

Energy efficiency benefits from just one year...



Pennsylvanian lives saved

+

\$1.8 billion



Avoided health harms



\$530 million  
in Philadelphia



\$493 million  
in Pittsburgh

Source: ACEEE<sup>1</sup>

## Saving Energy Protects Health in Pennsylvania

Energy efficiency holds significant pollution reduction potential for states. It can help states to manage air quality, protect public health, and keep electricity affordable, all while growing the local economy. We improve energy efficiency when we replace outdated practices and technologies with new, less wasteful approaches. In our homes and offices, for example, we can save energy by replacing incandescent light bulbs with LEDs, tightening building envelopes so that conditioned air does not leak out, and swapping out old appliances with new ones. These energy efficiency improvements in buildings and industry decrease the amount of fossil fuels we burn and thereby reduce air pollution, resulting in substantial health benefits.

Air pollutants such as nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and fine particulates (PM<sub>2.5</sub>) produced by burning fossil fuels harm respiratory and cardiovascular health. They contribute to coronary heart disease, the leading cause of death in the United States.<sup>2</sup> These pollutants also lead to increased hospitalizations for heart attacks and congestive heart failure, and the mercury they include causes serious neurological damage.<sup>3</sup> Finally, power plants emit greenhouse gases that contribute to climate change.

### Protecting the Health of Pennsylvanians

The health benefits of reducing pollution through energy efficiency extend throughout the United States. However, the complexity of the electric grid, the location of power plants, wind patterns that carry pollution from one place to another, and many other factors influence where energy efficiency's greatest health benefits will be realized. Reducing energy consumption by 15% nationally would have huge benefits for Pennsylvania. Up to 210 Pennsylvanian lives would be saved each year. Over \$1.8 billion in avoided health harms would accrue to the people of Pennsylvania. In Pittsburgh alone, money saved through avoided health harms could be as high as \$493 million per year. Philadelphia would save up to \$530 million.

In the absence of federal leadership, it is even more important that Pennsylvania take the lead in delivering the health benefits of energy efficiency to its citizens. In addition to improving ambient air quality, energy efficiency programs can be designed to help families and vulnerable communities in Pennsylvania. Efficiency policies and programs can be designed to respond to the challenges of living with asthma and other respiratory illnesses, address the

energy burdens of families struggling to heat their homes or put food on the table, and extend benefits to the most vulnerable in a community. Energy efficiency addresses many of the social determinants of health by improving housing conditions, protecting the environment, creating economic opportunities, and reducing costs for families.

### Action That Will Get Results

Many of the tools that can make this future a reality rest within the hands of Pennsylvania policymakers. Pennsylvania policies are already saving energy but there is opportunity to save more. To reap the full health benefits of efficiency, Pennsylvania policymakers must support and implement consistent, comprehensive policies that ensure that up-to-date building energy codes are adopted. Policymakers should ensure that the state's utilities invest in energy efficiency by expanding and strengthening energy savings targets and ensuring that programs capture efficiency opportunities for all customers, including large industrial customers.

Avoiding pollution benefits everyone. Pennsylvania can invest in energy efficiency to build a healthier, more energy-efficient future for generations to come. Tremendous opportunity to affect positive public health outcomes rests in a more energy-efficient future.

1. Hayes S. and C. Kubes. 2018. *Saving Energy, Saving Lives: The Health Impacts of Avoiding Power Plant Pollution with Energy Efficiency*. Washington, DC: ACEEE. <http://aceee.org/research-report/h1801>.
2. Physicians for Social Responsibility. 2011. *How Air Pollution Contributes to Heart Disease*. Washington, DC: Physicians for Social Responsibility. [www.psr.org/assets/pdfs/airpollution-effects-cardiovascular.pdf](http://www.psr.org/assets/pdfs/airpollution-effects-cardiovascular.pdf).
3. WHO (World Health Organization). 2017. "Mercury and Health." [www.who.int/mediacentre/factsheets/fs361/en/](http://www.who.int/mediacentre/factsheets/fs361/en/).