



# ELECTRICITY AND CLIMATE POLLUTION



## WHAT IS THE PROBLEM?

- Electricity sector produced 25% of total United States GHG emissions (2021)
  - Second largest contributor
- Only ~20% of U.S. electricity generation comes from renewable sources (i.e. wind, solar, biomass)
- Inefficiencies of transmission & distribution of electricity can cause excess air pollution



**20%**

**Of all Massachusetts GHG emissions come from the electricity sector.**

(MA Clean Energy and Climate Plan 2020)



## WHAT ARE COMMON IMPACTS?

### IMPACTS ON LAND AND NATURAL RESOURCES



- Toxic waste brought onto land from drilling operations can pollute land & drinking water
- Land erosion impacts
- Hazardous waste byproducts (i.e. heavy metals) can contaminate soil & groundwater

### HEALTH IMPACTS



- Air pollution coming from the burning of natural gas to power electricity can cause:
  - Asthma
  - Cardiovascular disease
  - Premature death

### Electricity Emissions in MRPC Region

Town	MT CO2 Emitted from Residential Electricity Transport & Delivery
Ashburnham	103.19
Ashby	25.25
Athol	393.07
Ayer	1,030.91
Clinton	890.70
Fitchburg	1,675.95
Gardner	881.40
Groton	289.03
Harvard	71.15
Hubbardston	30.50
Lancaster	218.85
Leominster	3,643.47
Lunenburg	170.79
Petersham	13.21
Phillipston	13.86
Royalston	5.70
Shirley	454.10
Sterling	215.85
Templeton	236.87
Townsend	424.50
Westminster	500.56
Winchendon	145.70
<b>Total</b>	<b>11,434.61</b>

## GENERAL GOALS AND STRATEGIES TO CONSIDER FOR THE ELECTRICITY SECTOR

**1**

**SCALE UP FUEL-SWITCHING EFFORTS THAT RESULT IN LESS CO2 EMISSIONS**

**2**

**INCREASE THE EFFICIENCY OF AND/OR DECOMMISSION EXISTING FOSSIL FUEL-FIRED POWER PLANTS**

**3**

**REDUCE OVERALL ELECTRICITY USE AND PEAK DEMAND**

**4**

**SCALE UP ENERGY TRANSMISSION INFRASTRUCTURE/ GRID CONNECTIONS**