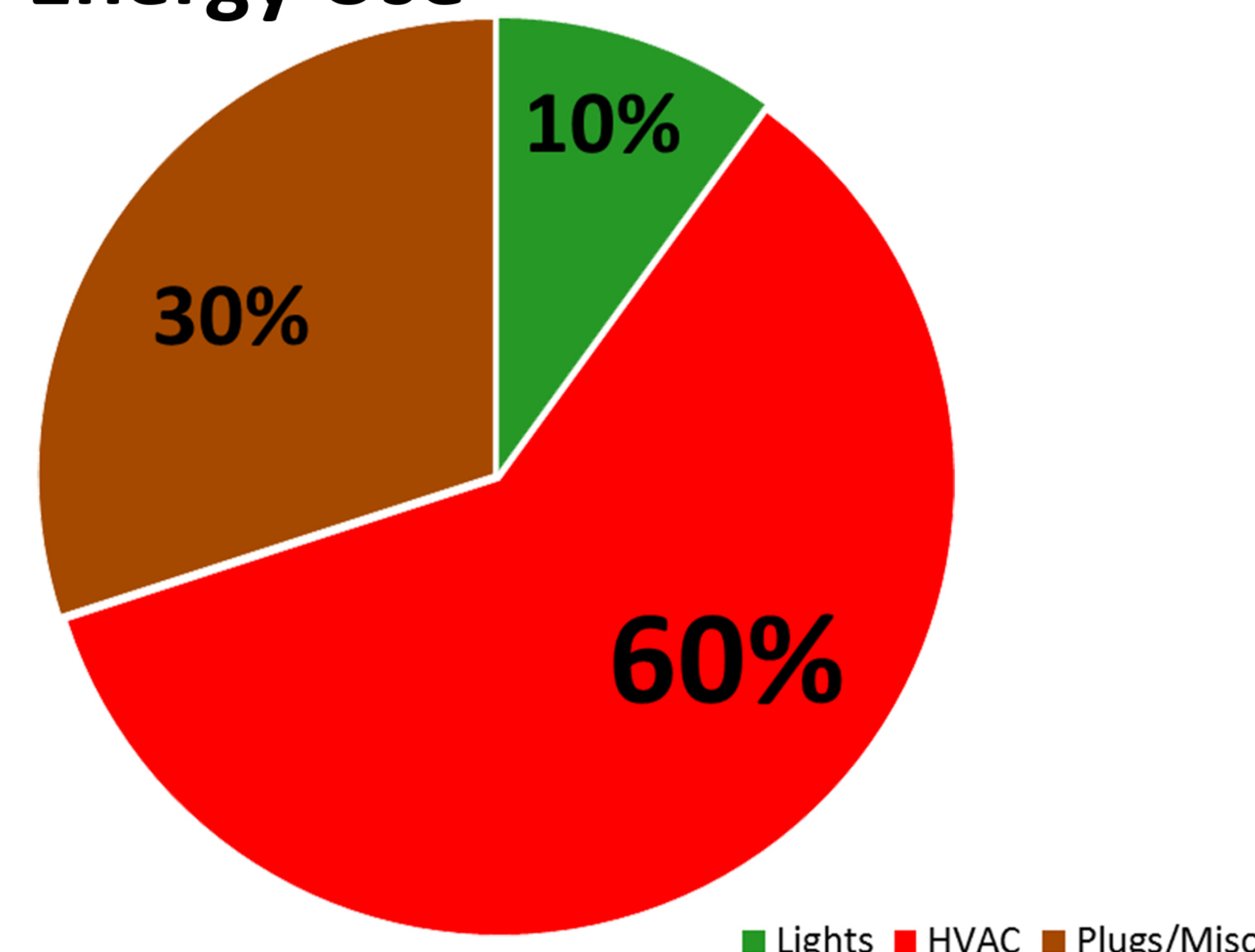
Annual Savings



Retrofit installation may cost **as little as 1/4 the cost** of replacing a standard fume hood with a new, high performance model.

