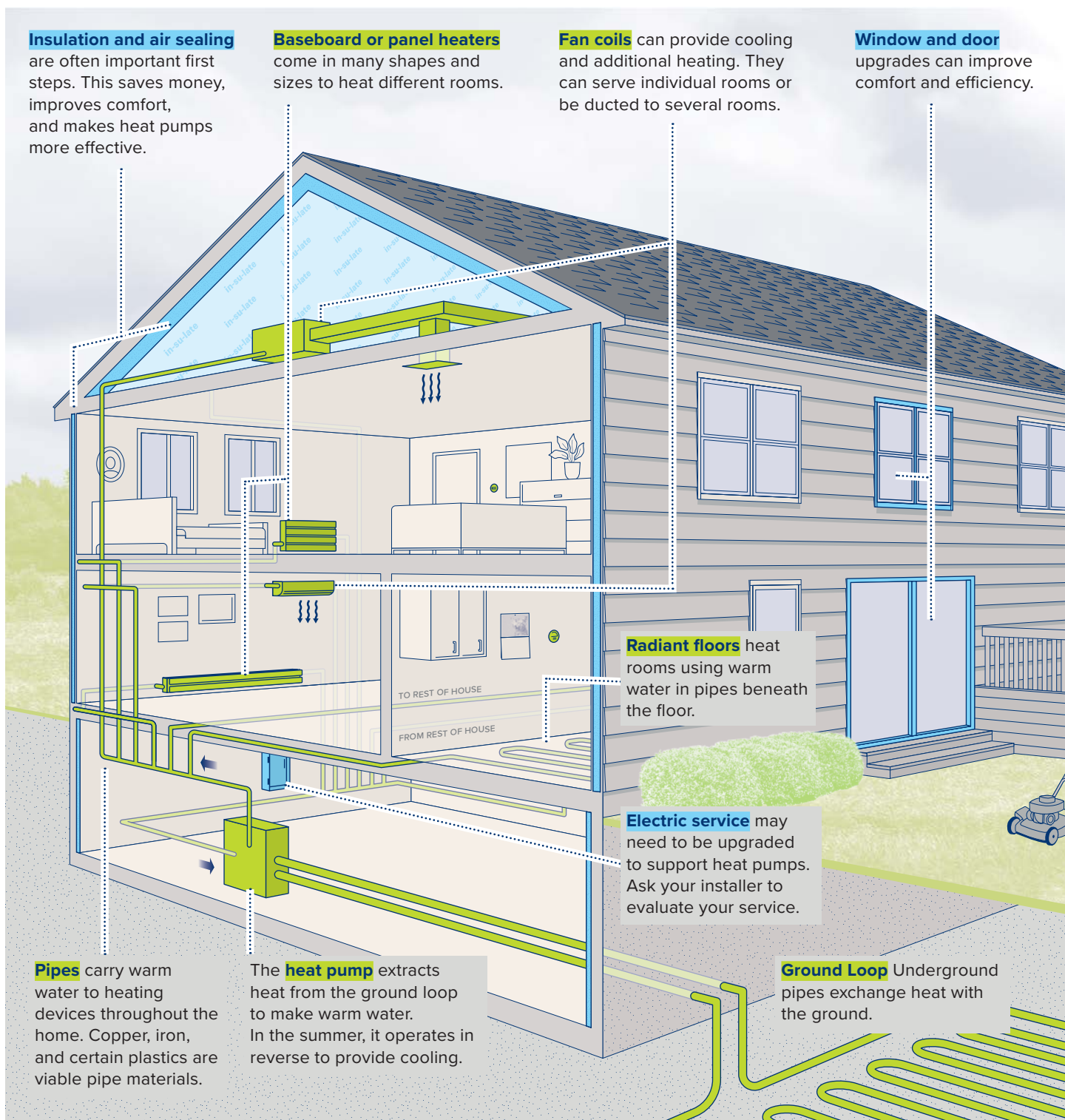


# Ground Source, Hydronic Heat Pump for a Two-Story Home

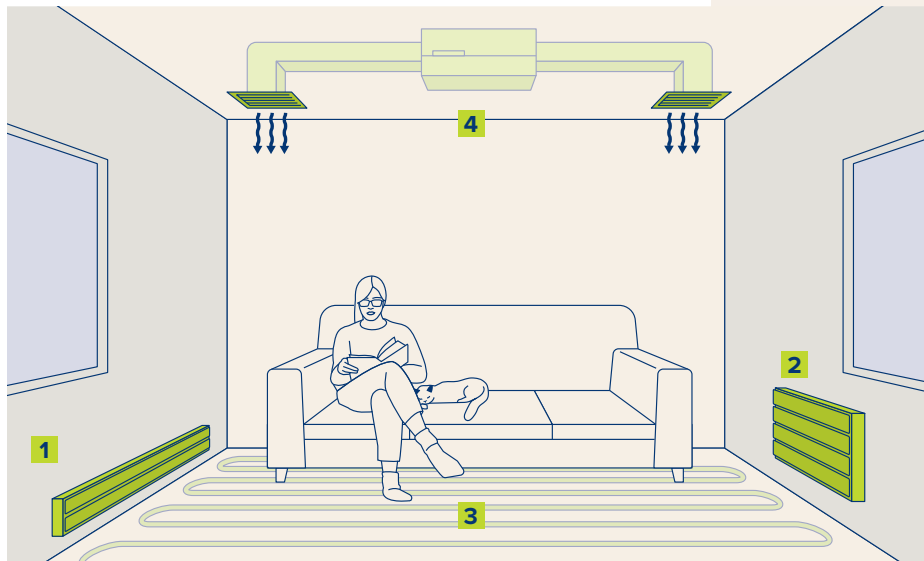
**Geothermal heat pumps use electricity to provide clean, efficient heating and cooling.**

- **Ground source**, or Geothermal, systems provide comfort all winter across New York State
- **Hydronic systems** send warm water to heating devices throughout the home
- **Healthy and safe** with no fuels or carbon monoxide risks
- **Affordable** with rebates, financing options, and low operating costs
- **Clean and green** with low greenhouse gas emissions
- **Versatile** solution for new or existing homes



## Features

- Quiet with no outdoor condensers
- Can also provide hot water for bathing, washing, cooking, etc.
- Comfort from warm water heat throughout the home
- Air ducts are not necessary



## Heat Delivery Options

Heat pumps provide warm water rather than hot water, and conventional baseboards and radiators are often not sufficient. Heating devices designed for warm water are needed to provide comfort. Your installer can suggest the best heat delivery options based on your heating needs.

### Heating Only

- 1 Baseboards** designed for warm water can comfortably heat rooms.
- 2 Panels** are available in many shapes and sizes and can be mounted in various positions.
- 3 Radiant floors** provide uniform comfort.

### Heating and Cooling

- 4 Fan coils** provide cooling and can supplement other heating devices. These can serve single spaces or be ducted to several rooms.

## Ask Your Installer

- Will proper heating and cooling get to each space?  
**Ask for room-by-room heating and cooling calculations.**
- Do I need to upgrade radiators or baseboards?
- Will the system use “outdoor reset” control to optimize efficiency and comfort?
- How long will installation take? Where and when will you need access?
- Who is responsible for landscaping after the ground loop is installed?
- How do I operate my system for optimal comfort and efficiency?
- What annual maintenance is required?
- What is the expected lifespan and warranty?

## Cost Considerations

### Installation Cost

- Check with NYSERDA, your electric company, and installer for incentives and financing options. Larger incentives may be available for eligible customers
- Ground source heat pumps may have a high upfront cost but will operate efficiently over a long lifetime
- Cost varies with region, installer experience, heat delivery options, system size and manufacturer

### Operating Cost

- Your overall heating costs will likely decrease if switching from oil, propane or electric baseboard
- If you previously heated with fuel, don't be surprised to see electric bills rise. Your gas, oil, or propane bills will drop or disappear
- Efficient homes (windows, doors, insulation, air sealing) have much lower operating costs



NYS Clean Heat