

# Energy efficiency and conservation

## Efficiency is working

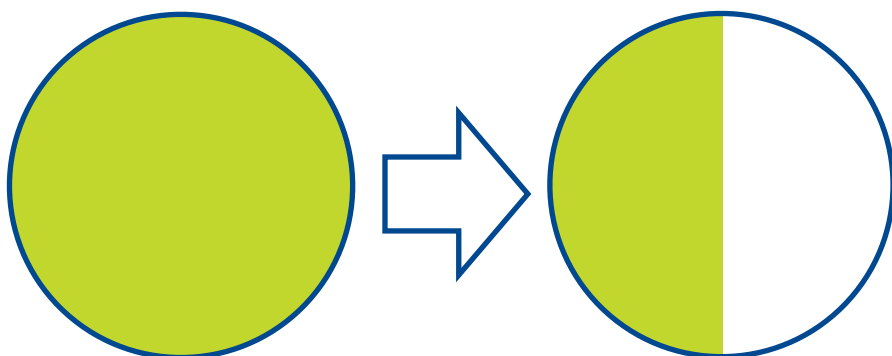
MassSave and other energy efficiency programs have significantly reduced the use of fossil fuels for electricity and heating. By 2020, energy efficiency programs are projected to cut Massachusetts' greenhouse gas emissions by 5.4 million metric tons – accounting for roughly 20% of all expected emissions reductions, more than any other category of policies.<sup>18</sup>

A 2015 report estimated that Massachusetts' energy efficiency investments through 2018 would yield \$14.4 billion in benefits, mostly by reducing the need to purchase energy and expand electricity and gas infrastructure.<sup>19</sup>

## Massachusetts' energy efficiency potential

In Massachusetts, energy efficiency improvements such as improved insulation and air sealing, smart thermostats, and LED lighting could reduce energy use for single-family homes by 27%, saving residents \$1.5 billion per year on their utility bills.<sup>20</sup>

Even adopting a single energy efficiency measure can have a big impact. For example, setting efficiency standards for appliances, lamps, and other products would save Massachusetts ratepayers \$282 million per year on their utility bills by 2035, while cutting carbon emissions as much as taking 57,000 cars off the road.<sup>21</sup>



**Energy consumption  
without efficiency  
and conservation**

**Energy consumption  
with efficiency and  
conservation**

**By 2050, we can  
reduce U.S. energy  
consumption by  
about 50%  
through efficiency  
and conservation.**

An analysis from the American Council for an Energy Efficient Economy found that we can reduce energy use across the United States by about 50% by 2050, through measures such as improving on existing programs to make our buildings and appliances more efficient, transitioning to less energy-intensive manufacturing processes, increasing the efficiency of our vehicles, and shifting trips from single-occupancy cars to transit, walking, and biking.<sup>22</sup>

## **Reducing transportation energy use**

More than four-fifths of the trips taken in the United States in 2017 were taken by car.<sup>23</sup> We can reduce the amount of energy we use in our transportation system by making it easier for people to travel on buses and trains, which use less energy per passenger than cars, or to travel by foot or on a bike, which use no fossil fuels.

Doubling the number of miles traveled by walking, biking, or transit in the United States, if matched by an equivalent decrease in vehicle miles traveled, would reduce annual carbon emissions by approximately 32 million metric tons.<sup>24</sup>