REDUCE

Lab Energy Use

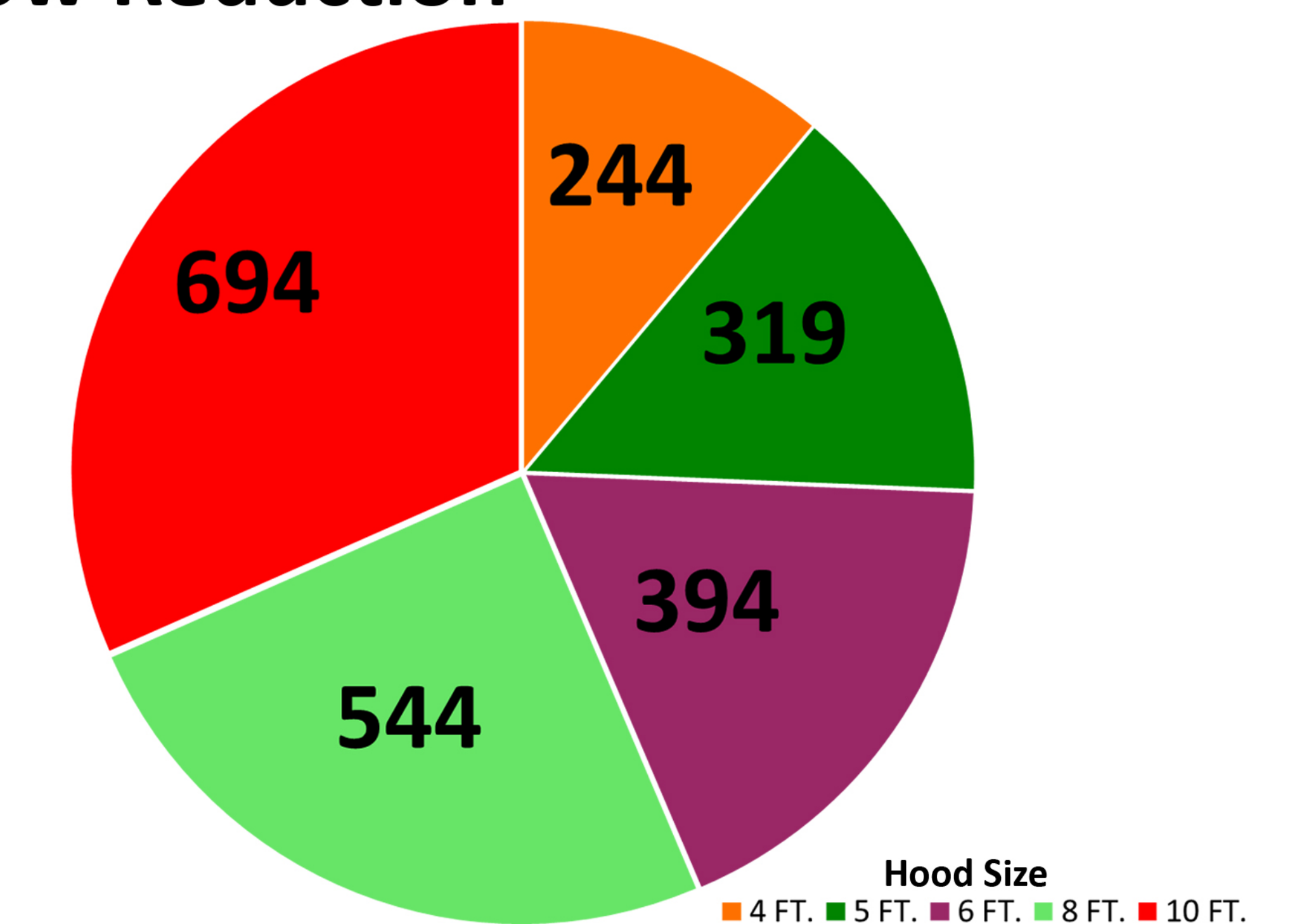


One 6-ft. CAV Fume Hood uses equivalent of:

- Three 2,500-sq-ft homes | 1500 gallons of gasoline | 80 tons CO₂ emissions
- Possible energy savings for the more than 750,000 hoods across the United States is \$1.39 billion annually¹

