

# Energy Efficiency

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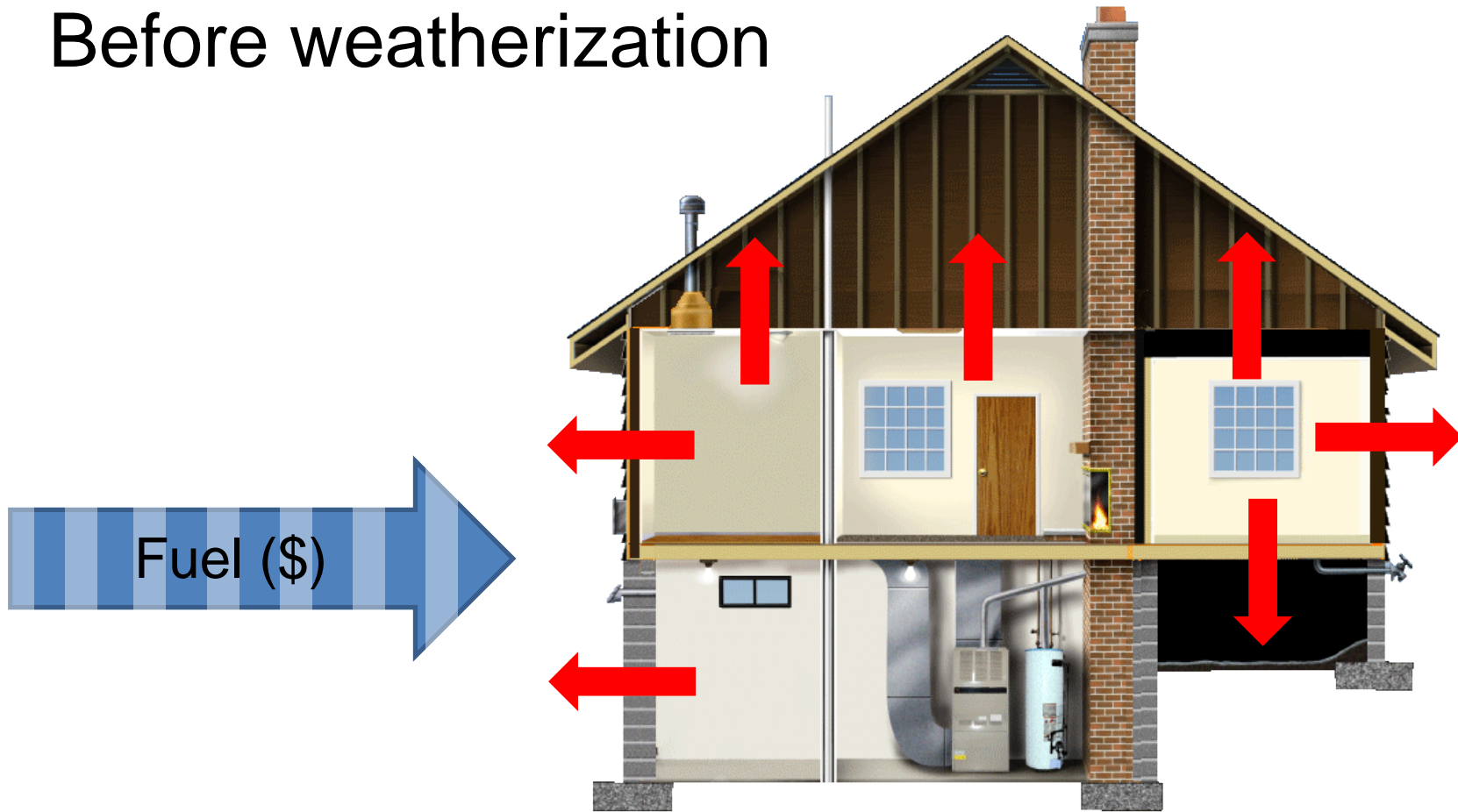
- Residential energy efficiency in a nutshell
- Why we need energy efficient homes
- Working in the field:
  - Auditing
  - Weatherizing
- Weatherization program funding
- Where to search for the jobs
- Conclusion
- Questions

Maximizing economic benefits of wise energy use through:

