

# Electrification Checklist for Home Energy Auditors

This checklist will aid residential energy auditors in assessing opportunities for the electrification of key home systems.

Key systems include space heating, water heating and other fossil fuel-based appliances, as well as readiness for installation of electric vehicle (EV) charging and solar photovoltaic (PV) systems. Many of these end uses provide important opportunities for homeowners to switch from existing fossil fuel-based systems to efficient electric systems. Electrification retrofits provide a host of benefits including financial, health, safety and climate.

The checklist is intended to supplement a traditional home energy audit. A traditional home energy audit typically assesses the thermal performance of the home (i.e., insulation levels, window efficiency/glazing areas, a blower door test, a duct leakage test, etc.), along with efficiency of primary systems, but ignores comment on the type of fuel used within the home. The checklist is meant to supplement, not replace, existing auditing practices, including those designed by Building Performance Institute, NATE, ACCA, and ASHRAE. As home energy auditors are already in millions of homes a year, this information can easily expand the usefulness, and potential scope, of their work.

## Systems to Inspect

This checklist will require the inspection of the following systems:



Space Heating/  
Cooling System(s)



Clothes Dryer



Water Heater



Cooking  
Appliances



Roof/Property



Electric Panel

Record findings in the following tables.



# Space Heating/Cooling System(s)

## Heating System(s)

### Existing Heating System(s)

- Forced Air Furnace (with ductwork)
- Boiler (with hydronic radiators/baseboard)
- Electric Resistance (baseboard)
- Forced Air Heat Pump
  - Part of Dual Fuel System
  - Standalone
- Ductless Heat Pump
- Other (e.g., woodstove) \_\_\_\_\_

### Existing Heating System Fuel Source(s)

- Natural Gas
- Propane
- Fuel Oil
- Electricity
- Other \_\_\_\_\_

Manufacturer

Serial Number

\_\_\_\_\_

Model Number

Heating Capacity

\_\_\_\_\_

### Rated Voltage

- 120V
- 208V
- 240V

Rated Amps

Rated Wattage

\_\_\_\_\_

### Electric Resistance System Wattage

(If electric resistance is present as primary or supplemental)

Primary: \_\_\_\_\_ W

Supplemental: \_\_\_\_\_ W

### Age of Heating System

- 1-10 years
- 11-20 years
- 20+ years

### Heating System Zoning

- Single zone
- Multi-zone

**If cooling system is same as heating system described above, skip to Clothes Dryer section**

Is the cooling system the same as the heating system?

Yes

No

## Cooling System(s)

### Existing Cooling System(s)

- Forced Air Central Air Conditioner (AC)
- Window/Portable AC
- No Cooling Systems
- Forced Air Central Heat Pump
  - Part of Dual Fuel System
  - Standalone
- Ductless AC/Heat Pump

Manufacturer

Serial Number

\_\_\_\_\_

Model Number

Cooling Capacity

\_\_\_\_\_

### Rated Voltage

- 120V
- 208V
- 240V

**Rated Amps**

**Rated Wattage**

\_\_\_\_\_

**Ductwork Inches of Insulation**

\_\_\_\_\_ inches

**Age of Cooling System**

- 1-10 years     11-20 years     20+ years

**Do Ducts Provide Cooling and Heating, or Heating Only? (if present)**

- Heating Only     Heating & Cooling     Cooling Only

**Heating/Cooling System Condensate Management (if necessary)**

- Floor Drain     Condensate Pump

**Occupant Feedback on Current System**

- Comfortable     Uncomfortable

**Size of Ductwork (inches, if present)**

- Round metal/flex: \_\_\_\_\_ inch diameter  
 Rectangular metal: \_\_\_\_\_ X \_\_\_\_\_ inches

Notes: \_\_\_\_\_

\_\_\_\_\_

**Condition of Ductwork (if present)**

- Good     Satisfactory     Poor

**Captured Photos of Current System(s), Including Nameplate**

- Heating Systems     Cooling Systems     Ductwork

**Is Ductwork Insulated?**

- Yes     No



## Clothes Dryer

**Existing Clothes Dryer**

- Standalone     Washer/Dryer Combo  
 None

**Rated Voltage**

- 120V     208V     240V

**Existing Fuel**

- Natural Gas     Propane     Electricity

**Rated Amps**

**Rated Wattage**

\_\_\_\_\_

**Manufacturer**

**Serial Number**

\_\_\_\_\_

**Age of Dryer**

- 1-10 years     11-20 years     20+ years

**Model Number**

**Drum Capacity**

\_\_\_\_\_ cu. ft.