ENHANCE

Flow Reduction

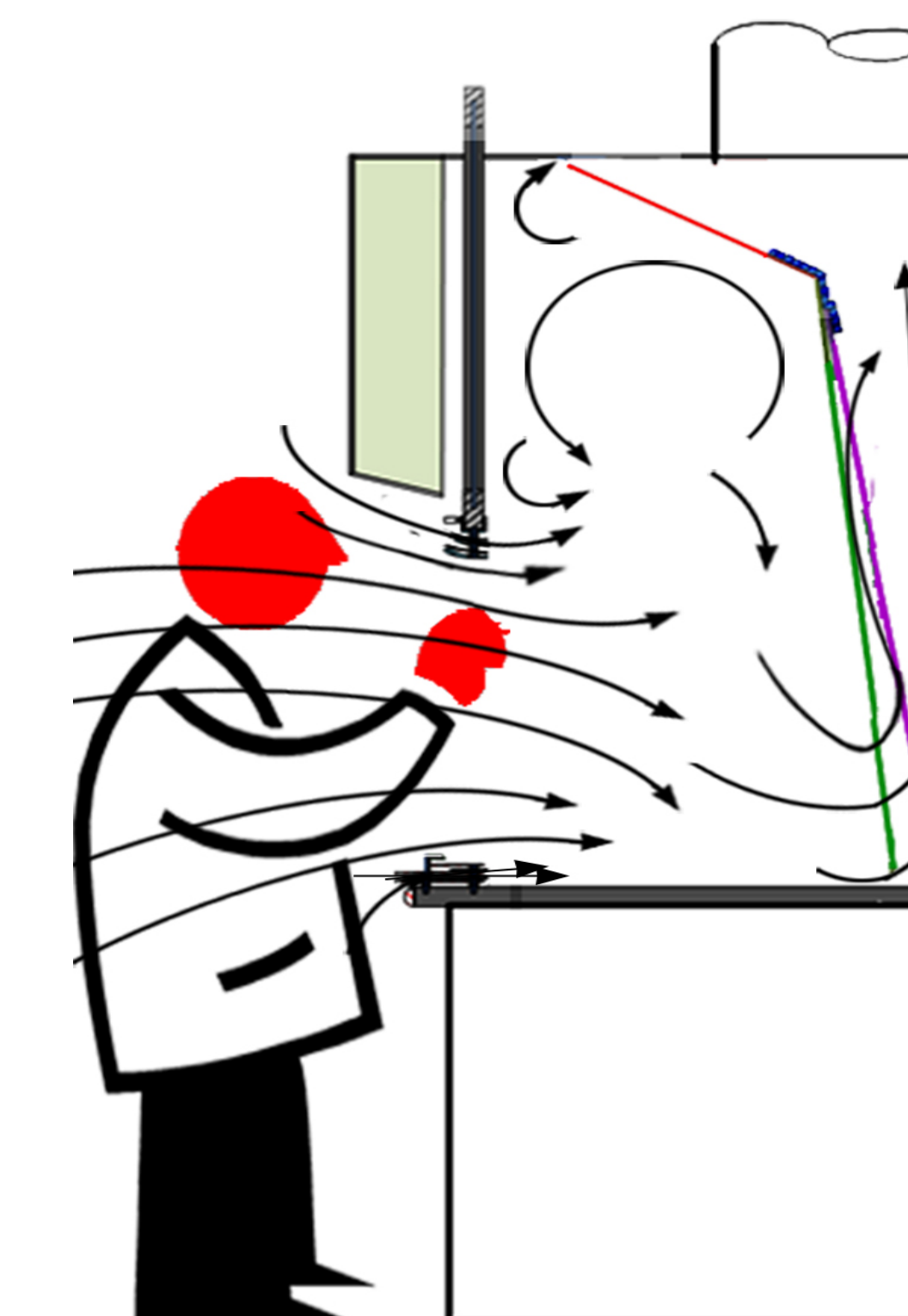
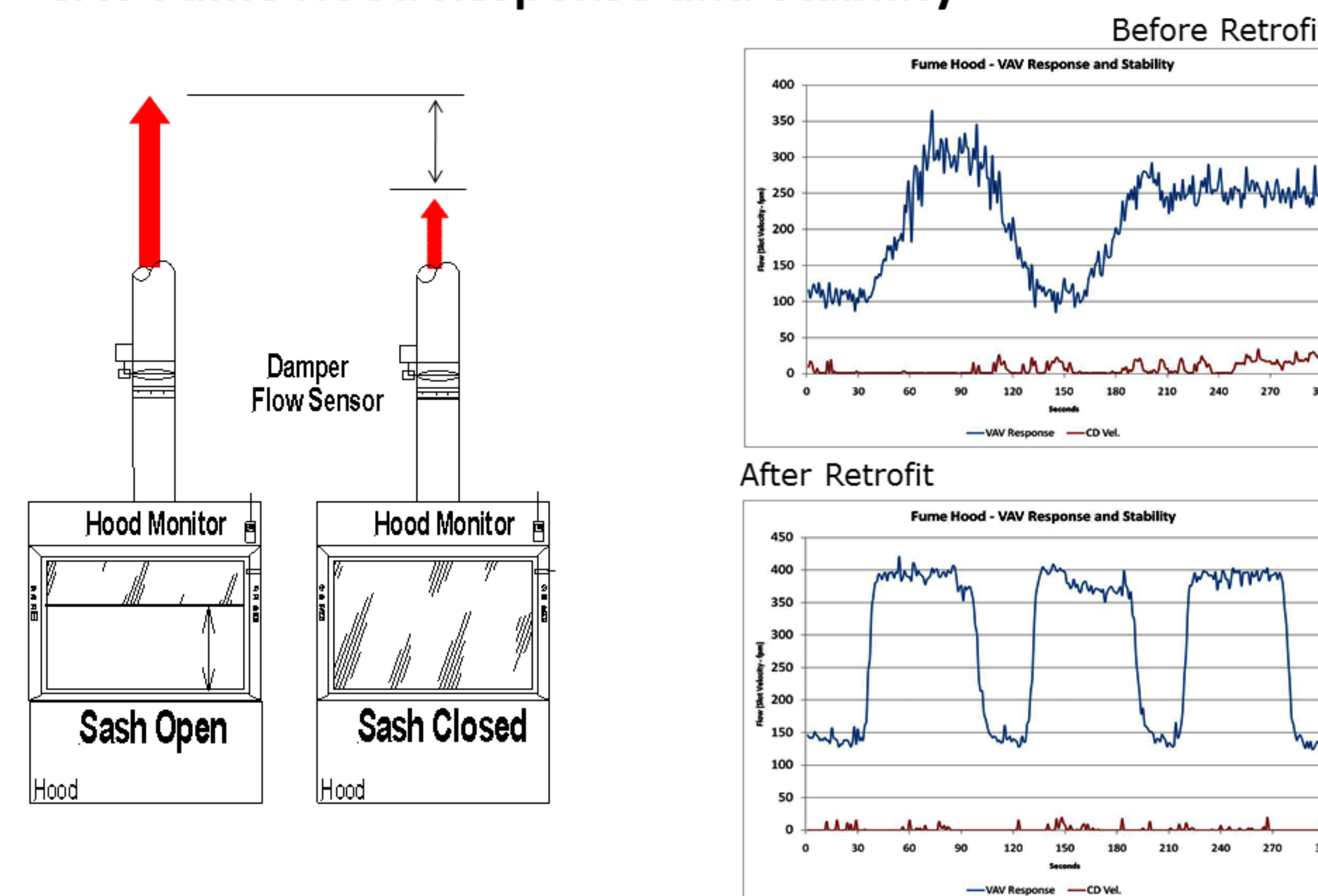


Retrofitting a standard fume hood with high performance components provides the ability to reduce air flow in a **potential reduction of energy consumption and costs by 30-40%**

Advantages of Retrofit vs. Replacement

- Installation of the retrofit increases the aerodynamic properties of the hood, improving its performance and containment abilities and increasing operator safety.
- Limited laboratory disruption. Retrofit installation takes hours instead of the days or weeks it takes to replace a fume hood
- Customizable parts – adaptable to most hood configurations
- Many models contain no moving parts or electronic components and do not change the size of the fume hood opening. No changes to operator procedures when using the hood

VAV Fume Hood Response and Stability



How Retrofit Works

- Aerodynamic Sash Pull - Displaces and dilutes vortex
- Aerodynamic Airfoil Sill - Improves flow over work surface
- Enhanced Baffle – Directs flow through opening and promotes effective capture

¹Lawrence Berkley National Laboratory