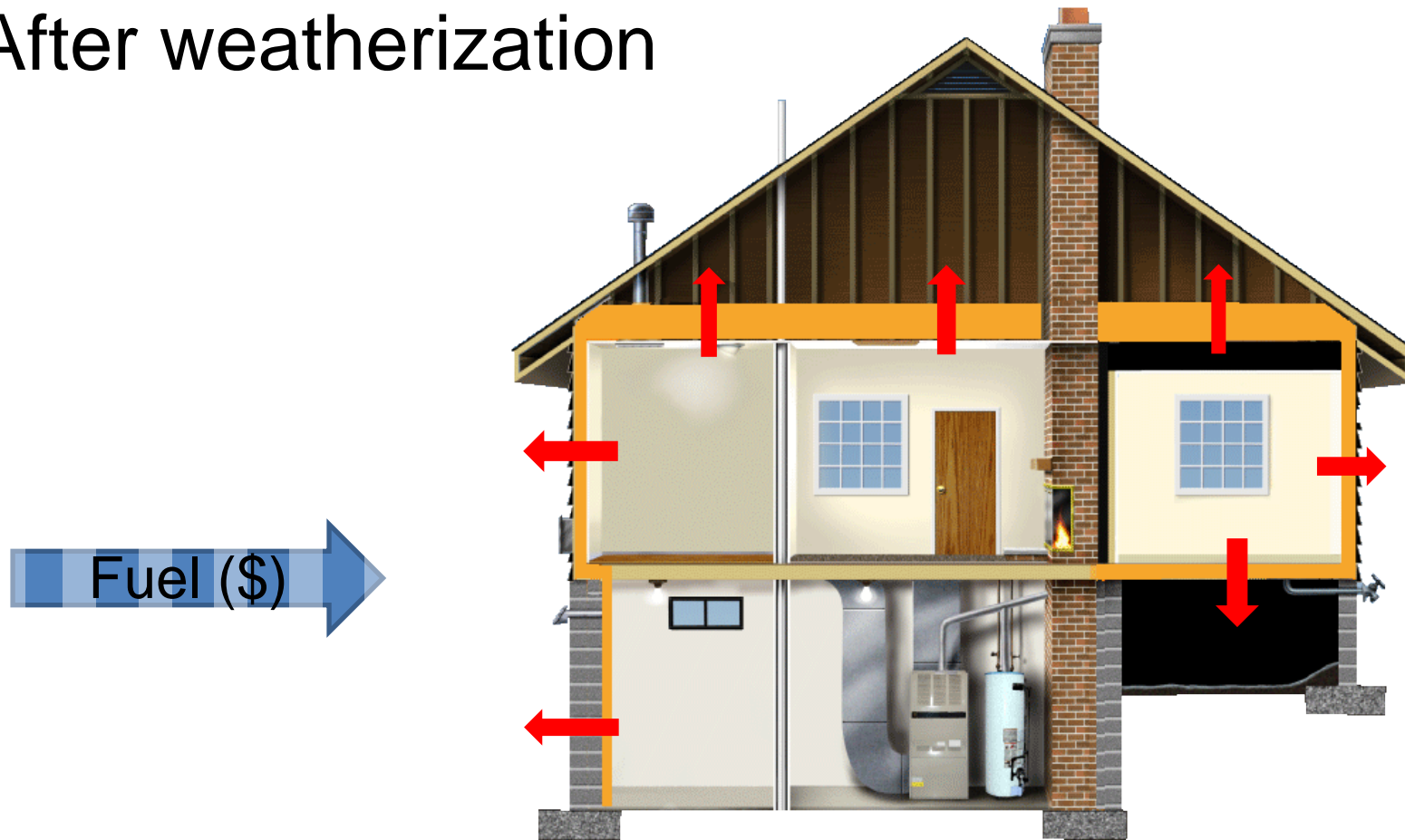
- Energy auditing
- Weatherization (air sealing and insulating)
- Heating system upgrades
- Appliance upgrades
- Window & door replacement

- Rising cost of heating fuels
- Nearly all homes in MA are heated with fossil fuels
- Most homes built before 1980 are underinsulated
- Weatherizing homes:
  - Lowers heating costs
  - Reduces greenhouse gas emissions

# Before weatherization



# After weatherization



Energy auditors installed 13,000 compact fluorescent bulbs

Over 6 years, this will save:

- \$690,000
- 2,070 *Tons* of carbon dioxide – 132 cars

## 550 Homes weatherized

Over 15 years, homeowners will save:

- 1,344,000 Gallons of heating oil (2443 gallons per household)
- \$3,860,000 (\$7018 per household)
- 17,300 *Tons* of carbon dioxide (2218 tons per household) – 406 cars

- Home inspection:
  - Air sealing, insulation opportunities
  - Heating system performance
  - Usage behaviors
  - Safety concerns
- Estimate cost effectiveness
- Educate homeowner
- Draft work order



- Air sealing:
  - Reduce air leakage
  - Mostly in attics, basements
  - Typically indoors
- Insulating:
  - Install insulation
  - Attics, basements, walls
  - Equal indoors and outdoors



## The Audit

- Home inspection:
  - Air sealing, insulating opportunities
  - Heating system performance
  - Usage behaviors
  - Safety hazards
- Estimate effectiveness of improvements
- Educate home owner
- Draft work order

## Air Sealing and Insulating

- Hands-on:
  - Tighten the home
  - Install insulation
- Test home for:
  - Tightness
  - Combustion safety

- Weatherization Assistance Program (WAP)
- Regional Greenhouse Gas Initiative (RGGI)
- American Recovery and Reinvestment Act (ARRA)
- Utility funding: MassSAVE
- HOME STAR\*

- Google “MassSAVE contractors” for a list
- Contact your local:
  - Community college workforce development department
  - Community Action Program (CAP)

# Questions?