**Air Volume Surrounding Dryer**

- Abundant (at least 750 cubic feet)  
 Limited (i.e. in a closet, louvered doors)  
 Very Limited (small closet)

**Is Exhaust Fan Present and Vented to Outdoors?**

- Yes     No

**Captured Photos of Dryer, Including Nameplate**

- Dryer     Venting



## Water Heater

### Existing Water Heater Type

- Storage     On-Demand     None

### Existing Water Heater Fuel

- Natural Gas     Electricity  
 Propane     Other \_\_\_\_\_

### Manufacturer

\_\_\_\_\_

### Serial Number

\_\_\_\_\_

### Model Number

\_\_\_\_\_

### Capacity (if storage)

\_\_\_\_\_ gallons

### Rated Voltage

- 120V     208V     240V

### Rated Amps

\_\_\_\_\_

### Rated Wattage

\_\_\_\_\_

### Existing Water Heater Location

\_\_\_\_\_

### Dimensions of Area with Water Heater

\_\_\_\_\_

### Age of Water Heater

- 1-10 years     11-20 years     20+ years

### Venting (if fossil fueled)

- Atmospheric     Direct

### Air Volume Surrounding Water Heater

- Abundant (at least 750 cubic feet)  
 Limited (i.e. <750 cubic feet or in a closet, louvered doors)  
 Very limited (small closet)

### Number of People in Household

- Adults: \_\_\_\_\_     Children: \_\_\_\_\_

### Temperature Setting

\_\_\_\_\_ °F

### Occupant Feedback on Current Hot Water Supply

- Sufficient     Insufficient

### Captured Photos of Water Heater, Including Nameplate and Venting

- Water heater     Venting

### Are Hot Water Pipes Insulated?

- Yes     No



## Cooking Appliances

### Existing Cooking Appliance(s)

- Stove/Oven Combo   
  Standalone Stove   
  Standalone Oven

### Cooking Appliance Fuel(s)

- Natural Gas     Electricity  
 Propane     Other \_\_\_\_\_

### Dimensions of Cooking Appliance(s)

Stove/Oven: \_\_\_\_\_

Standalone Stove: \_\_\_\_\_

Standalone Oven: \_\_\_\_\_

### Cooking Appliance #1

Manufacturer

Serial Number

\_\_\_\_\_

Model Number

\_\_\_\_\_

Rated Voltage

- 120V     208V     240V

Rated Amps

Rated Wattage

\_\_\_\_\_

Exhaust Fan Present?

- Yes     No

Occupant Feedback on Exhaust Fan Use

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Cooking Appliance #2 (if present)

Manufacturer

Serial Number

\_\_\_\_\_

Model Number

\_\_\_\_\_

Rated Voltage

- 120V     208V     240V

Rated Amps

Rated Wattage

\_\_\_\_\_

Exhaust Fan Present?

- Yes     No

Occupant Feedback on Exhaust Fan Use

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## Roof/Property

### Solar Photovoltaic (PV)

#### Does Home Already Have a PV System?

- Yes       No

#### If Yes, Provide Size of System

\_\_\_\_\_ Watts

#### Orientation of Roof (degrees of true north)

\_\_\_\_\_ degrees

#### Identify Best Possible Array Location

- Roof Mounted Location: \_\_\_\_\_  
 Ground Mounted Location: \_\_\_\_\_  
 No Possible Location (e.g. too shady)

#### Roof Slope (rise/run)

- \_\_\_\_\_ / \_\_\_\_\_       Flat Roof

#### Maximum Allowable Dead Load and Live Load Ratings of Existing Roof

- Dead Load Rating: \_\_\_\_\_ lbs/sq ft  
 Live Load Ratings: \_\_\_\_\_ lbs/sq ft

#### Is there Conduit From Appropriate Location on Roof to Electrical Panel?

- Yes       No

#### Captured Photos of Possible Siting Location(s)

- Location: \_\_\_\_\_

#### Age of Roof

\_\_\_\_\_ years

#### Age of Building

\_\_\_\_\_ years

### Electric Vehicle (EV) Charger

#### Does Home Already Have EV Charger?

- Yes       No

#### If Yes, Level 1 or 2?

- Level 1       Level 2

#### If Yes, is it Hard Wired?

- Yes       No

#### Identify Potential Location(s) For a Level 1 Charger

- Garage       Driveway       Curbside

#### Identify Potential Location(s) For a Level 2 Charger

- Garage       Driveway       Curbside

#### 1<sup>st</sup> Potential Location:

Is there already a junction box or outlet(s) located near the identified location?

- Yes, 120V       Yes, 240V       No

#### 2<sup>nd</sup> Potential Location:

Is there already a junction box or outlet(s) located near the identified location?

- Yes, 120V       Yes, 240V       No

#### Captured Photos of Possible Siting Location(s)

- Location 1: \_\_\_\_\_

- Location 2: \_\_\_\_\_



## Electric Panel

### Size of Current Panel (circle or fill in)

- 100A       150A       200A
- Other Size \_\_\_\_\_ A

### Number of Breaker Slots (including subpanel)

Currently Used: \_\_\_\_\_ Total: \_\_\_\_\_

### Surge Protector

- Yes       No

### Age of Panel

\_\_\_\_\_ years old

### Condition of Panel

- Good       Satisfactory       Poor

### Captured Photos of Current Panel, Including Nameplate

- Panel       Nameplate

### Captured Copy of 12 Months of Utility Bills

- Yes       No

### Maximum Annual Demand From Utility Bills

\_\_\_\_\_ (kWh)

### Note

Panel upgrades also require you to work with the local electric utility to upgrade your utility service.

**For more information on available air-to-air heat pump technologies, contact your local HVAC contractor/distributor and refer to DOE's Better Buildings' Low Carbon Technology Strategies resources.**

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